

# More Than Honor

by David Weber



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# A Beautiful Friendship

*David Weber*

## I

Climbs Quickly scurried up the nearest trunk, then paused at the first cross-branch to clean his sticky true-hands and hand-feet with fastidious care. He *hated* crossing between trees now that the cold days were passing into those of mud. Not that he was particularly fond of snow, either, he admitted with a bleek of laughter, but at least it melted out of his fur—eventually—instead of forming gluey clots that dried hard as rock. Still, there *were* compensations to warming weather, and he sniffed appreciatively at the breeze that rustled the furred buds just beginning to fringe the all-but-bare branches. Under most circumstances, he would have climbed all the way to the top to luxuriate in the wind fingers ruffling his coat, but he had other things on his mind today.

He finished grooming himself, then rose on his rear legs in the angle of the cross-branch and trunk to scan his surroundings with grass-green eyes. None of the two-legs were in sight, but that meant little; two-legs were full of surprises. Climbs Quickly's own Bright Water Clan had seen little of them until lately, but other clans had observed them for twelve full turnings of the seasons, and it was obvious they had tricks the People had never mastered. Among those was some way to keep watch from far away—so far, indeed, that the People could neither hear nor taste them, much less see them. Yet Climbs Quickly detected no sign that *he* was being watched, and he flowed smoothly to the adjacent trunk, following the line of cross-branches deeper into the clearing.

His clan had not been too apprehensive when the first flying thing arrived and the two-legs emerged to create the clearing, for the clans whose territory had already been invaded had warned them of what to expect. The two-legs could be dangerous, and they kept *changing* things, but they weren't like death fangs or snow hunters, who all too often killed randomly or for pleasure, and scouts and hunters like Climbs Quickly had watched that first handful of two-legs from the cover of the frost-bright leaves, perched high in the trees. The newcomers had spread out carrying

strange things—some that glittered or blinked flashing lights and others that stood on tall, skinny legs—which they moved from place to place and peered through, and then they'd driven stakes of some equally strange not-wood into the ground at intervals. The Bright Water memory singers had sung back through the songs from other clans and decided that the things they peered through were tools of some sort. Climbs Quickly couldn't argue their conclusion, yet the two-leg tools were as different from the hand axes and knives the People made as the substance from which they were made was unlike the flint, wood, and bone the People used.

All of which explained why the two-legs must be watched most carefully . . . and secretly. Small as the People were, they were quick and clever, and their axes and knives and use of fire let them accomplish things larger but less clever creatures could not. Yet the shortest two-leg stood more than two People-lengths in height. Even if their tools had been no better than the People's (and Climbs Quickly knew they were much, *much* better) their greater size would have made them far more effective. And if there was no sign that the two-legs intended to threaten the People, there was also no sign they did *not*, so no doubt it was fortunate they were so easy to spy upon.

Climbs Quickly slowed as he reached the final cross-branch. He sat for long, still moments, cream and gray coat blending into invisibility against trunks and branches veiled in a fine spray of tight green buds, motionless but for a single true-hand which groomed his whiskers reflexively. He listened carefully, with ears and thoughts alike, and those ears pricked as he tasted the faint mind glow that indicated the presence of two-legs. It wasn't the clear, bright communication it would have been from one of the People, for the two-legs appeared to be mind-blind, yet there was something . . . nice about it. Which was odd, for whatever else they were, the two-legs were *very* unlike the People. The memory singers of every clan had sent their songs sweeping far and wide when the two-legs first appeared twelve season-turnings back. They'd sought any song of any other clan which might tell them something—*anything*—about these strange creatures and whence they had come . . . or at least why.

No one had been able to answer those questions, yet the memory singers of the Blue Mountain Dancing Clan and the Fire Runs Fast Clan had remembered a very old song—one which went back almost two hundred turnings. The song offered no clue to the two-legs' origins or purpose, but it did tell of the very first time the People had ever seen two-legs and how the long ago scout who'd brought it back to his singers had seen their egg-shaped silver thing come down out of the very sky in light and fire and a sound more terrible than any thunder.

That had been enough to send the People of that time scurrying into hiding, and they'd watched from the shadows and leaves—much as Climbs Quickly did now. The first scout to see the masters of that silver egg emerge from it had been joined by others, set to watch the fascinating creatures from a safe distance, but no one had approached the intruders. Perhaps they might have, had not a death fang attempted to eat one of the two-legs.

People didn't like death fangs. The huge creatures looked much like outsized People, but unlike People, they were far from clever. Not that something their size really *needed* to be clever. Death fangs were the biggest, strongest, most deadly hunters in all the world. Unlike People, they often killed for the sheer pleasure of it, and they feared nothing that lived . . . except the People. They never passed up the opportunity to eat a single scout or hunter if they happened across one stupid enough to be caught on the ground, but even death fangs avoided the heart of any clan's range. Individual size meant little when an entire clan swarmed down from the trees to attack.

Yet the death fang who attacked one of the two-legs had discovered something new to fear.

None of the watching People had ever heard anything like the ear shattering "*Craaack!*" from the tubular thing the two-leg carried, but the charging death fang had suddenly somersaulted end-for-end, crashed to the ground, and lain still, with a bloody hole blown clear through it.

Once they got over their immediate shock, the watching scouts had taken a fierce delight in the death fang's fate, but anything that could kill a death fang with a single bark could certainly do the same to one of the People, and so the decision had been made to avoid the two-legs until the watchers learned more about them. Unfortunately, the scouts were still watching from hiding when, after perhaps a quarter turning, they dismantled the strange, square living places in which they had dwelt, went back into their egg, and disappeared once more into the sky.

All of that had been long, long ago, and Climbs Quickly regretted that no more had been learned of them before they left. He understood the need for caution, yet he wished the Blue Mountain Dancing scouts had been just a *little* less careful. Perhaps then the People might have been able to decide what the two-legs wanted—or what the People should do about them—between their first arrival and their reappearance.

Personally, Climbs Quickly thought those first two-legs had been scouts, as he himself was. Certainly it would have made sense for the two-legs to send scouts ahead; any clan did the same when expanding or changing its range. Yet if that was the case, why had the rest of their clan delayed so long before following them? And why did the two-legs spread themselves so thinly? The living place in the clearing he'd come to watch had required great labor by over a dozen two-legs to create, even with their clever tools, and it was large enough for a full clan. Yet its builders had simply gone away when they finished. It had stood completely empty for over ten days, and even now it housed only three of the two-legs, one of them—unless Climbs Quickly was mistaken—but a youngling. He sometimes wondered what had happened to the youngling's litter mates, but the important point was that the way in which the two-legs dispersed their living places must surely deprive them of any communication with their fellows.

That was one reason many of the watchers believed two-legs were unlike People in *all* ways, not just their size and shape and tools. It was the ability to communicate with their fellows which made People *people*, after all. Only unthinking creatures—like the death fangs, or the snow hunters, or those upon whom the People themselves preyed—lived sealed within themselves, so if the two-legs were not only mind-blind but chose to avoid even their own kind, they could not be people. But Climbs Quickly disagreed. He couldn't fully explain why, even to himself, yet he was convinced the two-legs were, in fact, people—of a sort, at least. They fascinated him, and he'd listened again and again to the song of the first two-legs and their egg, both in an effort to understand what it was they'd wanted and because even now that song carried overtones of something he thought he had tasted from the two-legs *he* spied upon.

Unfortunately, the song had been worn smooth by too many singers before Sings Truly first sang it for Bright Water Clan. That often happened to older songs or those which had been relayed for great distances, and *this* song was both ancient and from far away. Though its images remained clear and sharp, they had been subtly shaped and shadowed by all the singers who had come before Sings Truly. Climbs Quickly knew what the two-legs of the song had *done*, but he knew nothing about *why* they'd done it, and the interplay of so many singers' minds had blurred any mind glow the long ago watchers might have tasted.

Climbs Quickly had shared what he thought he'd picked up from "his" two-legs only with Sings Truly. It was his duty to report to the memory singers, of course, and so he had. But he'd implored Sings Truly to keep his suspicions only in her own song for now, for some of the other

scouts would have laughed uproariously at them. Sings Truly hadn't laughed, but neither had she rushed to agree with him, and he knew she longed to travel in person to the Blue Mountain Dancing or Fire Runs Fast Clan's range to receive the original song from their senior singers. But that was out of the question. Singers were the core of any clan, the storehouse of memory and dispensers of wisdom. They were always female, and their loss could not be risked, whatever Sings Truly might want. Unless a clan was fortunate enough to have a surplus of singers, it must protect its potential supply of replacements by denying them more dangerous tasks. Climbs Quickly understood that, but he found its implications a bit harder to live with than the clan's other scouts and hunters did. There could be disadvantages to being a memory singer's brother when she chose to sulk over the freedoms her role denied her . . . and allowed *him*.

Climbs Quickly gave another soft chitter of laughter (it was safe enough; Sings Truly was too far away to taste his thoughts), then crept stealthily out to the last trunk. He climbed easily to its highest fork and settled down on the comfortable pad of leaves and branches. The cold days' ravages required a few repairs, but there was no hurry. It remained serviceable, and it would be many days yet before the slowly budding leaves could provide the needed materials, anyway.

In a way, he would be unhappy when the leaves did open. In their absence, bright sunlight spilled through the thin upper branches, pouring down with gentle warmth, and he stretched out on his belly with a sigh of pleasure. He folded his true-hands under his chin and settled himself for a long wait. Scouts learned early to be patient. If they needed help with that lesson, there were teachers enough—from falls to hungry death fangs—to drive it home. Climbs Quickly had never needed such instruction, which, even more than his relationship to Sings Truly, was why he was second only to Short Tail, Bright Water Clan's chief scout . . . and why he'd been chosen to keep watch on these two-legs since their arrival.

So now he waited, motionless in the warm sunlight, and watched the sharp-topped stone living place the two-legs had built in the center of the clearing.

## II

"I mean it, Stephanie!" Richard Harrington said. "I don't want you wandering off into those woods again without me or your mom along. Is that clear?"

"Oh, *Daaaddy*—" Stephanie began, only to close her mouth sharply when her father folded his arms. Then the toe of his right foot started tapping the carpet lightly, and her heart sank. This wasn't going well at all, and she resented that reflection on her . . . negotiating skill almost as much as she resented the restriction she was trying to avoid. She was eleven T-years old, smart, an only child, a daughter, and cute as a button. That gave her certain advantages, and she'd become an expert at wrapping her father around her finger almost as soon as she could talk. She rather suspected that much of her success came from the fact that he was perfectly willing to be so wrapped, but that was all right as long as it worked. Unfortunately, her mother had always been a tougher customer . . . and even her father was unscrupulously willing to abandon his proper pliancy when he decided the situation justified it.

Like now.

"We're not going to discuss this further," he said with ominous calm. "Just because you

haven't *seen* any hexapumas or peak bears doesn't mean they aren't out there."

"But I've been stuck inside with nothing to do all *winter*," she said as reasonably as she could, easily suppressing a twinge of conscience as she neglected to mention snowball fights, cross-country skiing, sleds, and certain other diversions. "I want to go outside and *see* things!"

"I know you do, honey," her father said more gently, reaching out to tousle her curly brown hair. "But it's dangerous out there. This isn't Meyerdahl, you know." Stephanie rolled her eyes and looked martyred, and his expression showed a flash of regret at having let the last sentence slip out. "If you really want something to do, why don't you run into Twin Forks with Mom this afternoon?"

"Because Twin Forks is a complete *null*, Daddy." Exasperation colored Stephanie's reply, even though she knew it was a tactical error. Even above average parents like hers got stubborn if you disagreed with them *too* emphatically, but *honestly!* Twin Forks might be the closest "town" to the Harrington homestead, but it boasted a total of *maybe* fifty families most of whose handful of kids were zork brains. None of *them* were interested in xeno-botany or biosystem hierarchies. In fact, they were such nulls they spent most of their free time trying to catch anything small enough to keep as a pet, however much damage they might do to their intended "pets" in the process, and Stephanie was pretty sure any effort to enlist *those* zorks in her explorations would have led to words—or a fist or two in the eye—in fairly short order. Not, she thought darkly, that *she* was to blame for the situation. If Dad and Mom hadn't insisted on dragging her away from Meyerdahl just when she'd been accepted for the junior forestry program, she'd have been on her first internship field trip by now. It wasn't *her* fault she wasn't, and the least they could do to make up for it was let her explore their own property!

"Twin Forks is *not* a 'complete null,' " her father said firmly.

"Oh yes it is," she replied with a curled lip, and Richard Harrington drew a deep breath.

He made himself step back mentally, reaching for patience, that most vital of parental qualities. The edge of guilt he felt at Stephanie's expression made it a little easier. She hadn't wanted to leave everyone she'd ever known behind on Meyerdahl, and he knew how much she'd looked forward to becoming a forestry intern, but Meyerdahl had been settled for over a thousand years . . . and Sphinx hadn't. Not only had Meyerdahl's most dangerous predators been banished to the tracts of virgin wilderness reserved for them, but its Forestry Service rangers nursemaided their interns with care, and the nature parks where they ran their junior studies programs were thoroughly "wired" with satellite com interfaces, surveillance, and immediately available emergency services. Sphinx's endless forests were not only *not* wired or watched over, but home to predators like the fearsome, five-meter-long hexapuma (and scarcely less dangerous peak bear) and totally unexplored. Over two-thirds of their flora was evergreen, as well, even here in what passed for the semi-tropical zone, and the best aerial mapping could see very little through that dense green canopy. It would be generations before humanity even began to get a complete picture of the millions of other species which undoubtedly lived in the shade of those trees.

All of which put any repetition of yesterday's solo exploration trip completely out of the question. Stephanie swore she hadn't gone far, and he believed her. Headstrong and occasionally devious she might be, but she was an honest child. And she'd taken her wrist com, so she hadn't really been out of communication and they would have been able to home in on her beacon if she'd gotten into trouble. But that was beside the point. She was his daughter, and he loved her, and all the wrist coms in the world wouldn't get an air car there fast enough if she came face to face with a hexapuma.

"Look, Steph," he said finally, "I know Twin Forks isn't much compared to Hollister, but it's the best I can offer. And you know it's going to grow. They're even talking about putting in their own shuttle pad by next spring!"

Stephanie managed—somehow—not to roll her eyes again. Calling Twin Forks "not much" compared to the city of Hollister was like saying it snowed "a little" on Sphinx. And given the long, dragging, *endless* year of this *stupid* planet, she'd almost be *seventeen T-years old* by the time "next spring" got here! She hadn't quite been ten when they arrived . . . just in time for it to start snowing. And it hadn't *stopped* snowing for the next fifteen T-months!

"I'm sorry," her father said quietly, reading her thoughts. "I'm sorry Twin Forks isn't exciting, and I'm sorry you didn't want to leave Meyerdaahl, and I'm sorry I can't let you wander around on your own. But that's the way it is, honey. And—" he gazed sternly into her brown eyes, trying not to see the tears which suddenly filled them "—I want your word that you'll do what your Mom and I tell you on this one."

Stephanie squelched glumly across the mud to the steep-roofed gazebo. *Everything* on Sphinx had a steep roof, and she allowed herself a deep, heartfelt groan as she plunked herself down on the gazebo steps and contemplated the reason that was true.

It was the snow, of course. Even here, close to Sphinx's equator, annual snowfall was measured in meters—*lots* of meters, she thought moodily—and houses needed steep roofs to shed all that frozen water, especially on a planet whose gravity was over a third higher than Old Earth's. Not that Stephanie had ever seen Old Earth . . . or *any* world which wasn't classified as "heavy grav" by the rest of humanity.

She sighed again, with an edge of wistful misery, and wished her great-great-great-great-whatever grandparents hadn't volunteered for the Meyerdaahl First Wave. Her parents had sat her down to explain what that meant shortly after her eighth birthday. She'd already heard the word "genie," though she hadn't realized that, technically at least, it applied to her, but she'd only started her classroom studies four T-years before. Her history courses hadn't gotten to Old Earth's Final War yet, so she'd had no way to know why some people still reacted so violently to any notion of modifications to the human genotype . . . and why they considered "genie" the dirtiest word in Standard English.

Now she knew, though she still thought anyone who felt that way was silly. Of *course* the bioweapons and "super soldiers" whipped up for the Final War had been bad ideas, and the damage they'd done to Old Earth had been horrible. But that had all happened five hundred T-years ago, and it hadn't had a thing to do with people like the Meyerdaahl or Quelhollow first waves. She supposed it was a good thing the original Manticoran settlers had left Sol before the Final War. Their old-fashioned cryo ships had taken over six T-centuries to make the trip, which meant they'd missed the entire thing . . . and the prejudices that went with it.

Not that there was anything much to draw anyone's attention to the changes the geneticists had whipped up for Meyerdaahl's colonists. Mass for mass, Stephanie's muscle tissue was about twenty-five percent more efficient than that of "pure strain" humans, and her metabolism ran about twenty percent faster to fuel those muscles. There were a few minor changes to her respiratory and circulatory systems and some skeletal reinforcement, as well, and the modifications had been designed to be dominant, so that all her descendants would have them. But her kind of genie was perfectly interfertile with pure-strainers, and as far as she could see all the changes put together were no big deal. They just meant that because she and her parents



needed less muscle mass for a given strength, they were ideally suited to colonize high gravity planets without turning all stumpy and bulgy-muscled. Still, once she'd gotten around to studying the Final War and some of the anti-genie movements, she'd decided Daddy and Mom might have had a point in warning her not to go around telling strangers about it. Aside from that, she seldom thought about it one way or the other . . . except to reflect somewhat bitterly that if they *hadn't* been genies, the heavy gravities of the Manticore Binary System's habitable planets might have kept her parents from deciding they simply *had* to drag her off to the boonies like this.

She chewed her lower lip and leaned back, letting her eyes roam over the isolated clearing in which she'd been marooned by their decision. The tall, green roof of the main house was a cheerful splash of color against the still-bare picket wood and crown oaks which surrounded it, but she wasn't in the mood to be cheerful, and it took very little effort to decide green was a stupid color for a roof. Something dark and drab—brown, maybe, or maybe even black—would have suited her much better. And while she was on the subject of inappropriate building materials, why couldn't they have used something more colorful than natural gray stone? She knew it had been the cheapest way to do it, but getting enough insulating capacity to face a Sphinx winter out of natural rock required walls over a meter thick. It was like living in a dungeon, she thought . . . then paused to savor the simile. It fitted her present mood perfectly, and she stored it away for future use.

She considered it a moment longer, then shook herself and gazed at the trees beyond the house and its attached greenhouses with a yearning that was almost a physical pain. Some kids knew they wanted to be spacers or scientists by the time they could pronounce the words, but Stephanie didn't want stars. She wanted . . . green. She wanted to go places no one had ever been yet—not through hyper-space, but on a warm, living, breathing planet. She wanted waterfalls and mountains, trees and animals who'd never heard of zoos. And she wanted to be the first to see them, to study them, understand them, protect them. . . .

Maybe it was because of her parents, she mused, forgetting to resent her father's restrictions for the moment. Richard Harrington held degrees in both Terran and xeno-veterinary medicine. They made him far more valuable to a frontier world like Sphinx than he'd ever been back home, but he'd occasionally been called upon by Meyerdahl's Forestry Service. That had brought Stephanie into far closer contact with her birth world's animal kingdom than most people her age ever had the chance to come, and her mother's background as a plant geneticist—another of those specialties new worlds found so necessary—had helped her appreciate the beautiful intricacies of Meyerdahl's flora, as well.

Only then they'd brought her way out here and dumped her on *Sphinx*.

Stephanie grimaced in fresh disgust. Part of her had deeply resented the thought of leaving Meyerdahl, but another part had been delighted. However much she might long for a Forestry Service career, the thought of starships and interstellar voyages had been exciting. And so had the thought of immigrating on a sort of rescue mission to help save a colony which had been almost wiped out by plague. (Although, she admitted, *that* part would have been much less exciting if the doctors hadn't found a *cure* for the plague in question.) Best of all, her parents' specialities meant the Star Kingdom had agreed to pay the cost of their transportation, which, coupled with their savings, had let them buy a huge piece of land all their own. The Harrington homestead was a rough rectangle thrown across the steep slopes of the Copperwall Mountains to overlook the Tannerman Ocean, and it measured twenty kilometers on a side. Not the twenty *meters* of their lot's frontage in Hollister, but twenty *kilometers*, which made it as big as the entire city had been back home! And it backed up against an area already designated as a major nature preserve, as

well.

But there were a few things Stephanie hadn't considered in her delight. Like the fact that their homestead was almost a thousand kilometers from anything that could reasonably be called a city. Much as she loved wilderness, she wasn't used to being *that* far from civilization, and the distances between settlements meant her father had to spend an awful lot of time in the air just getting from patient to patient. At least the planetary datanet let her keep up with her schooling and enjoy some simple pleasures—in fact, she was first in her class (again), despite the move, and she stood sixteenth in the current planetary chess competition, as well—and she enjoyed her trips to town (when she wasn't using Twin Forks' dinkiness in negotiations with her parents). But none of the few kids her age in Twin Forks were in the accelerated curriculum, which meant they weren't in any of her classes, and the settlement was totally lacking in all the amenities of a city of almost half a million people.

Yet Stephanie could have lived with that if it hadn't been for two other things: snow, and hexapumas.

She dug a booted toe into the squishy mud beyond the gazebo's bottom step and scowled. Daddy had warned her they'd be arriving just before winter, and she'd thought she knew what that meant. But "winter" had an entirely different meaning on Sphinx. Snow had been an exciting rarity on warm, mild Meyerdaahl, but a Sphinxian winter lasted almost *sixteen T-months*. That was over a tenth of her entire *life*, and she'd become well and truly sick of snow. Daddy could say whatever he liked about how other seasons would be just as long. Stephanie believed him. She even understood, intellectually, that she had the better part of four full T-years before the snow returned. But she hadn't *experienced* it yet, and all she had right now was mud. Lots and lots and *lots* of mud, and the bare beginning of buds on the deciduous trees, and boredom.

And, she reminded herself with a scowl, she also had the promise not to do anything *about* that boredom which Daddy had extracted from her. She supposed she should be glad he and Mom worried about her, but it was so . . . so *underhanded* of him to make her promise. It was like making Stephanie her own jailer, and he knew it!

She sighed again, rose, shoved her fists into her jacket pockets, and headed for her mother's office. She doubted she could get Mom to help her change Daddy's mind about grounding her, but she could try. And at least she might get a little understanding out of her.

Dr. Marjorie Harrington stood by the window and smiled sympathetically as she watched Stephanie trudge toward the house. Dr. Harrington knew where her daughter was headed . . . and what she meant to do when she got there. In a general way, she disapproved of Stephanie's attempts to enlist one parent against the other when edicts were laid down, but she understood her daughter too well to resent it in this case. And one thing about Stephanie: however much she might resent a restriction or maneuver to get it lifted, she always honored it once she'd given her word to do so.

Dr. Harrington turned from the window and headed back to her desk terminal. Her services had become much sought after in the seventeen T-months she and Richard had been on Sphinx, but unlike Richard, *she* seldom had to go to her clients. On the rare occasions when she required physical specimens rather than simple electronic data, they could be delivered to her small but efficient lab and supporting greenhouses here on the homestead as easily as to any other location, and she loved the sense of freedom that gave her. In addition, all three habitable planets of the Manticore Binary System had remarkably human-compatible biosystems. So far, she hadn't hit

any problems she couldn't find answers for fairly quickly—aside from the disappearing celery mystery, which was hardly in her area of specialization anyway—and she had a sense of helping to build something new and special here which she hadn't had on long-settled Meyerdaahl. She loved that, but for now she put her terminal on hold and leaned back in her chair while she considered the rapidly looming interview with Stephanie.

There were times when she thought it might have been nice to have a child who wasn't quite so gifted. Stephanie knew she was much further along in school than other children her age, just as she knew her IQ was considerably higher than most. What she did *not* know—and what Marjorie and Richard had no intention of telling her just yet—was that her scores placed her squarely in the top tenth of a percent of the human race. Even today, tests became increasingly unreliable as one reached the stratosphere of intelligence, which made it impossible to rank her any more positively, but Marjorie had firsthand experience of just how difficult it could be to win an argument with her. In fact, her parents, faced with an endless and inventive series of perfectly logical objections (logical, at least, from *Stephanie's* perspective) often found themselves with little option but to say "because we *said* so, that's why!" Marjorie hated using that discussion-ender, but, to her credit, Stephanie usually took it better than Marjorie had when *she* was a child.

But gifted or not, Stephanie was only eleven. She truly didn't grasp—yet—all that Sphinx's slow seasons meant. The next several weeks, Marjorie estimated, would be marked by long, dark sighs, listlessness, draggy steps (when anyone was looking, at least), and all those time-honored cues by which offspring showed uncaring parents how cruelly oppressed they were. But assuming that all concerned survived long enough for spring to get underway, Stephanie was going to find that Sphinx without snow was a far more interesting place, and Marjorie made a firm mental note to take some time away from the terminal. There was no way she could spend as many hours in the woods as Stephanie wanted to, but she could at least provide her only child with an adult escort often enough for Stephanie's habit to get a minimum fix.

Her thoughts paused, and then she smiled again as another idea occurred to her. They couldn't let Stephanie rummage around in the woods by herself, no, but there might just be another way to distract her. Stephanie had the sort of mind that enjoyed working the *Yawata Crossing Times* crossword puzzles in permanent ink. She was constitutionally incapable of resisting a challenge, so with just a little prompting . . .

Marjorie let her chair slip upright and drew a sheaf of hardcopy closer as she heard boots moving down the hall towards her office. She uncapped her stylus and bent over the neatly printed sheets with a studious expression just as Stephanie knocked on the frame of the open door.

"Mom?" Dr. Harrington allowed herself one more sympathetic smile at the put-upon pensiveness of Stephanie's tone, then banished the expression and looked up from her paperwork.

"Come in, Steph," she invited, and leaned back in her chair once more.

"Could I talk to you a minute?" Stephanie asked, and Marjorie nodded.

"Of course you can, honey," she said. "What's on your mind?"

### III

Climbs Quickly perched in his observation post once more, but the sunlit sky of three days

earlier had turned to dark, gray-black charcoal, and a stiff wind whipped in from the mountains to the west. It brought the tang of rock and snow, mingled with the bright sharpness of thunder, but it also blew across the two-legs' clearing, and he slitted his eyes and flattened his ears, peering into it as it rippled his fur. There was rain, as well as thunder, on that wind. He didn't look forward to being soaked, and lightning could make his present perch dangerous, yet he felt no temptation to seek cover, for other scents indicated his two-legs were up to something interesting in one of their transparent plant places.

Climbs Quickly cocked his head, lashing the tip of his prehensile tail as he considered. He'd come to think of this clearing's inhabitants as "his" two-legs, but there were many other two-legs on the planet, most with their own scouts keeping watch over them. Those scouts' reports, like his own, were circulated among the memory singers of all the clans, and they included something he felt a burning desire to explore for himself.

One of the cleverest of the many clever things the two-legs had demonstrated to the People were their plant places, for the People weren't *only* hunters. Like the snow hunters and the lake builders (but not the death fangs), they ate plants as well, and they required certain kinds of plants to remain strong and fit.

Unfortunately, some of the plants they needed couldn't live in ice and snow, which made the cold days a time of hunger and death, when too many of the very old or very young died. Although there was usually prey of some sort, there was less of it, and it was harder to catch, and the lack of needed plants only made that normal hunger worse. But that was changing, for the eating of plants was yet another way in which two-legs and People were alike . . . and the two-legs had found an answer to the cold days, just as they had to so many other problems. Indeed, it often seemed to Climbs Quickly that two-legs could never be satisfied with a single answer to *any* challenge, and in this case, they had devised at least two.

The simpler answer was to make plants grow where *they* wanted during the warm days, but the more spectacular one (and the one that most intrigued Climbs Quickly) were their transparent plant places. The plant places' sides and roofs, made of yet another material the People had no idea how to make, let the sun's light and heat pass through, forming little pockets of the warm days amid even the deepest snow, and the two-legs made the plants they ate grow inside that warmth all turning long. Nor did they grow them only during the cold days. There were fresh plants growing in these plant places even now, for Climbs Quickly could smell them through the moving spaces the two-legs had opened along the upper sides of the plant places to let the breeze blow in.

The People had never considered making things grow in specific places. Instead, they gathered plants wherever they grew of their own accord, either to eat immediately or to store for future need. In some turnings, they were able to gather more than enough to see them through the cold days; in less prosperous turnings, hunger and starvation stalked the clans, yet that was the way it had always been and the way it would continue. Until, that was, the People heard their scouts' reports of the two-leg plant places.

The People weren't very good at it yet, but they, too, had begun growing plants in carefully tended and guarded patches at the hearts of their clans' ranges. Their efforts had worked out poorly for the first few turnings, yet the two-legs' success proved it was possible, and they'd continued watching the two-legs and the strange not-living things which tended their open plant places. Much of what they observed meant little or nothing, but other lessons were clearer, and the People had learned a great deal. They had no way to duplicate the enclosed, transparent plant

places, of course, yet this last turning, Bright Water Clan had found itself facing the cold days with much more white root, golden ear, and lace leaf than it had required to survive them. Indeed, there had been sufficient surplus for Bright Water to trade it to the neighboring High Crag Clan for additional supplies of flint, and Climbs Quickly wasn't the only member of the clan who realized the People owed the two-legs great thanks (whether the two-legs ever knew it or not).

But what made his whiskers quiver with anticipation was something *else* the other scouts had reported. The two-legs grew many strange plants the People had never heard of—a single sharp-nosed tou of any of their outside plant places would prove that—yet most were *like* ones the People knew. But one wasn't. Climbs Quickly had yet to personally encounter the plant the other scouts had christened cluster stalk, but he was eager to do so. Indeed, he knew he was a bit *too* eager, for the bright ecstasy of the scouts who'd sampled cluster stalk rang through the relayed songs of their clans' memory singers with a clarity that was almost stunning. It wasn't simply the plant's marvelous taste, either. Like the tiny, bitter-tasting, hard to find fruit of the purple thorn, cluster stalk sharpened the Peoples' mind voices and deepened the texture of their memory songs. The People had known the virtue of purple thorn for hundreds upon hundreds of turnings—indeed, People who were denied its fruit had actually been known to lose their mind voices entirely—yet there had never been enough of it, and it had always been almost impossible to find in sufficient quantities. But the cluster stalk was even better than purple thorn (if the reports were correct), and the two-legs seemed to grow it almost effortlessly.

And unless Climbs Quickly was mistaken, that scent blowing from the two-legs' plant places matched the cluster stalk's perfume embedded in the memory songs.

He crouched on his perch, watching the sky grow still darker and heavier, and made up his mind. It would be full dark soon, and the two-legs would retire to the light and warmth of their living place, especially on a night of rain such as this one promised to be. He didn't blame them for that. Indeed, under other circumstances, he would have been scurrying back to his own snugly-roofed nest's water-shedding woven canopy. But not tonight.

No, tonight he would stay, rain or no, and when the two-legs retired, he would explore more closely than he'd ever yet dared approach their living place.

Stephanie Harrington turned up the collar of her jacket and wiggled her toes in her boots for warmth. This part of Sphinx had officially entered Spring, but nights were still cold (though far, *far* warmer than they had been!), and Stephanie was grateful for her thick, warm socks and jacket as she sat in the darkened gazebo sniffing the ozone-heavy wind. The weather satellites said the Harrington homestead was in for a night of thunder, lightning, rain, and violent wind, and cold or not, Stephanie intended to savor it to the full. She'd always liked thunderstorms. She knew some kids were frightened by them, but Stephanie thought that was stupid. She had no intention of running out into the storm with a lightning rod—or, for that matter, standing under a tree—but the spectacle of all that fire and electricity crashing about the sky was simply too exhilarating and wonderful to miss . . . and this would be the first thunderstorm she'd seen in over a T-year.

Not that she'd mentioned her intention to observe it from the gazebo to her parents. She estimated that there was an almost even chance that they would have agreed to let her stay up to enjoy the storm, but she *knew* they would have insisted that she watch it from inside. Thoughts of fireplace-popped popcorn and the hot chocolate Mom would undoubtedly have added to the experience had almost tempted her into announcing her plans, but a little further thought had dissuaded her. Popcorn and hot chocolate were nice, but the only *proper* way to enjoy her first

storm in so long was from out in the middle of it where she could feel and taste its power.

And, of course, there was that other little matter.

She smiled in the dark and patted the camera in her lap as thunder growled louder and lightning lashed the mountaintops to the west. She knew her mother had trolled the disappearing crops mystery in front of her as a distraction, but that hadn't made the puzzle any less fascinating. She didn't really expect to solve it, yet she could have fun trying, and if it just happened that she *did* find the answer, well, she was sure she could accept the credit with becoming modesty.

Her smile curled up in urchin glee at the thought. The original idea might have been her mother's, and Dr. Harrington might have lent her enthusiastic support to Stephanie's approach to the problem, but Stephanie hadn't made her mother privy to *every* facet of her plan. Part of that was to avoid embarrassment if it didn't work, but most of it came from the simple knowledge that her parents wouldn't approve of her . . . hands-on approach. Fortunately, knowing what they would have said—had the occasion arisen—was quite different from actually having them say it when the occasion *hadn't* arisen, which was why she'd carefully avoided bringing the matter up at all.

For the past year or so, a mounting number of homesteads had reported vanishing crops. At first, people had been inclined to think it was some kind of hoax, especially since only one plant ever took missing. Personally, Stephanie couldn't imagine why anyone would want to steal *celery*, which she ate only under parental insistence, but it was obvious *someone* was.

The question was who. Logically, since celery was a Terran import, humans were the only people on Sphinx who should be interested in it, but the very limited evidence available suggested otherwise. Whoever was behind it must be fiendishly clever, for they seemed able to get in and out of places no human should have been able to sneak through, and they left very little in the way of clues. But Stephanie had noticed a pattern. First, the celery was always stolen from one of the more isolated homesteads, not from any of the farm plots or greenhouses near a town. And, second, whoever was stealing it operated only at night and, if possible, under cover of bad weather. For the most part, that had meant waiting to strike a greenhouse during a snow storm, when the blizzard would blot out any tracks they might leave, but Stephanie rather suspected that the bandits would find it hard to pass up the opportunity of a good, heavy thunderstorm. And if the raiders were not, in fact, simply a bunch of humans playing adolescent pranks—if, as she suspected, something *native* to Sphinx was behind it—then lurking out here in the dark might actually prove as interesting as the solo excursions into the woods which had been denied her.

Climbs Quickly clung to his pad as groaning branches lashed the night to protest the wind that roared among them. The rumbling thunder had drawn closer, barking more and more loudly, and lightning forks had begun to play about the mountain heads to the west. The storm was going to be even more powerful than he'd thought, and he smelled cold, wet rain on its breath. It would be here soon, he thought. Very soon, which meant it was time.

He climbed down the trunk more slowly and cautiously than was his wont, for he felt the sturdy tree quivering and shivering under his claws. It took him much longer than usual to reach the ground, and he paused, still a half dozen People-lengths up the tree, to survey his surroundings. The People were quick and agile anywhere, but true safety lay in their ability to scamper up into places where things like death fangs couldn't follow. Unfortunately, Climbs Quickly's plans required him to venture into an area without handy trees, and while it was unlikely to hold any death fangs, either, he saw no harm in double-checking to be certain of that.

But scan the night though he might, he detected no dangers other than those of the weather itself, and he dropped the last distance to the ground. The mud, he noted, had begun to dry—on the top, at least—but the rain would change that. He felt the faint, pounding vibration of raindrops through the ground, coming steadily nearer, and his ears flattened in resignation. If the reports about cluster stalk proved true, getting soaked would be small enough cost for this evening's excursion, but that didn't mean he would enjoy it, and he flirted his tail and scampered quickly towards the nearest plant place.

In planning her own approach to the disappearing celery mystery, Stephanie had studied everything she could get her hands on about previous thefts. Not that there'd been much to study; the mysterious thieves didn't strike often, and their first known raids had completely surprised the colonists. Since no one had seen any reason to take precautions against celery thefts, whoever the thieves were had been able to simply walk into the fields or greenhouses, scarf up their prizes, and disappear. Given that ease of operation, Stephanie had been surprised to discover how small the original thefts had been. With so clear a field of operations, the bandits should have been able to take as much as they pleased, yet their known hauls were so small that she suspected they'd been pilfering for quite a while before anyone even noticed.

It had taken a long time for anyone to take the reports seriously, and even when the colonists finally moved to put precautions in place, they'd started by trying the predictable—and simplest—measures. But locking greenhouse doors or fencing outdoor garden plots had failed miserably. Despite the unlikeliness that any Sphinxian creature could have a taste for a Terran vegetable, opinion (among those who didn't still think it was all a hoax, at least) had hardened in favor of some clever local animal. Had whatever it was shown an interest in anything but celery, that might have been a cause for alarm; as it was, most of those who'd been raided seemed to take it as a challenge, not a threat. Whatever the pest was, it had to be small, agile, fast, and sneaky, and they were determined to figure out what it was, but they had to act within the limits of the Elysian Rule. With no clear idea what they were after, it was impossible to be sure even capture traps would be nonlethal, and the Elysian Rule absolutely forbade the use of lethal means against a complete unknown without evidence that whatever it was posed a physical danger to humans.

That rule had been adopted over a thousand years before, after a disastrous clutch of mistakes had devastated the ecology of the colony world of Elysian, and no administration on a planet in the early stages of settlement would even consider its violation without a reason far more compelling than the minuscule economic loss thefts of *celery* represented. But that hadn't ruled out trip wires, photoelectric detectors, and pressure plates. They were attached to lights or alarms or passive camera systems, but somehow the celery thieves always seemed to avoid them. There *had* been that one time when someone—or, Stephanie thought deliciously, *something*—had tripped a camera over in Jefferies Land in the middle of a howling blizzard. Unfortunately, all the exterior camera had recorded was a lot of swirling snow.

Given how hard others had been working on the mystery, Stephanie was willing to admit that it was unlikely *she* would be the one to solve it. But that wasn't the same as impossible, and she'd been very careful to leave the ventilation louvers open on the greenhouse which contained her mother's celery. The odds were against anything coming along to take advantage of the opportunity, but it wasn't as if Stephanie had a lot of other things to do just now, and she settled back in her chair, camera in her lap, as the first spatters of rain began to fall.

Climbs Quickly paused, head and shoulders rising as he stood high on his true-feet and hand-feet like—had he known (or cared)—an Old Terran prairie dog to peer into the night. This was the closest he'd ever come to his two-legs' living place, and his eyes glowed as he realized he'd been right. He *had* been tasting a mind glow from them, and he stood motionless in the darkness as he savored the texture.

It was unlike anything he'd ever tasted from another of the People . . . and yet it *wasn't* unlike. It was . . . was . . .

He sat down, curling his tail about his toes, and rubbed one ear with a true-hand while he tried to put a label on it. It *was* like the People, he decided after long, hard moments of thought, but without words. It was only the emotions, the feelings of the two-legs, without the shaping that turned those into communication, and there was a strange drowsiness to it, as if it were half-asleep. As if, he thought slowly, the mind glow rose from minds which had never even considered that anyone else might be able to taste or hear them and so had never learned to use it to communicate. Yet even as he thought that, it seemed impossible, for the glow was too strong, too powerful. Unformed, unshaped, it blazed like some marvelous flower, brighter and taller than any of the People had ever produced in Climbs Quickly's presence, and he shivered as he wondered what it would have been like if the two-legs *hadn't* been mind-blind. He felt the brightness calling to him, tempting him closer like a memory singer's song, and he shook himself. This would be a very important part of his next report to Sings Truly and Short Tail, but he certainly had no business exploring it on his own *before* he reported it. Besides, it wasn't what he'd come for.

He shook himself again, stepping back from the mind glow, but it was hard to distance himself from it. In fact, he had to make a deliberate, conscious decision not to taste it and then close his mind to it, and that took much longer to manage than he'd expected.

Yet he did manage it, eventually, and drew a deep breath of relief as he pulled free. He flipped his ears, twitched his whiskers, and began sliding once more through the darkness as the first raindrops splashed about him.

The rain came down harder, drumming on the gazebo roof. The air seemed to dance and shiver as incessant lightning split the night and thunder shook its halves, and Stephanie's eyes glowed as wind whipped spray in through the gazebo's open sides to spatter the floor and kiss her eyelashes and chilled cheeks. She felt the storm crackling about her and hugged it to herself, drinking in its energy.

But then, suddenly, a tiny light began to flash on her camera, and she froze. It couldn't be! But the light *was* flashing—*it really was!*—and that could only mean—

She pressed the button that killed the warning light, then snatched the camera up to peer through the viewfinder. Visibility was poor through the rain cascading off the gazebo roof. There was too much water in the air for a clear view, even with the camera's light-gathering technology, and the lightning didn't help as much as one might have expected. The camera adjusted to changing light levels more quickly than any human eye, but the contrast between the lightning's split-second, stroboscopic fury and the darkness that followed was too extreme.

Stephanie knew that, and she hadn't really expected to see anything just yet, anyway. Since the celery bandits had proved so clever at avoiding mechanical devices like trip wires, most of those working on the problem had opted for more subtle approaches. Photoelectric beams had been the next obvious approach, but whoever it was actually seemed to avoid them even more



readily than he—or they—avoided mechanical barriers.

But Stephanie had a theory about why that was. In every case she'd been able to research, the photoelectric system used had employed infrared. Well, obviously visible light wouldn't work for something like that, and people had used infrared for such systems just about forever. But Stephanie's discussions with her father about his work with the fledgling Sphinx Forestry Service had led her to suspect that the people setting up those systems here had failed to adequately analyze their problem. From what Daddy said, relatively new evidence suggested that Sphinx wildlife used much more of the lower end of the spectrum than human eyes. That meant a Sphinxian animal might actually see the infrared light a human couldn't, and that, in turn, would make the photoelectric beams relatively easy to avoid, so *Stephanie's* alarms used the *other* end of the spectrum.

It hadn't been hard for her and Daddy to tinker them up in his workshop, and he'd helped her weave a solid wall of ultraviolet beams to cover the opened louvers. But while he and Mom knew all about her sensors, they thought she'd connected them to the data terminal in her room. Which she had. She just hadn't mentioned that for tonight she'd disabled the audible alarm on her data terminal and set up a silent relay to her camera, instead. Mom and Daddy were smart enough to guess why she might have done that, but since they hadn't specifically asked, she hadn't had to tell them, and that meant they hadn't gotten around to forbidding her to lurk in the gazebo tonight, which was certainly the most satisfactory outcome for all concerned.

If pressed, Stephanie would have conceded that her parents might have quibbled with that last conclusion, but what mattered at this particular moment was that something had just climbed through the open louver. Whatever was stealing celery was inside the greenhouse right this minute, and she had a chance to be the very first person on Sphinx to get actual pictures of it!

She stood for a moment, biting her lip and wishing she had better visibility, then shrugged. Mom and Dad wouldn't be a *lot* madder at her for getting soaked than they'd be over her having snuck out at all, and she needed to get closer to the greenhouse. She took a second to clip the rain shield onto the camera, then dragged her hat down over her ears, drew a deep breath, and splashed down the gazebo steps into the rain-whipped night.

Climbs Quickly found it even harder to ignore the two-leg mind glows as he dropped to the soft, bare earth of the plant place's floor. The rich smells of unknown growing things filled his nostrils, and his tail twitched as he absorbed them. The transparent material of the plant place seemed far too thin to resist the rain beating upon it, yet it did, and without a single drop leaking through! The two-legs were truly clever to design a marvel like that, and he sat for a moment luxuriating in the enfolding warmth that was made somehow even warmer and more welcoming by the furious splashing of the icy, lightning-laced rain.

But he hadn't come here to be dry, he reminded himself, and his true-hands untied the carry net wrapped about his middle while he followed his nose and resolutely ignored the background mind glows of the two-legs.

Ah! There was the cluster stalk scent from Sings Truly's song! His eyes lit, and he swarmed easily up the side of the raised part of the plant place, then paused as he came face to face with cluster stalk for the very first time.

The growing heads were bigger than the ones from Sings Truly's song, and he wondered if the scout who first brought that song to his clan had sampled his first cluster stalk before it was fully grown. Whether that was true or not, each of *these* plants was two-thirds as long as Climbs

Quickly himself, and he was glad he'd brought the carry net. Still, net or not, he would have to be careful not to take too much if he expected to carry it all the way home. He sat for another long moment, considering, then flipped his ears in decision. Two heads, he decided. He could manage that much, and he could always come back for more.

But even as he decided that, he realized he'd used the need to decide to distract him from the marvelous scent of the cluster stalk. It was like nothing he'd ever smelled before, and he felt his mouth water as he drew it deep into his lungs. He hesitated, then reached out and tugged gently on an outer stalk.

It responded with a springy resistance, like the top of a white root, and he tugged harder. Still it held out, and he tugged still harder, then bleeked in triumph as the stalk came loose in his true-hand. He raised it to his nose, sniffing deeply, then stuck out his tongue.

Magic filled his mouth as he licked delicately. It was like hot, liquid sunlight on a day of frozen ice. Like cold mountain water on a day of scorching heat, or the gentle caress of a new mother, just ruffling her first kitten's delicate fur while her mind promised him welcome and warmth and love. It was—

Climbs Quickly shook his head. It wasn't actually like any of those things, he realized, except that each of them, in its own way, was wonderful and unique. It was just that he didn't have anything else he could really compare that first blissful taste to, and he nibbled gently at the end of the stalk. It was hard to chew—People didn't really have the right kind of teeth to eat plants—but it tasted just as wonderful as that first lick had promised, and he crooned in pleasure as he devoured it.

He finished the entire stalk and reached quickly for another, then made himself stop. Yes, it tasted wonderful, and he wanted more, but he was no ground burrower to gorge himself into insensibility on yellow stalk. He was a scout of the Bright Water Clan, and it was his job to carry this home for Short Tail, Bright Claw, Broken Tooth, and the memory singers to judge it for themselves. Even if they hadn't been the leaders of his clan, they were his friends, and friends shared anything this marvelous with one another.

It was actually easier to get an entire head out of the soft earth in which it grew than it had been to peel off that single stalk, and Climbs Quickly soon had two of them rolled up in his carry net. They made an awkward bundle, but he tied the net as neatly as he could and slung it onto his back, reaching up to hold the hand loops with his mid-limbs' hand-feet while he used true-feet and true-hands to climb back down to the floor. Getting to the opening to the outer world would be more difficult with his burden than it had been coming in, but he could manage. He might not be very fast or agile, but not even a death fang would be out on a night like this!

Stephanie was glad her jacket and trousers were waterproof, and her broad-brimmed hat kept her head and face dry. But holding the camera on target required her to raise her hands in front of her, and ice-cold rain had flooded down the drain pipes of her nice, waterproof jacket sleeves. She felt it puddling about her elbows and beginning to probe stealthily towards her shoulders—just as her forearms were raised, her upper arms were parallel to the ground, providing an all too convenient channel for the frigid water—but all the rain in the world couldn't have convinced her to lower her camera at a moment like this.

She stood no more than ten meters from the greenhouse, recording steadily. Her camera's storage chip was good for over ten hours, and she had no intention of missing any of this for the official record. Excitement trembled inside as the minutes passed in the splashing, lightning-

slivered darkness. Whatever it was had been inside the greenhouse for nine minutes now, *surely* it would be coming back out pretty s—

Climbs Quickly reached the opening with a profound sense of relief. He'd almost dropped his carry net twice, and he decided to catch his breath before leaping down into the rain with his prize. After all, he had plenty of ti—

A whisker-fringed muzzle and prick-eared head poked out of the opening, green eyes glowing emerald as lightning stuttered, and the universe seemed to stop as their owner found himself staring into the glassy eye of a camera in the hands of an eleven-year-old girl. Excitement froze Stephanie's breath, even though she'd known this moment was coming, but Climbs Quickly *hadn't* known. His surprise was total, and he went absolutely motionless in astonishment.

Seconds ticked past, and then he shook himself mentally. Showing himself to a two-leg was the one thing he'd been most firmly instructed *not* to do, and he cringed inwardly at how Short Tail would react to this. He knew he could claim distraction on the basis of the storm and his first experience with cluster stalk, but that wouldn't change his failure into success, and he stared down at the two-leg while his mind began to work once more.

It was the youngling, he realized, for it was smaller than either of its parents. He didn't know what it was pointing at him, but from all reports, he would have been dead already if the two-leg had intended to kill him. Yet deciding the thing aimed his way wasn't a weapon didn't tell him what it *was*. Those thoughts flashed through his brain in a heartbeat, and then, without really thinking about it, he reached out to the two-leg's mind glow in an effort to judge its intentions.

He was totally unprepared for the consequences. It was as if he'd looked straight up into the sun expecting to see only the glow of a single torch, and his eyes flared wide and his ears flattened as the intensity of the two-leg's emotions rolled over him. The glow was far brighter than before, and he wondered distantly if that was simply because he was closer and concentrating upon it, or if the cluster stalk he'd sampled might have something to do with it. But it didn't really matter. What mattered was the excitement and eagerness and wonder that blazed so brightly in the two-leg's mind. It was the first time any of the People had ever come face-to-face with a two-leg, and nothing could have prepared Climbs Quickly for the sheer delight with which Stephanie Harrington saw the marvelous, six-limbed creature crouched in the ventilation louver with the woven net of purloined celery slung over its back.

The representatives of two intelligent species, one of which had never even suspected the other's existence, stared at one another in the middle of a howling thunderstorm. It was a moment which could not last, yet neither wanted it to end. Stephanie felt her sense of triumph and excited discovery flow through her like a fountain, and she had no idea that Climbs Quickly felt those emotions even more clearly than he would have felt them from another of his own kind. Nor could she have guessed how very much he wanted to *continue* feeling them. She knew only that he crouched there, gazing at her for what seemed like forever, before he shook himself and leapt suddenly down and outward.

Climbs Quickly pulled free of the two-leg's mind glow. It was hard—possibly the hardest thing he'd ever done—yet he had his duty, and so he made himself step back from that wonderful, welcoming furnace. Or, rather, he stepped *away* from it, for it was too strong, too intense,

actually to disconnect from. He could turn his eyes away from the fire, but he could not pretend it did not blaze.

He shook himself, and then he launched outward into the rain and darkness. He was slow and clumsy with the net of cluster stalk on his back, but he knew as surely as he'd ever known anything in his life that this young two-leg meant him no harm. The secret of the People's existence was already revealed, and haste would change nothing, so he sat upright in the rain for a moment, gazing up at the two-leg, who finally lowered the strange thing it had held before its face to look down at him with its own eyes. He met those odd, brown, round-pupiled eyes for a moment, then flicked his ears, turned, and scampered off.

Stephanie watched the intruder vanish with a sense of wonder which only grew as the creature disappeared. It was small, she thought, no more than sixty or seventy centimeters long, though its tail would probably double its body length. An arboreal, her mind went on, considering its tail and the well-developed hands and the claws she'd seen as it clung to the lip of the louver. And those hands, she thought slowly, might have had only three fingers each, but they'd also had fully opposable thumbs. She closed her eyes, picturing it once more, seeing the net on its back, and knew she was right.

The celery snatcher might *look* like a teeny-tiny hexapuma, but that net was incontrovertible evidence that the survey crews had missed the most important single facet of Sphinx. But that was all right. In fact, that was just *fine*. Their omission had abruptly transformed this world from a place of exile to the most marvelous, exciting place Stephanie Harrington could possibly have been, for she'd just done something which had happened only eleven other times in the fifteen centuries of mankind's diaspora to the stars.

She'd just made first contact with a tool-using, clearly sentient, alien race.

The only question now was what to do about it.

## IV

Climbs Quickly lay on his back outside his nest, belly fur turned to the sun, and did his best to convince the rest of his clan he was asleep. He knew he wasn't fooling anyone who cared to taste his mind glow, but good manners required them to pretend he was.

Which was just as well, for blissful as it was, the comfort of the drowsy sunlight was far too little to distract him from the monumental changes in his life. Facing his clan leaders and admitting that he'd let one of the two-legs actually see him—and even worse, see him in the very process of raiding their plant place—had been just as unpleasant as he'd feared.

People seldom physically attacked other People. Oh, there were squabbles enough, and occasional serious fights—usually, though not always, limited to younger scouts or hunters—and even rarer situations in which entire clans found themselves feuding with one another or fighting for control of their ranges. No one was particularly proud of such situations, but the ability to hear one another's thoughts and taste one another's emotions didn't necessarily make other People any easier to live with or fill a clan's range with prey when it was needed. But a clan's leaders normally intervened before anything serious could happen *within* a clan, and it was rare indeed for one member of a clan to deliberately attack another unless there was something

fundamentally wrong with the attacker. Climbs Quickly himself could remember an occasion on which High Crag Clan had been forced to drive out one of its scouts, a rogue who *had* attacked other People. The exile had crossed into the Bright Water range, killing prey not just to live but for the sheer joy of killing, and raided Bright Water's storage places. He'd even attacked and seriously injured a Bright Water scout while attempting to steal a mother's kittens . . . for purposes Climbs Quickly preferred not to consider too deeply. In the end, the clan's scouts and hunters had been forced to hunt him down and kill him, a grim necessity none had welcomed.

So Climbs Quickly hadn't expected any of the Bright Water leaders to assault him, and they hadn't. But they *had* left him feeling as if they'd skinned him and hung his hide up to dry. It wasn't even the things they'd said so much as the way they'd said them.

Climbs Quickly's ears flicked, and he squirmed, turning to catch the sun more fully, as he recalled his time before Bright Water's leaders. Sings Truly had been present as the clan's second singer and the obvious heir to the first singer's position when Song Spinner died or surrendered her authority, but even Sings Truly had been shocked by his clumsiness. She hadn't scolded him the way Short Tail or Broken Tooth had, yet tasting his sister's wordless reproach had been harder for Climbs Quickly to bear than all of Broken Tooth's cutting irony.

He'd tried to explain, as clearly and undefensively as possible, that he'd never *meant* to let the two-leg see him, and he'd suggested the possibility that somehow the two-leg had known he was in the plant place even before seeing him. Unfortunately, his suspicion rested on the mind glow of the two-leg, and although none of the others had actually said so, he knew they found it difficult to believe a two-leg's mind glow could tell one of the People so much. He even knew why they thought that way, for no other scout had ever come close enough to—or concentrated hard enough upon—a two-leg to realize how wonderfully, dreadfully powerful that mind glow truly was.

<I believe that you believe the two-leg had some way of knowing you were there,> Short Tail had told him judiciously, his mind voice grave, <yet I fail to see how it could have. You saw none of the strange lights or tool things the two-legs have used to detect other scouts, after all.>

<True,> Climbs Quickly had replied as honestly as possible, <yet the two-legs are very clever. I saw none of the tool things I knew to look for, but does that prove the two-legs have no tool things we have not yet learned of?>

<You hunt for ground runners in the upper branches, little brother,> Broken Tooth, the most senior of Bright Water's elders, had put in sternly. <You allowed the two-leg not simply to see you but to see you raiding its range. I do not doubt you tasted its mind glow, but neither do I doubt that you tasted within that mind glow that which it was most important for you to taste.>

Much as Broken Tooth's charge had angered Climbs Quickly, he'd been unable to counter it effectively. The feelings of the mind glow were always much easier to misinterpret, even among the People, than thoughts which were formed into words, and it was only reasonable for Broken Tooth, who'd never tasted a two-leg mind glow, to assume that it would be even more difficult to interpret those of a totally different creature. Climbs Quickly knew—didn't think; *knew*—that the two-leg's mind glow had been so strong, so vibrant, that he literally *could not* have read it wrongly, yet when he couldn't explain how he knew that even to himself, he could hardly blame the clan's leaders for failing to grasp the same fact.

And so, because he couldn't explain, he'd accepted his scolding as meekly as possible. The cluster stalk he'd brought home had muted that scolding to some extent, for it had proved just as marvelous as the songs from other clans had indicated, but not even that had been enough to

deflect the one consequence he truly resented.

He had been relieved of his responsibility to watch over his two-legs, and Shadow Hider, another scout (who just happened to be a grandson of Broken Tooth), had been assigned that task in his place. He understood why, however much he disliked it, for the People had only to watch them cutting down trees with their whining tools that ate through the trunks of trees large enough to hold whole clans of the People or using the machines that gouged out the deep holes in which they planted their living places to recognize the potential danger the two-legs represented. They need not decide to kill the People or destroy a clan's entire range to accomplish the same end by accident, and so the People had decided that their only true safety lay in avoiding them entirely. The clans must stay undetected, observing without being observed, until they decided how best to respond to the strange creatures who so confidently and competently reshaped the world.

Unfortunately, Climbs Quickly had come to doubt the wisdom of that policy. Certainly caution was necessary, yet it seemed to him that many People—such as Broken Tooth and his like among the other clans—had become too aware of the potential danger and too *unaware* of the possible advantages the two-legs presented. Perhaps without even realizing it, they had decided deep down inside that the time for the two-legs to learn of the People's existence would never come, for only thus could the People be safe.

But though Climbs Quickly had too much respect for his clan's leaders to say so, the hope that the two-legs would never discover the People was foolishness. There were more two-legs with every turning, and their flying things and long-seeing things and whatever the young two-leg had used to detect his own presence were too clever for the People to hide forever. Even without his encounter with the two-leg, the People would have been found sooner or later. And when that happened—or perhaps, more accurately, now that it *had* happened—the People would have no choice but to decide how they would interact with the two-legs . . . assuming, of course, that the two-legs *allowed* the People to make that decision.

All of that was perfectly clear to Climbs Quickly and, he suspected, to Sings Truly, Short Tail, and Bright Claw, the clan's senior hunter. But Broken Tooth, Song Spinner, and Digger, who oversaw the clan's plant places, rejected that conclusion. They saw how vast the world was, how many hiding places it offered, and believed they *could* avoid the two-legs forever, even now that the two-legs knew the People existed.

He sighed again, and then his whiskers twitched with wry amusement as he wondered if the young two-leg was having as many difficulties getting its elders to accept *its* judgment. If so, should Climbs Quickly be grateful or unhappy? He knew from its mind glow that the youngling had felt only wonder and delight, not anger or fear, when it saw him. Surely if its elders shared its feelings, the People had nothing to fear. Yet the fact that one two-leg—and one perhaps little removed from kittenhood—felt that way might very well mean no more to the rest of the two-legs than *his* feelings meant to Broken Tooth.

Climbs Quickly lay basking in the sunlight, considering all that had happened—and all that still threatened to happen—and understood the fear of Broken Tooth and his supporters. Indeed, a part of him shared their fear, but another part knew events had already been set in motion. The two-legs knew of the People's existence now. They would react to that, whatever the People did or didn't do, and all Broken Tooth's scolding could never prevent it.

Yet there was one thing Climbs Quickly hadn't reported, something he had yet to come to grips with himself and something he feared might actually panic Bright Water's leaders into abandoning their range and fleeing deep into the mountains. Perhaps that flight would actually be

the path of wisdom, he admitted, but it might also cast away a treasure such as the People had never before encountered. It was scarcely the place of a single scout to make choices affecting his entire clan, yet no one else *could* make this decision, for he alone knew that somehow, in a way he couldn't begin to understand, he and the young two-leg now shared something.

He wasn't certain what that "something" was, but even now, with his eyes closed and the two-legs' clearing far away, he knew *exactly* where the youngling was. He could feel its mind glow, like a far-off fire or sunlight shining red through his closed eyelids. It was too distant for him to taste its emotions, yet he knew it wasn't his imagination. He truly *did* know the direction to the two-leg, even more clearly than the direction to Sings Truly, who was no more than twenty or thirty People-lengths away at this very moment.

Climbs Quickly had no idea at all what that might mean or where it might lead, but two things he did know. His connection, if such it was, to the young two-leg might—*must*—hold the key, for better or for worse, to whatever relationship People and two-legs might come to share. And until *he* decided what that connection meant in his own case, he dared not even suggest its existence to those who felt as Broken Tooth.

## V

Stephanie leaned back in the comfortable chair, folded her hands behind her head, and propped her sock feet on her desk in the posture which always drew a scold from her mother. Her lips were pursed in a silent, tuneless whistle that was an all but inevitable complement to the vague dreaminess of her eyes . . . and which would, had she let her parents see it, instantly have alerted them to the fact that their darling daughter was Up To Something.

The problem was that for the first time in a very, very long time, she had only the haziest idea of precisely what she was up to. Or, rather, of how to pursue her objective. Uncertainty was an unusual feeling for someone who usually got into trouble by being too positive about things, yet there was something rather appealing about it, too. Perhaps because of its novelty.

She frowned, closed her eyes, tipped her chair further back, and thought harder.

She'd managed to evade detection on her way to bed the night of the thunderstorm. Oddly—though it hadn't occurred to her that it *was* odd until much later—she hadn't even considered rushing to her parents with her camera. The knowledge that humanity shared Sphinx with another sentient species was *her* discovery, and she'd felt strangely disinclined to share it. Until she did, it was not only her discovery but her secret, and she'd been almost surprised to realize she was determined to learn all she possibly could about her unexpected neighbors before she let anyone else know they existed. She wasn't certain when she'd decided that, but once she had, it had been easy to find logical reasons for her decision. For one thing, the mere thought of how some of the kids in Twin Forks would react was enough to make her shudder. Given their determination to catch everything from chipmunks (which didn't look at *all* like Meyerdaahl's—or, for that matter, Old Terra's—chipmunks) to near-turtles as pets, they'd be almost certain to pursue these new creatures with even greater enthusiasm and catastrophic results.

She'd felt rather virtuous once she got that far, but it didn't come close to solving her main problem. If she didn't tell anybody, how did she go about learning more about them on her own? Stephanie knew she was brighter than most, but she also knew someone else would eventually

catch a celery thief in the act. When that happened her secret would be out, and she was determined to learn everything she possibly could about them before that happened.

And, she thought, she was starting with a clean slate. She'd accessed the datanet without finding a single word about miniature hexapumas with hands. She'd even used her father's link to the Forestry Service to compare her camera imagery to known Sphinxian species, only to draw a total blank. Whatever the celery snatcher was, no one else had ever gotten pictures of one of his—or had it been *her?*—relatives or even uploaded a verbal description of them to the planetary database, and that said as much about their intelligence as the raider's woven net had. A planet was a big place, but from the pattern of celery thefts, these creatures must be at least as widely distributed as Sphinx's colonists. The only way they could have gone undetected for over fifty T-years was by deliberately avoiding humans . . . and that indicated a reasoned response to the colonists's presence *and* the existence of a language. Hiding so successfully had to indicate a deliberate, conscious, *shared* pattern of activity, and how could they coordinate that well without the ability to talk to one another? So they were not only tool-users but language-users, and their small size made that even more remarkable. The one Stephanie had seen couldn't have had a body length of more than sixty centimeters or weighed more than thirteen or fourteen kilos, and no one had ever before encountered a sentient species with a body mass that low.

Stephanie got that far without much difficulty. Unfortunately, that was as far as she *could* get without more data, and for the first time she could recall, she didn't know how to get any more. She might be first in her class, and she might have made it into the final round of the planetary chess championship, and she might approach most problems with complete confidence, but this time she was stumped. She'd exhausted the available research possibilities, so if she wanted more information, she had to get it for herself. That implied some sort of field research, but how did an eleven year old—and one who'd promised her parents she wouldn't tramp around the woods alone—investigate a totally unknown species without even telling anyone it existed?

In a way, she was actually grateful that her mother had found herself too tied down by her current projects to go for those nature hikes she'd promised to try to make time for. Stephanie had been grateful when her mother made the offer, though she'd realized even then that with her mom along her hikes could hardly have offered the sort of intensive investigation for which she'd longed. Now, however, her mother's presence would have posed a serious obstacle for any attempt to pursue private research in secret.

It was perhaps unfortunate, however, that her father, in an effort to make up for her "disappointment" over her mother's schedule, had decided to distract her by resuming the hang-gliding lessons their departure from Meyerdaahl had interrupted. Stephanie loved the exhilaration of flight, even if Daddy did insist that she take along an emergency countergrav unit "just in case," and no one could have been a better teacher than Richard Harrington, who'd made it into the continental hang-gliding finals on Meyerdaahl three times. But the time she spent on gliding lessons was time she didn't spend investigating her fascinating discovery, and if she *didn't* spend time on the lessons—and obviously enjoy them—her parents would suspect she had something else on her mind. Worse, Daddy insisted on flying into Twin Forks for her lessons. That made sense, since unlike her mom he had to be "on call" twenty-five hours a day and Twin Forks was the central hub for all the local homesteads. He could reach any of them quickly from town, and teaching the lessons there let him enlist the two or three other parents with gliding experience as assistant teachers and offer the lessons to all the settlement's other kids, as well. That was exactly the sort of generosity Stephanie would have expected of him, but it also meant her lessons were not only eating up an enormous amount of her free time but taking her over eighty kilometers



away from the place where she was more eager than ever to begin the explorations she'd promised her parents she wouldn't undertake.

She hadn't found a way around her problems yet, but she was determined that she *would* find one—and without breaking her promise, however much that added to her difficulties. But at least it hadn't been hard to give the species a name. It looked like an enormously smaller version of a "hexapuma," and like the hexapuma, there was something very (or perhaps inevitably) *feline* about it. Of course, Stephanie knew "feline" actually referred only to a very specific branch of Old Terran evolution, but it had become customary over the centuries to apply Old Terran names to alien species (like the Sphinxian "chipmunks" or "near-pine"). Most claimed the practice originated from a sort of racial homesickness and a desire for familiarity in alien environments, but Stephanie thought it was more likely to stem from laziness, since it let people avoid thinking up new labels for everything they encountered. Despite all that, however, she'd discovered that "treecat" was the only possible choice when she started considering names, and she hoped the taxonomists would let it stand when she finally had to go public with her discovery, though she suspected rather glumly that her age would work against her in that regard.

And if she hadn't figured out how to go about investigating the treecats without breaking her promise—which was out of the question, however eager she might be to proceed—at least she knew the direction in which to start looking. She had no idea how she knew, but she was absolutely convinced that she would know exactly where to go when the time came.

She closed her eyes, took one arm from behind her head, and pointed, then opened her eyes to see where her index finger was aimed. The direction had changed slightly since the last time she'd checked, and yet she knew beyond a shadow of a doubt that she was pointing directly at the treecat who'd raided her mother's greenhouse.

And that, she reflected, was the oddest—and most exciting—part of the whole thing.

## VI

Marjorie Harrington finished writing up her latest microbe-resistant strain of squash, closed the file, and sat back with a sigh. Some of Sphinx's farmers had argued that it would be much simpler (and quicker) just to come up with something to swat the microbe in question. That always seemed to occur to the people who faced such problems, and sometimes, Marjorie was prepared to admit, it was not only the simplest but also the most cost effective and ecologically sound answer. That was especially true when the parasite in question was itself a new strain, a new mutation rather than an old, established part of the ecosystem. But in this case, she and the planetary administration had resisted firmly, and her final solution—which, she admitted, had taken longer than a more aggressive one might have—had been to select the least intrusive of three possible genetic modifications to the plant rather than going after the microbe. It was always a good idea for people on a planet whose biosystem they were still in the process of exploring to exercise the greatest possible care to limit the impact of their actions *on* that biosystem, and she expected the agricultural cartels and Interior Ministry officials to be quite pleased with her solution, despite the cost of all the additional hours she'd put into the project.

She made a wry face at the thought of the bureaucrats. She had to admit that the local varieties were far less intrusive—and more reasonable—than their equivalents on Meyerdaahl, but

the Star Kingdom was barely sixty T-years old. No doubt it would have all the entrenched bureaucracies the least imaginative, most procedure-loving clerical tyrant could desire by the time it was Meyerdahl's age.

Her wry expression turned into a grin remarkably like her daughter's, then faded as she turned her mind from squash to other matters. Her work load had grown much heavier over the past weeks as Sphinx's southern hemisphere moved steadily towards planting time, and now that the squash project was out of the way her nagging sense of guilt returned full force. It was hardly her fault that the press of assignments had kept her from finding the time for long hikes with Stephanie, but she hadn't even been able to free up the time to help her daughter explore possible answers to the celery pilferage which had finally reached the Harrington Homestead.

She was thankful that Richard had at least resumed Stephanie's hang-gliding lessons as a combination diversion and compensation. It had been a brilliant idea on his part, and Stephanie had responded with enthusiasm. Marjorie could only be grateful that she seemed to enjoy it so much—she'd started spending hours in the air, checking in periodically over her wrist com—and, despite the vocal worry of some of the Twin Folks parents whose kids were also learning to glide, Marjorie wasn't especially worried by the risks involved in her daughter's new hobby. She'd never pursued the sport herself, but it had been quite popular on Meyerdahl, where she'd known dozens of avid practitioners. And unlike some parents, she'd learned—not without difficulty, she admitted—that it was impossible to keep her only child wrapped in cotton wool. Children might not be indestructible, but they came far closer to it than most adults were prepared to admit, and a certain number of bumps, scrapes, contusions, bruises, or even broken bones were among the inevitable rites of childhood, whether or not parents liked that fact.

Yet if Marjorie had no particular qualms over Stephanie's new interest, she was still unhappily certain that Stephanie had embraced it mainly as a diversion from her disappointment in other directions. Appearances might suggest Stephanie had forgotten all about her hunger to explore the homestead's endless forests, but appearances could be deceiving, and Marjorie knew her daughter too well to believe she had, in fact, relinquished her original ambitions, however outwardly cheerful her acceptance of an alternate activity.

Marjorie rubbed her nose pensively. She had no doubt Stephanie understood—at least intellectually—how important her own work was and why it had precluded the other activities they'd discussed, but that only made it almost worse. However bright Stephanie might be, she was also only eleven, and understanding and acceptance were too often two completely different things even for adults. Besides, whether Stephanie *accepted* it or not, the situation was grossly unfair to her, and "fairness" was of enormous importance to children . . . even going-on-twelve geniuses. Although Stephanie seldom sulked or whined, Marjorie had expected to hear quite a bit of carefully reasoned comment on the subject of fairness, and the fact that Stephanie hadn't complained at all only sharpened Marjorie's sense of guilt. It was as if Stephanie—

The hand rubbing Dr. Harrington's nose suddenly stopped moving as a fresh thought struck her, and she frowned, wondering why it hadn't occurred to her before. It wasn't as if she didn't know her daughter, after all, and this sort of sweet acceptance was very unlike Stephanie. No, she *didn't* sulk or whine, but neither did she give up without a fight on something to which she'd truly set her mind. And, Marjorie thought, while Stephanie had *enjoyed* hang-gliding back on Meyerdahl, it had never been the passion for her that it seemed to have become here. It was certainly possible that she'd simply discovered that she'd underestimated its enjoyment quotient on Meyerdahl, but Marjorie's abruptly roused instincts said something else entirely.

She ran her memory back over her more recent conversations with her daughter, and her suspicion grew. Not only had Stephanie not complained about the unfairness of her grounding or the "zorkiness" of the younger citizens of Twin Forks who shared her gliding lessons, but it was over two weeks since she'd even referred to the mysterious celery thefts, and Marjorie scolded herself harder for falling into the error of complacency. She understood exactly how it had happened—given the pressures of her current projects, she'd been too grateful for Stephanie's restraint to adequately consider its roots—but that was no excuse. All the signs were there, and she should have realized that the only thing which could produce such a tractable Stephanie was a Stephanie who was Up To Something and didn't want her parents to notice.

But what *could* she be up to? And *why* didn't she want them to notice? The only thing she'd been forbidden was the freedom to explore the wilderness on her own, and Marjorie was confident that, however devious she might sometimes be, Stephanie would never break a promise. Yet if she was using her sudden interest in hang-gliding as a cover for something else, then whatever she was up to must be something she calculated would arouse parental resistance. Her daughter, Marjorie thought with affection-laced exasperation, was entirely too prone to figure that anything which hadn't been specifically forbidden was legal . . . whether or not the *opportunity* to forbid it had ever been offered.

On the other hand, Stephanie wasn't the sort to prevaricate in the face of specific questions. If Marjorie sat her down and asked her, she'd open up about whatever she was up to. She might not want to, but she'd do it, and Marjorie made a firm mental note to set aside enough time to explore the possibilities—thoroughly.

## VII

Stephanie whooped in sheer exuberance as she rode the powerful updraft. Wind whipped her short, curly hair, and she leaned to one side, banking the glider as she sliced still higher. The countergrav unit on her back could have taken her higher yet—and done it more quickly—but it wouldn't have been anywhere near as much *fun* as this was!

She watched the treetops below her and felt a tiny stir of guilt buried in her delight. She was safely above those trees—not even the towering crown oaks came anywhere near her present altitude—but she also knew what her father would have said had he known where she was. The fact that he *didn't* know, and thus *wouldn't* say it wasn't quite enough for her to convince herself her actions weren't just a *bit* across the line, but she could always say—truthfully—that she hadn't broken her word. She wasn't walking around the woods by herself, and no hexapuma or peak bear could possibly threaten her at an altitude of two or three hundred meters.

For all that, innate self-honesty forced her to admit that she knew her parents would instantly have countermanded her plans if they'd known of them. But Daddy had been forced to cancel today's lesson because of an emergency house call, and he'd commed Mr. Saprastos, the Twin Forks' mayor who usually subbed for him in the gliding classes. Mr. Saprastos had agreed to take over for the day, but Daddy hadn't specifically told him Stephanie would be there. The autopilot in Mom's air car could have delivered her under the direction of the planetary air traffic computers, and he'd apparently assumed that was what would happen. Unfortunately—or fortunately, depending on one's viewpoint—his haste had been so great that he hadn't asked Mom to arrange transportation. (Stephanie was guiltily certain that he'd expected *her* to tell her mother.

But, she reminded herself, he hadn't actually *told* her to, had he?)

All of which meant Daddy thought she was with Mr. Sapristos but that Mr. Sapristos and Mom both thought she was with *Daddy*. And that just happened to have given Stephanie a chance to pick her own flight plan without having to explain it to anyone else.

It wasn't the first time the same situation had arisen . . . or that she'd capitalized upon it. But it wasn't the sort of opportunity an enterprising young woman could expect to come along often, either, and she'd jumped at it. She'd had to, for the long Sphinxian days were creeping past, and none of her previous unauthorized flights had given her big enough time windows. Avoiding parental discovery had required her to turn back short of the point at which she *knew* her treecats lurked, and if *she* didn't find out more about them soon, someone else was bound to. Of course, she couldn't expect to learn much about them flying around overhead, but that wasn't really what she was after. If she could just pinpoint a location for them, she was sure she could get Daddy to come out here with her, maybe with some of his friends from the Forestry Service, to find the physical evidence to support her discovery. And, she thought, her ability to tell them where to look would also be evidence of her strange link with the celery thief—a link, she was certain, which would require a *lot* of evidence before anyone else was prepared to accept it.

She closed her eyes, consulting her inner compass once more, and smiled. It was holding steady, which meant she was headed in the right direction, and she opened her eyes once more.

She banked again, very slightly, adjusting her course to precisely the right heading, and her face glowed with excitement. She was on track at last. She *knew* she was, just as she knew that this time she had enough flight time to reach her goal, and she was quite correct. Unfortunately, she was also very young, and for all her brilliance, she'd made one small mistake.

Climbs Quickly paused, one true-hand stopped in mid-reach for the branch above, and his ears flattened. He'd become accustomed to his ability to sense the direction to the two-leg youngling, even if he still hadn't mentioned it to anyone else. He'd even become used to the way the youngling sometimes seemed to move with extraordinary speed—no doubt in one of the two-legs' flying things—but this was different. The youngling *was* moving quickly, though not as quickly as it sometimes had, but it was headed directly towards Climbs Quickly—and already far closer than it had come since he'd been relieved of his spying duties—and he felt a sudden chill.

There was no question. He recognized exactly what the youngling was doing, for he'd done much the same thing often enough in the past. True, *he* usually pursued his prey by scent, but now he understood how a ground runner must have felt when it realized he was on its trail, for the two-leg was using the link between them in exactly the same way. It was *tracking* him, and if it found him, it would also find Bright Water Clan's central nesting place. For good or ill, its ability to seek out Climbs Quickly would result in the discovery of his entire clan!

He stood for one more moment, heart racing, ears flat with mingled excitement and fear, then decided. He abandoned his original task and bounded off along an outstretched limb, racing to meet the approaching two-leg well away from the rest of his clan.

Stephanie's attention was locked on the trees below her now. Her flight had lasted over two hours, but she was drawing close at last. She could feel the distance melting away—indeed, it almost seemed the treecat was coming to meet her—and excitement narrowed the focus of her attention even further. The crown oak had thinned as she moved higher into the foothills. Now

the woods below her were a mix of various evergreens and the crazy-quilt geometry of picket wood.

Of course they were, she thought, and her eyes brightened. The rough-barked picket wood would be the perfect habitat for someone like her little celery thief! Each picket wood system radiated from a single central trunk which sent out long, straight, horizontal branches at a height of between three and ten meters. Above that, branches might take on any shape; below it, they always grew in groups of four, radiating at near-perfect right angles from one another for a distance of ten to fifteen meters . . . at which point, each sent a vertical runner down to the earth below to establish its own root system and, in time, become its own nodal trunk. A single picket wood "tree" could extend itself for literally hundreds of kilometers in any direction, and it wasn't uncommon for one "tree" to run into another and fuse with it. When the lateral branches of two systems crossed, they merged in a node which put down its own runner.

Stephanie's mother was fascinated by the picket woods. Plants which spread by sending out runners weren't all that rare, but those which spread *only* via runner were. It was also more than a little uncommon for the runner to spread out through the air and grow down to the earth rather than the reverse, but what truly fascinated her was the tree's anti-disease defense mechanism. The unending network of branches and trunks should have made a picket wood system lethally vulnerable to diseases and parasites, but the plant had demonstrated a sort of natural quarantine process. Somehow—and Dr. Harrington had yet to discover how—a picket wood system was able to sever its links to afflicted portions of itself. Attacked by disease or parasites, the system secreted powerful cellulose-dissolving enzymes that ate away the connecting cross-branches and literally disconnected them at intervening nodal trunks, and Dr. Harrington was determined to locate the mechanism which made that possible.

But at the moment, her mother's interest in picket wood meant very little to Stephanie beside her realization of the same plant's importance to treecats. Picket wood stopped well short of the tree line, but it crossed mountains readily through valleys or at lower elevations, and it could be found in almost every climate zone. All of which meant it would provide treecats with the equivalent of aerial highways that could literally run clear across a continent! They could travel for hundreds—thousands!—of kilometers without ever once having to touch the ground where larger predators like hexapumas could get at them!

She laughed aloud at her deduction, but then her glider slipped abruptly sideways, and her laughter died as she stopped thinking about the sorts of trees beneath her and recognized instead the speed at which she was passing over them. She raised her head and looked around quickly, and a fist of ice seemed to squeeze her stomach.

The clear blue skies under which she had begun her flight still stretched away in front of her to the west. But the eastern sky *behind* her was no longer clear. A deadly looking line of thunderheads marched steadily west, white and fluffy on top but an ominous purple-black below, and even as she looked over her shoulder, she saw lightning flicker below them.

She should have seen it coming sooner, she thought numbly, hands aching as she squeezed the glider's grips in ivory-knuckled fists. She should have kept an eye out for it! But she was used to having other people—*adult* people—check the weather before she went gliding, and then she'd let herself get so excited, focus so intently on what she was doing, pay so little attention—

A harder fist of wind punched at her glider, staggering it in mid-air, and fear became terror. The following wind had been growing stronger for quite some time, a small, logical part of her realized. No doubt she would have noticed despite her concentration if she hadn't been gliding in

the same direction, riding in the wind rather than across or against it where the velocity shift would *have* to have registered. But the thunderheads behind were catching up with her quickly, and the outriders of their squall line lashed through the airspace in front of them.

*Daddy!* She had to com Daddy—tell him where she was—tell him to come get her—tell him—!

But there was no time. She'd messed up, and for the first time in her life, Stephanie Harrington confronted her own mortality. All the theoretical discussions of what to do in bad weather, all the stern warnings to avoid rough air, came crashing in on her, and they were no longer theoretical. She was in deadly danger, and she knew it. Countergrav unit or no, a storm like the one racing up behind her could blot her out of the air as casually as she might have swatted a fly, and with just as deadly a result. She could die in the next few minutes, and the thought terrified her, but she didn't panic.

Yes, she had to com Mom and Daddy, but it wasn't as if she didn't know exactly what they'd tell her to do if she did. She had to get out of the air, and she couldn't afford the distraction of trying to explain where she was while she tried to get down safely . . . especially through that solid-looking green canopy below her.

She banked again, shivering with fear, eyes desperately seeking some opening, however small, and the air trembled as thunder rumbled behind her.

Climbs Quickly reared up on true-feet and hand-feet, lips wrinkling back from needle-sharp white fangs as a flood of terror crashed over him. It pounded deep into him, waking the ancient fight-or-flight instinct which, had he but known it, his kind shared with humanity, but it wasn't *his* terror at all.

It took him an instant to realize that, yet it was true. It wasn't his fear; it was the two-leg youngling's, and even as the youngling's fear ripped at him, he felt a fresh surge of wonder. He was still too far from the two-leg. He could never have felt another of the People's mind glow at this distance, and he knew it, but this two-leg's mind glow raged through him like a forest fire, screaming for his aid without even realizing it could do so, and it struck him like a lash. He shook his head once, and then flashed down the line of what humans called picket wood like a cream and gray blur while his fluffy tail streamed straight out behind him.

Desperation filled Stephanie. The thunderstorm was almost upon her—the first white pellets of hail rattled off her taut glider covering—and without the countergrav she would already have been blotted from the sky. But not even the countergrav unit could save her from the mounting turbulence much longer, and—

Her thoughts chopped off as salvation loomed suddenly before her. The black, irregular scar of an old forest fire ripped a huge hole through the trees, and she choked back a sob of gratitude as she spied it. The ground was dangerously rough for a landing in conditions like this, but it was infinitely more inviting than the solid web of branches tossing and lashing below her, and she banked towards it.

She almost made it.

Climbs Quickly ran as he'd never run before. Somehow he knew he raced against death itself, though it never occurred to him to wonder what someone his size could do for someone the size

of even a two-leg youngling. It didn't matter. All that mattered was the terror, the fear—the danger—which confronted that other presence in his mind, and he ran madly towards it.

\* \* \*

It was the strength of the wind which did it. Even then, she would have made it without the sudden downdraft that hammered her at the last instant, but between them, they were too much. Stephanie saw it coming in the moment before she struck, realized instantly what was going to happen, but there was no time to avoid it. No time even to feel the full impact of the realization before her glider crashed into the crown of the towering evergreen at over fifty kilometers per hour.

## VIII

Climbs Quickly slithered to a stop, momentarily frozen in horror, but then he gasped in relief. The sudden silence in his mind wasn't—quite—absolute. His instant fear that the youngling had been killed eased, but something deeper and darker, without the same bright panic but with even greater power, replaced it. Whatever had happened, the youngling was now unconscious, yet even in its unconsciousness, he was still linked to it . . . and he felt its pain. It was injured, possibly badly—possibly badly enough that his initial fear that it had died would prove justified after all. And if it was injured, what could *he* do to help? Young as it was, it was far larger than he—much *too* large for him to drag to safety.

But what one of the People couldn't do, many of them often *could*, he thought, and closed his eyes, lashing his tail while he thought. He'd run too far to feel the combined mind glow of his clan's central nest place. His emotions couldn't reach so far, but his mind voice could. If he cried out for help, Sings Truly would hear, and if she failed to, surely some hunter or scout between her and Climbs Quickly would hear and relay. Yet what words could he cry out with? How could he summon the clan to aid a two-leg—the very two-leg he had allowed to see him? How could he expect them to abandon their policy of hiding from the two-legs? And even if he could have expected that of them, what right had he to demand it?

He stood irresolute, tail flicking, ears flattened as the branch beneath him creaked and swayed and the first raindrops lashed the budding leaves. Rain, he thought, a flicker of humor leaking even through his dread and uncertainty. Was it *always* going to be raining when he and his two-leg met?

Strangely, that thought broke his paralysis, and he shook himself. All he knew so far was that the two-leg was hurt and that he was very close to it now. He had no way of knowing how bad its injuries might actually be, nor even if there were any *reason* to consider calling out for help. After all, if there was nothing the clan could do, then there was no point in trying to convince it to come. No, the thing to do was to continue until he found the youngling. He had to see what its condition was before he could determine the best way to help—assuming it required his help at all—and he scurried onward almost as quickly as before.

\* \* \*

Stephanie recovered consciousness slowly. The world swayed and jerked all about her, thunder rumbled and crashed, rain lashed her like an icy flail, and she'd never hurt so much in her entire life.

The pounding rain's chill wetness helped rouse her, and she tried to move, only to whimper as the pain in her left arm stabbed suddenly higher. She blinked, rubbing her eyes with her right palm, and felt a sort of dull shock as she realized part of what had been blinding her was blood, not simply rainwater.

She wiped again and felt a sliver of relief as she realized there was much less blood than she'd thought. It seemed to be coming from a single cut on her forehead, and the cold rain was already slowing the bleeding. She managed to clear her eyes well enough to look about her, and her relief vanished.

Her glider was smashed. Not broken: *smashed*. Its tough composite covering and struts had been specially designed to be crash survivable, but it had never been intended for the abuse to which she'd subjected it, and it had crumpled into a mangled lacework of fabric and shattered framing. Yet it hadn't quite failed completely, and she hung in her harness from the main spar, which was jammed in the fork of a branch above her. The throbbing ache where the harness straps crossed her body told her she'd been badly bruised by the abrupt termination of her flight, and one of her ribs stabbed her with a white burst of agony every time she breathed, but without the harness—and the forked branch which had caught her—she would have smashed straight into the massive tree trunk directly in front of her, and she shuddered at the thought.

But however lucky she might have been, there'd been bad luck to go with the good. Like most colony world children, Stephanie had been through the mandatory first-aid courses . . . not that any training was needed to realize her left arm was broken in at least two places. She knew which way her elbow was *supposed* to bend, and there was no joint in the middle of her forearm. That was bad enough, but there was worse, for her com had been strapped to her left wrist.

It wasn't there anymore.

She turned her head, craning her neck to peer painfully back along the all too obvious course of her crashing impact with the treetops, and wondered where the com was. The wrist unit was virtually indestructible, and if she could only find it—and *reach* it—she could call for help in an instant. But there was no way she was going to find it in that mess. It was almost funny, she thought through the haze of her pain. *She* couldn't find it, but Mom or Daddy could have found it with ridiculous ease . . . if they'd only known to use the emergency override code to activate the locator beacon function. Or, for that matter, if *she'd* thought to activate it when the storm first came up. Unfortunately, she'd been too preoccupied finding a landing spot to bring the beacon up, and even if she had, no one would have found it until they thought to look for it.

And since I can't even find it, I can't com anyone to tell them to start looking for it, she thought fuzzily. I really messed up this time. Mom and Daddy are going to be really, really pissed. Bet they ground me till I'm sixteen for this one!

Even as she thought it, she knew it was ridiculous to worry about such things at a time like this. Yet there was a certain perverse comfort—a sense of familiarity, perhaps—to it, and she actually managed a damp-sounding chuckle despite the tears of pain and fear trickling down her face.

She let herself hang limp for another moment, but badly as she felt the need to rest, she dared do no such thing. The wind was growing stronger, not weaker, and the branch from which she hung creaked and swayed alarmingly. Then there was the matter of lightning. A tree this tall was all too likely to attract any stray bolt, and she had no desire to share the experience with it. No, she had to get herself down, and she blinked away residual pain tears and fresh rain to peer down at the ground.



It was a good twelve-meter drop, and she shuddered at the thought. Her gymnastics classes had taught her how to tuck and roll, but that wouldn't have helped from this height even with two good arms. With her left arm shattered, she'd probably finish herself off permanently if she tried it. But the way her supporting branch was beginning to shake told her she had no option but to get down *somehow*. Even if the branch held, her damaged harness was likely to let go . . . assuming the even more badly damaged spar didn't simply snap first. But how—?

Of course! She reached up and around with her right arm, gritting her teeth as even that movement shifted her left arm ever so slightly and sent fresh stabs of anguish through her. But the pain was worth it, for her fingers confirmed her hope. The counter-grav unit was still there, and she felt the slight, pulsating hum that indicated it was still operating. Of course, she couldn't be certain how long it would go *on* operating. Her cautiously exploring hand reported an entire series of deep dents and gouges in its casing. She supposed she should be glad it had protected her back by absorbing the blows which had left those marks, but if the unit had taken a beating anything like what had happened to the rest of her equipment, it probably wouldn't last all that long. On the other hand, it only had to hold out long enough to get her to the ground, and—

Her thoughts chopped off, and she jerked back around, in a shock spasm fast enough to wrench a half-scream of pain from her bruised body and broken arm, as something touched the back of her head. It wasn't that the touch *hurt* in any way, for it was feather gentle, almost a caress. Only its totally unexpected surprise produced its power, and all the pain she felt was the result of her *response* to it. Yet even as she bit her pain sound back into a groan, the hurt seemed far away and unimportant as she stared into the treecat's slit-pupiled green eyes from a distance of less than thirty centimeters.

Climbs Quickly winced as the two-leg's peaking hurt clawed at him, yet he was vastly relieved to find it awake and aware. He smelled the bright, sharp smell of blood, and the two-leg's arm was clearly broken. He had no idea how it had managed to get itself into such a predicament, but the bits and pieces strewn around it and hanging from its harness of straps were obviously the ruin of some sort of flying thing. The fragments didn't look like the other flying things he'd seen, yet such it must have been for the two-leg to wind up stuck in the top of a tree this way.

He wished fervently that it could have found another place to crash. This clearing was a place of bad omen, shunned by all of the People. Once it had been the heart of the Sun Shadow Clan's range, but the remnants of that clan had moved far, far away, trying to forget what had happened to it here, and Climbs Quickly would have much preferred not to come here himself.

But that was beside the point. He was here, and however little he might like this place, he knew the two-leg had to get down. The branch from which it hung was not only thrashing with the wind but trying to split off the tree—he knew it was, for he'd crossed the weakened spot to reach the two-leg—and that didn't even consider the way green-needle trees attracted lightning. Yet he could see no way for a two-leg with a broken arm to climb like one of the People, and *he* was certainly too small to carry it!

Frustration bubbled in the back of his mind as he realized how little he could do, but it never occurred to him not to try to help. This was one of "his" two-legs, and he knew that it was the link to *him* which had brought it here. There were far too many things happening for him to begin to understand them all, yet understanding was strangely unimportant. This, he realized suddenly, wasn't "one" of his two-legs after all; it was *his* two-leg. Whatever the link between them was, it cut both ways. They weren't simply linked; they were *bound* to one another, and he could no

more have abandoned this strange-looking, alien creature than he could have walked away from Sings Truly or Short Tail in time of need.

Yet what could he *do*? He leaned out from his perch, clinging to the tree with hand-feet and one true-hand, prehensile tail curled tight around the branch, as he extended the other true-hand to stroke the two-leg's cheek and croon to it, and he saw it blink. Then its hand came up, so much smaller than a full grown two-leg's yet so much bigger than his own, and he arched his spine and crooned again—this time in pleasure—as the two-leg returned his caress.

Even in her pain and fear, Stephanie felt a sense of wonder—almost awe—as the treecat reached out to touch her face. She'd seen the strong, curved claws the creature's other hand had sunk into the evergreen's bark, but the wiry fingers that touched her cheek were moth-wing gentle, claws retracted, and she pressed back against it. Then she reached out her own good hand, touching the rain-soaked fur, stroking it as she would have stroked an Old Terran cat, and the creature arched with a soft sound of pleasure. She didn't begin to understand what was happening, but she didn't have to. She didn't know exactly what the treecat was doing, but she dimly sensed the way it was soothing her fear—even her pain—through that strange link they shared, and she clung to the comfort it offered.

But then it drew back, sitting higher on its four rear limbs. It cocked its head at her for a long moment while wind and rain howled about them, and then it raised one front paw—no, she reminded herself, one of its *hands*—and pointed downward.

That was the only possible way to describe its actions. It *pointed* downward, and even as it pointed, it made a sharp, scolding sound whose meaning was unmistakable.

"I *know* I need to get down," she told it in a hoarse, pain-shadowed voice. "In fact, I was working on it when you turned up. Just give me a minute, will you?"

Climbs Quickly's ears shifted as the two-leg made noises at him. For the first time, thanks to the link between them, he had proof the noises were actually words, and he felt a stab of pity for the two-leg and its fellows. Was that the *only* way they knew to communicate with one another? But however crude and imperfect the means might be compared to the manner in which the People spoke, at least he could now prove that they *did* communicate. That should go a long way towards convincing the rest of the clan leaders that two-legs truly were People in their own fashion. And at least the noises the hurt youngling was making, coupled with the taste of its mind glow, were proof that it was still thinking. He felt a surge of strange pride in the two-leg, comparing its reaction to how some of the People's younglings might have reacted in its place, and bleeked at it again, more gently.

"I know, I know, I *know*!" Stephanie sighed, and reached back to the countergrav's controls. She adjusted them carefully, then bit her lower lip as a ragged pulsation marred its smooth vibration.

She gave the rheostat one last, gentle twitch, feeling the pressure of the harness straps ease as her apparent weight was reduced to three or four kilos, but that was as far as it would go. She would have preferred an even lower value—had the unit been undamaged, she could have reduced her apparent weight all the way to zero, in which case she would actually have had to pull herself down against its lift. But the rheostat was all the way over now. It wouldn't go any

further . . . and the ragged pulsation served notice that the unit was likely to pack up any minute, even at its current setting. Still, she told herself, doggedly trying to find a bright side, maybe it was just as well. Any lighter weight would have been dangerous in such a high wind, and getting her lightweight self smashed against a tree trunk or branch by a sudden gust would hardly do her broken arm any good.

"Well," she said, looking back at the treecat, "here goes."

The two-leg looked at him and said something else, and then, to Climbs Quickly's horror, it unlatched its harness with its good hand and let itself fall. He reared up in protest, ears flattened, yet his horror vanished almost as quickly as it had come, for the youngling didn't actually *fall* at all. Instead, its good hand flashed back out, catching hold of a dangling strip of its broken flying thing, and he blinked. That frayed strip looked too frail to support even *his* weight, yet it held the two-leg with ease, and the youngling slid slowly down it from the grip of that single hand.

The countergrav unit's harsh, warning buzz of imminent failure clawed at Stephanie's ears, and she muttered a word she wasn't supposed to know and slithered more quickly down the broken rigging stay. It was tempting to simply let herself fall, but the countergrav unit only reduced her apparent *weight*. It didn't do a thing about her *mass*, and any object fell at over thirteen meters per second per second in Sphinx's gravity, which meant she would hit the ground just as fast and with just as much momentum as if she'd had no countergrav at all. But what she *could* do was let herself down the stay, whose torn anchorage would never have supported her normal weight.

She was only two meters up when the unit decided to fail, and she cried out, clutching at the stay as her suddenly restored weight snatched at her. She plummeted to the ground, automatically tucking and rolling as her gym teacher had taught her, and she would have been fine if her arm hadn't been broken.

But it *was* broken, and her scream was high and shrill as her rolling weight smashed down on it and the darkness claimed her.

## IX

Climbs Quickly leapt down through the branches with frantic haste. His sensitive hearing had detected the sound of the countergrav unit, and though he'd had no idea what it was, he knew its abrupt cessation must have had something to do with the youngling's fall. No doubt it had been another two-leg tool which, like the youngling's flying thing, had broken. In an odd sort of way, it was almost reassuring to know two-leg tools *could* break, but that was cold comfort at the moment, and his whiskers quivered with anxiety as he hit the ground and scuttled quickly over to the youngling.

It lay on its side, and he winced as he realized its fall had ended with its broken arm trapped under it. He tasted the shadow of pain even through the murkiness of its unconscious mind glow, and he dreaded what the youngling would experience when it regained its senses. Worse, he sensed a new pain source in its right knee. But aside from the arm, the knee, and another bump

swelling on its forehead, the young two-leg appeared to have taken no fresh damage, and Climbs Quickly settled back on his haunches in relief.

He might not understand what had happened to forge the link between him and this two-leg, but that was no longer really important. What mattered was that the link existed and that for whatever reason the two of them had somehow been made one. There was an echo to it much like that in the mind glows of mated couples, but this was different, without the overtones of physical desire and bereft of the mutual communication of ideas. It was a thing of pure emotion—or *almost* pure emotion, at any rate; he felt frustratingly certain that he had touched the very edge of the youngling's actual thoughts a time or two and wondered if perhaps another of the People and another two-leg might someday reach further than that. For that matter, perhaps he and *his* two-leg would manage that someday, for if this was in fact a permanent link, they would have turnings and turnings in which to explore it.

That prompted another thought, and he groomed his whiskers with a meditative hand while he wondered just how long two-legs lived. The People were much longer lived than large creatures like the death fangs and snow hunters. Did that mean they lived longer than two-legs? The possibility woke an unexpected pain, almost like a presentiment of grief for the loss of the youngling's—*his* youngling's—glorious mind glow. Yet it *was* a youngling, he reminded himself, while *he* was a full adult. Even if its natural span was shorter than his, the difference in their ages might give them an equal number of remaining turnings. That thought was oddly comforting, and he shook himself and looked around.

The battering rain had already eased as the squall line passed through, and much of the wind's strength had died away, as well. He was glad his two-leg had gotten down before the wind could knock it out of the tree, yet every instinct insisted that the ground was not a safe place to be. That was certainly true for the People, but perhaps the youngling had one of the weapons with which its elders sometimes slew the death fangs which threatened them. Climbs Quickly knew those weapons came in different shapes and sizes, but he'd never seen the small ones some two-legs carried, and so he had no way to tell if the youngling had one.

Yet even if it did, its injured condition would leave it in poor shape to defend itself, and it certainly couldn't follow him up into the trees if danger threatened. Which meant it was time to scout around. If there *was* danger here, best he should know about it now. Once the young two-leg reawakened, it might have ideas of its own about how to proceed; until then, he would simply have to do the best he could on his own.

He turned away from the two-leg and began to circle it, moving out in an ever-widening spiral while nose and ears probed alertly. This early in the season there was little undergrowth beneath the trees to obscure his lines of sight, though it was a different matter in the old forest fire's clearing, which low-growing scrub and young trees were beginning to reclaim, and the rain hadn't been hard enough or fallen long enough to wipe away scents. Indeed, the moist air actually made them sharper and richer, and his muzzle wrinkled as he tested them.

But then, suddenly, he froze, whiskers stiff and fluffy tail belled out to twice its normal diameter. He made himself take another long, careful scent, yet it was no more than a formality. No clan scout could *ever* mistake the smell of a death fang lair, and this one was close.

He turned slowly, working to fix the location clearly in his mind, and his heart fell. The scent came from the clearing, where the undergrowth would offer the lair's owner maximum concealment when it returned and scented the two-leg. And it *would* return, he thought sinkingly, for he smelled something more, now. The death fang was a female, and it had recently littered.

That meant it must be out hunting food for its young . . . and that it would be back sooner rather than later.

Climbs Quickly stood a moment longer, then raced back to the two-leg. He touched its face with his muzzle, willing it to awaken with all his might, but there was no response. It would wake when it woke, he realized. Nothing he did would speed that moment, and that left but one thing he *could* do.

He sat upright on his four rearmost limbs, curling his tail neatly about his true-feet and hand-feet, and composed his thought carefully, then sent it soaring out through the dripping forest. He shaped and drove it with all the urgency in him, crying out to his sister, and somehow his link to the two-leg lent his call additional strength.

<Climb's Quickly?> Even from here he tasted the shock in Sings Truly's mind voice. <Where are you? What's wrong?>

<I am near the old fire scar to sun-rising of our range,> Climbs Quickly replied as calmly as he could, and felt a fresh surge of astonishment from his sister. No one from Bright Water Clan would soon forget the terrible day Sun Shadow Clan had lost control of a fire and seen its entire central nesting place—and all too many of its kittens—consumed in dreadful flame and smoke.

<Why?> she demanded. <What could possibly take you there?>

<I—> Climbs Quickly paused, then drew a deep breath. <It would take too long to explain, Sings Truly. But I am here with an injured youngling . . . and so also is a death fang lair filled with young.>

Sings Truly knew her brother well, and the oddness in his reply was obvious to her. But so was the unusual strength and clarity of his mind voice. He had always had a strong voice for a male, but today he had reached almost to the strength of a memory singer, and she wondered how he'd done it. Some scouts and hunters gained far stronger voices when they mated, as if their mates' minds somehow harmonized with theirs at need, but that couldn't explain Climbs Quickly's new power. Yet those thoughts were but a fleeting background for the chill horror she felt at the thought of any injured youngling trapped so near a death fang.

She started to reply once more, then stopped, tail kinking and ears cocking in sudden consternation and suspicion. No, surely not. Not even Climbs Quickly would dare *that*. Not after the way the clan elders had berated him! Yet try as she might, she could think of no way any Bright Water youngling would have strayed so far, and no other clan's range bordered on the fire scar. And Climbs Quickly had named no names, had he? But—

She shook herself. There was, of course, one way to satisfy her suspicion. All she had to do was ask . . . but if she did, then she would know her brother was violating the edicts of his clan heads. If she didn't ask, she could only suspect—not *know*—and so she kept that particular question to herself and asked another.

<What do you wish of me, brother?>

<Sound the alarm,> he replied, sending a burst of gratitude and love with the words, for he knew what she'd considered, and her choice of question told him what she'd decided.

<For the "injured youngling."> Sings Truly's flat statement was a question, and he flicked his tail in agreement even though she could not see it.

<Yes,> he returned simply, and felt her hesitation. But then her answer came.

<I will,> she said with equal simplicity—and the unquestionable authority of a memory singer. <We come with all speed, my brother.>

Stephanie Harrington awoke once more. A weak, pain-filled sound leaked from her—less words than the mew of an injured kitten—and her eyelids fluttered. She started to sit up, and her mew became a breathless, involuntary scream as her weight shifted on her broken arm. The sudden agony was literally blinding, and she screwed her eyes shut once more, sobbing with hurt as she made herself sit up anyway. Nausea knotted her stomach as the anguish in her arm and shoulder and broken rib vibrated through her, and she sat very still, as if the pain were some sort of hunting predator from which she could hide until it passed her by.

But the pain didn't pass her by. It only eased a bit, and she blinked on tears, scrubbing her face with her good hand and sniffing as she smeared mud and the blood from her mashed nose across her cheeks. She didn't need to move to know she'd smashed her knee, as well as her bad arm, in her fall, and she felt herself shuddering, quivering like a leaf as hopelessness and pain crushed down on her. The immediacy of the need to get down out of the tree had helped carry her to this point, but she was on the ground now. That gave her time to think—and feel.

Fresh, hot tears brimmed, dripping down her face, and she whined as she made herself gather her left wrist in her right hand and lift it into her lap. Just moving it twisted her with torment, but she couldn't leave it hanging down beside her like it belonged to someone else. She thought about using her belt to fasten it to her side, but she couldn't find the energy—or courage—to move that shattered bone again. It was too much for her. Now that the immediate crisis was over, she knew how much she hurt, how totally lost she was, how desperately she wanted—needed—her parents to come take her home, how *stupid* she'd been to get herself into this mess . . . and how very little she could do to get herself out of it.

She huddled there at the foot of the tree, crying hopelessly for her mother and father. The world had proved bigger and more dangerous than she'd ever quite believed, and she wanted them to come find her. No scold they could give her, however ferocious, could match the one she gave herself, and she whimpered as the sobs she couldn't stop shook her broken arm and sent fresh, vicious stabs of pain through her.

But then she felt a light pressure on her right thigh and blinked furiously to clear her eyes. She looked down, and the treecat looked back. He stood beside her, one hand resting on her leg, ears flattened with concern, and she heard—and felt—his soft, comforting croon. She gazed down at him for a moment, mouth quivering in exhaustion, despair, pain, and physical shock, and then she held out her good arm to him, and he didn't even hesitate. He flowed up her leg to stand on his rearmost limbs in her lap and place his hands—those strong, wiry, long-fingered hands with the carefully sheathed claws—on either side of her neck. He pressed his whiskered muzzle to her cheek, the power of his croon quivering through him as if he were a dynamo, and she locked her right arm around him. She held him close, almost crushing him, and buried her face in his soft, damp fur, sobbing as if her heart would break, and even as she wept, she felt him somehow taking the worst hurt, the worst despair and helplessness from her.

\* \* \*

Climbs Quickly accepted the two-leg's tight embrace. People's eyes didn't shed water as the two-leg's did, but only the mind-blind could possibly have mistaken the grief and fear and pain in the youngling's mind glow, and he felt a vast surge of protective tenderness for it. For *her*, he realized now, though he wasn't quite certain how he knew. Perhaps it was just that he was becoming more accustomed to the taste of her mind glow. One could almost always tell whether one of the People was male or female from no more than that, after all. Of course, this youngling

was totally unlike the People, but still—

He pressed more firmly against her, stroking her cheek with his muzzle and patting her good shoulder with his right true-hand while he settled more deeply into fusion with her. It wasn't as it would have been with another of his own kind, for she was unable to anchor the fusion properly from her end, but it was enough to let him draw off the worst of her despair. He felt the burden of her fear and pain ease and sensed her surprised awareness that he was somehow responsible, and a deep, buzzing purr replaced his croon. He nudged her cheek more firmly, then pulled back just far enough to touch his nose to hers, staring deep into her eyes, and her good hand caressed his ears. She said something—another of those mouth noises which so far meant nothing—but he felt her gratitude and knew the meaningless sounds thanked him for being there.

She leaned back against the tree, easing her broken arm carefully, and he settled down in her lap, wishing with what he hoped was concealed desperation that there was some way to get her away from this place. He knew she remained confused and frightened, and he had no desire to undo all the soothing he'd achieved, yet the scent of the death fang seemed to clog his nostrils. If not for her injured knee, he would have done his best to get her on her feet despite her broken arm. But the tough covering she wore over her legs had torn when she hit the ground, and the gashed knee under it was swollen and purpling. He needed no link to know she could move neither fast nor far, and he turned his mind once more towards his sister.

<Does the clan come?> he asked urgently, and her reply astounded him.

<We come,> Sings Truly repeated with unmistakable emphasis, and he blinked. Surely she didn't mean—? But then she sent him a brief burst of her own vision, and he realized she did. She was leading every male adult of the clan herself. A *memory singer* was leading the clan's fighting strength into battle with a death fang! That wasn't merely unheard of—it was *unthinkable*. Yet it was happening, and he poured a flood of gratitude towards her.

<There is no choice, little brother,> she told him dryly. <The clan may protect your "youngling" from the death fang, but without me, there will be no one to protect you from Broken Tooth and Digger . . . or Song Spinner! Now leave me in peace, Climbs Quickly. I cannot run properly with you nattering at me.>

He pulled in his thought, basking in his sister's love and trying not to think about the implications of her warning. From the glimpse he'd shared through her eyes, she and the others were making excellent speed. They would be here soon, and only a very stupid death fang would risk attacking anything with an entire clan of People perched protectively in the trees above it. It would not be long until—

Stephanie had fallen into a half doze, leaning back against the tree, but her head snapped up instantly as the treecat came to his feet in her lap with a harsh, rippling snarl like shredding canvas. She'd never heard anything like it, yet she knew instantly what it meant. It was as if the link between them transmitted that meaning to her, and she felt his fear and fury . . . and fierce determination to protect her.

She looked around wildly, trying to find the danger, then gasped, eyes huge in a parchment face, as the hexapuma flowed out of the undergrowth like a gray, six-legged shadow of death. Its lips wrinkled back, baring bone-white canines at least fifteen centimeters long, and its ears flattened as it sent its own rippling snarl—this one voiced in deep, basso thunder—to meet the treecat's. Terror froze Stephanie, but the treecat leapt from her lap. He sprang up onto a low-lying limb and crouched there, threatening his gargantuan foe from above, and his claws were no

longer sheathed. For some reason, the hexapuma hesitated, twisting its head around and staring up at the trees, almost as if it were afraid of something. But that couldn't last, and she knew it.

"No," she heard herself whisper to her tiny protector. "No, it's too big! Run away. Oh, *please—please! Run away!*"

But the treecat ignored her, his green eyes locked on the hexapuma, and despair mixed with her terror. The hexapuma was going to get them both, because the treecat *wouldn't* run away. Somehow she knew, beyond any possibility of question, that the only way the hexapuma would reach her would be through him.

There was very little to sense in a death fang's brain, but Climbs Quickly understood its hesitation. This was an old death fang, and it had not lived this long without learning some hard lessons. Among those lessons must have been what a roused clan could do to its kind, for it had the wit to look for the others who should have been there to support him.

But Climbs Quickly knew what the death fang couldn't. There *were* no other People—not yet. They were coming, tearing through the treetops with frantic, redoubled speed, but they would never arrive in time.

He glared down at the death fang, sounding his challenge, and knew he couldn't win. No single scout or hunter could encounter a death fang and live, yet he could no more abandon his two-leg youngling than he could have abandoned a kitten of the People. He felt her desperate emotions urging him to flee and save himself despite her own terror, even as he felt his sister's mind voice screaming the same, but it didn't matter. It didn't even matter that the death fang would kill the two-leg the moment he himself was dead. What mattered was that his two-leg—his *person*—must not die alone and abandoned. He would buy her every moment of life he could, and perhaps, just perhaps, it would be long enough for Sings Truly to arrive. He told himself that firmly, fiercely, trying to pretend he didn't know it was a lie, and then the death fang charged.

Stephanie watched the motionless confrontation as treecat and hexapuma glared and snarled at one another, and the tension tore at her like knives. She couldn't stand it, yet neither could she escape it, and the treecat's utter, hopeless gallantry ripped at her heart. He could have run away. He could have escaped the hexapuma *easily*, but he'd refused, and deep inside, under the panic of an exhausted, hurt, terrified child face-to-face with a murderous menace she should never have encountered, his fierce defiance touched something in *her*. She didn't know what it was. She didn't even realize what was happening. But even as the treecat was determined to protect her, she felt an equally fierce, equally unyielding determination to protect *him*.

Her right hand fell to her belt and closed on the hilt of her vibro blade survival knife. It was only a short blade—barely eighteen centimeters long, which was nothing compared to the sixty-centimeter bush knives Forestry Service rangers carried. But that short blade had a cutting "edge" less than a molecule wide, and it whined alive in her hand as she somehow shoved herself to her feet. She leaned back against the trunk, left arm dangling while terror rose like bile in her throat, and knew her knife was too puny. It would slice through the hexapuma effortlessly, cutting bone as easily as tissue, yet it was too short. The huge predator would tear her apart before she could cut it at all, and even if she somehow did manage to cut it as it charged, even inflict a mortal wound, it was so big and powerful it would kill her before it died. But the knife was all she had, and she stared at the hexapuma, hardly daring to breathe, waiting.



And then it charged.

Climbs Quickly saw the death fang move at last. He had time to send out one more urgent message to Sings Truly, to feel her raging despair and fury at the knowledge she would come too late, and then there was no more time to think. There was no time for anything but speed and violence and ferocity.

Stephanie couldn't believe it. The hexapuma was terrifyingly quick for so huge a creature, yet the treecat sprang from his perch, catapulting through the air in a cream-and-gray streak that somehow evaded the hexapuma's slashing forepaws. He landed on the back of its neck, and it screamed as centimeter-long claws ripped at thick fur and tough skin. It whirled, both rear pairs of limbs planted firmly, forequarters rising up as it twisted to snap and claw at the treecat, but its furious blows missed. The treecat had executed his flashing attack only to race further down his enemy's spine and fling himself back up onto another branch, and the hexapuma forgot about Stephanie. It wheeled, charging the tree in which the treecat waited, rising up on its rear legs and spreading its front and mid-limbs wide to claw at the thick trunk. It dragged itself as high as it could, slashing and snarling, and Stephanie suddenly understood what the treecat was trying to do.

He was *distracting* the hexapuma. He knew he couldn't kill it or even truly fight it. His attack had been intended to hurt it, to make it angry and direct that anger at *him* and away from her, and it was working. But it was a desperate, ultimately losing game, for he must keep up the attacks, keep stinging the hexapuma, and he couldn't be lucky forever.

Climbs Quickly felt a fierce exultation, unlike anything he'd ever imagined. This was a fight he couldn't win, yet he was eager for it. He *wanted* it, and the blood-red taste of his own fury filled him with fire. He watched the death fang lunge up the tree and timed his response perfectly. Just as the death fang reached the very top of its leap, he dropped to meet it, slashing and ripping, and the death fang howled as he shredded its muzzle and tore an ear to pieces, but again its counter-striking forepaws missed him as he sprang away once more.

It charged after him, and he came to meet it yet again. He danced in and out of the trees, pitting blinding speed and skill and intelligence against the death fang's brute power and cunning. It was a dance which could have only one ending, yet he spun it out far longer than even he would have believed possible before it began.

\* \* \*

"No!"

Stephanie screamed in useless denial as the treecat finally made a mistake. Perhaps he slipped, or perhaps he'd simply begun to tire at last. She didn't know. She only knew that she'd felt a wild, impossible hope as the fight raged on and on. Not that he could win, but that he might not *lose*. Even as she'd let herself hope, she'd known it was in vain, but the suddenness of the end hit her with the cruelty of a hammer.

The treecat was a fraction of a second too slow, lingered to slash at the hexapuma's shoulders for just an instant too long, and a mid-limb paw flashed up savagely. Ten-centimeter claws gleamed like scimitars, and she heard—and *felt*—the treecat's scream of agony as that brutal blow landed.

It didn't hit squarely, but it was square enough. It stripped him away from the hexapuma's neck, flicking him aside like a toy, and he screamed again as he slammed into the trunk of a tree. He tumbled down it in a broken, bloody ball of fur, and the hexapuma rose on its rearmost limbs. It hovered there, howling its rage and triumph, and then it lowered all six feet to the ground and crouched to spring and rend and tear and crush its tiny enemy.

Stephanie saw it, understood it, knew what it intended . . . and that she couldn't possibly stop it. But the treecat—*her* treecat—had known he couldn't stop it from killing *her*, either, and that hadn't kept him from trying. A part of her knew it was only a pathetic gesture, no more than the hiss and spit of a kitten in the instant before hungry jaws closed on it forever, but it was a gesture she simply could not *not* make.

She lunged, ignoring her snapped rib, the agony in her wounded knee and broken arm. In that moment, she wasn't just an eleven-year-old girl. There was no time for her to fully grasp all that was happening, but something inside her had changed forever when the treecat offered his life to save hers, and her scream was a war cry as she brought the vibro blade slashing forward and offered *her* life for his.

The hexapuma shrieked as the high-tech blade sliced into it. It had forgotten about Stephanie, narrowed all its intention to Climbs Quickly, and it was totally unprepared for the unadulterated agony of that blow. The blade caught it on its right flank, so "sharp" that even an eleven-year-old's arm could drive it hilt-deep. The creature's own frantic lunge to escape the pain did the rest, and blood sprayed across the fallen leaves of winters past as its movement dragged the unstoppable blade through muscle, tendons, arteries, and bone.

Stephanie staggered and almost fell as the huge predator squirmed frantically away. Her hand and arm were soaked in its blood, more steaming blood had gouted across her face and eyes, and if she'd had time for it, she would have been nauseated. But she didn't have time, and she staggered further forward, putting herself between the treecat and the hexapuma.

It was all she could do to stay on her feet. She shook like a leaf, her blood-coated face streaked with tears while terror yammered within her, yet somehow she stayed upright and raised the humming blade between them as the hexapuma stared at her in animal disbelief. Its right rear leg trailed helplessly while blood pulsed from the huge, gaping wound in its flank, but the very sharpness of the vibro blade worked against Stephanie in at least one respect. That wound was fatal, but the hexapuma didn't know it. It would take time to bleed out, and the knife was so sharp, the wound inflicted so quickly, that the creature had no idea of the catastrophic damage it had just received. It only knew it was hurt, that the injured prey it had expected to take so easily had inflicted more agony than any enemy it had ever faced, and it howled its fury.

It paused for just a moment, hissing and spitting, the ears Climbs Quickly had shredded flat to its skull, and Stephanie knew it was going to charge. She had no more idea than the hexapuma that she'd already inflicted a mortal wound, and she tried to hold her knife steady. It was going to come right over her, but if she could get the knife up, stick it into its chest or belly and let its charge do there what its lunge away had done to its hindquarters, then maybe at least the treecat would—

The hexapuma howled again, and Stephanie wanted desperately to close her eyes. But she couldn't, and she saw it lunge—saw it spring forward in the first of the two leaps it would take to reach her, dragging its crippled leg, fang-studded maw agape.

Only it never completed that lunge, and Stephanie's head jerked up as a dreadful noise filled the forest. She'd heard a single echo of it from the treecat who'd fought to protect her, but this

wasn't the defiant cry of one hopelessly gallant defender. This was the rippling snarl of dozens—scores—of treecats, filled with hate and vengeance, and its challenge pierced even the hexapuma's rage. Its head snapped up, as Stephanie's had done, and its yowl was filled with as much panic as fury as the trees exploded above it.

A cream-and-gray avalanche thundered down with a massed, high-pitched scream that seemed to shake the forest. It engulfed the hexapuma in an unstoppable flood of slashing ivory claws and needle-sharp fangs, and Stephanie Harrington collapsed beside a dreadfully wounded Climbs Quickly as the scouts and hunters of his clan literally ripped their foe to pieces.

## X

"I'm home!" Richard Harrington called out as he walked into the living room.

"About time," Marjorie replied from her office. She was at the end of a section anyway, so she hit the save key and closed the report, then rose and stretched.

"Hey, don't give me a hard time," her husband told her severely as he walked down the short hall and poked his head in her door. "You may be able to do a full day's work without going anywhere, but *some* of us have patients who require our direct, personal attendance . . . not to mention a superb bedside manner."

"'Bedside manner,' right!" Marjorie snorted, and Richard grinned as he leaned close to kiss her cheek. She put an arm around him and hugged him briefly. "Did Steph have a good day with Mr. Saprastos?" she went on.

"What?" Richard pulled back with a strange expression, and she cocked an eyebrow.

"I asked if Stephanie had a good day with Mayor Saprastos," she said, and Richard frowned.

"I didn't drop her off in Twin Forks," he said. "I didn't have time, so I left her home. Didn't I tell you I was going to?"

"Left her home?" Marjorie repeated. "Here? On the homestead?"

"Of course! Where else would I—" Richard broke off as he recognized his wife's incomprehension. "Are you saying you haven't seen her all day?"

"I certainly haven't! Would I have asked you about Mr. Saprastos if I *had*?"

"But—"

Richard broke off again, and his frown deepened. He stood for a moment, thinking hard, then turned and half-ran down the hall. Marjorie heard the front door open and close—then it opened and closed again, seconds later, and Richard was back.

"Her glider's gone," he told Marjorie grimly.

"But you said you didn't take her to town," Marjorie protested.

"I didn't," he said even more grimly. "So if her glider's gone, she must've gone off on a flight of her own—without telling either of us."

Marjorie gazed at him, her own mind filled with a cascade of chaotic thoughts and sudden, half-formed fears. Then she took a firm mental grip on herself and cleared her throat.

"If she went out on her own, she should be back by now," she said as calmly as she could.

"It's getting dark, and she would've wanted to be home before that happened."

"Absolutely," Richard agreed, and the tension in their locked gazes was just short of panic. An inextricable brew of fear for their daughter, guilt for not having watched her more closely, and—hard though they tried to suppress it—*anger* at her for evading their watchfulness, flowed through them, but there was no time for that. Richard shook himself, then raised his left wrist and keyed Stephanie's combination into his com.

He waited, right forefinger and second finger drumming anxiously on the com's wrist band, and his face went bleak as the seconds oozed past with no reply. He waited a full minute, in which his eyes became agate and the last expression leached from his face, and Marjorie caught his upper right arm and squeezed tightly. She said nothing, for she too understood what that lack of reply meant.

It took a painful act of will for Richard Harrington to accept the silence, but then his forefinger moved again. He keyed in another combination, and inhaled sharply as a red light began to flash almost instantly on the com. In one way, the light was almost worse than the total lack of response had been; in another, it was an enormous relief. At least it gave them a beacon to track—one which should guide them to their daughter. But if the emergency beacon was working the rest of the com unit should also be functional. And if it was—if it had produced the high-pitched buzz which was guaranteed to be audible from a distance of over thirty meters—then Stephanie should have answered it. If she hadn't, there had to be a reason, and neither Harrington had the courage to voice what that reason might well be.

"Grab the emergency med-kit," Richard said instead, his voice harsh. "I'll get my car back out of the garage."

Stephanie Harrington couldn't hear the signal from the lost com that hung on the stub of a limb more than fifty meters above her. Nor was she even thinking about coms, for she was surrounded by over two hundred treecats. They perched on branches, clung to trunks, and crouched with her on the wet leaves. Two actually sat pressed against her sides, and they—like all the rest—crooned a deep, soft harmony to the bloody, mauled ball of fur in her lap.

She was grateful for their presence, and she knew those scores of guardians could—and would—protect her from any other predators. Yet she had little attention to spare them, for every scrap of her attention was fixed with desperate strength on *her* treecat, as if somehow she could keep him alive by sheer force of will. The pain in her arm and knee and ribs and her residual, quivering terror still filled her, but those things scarcely mattered. They were there, and they were real, but nothing—literally *nothing*—was as important as the treecat she cuddled with fierce protectiveness in the crook of her good arm.

Her memory of what had happened after the other treecats poured down from the trees was vague. She recalled switching off the vibro knife, but she hadn't gotten it back into its sheath. She must have dropped it somewhere, but it didn't matter. All that had mattered was getting to her treecat.

She'd known he was alive. There was no way she could *not* know, but she'd also known he was desperately hurt, and her stomach had knotted as she fell to her good knee beside him. Her own pain had made her whimper as she moved with injudicious speed, yet she'd hardly noticed as she touched her protector—her *friend*, however he'd become that—with fearful fingers.

Blood matted his right side, and she'd felt fresh nausea as she saw how badly his right

forelimb was mangled. The blood flow was terrifying, without the spurt of a severed artery, but far too thick and heavy. She had no idea how his internal anatomy was arranged, but her frightened touch had felt what had to be the jagged give of broken ribs, and his mid-limbs' pelvis was clearly broken, as well. She'd cringed at the thought of the damage all those broken bones could have done inside him, but there was nothing she could do about them. That shattered forelimb needed immediate attention, however, and she plucked the drawstring from the left cuff of her flying jacket. Tying it into a slip noose with only her teeth and one working hand was impossibly difficult, yet she managed it somehow, and slipped it up the broken, bloodsoaked limb. She settled it just above the ripped and torn flesh and drew it tight, bending close to use her teeth again, then worked a pocket stylus under the improvised tourniquet and tightened it carefully. She'd never done anything like this herself, but she knew the theory, and she'd once seen her father do the same thing for an Irish setter who'd lost most of a leg to a robotic cultivator.

It worked, and she sagged in relief as the blood flow slowed, then stopped. She knew that cutting off all blood from the damaged tissues would only damage them worse in the long run, but at least he wouldn't bleed to death now. Unless, of course, she thought, fighting a suddenly resurgent panic, there *was* internal bleeding.

She didn't really want to move him, but she couldn't leave him lying on the cold, wet ground. He needed warmth, and she lowered herself with a groan to sit beside him and lift him as carefully as she could with only one hand. She flinched when he twisted with a sound like the mewl of a broken kitten, but she didn't put him back down. Instead, she tucked him inside her unsealed flying jacket and tugged the loose flaps closed around him as well as her single working arm could manage. Then she leaned back, whimpering with her own pain, holding him against her and trying to fight his shock and blood loss with the warmth of her own body.

She didn't think about her missing com, or her parents, or her own pain. She didn't think of anything. She only sat there, cuddling her defender's broken body against her own, and thought of nothing at all, for that was all she had the strength to do.

The elders of Bright Water Clan sat in a circle about the young two-leg. *All* of them, even Song Spinner, who had come after the others for the sole purpose of berating Sings Truly for her incredible folly in risking herself in such a fashion. But no one was berating anyone now. Instead, the other elders watched in confusion and uncertainty as Sings Truly and Short Tail crept closer to the two-leg. The chief scout and the clan's second ranking memory singer crouched on either side of the two-leg, quivering noses scarcely a handspan's distance from it. They sniffed it carefully, and then reached out to touch the link between it and Climbs Quickly.

Sings Truly's ears went flat in shock that, even for her, even now, was honed by disbelief. Despite the alienness of the two-leg, Climbs Quickly's link to it was *at least* as strong as that of any mated pair she'd ever encountered. More than that, the link clearly had yet to reach its maximum strength. That couldn't possibly happen—not with a creature as obviously and completely mind-blind as the two-leg. Yet it *had* happened, and Sings Truly's mind whirled as she tried to imagine the ramifications of that simple fact.

The rest of her clan's adult fighting strength sat or crouched or hung behind and above and all about her and the two-leg. As she, they'd watched the youngling, tasting its pain like their own, as it dragged its gravely injured body to Climbs Quickly. As Sings Truly, they had tasted its fear for him, its tenderness and frantic concern, its . . . love. And, as Sings Truly, they had watched the

youngling—surely no more than a kitten itself—tighten the string that stopped Climbs Quickly's bleeding before he died. And then they watched the two-leg gather him against itself, hugging him, giving of its own body heat to him, and the massed music of the clan's soft, approving croon had risen about the two-leg. The clan had reached out, able to touch the two-leg, albeit indirectly, through its link to Climbs Quickly, and their massed touch had soothed the youngling's fear and pain and eased it tenderly into a gentle mind haze. The People of Bright Water took its hurt upon themselves and soothed it into something very like sleep, and it was safe for them to do so, for nothing that walked the world's forest could threaten or harm Climbs Quickly or his two-leg through their watchful ring of claws and fangs.

Sings Truly saw all that, understood all that, and deep inside, she wanted—as she had never wanted anything before—to hate the two-leg. Climbs Quickly might live. His mind glow was weak, yet it was there, and even now she felt his awareness creeping slowly, doggedly back towards the surface. But he was terribly hurt, and those hurts were the two-leg's fault. It was the two-leg which had drawn him here. It was the two-leg for whom he'd fought his impossible battle, risked—and all too possibly lost—his life. Even if he lived, he would have only one true-hand, and that, too, was the two-leg's fault.

Yet badly as Sings Truly wished to hate the two-leg, she knew Climbs Quickly had *chosen* to come. Or perhaps not. Perhaps the strength of his link to this alien creature had left him no choice *but* to come, yet if that was true, then it was equally true that the two-leg had been given no choice, either. They were one, as tightly bound as any mated pair, and Sings Truly knew it . . . just as she knew her brother, as she herself, would have fought to the death to protect his mate.

And so would this two-leg. Youngling or no, despite broken bones and legs which would scarcely bear it, this barely weaned kitten had attacked a *death fang* single-handed. Climbs Quickly had done the same, but he had been an adult—and uninjured. The two-leg had been neither, but it had risen above its wounds and terror to fight the same terrible foe for Climbs Quickly. No youngling of the People, and all too few of the People's adults, could have done that, and without the two-leg, Climbs Quickly would already be dead, so—

<*How shall we untangle this knot, Sings Truly?*> The question came from Short Tail, and though it was directed to Sings Truly, the chief scout had thought it loudly enough to be certain all of the elders heard him.

<We should leave while we still can!> Broken Tooth replied sharply, before Sings Truly could. <The danger of this is far too great! Sooner or later, this two-leg's fellows will come seeking it, and we must not be here when they do.>

<*And Climbs Quickly?*> Short Tail asked bitinglly, and the People's ability to taste one another's emotions was not a useful thing at the moment. Broken Tooth felt the scout's searing contempt as clearly as if Short Tail had shouted it aloud—which, indeed, he had, in a way—and his own mind voice was hot when he replied.

<Climbs Quickly chose to come here!> he snapped. <He was told to stay away from the two-legs—that Shadow Chaser would have that duty—yet he disobeyed. Not content with that, he summoned the clan to save the two-leg from a death fang, despite the danger. Many of us might have been killed or hurt by such an enemy, and you know it! I am sorry for his wounds, and I wish him no evil, but what happens to him stems from his own decisions. Our task is to safeguard our entire clan, and to do that we must be far away when the other two-legs arrive. If that requires us to leave Climbs Quickly to his fate, it cannot be helped.>

<It was not Climbs Quickly who summoned the clan,> Song Spinner observed with frigid

disapproval. <Or not directly. It was you, Sings Truly, and you knew he was trying to protect the two-leg!>

<It was, and I did.> The calmness of Sings Truly's reply surprised even her. <Oh, I didn't know, but that was only because I had declined to ask him. So, yes, senior singer. I knew what Climbs Quickly desired. Perhaps I was even wrong to give it to him. But even if I was wrong, he most certainly was not.> The other elders stared at her in consternation, and she turned from her contemplation of the young two-leg and her brother to face them.

<Climbs Quickly and this two-leg are linked,> she told them. <I have tasted that link, and so can any of you, if you doubt me. He was defending . . . not his "mate," precisely, but something very close to it. This is his two-leg, and he is its. He could no more have failed to protect it than he could have failed to protect me or I him.>

<Prettily said,> Song Spinner said acidly when none of the males would meet Sings Truly's eyes or refute her words. <Perhaps even true . . . for Climbs Quickly. But Broken Tooth speaks for the rest of the clan. We have no link to this two-leg, and surely this is only fresh proof of the danger of hasty contact with them. Look at your brother, memory singer, and tell me risking further contact with these creatures is not the path of madness!>

<Very well, senior singer,> Sings Truly said, still with that same astounding calm and clarity of mind voice, <if you wish, I will tell you exactly that. Indeed, what has happened here is the clearest proof that we must seek out more contact with the two-legs, for we must learn if more of the People can establish such bonds with the two-legs.>

<More *bonds*?> Broken Tooth gasped. He and Digger gawked in horror, but Song Spinner stared at her in shock too profound for any other emotion. Short Tail, on the other hand, crouched beside her, radiating fierce agreement, and they were joined—albeit with less certainty—by Fleet Wind, the elder charged with the instruction of young scouts and hunters, and by Stone Biter, who led the clan's flint shapers.

<More *bonds*,> Sings Truly replied levelly, and Broken Tooth hissed—not in anger, for no male would ever show challenge to a senior memory singer, whatever the provocation, but in utter rejection. <*No, hear me out!*> Sings Truly commanded. <*Right or wrong, I am a singer. You will hear me, and the clan—the clan, Broken Tooth, not simply the elders—will judge between us on this!*>

Broken Tooth settled back, and Song Spinner twitched in even greater shock. As the clan's second ranking singer, Sings Truly had every right to make that demand, yet by making it, she had in effect challenged Song Spinner's own position. She had appealed to the entire clan, seeking the judgment of the majority of its adults, when all knew that Song Spinner opposed her. If the clan chose to support Sings Truly, *she* would become Bright Water's senior singer, while if the clan chose to reject her, she would be stripped of all authority.

But the challenge had been issued, and the clan adults drew closer.

<What my brother has done was not of his choice,> Sings Truly said quietly but clearly. <It could not have been his choice, for none of the People even guessed such a thing was possible. Nor could he, or any of us, have known how to establish such a link with a two-leg even had we desired to do so. But he did establish the link, and though the two-leg is mind-blind and clearly fails to understand, it shares the link. It is as linked to him as he is to it. Is this not true, senior singer?>

Sings Truly looked directly at Song Spinner, and Bright Water's senior singer could only flick

her ears in curt agreement, for it was obvious to all, singer and non-singer alike, that it *was* true.

<Very well,> Sings Truly continued. <We didn't know—then—that such links were possible. We do know now, however, just as all of us have seen proof of the link's depth and power. Climbs Quickly fought the death fang for his two-leg, but the two-leg also fought the death fang for him, and by the standards of its own kind, this two-leg is but a kitten. We dare not judge all two-legs by its actions, yet we dare not reject its example, either. We must learn more about them and their tools and their purpose in being here. They are too dangerous, and there are too many of them, and their numbers increase too quickly for us not to learn those things. Climbs Quickly was right in that . . . and the very things which make them so dangerous could also make them powerful allies.>

Not a whisper rose among her listeners. Every eye was fixed upon her, and even Broken Tooth's tail had stopped its lashing, for it had never occurred to him to consider what the two-legs could do *for* the People. He had been too aware of all the threats the intruders posed *to* them, and Sings Truly felt her hope rise higher as she tasted the shifting emotions of his mind glow.

<If others of the People can—and choose to—form such links, we will learn much. If they go with those they link with to live among the two-legs, they will see far more than we can ever see spying upon them from the shadows. They can report to us, tell us of all they learn, help us to understand the two-legs. And remember the nature of such links. The two-legs do, indeed, appear to be mind-blind. Certainly this one is. Yet for all its blindness, it senses the link. It feels and recognizes Climbs Quickly's love for it . . . and returns that love. I think it is clear from Climbs Quickly's original report that this two-leg thought him no more clever than the ground runners or lake builders when first it met him. It knows better now, yet it cannot know how much more clever the People are. Perhaps it would be as well if we do not let it or its elders know just how clever we are, for it is always wise to let others underestimate us. But let us also build more links with the two-legs, if such we can. Let us learn, and let those of the People who share such links with them teach them that we do not threaten them. There is much room in the world, surely enough for us to share it with the two-legs if we can make them our friends.>

The mental silence lingered, hovering in the wet, rapidly darkening woods. And then, in the way of the People, it was broken by mind voices in ones and twos, choosing their course.

## XI

Richard Harrington's face was white as the air car's powerful lights picked the wreckage trail from the darkness. The icon of Stephanie's emergency beacon glowed in the dead center of his HUD, indicating that it lay directly below him, but he didn't really need it. Bits and pieces of a mangled hang glider were strewn through the tops of three different trees, and the continued silence from his daughter's end of the com link was suddenly even more terrifying.

He didn't know what Stephanie had been doing out here, but she'd clearly been trying to reach the clearing ahead when she went down, and he sent the air car scudding forward. Marjorie sat tense and silent beside him, twisting the control that swept the starboard spotlight in a wide half-circle on her side of the car. Richard was just reaching for the control to the port light, when Marjorie gasped.

"Richard! *Look!*"



His head snapped around at his wife's command, and his jaw dropped. Stephanie sat huddled against the base of a huge tree, clasping something against her with one arm. Her clothing was torn and bloody, but her head rose as he looked at her. She stared back into the lights, and even from his seat in the air car, he saw the bottomless relief on her bruised and bloody face. Yet even as he recognized that, and even as his heart leapt in joy so sharp it was anguish, stunned surprise held him frozen, for his daughter was not alone.

A grisly ruin of white bone and mangled tissue lay to one side. Richard had done enough anatomical studies of Sphinxian animal life to recognize the half-stripped skeleton of a hexapuma, but neither he nor any other naturalist had ever seen or imagined anything like the dozens and dozens and *dozens* of tiny "hexapumas" who surrounded his daughter protectively.

He blinked, astonished by his own choice of adverb, yet it was the only one which fitted. They were *protecting* Stephanie, watching over her, and he knew—as if he'd seen it with his own eyes—that they, whatever *they* were, had killed the hexapuma to save her.

But that was all he knew, and he touched Marjorie's arm gently.

"Stay here," he said quietly. "This is my area, not yours."

"But—"

"Please, Marge," he said, still in that quiet voice. "I don't think there's any danger—now—but I could be wrong. Just stay here while I find out, all right?"

Marjorie Harrington's jaw clenched, but she fought down her unreasoning surge of anger, for he was right. He was the xeno-veterinarian. If the problem had been plant life, he would have deferred to *her* expertise; in this case she must defer to his, however her heart raged at her to rush to her daughter's side.

"All right," she said grudgingly. "But you be careful!"

"I will," he promised, and popped the hatch. He climbed out slowly and walked very carefully towards his daughter, carrying the emergency medical kit. The sea of furry, long-tailed arboreals parted about his feet, retreating perhaps a meter to either side and then flowing back in behind him, and he felt their watchful eyes as he stepped into the small clear space about Stephanie. A single creature crouched by her side—smaller and more slender than the others, with a dappled brown and white coat instead of their cream and gray—and he felt its grass-green eyes bore into him. But despite the unnerving intelligence behind that scrutiny, his attention was on his daughter. This close, the bruises and bloodstains—few of the latter hers, thank God!—were far more evident, and his stomach clenched at the evidence of her injuries. Her left arm hung beside her, obviously badly broken, and her right leg was stretched stiffly before her, and he had to blink back tears as he dropped to his knees.

"Hello, baby," he said gently, and she looked at him.

"I messed up, Daddy," she whispered, and tears welled in her own eyes. "Oh, Daddy! I messed *everything* up! I—"

"Hush, baby." His voice quivered, and he cupped the right side of her face in his palm. "We'll have time for that later. For now, let's get you home, okay?"

She nodded, but something in her expression told him there was more. He frowned speculatively—and then his eyebrows shot up as she opened her jacket to reveal another of the creatures hovering all about them. He stared at the badly mauled animal, then jerked his eyes to his daughter's.

Stephanie read the question in her father's gaze. There wasn't time to explain everything—that

would have to come later, when she also accepted whatever thoroughly merited punishment her parents decided to levy—but she nodded.

"He's my friend." Her voice trembled, heavy with tears—the voice of a child begging her parents to tell her the problem could be fixed, the damage mended . . . the friend saved. "He . . . he saved me from the hexapuma," she went on, fighting to keep that fraying voice steady. "He *fought* it, Daddy—fought it for *me*—and he got hurt so *bad*. I—" Her voice broke at last, and she stared at her father, white-faced with exhaustion, pain, fear, and grief. Richard Harrington looked back, his own heart broken by her distress, and cupped her face between both his hands.

"Don't worry, baby," he told his daughter softly. "If he helped you, than I'll help *him* any way I can."

\* \* \*

Climbs Quickly floated slowly, slowly up out of the blackness. He lay on his left side on something warm and soft, and he blinked. He felt the pain of his hurts and knew they were serious, yet there was something strange about the *way* they hurt. The pain was distant and far away, as if something were making it less than it should have been, and he turned his head. He looked up, seeking what he knew was there, and made a soft sound—a weak parody of his normal, buzzing purr—as he saw the face of his two-leg.

She looked down quickly, and the brilliant flare of her joy and relief at seeing him move blazed through the odd, pleasantly lazy haziness which afflicted his thoughts. She touched his fur gently, and he realized the blood had been cleaned from her face. White bits of something covered the worst of her cuts and scratches, and her broken arm was sheathed in some stiff, white material. He tasted an echo of pain still coloring her mind glow, but the echo was almost as muted as his own. She opened her mouth and made more of the sounds the two-legs used to communicate, and he rolled his head the other way as another, deeper voice replied.

His person was seated on one of the two-legs' sitting things, he realized, but it took several more breaths to realize the sitting thing was inside one of the flying things. He might not have realized even then, without his link to his person, but that same link—and the haziness—kept him from panicking at the thought of tearing through the heavens at the speed at which the flying things regularly moved.

Two more two-legs—his two-leg's parents—sat in front of them. One looked back at his two-leg, and he blinked again as their link helped him recognize her as *his* two-leg's mother. But it was the other adult—his two-leg's father—who spoke. The deep, rumbling sounds still meant nothing, and Climbs Quickly decided vaguely that he really must start learning to recognize their meanings.

"He looked at me, Daddy!" Stephanie cried. "He opened his eyes and *looked* at me!"

"That's a good sign, Steph," Richard replied, putting as much encouragement as he could into his voice.

"But he looks awfully weak and groggy," Stephanie went on in a more worried tone, and Richard turned his head to exchange glances with Marjorie. Despite the painkillers, Stephanie still had to be suffering fairly extreme discomfort, but there was no concern at all for herself in her voice. Every bit of it was for the creature—the "treecat"—in her lap, and it had been ever since they'd found her. She'd insisted that her father examine the "treecat" even before he set her arm, and given the vast, silently watching audience of *other* treecats—and the fact that Stephanie,

at least, was in no immediately life-threatening danger—he'd agreed. Neither he nor Marjorie could make much sense of the bits and pieces of explanation they'd so far heard, but they'd already concluded that Stephanie was right about one thing: whatever else they might be, these treecats of hers were another sentient species.

God only knew where *that* was going to end, and, at the moment, Richard and Marjorie Harrington didn't much care. The treecats had saved their daughter's life. That was a debt they could never hope to repay, but they were quite prepared to spend the rest of their lives trying to, and he cleared his throat carefully.

"He looks weak because he *is*, honey," he said. "He's hurt pretty badly, and he lost a lot of blood before you got that tourniquet on him. Without that, he'd be dead by now, you know." Stephanie recognized the approval in his voice, but she only nodded impatiently. "The painkiller I used is probably making him look a little groggy too," he went on, "but we've been using it on Sphinxian species for over forty T-years without any dangerous side effects."

"But will he be *all right*?" his daughter demanded insistently, and he gave a tiny shrug.

"He's going to live, Steph," he promised. "I don't think we'll be able to save his forelimb, and he'll have some scars—maybe some that show even through his fur—but he should recover completely except for that. I can't guarantee it, baby, but you know I wouldn't lie to you about something like this."

Stephanie stared at the back of his head for a moment, then swiveled her eyes to her mother. Marjorie gazed back and nodded firmly, backing up Richard's prognosis, and a frozen boulder seemed to thaw in Stephanie's middle.

"You're *sure*, Daddy?" she demanded, but her voice was no longer desperate, and he nodded again.

"Sure as I can be, honey," he told her, and she sighed and stroked the treecat's head again. It blinked wide, unfocused green eyes at her, and she bent to brush a kiss between its triangular ears.

"Hear that?" she whispered to it. "You're gonna be all right. Daddy said so."

Yes, Climbs Quickly thought fuzzily, he really *did* have to start learning what the two-leg sounds meant. But not tonight. Tonight he was simply too tired, and it didn't matter right now, anyway. What mattered was the mind glow of his two-leg, and the knowledge that she was safe.

He blinked up at her and managed to pat her leg weakly with his good arm. Then he closed his eyes with a sigh, snuggled his nose more firmly against her, and let the welcome and love of her mind glow sing him to sleep.

# A Grand Tour

*David Drake*

Edith Mincio waited as her friend and employer, Sir Hakon Nessler, Fourteenth Earl of Greatgap, stepped from the landing shuttle hatch onto the soil of Hope. He stumbled. The earl was a good spacer, so good that his body had adjusted to the rhythmic fluctuations of the artificial gravity during the five-day journey aboard the battered shuttle's equally battered mother ship.

"Oof!" he said. The doubled sound reminded Mincio they still wore the plug intercoms they'd needed to speak to one another over the noise of the small freighter. She took hers out of her left ear canal and returned it to its protective case.

Hope had little to recommend it as a planet, but at least its gravity remained at a constant level. The earl's quick adaptation was now playing him false, though Mincio knew he'd be back to normal in a few hours. Not for the first time she envied the tall youth. She was only twenty years older than her pupil, a mere eyeblink for a society with prolong, but sometimes he made her feel ancient.

Mincio disembarked with only a little more dignity than the luggage the crew began to toss through the hatch as soon as she'd cleared it. She wasn't a good spacer by any stretch of the imagination, and almost anyone would have been made queasy by conditions aboard the sorts of vessels Earl Greatgap—

Mincio made herself pause, reminding herself that her employer had decided to travel at least partly incognito. His accession to his father's title was almost as recent as it had been unexpected, and in areas as prone to lawlessness as this it was only common prudence to appear no more ransomable than one must. It was a point which irked his valet immensely, and there was no point in trying to hide the fact that he was at least wealthy. But admitting membership in the aristocracy seemed to make one even more appealing as a potential source of income, and so he traveled as simple Sir Hakon Nessler.

And the best way to support that was for his travel companions to remember his official name, Mincio thought. She gave herself a mental shake, collected the small case which contained her personal computer and journal from the growing heap of bags, and turned to survey her surroundings.

Her breath caught. On the distant horizon winked a line of six crystal pylons, just as Kalpriades had described them in his *Survey of the Alphane Worlds*—written five hundred years ago and still the most comprehensive work on the vanished prehuman star-travelers. If dizziness and a stomach that would take days to settle down were the prices required to see the remnants of the Alphane civilization in person, then Mincio would pay willingly.

The landing field was plain dirt, blackened by leaked lubricants where landing craft had hammered low spots into the ground. Half a dozen other vessels were present, most of them cargo tenders for intrasystem freighters without Warshawski sails. At the far end of the field sat a large cutter with worn hints of gold-leaf decoration. A dozen men and women in baggy gray uniforms got up from the cutter's shade and slouched toward Nessler and Mincio.

Hope's planetary capital and the League Liaison Office were here at Kuepersburg. From the field all Mincio could see in the way of civilization were houses roofed with heavy plastic a kilometer to the north.

The remainder of Nessler's party had waited to disembark until the shuttle's crew had dumped the luggage in a large pile. Beresford, Nessler's personal servant, was green rather than his ruddy norm; Rovald, the recording technician, looked as though she'd been disinterred after a week of burial. Mincio was queasy, but at least she could tell herself that she was a better traveler than those two.

Nessler extended his imaging goggles to view the Six Pylons. Kalpriades claimed the towers had once been connected by a bridge of gossamer crystal, but there were no signs of it from this distance. The pylons stood in the middle of a plain with no obvious reason to exist.

"Hope!" muttered Beresford. He was a stocky little man, forty years older than his employer and a dependent of the Nessler's of Greatgap as every male ancestor of his back to the settlement had been. "Damned little of that here that I can see."

"It was originally named Salamis, I believe, but the Teutonic Order renamed it Haupt when they made it their capital," Mincio explained. "The pronunciation decayed along with everything else associated with the Order."

"And a good thing, too," Nessler said, closing his imager with a snap. He was twenty-two T-years old and had a good mind as well as a fierce enthusiasm for whatever he was doing. When he took up his tutor's interest in the Alphanes, that enthusiasm translated itself into a tour of the Alphane Worlds for both of them. On their return Sir Hakon would enter into the stewardship of one of the greater personal fortunes of the Manticore System, as well as one of its oldest titles. "Quite a knot of vipers, that lot. Although . . ."

His eyes drifted toward the plastic-roofed shacks of Kuepersburg and toyed with the imager, though he didn't reopen it. "I wouldn't say League membership has done a great deal for any of the worlds we've visited in this region."

Rovald found the cases holding her equipment, but she didn't have the strength or enthusiasm at the moment to lift them from the pile. She was a slight woman, at least Beresford's age, with an intuitive grasp of electronic circuitry but no pretensions.

There was nothing wrong with Rovald's health, but events had shown that she wasn't really mentally resilient enough for the rigors of travel here at the edge of the settled universe. Mincio was afraid that they'd have to send the technician home soon, and there wasn't a chance they'd find anyone as good to replace her.

"Region Twelve's been a backwater ever since the Alphanes vanished," Mincio agreed. "The

League uses it as a dumping ground for personnel who might do real harm if they were anywhere important."

Beresford spat. "Which this sandbox sure ain't," he said.

The planet Salamis had received one of the earliest generation ship colonies. After its brief spell as Haupt under the Teutonic Order early in the Warshawski period—"flowering" was too positive a term to describe the era during which those psychopathic brutes ruled four neighboring star systems—the planet had sunk to near barbarism before rediscovery.

As Hope, it had joined the Solarian League in the belief that this would aid its advancement, but nothing much had changed. Hope had no unique mineral or agricultural resources. The soil and climate permitted growing Earth-standard crops with ground-water irrigation, so Hope fed the small-scale mines and manufacturing complexes in neighboring systems. The whole region was singularly devoid of wormhole junctions, and since it was on the edge of the human-settled sphere there wasn't even the chance of through-trade stopping over.

The Alphane civilization was the only reason anybody from the advanced worlds would be interested in Hope, and the difficulties of travel to the region meant that such interest normally remained a distant one. No one knew what the Alphanes had looked like; even the name was one coined by Kalpriades because he believed they were the first star-traveling race in the Milky Way galaxy.

Alphanes had built in crystal on at least a score of worlds known to humans, vast soaring structures which survived only as shattered remnants. Lava that overflowed an Alphane city on Tesserow had been dated to 100,000 T-years ante Diaspora. How much older the ruins might be was anybody's guess.

Besides their structures, the Alphanes had left nut-sized crystals which formed holograms in the air above them when subjected to alternating current. Kalpriades claimed the crystals were books, and most scholars following him had agreed. Few of the crystals thus far found were whole, and the patterns varied according to the frequency and intensity of the current.

To decipher the patterns a scholar first had to determine the correct input, and there were as many theories about that as there were scholars. Books the crystals might be, but they gave no more information about the Alphanes than did the gleaming skeletons of Alphane cities.

The four-man crew of the Klipspringer freighter's shuttle began to walk away. They'd secured their vessel by running a heavy chain around the hatch release and through a staple welded to the hull, then padlocking it. Even so they eyed the people shambling from the cutter askance.

"Captain Cage?" Nessler called sharply to the owner, who had accompanied them down. "Can we expect port officials to arrive shortly?"

"Naw, you have to see the League boss yourself," Cage mumbled. He'd filled his mouth with a wad of chewing tobacco as soon as the shuttle touched ground and he had a place to spit. "There's a merchant named Singh who looks after folks like you from the Inside Worlds. I'll tell him there's a Manticoran arrived at the field, and he'll send somebody out for you."

"Sod that for a lark," Beresford muttered, his hands on his hips as he faced the people from the cutter. "Who're you?" he demanded of the squat, gloomy woman in the lead.

"Please, Good Sir," she said. "Can you give us food? We are very hungry."

"All right, here's the plan!" Beresford said. "Sir Hakon could buy this whole planet if he felt like it. If you pick up his baggage and take it to Mr. Singh's, you won't be the worse for it." He clapped his hands. "But hop to it!"

"One moment, Beresford," Nessler said with a slight frown. "Madam, are you League officials?"

The woman patted her eyes, her ears, and finally her mouth with both hands in a gesture of abject submission. "Good Sir," she said, "I am Petty Officer Royston. We are Melungeon spacers from the *Colonel Arabi*. Please, we will carry your bags. Mr. Singh is a good man. He gives us food often."

"Were you shipwrecked?" Nessler said in growing puzzlement.

The Grand Duchy of Melungeon lay to the galactic south of the Solarian League. Melungeon was an occasional tourist destination for wealthy Manticorans, particularly those who liked to hunt wild animals in conditions in which all the comforts were available to those who could pay for them, but from everything Mincio had heard it was an exotic rather than a really civilized place.

The petty officer started to repeat her salute. Mincio caught her hand to prevent a degradation she found creepy.

"No, Good Sir," Royston said with a worried look to be sure Nessler wasn't going to strike her. "The ship is in orbit. We are to stay with the cutter while the rest of the crew digs for Lord Orloff, but there is no food for us."

Nessler grimaced. "Yes, all right," he said. "Take our luggage to Mr. Singh and I'll see to it you're fed."

With a glance toward Mincio to make sure they were together, Nessler set off for Kuepersburg at his usual long-limbed saunter. Mincio kept up easily though her legs scissored at three strides to Nessler's two. She proceeded through life with a fierce drive that contrasted with her pupil's apparent relaxed ease, but both of them managed to reach their goals.

"I was hoping to see growlers," Nessler said. "Kalpriades said they were common on Hope. Of course, five hundred years . . ."

"Relatively common," Mincio corrected judiciously. "I wouldn't expect to find them near the landing field. They seem to dislike petroleum smells, and small craft like those"—she twitched a thumb at the field behind them—"always leak oil and hydraulic fluid."

Nessler sighed. "I suppose," he agreed grudgingly. "And I don't suppose they can really be the Alphanes, much as I'd like to believe they are."

Growlers were scaly, burrowing herbivores with an adult weight of about thirty kilograms. They were found on most of the worlds with Althane material remains—and vice versa. Growlers were sweet-tempered and fairly sluggish, with no means of defense. That they were able to survive was due to the fact that no carnivore larger than a dachshund remained on any world where growlers lived. That wasn't an accident, because in many cases the fossil record contained major predators.

Kalpriades took as an article of faith that the growlers were themselves the descendents of his Alphanes; other scholars—almost everybody else who'd visited the Althane worlds—believed that the growlers had been pets or even food animals rather than the Alphanes themselves.

Mincio had kept an open mind on the question until she'd seen the creatures herself for the first time. If the growlers were the offspring of star-traveling builders in crystal, then the process of descent had been going on for much longer than a hundred thousand years.

Nessler looked over his shoulder to be sure the rest of the entourage was behind them. The dozen Melungeons clomped along stolidly with the luggage while Royston called cadence.

Rovald was at the end of the line. The technician still looked wan, but she managed a smile when Nessler called, "We're almost there!" in encouragement.

To Mincio in a low voice Nessler said, "We'll be spending a little time here on Hope. If she doesn't get her feet back under her, though, I'm afraid I'll have to arrange her return home."

Beresford trotted up to Nessler and Mincio, pumping his arms in time with his strides. "It's a crying shame the way those poor devils is treated," he said as he came abreast. "Royston says Lord Orloff, that's the captain, just left them to fend for themselves and they're six months behind in their pay. They've been begging. Can you imagine it? What kind of navy puts its spacers to begging on a dirtpile planet like this one?"

"Navy?" Nessler said in surprise. "The *Colonel Arabi* is a Melungeon naval vessel?"

Beresford nodded briskly. "It surely is," he said. "A light cruiser, though I don't know what that means where they come from. The captain's a great curio fancier, Royston says, and he's come out here to haul an Alphane building back to the Duke's museum on Tellico."

Mincio missed a step in surprise. "Take a building?" she said. "Good God Almighty! Surely they can't do that?"

Beresford shrugged. "She says Orloff's got most of the crew digging around one of them towers on the horizon," he said. He hooked his thumb in the direction of the Six Pylons. "They didn't bring any equipment, just bought shovels and picks here because that's all there is to be had on Hope."

He spat dismissively into the blowing dust. "Some expedition, huh? Orloff sounds like a thick-headed barb to me, for all he's got 'lord' in front of his name."

"Watch your tongue, Beresford," Nessler said with what was for him unusual sharpness. "Persons may be gentlemen even though they don't come from the Manticore system."

"Indeed they may, Sir," the servant said in a chastened voice. He bobbed his head. "I beg your pardon."

"I can't believe that someone would try to move one of the pylons," Mincio murmured. "And to Tellico, of all places."

"Not exactly a galactic center of scholarship, is it?" Nessler said in a tone of quiet disapproval. "The Melungeon nobility is given to whims, I'm told. It's perhaps rather unfortunate that Lord Orloff seems to have a whim for Alphane artifacts."

He wouldn't stand for his servant calling a fellow nobleman a thick-headed barbarian, but Mincio suspected that he privately agreed with Beresford's assessment of someone trying to move one of the largest and finest surviving Alphane structures. Certainly Mincio agreed.

They'd reached the outskirts of Kuepersburg. Up close the buildings were more substantial than they looked at a distance. They were built of sandy loam stabilized with a cellulose-based plasticizer, a material as permanent as lime concrete and a great deal easier to shape before it set. Many of the locals had brightened the natural dun color with dyes or exterior paint.

Children played in the street among the pigs, chickens, and garbage. They came crowding around with excited cries as soon as they saw that the travelers were well-dressed strangers. The heavily-laden Melungeons and Rovald were far to the rear.

"Half a Solarian credit to the child who leads Sir Hakon to Merchant Singh's!" Beresford called, holding high a plastic coin with a coppery diffraction grating at its core. "Hop it, now! Sir Hakon's too important a person to wait."



Nessler met Mincio's eyes with a wince. He didn't call Beresford down since the boast was already spoken. Mincio shrugged and chuckled.

The children screamed and leaped for the coin like so many starving rats desperate for a tidbit—though in fact none of them looked undernourished. Beresford chose a tall girl with an exceptional willingness to elbow clear the space about her. With the guide strutting in the lead and Beresford obsequiously in the rear, the party turned right on a cross-street nearly as wide as the track from the landing field.

The girl halted in front of a compound. Windblown dirt dimmed the wall's white paint and several patches had flaked away, but somebody'd recently cleaned the surface with a dry broom.

The gate was open, but a husky servant sat across it polishing scale off a screen of nickel filigree. He rose when he saw the mob of children and strangers coming toward him.

"Here's the Singhs!" the girl caroled. "Give me the money! Give me the money!"

A middle-aged man stepped out the front door of the largest of the three buildings within the compound. He had a full beard and wore a dark velvet frock coat of the type that was almost a uniform for respectable small businesspeople in the League's hinterlands.

"Yes?" he called in a resonant voice. Two women, one his own age and the second a twenty-year old of exceptional beauty, looked out the door behind him.

"I'll handle this, Beresford," Nessler said with quiet authority. "Mr. Singh? I'm Sir Hakon Nessler, traveling with a party of three from Manticore to view Alphane sites. I was given to understand that you might be able to help us to accommodations and supplies here on Hope?"

The gatekeeper immediately lifted his bench from the passage. He watched his master out of the corner of his eye to be sure that he wasn't misinterpreting his duty.

He wasn't. Singh strode forward and clasped hands with Nessler. "Yes, please," he said. "I am consular agent for Manticore on Hope." Singh grinned. "Also for a dozen other worlds. The duties don't take much time away from my own export business, you understand, and I take pleasure in the company of travelers from more settled regions. I like to believe that I am able to smooth their path on occasions. You will stay with me and my family, I trust?"

"We would be honored, but you must permit me to pay all the household expenses during the time we're imposing on you," Nessler said. "In particular—"

He glanced down the street to call attention to the arriving baggage carriers.

"—I've promised these persons that I'd feed them in exchange for carrying our traps. I'd like to fulfil that promise as soon as possible."

"Morey," Singh said to the gatekeeper, "go to Larrup's and tell her to ready . . ." He glanced out the gate to check the count. The gray-clad spacers halted, standing as silently as so many beasts of burden; which indeed they were. ". . . twelve dinners on my account. The parties will be along as soon as they have brought Sir Hakon's goods into the house."

"I'll direct them, dear," the older woman said. In a tone of crisp command she went on, "Come along, Ms. Royston. I'll show you where to put the parcels and then you can go to Larrup's for a meal."

She went inside. Beresford trotted in also. The servant began introducing himself to the woman of the house in terms that indicated he'd decided the Singhs were gentry to be flattered instead of common folk he could badger on the strength of his connection to Nessler. Mincio sighed. Sir Hakon's father and grandfather had never forgotten that they were Nessler's of

Greatgap, and their wealth and Conservative Association political connections had let them enjoy—and project—an old-fashioned aristocratic arrogance which had long since become passe for most Manticorans. Sir Hakon himself held rather different views, much to the disgust of Baron High Ridge and the other Conservative party elders, but neither he nor Beresford were immune to the conditions under which they had been raised. Mincio knew the servant's insistence on his master's primacy in all things often irritated Sir Hakon, but she also knew the little man wouldn't have been nearly as useful a servant here in the back of beyond if he'd been less pushy.

"Are they really from the Melungeon Navy?" she asked Singh in a low voice as the last of the spacers disappeared into the house.

"Yes, indeed," Singh agreed. He gave a faintly rueful shrug. "Maxwell, Lord Orloff, arrived in a warship three weeks ago. He and his cronies as well as most of his crew are at the Six Pylons twenty-five kilometers from here. You've seen the pylons, no doubt?"

"From a distance," Nessler said. "We hope to visit the site ourselves tomorrow, if transport can be arranged. But why doesn't his crew have food?"

Singh shrugged again. "You'd have to take that up with Lord Orloff, I'm afraid," he said. "I've had very little contact with him. He pays quite well for the needs of his immediate entourage, but the common spacers appear to be destitute. Kuepersburg isn't a wealthy metropolis—" He and the two Manticorans exchanged tight smiles. "—but we can't very well let fellow human beings starve. We've been providing basic requirements to the poor fellows, and they sometimes find a taker for a bit of their vessel's equipment."

"They're stripping their own ship to buy food?" Mincio said in surprise. "Surely that costs Melungeon more than it would to pay their crews properly—or at least to provide rations?"

"Sometimes what officials think are pragmatic decisions seem remarkably short-sighted to others," Singh said. "That was as surely true when I was home on Krishnaputra as it appears to be among the Melungeons. And certainly—"

Before continuing he glanced both ways down the street, empty except for the playing children again.

"Certainly it is true of the way the League deals with all the worlds of this region, particularly in the choice of officials the League sends here."

"There's also the matter that the cost of the policy is generally borne by a department other than the one which makes that policy," Nessler said drily. "The phenomenon isn't unique to the Melungeon Navy."

His eyes narrowed. Mincio had found her pupil to be a generally cheerful youth, but he had the serious side to be expected in a responsible heir to a great fortune. "Though I must say," Nessler added, "I might wish that we had the Melungeon Navy to fight rather than that of the People's Republic of Haven."

The Melungeon spacers filed from the house, moving more briskly than Mincio had seen them do previously. Royston was in the lead; she held a chit written on a piece of coarse paper. Singh's wife shepherded them out with a proprietary expression.

The younger woman remained beside the doorway. She gave Mincio a shy smile when their eyes met. She was clearly Singh's daughter, though the greater delicacy of her similar features made her strikingly attractive.

"From what the Manticorian captains on Klipspringer and Delight told us," Mincio said, "the ships of the Expansion Navy of the People's Republic aren't a great deal better."

Nessler nodded, a placeholder that wasn't really an agreement. To Singh he explained, "Once an assembly line's set up it's actually easier to build ships than it is to provide crews for them. The Peeps thought to get around the problem by drafting able-bodied personnel from the Dole list to crew what they call their Expansion Navy. As Mincio says, the result was less than a first-rate combat fleet. *But—*"

He turned his glance toward his tutor.

"You'll recall that the freighter captains who sneered so enthusiastically at the 'Dole Fleet' were nonetheless holding their own vessels in League sovereign space. Expansion Navy ships are quite adequate for commerce raiding, and they provide the Peeps with a presence in far corners from which our very excellent navy lacks the numbers to sweep them."

"You speak like an expert, Sir," Singh said. The Krishnaputran merchant had to be a sharp man to have created a comfortable life for himself and his family in a location that didn't encourage commercial success.

"Scarcely that," Nessler said with a deprecating smile. "I spent a year as an ensign of the Royal Manticoran Navy, and a less than brilliant example of that very junior rank. I resigned my commission when my father and elder sister drowned in a boating accident and I became perforce head of the family. While I regret the death of Dad and Anne more than I can say, I'm better qualified as an estate manager than I was as a naval officer."

He grinned at Mincio. "And I like to think I'm a gentleman scholar."

"Certainly a scholar to have come so far for knowledge, Sir," Singh said. "And a gentleman, also certainly, for that I see with my own eyes." He looked toward his wife and said, "My dear?"

"The rooms will be ready in a few minutes," she replied, "and water for the bath is heating. Will you introduce me, Baruch?"

Singh bowed in apology for forgetting the lack of introductions. "Dear," he said, "this is Sir Hakon Nessler. Sir Hakon, may I present my wife Sharra and our daughter—"

The younger woman came down from the open porch to stand at her father's side.

"—Lalita, of whom we're very proud."

Nessler bowed and took Lalita's fingertips between his. "May I in turn present my friend Edith Mincio?" he said. "She tutored me through university and has kindly consented to accompany me on my travels before taking up a post as Reader in Pre-Human Civilizations at Skanderbeg University on Manticore."

A post which only Sir Hakon's influence gained me, Mincio thought as she touched fingertips with father and daughter. For all that I was the most qualified applicant.

Sharra Singh smiled but didn't offer her hand. While she was clearly a person of independence and ability, her idea of a woman's place in society was not that of Manticore or of her own daughter.

"Father, can we have a dance tonight?" Lalita said with kittenish enthusiasm as she hugged Singh's arm close. The girl might well be two T-years younger than Mincio had first judged; she was at that point in physical development where the prolong treatments always made age estimates difficult. "Please father? They'll have all the most exciting new music, I just know it!"

She looked up at the Manticorans. "Oh, you will let me invite my friends to meet you, won't you? They'll be ever so excited!"

"I'm sure our guests are exhausted from their journey," Singh said with a serious expression.

"Dear—"

"Oh, not at all," Nessler rejoined cheerfully. "As soon as I've had a bath and a bit of dinner, there's nothing I'd like more than some company that isn't ourselves and a quartet of spacers from Klipspringer. Isn't that so, Mincio?"

"Yes indeed," Mincio agreed. She wasn't nearly as social a creature as her pupil, but his statement had been basically true for her as well. In any case, it was the only possible answer to make to Lalita's desperate longing.

Rovald and Beresford came out the side door. Beresford held a bun and a glass of amber fluid. Rovald wasn't to the point of being ready to eat and drink yet, but at least her face had color and animation again.

"As for music, though," Nessler continued with a frown, "I'm afraid I've brought only a personal auditor with me on my travels. You're more than welcome to listen to the contents, Ms. Singh, but I'm afraid we won't be able to dance to it."

"They have an amplifier and speakers, Sir," Rovald said unexpectedly. "With your permission, I can run the auditor's output through their system."

"Your equipment will fit ours?" Singh said. "Really, I don't think . . . My set is very old and came from Krishnaputra with me, you see."

"I can couple them, I think," Rovald said with quiet assurance. "It'll help if you have a length of light-guide, but I can make do without it."

"Rovald's the best electronics technician on Manticore," Nessler said. "If she says she can do it, consider it done."

Rovald beamed with pardonable pride as she and Lalita went inside. The technician had been an object of pity through the uncomfortable voyage and after landing; now at last she was able to show herself as something better than a queasy wreck.

"Would our guests care to come in, now?" the older Ms. Singh said, ostensibly to her husband. "The bath water should be hot."

"Go ahead, Mincio," Nessler said. "I took the last of the warm water on Klipspringer, as I recall."

"Well, if you don't mind . . . ?" Mincio said. Regular hot baths were the one luxury that she really missed in these hinterlands of human habitation.

"You know . . ." Nessler said. Mincio paused, thinking for a moment that he was responding to her immediate question rather than returning to a subject they'd been discussing earlier. "There isn't any complicated difference between the Royal Manticoran Navy and the Dole Fleet or even the Melungeons. It's just a matter of constant effort by all those concerned, the officers even more than the men. If my sister had inherited as she should have, I would have been one of those officers—and I'm very glad I'm not. I'd much rather do something I was good at."

Wearing formal dress that—except for the footgear—would have passed muster at a royal levee on Manticore, Nessler and Mincio approached the League Liaison Office. Their boots were a concession to streets whose sandy muck would have swallowed the iridescent slippers which should have completed their outfits.

Singh had given them directions, but relations between League officials and the commercial elite of most worlds in this region were about as bad as they could be. The League personnel

were the dregs of a very advanced bureaucracy; the merchants tended to be the most dynamic citizens of the tier of worlds marginally more developed than, say, the systems once controlled by the Teutonic Order.

Singh's native Krishnaputra was a typical example. The planet had a local electronics industry, but half the people didn't have electricity in their homes.

League officials could sneer at the local elites as being unsophisticated products of dirty little worlds: mushrooms springing from dungheaps. The local population in general regarded most of the liaison officers sent to them as dense, grasping failures with an overdeveloped sense of their own importance. From everything Mincio had seen or heard, the League Liaison Officer on Hope, the Honorable Denise Kawalec, fell into the expected category.

The League offices on Hope comprised three rectangular buildings touching at the corners like dominoes spilled on a table. They were flat-roofed modular constructions cast from cold-setting ceramic.

Each slab was a different saturated color. Though the structure was probably a standard bureaucratic design from the generation in which Hope first became a League protectorate, Nessler and Mincio hadn't seen anything like it before on their travels. It wasn't something one would forget. The corner where walls of lime green and royal blue met was particularly eye-catching.

The offices were intended for total climate control. The only original opening on this side was the double main door, though there were probably emergency exits in the rear as well. Plastic panes in frames of native wood now covered window openings crudely hacked through the walls to provide light and ventilation during power failures. Mincio guessed that outages were more probable than not, given Hope's technological level and the quality of the League personnel who'd have to maintain a separate generator.

"Will you show us in to Officer Kawalec, lad?" Nessler said to the urchin sprawled in the building's doorway. He'd been watching them approach with an expectant sneer.

"Why should I?" the boy said without getting up. His clothing was cut down from pieces of Liaison Service and Gendarmerie uniforms.

Nessler flipped him a small coin. The boy jumped to his feet and ran around the building. "Sucker!" he called over his shoulder. "Find her yourself!"

"I suppose we'd better do that," Nessler said without expression, pushing open the door.

The hallway was dim but the room at the east end had a light which pulsed at the cyclic rate of the current feeding it. They turned in that direction. Two men wearing black Gendarmerie uniforms walked out of one room and into another, ignoring the visitors.

The Gendarmes were supposed to uphold League regulations on the less-developed worlds which had a Liaison Officer instead of a League High Commissioner. Every contact with Gendarmes during this tour had convinced Mincio that the service attracted people who did little for the reputation of the League, or for law and order more generally.

"Carabus!" a woman shouted from the lighted room. A paper placard tacked to the half-open door read CLO2 Denise Kawalec. "Damn you, what have you done with the bottle?"

Mincio entered the room on Nessler's heels. Kawalec glared up from her search in the bottom drawer of a cabinet for filing hardcopy. When she saw strangers rather than whoever she'd expected, her expression quivered between fear and greed. While Kawalec wasn't precisely ugly, Mincio had never met a human being for whom the word "plain" was a better fit.

"Who are you?" Kawalec demanded, sliding back behind her desk. Its surface was littered with orange peel and fragments of less identifiable food; local scavengers the size of a fingerbone wriggled their single antennae at the newcomers, then went back to their meal.

"Officer Kawalec," Nessler said, "we're Manticorian citizens touring Alphane sites. My name is Nessler, and my friend is Ms. Mincio."

Mincio handed Kawalec the travel authorization from the League's Ministry of Protectorate Affairs both in the form of a read-only chip and a stamped and sealed offprint. The hardcopy had generally proven more useful in Region Twelve, where chip readers—particularly working chip readers—were conspicuous by their absence.

Kawalec flicked the hardcopy and said, "It doesn't cover Hope by name."

"It covers the whole of Region Twelve—" Mincio began hotly.

"A moment, Mincio," Nessler said. "May I see that again, Officer?"

He took the document from Kawalec's hands, folded it over a gold-hued coin he'd palmed from his purse, and handed it back. "I believe you'll find the mention if you check now."

Mincio stared stone-faced at the wall-hung hologram of the League Palace in Geneve. Bribes were only to be expected when dealing with officials on undeveloped worlds, but *League* officials shouldn't be pocketing them. Nessler could easily afford the expense, but when the representatives of developed civilizations were on the take, then the barbarians were truly at the gates.

"Right, I see it now," Kawalec said with an approving nod. She returned the authorization to Nessler, but her right hand remained firmly closed over the coin. When her eyes narrowed, she looked even more ratlike than before. She continued, "Now of course there'll be fees for any antiquities you discover. Port duties as well if you ship them out."

"Of course," Nessler said blandly, as though he were unaware that League regulations specifically forbade private traffic in Planetary Treasures—a category covering Alphane artifacts as well as the vestiges of early human settlements. "Payments should be to your office rather than to the government of Hope?"

"There *is* no government of Hope except for me!" the liaison officer snapped. "These savages can't wipe their own bums without help!"

"I was wondering about the arrangements you've made with the Melungeon expedition," Mincio said. "Are they really going to take one of the Six Pylons offworld with them?"

"That bastard Orloff!" Kawalec said. "He's going to take any damn thing he pleases, it seems like, and not so much as kiss-my-hand to me!"

"Because he has approval from the Ministry of Protectorate Affairs on Old Earth?" Nessler asked.

"Because he's got a bloody cruiser in orbit!" snarled the League official. "I'd complain to Geneve, but Orloff'll be long gone by the time a courier gets there and back. And that's *if* anybody on Earth gives a hoot whether I starve here on this pisspot planet."

She glared at Nessler with transferred fury. "But you, boyo," she said. "You're going to pay!"

"I'm sure we will, if we choose to remove any artifacts," Nessler said calmly. He tipped his beret to Kawalec. "Thank you for seeing us, Madam," he said.

Mincio was out of the office ahead of him. People like Denise Kawalec made her angry in a quite unscholarly fashion, but an insult to the bureaucratic highwayman wouldn't help matters.

Besides, it was unlikely that there was anything Mincio could say that Kawalec hadn't already heard.

Edith Mincio finished her third *estampe* of the evening with a pirouette that she couldn't have managed in a million years if she'd paused to think about it. Usually she danced merely as a social obligation: mating rituals weren't one of her interests in either the abstract or the specific. This party at the Singhs was genuinely pleasant, though; not least because she was a center of attention instead of a wallflower as usual.

The dance steps that had been current on Manticore when she and Nessler left were years ahead of anything the young people of Hope had seen. At least one man had cut in every time Mincio was on the floor, and the belles of Kuepersburg society stared at her with undisguised envy.

A servant handed Mincio a glass of punch; she downed it in three quick gulps. The room was hot despite the open door. This was the most exercise Mincio had gotten in the weeks since she and Nessler climbed the Bakersfield Cordillera on muleback in search of the Crystal Grotto.

Somebody offered her another glass. She started drinking before she realized that the Singhs' daughter, not one of the servants, had given it to her.

"Oh!" Mincio said. "I'm sorry, I've been spinning around so fast that my head hasn't settled down yet. I do apologize, Lalita."

"Oh, please," the girl said with a blush. "We are so honored to have you here."

Mincio eyed the line of men circling just beyond Lalita, preparing to pounce on the Manticoran guest. Across the room Nessler stood at the center of a similar bevy of local girls, visible only because he was a full head taller.

"Lalita," Mincio said, "would you care to get some fresh air for a moment? I'm not up to another dance just now, and I'm afraid I'll be trampled if I try to sit one out inside here."

Lalita turned. To the largest of the young men she said brusquely, "Carswell, Ms. Mincio and I will be taking a turn outside. She would prefer not to be bothered. See that everyone understands, please."

Carswell nodded with a look of grim determination. The men and boys around him were already backing away. Lalita acted like a ten-year-old when dealing with the visitors from Manticore, but her authority among her fellows was as assured as Sir Hakon Nessler's own.

The two women walked out of the sliding doors. A group of men stood near the entrance, talking and chewing tobacco, but Lalita's steely glance parted them.

Inside the sound system broke into a spirited *gavotte*. Rovald presided proudly over the jury-rigged apparatus. The link between the amp and Nessler's personal auditor worked perfectly, and Mincio was willing to bet that in addition the Singhs' speakers had never sounded better.

The dance was being held in a warehouse which Singh's laborers had emptied during the afternoon. There wasn't a hall on the planet large enough to hold the crowd, all the "best people" who could reach Kuepersburg in time. Some of them had arrived by mule-drawn carriage, but there were motorized vehicles also and half a dozen air cars—perhaps all the private air cars on the planet.

The breeze was dry and cool, at least compared to the atmosphere inside the warehouse. The grit it picked up as it sailed between the town's dingy, ill-lit buildings was an acceptable price to

pay.

"I so envy you," Lalita said wistfully. "I don't see why someone as rich and wise as you are would want to come here, Ms. Mincio."

"Call me Edith, please," Mincio said, a little more forcefully than the number of times in the past she'd made the same request. "I don't claim to be wise, Lalita, though I'm knowledgeable about a few things that don't matter in the least to most other people. As for rich, though—your father could buy or sell me a dozen times over, I suspect. I'm here very much at Sir Hakon's expense. Don't let the fact that we're friends mislead you into thinking that we're equals in the economic or even social spheres."

"Oh, you can say that," Lalita said dismissively. "You have the whole galaxy at your fingertips and you don't know what it's like for us living on a pile of . . . of dirt."

The warehouse was on the east side of town, at a distance from the landing field but perhaps more secure for being near the Singh dwelling. The two women walked along the sidewalk of stabilized earth a handsbreadth above the cracked mud of the street proper. Lalita picked her way over the irregular surface without a skip or stumble, despite pools of shadow which the lights of neighboring buildings didn't reach. Hope's three moons were scarcely brighter than planets.

Three people approached from up the street in the direction the women were walking. There was laughter and a snatch of song in which Mincio recognized Beresford's voice.

"Lalita," Mincio said, "it's never a good thing to feel trapped. Believe me, poverty is just as confining as . . . as a planet which is a long way from the centers of development. After this tour I'll have a position that will provide for me all the rest of my life without any need for concern on my part. That security is as close to paradise as I ever expect to come."

She smiled faintly. And if I die before returning to Manticore, then that's security of another sort.

"But don't let the fact that you feel trapped make you blind to the beauties of Hope," Mincio went on fiercely. "And to the beauties of your life here. There are many, many women on Manticore who'd trade their lives in a heartbeat to be as lovely and *central* as you are here."

"Ah, Ms. Mincio?" Beresford said. A lamp over the adjacent house cast its light through the bars of the fenced courtyard in front of the dwelling. The servant stepped close while his two companions kept a little behind in the shadows.

"Good evening, Beresford," Mincio said coldly. Beresford was with a pair of female spacers from the Melungeon vessel; they were carrying bottles. Mincio assumed their association with Beresford was a mercenary one. She didn't approve, but it wasn't her place to object; anyway, that would be a waste of breath.

"I've arranged to borrow an air car for you and the master tomorrow," Beresford said. "A farmer named Holdt's staying in town and lent it. I was coming to tell him that, but I wonder if you'd . . . ?"

"Yes, all right," Mincio said. There was no telling when Beresford would get back to the Singh compound, and there was no need for him and his presumed whores to come any closer to the party in his master's honor.

"Thank you, Ms. Mincio," Beresford said, tipping his hat and returning to his companions. "We'll be off, then."

Beresford seemed to like Mincio well enough, and he never failed to treat her as the gentlewoman she was by birth. There was always an undercurrent of amused contempt when he



spoke to her, though. Beresford knew *his* status; Mincio was neither fish nor fowl. As she'd said to Lalita, poverty was as surely a trap as any backward planet could be.

"We should get back anyway," Mincio said. "Though I don't know that I'm going to be ready for anything faster than a saraband."

They turned together, putting the breeze behind them. It felt cool now. Snatches of Beresford's song reached them; Mincio hoped that the girl couldn't understand the words, though she didn't suppose anyone on Hope could be described as "delicately brought up."

Two figures came up the alley just ahead of them. *A man and a boy*, Mincio first thought; then realized she'd been wrong in both identifications. The first growler she'd seen on Hope was following an old woman who wore a cloak and floppy hat as she plodded steadily toward the dance.

"Oh, it's Ms. deKyper," Lalita said, her lips close to Mincio's ear so as not to be overheard. The old woman was only a few steps ahead. "She's from Haven. She's been here oh! so many years, studying the Alphanes like you. She used to be rich, but something happened back home and now she just scrapes by."

"I'd like to meet her," Mincio said. "If she's as expert as you say, she'd be a perfect guide for the time we're on Hope."

"Ms. deKyper?" Lalita called. "May I introduce our guest, Ms. Mincio of Manticore?"

"Oh my goodness!" deKyper said. She swept her hat off as she turned; a thin, tired woman, showing her advanced age despite prolong, whose eyes nonetheless sparkled in the area light flooding from the compound across the street. "I'm honored I'm sure. I came as soon as I heard that scholars touring the Alphane worlds had arrived."

Her face hardened in wooden disapproval. "You're not, I trust," she said, "associated with Lord Orloff and his fellow savages?"

"We are not," Mincio said, her tone an echo of the older woman's. They touched fingertips. "While my friend and pupil Sir Hakon Nessler may gather a small souvenir here or there, for the most part we view and record artifacts with the intention of recreating some of them on his estate."

The growler stuck out a tongue almost twenty centimeters long and licked Mincio's hand. The contact was rough but not unpleasant, something like the touch of a dry washcloth. It was completely unexpected, though, and Mincio jerked back as if from a hot burner.

"Oh, I'm very sorry!" deKyper said. "She's quite harmless, believe me."

"I didn't know what it was," Mincio said in embarrassment. "I was just startled."

The growler's broad forehead tapered abruptly to the nose and jaws from which the tongue had snaked. Its skin was covered with fine scales; they showed a sheen but no particular color under the present dim light. According to images and travelers' descriptions, growlers were generally gray or green.

Mincio reached tentatively to stroke the beast's head; it began to purr with the deep buzzsaw note that had gotten the creatures their common name. The sound was a shock to hear even though she knew it was friendly, not a threatening growl.

"Does he have a name?" Mincio asked. The growler licked her wrist as she petted it. The tongue was remarkable, virtually a third hand in addition to the four-fingered appendages on the ends of the arms.

"She, I believe," deKyper said, "but I don't know her name."

She straightened and added with the emphasis of someone who knows she's making an insupportable statement, "There's no doubt that growlers are the real Alphanes. I can tell by the way she attends when I play Alphane books."

"Can you read Alphane crystals, Ms. deKyper?" Lalita said. "Oh, that's wonderful! I didn't know that."

"Well . . ." the old woman temporized. "I've discovered the frequency at which the crystal books are intended to be played, but I haven't deciphered the symbology as yet. I'm sure that will come in time."

And so will Christ and His angels, Mincio thought. Another enthusiast who's discovered the key to the universe by studying the site of the Great Sphinx of Giza; or here, its Alphane equivalent.

Aloud she said, "Would you care to meet my companion, Sir Hakon Nessler? We like to have a guide knowledgeable about local sites when we visit a planet. Of course there'd be a special honorarium for a scholar like you, if you wouldn't be embarrassed."

The growler stopped licking Mincio and shuffled close to deKyper again. Though its hind legs were short, the beast was fully bipedal. It leaned its head against deKyper's chest and resumed its thunderous purr.

"I long ago stopped being embarrassed at honest ways to receive money," deKyper said with a wan smile. "And it doesn't happen so frequently that I'm apt to get bored with the experience, either. In any case, I'd be proud to accompany real scholars."

Her resemblance to her pet went beyond a degree of physical similarity that itself was surprising in members of such different species. They both shared a dreamy harmlessness, and neither really belonged—here or perhaps anywhere. Mincio could empathize with the lack of belonging, but she herself was unlikely ever to be mistaken for a dreamer.

Perhaps deKyper understood Mincio's guardedly neutral expression; wistful the old woman might be, but she certainly wasn't stupid. "It's of particular importance that we translate Alphane books," she said. "The knowledge and the public *excitement* that will generate in the developed regions will bring tourists to the Alphane worlds in large numbers."

"You want mass tourism?" Mincio said. "I would have thought . . ."

"Ms. Mincio," deKyper said, "if only scholars like you and your companion toured the Alphane worlds, I would be delighted. But for every pair like yourselves there's a party which knocks chunks off the pylons with a hammer—and now we have the unspeakable barbarians from Melungeon who plan to spirit a pylon clean away! Only large-scale interest among civilized peoples will permit arrangements that will save the remaining artifacts for future generations."

"I see," Mincio said. She fully empathized with the old woman's hopes, but wishful thinking about the translation of Alphane books wouldn't bring those hopes to fruition. "Let's go see Nessler, Ms. deKyper. And perhaps tomorrow while the three of us visit the Six Pylons, our technician Rovald can stay behind to take a look at the crystals in your collection. She has an absolute genius at anything to do with electronics."

The three women walked toward the music and the fan of light spilling through the warehouse doorway. The growler followed with a rumble of soft contentment.

Nessler dropped the air car skillfully downwind of the long tent with its sides rolled up. The dozen people sitting at cards in its shade turned to watch the vehicle land. A few of them got up.

Hundreds of workers with hand tools continued to toil. Some dug away the ground at the base of the tallest pylon while others carried loosened earth from the pit in baskets to pour in a heap a hundred meters away. The men wore shorts; the women sometimes as little. Mincio frowned at thought of what the sun and gritty wind must be doing to their skin. The burrows in the gully wall east of the site must be housing for the laborers.

"Oh, the barbarians," deKyper whimpered from the back seat. The pylon was the easternmost of the line of six. Almost the entire length of the shaft was covered by countergrav rings like those used for moving heavy gear aboard a warship. Several of the rings were dark, obviously dead, while others shimmered nervously with a surface discharge that implied incipient failure.

The party—the officers under the tent at least—had arrived on an ornate air car big enough to carry all of them together. A cutter had landed nearby in the recent past. Despite the skirling wind, the scars from its lift jets remained as pits in the soil.

Nessler shut down the air car, smiling vaguely in the direction of the Melungeon officers. In a tone much more grim than his expression he said to Mincio, "I really don't believe those grav rings will take the pylon's weight, not unless the ones that haven't failed are all at a hundred percent. But I don't suppose Orloff would thank me for telling him."

"I doubt there are any additional rings available on Hope," Mincio said. "As you say, it's their business." The whole Melungeon operation disturbed her profoundly, but focusing her mind on the details of it wouldn't do any good.

She turned to help deKyper out of the back of the open vehicle. The door was wired shut so the passenger had to step over the side. The older woman was gray with silent despair.

They walked to the tent, Nessler slightly in the lead. The Melungeon officers wore ornate uniforms, but their jackets were mostly unbuttoned and the garments weren't clean enough for Mincio to have imagined putting any of them on. The officers carried sidearms in flap holsters. Navy ratings, probably thankful that they weren't at the backbreaking labor of the pit, acted as servants.

The half dozen civilians present were obviously prostitutes, though Mincio wasn't sure they were all Hope residents. Four were women, two men.

Nessler approached the big man who'd been sitting at the head of the table. He wore an open white tunic with gold braid most of the way to the elbows. The fellow was completely bald, but he had a full mustache and a mass of chest hair so black that it looked like a bearskin gorget.

"Good morning," Nessler said. "I've been told this is the camp of Maxwell, Lord Orloff. If I may take the liberty of introducing myself, I'm Sir Hakon Nessler of Manticore. I'm a student of Alphane sites, as I see you are as well."

Orloff's face split in a broad grin. "I'm Orloff," he said. He ignored the hand Nessler raised to touch fingertips in Solarian League fashion and instead embraced his visitor in a great hug. "Come, have a drink!"

He glanced at Mincio and deKyper and added, "Two women, hey? You Manticorans know how to travel—though I like them with a little more meat myself."

He gave a bellowing laugh and banged Nessler on the back. A servant poured faintly mauve liquid into beakers.

"Permit me to introduce Edith Mincio, my tutor and superior in the study of Alphane

remains," Nessler said in a tone of cool unconcern, as though he hadn't heard the last comment, "and Ms. deKyper, a Havenite scholar who's studied the Alphanes here on Hope for many years."

"What you're doing is unspeakable!" deKyper said angrily. "You're desecrating a site that's older than mankind!"

"Oh, you're the crazy lady," Orloff said with an amused chuckle. "Sure, I've heard of you. Well, have a drink anyway, my dear. We're only taking one pillar, you see. That'll leave five right here for you, but mine will be the only one on Tellico."

There'd been a poker game going on when the visitors arrived. The seven or eight players were using cash rather than chips. The denominations Mincio recognized—the currency of a dozen worlds was on the table—were large ones. Melungeon officers were nobles and either wealthy or at least addicted to the vices of wealth, of which high-stakes gambling was the most common.

Mincio knew the type very well. She shivered. *Sheep for the shearing*, she thought as she glanced at the half-drunk, none-too-bright, faces around the table. She hadn't realized how deeply she'd been infected as a child.

Orloff's officers talked among themselves, not so much deferential to their commander as disinterested in the visitors. One of the men walked to the end of the tent and began to urinate on the dry sand.

Servants filled two more beakers. Mincio took hers; deKyper ostentatiously turned her back and walked toward the pylon fifty meters away. Orloff's face darkened in a brutal scowl before he said, "Maybe you'd like to take a pillar yourself, Nessler? There's plenty for all, it seems to me."

Nessler lowered the beaker from which he'd been sipping. "I'm afraid it'd cost half my fortune to ship home something so huge. My heirs will be disturbed enough at the amount their crazy forebear spent to recreate copies of Alphane artifacts from imagery."

A Melungeon crewman who wore tunic and trousers in token of his higher status—he was however barefoot—clumped up to Orloff. When he caught Orloff's eye he gave the degrading Melungeon equivalent of a salute.

"Please Sir," the crewman said. "There's a problem. We can't get the pillar loose."

Orloff rumbled a sound of disgust. "No more brains than monkeys," he said. "Let's straighten them out, Nessler, and then we'll talk about cards."

He strode toward the pit, pushing the crewman aside as he might have kicked a dog that got in his way. Mincio and Nessler traded expressionless glances as they followed. The remainder of the Melungeon officers trailed after, though Mincio noticed that all the card players put their money in their pockets before leaving the table.

The diggers had lowered the ground at the pylon's base by a distance of three meters, laying bare the natural substrate. Though most of the crystal shaft was hidden behind countergrav rings, the tip forty meters in the air caught the sun and wicked it down through the base. Light spilled in dazzling rainbows across the pit and those laboring in it.

"It appears that the Alphanes didn't set their pylons on the bedrock, Lord Orloff," Ms. deKyper said with dispassionate clarity. "They fused them *to* the rock. I dare say your peons here will be some while chipping away at the granite, don't you think?"

Orloff ripped out a series of oaths that were both blasphemous and disgusting. Mincio kept her face studiously blank and her eyes focused on the pylon. It would be ill-bred to let Orloff know what she thought of him. There was enough ill-bred behavior here already.

She wondered how the Alphanes had managed the attachment. Crystal had flowed down into the dense rock, but streaks of granite wove upward into the pylon's base as well. The zone of contact looked as though colored syrups had been stirred into a mixture, then frozen.

In a mood swing as abrupt as sun after a rainsquall, Orloff draped his big arm over Nessler's shoulders and walked the Manticoran back to the tent with him. "Well, I'll have to get some equipment from the ship, but tomorrow will be time enough for that. Shall we have a friendly game of poker?"

Orloff pointed to one of the servants and said, "Alec! The new cards in honor of our visitor!" His index finger jerked from the man to an ornate wooden storage chest which showed the marks of hard traveling.

"And one of you dogs bring some more liquor!" he added in a bellow. In a friendly, almost wheedling, voice he went on to Nessler, "It's Muskatoon. Have you had it before? It's our Melungeon national drink, brandy distilled from the wine of the Muscadine grapes our ancestors brought from Earth."

Mincio had sipped at her beaker and hoped to avoid further contact with the fluid within. Muskatoon's cloying sweetness tried to conceal an alcohol content sufficient to strip paint. She tipped the remaining contents onto the roots of a spiny bush.

"I think I've got enough in my glass for now," Nessler said mildly. His host had brought him to the card table with as little ceremony as a policeman conducting a drunk. The servant handed Orloff a flat case from the storage chest. "And as for cards—"

Orloff opened the case; Mincio felt her face harden. Inside were two decks with mottled designs on the back: one vaguely blue, the other a similarly neutral green. They were made of thin synthetic, not paper, and looked pristine.

Pocketed incongruously with them in the case was a meerschaum tobacco pipe whose stem was of black composition material. The intricately-carved bowl of porous stone was white, unused.

"—I think that'll have to wait for another time," Nessler continued. Mincio's muscles relaxed, though she still felt cold inside.

Nessler rotated himself out of Orloff's grasp; the motion seemed intended only to let him gesture toward the line of pylons. "We'd like to see the remainder of this site yet during daylight. Tomorrow we'll come back with our imaging equipment to record them, this pylon in particular, and perhaps we'll have time for cards."

He handed his beaker—still full—to a servant, bowed to the Melungeon captain, and said, "Good day, Sir!" He turned on his heel before the other could respond.

Orloff stood with a slight frown. He'd taken the pipe from its case and was twiddling the stem with his powerful fingers. "Yes, all right, tomorrow," he called to Nessler and Mincio. Ms. deKyper was already in the air car, sizzling in fury at the Melungeon sacrilege.

The next pylon was almost half a kilometer away, sufficient distance to free their party from the Melungeons' presence. Nessler landed, downwind as before, though sand spurting from beneath the air car wouldn't do any significant harm to the crystal shaft.

Mincio got her breath. She found she was more angry, not less, now that her conscious mind had processed the information to which she'd reacted instinctively on first receipt.

"Nessler," she said, breaking into deKyper's litany of displeasure, "under no circumstances should you play cards with that man. The deck he brought out is fixed. The cards broadcast their values. Orloff picks up the signals in clicks through the stem of his pipe."

Nessler raised an eyebrow as he got out of the air car. "Cheating at cards would be in keeping with the rest of the man's character, wouldn't it? I, ah . . . I'm glad you recognized the paraphernalia. I wouldn't have done so."

Mincio tried to stand. She failed because her muscles were trembling. She covered her face with her hands.

Nessler helped deKyper from the vehicle. The two of them spoke for a moment in low voices; then deKyper said, "I'll be on the other side of the pylon," and her feet crunched away.

Nessler cleared his throat. "Ah, Mincio?" he said.

Mincio lowered her hands. Without meeting Nessler's eyes she said, "I never talked about my father. He was a professional gambler. My earliest memories are playing cards with my father. He punished me when I made a mistake. I was three years old, maybe not even that, and he whipped me for drawing to an inside straight."

"I'm sorry that this matter arose," Nessler said quietly. "We needn't go anywhere near the Melungeons tomorrow. Perhaps Rovald can get some imagery."

"It doesn't bother me to see people play," Mincio said. She smiled wanly in the direction of the far horizon. "Really what it does is excite me. My father taught me very well, but I haven't touched a deck of cards since the day he died."

She stood and looked directly at her friend and employer. She smiled again, though the corner of her lips wobbled. "He was shot dead when I was sixteen. It wasn't a duel—merely a murder, a contract killing. Given that several of the victims he cheated had committed suicide, I suppose justice was done."

Nessler shook his head slowly. "I'm sorry about your father's death, Mincio," he said. "Also about the way he chose to live his life. But that wasn't your choice. I'm honored to have been your pupil in the study of the Alphane culture, and I remain in awe of your learning."

"I hope you're not so great a fool to be awed by mere knowledge," Mincio said tartly. "Any more than I am by mere wealth. Let's take a look at this pylon, shall we? I want to see whether all six are the same molecular composition."

They'd dropped deKyper off at the pair of storage sheds in which she lived on the edge of Kuepersburg. Nessler brought the borrowed air car down in Singh's courtyard. Generator-powered electric lights were on all over the complex of buildings, and dozens of people had to crowd out of the way to permit the vehicle to land.

"Sir!" Beresford said as soon as Nessler shut off the turbines. "There's a Jathan freighter in orbit that's brought in a pinnacle from a Manticoran navy ship that a Peep cruiser blasted in the Air System. They're hoping that, you know, you being a gentleman—"

Nessler rose with a subtly changed expression. "A gentleman I hope," he said, "and a reserve naval officer beyond question. May I ask who's in charge of this party?"

Singh stood at his front door but didn't interfere in what he hoped was no longer his business. Mincio moved from the car to a corner where she'd be out of the way while she observed what was happening.

The people who nearly filled the courtyard wore either utility uniforms of the Royal Manticoran Navy or loose, locally-made garments which must have been provided by the consular agent. Some of the castaways had been injured; most had sallow, hollow-eyed expressions which were more than a trick of the low-voltage lights that illuminated them. From the looks of them, they must have been forced to subsist on the life support capability of their pinnacle/lifeboat to avoid overloading the limited capacity of the hyper-capable freighter which had picked them up.

"Sir!" said a powerfully-built woman who planted herself in front of Nessler and threw a crisp salute. "Leona Harpe, Bosun, late of Her Majesty's destroyer *L'Imperieuse*. There's thirty-seven of us, everybody who survived."

"Stand easy, Harpe," Nessler said in a tone of calm authority very different from that of his normal discourse, and different even from his dealings with servants like Beresford. "Now, what are your primary needs?"

"Mr. Singh fed us right after we landed in the pinnacle," Harpe said. She rubbed her eyes. "He doesn't have tents for shelter, and I don't know how long we're going to be stuck here."

"We need a way to get to a Navy ship big enough to serve out the Peep bastards who whacked us!" somebody called from a rear rank.

"Belt up, Dismore!" Harpe snapped without turning her head. "Though I'm looking forward to that too, Sir. They hit us without warning in League territorial space—we didn't even know there was a war on . . . if there is! All we knew was that someone started jamming us, then opened fire. We did our best—I think we may even've got a lick or two in—but the Peeps had a heavy cruiser." She shook her head. "The old *Imp* was like a puppy up against a hexapuma, Sir."

She paused for a moment, then inhaled sharply. "After a hit sent the fusion bottle climbing toward failure, all the survivors got off in the two cutters and the pinnacle . . . and that's when the bastards opened up all over again. They lasered the blue cutter under Mr. Gedrosian, the XO. Ms. Arlemont, she was Engineering Officer, tried to ram them with the red cutter. They lasered them too."

Harpe swallowed. "The Captain got *us* clear before he died," she said. "I couldn't have evaded the bastards myself. He'd lost his legs from the hit on the bridge but I don't think it was that what killed him. He just gave up." She swallowed again.

"We knew the Peeps were on Air, so we couldn't go back there. It was just luck the *Jerobahm* was bound out-system and her skipper was willing to let us ride her hull. We'd be dead for sure otherwise, Sir. Those bastards don't want any witnesses left."

"Yes, all right," Nessler said. "Wait here for a moment while I consult with Mr. Singh."

Nessler stepped toward Singh on the porch. The shipwrecked spacers parted with mechanical precision. They'd lost everything but the clothes they stood in—and clothes as well in some cases—but their discipline held. Mincio had always considered herself a scholar and above petty concerns of nationality, but in this moment she was proud to be a citizen of the Star Kingdom of Manticores.

"Excellent!" Nessler said after a brief conversation. Mr. Singh disappeared into the house, calling half-heard orders.

"Bosun Harpe," Nessler continued, still on the porch which put him a head higher than the spacers he was addressing. "You and your people will be billeted in a warehouse and provided with rations during the period you're on Hope. I'll defray Mr. Singh's expenses and be repaid on

my return to Manticore. Mr. Singh is summoning a guide right now."

Mincio doubted that Nessler would even request reimbursement for an amount that was vanishingly small in comparison to his annual revenues. Government paperwork was a morass, and she suspected that the Navy was worse even than the Star Kingdom's civilian bureaucracy. The comment was his way of not seeming to boast about his wealth.

"We really do want to get back for another crack at those Peeps, Sir," Harpe said. "They took us down, that's war. But the lifeboats . . ."

"We'll deal with that, Bosun," Nessler said sharply, "but first things first." Nodding toward the servant who'd appeared at the door behind him he continued, "You're to report to your new quarters until seven hundred hours tomorrow. A delegation of petty officers will wait on me here at that time. Dismissed!"

"Hip-hip—" called a rear-rank spacer.

"*Hooray!*" shouted the whole body, sounding to Mincio like many more than thirty-seven throats in the echoing courtyard.

As crewmen filed from the courtyard behind Harpe and the servant guiding the party, Mincio moved to where Nessler was talking to Beresford. "This is horrible," she said.

"The other side of the Dole Fleet not being very competent at waging war," Nessler said without emphasis, "is that they're willing to commit acts that would be unthinkable to a professional force. Like destroying lifeboats."

Mincio nodded. "I'd think that any war was bad enough without people trying to find ways to make it worse," she agreed, "but as you say—failed people are desperate to have *anyone* else in their power."

"I was just pointing out to the master," Beresford said, "that with the Peeps being the sort they is, and Air being so close by to Hope, maybe it'd be a good idea if we cut things short in this sector and got back to systems where the Navy shows the flag with something more impressive than a destroyer." He spat. "To take on a heavy *cruiser*, for chrissake!"

"The normal problem in League Sector Twelve is piracy," Nessler said in a voice as flat and hard as a knifeblade. "But I agree that it might have occurred to someone in the Ministry that when the Peeps began sending out cruisers for commerce raiding, our anti-piracy patrols should have been either reinforced or withdrawn. No doubt the Admiralty had other things on its mind."

Rovald came out of the house with a hologram projector, part of the extensive suite of equipment she'd brought on the voyage. She started to speak but stopped when she realized Nessler and Mincio, though silent, were focused on more important matters.

Beresford had no such hesitation. "So shall I see about arranging transport, say, to Krishnaputra?" he said. "Captain Cage hasn't broken orbit yet. It might be three months before another Warshawski ship touches down here!"

Nessler shook his head no. He said, "Yes, that's the problem. We can get out of the region, but the survivors of *L'Imperieuse* cannot—certainly not in their pinnace, and not with any likelihood on any of the small-capacity vessels which call on a world like Hope."

"Well, Sir . . ." said Beresford, looking at the ground and thereby proving he knew how close he was skating to conduct his master would find completely unacceptable. "It seems to me that when they signed on with the Navy, Harpe and the rest, they kinda . . ."

"Yes, one does take on responsibilities that one may later find extremely burdensome,"



Nessler said in a cold, distinct tone. "As I did when I took the oath as an officer in Her Majesty's Navy. Nothing that touches you, of course, Beresford. I'll send you and Rovald—"

"Sir!" Beresford said. With a dignity that Mincio had never imagined in the little man he continued, "I don't guess anybody needs to teach his duty to a Beresford of Greatgap. Which it may be to keep his master from getting scragged, but it doesn't have shit to do with leaving him because the going got tough."

Nessler made a sour face. "Forgive me, Beresford," he said. "This isn't a good time for me to play the fool in front of the man who's looked after me all my life."

"Sir?" said Rovald, perhaps as much to break the embarrassing silence as because she thought anybody cared about what she had to say. "As Ms. Mincio instructed, I've analyzed the damaged crystals in the deKyper collection to find a common oscillation freq—"

"A moment please, Rovald," Nessler said, raising his hand but looking at Mincio rather than the technician. "Mincio, would it be possible for you to win a great deal of money at poker from Lord Orloff? More money than he could possibly pay?"

"No," Mincio said, her words as clipped and precise as the click of chips on hardwood. She and Nessler were no longer tutor and pupil, though she didn't have the mental leisure to determine what their present relationship really was.

Ignoring the chill in Nessler's expression she continued, "He wouldn't play with me for amounts in that range. If I have the complete cooperation of Beresford and Rovald, however, I think I might be able to arrange for you to—" she smiled like a sharp knife "—shear him like a sheep yourself in a day or two."

Beresford guffawed. "Who d'ye want killed, boss?" he asked; not entirely a joke from the look in his eyes, and the sudden tension in Rovald's thin frame.

"Just a matter of borrowing a deck of cards from Orloff's camp," Mincio said. "It shouldn't be difficult, given your contacts with the Melungeon crew; and perhaps a little money, but not much."

She turned to the technician. "As for you, Rovald," she continued, "I'll want you to reprogram the deck's electronic response. I could probably do the job myself with your equipment, but I couldn't do it as quickly and easily as I'm sure you can."

Rovald let out her breath in a sigh of relief. "I'm sure it won't be a problem, Ma'am," she said.

"I'm going to win at poker?" Nessler said. "That'll be a change from my experience at school, certainly." He chuckled. "But you're the expert, of course. And Beresford? Before I surrender your services to Mincio, be a good fellow and find my alcohol catalyzer. Orloff's bound to be pushing his horrible brandy at me, and I wouldn't want him to think I had a particular reason to keep a clear head."

It was midmorning before Reserve Midshipman Nessler finished his meeting with the ranking survivors of the *L'Imperieuse*. That suited Mincio much better than an early departure for the pylons. She was still feeling the effects of the dance two nights before.

Besides letting her muscles work themselves loose, the delay permitted Mincio to examine Rovald's work of the previous day. The technician had calculated the range of resonant frequencies for the four least-damaged Alphane "books" from deKyper's collection. The next step would be to calculate the frequency of common resonance, then finally to determine the factor by which that prime had to be modified to properly stimulate the crystals in their present damaged

state.

If Rovald was successful—and that seemed likely—the breakthrough in Alphane studies would be the high point of Mincio's scholarly life. She wasn't really able to appreciate it, though, because for the first time since her father died Edith Mincio wasn't primarily a scholar.

Nessler lifted the air car. He and Mincio were in the front seats; Beresford and Rovald shared the back. There was space for a fifth passenger, but none of them cared to chance adding even deKyper's slight additional weight. The drive had labored just to carry three the day before.

They'd barely cleared the walls of Singh's courtyard before they saw the Melungeon air car curving down toward the landing field. Lord Orloff's vehicle had a fabric canopy with tassels which whipped furiously in the wind of passage.

"Ah!" said Nessler as he leaned into the control yoke to turn the car. "I think we'd best join them before going on. You may have to drive Rovald to the site yourself, Beresford."

"I guess I can handle that," the servant said. "Seeing as I've been driving air cars since I was nine. And *didn't* your father whip my ass when he caught me, Sir."

Orloff and his entourage were about to enter the Melungeon cutter when Nessler settled his borrowed car nearby. Orloff beamed at them and cried, "Nessler! Come and see my *Colonel Arabi*. Then the two of us can go back to the camp and play cards, not so?"

"Mincio and I would be delighted to visit your ship, Captain Orloff," Nessler said cheerfully. He strode to the Melungeon and embraced him enthusiastically. Mincio noticed that this time Nessler's arms were outside Orloff's instead of being pinned to his chest by the Melungeon's bear hug. "There's no problem with my servant and technician going to your camp to record the pylon before you remove it, is there?"

"Foof!" said Orloff. "Why should there be a problem? Alec, go back to camp with my honored guest's servants and see to it that the dogs there treat them right. It's only the other ranks there now, you see."

"And perhaps tomorrow when we've had a chance to rest," Nessler added, "I'll be in a mood for some poker. I hope you don't have a problem with high stakes?"

Lord Orloff's laughter thundered as he patted Nessler ahead of him into the pinnace.

Mincio had no naval experience, so the view of the approaching cruiser wouldn't have meant anything to her even if the cutter's view screen had been in better condition. If the fuzzy image was an indication of the *Colonel Arabi's* condition, however, the cruiser was in very bad condition indeed.

"Why, if I didn't know better," Nessler said as he looked over the coxswain's shoulder, "I'd have said that was a *Brilliance*-class cruiser of the People's Republic of Haven! That's *very* good. Did the Grand Duchy purchase the plans from the Peeps, or . . .?"

"Not plans, no," Orloff said from the command seat to the right of the coxswain. "We bought the very ship! Nothing is too good for Melungeon, and nothing on Melungeon is too good for Maxwell, Lord Orloff." He pounded his broad chest with both fists. "My very self!"

The cutter passed into the cruiser's number two boat bay and settled into the docking buffers. The mechanical docking arms clanged rather more loudly than Mincio had expected, and the personnel tube ran out to the cutter's lock.

The sale of warships to minor states would be a useful profit center for a government like that

of Haven, which needed massive production capacity for its own purposes. Post-delivery maintenance wouldn't be part of the deal, however.

"We bought the *Colonel Arabi* not twenty years ago," Orloff continued as crewmen manually opened the cutter's hatch. The powered system didn't work. "Direct from the yard on Haven, not some dog of a castoff. Have you ever seen so lovely a ship in your life, Sir Hakon Nessler? *My ship!*"

The view of the boat bay gallery beyond through the personnel tube didn't strike Mincio with anything but an awareness of squalor, but Nessler seemed genuinely impressed as he followed Orloff down the tube. "This is much more than I'd expected," he said. "Lord Orloff, I'll admit that I didn't think the Melungeon navy had so very modern a vessel in its inventory."

Orloff's officers were obsequious to both him and Nessler, but they showed no such reserve toward Mincio or one another. After Mincio had been pushed aside by a woman with three rings on her sleeves and a dueling scar across her forehead, she waited to disembark after all the ship's officers.

"Get to work on the forward lasers, Kotzwinkle," Orloff said. "Whichever one you think. And I don't want to spend all day here, either! A drink, Nessler?"

"So . . ." Mincio said as she caught up with the others as they left the boat bay. The Melungeons were intent on their own business; she was in effect speaking only to Nessler, though without any suggestion of secrecy between them. "This ship is actually the equal of the Peep vessel on Air?"

"Oh, good God, no!" Nessler said in amusement. "This is a light cruiser. The ship on Air is a heavy cruiser, quite a different thing, and newer as well. Though—" in a lower voice, still amused—"there may not be a great deal to choose between the professional standards of the crews. And it *is* a great deal better than I expected."

Orloff turned and thrust one of the two beakers of brandy he now held into Nessler's hand. "Come! Look at my lovely ship."

Mincio followed the pair of them, glad not to have more Musketoon to deal with. Nessler had swallowed a catalyzer before boarding. It converted ethanol to an ester which linked to fatty acids before it could be absorbed in the intestine. So long as Nessler had a supply of suitable food—the bowls of peanuts on the Melungeon card table would do fine—nobody could drink him under the table.

The catalyzer didn't affect the *taste* of Musketoon, however. If Mincio had a choice, she'd prefer to drink hydraulic fluid.

Several of the officers went off on the business of the ship, shouting angry orders at the enlisted personnel still aboard. With Nessler at his side, Orloff led the rest of his entourage on a stroll through the vessel. Mincio followed as an interested though inexperienced observer.

The voyage from Melungeon to Hope was long and presumably a difficult piece of navigation, so the officers and crew had to have at least a modicum of competence. More than a modicum, given the *Colonel Arabi's* terrible state of repair.

No expertise was needed to notice the ropes of circuitry routed along the decks, sometimes to enter compartments through holes raggedly cut in what had been blast-proof walls. Equipment didn't fit the racks and was interconnected by exposed cables. Sometimes a replacement unit was welded *onto* the case of the original.

Above all, everything was filthy. Lubricants and hydraulic fluids had obviously won their

battle to bleed over every surface within the closed universe of any starship. Only constant labor by the crews could remove the slimy coating. There was no sign that anybody aboard the *Colonel Arabi* even made the effort. Mincio saw 20-centimeter beards of gummy lint wobbling everywhere but in the main traffic areas.

They entered an echoing bay. For the most part the *Colonel Arabi* had given Mincio the dual impressions of being very large and simultaneously very cramped. This was the first time she had the feeling of real volume. Crewmen flitted half-seen in the shadows; only a fraction of the compartment's lighting appeared to function.

"Here we will store the pillar," Orloff said, gesturing expansively with both hands. "Three months it took to open the space! Our dockyard on Melungeon, it's shit!"

He spat on the deck at his feet. "Cheating crooks, just out to line their pockets!"

"That bulkhead separated the forward missile magazine from a main food storage compartment, did it not?" Nessler said. "Removing the armor plate from a magazine would have been a serious job for any dockyard, Lord Orloff. And I wonder . . . don't you have flexing problems as a result of the change? That was the main transverse stiffener, I believe."

"Faugh!" Orloff said. "We had to have room for the pillar, did we not? What use would it be to come all this way if we couldn't carry the damned pillar?"

As Mincio's eyes adapted to the lack of lighting she made out the forms of two huge cylinders, each nearly the size of the *Colonel Arabi's* cutter. They were missiles, sublight spaceships in their own right, each with a nuclear warhead as its cargo.

Perhaps a nuclear warhead. Based on the rest of what she'd seen of the Melungeon navy, the warhead compartment might be empty or hold a quantity of sand for ballast.

"You've had to remove most of your missiles to make room to store Alphane artifacts, I gather, Lord Orloff?" Mincio said. In fact she didn't think anything of the sort. Close up she could see that the cradles which should have held additional missiles were pitted with rust. It had been years if not decades since they'd last been used for their intended purpose.

"This is just the forward missile magazine, Mincio," Nessler said quickly. "There's the stern magazine as well, and it hasn't been affected by these modifications."

"Faugh!" Orloff repeated. "What do we need missiles for? Are the Alphanes going to attack us, my friend?"

He whacked Nessler across the back and laughed uproariously. "Besides, do you know how much one of those missiles costs? Much better to spend the naval appropriations on pay for deserving officers, not so?"

A bell chimed three times. A voice called information that Mincio couldn't understand: the combination of loudspeaker distortion, echoes, the Melungeon accent, and naval jargon were just too much for her.

"Hah!" Orloff cried. "Kotzwinkle is ready so soon. I'll have to apologize for calling him a lazy dog who'd rather screw his sister than do his duty, will I not?"

His laugh boomed again as he shooed both Manticore visitors ahead of him toward the hatch by which they'd entered the bay. "Another drink and we go back to the camp and play poker, not so?" he said.

"Another drink," Nessler agreed. "And tomorrow I'll come out to your camp and we'll play poker, yes."

\* \* \*

It had rained at the campsite during the night, a brief squall that seemed to have done nothing to lay the dust. Tiny shoots sprang up from what had been bare soil. The vegetation was an unattractive gray hue and it had spikes capable of piercing the fabric sides of Mincio's utility boots. She'd need to get tougher footwear if they were to stay on Hope any length of time.

Beresford was erecting a small tent beside the Melungeons' own shelter. Rovald carried her gear to the spot, making a number of trips rather than chance dropping a piece and damaging it. Mincio had offered to help, but the technician didn't trust anybody else with the equipment. They hadn't been able to bring the protective containers in which the pieces normally traveled. Even now the borrowed air car was only marginally flyable with four people aboard and the minimum additional weight.

"So," said Orloff cheerfully. "You didn't bring your old fool deKyper to watch? I thought she'd want to say good-bye to her precious pillar."

"She wanted to stay home and check some values Rovald here has calculated for Alphane books," Nessler lied. His smile looked as bright and natural as sunrise. You had to know him as well as Mincio did to notice the vein throbbing at the side of his neck. "That would be a wonderful thing, wouldn't it, if we could actually decode their records?"

"Books are all well and good," Orloff said dismissively. He gestured toward the pylon in its wrapper of countergrav rings. "But this, *this* is what will knock their eyes out!"

Beresford had the tent up. It was of Manticoran manufacture, a marvel of compactness and simplicity. It would sleep four and even hold a portion of their personal property if necessary. Some of the lodgings Nessler's party had found on the tour were rudimentary, but this was the first time they'd actually used the tent.

Crewmen had unloaded the laser they'd stripped from the cruiser's defensive armament. Under Kotzwinkle's shrill commands they were manhandling it the ten meters from the cutter to the edge of the pit where it could point at the rock on which the pylon rested.

The weapon didn't have a proper ground carriage: it lay in the bed of an agricultural cart purchased from a nearby latifundium. Mincio supposed that was all right since a laser wouldn't recoil, but both Nessler and Rovald had warned her not to get near the power cable which connected the weapon to the cutter's MHD generator. Neither of them thought the wrist-thick cable would hold up to the current for long.

A Melungeon servant huddled for a moment with Beresford. The officers paid no attention; those who'd gotten bored with watching the preparations were playing a half-hearted game of snap. It wouldn't have mattered if they'd all been staring at the servants. Even knowing what to expect, Mincio couldn't tell when Beresford passed the reprogrammed deck of cards back to the Melungeon.

"I wonder, Lord Orloff," Nessler said loudly enough to be heard by most of the officers. "Might I borrow a pistol from one of your men to do a little target shooting? At one time I used to be pretty good."

"Sure, use mine," Orloff said, pulling a gleaming weapon from the holster on his belt. It was a little thing, almost hidden in Orloff's hand, a symbol rather than a serious weapon which would weigh the wearer down uncomfortably.

"But say," he added. "Don't shoot more than a dozen or so of my dogs of crewmen, will you? We still need to get the pillar aboard!"

Orloff doubled over with the enthusiasm of his laughter. Nessler chuckled also as he examined the borrowed pistol.

He turned and brought the weapon up. It *whacked*, an angry, spiteful sound, and the short barrel lifted in recoil. Dirt spewed fifty meters from where Nessler stood.

"What are you trying to hit?" Orloff asked genially. Several other officers walked over, some of them drawing their own sidearms in the apparent intention of joining in.

Nessler fired again. There was no flash or smoke from the muzzle so Mincio supposed the weapon used electromagnetic rather than chemical propulsion. A second geyser of dirt sprayed from the same bit of ground.

"Seems to group nicely," Nessler said. "If it was mine, I'd adjust the sights; but so long as it groups, I don't mind holding off."

He fired a third time: a fist-sized rock, half a meter from the original point of impact, sprang into the air. He hit the rock twice more before it disintegrated as it bounced across the landscape.

"You meant to do that?" a Melungeon officer said in amazement.

"Of course," said Nessler. He picked up a pebble with his left hand. Mincio noticed that despite Nessler's seeming nonchalance he never let the muzzle waver from the stretch of empty landscape toward which he'd been shooting. "Watch this."

He tossed the pebble skyward. It disintegrated at the top of its arc. The *whack* of the pistol and the *crack* of rock being hammered into sand were almost simultaneous.

"Hit *this!*" said Orloff. He hurled a pebble no larger than the first toward the horizon with all his strength.

Nessler's body swung onto the new target, the pistol an extension of his straight right arm. The pebble was a rotating reflection forty meters from Nessler when it vanished in a spark and a spray of white dust.

"Yes, very nice," Nessler said as he turned to the astounded Melungeons. He offered the pistol, its muzzle in the air, to Orloff between thumb and forefinger. "Haven't done any shooting in a very long time. Haven't dared to, really."

"Where did you learn to shoot like that?" Orloff said. Though he closed his hand over the pistol, he seemed completely unaware of what he held.

"Well, it wasn't my first love," Nessler said airily. "But after a while people refused to fight me with swords so I had to learn to shoot. I was a terror at school, I'm afraid. How many did I kill in duels, Mincio? It must have been near twenty, wasn't it?"

"More than that," Mincio said, shaking her head sadly. "It was quite a scandal."

Nessler nodded. "Yes," he agreed, "I was on the verge of being sent down. My sainted mother on her deathbed made me swear never to fight another duel. I've kept that oath thus far. But I must say, when I hold a weapon in my hand again it makes me wonder if a little hellfire for a broken oath would really be so bad."

He gave the Melungeons a bright smile. Orloff rubbed his mustache with his fist, trying to process the unexpected information.

"We're ready!" Kotzwinkle called from beside the laser. A crewman murmured a protest, his head abjectly lowered. "We're ready, I say!" the officer roared.

Everyone moved toward the edge of the pit. Orloff had his arm around Nessler's shoulders. He fumbled the pistol into its holster with his free hand.

"The best thing I could say about the master's mother," Beresford whispered into Mincio's ear, "is that after she ran off with the undergardener ten years ago she never troubled the family again. And Sir Hakon never fought a duel in his life."

"He never had to fight," Mincio whispered back. "He made sure that everyone at school knew he was as deadly a marksman as ever walked the Quad. He gave trick-shooting demonstrations to entertain the bloods. Nobody would have thought of calling him out."

She nodded toward Nessler, listening to their host's expansive boasting. "And he's just done the same thing again, Beresford."

The big laser was aimed at bare granite beside the pylon's crystal shaft. Some of the Melungeon crewmen were directly across the pit, itself less than thirty meters in radius.

"I wonder if we should be standing so close?" Mincio observed aloud. Everyone ignored her, though she noticed Nessler was covering his eyes with his left forearm. She did the same.

Kotzwinkle signalled a crewman, who switched on the cutter's MHD generator. Its roar overwhelmed any chance for further conversation.

The laser's oscillator whined up into the reaches of inaudibility. When the weapon fired, the sound of the beam heating the air was lost in the crash of granite shattered by asymmetric heating.

Bedrock exploded into secondary projectiles ranging in size from sand to head-sized rocks. Most of them flew into the side of the pit, but crewmen on the other side were down and the stone that howled past Mincio's ear could have knocked her silly if not worse.

At the same time as the bedrock disintegrated, a varicolored short circuit blew out the side of the laser. The cable had proved more durable than the weapon it fed. Kotzwinkle fell shrieking into the pit with his tunic afire. His roll down the gritty slope smothered the flames.

Mincio lowered her protective arm; Nessler had done the same. Everybody was shouting, mostly in delight and wonder. The fireworks had been the most entertainment the Melungeons, officers and spacers alike, had seen in a long time.

The pylon wavered, then started to tilt. The rock to one side of the crystal was broken into fragments but the granite shelf on the other side remained whole; the base was partly supported, partly free.

The shaft tilted minusculely farther. Then the entire pylon disintegrated into shards no bigger than a fingernail with a trembling roar like that of ice breaking in a spring freshet.

The countergrav rings flew loose, freed when the shaft they bound dribbled out of their grip. Glittering ruin filled the pit with the remnants of an object that had survived longer than men had used fire. Kotzwinkle had started to climb up the sandy slope. The crystal flowed over him. The Melungeon's screams continued for a little longer than even his outstretched arm was visible.

Mincio swallowed. Her eyes were open, but tears blinded her. From her side Nessler said in a low voice, "I'm glad we didn't bring Ms. deKyper. It'll be bad enough that she has to hear about it."

The last fragments tinkled down. In the silence to which even his own personnel had been struck, Orloff said, "Well, shall we play poker, Sir Hakon? Let's see if things go right for at least one of us this day!"

"Yes," said Nessler. "I think we should play cards."

"I've always loved poker, but I'm afraid I'm not very good at it," Nessler said as he sat in the indicated chair to Orloff's left. Two other Melungeon officers took their places at the table; the remainder watched with greedy expressions, some of them toying with the prostitutes as they did so. Enlisted personnel drifted to their burrows or sat stolidly around the glittering wreck.

Mincio stood at the flap of the Manticoran tent. She heard Nessler's voice through the intercom in her left ear canal and, a half-beat later, via the air in normal fashion.

"Hah, don't worry," Orloff said, taking the deck of special cards from his servant. He put the pipe in his mouth. "We teach you to play good today, not so?"

"If you can hear me," Mincio said softly, "lace your fingers against the back of your neck and stretch."

Nessler laced his fingers and stretched. "Well, so long as we play for table stakes," he said, "I don't guess I can get into any serious problems. Can we stipulate table stakes?"

"Well . . ." Orloff said.

"I don't mean small stakes, necessarily," Nessler added. He brought a sheaf of credit vouchers from his purse and laid them on the table. Each was a chip loaded by the Royal Bank of Manticore, with an attached hardcopy of the terms and amount of the draft.

Orloff picked one of the printouts at random and looked at the amount it represented. "Ha!" he bellowed. "I should say not! Table stakes indeed! Let us play, my friends. Sir Hakon thinks he can buy all Melungeon, or so it seems!"

"I'm going to check the imagery, Nessler," Mincio called. Everyone ignored her; Orloff was shuffling the cards.

She went into the tent; Beresford walked over to stand in front of the flap, his eyes on the card game in the adjacent tent.

Rovald had a receiver set up inside. It already displayed the deck's arrangement in the form of an air-projected hologram. The glowing layout shifted instantly every time Orloff mixed the cards.

"All he's got is a code signal through his teeth on the pipestem," Rovald explained proudly as Mincio seated herself before the display. "It tells him what the top card in the deck is. You see the whole thing."

"Yes," Mincio said. "Now, don't move till I tell you, and don't talk."

The technician jerked as though slapped. Mincio, though wholly immersed in the job at hand, knew she'd sounded very like her late father. Well, she could apologize later.

Play started with Orloff dealing. Nessler plunged deeply on two pair, losing the hand to another of the Melungeons with three queens.

Mincio said nothing during that hand or any of the scores of hands following. She'd instructed Nessler to bet heavily and to bluff frequently—precisely the sort of mistakes that came naturally to someone rich and unskilled. Mincio needed to get the measure of the opposition, and Nessler had to lose a hefty amount before he could move in for the kill anyway. There was no need to force the pace.

"Another drink!" Nessler's voice snarled through the intercom. "Goddammit, isn't it enough that my cards are all shit? Do I have to die of thirst as well?"

He was a good actor; she could almost believe the anger and frustration in her pupil's tone were real. Maybe they were: even though he knew that losing was necessary to the plan, it



couldn't be a great deal of fun for somebody like Sir Hakon Nessler. He prided himself on being extremely good at the narrow range of categories in which he chose to compete.

The shifting display was all Mincio's life for the moment. The Melungeons played five-card draw, nothing wild; an expert's game, and Edith Mincio was the greatest expert on Hope.

"Goddammit, I've got to sign over another of these drafts," Nessler's voice snarled. "You'll have my shirt before I leave here, Orloff. And where's that damned bottle? Can't a man get a drink in this place?"

A youth with more money than sense. A bad player growing even wilder as he gulped down brandy . . .

It took three hours before the deck broke the way Mincio needed it. Orloff was dealing. Even before the second round of cards pattered onto the table, Mincio turned to Rovald. "Switch the signals from these two cards," she ordered.

The technician touched the keyboard. The minuscule cue reprogrammed the chosen pair of cards.

The deal finished. Nessler's hand contained the ten, nine, seven, and six of spades, and the king of clubs. So far as Lord Orloff knew, the top card remaining in the deck was the jack of diamonds.

"Nessler, this is it," Mincio said crisply. The bone-conduction pickup was part of the bead in her ear canal. "Bet as high as you can. There won't be another chance. Discard the king and take one card on the draw."

"By God, I'm tired of this penny-ante crap!" Nessler's voice rasped in her ear. "What's the pot? Well, let me sign this over and we'll have a real pot!"

"God and holy angels!" one of the Melungeons said, loud enough to be heard through the tent's insulating walls.

Mincio got up from her chair and wobbled outside. Her legs were so stiff they threatened to cramp. She was dizzy, thirsty, and sick with fatigue. She had nothing more to do, so she might as well watch. Beresford stepped aside to give her room, but he kept his eyes on the game.

The two officers who'd been makeweights for the game folded their hands immediately. By luck or design the big pots had all gone to their captain. Table stakes meant they had to show the money they were betting, and they simply didn't have it.

"So, we put another of your little chits in to match you," Orloff said genially. "You must have very good cards, my friend. Still, God loves a brave man, not so?"

"From the cards I've been getting, He doesn't love me today," Nessler grumbled. He drank off the rest of a beaker of Musketoon and slapped the king of clubs facedown in the center of the table. "One card!"

Orloff slid the top card to his opponent, then set the deck down. "The dealer stands pat," he said. "Perhaps I have very good cards too, or perhaps . . ."

He laughed loudly to imply he was really bluffing. He wiped spittle from his mustache with the back of his hand. Orloff was nervous despite what must be his certainty that everything was in his pocket. The amount the fool from Manticore had already lost would make Orloff one of the wealthiest men on Melungeon.

"So, are they this good?" Nessler said. He thrust three more drafts onto the table, equalling the full amount of Orloff's winnings and original stake. "Brandy! Somebody give me a glass of

damned brandy, won't you?"

A Melungeon officer instantly handed over the full beaker which he'd been holding for the purpose.

"I will see you, yes," Orloff said. His voice was no longer confident. He stared for a moment at the remainder of the deck, but he pushed out the matching bet.

Melungeon officers whispered among themselves; Beresford was as taut as an E-string. Mincio was relaxed as she watched events roll to their inevitable conclusion.

Nessler slammed down the beaker, empty again. "Then by God I'll raise!" he said. "I'll double the damned pot!"

He pulled another draft from his purse. The printout had red wax seals and the face amount was five times that of any document already on the table. "Do you see me now, Orloff?"

Orloff's bare scalp glistened with sweat. "I see you," he said. "But I call. We would not have it seem that you bought the pot."

"I accept your call," Nessler said. He laid his cards faceup on the table.

Orloff displayed his hand with a great sigh of relief. "A full house, jacks over fives," he said. "Which beats your busted flush, I'm afraid, Sir Hakon!"

"It's not a busted flush," Nessler said. "It's complete to the ten of spades. A straight flush to the ten, which beats a full house. My pot, I believe."

"Holy Savior!" a Melungeon officer said, crossing herself. "He's right!"

Orloff's face went from red to a white as pale as if he'd been heart-shot. "But I thought . . ." he gasped. He raised the top card on the deck. It was the jack of diamonds which he'd thought was in Nessler's hand.

Nessler stood up and stretched lithely. He didn't look drunk, or young, or foolish, any more. Mincio walked toward the card players, her face calm.

"I don't intend to break the game up now that I'm ahead," Nessler said mildly. "I'll give you a chance to win your money back, of course. But first we'll settle this pot. Table stakes, you'll remember."

Orloff remained in his chair. The other two players rose and stepped quickly away, as though they'd been thrust back by bayonets.

"I'll give you my note," Orloff whispered. He was staring at the cards on the table rather than attempting to meet the Manticoran's eyes.

"No, Sir," Nessler said in a voice like a whiplash. "You will settle your debt immediately like the gentleman I assumed you were. If you choose instead to affront my honor—"

He left the threat hanging. Half of Orloff's officers stared toward the scarred sand where Nessler had proved he could put a whole magazine through his opponent's right eye if he so chose.

"Actually, My Lord," Mincio said, "this may be all to the good. Why don't you rent Orloff's ship for a month or two in settlement of the debt?"

Orloff looked up, blinking as he tried to puzzle out the meaning of words which seemed perfectly clear in themselves.

"A good thought, Mincio," Nessler said in easy agreement. They hadn't worked out the details of this exchange, but they knew one another well. "That'll serve everybody's purpose."

"But . . ." Orloff said. "The *Colonel Arabi*? I cannot—the *Colonel Arabi* is a Duchy ship, I can't rent her to you, Sir Hakon."

"As I understand it, Lord Orloff," Mincio said musingly, "your government put the ship at your disposal to facilitate your collection of Alphane artifacts. Is that so?"

Orloff swallowed. "That is so, yes," he said. His officers were all at a distance, staring at their captain as if he were a suicide beneath a high window.

"I'd say that renting the ship to Lord Nessler here was well within the mandate, then," Mincio said. "After all, old man, you can't collect many artifacts after your brains are splashed over a hectare or so of sand."

Orloff lurched to his feet. Mincio thought he was going to say something. Instead the Melungeon turned and vomited. He sank to his knees, keeping his torso upright only by gripping the card table with one hand.

"Yes, all right," he said in a slurred voice. "The *Colonel Arabi* for a month. And we are quit."

Nessler looked behind him to be sure that Rovald was recording the agreement. "Very good," he said. He picked up his winnings before Orloff managed to tip the table into the pool of vomit beside him. "I suppose the cutter should be part of the deal, but I won't insist on that."

He grinned brightly around the awestruck Melungeons. "I think I'll use the pinnace from *L'Imperieuse* instead."

A few artificial lights were already on in Kuepersburg as Nessler flew them home at a sedate pace. Days were short on Hope, but this one had vanished almost without Mincio's awareness.

She turned to the servants in the air car's back seat. "Rovald," she said, "this was your win. A child could beat professionals at cards with your help."

"Thank you, Ma'am," Rovald said. The technician had been unusually stiff and withdrawn ever since Mincio silenced her so abruptly at the start of the game. At last she relaxed—to her usual stiff, withdrawn personality.

"You were both splendid," Nessler said. He sighed. "Now all I have to do is figure out how to get a light cruiser from Hope to Air with thirty-seven spacers and a very rusty astrogator."

Mincio twisted around suddenly in her seat. Stabbing pains reminded her of how tense she'd been as she watched the progress of the card game. "Surely you don't need to go to Air?" she said. "I thought you were going to use the cruiser to frighten away the Peeps if they came here?"

"If we give the Peeps the initiative as well as all the other advantages . . ." Nessler said. He raised the air car to clear the walls of Singh's courtyard. "Then they'll certainly destroy us. Based on what we've heard of the Dole Fleet, I'm hoping that if we attack and then retreat, they'll make an effort to avoid us thereafter."

The air car wasn't stable enough to hover. Nessler brought them down in a rush, doing his best to control the bow's tendency to swing clockwise.

They hit and bounced. As the turbines spun down he added, "The problem is getting there with a tenth the normal crew, of course."

"You can have all the Melungeons working for you if you like, Sir," Beresford said. "Barring the officers, of course, which I *don't* think is much loss. I'll pass the word that they'll get a square meal every day. They'll trample each other to come along."

Lalita and several household servants came into the courtyard to help if required. Nessler had

started to climb out of the vehicle; he paused with his right leg over the side.

"Are you serious?" he said. "I'll certainly do better than a meal a day if you are!"

"Sure you will, Sir," Beresford said with a satisfied smirk. "But I won't tell 'em that, because they wouldn't believe me. You just let me handle this, Sir."

He hopped out of the air car and strolled to the front gate, his hands clasped at the back of his plump waistline. He was whistling.

Nessler watched the little man leave the compound. "I'll be damned," he muttered to Mincio as he finally got out of the vehicle. "There's actually a chance this might work!"

The two ranks of Manticoran spacers in the Singh courtyard looked more professional than they had the last time Mincio had seen them. It wasn't just that they were well-fed and rested; those who'd lost their clothing with the *L'Imperieuse* had now turned local fabric into garments closely resembling the issue uniforms their fellows wore.

"This is a private venture," Nessler said in a carrying tone. "In a moment I will ask those of you who volunteer to board the *Colonel Arabi* with me to take a step forward."

He spoke with the exaggerated precision that Mincio knew meant her pupil was nervous. It was easy even for her to forget that Sir Hakon Nessler, the self-assured youth with all the advantages, had never really felt he belonged anywhere except in his dreams of the distant past.

"I can't order anyone to come," Nessler continued, "because so far as I know my reserve commission is still inactive. Also, I'd like to say that we were going to Air to sort out the Peeps who murdered your fellows, but I can't honestly claim I see any great likelihood of success. The ship at our disposal is in wretched shape and has been virtually disarmed besides."

Nessler cleared his throat. The spacers were silent and motionless, their faces yellowed by the courtyard lighting. Naval discipline, Mincio knew, but it still gave her a creepy feeling. It was like watching Nessler declaim to a tray of perch at a fishmonger's.

"Still," Nessler said, "a gentleman of Manticore does what he can. I'll make arrangements for those of you who choose to stay and—"

"*Attention!*" Harpe said from the right front of the double rank. "On the word of command, all personnel will take one step forward!"

"Wait a minute!" cried Nessler, taken completely aback. "Harpe, this has to be a free choice."

"And so it is, Sir," the Bosun said. "Mine, as senior officer of this contingent until we put ourselves under your command."

She turned to the spacers. "Now *step*, you lousy bastards!"

Laughing and cheering, the thirty-six spacers obeyed. Harpe stepped forward herself, threw Nessler a sharp salute, and said, "All present and accounted for, Captain."

"Begging your pardon, Sir," said a brawny spacer. "But what did you think we were? A bunch of fucking Peeps who were going to argue about orders?"

"No, Dismore," Nessler said as if he were answering the question. "I don't think that at all."

"All right, ten minute break!" Beresford called from the adjacent compartment. "You're doing good, teams. Damned if I don't think I'll be buying beer for both lots of you come end of shift!"

Nessler slid out from beneath a console which he'd been discussing with a Melungeon and a

Manticoran yeoman who'd crawled under from the opposite side. Mincio had to hop clear. She was standing nearby in a subconscious attempt to seem to have something useful to do. In fact she didn't know the purpose of the console, let alone what problem it was having.

"Mincio, do you know where Rovald is?" Nessler said as he noticed her. His face and clothing were greasy; there was a nasty scratch on the back of his left hand. "The damned intercom system doesn't work, of course."

"I don't—" Mincio began.

"Fetch her here, will you?" Nessler continued without waiting for an answer. "I think she's in Navigation Two. All the levels check, but there's no damned display!"

Mincio nodded and trotted into the passage, thinking of the curt way she'd acted toward Rovald during the card game. Nessler was focused on putting the *Colonel Arabi* in fighting trim for perhaps the first time since the vessel was delivered to the Grand Duchy of Melungeon. He didn't have time for what anybody else might want.

Work parties—generally a group of Melungeons under the direction of one or two survivors of *L'Imperieuse*—were busy all over the ship, readying her for action. Beresford had no naval or technical experience, but he'd proven to be a wonder in these changed circumstances. Not only was he acting as personnel officer, he'd formed unassigned Melungeons into teams to clean up the vessel's squalor.

Rovald's help was even more crucial. Third-rate navies like the Grand Duchy's train their personnel to use their ship's equipment, but they don't as a general rule care whether anybody *understands* that equipment. First-rate navies like that of the Star Kingdom *do* train their people to understand it so that they can do more than by-the-book maintenance, but no fleet has time to train its personnel to understand everyone *else's* equipment. In a ship like the *Colonel Arabi*, where so much was jury-rigged and none of it was of standard Manticoran design, Rovald's ability to troubleshoot unfamiliar systems was invaluable.

Mincio had no useful skills whatsoever. She'd thought of joining Beresford's custodial teams, but she decided that she wasn't ready to humble herself completely to so little purpose. She couldn't convince herself she'd be much good at wiping oily scum off the walls.

She stepped aside for six spacers grunting under the weight of a three-meter screwjack. All the cruiser's countergrav rings were down at the pylon site. Nessler hadn't sent for them because he didn't want to discuss with Orloff what he knew about the desertion of the entire enlisted complement of the *Colonel Arabi* and the sabotage of the Melungeon air car.

"Have you seen Ms. Rovald?" she called to the Manticoran rating at the head of the gang.

"Navigation Two!" the man shouted back. "Next compartment to port!"

Which didn't mean "left" as Mincio assumed; it meant "left when you're facing the ship's bow" which she was not, but she found Rovald by a process of elimination. The technician sat crosslegged in front of a bulkhead. Before her an access panel had been removed to display a rack of circuitry. The compartment felt cold and musty; the air was still.

"Good day, Rovald," Mincio said. "Sir Hakon needs you in, ah . . . I'll lead you."

Rovald didn't stir. Mincio blinked and partly out of curiosity said, "You're fixing the environmental system here?"

"I can't fix that," the technician said in a dead voice. "They used the power cable for the laser, and it's still on the ground at the Six Pylons. Five Pylons."

"Well," Mincio said. "Sir Hakon—"

Rovald sucked in a great gulp of air and began to cry.

Mincio knelt beside the older woman. "Are you . . ." she said. She didn't know whether to touch Rovald or not. "That is . . ."

"I'm not a soldier, Ma'am!" Rovald sobbed. "I don't want to die! He doesn't have a right to make me be a soldier!"

"Ah!" said Mincio, glad at least to know what the problem was. "Dear me, Nessler had no intention of taking you with him to Air," she lied brightly. "You'll be landed as soon as he's ready to, ah, proceed. No, no; you're to continue your work on Alphane books. If worse comes to worst, our names as scholars will live through your work, you see?"

"I don't have to come?" Rovald said. Her tears had streaked the dirt inevitable on anybody working aboard the *Colonel Arabi*. "He just wants me while we're in orbit here?"

"That's right," Mincio said. That would be true as soon as Nessler learned how the technician felt. She stood and gestured Rovald up. "But I think there's some need for haste now."

"Of course," said Rovald as she rose. "They'll be in Generator Control, I suppose."

She stepped briskly off the way Mincio had come to fetch her. Mincio followed, thinking about people. It was easy to understand why Rovald would want to avoid this probable suicide mission. It was much harder to explain why Mincio planned to go along. . . .

"The pinnacle just docked, Sir," Harpe said. "She'll be dogged down in five minutes, and then we're ready."

Mincio completed the statement in her mind: *Ready to depart*. Ready to voyage to Air. Ready to die, it seemed likely. She couldn't get her mind around the last concept, but it didn't seem as frightening as she'd have assumed it would.

"Thank you, Bosun," Nessler said. "I'll hold a christening ceremony, then we'll set off."

As if he'd read her thoughts, Nessler turned to Mincio and said, "I don't think we'll have a great deal of difficulty with the drive and astrogation equipment. Orloff managed a much more difficult voyage than this little hop to Air, after all. The problem is that the closest thing to an offensive weapon aboard is a broken-down cutter that we've re-engined and hope will look like a missile to the Peeps."

"But there *are* missiles," Mincio said in puzzlement. "Two of them, at least."

"Ah, yes, there were," Nessler said. "But those we've converted to decoys since there weren't any decoys aboard. Have to think of our own survival first, you know."

He smiled.

*If we were thinking of our own survival, we wouldn't any of us be aboard*, Mincio thought; but perhaps that wasn't true. History was simpler to study than to live.

Beresford trotted through the armored bridge hatch, holding a suit bag high in his left hand. "Rovald's all happy and digging into them crystals with deKyper," he said cheerfully. "And the folks in Kuepersburg, they sent these up for you and Ms. Mincio. All the ladies in town worked on them with their own hands."

"You were supposed to stay on Hope too, Beresford," Nessler said in a thin voice.

"Was I, Sir?" said the servant as he opened the bag's zip closure. "Guess I musta misheard."

He looked at his master. "Anyhow, I want to make sure these Navy types treat my wogs right. Since I recruited them, I figure they're my responsibility."

Mincio winced to hear the Melungeon spacers called wogs; but on the other hand, it was hard to fault the sentiment.

Beresford flicked the bag away from the garments within. "For you, Sir," he said, handing one of the hangers to Nessler. "They worked from pictures of you when you was a midshipman."

"Good God!" Nessler said. "Royal Manticoran Navy dress blacks!"

"Close enough, Captain Nessler Sir," Beresford said with a smirk. He turned to Mincio. "And for you—"

"I'm not a naval officer," she protested.

"You are now, Commander Mincio," Beresford said as he handed over the second uniform. "What's a ship as don't have a second in command, I say?"

Mincio rubbed a sleeve of her uniform between thumb and forefinger. The cloth was of off-planet weave but clearly hand-sewn as Beresford said. Nessler stared at his collar insignia.

"Those started out as Gendarmerie rank tabs," the servant explained. "A little chat with a barracks servant and a little work with a file, that's all it took."

A three-note signal pinged from the command console. "All systems ready, Sir," Harpe said.

"Then I'll have my little ceremony," Nessler said. He started to drape his uniform over the back of a seat; Beresford took it from his hand instead.

Nessler rang a double chime, then touched a large yellow switch. Mincio heard carrier hum from the intercom speaker above the hatch.

"This is the Captain speaking," Nessler said. His voice boomed from the intercom but it didn't cause feedback. The *Colonel Arabi's* internal communications system worked flawlessly again. "In a moment we'll get under way, but first I wish to take formal possession of this vessel for the Star Kingdom of Manticore."

He took a 100-milliliter bottle from the breast pocket of the jacket he was wearing. "With this bottle of wine from the Greatgap Winery," he said, "I christen thee Her Majesty's Starship *Ajax*."

He flung the bottle to smash on the steel deck. The intercom managed to pick up the clink of glass.

"May she wear the name with honor!" Harpe cried.

There was frenzied cheering from neighboring compartments. From the volume, most of it must be coming from the Melungeons.

"The course is loaded," Nessler said. "Get us underway, Bosun."

Nessler looked a little embarrassed as he walked over to Mincio at the rear bulkhead. There should probably be a squad of officers at the empty consoles; instead the two of them, Beresford, and Harpe with a pair of Melungeons were the entire bridge crew. In a dozen other compartments enlisted personnel did work that officers would normally have overseen. . . .

Though on the *Colonel Arabi*, perhaps not overseen as closely as all that. The present crew was up to the job, of that Mincio was sure. A Melungeon had already sponged up the splash of wine and thin glass without being told to.

"I was never much of an astrogator," Nessler muttered.

"If Orloff can find Hope," Mincio said, "then you can find Air. You've got proper spacers

aboard, besides. A few of them."

"You know," said Nessler, "that's an odd thing. The Melungeons are working harder than I've ever seen spacers do. I think they're trying to prove to the fancy folk from Manticore that they're really good for something. And our people are working doubly hard to prove they *are* fancy folk from Manticore, of course."

The *Ajax* shuddered as systems came on line. An occasional drifting curse, and clangs that might be hammers on balky housings, indicated that not every piece of equipment was being cooperative. Nevertheless, a panel of lights on the main console was turning green bit by bit.

Beresford walked over to them. "Shall I hang the Captain's uniform in the Captain's cabin?" he said.

"I . . . yes, that would be a good idea," Nessler said. To Mincio he added, "We should probably sit down. This may be a bit rough. That—" He gestured at the console across the bridge. "—is the First Officer's station while cruising. Though I don't suppose it matters."

"Of course," Mincio said. She wondered what a First Officer did. Wear a black uniform, at any rate.

"I was wondering, Nessler," she said aloud. "How did you happen to pick that name for the ship? *Ajax*, I mean."

"Well, actually, I'd been given orders to take up the sixth lieutenantcy aboard *Ajax* when I got word of my father and sister," Nessler said without meeting her eyes. "Instead I resigned my commission, of course."

He cleared his throat. Still looking at the deck he continued, "Three weeks later *Ajax* was lost with all hands. Funny how things work out, isn't it?"

A bell rang three slow peals. Mincio strode to what was apparently her station, the new uniform in her hands. "Yes, isn't it?" she said.

And wondered if Fate was planning to pick up the last of the former *Ajax*'s crew, along with all his present associates.

The Plot Position Indicator showed the *Ajax* in close conjunction with Air, at least if Mincio understood the scale correctly. Harpe and her Melungeon aides muttered cheerfully as they adjusted controls on a console with a curved bench seat holding three, and Nessler himself was whistling as he eyed the various displays with his hands in his pockets.

In theory the crew of the *Ajax* was at battle stations, but ever since the vessel entered the Air system Beresford had been leading a stream of Melungeons through the bridge to gape at the optical screen. Mincio knew she was of less use in a battle than the Melungeons were, so she felt free to stroll over to Nessler and say, "I'm not an expert, but it seemed to me to be a nice piece of astrogation."

"Yes, it rather was," Nessler said, beaming. "I'm leaving the pilotage to Harpe and her team, though. The largest craft I've piloted was a pinnace, and my deficiencies then didn't encourage me to try my luck with a cruiser."

He chuckled, embarrassed at being so proud of the dead-on positioning he'd achieved as the *Ajax* reentered normal-space. "It may have been luck, my failures cancelling out those of the equipment, of course."

"Stop that, Mr. Nessler!" Mincio said. "You'll find no lack of people to criticize your



performance unjustly. You should not be one of them."

Nessler straightened and smiled faintly. "Yes, tutor," he said.

A large warship filled the main optical display. Even Mincio could identify the ominous row of gunports and extrapolate from them to the serious weaponry within the hull. The Melungeon crewmen continued to babble to one another at the clarity of the image even as Beresford shoed them out to make room for another group of sightseers.

"Have they never seen a ship?" Mincio said. Surely they'd at least have seen the *Colonel Arabi* from the lighters that ferried them aboard. . . .

"The software for this screen was misinstalled," Nessler explained with a grin. "It had never worked until Rovald fixed it—in about three minutes. The equipment is actually brand new and very good, though not of quite the most current design."

He cleared his throat and added, "I hope Rovald's having equal fortune with the artifacts. That's really more important, of course. I've made arrangements for our findings to be returned with her in the event . . ."

Mincio nodded to the optical screen. "I gather we're still out of range?" she said.

"Oh, goodness no!" Nessler said. "But we can't attack them within the Air System—that's League sovereign space and would be an act of war against the League."

"But *they* attacked *L'Imperieuse* here!"

"Of course they did." The chill smile Nessler gave her belied the lazy humor of his tone. "But no one *knows* they did, you see. By now, they have to assume Harpe and all her people are as dead as the rest of *L'Imperieuse's* crew. They didn't planet on Air, after all, and their pinnacle's life support would be long since exhausted. In fact, that's probably why they massacred the survivors in the first place—to keep them from making any embarrassing allegations about violation of League neutrality. I doubt they'll try anything this close to the planet, though. If they do—" he twitched a shrug "—our defenses are all on line."

Beresford guided what appeared to be the last dozen Melungeons off the bridge. "I hope they are, at any rate," Nessler muttered. In a louder voice he said, "Any sign of life from the Peeps, Harpe?"

"Dead as an asteroid, Sir," the grizzled woman replied. "I'll bet they're all asleep. Or drunk."

She looked up from the console. "You know, Captain," she added diffidently, "what with the condition of our ship, nobody'd be surprised if there was a short-circuit in the fire-control system . . .?"

"Carry on, Bosun!" Nessler snapped. "If we're not in the plotted orbit in three minutes, I'll want to know the reason why."

He turned. Softly he went on to Mincio. "They may all be asleep, but we can't expect them to have disabled their automatic defense systems. And absolutely nothing that could happen to us would be worth the risk of bringing the League into this conflict on the Peeps' side."

Beresford sauntered over to them, his duties as tour guide completed. "I was wondering, Sir," he asked. "Why did they name the place Air? Did they come from a planet that didn't have any?"

"It was 'Ehre,' Honor, when the Teutonic Order named it," Mincio explained. "The League has a sub-regional headquarters here, so it's probably a little more lively than Hope. For the same reason there's not much in the way of Alphane remains, though."

"I'll go down and give the League commander notice to order all combatant vessels to leave

League sovereign territory within forty-eight T-hours," Nessler said. "That's proper under interstellar law, but heaven only knows what'll actually happen. Between the Dole Fleet and the sort of people the League sends to these parts . . ."

"No," Mincio said. "I'll deliver the notice; I dare say it's my duty as First Officer, isn't it? It'll give me a chance to wear my pretty new uniform."

"Well, if you're sure, Mincio . . ." Nessler said.

"I'll set it out for you in your cabin, Commander," Beresford said with an obsequiousness she'd never before heard from the man who was very clearly *her employer's* servant.

The *Ajax* shuddered as her impeller wedge went down. "Braking into final orbit, Sir," Harpe called loudly.

"Besides," Mincio said. "If the Peeps react the wrong way, the *Ajax* can much better spare my expertise than it can yours, Captain Nessler."

Air's landing field was a little more prepossessing than that of Hope. The vessels sat on ceramacrete hardstands—most of them cracked to little more than gravel, but still better than Hope's dirt—and a solid-looking courtyard building stood on the field's western edge. The town of Dawtry, the planetary capital, lay in the near distance to the north and west. Mincio didn't see any air cars, but there was a respectable amount of motorized transport running on paved—mostly paved—roads.

The pinnacle cooled with a chorus of pings, chings, and clanks that might even have been pleasant if Mincio hadn't been so nervous. One of the four Manticoran spacers escorting her muttered, "*That* cutter's Peep, and *that* one's Peep, and I figure that big lighter—"

"Belt up, Dismore!" said Petty Officer Kapp, the detachment's leader. She added with a sniff, "And you notice there's not an anchor watch on any of them? That's Peeps for you. Bone idle."

"Right," said Mincio. "Two of you come with me while the others guard the boat."

She strode toward the truck parked beside a cargo shuttle from an intrasystem freighter. A man in greasy coveralls was working on tubing exposed when a panel was removed from the vessel's stern.

"Excuse me, Sir!" Mincio called. If Kapp hadn't spoken she wouldn't have known to leave anyone with the pinnacle. Dismore would probably have told her even if the petty officer had been too polite. "Will you drive us to the League Liaison Office? We'll pay well."

The mechanic turned with a puzzled expression. "Why d'ye want to ride there?" he said. He gestured toward the building adjacent to the field. "You could just about spit that far, couldn't you?"

"Ah," said Mincio. "Thank you."

"I figured the damned thing was Port Control," Dismore muttered, immediately making her feel better. "I guess these hicks don't have anything so advanced as that."

"Right," Mincio said, turning on her heel and striding toward the building with what she hoped was a martial air. Dismore was on one side, Kapp on the other.

The spacers were armed. The guns were hunting weapons found while ransacking the Melungeon officers' compartments, but fortunately hunting on Melungeon involved weapons that would have been military-use-only in most other societies. Certainly no society Mincio found congenial would hunt goat-sized herbivores with heavy-caliber pulse rifles firing explosive

projectiles like those which now equipped her escort.

A squad of Protectorate Gendarmes guarded the headquarters entrance. They didn't look alert, but they at least stood up when they saw an armed party approaching.

"Commander Mincio, Royal Manticoran Navy, to see the liaison officer ASAP!" Mincio said in her driest tone. She'd used it only once on Nessler, the time he translated a Latin passage referring to twenty, *viginti*, soldiers as "virgin soldiers."

"I don't have orders to admit anybody to see Flowker," the leader of the gendarmes said. "Maybe we'll mention it to him when we go off shift."

Several of the underlings snickered. Mincio couldn't tell whether the fellow was angling for a bribe or simply being difficult because his own life wasn't what he wanted. A lot of people seemed to feel a need to pass the misery on. Nessler had filled her purse as she embarked in the pinnacle. She didn't dare offer a bribe, though, because it would be out of keeping with her claimed authority.

"Listen, slime." Mincio didn't shout, but her voice would have chipped stone. "There's a dreadnought in orbit over you. Every moment you piss away is one less moment Officer Flowker has to make up his mind—and believe me, he's going to know who's responsible for that!"

The guard commander backed a step from what he thought was fury. Mincio would have described her emotion as closer to terror, fear that she'd fail in this crucial juncture and destroy the chances of those depending on her. She'd willingly accept a misunderstanding in her favor.

"Allen, take the Commander to Flowker's suite," the fellow said to one of his underlings, this one female. He glared at the spacers. "These other two stay, *and* they give up those guns."

"Wanna bet, sonny?" Dismore said pleasantly.

Allen led Mincio across the courtyard at a brisk pace. She seemed to want to put as much distance as she could between herself and the two armed groups at the gate. Mincio didn't let herself think about that. Kapp and Dismore were more competent to handle their situation than she was, and she had enough concerns of her own.

The building—another League standard design, presumably—showed Moorish influences in its arches and coffered ceilings. Mincio could see people in offices to either side of the courtyard. Only half the desks were occupied, and nobody seemed to be doing any work.

There was only one door in the wall facing the outer gateway, and the pointed windows to either side were curtained. Allen opened the door; another gendarme looked up from the chair where she watched a pornographic hologram.

"Sarge says let this one see Flowker," Allen said. "But it's your business now."

She turned and walked away, letting the door slam behind her. The interior guard hooked a thumb toward the portal beside her. "Why should I care?" she said and went back to watching the imagery. One of the participants seemed to be an Old Earth aardvark.

Mincio thought of knocking on the door. It was plastic molded to look—when it was newer, at least—like heavy, iron-bound wood. She discarded the idea and simply shoved her way through.

Five people lounged on cushions in the room beyond. Three were women in filmy harem suits. They were pretty enough in a blowsy sort of way and were most probably locals. The heavy man being fed grapes by one of the women wore a sleeveless undershirt and the khaki trousers of the Protectorate Liaison Service: Officer Flowker by process of elimination.

The wasp-thin woman against the other wall was in a black Gendarmerie uniform with Major's collar insignia; like Flowker, she was barefoot. She jumped up when Mincio appeared but remained tangled in the baggy trousers of the girl who'd been entertaining her.

The third girl was by herself, but the green uniform jacket on the cushion didn't belong to her. A commode flushing in the adjacent room explained where the garment's owner was. The coat sleeves had gold braid, cuff rings with the legend *Rienzi*, and the shoulder flashes of the People's Republic of Haven. As elsewhere in Region Twelve, the Peeps were on very good terms with local League officialdom.

Mincio drew herself up to what she hoped was "Attention." "Sir!" she said. She threw Flowker a salute as crisp as she could make it after fifteen minutes' coaching from Harpe—all there'd been time for.

It was a *terrible* salute, just terrible; her right elbow seemed to be in the wrong place and she couldn't for the life of her remember what her left hand was supposed to be doing. The saving graces were that the present audience might never have seen a Manticoran salute delivered properly, and that they couldn't have been more dumbfounded by the situation if the floor had collapsed beneath them.

"Who the hell are you?" Flowker said. He tried to stand but his legs were crossed; he rose to a half-squat, then flopped down on the cushion again.

"Commander Edith Mincio," Mincio said, shifting her legs to something like "Parade Rest." "First Officer of Her Majesty's Ship *Ajax*, on patrol from our Hope station. I'm here as representative of Captain Sir Hakon—"

A man burst from the commode, one hand holding up the uniform trousers he hadn't managed to close properly.

"—Nessler, Earl of Greatgap."

"What's she doing here!" the Peep demanded, looking first to Flowker and then at the Gendarmerie major. "You didn't tell me there was a Manticoran ship operating on Hope!"

"How the hell would I know, Westervelt?" said the liaison officer peevishly. "Do I look like I know what she's doing here?"

As Flowker struggled to his feet—successfully this time—Mincio said, "Sir, by long-established interstellar law, the armed vessels of belligerent powers are to leave the sovereign territory of neutrals within forty-eight T-hours of notice being given by one party to the conflict. I'm here to deliver that notice to you as the representative of the neutral power."

"This is League territory!" Westervelt said. He was a tall, stooping man; soft rather than fat. His hair was impressively thick, but it didn't match the color of his eyebrows. "You can't order me out of here!"

"Of course not," Mincio agreed. The three girls in harem costumes had moved close together and were watching avidly. They'd unexpectedly become the audience rather than the entertainment. "But Officer Flowker will do so under the provisions of interstellar law, and *Ajax* will most certainly attack your vessel upon the expiry of that deadline whether or not you've obeyed the League authorities."

"Now see here . . ." said Flowker. He bent to grope at the cushion where he'd been sitting. His tunic lay crumpled against the back wall where he couldn't have located it without taking his eyes away from Mincio.

He straightened and continued, "You can't attack the *Rienzi* in League space, and I'm *not*

going to order them away. Look, go fight your war—"

"I beg your pardon, Officer Flowker," Mincio said with no more emotion than the blade of a band saw. "If you refuse to give the required notice, Air is no longer neutral territory. If your legal officer can't explain the situation to you, I'm sure your Ministry of Protectorate Affairs will do so in great detail during its investigation."

She drew a chronometer, flat as a playing card, from the outer breast of her tunic. The timepiece was a useful relic of Nessler's naval service, and she entered the present time, then put the chronometer back.

"Good day to you, Officer Flowker," she said, wondering if she ought to salute again.

"We don't need an investigation, Flowker," the Gendarmerie major said, the first time she'd spoken. "If they start looking at the staff payroll . . ."

"Goddammit, what do you expect me to do?" Flowker shouted. "Does this look like it was my idea? I—"

"Look, Flowker—" said Westervelt with a worried expression.

"You get your ship out of here!" Flowker said. Turning his furious glare toward Mincio he went on, "You *both* get your damned ships out of League space! Forty-eight hours, forty-eight minutes—I don't care, I just want you out!"

"I'll report your cooperative attitude to Captain Nessler, Sir," Mincio said. Deciding not to risk another salute, she turned on her heel and strode from the office.

Westervelt spat at her back. He missed.

On the *Ajax's* main optical screen a cutter maneuvered to dock with the *Rienzi*; it was the third in the past hour. The image appeared to rotate slowly because the two cruisers were in different orbits. The *Rienzi's* pinnace edged toward the bottom of the display as it dropped for another load of spacers.

Mincio sighed. "I'd begun to think they were going to ignore the deadline," she said to Kapp. "I wondered what would happen then."

"The Peeps never manage to do anything to schedule," the petty officer said, her eyes scanning ranks of miniature displays. She'd set her console to echo all the bridge screens; the other positions had only a Melungeon on duty. "The Dole Fleet, they're even worse than usual. Thirty hours to do what'd take us twelve, that's about right."

She and Mincio were the only Manticorans on the bridge. The others and most of the Melungeons were readying more anti-missile missiles for use.

At the moment only thirteen countermissiles were fully operable. Since a Peep heavy cruiser could launch more missiles than that in a single broadside, the pragmatic reality was more chilling than superstition could be.

The total stock of countermissiles aboard *Ajax* was fifty-six. Nessler said they might cannibalize enough parts from the junkers to add fifteen or sixteen more to the thirteen. After that, defense was up to the laser clusters. Mincio had already seen the vessel's lasers in operation.

"Well, at least we can make it look like a fight," Kapp said. Somebody reliable had to be on the bridge; Nessler, as Captain, had decided it was her. She'd obviously prefer to be getting her hands dirty in a place she didn't have to watch the hugely superior Peep warship preparing for battle.

"Nessler . . ." Mincio said. "That is, Captain Nessler says we're just going to launch one, ah, missile and run. Launch our pretend missile, that is. And hope the Peeps choose to give us a wide berth in case we might do better the next time."

Kapp snorted. "Right, the next time," she said caustically.

She caught herself with a cough. "That is, I think there's a damned good chance it'll work. It's quite, well, possible. Anyway, it's better than what happened to the cutters, and better than what those bastards'd do to us if they found us on Hope." She gave Mincio a lopsided grin. "Besides, it's our job, ain't it?"

"Yes," said Mincio, "it is."

It was the job of every decent human being to fight evil; people who destroyed lifeboats were evil. It was a simple equation.

Unfortunately, Mincio was too good a historian to believe that evil always lost.

*Ajax* shuddered in dynamic stasis. The planet rotated beneath while the cruiser's reaction thrusters lifted her nose before her impeller wedge carried her into a higher orbit. The *Rienzi's* impeller nodes were hot but the Peeps weren't underway yet. The "Manticoran" ship's wedge came up, boosting her clear of the planetary parking patterns at a leisurely two hundred gravities. Hopefully, it looked like the leisure of the totally confident rather than the concession to a less than fully reliable inertial compensator which it actually was.

Behind them, *Rienzi* began to move at last. She climbed away from the planet, following roughly in *Ajax's* wake, and Mincio licked her lips. By interstellar law, a system's territorial limit extended half a standard light-day from its primary. Technically, then, neither belligerent could attack the other within twelve light-hours of Air's primary . . . but *Rienzi* had already violated that law once, and every sensor *Ajax* boasted watched her carefully as she cracked on a few more gravities of acceleration.

"Hold the roof of the wedge towards her," Nessler said. His voice over the ship's address system sounded cool, almost bored. Mincio watched from her console on the other side of the bridge as his long, aristocratic fingers moved, then glanced at Kapp with a raised eyebrow.

"We're in energy range, Ma'am," the petty officer explained quietly, "but the bastards can't shoot through an impeller band. They want to try ambushing us again, they'll have to use sublight weapons that can maneuver after us."

Mincio nodded thanks and returned her attention to her own display.

"Captain, we're picking up radar and lidar!" Harpe announced sharply. "Looks like their fire control's trying to lock us up."

"In that case, you may launch the decoys, Bosun," Nessler said in the same disinterested tone. He touched another control.

The *Ajax's* hull twitched minutely, then rang again in a note that syncopated harmonics of the first. "Decoys away!" the Bosun reported from the Combat Information Center.

That armored citadel at the center of the ship was properly the First Officer's station during combat. Harpe was there instead of Mincio because Harpe knew what she was doing. Edith Mincio might as well have been on the ground for all the good she was now.

She could have stayed on Air when the pinnace lifted Kapp and the spacers back to the cruiser. She would have survived that way, but she wasn't sure she could have lived with herself

afterward. It didn't matter now.

Twenty-one seconds to the expiration of the deadline. Twenty . . . nineteen . . . eighteen . . .

"Enemy is launching missiles!" reported Petty Officer Bowen, who manned the console nearest Mincio's. His voice was higher than it had been when he showed her how to adjust the scale of her display.

Two, six, eight, fifteen miniature starships, reaching for the *Ajax's* life with laser heads. . . .

Because the ships were still within easy optical range of one another, the decoys that mimicked the cruiser's electronic signature were of no defensive value: Peep missiles could guide on the visual image of their target. Nessler had kept the *Ajax* close instead of gaining maneuvering room before the deadline as a calculated risk. This way the missiles would be at the start of their acceleration curves and so more vulnerable to *Ajax's* point defense lasers.

If the lasers worked, that is.

"Engaging with lasers," reported a laconic female voice that Mincio didn't recognize. The buzz of high-energy oscillators added minute notes to the vibration of a cruiser underway with all her systems live. Five missiles, then five more, tore apart or diverged in vectors from the smooth curve they'd been following. Vaporized metal expanded behind the missiles at the point they went ballistic and therefore harmless. Two more disappeared, but they only had to get to within twenty or thirty thousand kilometers and the lasers weren't going to stop them all after all and . . .

*Ajax* rang with a quick shock as a single bomb-pumped laser smashed at her sidewall. The over-aged, under-maintained Melungeon sidewall generators were no match for the power of a modern laser head, but the angle was bad. The laser smashed through the passive defenses and threadbare radiation shielding like a battering ram, but it was an ill-aimed ram that somehow missed her hull completely. Simultaneously the remaining Peep missiles failed, one in a low-order explosion instead of mere loss of guidance.

"Bosun, lock them up," Nessler ordered. "Radar and lidar both. I want a lock so hard you can give me a hull map."

"Aye, aye, Sir!"

Despite her own tension, Mincio recognized the glee in Harpe's reply and darted another glance at Kapp.

"Skipper wants the Bosun to hit 'em hard enough with our fire control to burn out their threat receivers, Ma'am," the petty officer whispered. "Don't know if it'll do any—"

"Number Four battery down!" a voice with a Melungeon accent said. "Five minute, five minute only say Ms. Lewis! We back in five minute!"

"Enemy launching—" said Bowen. His voice changed. "Holy shit! Those are people! They're throwing out bodies!"

"The crew tried to mutiny!" Nessler said, at last sounding excited. "They're throwing out mutineers!"

"Christ, that one's *moving*!" Bowen said. "They're alive!"

Mincio instinctively increased her display's magnification. She blinked at the bodies falling astern as *Rienzi* continued to accelerate away from them. The victims had been alive when they left the airlock without suits. It seemed very unlikely to Mincio that any of them were still alive by the time Bowen spoke. She felt a little nauseous at the thought, but this was war.

The countdown had reached zero without her noticing it. She reduced the magnification so

that the drifting corpses were merely specks lost against the immensity of the *Rienzi's* hull.

"Enemy launching!" Bowen said once more.

"Stand by point def—" Nessler said, professionally calm again.

"They're abandoning ship!" Bowen screamed. "That's their boats! That's not missiles!"

"Do not fire!" Nessler said. "I repeat, do not fire point defense!"

*Ajax* continued to drive outward. On the optical screen the *Rienzi* lost detail as *Ajax's* enhancement program segued slowly from sharpening the image to creating it.

"Sir!" called Harpe. "Sir! Those weren't mutineers going out the lock, those were the officers! Those worthless dole-swilling bastards killed their officers when we locked them up rather than fight!"

"Yes," Nessler said. "I rather think they did."

Six smaller craft—pinnaces and cutters—and two great cargo lighters had left the *Rienzi*. As they braked away under reaction thrusters, fighting to clear the safety perimeter of their mother ship's impeller wedge, the cruiser's image started to swell, losing definition. Mincio thought something had gone wrong with her display.

*Rienzi* brightened into a plasma fireball. A front of stripped atoms swept inexorably across the fleeing light craft, catching them without even the protection of their own impeller wedges, buffeting them from their intended courses for a few moments before the boats' structures and all aboard them dissolved into hellfire.

The bubble of sun-hot destruction continued to expand. Air's upper atmosphere began to fluoresce in response.

"One of the officers survived long enough to scuttle her," Nessler said. He sounded either awestruck or horrified; Mincio wasn't sure of her own emotions, either.

Bowen stood at his console. "Guess our buddies from the *Imp* have an escort to Hell, now," he said. He gave the optical screen a one-finger salute. "And a bloody good thing it is!"

Hope was a blue-gray jewel in the main optical screen. Because *Ajax* was in clockwise orbit, the planet's apparent rotation was very slow. The survivors of *L'Imperieuse* were drawn up in a double rank across the forward bulkhead.

Nessler handed the Melungeon petty officer her wages in currency—a mixture of League and Melungeon bills, the incidental fruits of the poker game that gained him the use of the cruiser. They exchanged salutes, which in the Melungeon's case meant the eye, ear, and mouth gesture that Mincio still found unsettling.

"That's the last one, Nessler," she said, then to be sure double-checked the database she'd created during the return from Air. The vessel's computers hadn't contained a crew list when the Manticorans took over. Mincio couldn't pretend that she thought anybody would use the records she was leaving behind, but she'd done what she could.

"Very good," Nessler said. To Mincio his smile looked forced. "Well, I suppose . . ."

"Excuse me, Sir," Harpe said. "We'd like to say something. Ah, the crew, that is."

Nessler raised an eyebrow. "Certainly, Bosun," he said. He caught Mincio's eye; she shrugged a reply of equal ignorance.

Harpe bent over the intercom pickup of the command console. "The crew of *L'Imperieuse*



would like to thank the crew of the *Colonel Arabi*," she said, her voice booming into every compartment of the ship. "May you someday get officers as good as you deserve."

She straightened and faced the double rank of Manticoran spacers. "Hip-hip—" she cried.

"Hooray!"

"Hip-hip—"

"Hooray!"

"Hip-hip—"

"Hooray!"

From deep in the ship, permeating it, the throats of four hundred Melungeon spacers growled, "*Urrah!*" It was like the sound of the engines themselves.

"Time to board the pinnace, I believe," Nessler said. He'd swallowed twice before he could speak. Mincio blinked quickly, but in the end she had to dab her eyes with the back of her hand.

"I'd almost like to . . ." Nessler continued. "But then, a light cruiser wouldn't be much good to me back on Manticore, and she probably isn't up to the voyage anyway."

"Don't you say that about *Ajax*, Sir!" Dismore said. "She'd make it. She's got a heart, this old bitch has!"

"Dismore—" the bosun snarled in a tone all the more savage for the fact she didn't raise her voice.

"That's all right, Harpe," Nessler said, raising his hand slightly. "Yeoman Dismore is quite correct, you see. I misspoke."

One of the spacers began to whistle "God Save the Queen" as the Manticorans marched off the bridge. By the time they'd reached the pinnace that would take them to the ground they were all singing; every one of them, Edith Mincio included.

Because League officials in this region favored the Peeps, Hope's native population was loudly pro-Manticore. The party filling the streets of Kuepersburg had started before the pinnace touched down. It looked to be good for another six hours at least.

Mincio wasn't good for anything close to that. The only thing on her mind now was bed, but the Singh compound was the center of the festivities. She edged her way with a faint smile past people who wanted to drink her health. *She* hadn't taken an alcohol catalyzer, and anyway she was barely able to stand from fatigue.

Chances were there'd be a couple having a private party in her room. If Beresford was involved, "couple" was probably an understatement. Mincio hoped that by standing in the doorway looking wan, she might be able to speed the celebrants on their way.

The door was ajar; a light was on inside and she heard voices. Sighing, Mincio pushed the panel fully open.

The growler moved aside with grave dignity. Rovald jumped up from the bed on which she'd been sitting; deKyper started to rise from the room's only chair though Mincio waved her back quickly.

"Congratulations on your great victory, Ma'am!" Rovald said. The technician spoke with a little more than her normal animation, but there was a tinge of embarrassment in her voice also. "We didn't want to intrude during the celebrations, but we hope you'll have a moment to see what

we achieved while you were gone."

She nodded toward the equipment she'd set up on the writing desk. DeKyper was standing despite Mincio's gesture. She squeezed against the bed so that Mincio had a better view. The growler wrapped its tail around its midsection and licked the old woman's hand.

"Yes, of course," Mincio said. Actually, this reminder of her real work had given her a second wind. She'd collapse shortly, perhaps literally collapse, but for the moment she was alert and a scholar again.

Gold probes as thin as spiderweb clamped the sharp-faceted "book" into the test equipment. The crystal was one of Rovald's reconstructed copies, not an original from deKyper's collection. Not only was it complete, its structure was unblemished down to the molecular level where the Alphanes had coded their information. Even apart from gross breakage, real artifacts all had some degree of surface crazing and internal microfractures.

An air-formed hologram quivered above the equipment. It was as fluidly regular as a waterfall and very nearly as beautiful.

"That's Alphane writing, Ma'am," Rovald said. "This is *precisely* the frequency the books were meant to be read at. I'm as sure as I can be."

Mincio bent for a closer look. The crystal was a uniform tawny color, but the projected hologram rippled with all the soft hues of a spring landscape. She could spend her life with the most powerful computers available on Manticore, studying the patterns and publishing weighty monographs on what they meant.

It was the life Mincio had always thought she wanted. She straightened but didn't speak.

"The frequency should be much higher," said deKyper sadly. "I'm sure of it. But it really doesn't matter."

The control pad contained a keyboard and dial switches as well as a multifunction display which for the moment acted as an oscilloscope. She rested her fingers at the edge of it while her free hand caressed the growler's skull. The beast rubbed close to her and rumbled affectionately.

"Ma'am," Rovald said. "I've calculated this frequency, not simply guessed at what it might possibly be. This is the base frequency common to all the books in your collection. When they were complete, that is."

Mincio thought of the tomes she had read in which the scholars of previous generations translated Alphane books to their own satisfaction. She would create her own translations while she taught students about the wonders of Alphane civilization. Later one of her own students might take her place in the comfortable life of Reader in Pre-Human Civilizations, producing other—inevitably different—translations.

Rovald and deKyper faced one another. Neither was angry, but they were as adamantly convinced of one another's error as it was possible for a professional and an amateur to be.

DeKyper sagged suddenly. "It doesn't matter," she repeated. "More Orloffs will come to Hope and will go to the other worlds. In a few generations the Alphanes will be only shards scattered in museums. Everyone but a handful of scholars will forget about the Alphanes, and we'll have lost our chance to understand how a star-traveling civilization vanishes. Until we vanish in turn."

Fireworks popped above Kuepersburg. A dribble of red light showed briefly through the bedroom's window. The hologram in the test rig danced with infinitely greater variety and an equal lack of meaning.

Mincio touched the old woman's hand in sympathy. She knew deKyper was right. Destruction didn't require strangers like Orloff and his ilk. Mincio herself had seen worlds where the growing human population broke up Alphane structures that were in the way of their own building projects. People would blithely destroy the past unless they had solid economic reasons to preserve it.

That would require either political will on the part of the Solarian League—a state which hadn't for centuries been able to zip its collective shoes—or mass tourism fueled by something ordinary humans could understand.

They couldn't understand a pattern of light quivering above a crystal. Edith Mincio could spend her life in study and she wouldn't understand it either, though she might be able to delude herself to the contrary.

"I'm very sorry," she said to deKyper.

"Say!" said Rovald. "Don't—"

The growler touched one of the pad's dials, a vernier control, moving it almost imperceptibly. The beast took its four-fingered hand away.

Instead of a cascade of light in the air above the Alphane book, figures walked: slim, scaly beings wearing ornaments and using tools.

The three humans looked at one another. None of them could speak.

Fireworks popped with dazzling splendor in the sky overhead.



# A Whiff of Grapeshot

*S. M. Stirling*

AUTHOR'S NOTE: readers may be amused to learn that both the climax of this story and the archeological methods described therein are closely modeled on real events which took place in the Eastern Mediterranean in 1795.

The Committee of Public Safety of the People's Republic of Haven rarely met in full session. There were security reasons, for one thing; for another, since the purge of the Parnassian faction, the rivalries had gotten too savage. Two dozen men and women sat stiffly along the long table the new regime had inherited from the old Legislaturalist government. The room had a restrained elegance of dark wood and creamy panelling that spoke of that older era, as well. Say what you liked about the Hereditary Presidency and its elitist flunkies, they'd had good taste. Much good it had done them when the jaws of his trap closed on them.

*Well, at least we're not shooting at each other,* Chairman Robert Stanton Pierre thought wearily. *Yet.* There were times when he wondered who was worse, the profiteers who swarmed over the State like flies, or Cordelia Ransom and her grim incorruptibles.

Out at Trevor's Star the navies of the People's Republic and the Star Kingdom of Manticore *were* shooting at each other. Men and women were dying by the thousands to buy the Committee more time. By *God*, he was sick of these cretins wasting it!

"Citizens," the Chairman of the Committee of Public Safety said coldly.

That brought silence. He gave a wintry nod. Those rivalries were not helping the war effort of the People's Republic, but they *were* making it less likely that enough of the other Committee members would combine against him . . . and he knew with a leaden certainty that none of his possible replacements would do as well. His eyes slid of their own volition to the head of State Security. Saint-Just's face was calm as always, his appearance so utterly unremarkable that the only thing noticeable about it was its own extreme inconspicuousness. *Oscar could do it.* But State Security had inspired too much hatred along with the fear, not least among the People's Navy. Nobody would accept the head executioner of the purges as head of state. More, the first

move of any new head of the Committee would be to purge Security, which meant that Security had no choice but to keep supporting him.

*And Oscar knows better. We've been in this together too long.* The paranoia was getting to him. Oscar Saint-Just was as reliable a friend as he had on the Committee.

*I hope,* he thought. *When you're riding the tiger, you can't dismount.* He had no choice but to bring himself and Haven through and out the other side of the crisis. Cordelia Ransom smiled back at him and nodded. *And I need her too.* Ransom was the one who'd built up the Committee's propaganda machine, who'd lashed the Dolists out of their apathy. She'd overseen the public carnival of blood as they fed the Legislaturalists and their families to the People's Courts, and then convinced the masses that the Star Kingdom of Manticore was their deadly enemy.

It was blind, it was stupid—it was beyond stupidity, it was self-contradictory—and it tied his hands completely. His power was unassailable, but only as long as he took the great billion-headed beast in the direction it wanted to go. *And she has helped me mobilize the Dolists.* The vast parasitic horde that had dragged the old regime down with their incessant demands for more and more of the BLS—Basic Living Supplement—were thronging into the People's Navy and Marines, into the shipyards and war-factories. Giving up their bread and circuses. Begging, *demanding* to work, willing to really learn, which was something the People's Republic hadn't been able to get them to do in what passed for an educational system in generations. The sheer power of it was exhilarating and terrifying all at once; it was the only force he could imagine destroying the huge mass of social inertia that had been dragging down his nation all his life. If only they could win the war . . .

Then they could relax, then he could do something *positive* with the power he'd bought at the cost of so much of his self and the capacity to sleep without hauntings. Yet if he hesitated for an instant, it would all come down on him. Ransom's True Believers were waiting, and behind them factions whose fanaticism was so grotesque it chilled even the golden-haired Cordelia. LaBoeuf and his Conspiracy of Equals, for instance, the Levelers.

We've woken the Beast, he thought. Well enough, as long as we can ride it. But what if it begins to think as well?

"We're here," he went on bluntly, "to consider a major change in our overall policy. As you know, we've reinvigorated our armed forces with a policy of meritocratic egalitarianism."

Meaning we killed everyone we thought wasn't reliable and everyone who showed any sign of incompetence.

"But we've reached a point of diminishing returns with the . . . austere policy instituted immediately after the Coup."

Meaning we've got a young, energetic, competent, utterly terrified officer corps. And the latter is beginning to outweigh the benefits of the former.

The departed Legislaturalist scions who'd run the Navy before hadn't been any loss. It was time for the Committee and its political officers to remember that the new breed owed everything to the new regime. For that matter, the professionals and conscripts who'd provided the rank-and-file of the old regime's navy were being diluted by the tidal wave of revolutionary volunteers pouring out of accelerated training courses.

"We *have* to alter—" he began, then looked up in astonishment as a door burst open.

"Sir!" the Committee Security Force officer said. "Sir, we've got an emergency."

Citizen Admiral Esther McQueen didn't particularly like the Committee of Public Safety. Not that it hadn't done her a good turn or two; it had swept the Legislaturalists out of her way, and without a patron she'd never have risen far in the Navy of the People's Republic under the *ancien regime*. Killing all the Legislaturalist ruling families, and shooting everyone else who didn't give a convincing imitation of loyalty, *and* anyone who lost a battle to the Manties, had created very rapid promotion for the survivors.

The problem was that most of the Committee, as far as she could see, were pig-ignorant about naval affairs, which was bad enough, and absolutely unwilling to *admit* that they were ignorant, even to themselves. That was potentially deadly. Not to mention their habit of shooting anyone who lost, anyone related to anyone who lost, anyone who was a friend of anyone who lost, and all *their* relatives as well. That sort of thing could get alarming, and it certainly didn't encourage a bold, daring command style. The Committee evidently thought you could win victories without taking any risks.

She looked across the waiting room at her Citizen Commissioner—translated, political watchbeast—Erasmus Fontein. He was waiting patiently himself, looking out the hundred-and-fifth floor window over the towerscape of the People's Republic of Haven's capital city. Nouveau Paris had a certain tattered beauty still, even after generations of decay under the Legislaturalists' grotesque economic policies and the strain of the long war with Manticore. From this height all you could see was the grandeur of her towers. Not the empty windows and broken lights, not the curdled rage and suspicion, the terror of the mass arrests and the cold fear of midnight disappearances. Or the worse nightmare of the People's Courts and mob vengeance that outdid even the old gangs. Worst of all were the ones who came back from "Re-Socialization Centers." Very quiet people who talked seldom and worked like machines. Usually they had no teeth.

*Well, I'm fairly sure they aren't going to shoot me, at least. They'd gotten her out of that debacle at the front ahead of time, at least. Although you never knew . . . and that left the question of why they'd parked her here in this out-of-the-way tower full of bureaucrats. It made her invisible; if there was one thing that Haven was well-equipped with, it was towers full of data-shufflers. Our sensor equipment isn't all that great, the Manties have better inertial compensators, but when it comes to producing bureaucrats, we're cutting edge. Bah, humbug, bullshit.*

Fontein had been dropping cryptic hints and half-statements about an "important interview," possibly with the Chairman himself. It was about time to cut to the chase. She opened her mouth to speak. A quiver in the fabric of the huge building beneath her halted the words.

Fontein looked around; he was a mild-faced man, and most of the time he looked like a complete fool, albeit one whose position made him dangerous. Right now his face was liquid with shock, and the intelligence in his eyes startled her.

"What is it?" she said. "Earthquake?"

Another quiver shook the tower, stronger this time. McQueen pushed past the Commissioner and looked out herself. The bright actinic flash made her whip her head aside in reflex and throw up a hand, then blink back tears of pain as afterimages chased themselves across her retinas. Nobody needed to tell a veteran of space combat what that blink of light in the night sky had been. *Nuke*, she thought. *Fairly big one*. A warhead burst, not the type that pumped X-ray lasers for ship-to-ship combat.

The thought came from some insanely logical, dispassionate part of her mind. The rest of it was gibbering. Haven itself *couldn't* be under attack—

"The Manties," she said. "They could have decided to go for broke . . . throw everything through at us . . ."

Their eyes met in mutual appalled horror. The staff studies of the People's Navy said the risk was far too high for any sane commander to take. But White Haven, the Royal Manticoran Navy commander, had been taking a *lot* of chances lately.

Their shoulders bumped against each other as they dove for the waiting room's communications terminal. McQueen ruthlessly shouldered the older Havenite aside as her fingers danced on the keys. She ignored the public news channels; they wouldn't know anything, and they wouldn't be allowed to say it if they *did* know. There was a surreal quality to watching bits and pieces of *news* about aquaculture, the glories of the New Republic, and happy Dolists taking accelerated learning courses—at least that was more or less true, they were finally getting substantial numbers of the idle Prole bastards to volunteer to do something useful, namely enlist for the war effort. More light blinked in through the window, and static cut through the reports. *EMP is getting to the relays*. Quite a lot of it, if it was getting past the digital noise filters. She cut through to the Naval emergency channels.

"Uh-oh," she said quietly.

"Uh-oh?" the Commissioner repeated.

"Logic bomb," McQueen said. "Look." She extended the screen and pivoted it. "Hash. Rerouting, cross-connections, garbled text, crossed order-response loops, spontaneous memory core dumps . . . *Nothing* working the way it should."

"Impossi—" Fontein began.

They looked at each other again. Every military service in the human-settled galaxy depended on information systems; every service had unbreakable protection against logic bombs from the outside. Every ship had an emergency response, too; cut all connections to the net to guard against infiltration if the system was compromised.

Which meant someone had done it from the *inside*, and that they'd effectively cut the Home Fleet into so many isolated units for as long as it took to bring the system back up. Hours, at least, and a good deal could happen in a couple of hours. Any commander would hesitate to act without orders or hard data. Particularly in the People's Navy, where exercising independent initiative without orders tended to get you stood up against the nearest convenient wall.

"Citizen Commissioner," McQueen said slowly. "I think you'd better try the Security Service net. And find out what the hell is happening."

"This is the best I can do, Citizen Admiral," Erasmus Fontein said, fifteen minutes later.

He was acutely conscious of the sweat running down under the collar of his uniform. In a man so precisely controlled, one who'd spent decades perfecting the art of emitting no signal of voice or body except those intended, it was humiliating.

"My clearance is being recognized," he said at last. "But that's triggering some subroutine that shunts my calls—some sort of viral AI parasite living in whatever open memory it can find. Whoever did this is damned clever, it's like having hostile ghosts loose in the machine."

"Can you get *anything*?"

"I've got a one-way bleed on the Security net. The contacts last about six to twelve seconds, and then the AI kicks me out. Take a look."



McQueen did. The first was a helmet pickup, showing ground level. The Admiral blinked; she'd never seen that many people all at once. Dolists, from their shabby-colorful clothes. They carried signs—*Purge the Traitors* and *Victory to the People*, liberally sprinkled with *Equality Forever*, *Equality Now*—but what bothered her was the sound they were making. It was nothing like a chant; more like a storm she'd seen once, on another planet. One where long slow waves crashed into a cliff in endless gray ranks, and made the solid rock vibrate beneath her feet. The sound of the crowd was like that, but it was alive. And it hated. The Committee had set out to prod the Dolists out of their apathy into revolutionary fervor, and it had succeeded. Succeeded all too well.

"Fire," she said. "Come on, whoever's in charge, give the order to—"

The helmet camera did a quick glance right and left. A long line of Public Order Police stood there, two deep, armed with riot shields and clubs; a slab-sided vehicle floated behind them, its dorsal turret loaded with soundbombs and stickgel.

"Citizen Admiral, the police can't use deadly force without political authorization. And right now, that detachment can't get authoriz—"

The crowd surged forward, throwing a surf-wave of bottles and rocks before it. McQueen had stood on her bridge without undue difficulty in engagements where tens of thousands died . . . and a flagship was *not* invulnerable to weapons that could turn it into a ball of expanding plasma. The thousands of snarling faces racing towards the pickup still made her draw back in the seat, the way the sudden appearance of a lion might. It spoke to instincts far older than spaceflight—older than fire or chipped flint.

Just before the screen blanked the pickup slammed forward to the ground. She could see boots going by, and the helmet juddered as the crowd stampeded across it. *And across*, she realized, *the body wearing the equipment*.

The screen blanked and then jumped. Another helmet pickup, but this time the scene was a little more familiar; a tac display table, but the groundside model. It carried a holo-schematic of the city, but the information markers were mostly amber blinking lights, signifying "no data."

"Citizen Lieutenant," a voice said testily—the voice of the person wearing the helmet.

"Citizen Captain!"

The lieutenant was wearing chameleon fatigues and the torso portion of a set of infantry armor. The branch-of-service flashes on her collar were red-on-black, and only State Security used that *waffenfarbe*.

*Intervention Battalion*, McQueen thought. State Security goon squads, but heavily armed.

"Citizen Lieutenant, *something* is going on, but we're getting no intelligence at all. Take a floater, get out there, and *eyeball* the situation. Then report directly to me. Understood?"

"Yes, Citizen Captain!"

The lieutenant put on her helmet, face vanishing behind the facemask, and trotted towards a vehicle park on the outer rim of the tower-top. Then a voice screamed: "Incoming! *Incoming!*"

McQueen saw figures around the tac display table begin to dive for cover, and the pickup went black with a finality that was different from the system switch she'd seen before. A few seconds later, like an echo, a distant drawn-out *boooooommm* came through the window.

"That's enough," she said crisply to the Commissioner. "We're not going to do anything useful here. There's obviously some sort of attack on the government."

The Committee's watchdog nodded. "Exactly. But we don't have any more information than—" he twitched his hand towards the screen, which showed a bored Security officer sitting sipping coffee before a bank of screens "— they do."

McQueen met Fontein's eyes. "In your professional estimation, Citizen Commissioner, what the hell is going on?"

Fontein was silent for a long moment. Then his face moved slightly, as if he was biting into a bitter fruit. *Deciding he has to tell the truth*, McQueen thought. That would be unpleasant.

"Citizen Admiral, I think it's an attempt to overthrow the government, through a coup disguised with a popular uprising. As to who . . ." he hesitated again. "I can't say. I'd *guess* it was LaBoeuf's Levelers. Total crazies, a breakaway faction of the CRP, but they have a small core of very smart people in their inner cadre."

"Pity the Committee hasn't shot *them*," McQueen answered.

"Perhaps, although they were useful against the Parnassians. In the meantime, we still have no information at all."

"No, Citizen Commissioner, we don't," McQueen answered. "But let's say I made previous arrangements for things that couldn't be handled through channels. Citizen Sergeant Launder! Execute Tango Three-Niner!"

Fontein's face went pale as the door burst open and a dozen Marines in full battle armor showed beyond it. Every one of them had a pulse rifle or energy weapon deployed . . . and every one of them was pointing it right at him.

Their eyes met again. *Right, watchbeast. I wasn't going to go quietly if getting me dirt-side was a maneuver to arrest me.* State Security had already learned that trying to arrest an admiral on the bridge of her flagship wasn't the most economical way to go about things.

"Citizen Admiral?" the noncom said politely.

"We're getting out of here, and now," she said. "Move it."

"Neufer," the sergeant said.

One of his squad raised a weapon. McQueen and Fontein both turned and shielded their eyes automatically. The light still shone through their hands, leaving the finger-bones in stark relief for an instant, just before the heat and pressure struck their backs like huge warm pillows.

They turned, blinking, and a pinnacle was hovering outside the window. "Well, I knew you don't believe in half-measures," Fontein murmured.

"Let's go," she said. Two Marines gripped her by the arms, and another pair took Fontein; their powered armor and thrusters took them from shattered window to open hatch in a precise, mathematical curve.

"Citizen Ensign," McQueen was saying even before her feet touched the decking. "Take us out of here on a spiral over the city. Full scanners."

"Citizen Admiral, that's—"

"—highly illegal, do it nonetheless," McQueen said dryly.

The ensign's face was sweating as his hands moved over the control board. "Yes, *Ma'am!*"

Better watch that. Sir and Ma'am are counter-revolutionary, she thought dryly. "Do you have a secure line to the Rousseau?" she said.

"Yes, Ma—Citizen Admiral."

"Good. Full data-dump, and I want the staff on hand in my ready room as soon as we dock. Move it, and don't be shy about breaking windows. Visual feed to this screen."

She was conscious of Fontein's silent presence at her elbow as the pinnace rose with a howl of cloven air. Only a slight vibration and the tug of acceleration told of the wild corkscrewing path the craft was following, or of the dozens of near-collisions it left in its wake. *Of course, with a fleet to pick from, I was rather careful about who flew my own personal pinnace.*

"Sir," she said to Fontein—you *were* allowed to call a Commissioner by honorifics. "If we're going to pull through this, I'm going to need your *full* cooperation. Do I have it?"

"Citizen Admiral, you do," Fontein said quietly, looking at the screen.

"Here's the picture," McQueen told her staff.

A quick glance at the readout in the corner of the big display tank told her that it was an incredible mere half-hour since she'd felt that telltale quiver in the soles of her feet. Time enough for the world to turn upside down again, certainly. The men and women around her inched forward instinctively. The superdreadnaught *Rousseau* had been intended as a fleet flagship, and there was plenty of room—far too much, with the skeletal cadre she'd brought back with her, and their losses at Trevor's Star. A faint smell of ozone still hung in the air, underlain with scorched synthetics and despite all the cleanup crews had done, a slight smell of rotting blood. Only the shipyard would get that out.

"The Home Fleet and Nouveau Paris military and Security com nets are down for the foreseeable future—hours, at least, and that's all that's needed."

She gestured towards the tank. It had been designed to show ship dispositions together with coded schematics. The projection of the city below them was almost eerie in its detail. The ship's scanners were picking up enough tactical information to show raw numbers and weapons-types with some accuracy. At least there hadn't been any more mininukes, not after the first salvo.

"As you can see, there's considerable fighting going on down there. Nothing in space yet, thank God, but at a guess I'd say that the compromised com system was used to disinform the various police and Security forces to the point where many of them are fighting *each other*, under the impression that the next man over is part of the insurrection. At the same time, very large numbers of—" she stopped herself just short of saying "Proles" — popular elements are in the streets. Initially that was directed by partisans of the coup leaders, but it spread, and right now there may be a *million* rioters out there, killing and looting under the general impression they're defending the Revolution. Those Security forces that aren't distracted by false messages *are* spending most of their efforts trying to keep the mob out of the governmental towers."

"Oh, beautiful," her flag captain said. A relatively junior officer spoke: "Citizen Admiral . . . there's the entire Capital Fleet in orbit here, several Marine brigades in transit, hell, there's the equivalent of a division in the Marine parties on ships alone. What's stopping them putting this lunacy down?"

McQueen cleared her throat and looked at Commissioner Fontein. He nodded bleakly. *We've shot everyone in the Navy who even looked like they might intervene in politics.* The whole revolt against the Legislaturalists had started with an action that made the Navy appear to be launching a coup.

"Due to . . . various circumstances . . ." Fontein began. "It is unlikely that any of the Capital

Fleet's captains or higher officers will undertake any *immediate* action." The Capital Fleet had been purged with more than usual severity; after all, they were closest to the Committee. "At least not for some time. The conspirators are undoubtedly counting on this. They must plan to complete their actions before any counterattack can be organized."

"As you're all aware, Citizens," McQueen said neutrally, "there are advantages and disadvantages to an extremely centralized decision-making structure."

And right now, one of the disadvantages has reared its ugly head and bitten the Committee of Public Safety on its sorry ass, she thought.

The same logic train was running through every face looking at her. The *Rousseau* might very well be the only remotely independent actor in a position to save the present Committee.

Which left only one question: should they? She could feel the *let them swing* pouring out from better than half the officers present, and that didn't count the ones skillful enough to keep their faces completely blank. McQueen looked up at Fontein's face, and watched it go pale as he realized that all she had to do was wait. McQueen was far too self-controlled to smile; she wouldn't have lived this long if she wasn't. It wasn't necessary, anyway.

"In fact, due to coincidence, I am probably the only ranking officer who has a real idea of what's happening. Now, I will say nothing critical of the Committee." Heads nodded unconsciously; only a complete idiot would do *that*. "Let me put it hypothetically, then; even someone who *didn't* approve of the Committee's heroic efforts to save the People's Republic would be wise to come to its aid at this juncture, on the basis of the old principle that one should always consider the alternative. Citizen Commissioner, perhaps you could fill us in on the background of LaBoeuf's Levelers."

Fontein did. The calm control of his voice and the dispassionate terms he used made the description all the more effective. The fall of the Legislaturalists had taken the cork out of the bottle, and some extremely odd ideological scum had floated to the surface. McQueen nodded thanks when he finished, noting the looks of horror on the faces of the officers around the plotting tank. What LaBoeuf had in mind for the People's Republic made Rob S. Pierre look like a humanitarian.

"It's certainly true that we have no orders," she began. "Just as an exercise, however, let's consider—"

Rob S. Pierre, Chairman of the Committee of Public Safety, looked down the table. In theory, and until about forty-five minutes ago in practice, the men and women sitting here had power of life and death over every single individual in the People's Republic. The Republic's power extended over hundreds of light-years and scores of planets, scores of billions of human beings.

"But right now, we hold this building and not much else," he said. "We don't even know *who* is attacking us. The only thing we know is that they're winning."

Some of the people sitting at the table jerked as if he'd pressed a button and sent a shock charge through their chairs. *There are times . . .* he thought bitterly. Even under the airscrubbers you could . . . not quite smell . . . sense the anger and the fear. Then: *Back to present business.*

"I retract that statement. We also know that they've penetrated our ranks, because otherwise this wouldn't have occurred just when I'd called a plenary emergency meeting. You realize, Citizens, that our entire leadership cadre, *and their staffs*, are in this building right now? That that circumstance hasn't happened more than once in the last year and a half?"

Some of them evidently hadn't; the temperature in the long bare room seemed to drop another degree or two, and the glances they'd been sneaking at each other went from furtive speculation to glares. He turned to the nervous-looking technical officer Security had brought in to explain things. The man was standing at a stiff brace, looking as if he was willing his vital functions to stop.

*I'm beginning to think we've reached the limits of what can be accomplished with terror*, he thought with a detached corner of his mind, the part that wasn't concerned with his own probable death in the next hour or two.

"Report, please, Citizen Major," he said.

"Citizen Chairman, we will have the net available again—the high-priority sections—in not more than two hours forty-five minutes. Possibly as little as two hours, but I couldn't guarantee that."

Somebody broke in: "Not good eno—"

"Silence!" Pierre shouted, and slapped his hand down on the table. The gunshot crack cut through the rising babble. "Panic will not help!" He turned to the officer. "Please do the best you can, Citizen Major. The Republic's future is in your hands."

And in the hands of the uncoordinated efforts of four separate and distinct guard forces, two of which are fighting each other, he thought.

They'd taken very careful precautions against all the armed forces close to the Committee. The problem seemed to be that the precautions had destroyed most of the ability of those forces to deal with anyone except each other.

At this moment, Rob S. Pierre wished very much that he believed in God. Because right now, there didn't appear to be anyone else he could get in touch with.

"Citizen Admiral," the Marine brigadier said. "There are four problems—four interlocking problems here."

Citizen Brigadier Gerrard Conflans was short but trim and broad in the shoulders, with long-fingered hands that gave an impression of strangler's strength. His face was set now, but you could see smile-marks at the corners of his eyes, and he had an unusual and flamboyant mustache.

His cursor moved over the streets of the city. "First, there are the mobs. Many of them are armed, and there are simply so many of them attacking so many targets that they make any movement impossible.

"Second, there are the Presidential, Capital, Committee and State Security forces. Many of them are actively engaged against each other, and all of them are out of effective communications with the Committee, unless someone's sending runners with hardcopy messages. They're unlikely to believe that a naval force appearing suddenly and without warning is anything but another threat.

"Third, there're the actual conspirators, and *they've* overrun the last Security Intervention units blocking them from attacking Committee HQ.

"Fourth and most serious, while the other units of the Capital Fleet don't know what the hell's going on and are apparently sitting this out, they'll certainly know *we're* doing something and may not believe us when we say that we're acting to protect the Committee. It'll certainly *look*

like we're involved in whatever's going on down there. And they certainly have standing orders to prevent any People's Navy unit from undertaking offensive action against Nouveau Paris!"

McQueen nodded. The other officers and the Commissioner were utterly silent, their eyes fixed on her like so many laser links, scanning for information. The destiny of Haven balanced on a sword's edge.

"Thank you for that accurate summation, Citizen Brigadier," she said. "I will remark again that the insurrection seems to have been started by LaBoeuf's Levelers, and that they make Cordelia Ransom look like a benign moderate. As Citizen Brigadier Conflans has outlined, frustrating their attack presents us with multiple problems. I believe, however, that we can kill a number of birds with one stone here."

"Citizen Captain Norton," she said. The commander of *Rousseau* came to attention. "I want you to take this ship down. As far down as you safely can, in a stable circuit over the capital. That may—should—make anyone else hesitate about firing on us. Because anything that misses will go straight down into the built-up area."

There were a few wincing. A fifty-megaton explosion in space was no great matter, unless it happened to be near the pinprick dot of a ship. A fifty-megatonner going off on a planetary surface didn't bear thinking about, and an X-ray warhead would be like driving the red-hot poker of God into the surface over and over again.

"You will also," she went on, "rig for planetary bombardment—kinetic energy strikes."

"Within the city limits, Citizen Admiral?"

"That's where the potential targets are. You will of course commence strikes only on my explicit order." Her voice had the mechanical precision of an industrial forging hammer as it went on: "Citizen Brigadier, you will prepare to embark the *Rousseau's* full complement of Marines in everything that will get to the surface. You are tasked with securing the perimeter of Committee HQ and holding it against all comers."

"Citizen Admiral," he said quietly. "As I said, there are over a *million* rioters attacking the Government district."

"That will also be taken care of," McQueen said, her face like something carved from crystal. She looked up at Fontein. "I assume that you will authorize all necessary measures, Sir?"

The silence stretched. "All necessary measures, Citizen Admiral," Fontein said. "Any and all measures necessary are hereby authorized in advance at your discretion. I will so record it."

"Excellent," McQueen said. "Most excellent, Sir." She turned to her staff. "This is now a purely military operation."

"Ah . . . Citizen Admiral," the Marine officer said. "With a million citizens in the streets, how can the situation be considered purely military?"

McQueen's face showed expression for the first time in the meeting. The gesture that drew her lips back over her teeth was not in the least like a smile.

"Don't think of it as millions of citizens, Citizen Brigadier Conflans," she said. "Think of it as having a very, very large target selection." She met his eyes. "This is essential to the future of the People's Republic. Am I understood?"

He nodded, and her eyes went back to the display. And when it's over, a good many of the imbeciles who've kept Haven from having a rational domestic policy will be . . . no longer a factor in the equation.

"Citizen Captain Norton, in the event of any People's Navy unit firing on you, you will respond vigorously in such manner as to best defend this vessel. I will personally command this operation from a forward HQ on one of the pinnaces. Now let's get cracking on the planning side, because we have about ten minutes to do it."

The HQ building's internal net was still functioning. Rob S. Pierre watched the display monitor on the wall with a show of clinical detachment as a massive armored door blew a hundred and fifty stories below them. The muted roar over the sound membranes came a perceptible instant sooner than the feeling beneath his feet.

"Why don't they just blow the building?" Cordelia Ransom asked.

"Decapitation," the Chairman said absently. "If someone else is sitting here and giving orders when the system comes back up—particularly if they have a familiar face or two—"

Nobody looked much more guilty than anyone else. *Pity*. But then, everyone at this level had first-rate acting ability.

"—nearly everyone will go right on obeying orders on sheer reflex. If there's nothing but a large glowing hole in the ground, the admirals will fight it out with each other for who gets to pick the bones. You know, we've got to do something about all this, presuming we survive the next couple of hours."

The glow died down on the pickup. Plasma bolts were coming through the door, and figures in body armor. Pulser darts tore into them, turning the entrance into a mist of blood and body parts. Then something flashed through and there was a blaze of white light and the pickup went dead. When the screen came back on, it showed Chairman's Guards piling up office furniture in an undamaged corridor further up from the sub-basement. A harassed-looking officer turned for an instant as the pickup indicated somebody with a command override was taking the transmission.

"They're loaded for bear, Sir," she said. *Must think it's her CO*, Pierre realized. "And there's a lot of them. We can't get out to ground level to cut them off because of the crowds. But we'll make them pay for every foot they take as long as we've got anyone standing."

Pierre felt himself nodding, and an uncomfortable tightness in his chest. They were selling their lives to buy *him* time.

"You know," he said aloud—the unit wouldn't carry anything back— "I don't think we could have gotten this sort of performance from the Guard by holding their families hostage, even if they *are* an elitist remnant of the old regime. And equipped only with light personal weapons."

Various expressions rippled across the knots of Committee members scattered through the room. He saw with a faint nausea that they were still divided into the usual factional clusters. How relevant those would be when the attackers burst into the room and started shooting them down was moot. Of course, if they waited long enough to put on show trials, at least half the Committee would be clamoring to switch sides.

I wanted to help Haven, make it great again, he whispered in the back of his mind. I had to act, the Legislaturalists were riding us right down the river of entropy in a ship with engines dead. I had to do it.

That was the problem. Every single step had seemed inevitable and inescapable all along the way. And it had brought them to this.

"Let 'em have it!" the officer on the other end of the pickup said. "Let 'em—"

Pulser rifles snarled. A plasma gun answered them, and droplets of burning metal and plastic scattered backward. A man rolled past the pickup's lens, beating at the molten stuff that coated his legs. Another rose to fire over the burning barricade and toppled backward with his helmet and brains splashing away from his headless trunk. Pierre forced back the hand that would have turned off the input. He *deserved* to have to watch this. They all did, but he suspected that most of his dear friends and associates would never know why.

"This is going to require careful coordination," McQueen said, in the pinnacle's co-pilot seat.

The figures in the screens nodded at her. She smiled at them; it was rare, unexpected, and had just the effect she was looking for.

"Actually, it's going to require a fucking miracle, but we're going to do it anyway, people. Now let's go."

The pinnacle rolled and dived. The huge white-and-blue shield of the planet grew before her, swelling with alarming speed. The pinnacle had been made for high-speed atmosphere transits, and the scanners compensated for the growing ball of incandescent air around it. Her mouth quirked. One side-benefit of the confusion the Leveler coup attempt had created was that Traffic Control was completely screwed up, along with the ground-based point defense systems.

"Orbital Fortresses *Liberty* and *Equality* are signalling." That was a relayed voice from *Rousseau*. "Citizen Captain, they demand we vacate prohibited space immediately."

Norton's voice came through, harsh and authoritative. "Record. *Rousseau* is acting in aid to the civil power, under the direct instructions of the Committee. Any interference in her mission will be treated as treason to the People's Republic. End."

"Wait," McQueen said over the relay. *Good man*, she thought. Not imaginative, but extremely solid. "Sir, would you please sign off on that for the transmission as well, as Citizen Captain Norton's Commissioner?" Fontein nodded and added his voice.

He'd insisted on coming down with her. He hadn't asked aloud, but . . . she leaned towards him. "Because *I'm* going to be the one who handled this situation," she said softly. "Not commanded it from orbit, not ordered it done, but the one who *did* it."

Fontein nodded. That would also make her the one who'd saved the Committee . . . if, that was, she intended to save the Committee and not complete its execution, possibly as a "mistake" in the strike that took out the Levelers. He knew her people would follow her *whatever* decision she made.

"Speed down to Mach Seven and dropping," the pilot reported. "Nothing so—acquisition! We're being painted!"

McQueen nodded to herself as the shock cages clamped around them and the world outside spun with crazed, chaotic viciousness. Something whined past, dark and solid for a fleeting instant. *Close enough to see it, by God*, she thought. That meant really inspired piloting. The pinnacle juddered in its path as a warhead blew up behind them, and static hashed an electromagnetic pickup.

"Maniacs," she said softly. They were using nuke warheads within the atmosphere. Not total fools, though. They hadn't put all their faith in the logic bomb to keep the Navy from intervening while their coup went on.



Rob S. Pierre kept his eyes on the wall display, hands kneading at the gray streaks over his temples. Everyone else was looking now too, and the fighting was close enough that the building shuddered continuously with the outrages being done to its structural members. Anguish shouted from the speakers: "*Don't, George, don't!*"

The pickup showed a wounded man slumped back against a ceramacrete-armored door. He looked up, his face knotted into a rictus, and worked doggedly at the hose connector that lay across his lap. A fumbling grip undid it at last, and the man's head slumped back in exhaustion against the metal. His tongue licked lips gone paper-dry with the thirst that blood-loss brings, but his eyes opened again as cautious steps sounded in the corridor outside. The battered, scorched furniture had been luxurious once, and the floor was covered in a pile of deep sea-green carpet. It sopped up the rather thick liquid that gouted out of the armored cable, leaving it an inconspicuous spreading stain rather than the slippery mass it would have been on bare pavement or metal.

Body-armored figures swarmed forward down the corridor, groups forming fire-parties and then leapfrogging forward. Pulsar rifles whined as they "checked" the rooms to either side with fire, and an occasional grenade blasted fragments and dust out into the corridor itself. The view narrowed as the man leaning against the door let his head droop; all they could see then was the circle of sopping carpet, and the dead bodies scattered across it, insurrectionist and Chairman's Guard.

"We need the access code, traitor," a voice said, cold with hate.

The man looked up again, seeing his own bloody face reflected in the visor-shield of the enemy standing over him. Boots kicked away weapons.

"*Don't, George! Don't do it!*" Evidently the attackers could hear that clearly too, and they looked up and around. The one with the visored helmet laughed.

"Don't be brave, George—be smart." He ground his foot down on the prone man's shattered leg, bringing a convulsive moan of agony. "The access code! Give it to us, *now!*"

"I'll . . . give . . ." the man wheezed.

The visored face nodded, bent to hear. At that range Pierre could see through the visor, see the flicker of horror as the wounded man's fingers dropped the lighter to the carpet and he realized what was about to happen.

"Don't George, don't—it's useless, don't—"

An instant's searing flame showed through the pickup, and then the rippling bubble of melted plastic. A long hollow *boooooom* sounded through the fabric of the building, echoing up through ventilators and elevator shafts. Two dozen pairs of eyes swivelled to the exterior view, and halfway up the tower they saw windows punched out in an echoing bellow of flame.

Saint-Just was busy at his console. "That was part of the automated defenses," he said, in his colorless bureaucrat's voice. "Inoperable. George Henderson led a party back down through the shafts to enemy-held floors to try and activate it manually." The pale, passionless eyes rose for a second. "He succeeded."

"How long until we have the systems back?"

"One hour forty-five minutes," the head of Security said. "Captain Henderson has bought us some time; besides their casualties, they'll have to wait for that level to cool, or bring in firefighting equipment. On the other hand, we've also suffered very severe losses. It's going to be a tossup."

Not for the first or last time that day, Rob S. Pierre wished that he could pray.

*Liberty* and *Equality* massed fourteen million tons each, more than twice the weight of a superdreadnaught like the *Rousseau*, and they were armored and armed to match. Ordinarily a close-range engagement would crush the ship like a food pack under a power-armor boot. Their problem was that they couldn't approach the planetary surface as closely as a mobile ship. Everything they could throw towards *Rousseau* would also be thrown towards the planetary surface where their families lived. Even fanatics would hesitate at that prospect.

"Hesitate, but not forever," Captain Robert Norton muttered to himself, leaning back in the command chair. Aloud: "Hold station."

"Citizen Captain." His Tac officer spoke, and Norton glanced at the appropriate repeater.

*Goddammit, Citizen ThisandthatRank not only sounds ridiculous, it's cumbersome when you're in a hurry*, some distant part of his mind fumed. Probably the irritation was comforting because it was so familiar. Few of the officers who'd served before the Revolution were comfortable with the new titles.

"They're launching their LACs," he said, watching the display's schematics indicate small vessels swarming out of the fortresses' holds. "Logical."

Light Attack Craft were designed for close-in point defense. They had no armor to speak of, no sidewalls, and only a single light energy gun and strap-on pods of single-shot missiles. Putting them up against a superdreadnaught was like sending ants against an elephant. But ants could sting, and enough of them . . . and he was a stationary target, too.

"Launch," he said. "Let's try and close up the net."

The huge ship shuddered as her broadside batteries went to salvo, and scores of heavy missiles streaked across the screens. Engagement ranges were insanely close; the forts would have cut him into drifting wreckage if they'd dared use their laser and graser batteries, but *Rousseau* was shooting *up*. They might still blast him, if they were desperate enough. He glanced around. Point defense was active, treating the LACs as if they were missiles themselves. *Insane*. Nobody was going to have time to react to anything.

"Closing," the Tac officer said. "Ten point two seconds to launch. Mark."

Spots of brilliant light began to flare silently against the blackness and unwinking stars of space; the tank listed them as nuke warheads, the stabbing flicker of bomb-pumped X-ray swords, the fuzzier explosions of fusion bottles rupturing under the massive fists of *Rousseau's* energy batteries. Machines were dueling with machines, and men and women died.

*And here I am a sitting duck*, he thought bitterly. Nothing for a captain to do; the ship couldn't maneuver.

He looked to another screen, this one showing his assigned targets for bombardment. That made him lick dry lips. *Insane*, he thought again. Kinetic energy bombardment, warheadless missiles fired straight down at—literally—astronomical velocities. When they met the surface, mass in motion would be converted into heat. They didn't *need* warheads. The thought of that type of strike on a populated area, on *Nouveau Paris*, for Christ's sake, made his testicles try to crawl up back inside his abdomen.

"We didn't start it," he reminded himself. The gang of madmen who did start it had used *nukes* in a populated zone, and that showed you the sort of thing they'd do and order him to do if they got their hands on the levers of power.

He still tasted vomit at the thought of what he had to do, and what the Admiral was going to

order herself. *McQueen, when I'm fighting the Manties, I'd trust you to the limit.* She was a hard CO, but she got the job done and she didn't flinch herself. *Can I trust you here?*

*Rousseau's* eight million tons leaped and shuddered as an energy lance went through her sidewalls and blasted into her armor.

"Damage control," he said in a metronome-steady voice.

"Compartments twenty-six through eight open to vacuum. Graser one down."

"Reconfigure—"

There was no need to look at the display screens anymore, though some still did. Rob S. Pierre sat with his hands on the table, looking ahead, ignoring the worried glances and whispers where Oscar Saint-Just and Cordelia Ransom had their heads together.

Everyone looked up as a couple of Security noncoms came through the door, their arms full of pulse rifles.

"Citizens," one of them said. "It's time."

They began handing the weapons out.

"Hit them," McQueen said.

They were coming in over the city of Nouveau Paris at twenty-five thousand meters, and even from here the pillars of smoke were obvious. One or two of the huge towers must have *fallen* to create the gaps she saw. There was an ominous-looking crater, and her skin crawled as she watched the readout. Oh, it wasn't really a very large weapon—subcrit squeeze job—and it was designed to be relatively clean, but "relatively" was the operative word there. She remembered an old, old grisly joke: *A tactical nuclear weapon is one that explodes a thousand kilometers downwind of you.*

"That used to be Regional Intervention Battalions HQ, didn't it?" she said.

"Yes." Fontein's voice was flat.

Fourteen thousand people, she thought. More than a good-sized fleet engagement usually killed.

"Status on the crowds," she said.

"They've thinned out. Everyone must have gotten the idea that something serious is going on, and the fun-seekers have gone home," one of her staffers said. "We estimate that *only* two hundred thousand are still out."

Still a fairly substantial number, even in a city with a population of thirty-two million.

"These must be the real Leveler militants. They're all in or near Committee HQ and adjacent parts of the Government district. No particular organization, but plenty of arms."

"Citizen Brigadier Conflans."

"Citizen Admiral, I can't proceed until the . . . mob . . . is cleared out of my way. Dropping ground troops into that would be like throwing a handful of buckshot into a barrel of snot."

"And I can't do that until the airspace over the Avenue of the People is safe," she said thoughtfully. Then on another channel: "Citizen Captain Norton, execute."

"Ma'am—" there was an edge of desperation in his voice. "Ma'am, those are *government* units."

McQueen throttled an impulse to shout. She couldn't *force* Norton to obey her; all bets were off, and everyone was proceeding on personal convictions and loyalties. Norton had been with her all through the fighting around Trevor's Star; he'd stayed calm when the *Rousseau's* bridge was blown open to space and they were slugging it out with Manty superdreadnoughts at energy-weapon range and a main fusion bottle started to go critical. . . .

"Bob," she said quietly, "we can't spare the time to convince them of our bona fides, and they'll fire on us. There's no *time*. Clear our way, but whatever you do, we're going in."

The voice that answered might as well have been a robot's. "Affirmative, Citizen Admiral. Initiating."

Someone gasped as a solid bar of white light stretched down from heaven; air riven to ionized gas, and fragments of ablative shielding. The bar touched earth, and a pattern of shocked-white fury reached out from that point. The shock wave moved after it, and buildings rippled and blew away like straw around it.

"God have mercy on anyone within half a klick of any of those."

"Civilians," she said to nobody in particular, "call this sort of thing a *surgical strike*. Sort of like surgery with a chain-saw."

"Two," someone murmured. Another bar of light; she looked away, blinking at the after-images behind her eyelids. "Three. Four. Five. Six. Seven." A pause. "Eight."

"Citizen Admiral," Norton's voice said. "*Liberty* and *Equality* have opened fire with their energy armaments." Another pause, and surprise in his tone: "*Fraternity* is opening fire on *them*."

"Get out of there, Bob. You've done all you can." She switched channels. "Prepare to execute, Citizen Brigadier Conflans." To her own tiny flotilla of pinnaces: "Let's convince the Leveler militants they're in the wrong line of work. *Execute Grapeshot*."

Many of the crowd that filled the Avenue of the People for two kilometers were in a holiday mood; the police officers hanging from the street-lamps on either side, or twitching on the points of the decorative wrought-iron fences around gardens added to the festive air. There was still fighting going on towards the three-hundredth floor of the Committee's tower, but they didn't have to do anything in particular. A few of the more energetic were amusing themselves by dragging out civil servants from the lower floors of the towers on either side, and giving them impromptu People's Justice. Others passed bottles around, sang the war-chants of the Conspiracy of Equals, or simply stood or sat and waited. It wouldn't be long now.

Many of them looked up at the turbine wail. Police vehicles had tried overflights an hour ago, and a few of them had even gotten away, but the falling debris from the others had been dangerous. Leveler cell-leaders at the fringes of the street barked into their communicators.

Some of the mob might have had time to realize the nature of the pepper-flake tiny loads the pinnaces were dropping. None of them had time to run before the tens of thousands of fragmentation loads from the cluster munitions reached their preprogrammed height and exploded in a long surf-wall of white fire. Each of them threw *thousands* of pieces of jagged ceramic shrapnel into the air, cutting across the crowd at chest-height at thousands of meters per second. Where they struck blood and flesh and bone *splashed*, divided into a spray of damp matter as liquid as the blood alone.

The crowd was huge, more than eighty thousand on this avenue alone. The laws of probability and various obstacles assured there were more than enough left alive to scream as the

pinnaces began their second run.

One man managed to stagger back to his feet and fumble at the load across his back. Blood was running down into his eyes, and there was a wetness when he tried to breathe, but his hands still functioned.

"They're running, Ma'am," the pilot begged, forgetting himself and the presence of Citizen Commissioner Fontein. "They're *running*."

"And I want them to keep on running for a long, long time," McQueen said softly. "All their lives, in their heads. How do you think those bodies got to hanging from those lamp-posts, son? We'll make another pass, with the pulsers, slow and level. All pinnaces, one more pass. Citizen Brigadier Conflans, we've cleared your way for you. Now go in there and make it worth something."

The pinnacle screamed up in a near-vertical turn, passing near the scarred, smoking side of the Committee tower, then looped over again and began another run down the Avenue of the People. This time she was working from the rear of the crowd forward, towards the building the mob had hoped to overrun. To either side of her nose heavy tri-barrel pulsers raved in long spears of white light, sending thousands of heavy explosive projectiles down into the street below. Bodies living and dead blew apart, and the ground-cars and pavement below them offered little more resistance as they erupted into volcanoes of shredded metal and stone. Lime in the concrete burned white under the howling lash of projectiles driven to thousands of meters a second by the impeller coils. Wrecks trailed the clean blue flame of burning hydrogen in the pinnacle's wake.

"*Target acquisition!*" the pilot shouted as an alarm shrieked and blinked red from his control panel. He rammed his throttles home.

The pinnacle leapt forward. Something slammed into its side, and one of the massive air-breathing turbines lurched free and pinwheeled away. Admiral Esther McQueen watched it slam into the side of a tower. Her last thought was an angry impatience. She wouldn't even get to see if her gamble had succeeded or failed.

"Citizen Chairman," the Marine said, saluting. "I am pleased to report that this building is under control. I must ask you all to remain here until we've—"

"Got it!" someone shouted. "Sir, the net's back up! We killed the fucking ghost!"

"Excuse me," Rob S. Pierre said to the Marine brigadier. He turned and took two steps to the terminal, sat, and began giving orders. It was twenty minutes before he sat back.

"Citizen Committeeman Saint-Just," he said. "Perhaps you could tell me exactly what happened, at this point?"

Saint-Just swallowed; he'd just allowed the most massive Security breach in the new regime's history. *Of course*, Pierre thought behind the mask of his face. *He knows I know everyone makes mistakes. But he can't really be certain of that.* A wry smile tugged at one corner of his mouth; it would be an odd start to his New Look policy to have his second-in-command shot, anyway.

The head of State Security had the Marine officer in tow; the man was looking guarded, which any sensible officer would at being in this close contact with the Committee.

"Now, Citizen Brigadier . . . Conflans?" The officer nodded. There were scorchmarks and rusty-looking dried fluids across the arm and chest of his combat armor. "Perhaps you could

explain exactly how your most *timely* assistance came about?"

The Chairman's brows rose until he felt his forehead ache. "Timely indeed," he murmured when the man was finished. "Esther McQueen, eh?" He looked at Saint-Just; the Security chief nodded. *And I was supposed to interview her this afternoon.* He looked at a screen; three hours almost to the minute since this began. He felt as if it had been that many decades . . . and where had he managed to get that bruise, or tear his jacket?

"Well, where is the lady?" he said. "I gather from you and Citizen Captain Norton that she isn't on *Rousseau*?"

"No, Citizen Chairman," the Marine said. The fierce, handsome face behind the sweeping mustaches suddenly looked pinched. "Her pinnacle went down while it was directing the final operations. We haven't . . ."

Rob S. Pierre looked at his Security chief. "Find her for me, Oscar. I think the lady has gone from a *possibility* to a certainty, and it would be excessive irony if she were dead."

The calm, pale bureaucrat's face nodded. "Of course, Citizen Chairman. At once."

Esther McQueen realized that death was much like space; very dark, with flashes of light in infinite depth.

After a second she realized she was dangling upside-down and watching electronic equipment self-destruct. The battle steel hull of the Naval pinnacle had withstood a collision that would have left a civilian vehicle travelling at its velocity smeared across the side of the tower. The remains of the pinnacle were sticking into the side of it now, like a knife thrust halfway into a giant cheese. A gaping rent directly below her showed the three hundred and fifty story drop to the pavement of the People's Avenue . . . and if the buckled shock harness gave way, she'd drop straight down to make her smeared remains one with the multi-thousand victims of her strafing run.

That made her laugh. The tearing pain of *that* brought her fully back to consciousness with an involuntary whimper, enough to feel the pinnacle shifting in its stony cradle. More lights danced behind her eyes as she froze; intellectually she knew that a seven-hundred-ton pinnacle wasn't likely to shift and fall because a short, slight woman moved, but her gut was harder to convince. Carefully, slowly, she raised one hand to her face and wiped her eye, then pushed back the flap of scalp that was hanging loose. Coagulating blood held it in place.

*Ribs*, she thought. She wasn't actually coughing blood, so the splintered ends weren't likely to kill her in the immediate future . . . unless she moved vigorously. *Which, since I'm hanging upside-down over a long, long drop, I probably will have to do.* All the other figures she could see were immobile, either unconscious or dead.

All except People's Commissioner Fontein. His shock harness had broken even more thoroughly than hers, but it had broken away as a unit. The last fastening point had held, so far, and it swung him out over the gap in the pinnacle's hull. As she watched he tried to reach for a dangling piece of wreckage, and the fastener gave a small, tooth-gritting wail.

"Fontein," she said—whispered, rather.

"You're alive?" he blurted.

"Temporarily." She grinned. The expression was ghastly in the bloody mask of her face. "Let's see how temporarily . . . how badly are you hurt?"

He *looked* terrible, his face and what she could see of his body a mass of bruises and dried

blood; tear-tracks cut half-clean runnels through the matter on his face, except where the skin had been abraded away and oozed raw. She was almost glad that her nose was broken and swollen shut; she had no wish to smell this charnel-house of her own making.

"I'm . . . no broken bones except for this." He twitched his left hand, and she saw that the little finger was at right angles to the others and swollen to sausage-size.

"Good . . . for . . . you," she wheezed painfully. *Christ, but this hurts. No matter. Get going, bitch.* "Is the release catch on your shock harness working?"

"I think so. I'd really rather not find out, though, Citizen Admiral."

Fontein looked down. An acrobat in high training might be able to catch something in the half-second before he fell clear and down a long, long way. A middle-aged man of sedentary habits with serious injuries might as well flap his arms hard on the way down, for all the good it would do him.

"Here's my plan," McQueen said, and laughed again, stopping herself with a shudder of agony as things moved and grated in her torso. "Sorry, classical reference. Getting a little light-headed. You swing across and grab my hand with your right. Then, *as soon as I've got you*, you hit the release—do it fast, so you don't lose momentum. I'll swing you on across to there," she said, indicating a section of wall plating with dangling cables festooned across it. "Then you can go and get help for the rest of us."

Fontein looked at her blank-eyed for a moment. Then he spoke: "You don't give up very easily, do you, Citizen Admiral McQueen?"

"White Haven didn't think so."

He nodded. "On the count of three."

"One." The Commissioner heaved his weight backward, like a child on a swing.

"Two."

She closed out everything except the hand she would have to grasp.

"Three."

It jarred into hers, and she heard a *click-snap* and falling clatter as her fingers clenched. Then she was screaming, screaming and tasting iron at the back of her throat as Fontein's weight came onto her outstretched arm and wrenched her savaged body against the unyielding frame of the shock harness. Blackness surged over her, welcome as the memory of her mother's arms, then receded into a red-shot alertness. She spat to clear her mouth; that *was* blood this time. A steady trickle of it, if not an arterial gusher. The bone spears had hit something.

"See," she said to Fontein's shock-white face where he clung to the wreck's wall not more than an arm's length away. "We really do accomplish things when we cooperate, Citizen Commissioner."

Then the blackness returned.

Rob S. Pierre looked down at the stretcher. "Will it endanger her life?" he said.

"No, Sir," the medtech said unwillingly.

"Then I insist." He stepped back.

Esther McQueen's eyes opened, and she sighed once in blissful relief; the stretcher's lights blinked as it swept away her pain. Her eyes moved.

"Gerrard?" she said, her voice faint but steady. The Marine went to one knee and looked at her, his face warring between relief and revulsion. "The butcher's bill?"

"Light, Skipper," he said. "By the time we hit them they were running on empty; the Chairman's Guard bled them bad."

"Ship?"

"Some damage, but Citizen Pierre called them off in time."

She nodded again, and the Chairman of the Committee of Public Safety stepped forward. "Citizen Admiral McQueen," he said. "The People's Republic, the Committee, and I myself are in your debt. Your prompt action . . . we'll talk more about this later. I already intended to have an interview with you today, but tomorrow will do just as well."

"Thank you . . . Sir," she said. The eyes began to wander again, and he stepped back and motioned the techs to take her away.

He looked around the wreckage of the Committee's tower. The other members were dispersing about their various tasks; it would be some time before they got this mess cleaned up and returned to the agenda he'd intended to spend the day on.

"But we *will* get back to it, by God," he whispered, and looked out the gaping windows over his city.

They were his people out there; weak and foolish and stupid and short-sighted, but they were as others made them. *He* would remake them, and give them back their pride. If he had the right tools.

He looked after McQueen's stretcher. Any good tool kit needed a knife, a sharp one. If you cut yourself using it, that was your fault, not the tool's.



# The Universe of Honor Harrington

*David Weber*

Honor Harrington was born on October 1, 1859 Post Diaspora, at Craggy Hollow (the Harrington family homestead), County Duvalier, in the Duchy of Shadow Vale, Sphinx. In general, one might say that she was born at the twilight of what had been a long, relatively stable and peaceful period of galactic history. Her native Star Kingdom of Manticore was widely respected as one of the wealthiest star nations in existence (probably *the* wealthiest, on a per capita basis), and its carrying trade dominated the interstellar freight lines outside the Solarian League itself. The galaxy had not seen a major war in over a century, although there were always places (like the Silesian Confederacy) where ongoing low-level conflicts were the norm rather than the exception. Aside from rumblings out of the economically devastated People's Republic of Haven, which had recently forcibly annexed a half dozen neighboring systems, there seemed little reason to expect that to change.

But by 1901 pd, (the time of *On Basilisk Station*) it *had* changed, and changed drastically. The PRH's steady economic collapse had driven its expansionism to heights unseen since pre-space days on Old Terra, and the Star Kingdom of Manticore lay squarely in the Peeps' path. The last century's "golden age" was coming to an end with the approach of an interstellar war which would, before it ended, see virtually the entire human-occupied galaxy choosing up sides, with military operations on a scale no one had ever previously contemplated.

This appendix sketches in some of the salient points of the galaxy into which Honor was born . . . and which she, willingly or not, was to play a major part in changing forever.

## **(1) Background (General)**

The first manned interstellar ship departed the Solar System on September 30, 2103. Although no other ship followed for almost fifty years, 2013 ce, became accepted as Year One of

the Diaspora, and January 1 of that year became January 1, 01 pd for purposes of interstellar dating.

For over seven centuries after the *Prometheus* became the first manned starship, FTL movement remained impossible, leaving generation ships (followed in the fourth century pd by the development of practical cryogenic hibernation vessels) as the only means of long-distance interstellar expansion. The original starships used fairly straightforward reaction drives with hydrogen catcher fields to sustain boost after the initial onboard reaction mass was exhausted. Later generations attempted more esoteric propulsion systems, but though they graduated to fusion and photon drives, they remained locked into the sublight reaction principle until 725 pd, when the first crude hyper drive was tested in the Solar System.

The interface between normal and hyper-space was speed-critical, for if velocity at hyper translation exceeded  $.3 c$ , the translating starship was destroyed. In addition, a hypership had to reach the hyper limit of a star's gravity well before it could enter hyper, and the hyper limit varies with the spectral class of the star, as shown in Figure 1.

The original hyper drive was a man-killer. The casualty figures over the first fifty years of hyper travel were daunting. Worse, vessels which were destroyed were lost with all hands, which left no record of their fates and thus offered no clue as to the causes of their destruction. Eventually, however, it was determined that most had probably been lost to one of two phenomena, which became known as "grav shear" (see below) and "dimensional shear" (violent energy turbulence separating hyper bands from one another). Once this was recognized and the higher hyper bands were declared off limits, losses due to dimensional shear ended, but grav shear remained a highly dangerous and essentially unpredictable phenomenon for the next five centuries. Despite that unpredictability and continuing (though lower) loss rates, hyperships' FTL capabilities made them the vessel of choice for survey duties and other low-manpower requirement tasks. Crews of highly paid specialists willing to accept risky employment conditions were enlisted for survey work and for the early mail packets, but the loss rate continued to make any sort of interstellar bulk commerce impractical and insured that most colonists still moved aboard the much slower but more survivable cryogenic ships. As a consequence, the rate of advance of colonization did not increase terribly significantly during the period 725-1273 pd, although the ability to pick suitable targets for colonization (courtesy of the FTL survey crews) improved enormously.

The best speed possible in hyper prior to 1273 pd was about fifty times light-speed, a major plus over light-speed vessels but still too slow to tie distant stars together into any sort of interstellar community. It *was* sufficient to allow establishment of the oldest of the currently existing interstellar polities, the Solarian League, consisting of the oldest colony worlds within approximately ninety light-years of Sol.

The major problem limiting hyper speeds was that simply getting into hyper did not create a propulsive effect. Indeed, the initial translation into hyper was a complex energy transfer which reduced a starship's velocity by "bleeding off" momentum. In effect, a translating hypership lost approximately 92% of its normal-space velocity when entering hyper. This had unfortunate consequences in terms of reaction mass requirements, particularly since the fact that hydrogen catcher fields were inoperable in hyper meant one could not replenish one's reaction mass underway. On the other hand, the velocity bleed effect applied equally regardless of the direction of the translation (that is, one lost 92% of one's velocity whether one was entering hyper-space from normal-space or normal-space from hyper-space), which meant that leaving hyper automatically decelerated one's vessel to a normal-space velocity only 08% of whatever its

velocity had been in hyper-space. This tremendously reduced the amount of deceleration required at the far end of a hyper voyage and so made reaction drives at least workable.

Since  $.3 c$  (approx. 89,907.6 km./sec.) was the maximum velocity at which an "upward" translation into hyper-space could be made, the maximum initial velocity in hyper-space was  $.024 c$  (or 7,192.6 km./sec.). Making translation at speeds as high as  $.3 c$  was a rough experience and not particularly safe. The loss rate at  $.3 c$  was over 10%; dropping translation velocity to  $.23 c$  virtually eliminated ship losses in initial translation, and, since the difference in initial hyper velocity was less than 1,700 KPS, most captains routinely made translation at the lower speed. Even today, only military commanders in emergency conditions will make upward translation at  $.3 c$ . There is no safe upper speed on "downward" translations. That is, a ship may translate from hyper-space to normal-space at any hyper-space velocity without risking destruction. (Which is not to say that the crews enjoy the experience or that it does not impose enormous wear and tear on hyper generators.) Further, translation from one hyper band to a higher band (see below) may be made at any velocity up to and including  $.6 c$ . No vessel may exceed  $.6 c$  in hyper ( $.8$  in normal-space) because radiation and particle shields cannot protect them or their passengers at higher velocities.

Once a vessel enters hyper, it is placed in what might be considered a compressed dimension which corresponds on a point-by-point basis to "normal-space" but places those points in much closer congruity. Hyper-space consists of multiple regions or layers—called "bands"—of associated but discrete dimensions. Dr. Radhakrishnan (who, after Adrienne Warshawski, is considered to have been humanity's greatest hyper-physicist) called the hyper bands "the back-flash of creation," for they might be considered echoes of normal-space, the consequence of the ultimate convergence of the mass of an entire normal-space universe. Or, as Dr. Warshawski once put it, "Gravity folds normal-space everywhere, by however small an amount, and hyper-space may be considered the 'inside' of all those little folds."

In practical terms, this meant that for a ship in hyper, the distance between normal-space points was "shorter," which allowed the vessel to move between them using a standard reaction drive at sublight speeds to attain an *effective* FTL capability. Even in hyper, ships were not capable of true faster-than-light movement; the relatively closer proximity of points in normal-space simply gave the *appearance* of FTL travel, which meant that as long as a vessel was dependent on its reaction drive and could not reach the higher hyper bands, its maximum apparent speed was limited to approximately sixty-two times that which the same vessel could have attained in normal-space.

Navigation, communication, and observation all are rendered difficult by the nature of hyper-space. Formed by gravitational distortion, hyper-space itself acts as a focusing glass, producing a cascade effect of ever more tightly warped space. The laws of relativistic physics apply at any given point in that space, but as a hypothetical observer looks "outward" in hyper-space, his instruments show a rapidly increasing distortion. At ranges above about 20 LM (359,751,000 km.) that distortion becomes so pronounced that accurate observations are impossible. One says "about 20 LM" because, depending on local conditions, that range may vary up or down by as much as 12%—that is, from 17.6 LM (316,580,880 km.) to 22.4 LM (or 402,921,120 km.). A hypership thus travels at the center of a bubble of observation from 633,161,760 to 805,842,240 km. in diameter. Even within that sphere, observations and measurements can be highly suspect; in effect, the "bubble" may be thought of as the region in which an observer can tell something is out there and very roughly where. Exact, precise observations and measurements are all but impossible above ranges of 5,000,000 to 6,000,000 km., which would make navigational fixes

impossible even if there were anything to take fixes on.

This seemed to rule out any practical use of hyper-space until the development of the first "hyper log" (known as the "HL" by spacers) in 731 pd. The HL is analogous to the inertial guidance units first developed on Old Earth in the 20th century ce. By combining the input from extremely acute sensor systems with known power inputs to a vessel's own propulsive systems and running a continuous back plot of gravity gradients passed through, the HL maintains a real-time "dead reckoning" position. Early HLs were accurate to within no more than 10 LS per light-month, which meant that, in a voyage of 60 light-years, the HL position might be out by as much as two light-hours. Early hyper-space navigators thus had to be extremely cautious and make generous allowances for error in plotting their voyages, but current (1900 pd) HLs are accurate to within .4 light-second per light-month (that is, the HL position at the end of a 60 light-year voyage would be off by no more than 288 light-seconds or less than 5 light-minutes).

From the beginning of hyper travel, it was known that there were multiple hyper bands and that the "higher" the band, the closer the congruity between points in normal-space and thus the higher the apparent FTL speed, but their use was impractical for two major reasons. First, translation from band to band bleeds off velocity much as the initial translation. The bleed-off for each higher band is approximately 92% of the bleed-off for the next lowest one (that is, the alpha band translation reduces velocity by 92%; the beta band bleed-off is 84.64%; the velocity loss for the gamma band is 77.87%, etc.), but it still had to be made up again after each translation, and this posed an insurmountable mass requirement for any reaction drive.

The second problem was that the interfaces between any two hyper bands are regions of highly unstable and powerful energy flows, creating the "dimensional shear" which had destroyed so many early hyperships, and dimensional shear becomes more violent as band levels increase. Moreover, even the relatively "safe" lower bands which could be reliably reached were characterized by powerful energy surges and flows—currents, almost—of highly-charged particles and warped gravity waves. Adequate shielding could hold the radiation effects in check, but a grav shear within any band could rip the strongest ship to pieces.

Hyper-space grav waves take the form of wide, deep volumes of space, as much as fifty light-years across and averaging half their width in depth, of focused gravitational stress "moving" through hyper-space. Actually, the wave itself might be thought of as stationary, but energy and charged particles trapped in its influence are driven along it at light- or near-light-speed. In that sense, the grav wave serves as a carrier for other energies and remains motionless but for a (relatively) slow side-slipping or drifting. In large part, it is this grav wave drift which makes them so dangerous; survey ships with modern sensors can plot them quite accurately, but they may not be in the same place when the next ship happens along. The major waves in the more heavily traveled portions of the galaxy have been charted with reasonable accuracy, for sufficient observational data has been amassed to predict their usual drift patterns. In addition, most waves are considered "locked," meaning that their rate of shift is low and that they maintain effectively fixed relationships with other "locked" waves. But there are also waves which are not locked—whose patterns (if, in fact, they have patterns at all) are not only not understood but can change with blinding speed. One of the most famous of these is the Selkir Shear between the Andermani Empire and the Silesian Confederacy, but there are many others, and those in less well-traveled (and thus less well-surveyed) areas, especially, can be extremely treacherous.

The heart of any grav wave is far more powerful than its fringes, or, put another way, a "grav wave" consists of many layers of "grav eddies." For the most part, all aspects of the wave have the same basic orientation, but it is possible for a wave to include counter-layers of reverse

"flow" at unpredictable vertical levels. Despite the size of a grav wave, most of hyper-space is free of them; the real monsters that are more than ten or fifteen light-years wide are rare, and even in hyper the distances between them are vast, though the average interval between grav waves becomes progressively shorter as one translates higher into the hyper bands. The great danger of grav waves to early-generation hyperships lay in the phenomenon known as "grav shear." This is experienced as a vessel moves into the area of influence of a grav wave and, even more strongly, in areas in which two or more grav waves impact upon one another. At those points, the gravitational force exerted on one portion of the vessel's structure might be hundreds or even thousands of times as great as that exerted on the remainder of its fabric, with catastrophic consequences for any ship ever built.

In theory, a ship could so align itself as to "slide" into the grav wave at an extremely gradual angle, avoiding the sudden, cataclysmic shear which would otherwise tear it apart. In practice, the only way to avoid the destructive shearing effect was to avoid grav waves altogether, yet that was well nigh impossible. Grav waves might be widely spaced, but it was impossible to detect them at all until a ship was directly on top of one, and with no way to see one coming, there was no way to plot a course to avoid it. It *was* possible to recognize when one actually entered the periphery of a grav wave, and if one were on exactly the right vector, prompt emergency evasion gave one a chance (though not a good one) of surviving the encounter, but the grav wave remained the most feared and fearsome peril of hyper travel.

Then, in 1246 pd, the first phased array gravity drive, or impeller, was designed on Beowulf, the colonized world of the Sigma Draconis System. This was a reactionless sublight drive which artificially replicated the grav waves which had been observed in hyper-space for centuries. The impeller drive used a series of nodal generators to create a pair of stressed bands in normal-space, one "above" and one "below" the mounting ship. Inclined towards one another, these produced a sort of wedge-shaped quasi-hyper-space in those regions, having no direct effect upon the generating vessel but creating what might be called a "tame grav wave" which was capable of attaining near-light speeds very quickly. Because of the angle at which the bands were generated relative to one another, the vessel rode a small pocket of normal-space (open ahead of the vessel and closing in astern) trapped between the grav waves, much as a surfboard rides the crest or curl of a wave, which was driven along between the stress bands. Since the stress bands were waves and not particles, the "impeller wedge" was able, theoretically, at least, to attain an instantaneous light-speed velocity. Unfortunately, the normal-space "pocket" had to deal with the conservation of inertia, which meant that the effective acceleration of a manned ship was limited to that which produced a *g* force the crew could survive. Nonetheless, these higher rates of acceleration could be maintained *indefinitely*, and no reaction mass was required; so long as the generators had power, the drive's endurance was effectively unlimited.

In terms of interstellar flight, however, the impeller drive was afflicted by one enormous drawback which was not at first appreciated. In essence, it enormously increased the danger grav shear had always presented to reactor drive vessels, for the interference between the immense strength of a grav wave and the artificially produced gravitic stress of an impeller wedge will vaporize a starship almost instantly.

In the military sphere, it was soon discovered that although the bow (or "throat") and stern aspects of an impeller wedge must remain open, additional "sidewall" grav waves could be generated to close its open sides and serve as shields against hostile fire, as not even an energy beam (generated using then-current technology) could penetrate a wave front in which effective local gravity went from zero to several hundred thousand gravities. The problem of generating an

energy beam powerful enough to "burn through" even at pointblank ranges was not to be solved for centuries, but within fifty years grav penetrators had been designed for missile weapons, which could also make full use of the incredible acceleration potential of the impeller drive. Since that time, there has been a constant race between defensive designers working new wrinkles in manipulation of the gravity wave to defeat new penetrators and offensive designers adapting their penetrators to defeat the new counters.

The interstellar drawbacks of impeller drive became quickly and disastrously clear to Beowulf's shipbuilders, and for several decades it seemed likely that the new drive would be limited solely to interplanetary traffic. In 1273 pd, however, the scientist Adrienne Warshawski of Old Terra recognized a previously unsuspected FTL implication of the new technology. Prior to her *Fleetwing* tests in that year, all efforts to employ it in hyper-space had ended in unmitigated disaster, but Dr. Warshawski found a way around the problem. She had already invented a new device capable of scanning hyper-space for grav waves and wave shifts within five light-seconds of a starship (to this day, all grav scanners are known as "warshawskis" by starship crews), which made it possible to use impeller drive *between* hyper-space grav waves, since they could now be seen and avoided.

That, alone, would have been sufficient to earn Warshawski undying renown, but beneficial as it was, its significance paled beside her next leap forward, for in working out her detector, Dr. Warshawski had penetrated far more deeply into the nature of the grav wave phenomenon than any of her predecessors, and she suddenly realized that it would be possible to build an impeller drive which could be reconfigured at will to project its grav waves at *right angles* to the generating vessel. There was no converging effect to move a pocket of normal-space, but these perpendicular grav fields could be brought into phase with the grav wave, thus eliminating the interference effect between impellers and the wave. More, the new fields would stabilize a vessel relative to the grav wave, allowing a transition into it which eliminated the traditional dangers grav shear presented to the ship's physical structure. In effect, the alterations she made to *Fleetwing* to produce her "alpha nodes" provided the ship with gigantic, immaterial sails: circular, plate-like gravity bands over two hundred kilometers in diameter. Coupled with her grav wave detector to plot and "read" grav waves, they would permit a starship to literally "set her sails" and use the focused radiation hurtling along hyper-space's naturally occurring grav waves to derive incredible accelerations.

Not only that, but the interface between sail and natural grav wave produced an eddy of preposterously high energy levels which could be "siphoned off" to power the starship. Effectively, once a starship "set sail" it drew sufficient power to maintain and trim its sails *and also for every other energy requirement* and could thus shut down its onboard power plants until the time came to leave hyper-space. A Warshawski Sail hypership thus had no need for reaction mass, required very little fuel mass, and could sustain high rates of acceleration indefinitely, which meant that the velocity loss associated with "cracking the wall" between hyper bands could be regained and that use of the upper bands was no longer impractical.

This last point was a crucial factor in attaining higher interstellar transit times. The maximum safe velocity in any hyper band remained  $.6 c$ , but the higher bands, with their closer point-to-point congruencies, added a significant multiplier to the FTL equivalent of that velocity. Prior to the Warshawski Sail, not only had dimension shear made translating into the upper bands dangerous, but the successive velocity losses had made it highly uneconomical for any reaction drive ship. Now the lost velocity could be rapidly regained and the higher, "faster" bands could be used to sustain a much higher average velocity. As a result, the dreaded grav wave became the

path to ever more efficient hyper travel, and captains who had previously avoided them in terror now used their new instrumentation to find them and cruised on standard impeller drive between them.

Of course, there wasn't always a grav wave going the direction a starship needed, but with the grav detector to keep a ship clear of naturally occurring grav waves impeller drive could, at last, be used in hyper-space. In addition, it was possible for a Warshawski Sail ship to "reach" across a wave (which might be thought of as sailing with a "quartering breeze") at angles of up to about 60° before the sails began losing drive and up to approximately 85° before all drive was lost. By the same token, a hypership could sail "close-hauled," or into a grav wave, at approach angles of 45°. At angles above 45°, it was necessary to "tack into the wave," which naturally meant that return passages would be slower than outgoing passages through the same region of prevailing grav waves. Thus the old "windjammer" technology of Earth's seas had reemerged in the interstellar age, transmuted into the intricacies of hyper-space and FTL travel. By 1750 pd, however, sail tuners had been upgraded to a point which permitted the "grab factor" of a sail to be manipulated with far more sophistication than Dr. Warshawski's original technology had permitted. Indeed, it became possible to create a negative grab factor which, in effect, permitted a starship to sail directly "into the wind," although with a marginally greater danger of sail failure.

The Warshawski Sail also made it possible to "crack the wall" between hyper bands with much greater impunity. Breaking into a higher hyper band was (and is) still no bed of roses, and ships occasionally come to grief in the transition even today, but a Warshawski Sail ship inserts itself into a grav wave going in the right direction and rides it through, rather like an aircraft riding an updraft. This access to the higher bands meant the first generation Warshawski Sail could move a starship at an apparent velocity of just over 800  $c$ , but an upper limit on velocity remained, created by the range capability of the vessel's grav wave detectors. In the higher bands, the grav waves were both more powerful and tightly-spaced due to the increasingly stressed nature of hyper-space in those regions. This meant that the five-light-second detection range of the original Warshawski offered insufficient warning time to venture much above the gamma bands, thus imposing the absolute speed limitation. In addition, the problems of acceleration remained. The Warshawski Sail could be adjusted by decreasing the strength of the field, thus allowing a greater proportion of the grav wave's power to "leak" through it, to hold acceleration down to something a human body could tolerate, but the old bugaboo of "g forces" remained a problem for the next century or so.

Then, in 1384 pd, a physicist by the name of Shigematsu Radhakrishnan added another major breakthrough in the form of the inertial compensator. The compensator turned the grav wave (natural or artificial) associated with a vessel into a sort of "inertial sump," dumping the inertial forces of acceleration into the grav wave and thus exempting the vessel's crew from the  $g$  forces associated with acceleration. Within the limits of its efficiency, it completely eliminated  $g$  force, placing an accelerating vessel in a permanent state of internal zero-gee, but its capacity to damp inertia was directly proportional to the power of the grav wave around it and inversely proportional to both the volume of the field and the mass of the vessel about which it was generated. The first factor meant that it was far more effective for starships than for sublight ships, as the former drew upon the greater energy of the naturally occurring grav waves of hyper-space, and the second meant it was more effective for smaller ships than for larger ones. The natural grav waves of hyper-space, with their incomparably greater power, offered a much "deeper" sump than the artificial stress bands of the impeller drive, which meant that a Warshawski Sail ship could deflect vastly more  $g$  force from its passengers than one under

impeller drive. In general terms, the compensator permitted humans to endure acceleration rates approaching 550 g under impeller drive and 4-5,000 g under sail, which allows hyperships to make up "bleed-off" velocity *very* quickly after translation. These numbers are for military compensators, which tend to be more massive, more energy and maintenance intensive, and much more expensive than those used in most merchant construction. Military compensators allow higher acceleration—and warships cannot afford to be less maneuverable than their foes—but only at the cost of penalties merchant ships as a whole cannot afford.

In practical terms, the maximum acceleration a ship can pull is defined in Figure 2.

These accelerations are with inertial compensator safety margins cut to zero. Normally, warships operate with a 20% safety margin, while MS safety margins run as high as 35%. Note also that the cargo carried by a starship is less important than the table above might suggest. The numbers in Figure 2 use mass as the determining factor, but the *size* of the field is of very nearly equal importance. A 7.5 million-ton freighter with empty cargo holds would require the same size field as one with full holds, and so would have the same effective acceleration capability.

Note also that in 1900 pd, 8,500,000 tons represented the edge of a plateau in inertial compensator capability. Above 8,500,000 tons, warship accelerations fell off by approximately 1 g per 2,500 tons, so that a warship of 8,502,500 tons would have a maximum acceleration of 419 g and a warship of 9,547,500 tons would have a maximum acceleration of 1 g. The same basic curves were followed for merchant vessels.

In 1502 pd, the first practical countergravity generator was developed by the Anderson Shipbuilding Corporation of New Glasgow. This had only limited applications for space travel (though it did mean cargoes could be lifted into orbit for negligible energy costs), but incalculable ones for planetary transport industries, rendering rail, road, and oceanic transport of bulk cargoes obsolete overnight. In 1581 pd, however, Dr. Ignatius Peterson, building on the work of the Anderson Corporation, Dr. Warshawski, and Dr. Radhakrishnan, mated countergrav technology with that of the impeller drive and created the first generator with sufficiently precise incremental control to produce an internal gravity field for a ship, thus permitting vessels with inertial compensators to be designed with a permanent up/down orientation. This proved a tremendous boon to long-haul starships, for it had always been difficult to design centrifugal spin sections into Warshawski Sail hyperships. Now that was no longer necessary. In addition, the decreased energy costs to transfer cargo in and out of a gravity well, coupled with the low energy and mass costs of the Warshawski sail itself *and* the greatly decreased risks of dimensional and grav shear, interstellar shipment of bulk cargo became a practical reality. In point of fact, on a per-ton basis, interstellar freight can be moved more cheaply than by any other form of transport in history.

By 1790 pd, the latest generation Warshawskis could detect grav wave fronts at ranges of up to just over twenty light-seconds. A hundred years later (the time of our story) the range is up to eight light-minutes for grav wave detection and 240 light-seconds (4 light-minutes) for turbulence detection. As a result, 20th Century pd military starships routinely operate as high as the theta band of hyper-space. This translates an actual velocity of .6 *c* to an apparent velocity of something like 3,000 *c*. The explored hyper bands and their bleed-off factors and speed multipliers over normal-space are given in Figure 3.

In addition to his inertial compensator, Dr. Radhakrishnan also enjoys the credit for being the first to develop the math to predict and detect wormhole junctions, although the first was not actually detected until 1447 pd, many years after his death. The mechanism of the junction is still



imperfectly understood, but for all intents and purposes a junction is a "gravity fault," or a gravitic distortion so powerful as to fold *hyper-space* and breach the interface between it and normal-space. The result is a direct point-to-point congruence between points in normal-space which are seldom separated by less than 100 light-years and may be separated by several thousand. A hyper drive is required to utilize them, and ships cannot maintain stability or course control through a wormhole junction without Warshawski Sails. Nonetheless, the movement from normal-space to normal-space is effectively instantaneous, regardless of the distance traversed, and the energy cost is negligible.

The use of the junctions required the evolution of a new six-dimensional math, but the effort was well worthwhile, particularly since a single wormhole junction may have several different termini. Wormholes remain extremely rare phenomena, and astrophysicists continue to debate many aspects of the theories which describe them. No one has yet proposed a technique to mathematically predict the destinations of any given wormhole with reliable accuracy, but work on better models continues. At the present, mathematics can generally predict the total number of termini a wormhole will possess, but the locations of those termini cannot be ascertained without a surveying transit, and such first transits remain very tricky and dangerous.

There are other ambiguities in the current understanding of wormholes, as well. In theory, for example, one should be able to go from any terminus of a wormhole junction directly to any other. In fact, one may go from the central nexus of the junction to any of its other termini and vice versa but cannot reach any secondary terminus from another secondary. That is, one might go from point A to points B, C, or D but could not go from B to C or D without returning to A and reorienting one's vessel.

Despite their incompletely understood nature, the junctions opened a whole new aspect of FTL travel and became focusing points or funnels for trade. There were not many of them, and one certainly could not use them to travel directly to any star not connected to them, but one *could* move from any star within a few dozen light years of a wormhole terminus to the terminus then jump instantly three or four hundred light-years in the direction of one's final destination with a tremendous overall savings in transit time.

In addition, of course, the discovery of wormhole junctions and a technique for their use imposed an entirely new pattern on the ongoing Diaspora. Theretofore, expansion had been roughly spherical, spreading out from the center in an irregular but recognizable globular pattern. Thereafter, expansion became far more ragged as wormhole junctions gave virtually instantaneous access to far distant reaches of space. Moreover, wormhole junctions are primarily associated with mid-range main sequence stars (F, G, and K), which gives a high probability of finding habitable planets in relatively close proximity to their far termini.

Once initial access to the far end of a wormhole junction had been attained, the habitable world at the far end (if there was one) tended to act as the central focus for its own "mini-Diaspora," creating globular quadrants of explored space which might be light-centuries away from the next closest explored star system.

## **(2) Warshawski Sail Logistics**

By their very natures, the impeller drive and Warshawski Sail had a tremendous impact on the size of spacecraft. With the advent of the impeller drive, mass as such ceased to be a major consideration for sublight travel. With the introduction of the Warshawski Sail, the same became true for starships, as well. In consequence, bulk cargo carriers are entirely practical. Transport of interplanetary or interstellar cargoes is actually cheaper than surface or atmospheric transportation (even with countergrav transporters), though even at  $1,200 c$  (the speed of an average bulk carrier) hauling a cargo 300 light-years takes 2.4 months. It is thus possible to transport even such bulk items as raw ore or food stuffs profitably over interstellar distances.

By the same token, this mass-carrying capability means interstellar military operations, including planetary invasions and occupations, are entirely practical. A starship represents a prodigious initial investment (more because of its size than any other factor), but it will last almost forever, its operational costs are low, and a ship which can be configured to carry livestock and farm equipment can also be configured to carry assault troops and armored vehicles.

Hyperships come in three basic categories: the low-speed bulk carrier; the high-speed personnel carrier; and warships.

The maximum acceleration and responsiveness of a Warshawski Sail starship is dependent upon the power or "grab value" of its sails and the efficiency of its inertial compensator. The more powerful (and massive) the sail generator, the greater the efficiency with which it can utilize the power of the grav wave; the more efficient the compensator, the higher the acceleration its crew can endure. Moreover, it requires an extraordinarily powerful sail, relative to the mass of the mounting ship, to endure the violent conditions of the upper hyper bands. This means that larger ships, with the hull volume to devote to really powerful sails, have greater inherent power and maximum theoretical average velocities (transit times) because they ought to be able to pull more acceleration from a given grav wave (thus reaching their optimum velocity of  $.6 c$  more rapidly) and to access the higher hyper bands (where the "shorter" distances effectively multiply their  $.6 c$  constant velocity by a quite preposterous factor).

There are, however, offsetting factors. The more powerful a Warshawski Sail, the slower its response time in realigning to a shift in the grav wave. This is potentially disastrous, but is, once more, offset to some extent by the ability of the more powerful sail to withstand greater stress. That is, it isn't as necessary to the starship's survival that it be able to reset or trim a sail to survive fluctuations in the grav wave about it. Put another way, a bigger ship with more powerful generators can "carry more sail" under given grav wave conditions than a smaller vessel and, all other things being equal, run the smaller vessel down.

But, of course, things aren't quite that simple. For starters, a smaller, less massive vessel gains more drive from the same sail strength. Because it is less massive, it accelerates more quickly for the same power. And the inertial compensator, marvelous as it may be, becomes more effective as its field area grows smaller and the mounting vessel's mass decreases, which means that a smaller ship can take advantage of its acceleration advantage over a larger vessel riding the same grav wave (and hence having access to the same "inertia sump") without killing its crew. If the smaller vessel can accelerate to  $.6 c$  (the highest survivable speed in hyper-space) before the larger ship, the larger ship's theoretical speed advantage is meaningless, as it can never overhaul. Under extreme grav wave conditions, the larger ship can maintain a greater effective acceleration, compensator or no, because the smaller ship's lighter sails are forced to "reef" (reduce their "grab factor") lest their generators burn out. This is particularly true in and above the zeta band, and few merchant ships ever venture that high. Even fairly small warships tend to have extremely

powerful sails for their displacement, so that they can reach those higher bands, but smaller ships are simply unable to match the mass of a large ship's sail generators. This means that in some circumstances the larger ship can climb higher in the hyper bands and/or derive sufficiently more usable drive from a grav wave to offset its lower compensator efficiency.

In addition, smaller ships with less powerful sails can trim them much more rapidly and with greater precision. In wet-navy terms, smaller ships tend to be "quicker in the stays," able to adjust course with much greater rapidity and to take the maximum advantage of the power available to them from a given sail force. This means that a smaller ship with an aggressive sail handler for a captain can actually turn in a faster passage time over *most* hyper voyages than a bigger ship. There are, however, some passages (known to starship crews as "the Roaring Deeps") where exceptionally powerful, exceptionally steady grav waves operate. In these regions, the bigger ship, with its more powerful sails, is able to make full use of its theoretical advantages and will routinely run down smaller vessels.

In *sublight* movement, the larger vessel's more powerful sails (which equate to a more powerful impeller drive, as well) *do not* give it a speed advantage because of the nature of the inertial compensator. The curve of the compensator's most efficient operation means that a smaller vessel (with a smaller area to enclose in its compensator field) can pull substantially higher accelerations, and no amount of brute impeller power can create an *artificial* grav wave with a sufficiently deep inertial sump to overcome this fundamental disadvantage of a large ship. Capital ships thus are as fast as lighter warships in *sustained* flight but tend to be slower to accelerate or decelerate.

The tuning or trimming components of a Warshawski Sail generator are its most expensive and quickest wearing parts, and they wear out much more rapidly on more powerful generators with their higher designed power loads. Because of this, bulk carriers tend to use relatively low-powered sails and the lower hyper bands, which limits their practical speeds to perhaps 1,000-1,500 *c*. Passenger ships and those vessels specializing in transport of critical cargoes accept the higher overhead cost associated with more powerful sails and run in the range of 1,500-2,000 *c*. For the most part (though there are exceptions) only warships are designed around the most powerful sails and compensators their displacement will permit, giving speeds of up to 3,000 *c*. A bulk carrier's tuning components may last as long as fifty years between replacements and those of a passenger ship up to twenty years, but a warship is likely to require complete tuner overhaul and replacement as frequently as once every eight to ten years. On the other hand, a warship may spend decades "laid up" in orbit, making no demands at all upon its sails, so the actual life span of a given set of tuners may vary widely between ships of the same class, depending upon their employment history.

### **(3) The Mechanics of the Diaspora**

It was discovered early in the Diaspora that the maximum practical safe speed for a sublight ship was approximately .8 *c*, as radiation and particle shields can not protect the vessel above that velocity.

The generation ships were built as complete, life-sustaining habitats oriented around the

smallest practical self-sustaining population and designed to boost to that velocity at one gravity. In the long term, onboard gravity was provided through centrifugal force. In addition to their human passengers, the generation ships also had to provide for all terrestrial livestock and plants which would be required to terraform the colonists' new home for their survival. Even aboard these huge ships, space was severely limited, and many early colonial expeditions reached their destinations only to come to grief through the lack of some essential commodity the settlers had not known to bring along. This sort of disaster became less common after about 800 pd, when the original, crude hyperships made it possible to conduct extensive surveys of potential colony sites before the slower colony ships departed, but by that time the generation ships were a thing of the past, anyway.

In 305 pd, cryogenic hibernation finally became practical. It had long been possible to cryogenically preserve limbs and organs, though even the best anti-crystallization procedures then available were unable to prevent some damage to the preserved tissues. But where minor damage to an arm or a liver was acceptable, damage to a brain was not, and the early cryogenic pioneers' enthusiastic predictions about indefinite suspension of the life processes had proven chimerical.

It was Doctor Cadwaller Pineau of Tulane University who, in 305, finally cut the Gordian knot of cryogenic hibernation by going around the crystallization problem. He found that by lowering the hibernator's temperature to just barely above the freezing point he could maintain the physiological processes indefinitely at about a 1:100 time ratio. In other words, a hibernating human would age approximately one year for every century of hibernation, and his nutritional and oxygen requirements were reduced proportionately. Over the next several decades, Pineau and his associates further refined his process, working to overcome the problem of muscular atrophy and other physiological difficulties associated with long comatose periods, and eventually determined that optimum results required a hibernating individual to rouse and exercise for approximately one month in every sixty years (ie., after six physiological months), which remained a fixed requirement throughout the cryogenic colonization era.

What this meant was that the life support capabilities of a cryo ship could be vastly reduced in comparison to those of a generation ship. Moving at  $.8c$ , the colonists experienced a 60% time dilation effect; in other words, each sixty-year period of hibernation used up one century of voyage time by the standards of the remainder of the universe. Thus an entire one-century voyage could be made without a single "active" period and would consume only 7.2 apparent months of the traveler's life span. Longer voyages would require periodic awakenings, but they could be staggered, permitting the currently roused crew to use only a fraction of the life support the entire crew would require. The result was to permit far larger numbers of colonists to travel on a given sized ship with a far lower subjective time passage.

A further boost to colonization came about in 725 pd with the advent of the first hyper drive. The casualty rates among early hyperships were so severe that it took a rather daredevil mentality to go aboard one, and colonists weren't normally noted for that sort of personality. To claim a new home world they would take risks, yes, but not risks they could avoid.

But what the hyperships provided was a survey vehicle which could travel more than sixty times as fast as a sublight ship, and the people who went in for discovering and exploring (as opposed to settling) new worlds had just the sorts of mentalities to risk hyper travel. A situation thus arose in which survey ships, generally operated by private corporations, undertook the high-risk job of locating potential colony sites which were then auctioned to prospective colony expeditions. Even with the hyper drive, this required that everyone involved take a very long

view of things, but humanity adjusted to that just as it had once adjusted to the novelty of instant communication to any point on a single planet.

It is believed that the first Warshawski Sail colony ship was the *Icarus*, which departed Old Earth on September 9, 1284 pd, under the command of Captain Melissa Andropov (and, despite its name, provided over two centuries of dependable, reliable service before it was finally scrapped in 1491 pd), but for well over five hundred years, the dichotomy of FTL hypership survey expeditions and sublight hibernation colony transports remained the standard.

When the transition finally occurred, there were several very unfortunate instances in which unscrupulous operators used the new hyper sail technology to pass hibernation ships en route to their new homes. When the original colonists arrived, it was only to find well-established (and armed) claim-jumpers already squatting on their planned home worlds. If there was an already established colony in the vicinity, it might take a hand to assist the original colonists, even to the extent of lending military aid to eject the claim-jumpers, in order to discourage such unsavory elements from ruining the neighborhood. If there was no such well-inclined planet in the vicinity, the original colonists were out of luck, particularly since their technology might be several centuries less advanced than that of the thieves they confronted. In some cases, this created a domino effect. Expeditions which found themselves dispossessed of their colony sites often lacked the resources to return whence they had come (even if they had the inclination) and many opted to risk settling an unsurveyed world if there were stars with habitable planets (or which were likely to have such planets) in the vicinity. Many of them came to grief as the old generation ship colonies had in attempting to settle worlds other than the ones they had planned their original expedition's equipment list to meet, and those which did not often wound up displacing yet another group of legitimate colonists. Other such instances ended far more happily, with the second group of settlers discovering a world which was already partly settled and a group of "squatters" who paid their own way with the improvements they had already made and were integrated peaceably into the ranks of the "legitimate" colonists.

With the advent of *Icarus* and her later sisters, however, the entire pattern of colonization shifted. It was now possible to make a 500 light-year voyage in barely two-and-a-half years, an interval which dropped steadily as improvements in Warshawski technology became available. Hibernation was still used on most colony ships, but now it was simply to cram in the largest possible number of passengers, not a necessity. Indeed, as higher and higher speeds became possible, the hibernation features began to fall by the wayside.

## **(4) The Star Kingdom of Manticore**

### **(A) Founding and Early History**

The original colony expedition to Manticore departed Old Earth on October 24, 775 pd, aboard the sublight hibernation ship *Jason* for the Manticore Binary. Manticore, approximately 512 light-years from Earth, was a G0/G2 distant binary first confirmed to have planets in 562 pd, by the astronomer Sir Frederick Clarke. Its distance from Sol was such that the voyage would take 640.5 years (just over 384 subjective years), requiring that each colonist be waked for exercise seven times. Accordingly, the colonists were investing about 4.5 years of their lives (and

all of their money) in the voyage.

Sixty percent of the colonists were Western Europeans, with most of the remainder drawn from the North American Federation, the Caribbean, and a very small minority of ethnic Ukrainians. The total expedition consisted of 38,000 adults and 13,000 minor children, and the "rights" to the system had been purchased at auction from the survey firm of Franchot et Fils, Paris, France, Old Earth. "FF" (as it was known) had a high reputation, and its survey ship *Suffren* had made the same voyage in just twenty years. *Suffren's* crew had done FF's usual, professional job, although, of course, all data was accompanied by the caution that it would be 650 years out of date when the colonists arrived, and FF sold its rights in the Manticore System to the Manticore Colony, Ltd., for approximately 5.75 billion EuroDollars. As part of the transfer of rights, FF expunged all data on the system from its memory banks, transferring the information to the Federal Government of Earth's World Data Bank's maximum security files. This was a standard safeguard to protect Manticore Colony against the occupation of the planet by later expeditions with faster ships, as it was already apparent that advances in hyper travel might well make such protection necessary, yet it was also recognized that there was no way to guarantee that faster, more capable hyperships would not beat the colonists to Manticore. Accordingly, Roger Winton, President and CEO of Manticore Colony (already elected first Planetary Administrator) opted to establish the Manticore Colony Trust of Zurich.

The MCT's purpose was to invest all capital remaining to the MC after mounting the expedition (something under one billion EuroDollars) and use the accrued interest to watch over the colonists' rights to their new home. It was a wise precaution, for when *Jason* finally arrived in the Manticore System on March 21, 1416 pd, her crew discovered a modest settlement on the planet they christened Manticore, but it was staffed by MCT personnel who also manned the four small Earth-built frigates protecting the system against claim-jumpers. Indeed, so well had the Trust done in the last six centuries that Manticore found itself with a very favorable bank balance, and the frigates became the first units of the Manticoran System Navy (later the Royal Manticoran Navy). Moreover, the small MCT presence on Manticore included data banks and carefully selected instructors assigned to update the colonists on the technical advances of the last six centuries. This last was a feature even Winton had not anticipated, and he had very good reason to be pleased both with his own decision and the diligence, foresight, and imagination with which a succession of MCT managers had discharged their duties.

It was as well that the colony had such unusual support and off-world financial strength, however, for after almost forty years in which things went perfectly, disaster struck Manticore in 1454.

The initial bid for Manticore had been so high for two reasons. One was that the G0/G2 binary was highly unusual—indeed, unique—in having no less than three planets suitable for human life. The second was that Manticore and Sphinx, the two Earth-like planets orbiting the G0 stellar component, were extremely Earth-like. Although each had its own unique biosphere, survey reports indicated that terrestrial life forms would find it unusually easy to adapt to all three, and so, indeed, it proved. Terran food crops did well, and while the local flora and fauna could not provide all essential dietary elements, much of it was digestible by the terrestrial visitors. Terraforming requirements thus were extraordinarily modest, consisting of little more than the need to seed food crops and selected terrestrial grasses to support imported herbivores. Unfortunately, that very ease of adaptation had a darker side, and Manticore proved one of the very few extra-terrestrial systems to possess microorganisms which could (and did) prey on humans.

The culprit was a virus—or, rather, a small family of viruses—which had been missed by the original survey team. Some virologists argue that it was not, in fact, missed but rather evolved in the six centuries between the initial survey and the arrival of the colonists. Still others suggest that it was actually the mutated descendant of a virus the colonists had brought with them from Old Earth. Whatever the truth of the matter, the virus was deadly, producing a condition analogous to virulent influenza and pneumonia simultaneously in its victims. Worse, it proved resistant to all existing medical technology, and ten years were to pass before a successful vaccine was found.

In that decade, almost sixty percent of the original colonists died. Their Manticore-born children fared better against the disease, experiencing a generally less violent manifestation of it, yet without the cushion provided by the MCT funds on Old Earth and the evolution of the Warshawski Sail hypership, the entire expedition would no doubt have come to grief.

As it was, the colony found itself in urgent need of additional homesteaders. These were recruited from Old Earth (yet another process made much easier by the existence of the MCT), but the original colonists, concerned about retaining control of their own colony, adopted a radically new constitution before opening their doors to emigration.

Roger Winton had been reelected continuously to the post of Planetary Administrator, serving superbly in the position throughout the early settlement period and the plague crisis. He was now an old man (over eighty) whose wife and two Terra-born sons had died of the plague, but he remained vigorous and his Manticore-born daughter Elizabeth showed promise at least equal to his. At fifty-three, she was President of the Board of Directors (effectively vice-president of the colony) and one of Manticore's preeminent jurists. Since she had a large and thriving brood of second-generation Manticoran children and her family had served so outstandingly, a convention of colony shareholders converted the Corporation's elective board into a constitutional monarchy and crowned Roger Winton King Roger of Manticore on August 1, 1471.

It was a post he was to enjoy for only three years before his death, but his daughter succeeded him as Elizabeth I in a smooth and popular transfer of power, and the House of Winton has ruled the Star Kingdom of Manticore ever since. Simultaneously, the surviving "First Shareholders" and their descendants, who held title to vast tracts of land (including most of the richest mineral resources of Manticore and Sphinx) and/or to extra-planetary resources in the Manticore System, acquired patents of nobility to go with their wealth, and the hereditary aristocracy of Manticore was born.

The new wave of immigrants arriving in the wake of the Plague comprised three distinct classes of citizen. Each immigrant received a credit whose value precisely equaled the cost of a second-class passenger ticket from the Solarian League to Manticore. That credit could be converted, at the holder's option, into a land credit on a planetary surface or into a share of equivalent value in any of several orbital and deep space industrial concerns. Most of the new immigrants, faced with virgin planets on which to live, opted for homestead rights there, although some of the sharpest among them made careful investments in the Star Kingdom's industrial infrastructure which later proved of enormous worth, instead.

Any individual capable of paying his own passage received the full credit upon arrival, whereas those incapable of paying their passage could draw upon MCT for a dollar amount equal to their credit to cover the difference between their own resources and the cost of passage. In addition, an immigrant whose resources were greater than the cost of his passage could invest the surplus, paying 50% of the "book" price for additional land and/or investment. The most affluent

immigrants thus became "Second Shareholders," with estates (whether in terms of land or industrial wealth) which, in some cases, rivaled those of the original shareholders and entitled them to patents of nobility junior to those of the existing aristocracy. Those immigrants who were able to retain their base land right or perhaps enlarge upon it slightly became "yeomen," free landholders with voting rights beginning one Manticoran year (1.73 Terran Standard Years) after their arrival. Those who completely exhausted their credit to buy passage to Manticore were known as "zero-balance" immigrants and did not become full citizens until such time as they had become well-enough established to pay taxes for five consecutive Manticoran years (8.7 Terran Standard Years). While all Manticoran subjects are equal in the eyes of the law, whether enfranchised to vote or not, there were distinct social differences between shareholders, yeomen, and zero-balance, and even today there is greater prestige in claiming a yeoman as a first ancestor than in claiming a zero-balance ancestor. And, of course, direct descent from a full shareholder is the most prestigious of all.

The constitutional system prospered over the next five hundred years, blessed by a series of strong monarchs and a steadily growing population base. The constitution contains a strong "Declaration of Fundamental Rights," but the franchise is limited to citizens who have paid taxes for at least five consecutive years. (The policies encouraging emigration with credits were ended after a period of fifty years, having served their purpose most effectively, and it is no longer possible for an immigrant to become an instant shareholder or gain the franchise immediately upon arrival.)

The Constitution created a two-house Parliament, a Royal Council, and a Crown Judiciary. The Parliament consists of a House of Lords and a House of Commons with mutual veto power, and the Crown has the rights of both initiation and veto. According to some constitutional scholars (though not all, by any means), the Framers intended for the executive power to be exercised by the Royal Council, which, by law, consists of the Prime Minister, his subordinate executive ministers, and certain hereditary members, such as the Keeper of the Seal, the heir to the throne (as a nonvoting member), and the monarch. In fact, however, the Royal Council, now commonly referred to as the Cabinet, became the instrument through which the monarch acts as head of Government as well as head of State. Although the Prime Minister, who (traditionally) is from the House of Lords but must be able to command a majority in the Commons, manages the Cabinet, he may be dismissed by the King or Queen at will and acts in most ways as the monarch's executive officer. At the same time, it is only a foolish monarch who capriciously or willfully ignores the advice of his or her ministers and, especially, *prime* minister.

The Crown retains the power to pardon and commute, appoints ministers and judges with the advice and consent of the House of Lords, and, unless overruled by a majority in both houses, possesses the power to interpret constitutional law through its appointees to the King's (or Queen's) Bench. The Crown cannot, however, create new peers without the consent of a majority of the House of Commons.

In cases of disagreement between the Crown and both houses of Parliament, the Lords serve as the supreme judiciary without right of veto by Crown or Commons. The strongest safeguards of the common population lie in (1) the Commons' power to approve or disapprove budgets, (2) the Constitutional requirement that the Prime Minister command a majority in the Commons, and (3) the right to remove the monarch.

It is up to the Crown (actually, the Cabinet), and not the Commons, to initiate economic policy and propose budgets, and the Crown has an additional discretionary fund drawn from the extensive Crown lands and industrial holdings, but the Crown and Lords both know that they



cannot long defy the Commons if the lower house decides to withhold budget approval. The fact that the Prime Minister, although serving at the Crown's pleasure, must also be able to poll a majority in the House of Commons (a similar majority in the House of Lords is *not* a constitutional requirement, although most PMs who cannot generally resign their office), also helps to insure that the viewpoint of the Star Kingdom's commoners will always be heard at the highest level. Finally, the Manticoran monarchy is one of the very few hereditary forms of government with a specific provision for the removal of a monarch for reasons other than incapacitation or criminal action. A monarch may be impeached *for any reason*, including but not limited to "high crimes and misdemeanors," by a two-thirds majority vote of the House of Commons. Impeachment proceedings may not begin in the House of Lords, and a three-quarters vote of both houses is required to actually remove a monarch. Although this constitutional provision has never been used and is now regarded by many constitutional authorities as a vestigial holdover from pre-monarchy days, it has never been removed, and the possibility of its exercise remains.

As a final safeguard intended to prevent the monarchy from losing touch with the non-aristocratic majority of the Star Kingdom's population, Roger I and Elizabeth I insisted that the Constitution include one additional provision. The heir to the throne is required by law to marry a commoner. Other members of the royal family may marry whomever they wish, but the Crown Prince or Crown Princess must marry outside the aristocracy.

The only real challenge to the Manticoran monarchy came in 1721 pd in the so-called "Gryphon Uprising," which remains the most internal excitement the Star Kingdom has been forced to confront. Gryphon, the least congenial of the three habitable planets of the Manticore System, has by far the smallest share of First Shareholder families, as its first outpost was not placed until fifteen years after the Plague. The bulk of its aristocracy came from the Second Shareholders, who, for the most part, had substantially less credit than First Shareholders and, accordingly, received smaller "Clear Grants" (that is, land to which clear title was granted prior to improvements by the owner/tenant). The Crown, however, had established the principle of "Crown Range" (land in the public domain and free for the use of any individual) to encourage emigration to Gryphon, and by 1715, the population of Gryphon had grown to the level set under the Crown Range Charter of 1490. At that point, as the charter required, the Crown began phasing out the Crown Range, granting title on the basis of improvements made, and the trouble began. Yeomen who hoped to become independent ranchers, farmers, or miners claimed that the planetary nobility was using strong-arm tactics to force them off the land—indeed, something very like a shooting war erupted between "squatters" and "the children of shareholders," and after two years of increasingly bloody unrest, a special commission was established with extraordinary police powers and a mandate to suppress the violence and reach a settlement.

The Gryphon Range Commission's final finding was that there was sound foundation to the yeomen's original complaints, and the Manticoran Army, having pacified and stabilized the situation, then oversaw a closely regulated privatization of the Crown Range. A degree of dislike between small landholders and certain of the noble families continues to this day, but it has become something of a tradition rather than a source of active hostility.

### **(B) Manticoran Time-Keeping:**

All of the above dates are given in Terran Standard (Post Diaspora) Reckoning. Like all extra-Solar systems settled during the Diaspora of Man, the Manticore System found it necessary

to create its own calendar to reflect the axial and orbital rotations of their new home, but in the Mantikorans' case the situation was complicated by the fact that whereas most star systems are fortunate to have a single habitable world, their distant binary system possessed three of them, each with its own day and year.

As the rest of humanity, Mantikorans use Standard Seconds, Minutes, and Hours, and Old Earth's 365.26-day year serves as the "Standard Reckoning Year," or "T-year," the common base to which local dates throughout known space are converted for convenience in dealing with inhabitants of other star systems. Like most extra-Solar polities, the Star Kingdom of Manticore's history texts follow the convention of counting years "Post Diaspora" (ie., in T-years from the year in which the first interstellar colony ship departed Old Earth) as well as in terms of the local calendar.

The Kingdom's Official Reckoning of dates is based on the rotational and orbital periods of Manticore-A III, the planet Manticore. This calendar is used for all official records, but doesn't really work very well for the seasons of any planet other than Manticore itself. Accordingly, both Sphinx (Manticore-A IV) and Gryphon (Manticore-B IV) have their own, purely local calendars, which means that a single star system routinely uses no less than four calendars (including Standard Reckoning). Needless to say, date-conversion software is incorporated in virtually every Mantikoran computer.

The Kingdom's planetary days and years are:

Planet Name	Day In T-Hours	Year In Local Days	Year In T-Days	Year In T-Years
Manticore	22.45	673.31	629.83	1.73
Sphinx	25.62	1,783.28	1,903.65	5.22
Gryphon	22.71	650.46	615.51	1.69

The clocks of each planet count time in full 60-minute Standard Hours (or T-hours), with an additional, shorter "hour" called "Compensate" (or, more commonly, simply "Comp") to make up the difference. Thus the Planet Manticore's day consists of 22 hours (numbered 01:00 to 22:59) plus a 27-minute-long Comp, while Sphinx's day consists of 25 hours (numbered 01:00 to 25:59) plus a 37-minute Comp. The planetary week is seven planetary days long in each case, and Manticore's day is used aboard all Royal Navy vessels.

The official year of the Kingdom is 673 days long, with a leap year every third year. It is divided into 18 months, 11 of 37 days and 7 of 38, alternating for the first 6 and last 8 months, named (simply, if rather unimaginatively) First Month, Second Month, Third Month, etc., with a leap year (1 extra day in 4th Month) every third year. The Gryphon local year is also divided into 18 months (16 of 36 days and 2 of 37 days) with the extra days in Ninth and Tenth and one extra day in Eleventh Month every other local year. The Sphinxian year, however, is divided into 46 months, 35 of 39 days and 11 of 38 days (the shorter months fall in even-numbered months from Twelfth to Thirty-Second), with a leap year every 7 years with an extra day in 15th Month. All of these calendars are reckoned in "Years After Landing" (abbreviated al), dating from the day (March 21, 1416 pd) the first shuttle from the colony ship *Jason* touched down on the present-day site of the City of Landing. Obviously, this means that each planet's local year is a different "Year After Landing" from any of the others. Thus Honor Harrington's orders to *Fearless*, dated Fourth 25, 280 al (using Official Manticoran Reckoning, or the Manticore planetary calendar), were also written on March 3, 1900 pd (Standard Reckoning), and on Second 26, 93 al (using the local Sphinxian calendar). This plethora of dates is a major reason Manticorans tend to convert time spans into T-years even in domestic matters.

### (C) The House of Winton:

Roger I 1471–1474 pd (32–34 al)  
 Elizabeth I 1474–1507 pd (34–53 al)  
 Michael 1507–1539 pd (53–72 al)  
 Edward I 1539–1544 pd (72–74 al)  
 (boating accident; succeeded by sister)  
 Elizabeth II 1544–1601 pd (74–107 al)  
 David 1601–1642 pd (107–131 al)  
 Roger II 1642–1669 pd (131–147 al)

Adrienne 1669–1681 pd (147–154 al)  
William 1681–1690 pd (154–158 al)  
(assassinated)  
William II 1690–1741 pd (158–188 al)  
Caitrin 1741–1762 pd (188–200 al)  
Samantha 1762–1785 pd (200–214 al)  
George 1785–1802 pd (214–224 al)  
Samantha II 1802–1857 pd (224–255 al)  
Roger III 1857–1883 pd (255–270 al)  
Elizabeth III 1883 pd–present (270 al–present)

#### **(D) Manticoran Domestic Politics:**

Manticoran political parties began as factions in the House of Lords and, in the Lords, retain much of their original factional nature.

The Constitution adopted following the Plague intended to place government primarily in the hands of the aristocracy, who would dominate the House of Lords (the senior branch of the Parliament) and the Royal Council, but things actually worked out somewhat differently. Although Roger Winton had been a very strong planetary administrator, it is improbable that the drafters of the Constitution truly intended for the Crown to acquire a firm grip on the executive authority. Elizabeth I, however, was a *very* shrewd administrator, and she quickly observed that the original Manticoran peerage comprised a group of spokesmen for competing interests rather than statesmen. By playing the interests of the various factions within the Lords off against one another, Elizabeth was able to establish (among other things) that the Prime Minister and all non-hereditary members of the Royal Council served at her pleasure. The Lords had the right to advise and consent on initial appointments, but *she* had the power to dismiss them at any time, and she could not be forced to accept anyone else's choice for any of those positions. With that principle firmly enshrined in the unwritten portion of the Star Kingdom's Constitution, Crown dominance of the government was established.

As a ruling house, the Wintons have proven extremely capable. Indeed, their only realistic competition as a dynasty has come from the Andermani Empire, and for all its undisputed accomplishments, the Anderman Dynasty has always suffered from a potentially dangerous degree of eccentricity which has never afflicted the House of Winton.

Nonetheless, it eventually dawned on the members of the peerage that the Crown had assumed (some might say usurped) much of the political power the Shareholders had intended to reserve for themselves and their children. It also occurred to them that Elizabeth had enjoyed the strong support of the House of Commons in her maneuvers, for the Commons (elected primarily by the yeomen and zero-balancers imported after the Plague) had recognized that the Constitution stacked the deck against them. In particular, the fact that both houses enjoyed the mutual power of veto but that members of the Lords need not stand for election, gave the upper house enormous leverage in any dispute between them.

Once recognition set in—and once the immediate factional squabbles of the early settlement and post-plague period had been settled—the Lords began to evolve genuine parties. For the most part, they grew up around the old personal factions, but they were also differentiated by clear ideological differences, and as they solidified, they reached out to the Commons for allies. Because of their advantages in not needing to stand for reelection, members of the aristocracy

continue to head most of the political parties to this day, but they have learned the hard way to listen to the Members of Parliament from the Commons, as well. Most (though by no means all) Manticoran aristocrats have a fairly strong sense of *noblesse oblige* (those who do not are among the most self-centered and intolerant of the known universe), but without the input of their allied commoner MPs, the aristocratic leadership of any of the parties would quickly lose touch with the majority of the Star Kingdom's population and suffer for it the next time the House of Commons called a general election.

Despite this, the Star Kingdom's political parties tend to be working alliances of individuals with the same basic interests rather than closed ideological systems even today. Party discipline is often impressive when close votes must be fought through, but there is no "collectivist discipline" in the sense that a member of a party must publicly endorse and support policies with which he disagrees simply because the rest of the party does. MPs are more likely than Peers to "vote the party line," but the tradition of "voting one's conscience" is the Manticoran ideal, and most of the Star Kingdom's political parties have their own distinct "left," "right," and "center" wings.

The more powerful parties are: the Centrist Party and its normal ally the Crown Loyalists; the Liberal Party; the Conservative Association; the Progressive Party; and the so-called "New Men" Party.

The Centrists, led by Allen Summervale, Duke of Cromarty, the current PM, are the largest single bloc, though they do not quite constitute a majority in their own right. The Centrists pursue a rather conservative domestic policy of gradualism and fiscal restraint, opposed to sweeping social changes and determined to avoid deficit spending. More importantly, they have been absolutely committed to the defense of Manticore against the growing Havenite threat for over fifty T-years, having believed that an eventual military confrontation was inevitable and should not be postponed in hopes it would go away. In particular, they believed that waiting for the Republic to weaken, however attractive it might seem, constituted a supine surrender of the initiative to their enemies and so invited long-term defeat. Moreover, unlike certain other political groups, the Centrists believe Manticore can survive open warfare with Haven and that even if they are defeated, the final cost will not be much worse than a craven surrender. It was the Centrists who supported Roger III in instigating the Star Kingdom's pre-war naval build-up and pushing through the annexation of the Basilisk System (a G5 star with a single habitable planet) to forestall Havenite occupation of the Junction terminus in that system, which was at the time a highly controversial move. Some critics saw it as the first step in a deliberate policy of imperial aggrandizement; others saw it as an unnecessary challenge to Haven which could provoke the very war they feared. The majority of Queen Elizabeth's subjects, however, supported the annexation, whatever their representatives might think. Of all the aristocratic-led parties, the Centrists have the strongest support in the Commons, which gives them an added depth that affords rather more clout than simple numbers might suggest.

The Crown Loyalists, led by Henry McShain, Marquis of New Dublin, might be thought of as Manticoran Tories. Their fundamental article of political faith is that stability and prosperity for all Manticorans depends upon the power and authority of the executive in the person of the monarch. From time to time, the Crown Loyalists differ with the current monarch on policy, but in those instances they generally seek to remonstrate in private while preserving a public front of solid support. The Crown Loyalists are extremely weak in the Commons. They are perceived,

with a certain degree of justice, as the party of the great nobles, and while they are accorded great respect and deference, there is a belief (even among many Centrists) that they are insensitive to current issues, subjecting all of them to the litmus test of their effect on the Crown's authority (and the nobility's influence). Those who believe this also believe that the Loyalists will oppose any policy, however beneficial its final effects may be in other ways, if it weakens the Crown. In general, the Loyalists share the Centrist view on foreign policy, but they are even more conservative in fiscal policy (they felt pre-war taxation levels were excessive) and have always had difficulty resolving their contradictory support for a strong fleet and opposition to high military spending.

The Liberal Party, headed by Marisa Turner, Countess of New Kiev, advocates humanist reform and is relatively disinterested in foreign policy. They are larger than the Crown Loyalists but smaller than the Centrists and have less numerous but extremely loyal adherents in the Commons. Although disheartened by the current state of affairs in the People's Republic of Haven, the Liberals believe that the fundamental objectives of the Havenite Declaration of Economic Rights (see The Republic of Haven, below) were laudable. In their opinion, the pre-war Legislaturalist Havenite leaders were "bad liberals" who had become prisoners of the "mobocracy" of the Haven System. Their own concern is with "bringing the Star Kingdom into the main stream of modern galactic political thought" (ie., extending and enlarging the franchise, providing relief for the indigent, equalizing income, and promoting greater popular participation in government), and they do not pay much attention to the manner in which affairs beyond the borders may impinge upon Manticore. They regarded the Centrist Party's pre-war concern over Haven as alarmist, believing that however expansionist Haven's current leadership might be, it would hesitate to try conclusions with Manticore (lest it rouse the Solarian League by threatening the Manticore Wormhole Junction) and would eventually reach satiation and cease expanding. Since they preferred to increase spending on human services, they begrudged every penny spent on the fleet, which caused them to lose a great deal of public support once active hostilities with Haven broke out. Nonetheless, they continue to believe that "war never settles anything," and of all Manticoran political parties, they remain most comfortable with the official pre-war ideology of the People's Republic.

The Conservative Association, headed by Michael Janvier, Baron of High Ridge, is the smallest of the traditional political parties and might charitably be termed reactionary. It advocates an isolationist foreign policy, argues that foreign adventures are dangerous, and decries the "steady, liberalizing rot threatening Manticore with anarchy." As might be surmised, the Association is something of a crackpot group which attracts the nobles who find the Crown Loyalists entirely too permissive in defense of privilege. Indeed, they advocate return to an "original Manticoran balance of power" which never actually existed outside the imaginations of their own theorists. Although they felt the Centrists' annexation of Basilisk was an act of madness, the very sort of adventurism which could plunge Manticore into disastrous confrontation with foreign powers, Roger III and Cromarty knew they could be counted upon to support fleet appropriations, as their isolationist bent required a powerful fleet to police their borders.

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The Progressive Party, headed jointly by the Earl of Gray Hill and Lady Elaine Descroix, is the third largest party and, in general, endorses many of the objectives of the Liberal Party. The

Progressives share the Centrist determination to avoid deficit spending (which the Liberals see as an acceptable, temporary evil), would like to see "a better and more beneficial balance between social spending and military appropriations," and share the Liberals' distaste for foreign policy. Unlike the Liberals, they have never regarded concerns over Haven (which they see as an example of deficit-spending liberalism run berserk and corrupted by power-seeking politicians) as alarmist. On the other hand, they also felt (and, apparently, still feel) that any belief that Manticore can survive a fight to the finish with the Havenite military machine is lunacy. (Since the beginning of actual hostilities, the Progressives have been very vocally and publicly confident of Manticoran victory, but their opponents believe this is camouflage. According to this theory, the Progressive's present posture is designed to make their fear-based desire for a negotiated settlement appear to stem from their complete confidence in victory, instead.)

Because their primary concern is with domestic issues, their traditional foreign policy has always tended to be extremely simplistic, believing that "honest negotiators" can reach a live-and-let-live arrangement. Their pre-war Centrist and Loyalist critics argued, not without justification, that this really amounted to advocating that Manticore sell out the rest of the galaxy to save its own skin, a policy which must ultimately result in disaster when there is no more galaxy to sell to Haven. Yet while this may well be a not-inaccurate reading of the effect of their policy, it is unjust to argue (as their critics do) that it was their intended object. The real problem with the Progressives' foreign policy is that they simply don't think about it very much, relying on platitudes and vague beliefs rather than a reasoned analysis, which left them with no structured thought upon which to base themselves once the Havenite Wars actually began.

The "New Men" Party, led by Sir Sheridan Wallace, is a relatively new group which believes that power is far too concentrated in the hands of existing cliques of the aristocracy and wealthy merchants/industrialists. They argue that the traditional Manticoran practice of co-opting capable and ambitious individuals into those two groups is a mistake. The Centrists and Loyalists believe that co-option assures a continuous flow of new ideas into the aristocracy and financial elites in a controlled, gradualist fashion, whereas the Liberals and Progressives argue that the very concept of aristocracy is anachronistic and anti-democratic. The New Men view the practice of co-option as a deliberate, undisguised mechanism to keep control firmly in the hands of traditional power groups, which is rather Liberal-sounding—until one realizes that their problem is less that there are traditional elites than that *they* don't control them. In a very real sense, the New Men are the lesser nobility's counterweight to the Conservative Association, mounting perennial assaults on the bastions of power and entrenched privilege. Unlike the Liberals and Progressives, however, they believe that the spoils belong to the victors and are not out to overturn the system, but rather to seize the levers of power for themselves. The New Men have only the most rudimentary fiscal policy and share the Conservative Association's fundamental isolationism, yet distrust the military as one more bastion of the Powers That Be. In general, the New Men might be said to be in opposition to everyone. They enjoy the least support in the Commons of any of the major parties, but their intense party discipline puts Wallace in a position to reliably deliver an organized block of votes essentially at will. This, coupled with his readiness to make deals with anyone on a purely pragmatic basis, gives him much more power within Parliament than simple numbers might suggest.

In addition to the parties listed above, there are several small, *ad hoc* factions which come and go, generally focused around a single charismatic leader. The real power struggle is between

the Centrist/Crown Loyalist alliance and the Liberal/Progressive Alliance, with the former holding a slight edge in the Lords and a larger one in the Commons. The Liberals and Progressives tend to be allied on a stronger, deeper, and more permanent basis than the Centrists and Loyalists, helped by the fact that both of them regard foreign policy as a distraction from the real concerns of the day. The Centrists and Loyalists often find themselves divided over particular points of domestic policy, but maintain a fairly united front on foreign policy and military preparedness. Both enjoy the support of the Crown, which is a decided plus, though the Loyalists remain far from convinced of the wisdom of the Centrists' pre-war willingness to accept (some would say court) a confrontation with Haven. Traditionally, the Conservative Association has helped tilt the balance in favor of the two Crown parties because of its insistence on maintaining a powerful fleet, but the potential has always existed for the Association to strike a deal with the Liberals and Progressives on foreign policy, although the fundamental antipathy of their domestic policy positions makes it unlikely an alliance between them could last. The real joker in the deck is the "New Men." For all their relatively small numbers, they are concentrated in the Lords, where the Centrist/Crown Loyalist majority is thinnest. No one in any party believes that the New Men could work indefinitely with the Liberals or Progressives, whose domestic policy is fundamentally at odds with their own, but the possibility of a temporary alliance to break the "stranglehold" of the Centrist/Crown Loyalist group is not at all out of the question. It would be a cynical marriage of convenience on both sides, probably with the tacit understanding that once their common foes had been smitten hip and thigh the Liberals, Progressives and New Men would fight it out to a conclusion, and the real fear of Duke Cromarty and his inner circle is that the New Men may decide the Liberals and Progressives are so evenly matched that, once the "entrenched power brokers" have been toppled, the New Men would find themselves in a position to control the outcome by choosing whom to support.

#### **(4) The Manticoran Wormhole Junction**

##### **(A) General Wormhole Mechanics:**

Wormhole junctions consist of a central wormhole (referred to as the "wormhole nexus") and its associated termini (referred to as "secondary termini"). The nexus is connected to each terminus by a unique pattern of gravity waves, one pattern outbound and one inbound, normally referred to as the "terminus route." Each junction has an absolute tonnage ceiling, the maximum mass which can be put through any given terminus (including the central nexus) simultaneously, but the limit applies individually to each terminus route.

Traffic may be routed from the central nexus to any terminus and from any terminus to the central nexus, but direct routing between secondary termini is impossible. The tonnage limit can be moved simultaneously over different terminus routes.

Each time a vessel or vessels move along a given terminus route, the route "destabilizes" for a brief period, during which it cannot be used by other vessels, and the destabilization time is proportional to the mass being moved along the route. Thus the more massive the transit (ie., the larger the number of vessels involved) the longer it is destabilized.

The central nexus is thus the most flexible but, in a sense, the most vulnerable (militarily



speaking) of the junction termini. It may dispatch an assault force equal to its tonnage limit to any or all of its secondary termini virtually simultaneously, but will then be unable to send reinforcements until the route(s) used stabilize once more. By the same token, an adversary in possession of two or more secondary termini of the same junction may use each of the termini it controls to send the full tonnage limit of warships into the central nexus. Hence the Star Kingdom of Manticore's extreme sensitivity to the possibility that any hostile power (such as the People's Republic of Haven) might obtain control of more than one terminus of the Manticore Junction.

### **(B) The Manticore Junction:**

The Manticore Wormhole Junction was discovered in 1585 pd (98 al). The Manticore Junction lies 412 LM from Manticore A and has the distinction of being the largest so far discovered, connecting to no less than five other star systems: Sigma Draconis (Solarian League), Gregor (Anderman Empire), Trevor's Star (People's Republic of Haven), Phoenix (Phoenix Cluster), and the most recently discovered (1856 pd/254 al) Basilisk System. In addition, the Star Kingdom's astrophysicists are currently working with the latest survey data in the belief that the junction connects to at least one and possibly more additional termini which have yet to be isolated.

The wormhole junction has been a bonanza for the Manticoran economy, attracting a huge concentration of shipping. Unfortunately, it has also made the kingdom a player, will it or won't it, on the galactic stage, as the imperialistic and military implications of the junction are quite clear to all concerned. For obvious reasons, the Navy budget has received considerable attention in the last 50-odd T-years, and the kingdom has laid claim to its first extra-system planet (Medusa, a thoroughly unpleasant, marginally habitable planet in the Basilisk System) to safeguard that terminus of the junction. (Prior to 1901 pd, Manticoran diplomats took great care to avoid saying just whom they were safeguarding it against, but Basilisk's relative proximity to the People's Republic of Haven made that fairly clear, and there is reason to believe the Kingdom got away with the annexation so easily only because Haven was occupied with other matters when the Basilisk terminus was first discovered.) As Medusa is inhabited by a sapient alien species, this embroiled the kingdom in questions of aboriginal rights and protection, and the increasing pressure of Havenite "merchants" there for "legitimate trade with the natives" (who have very little worth trading) further complicated an already complex situation.

## **(5) Planets of the Star Kingdom of Manticore**

Manticore: (Manticore-A III) The capital planet of the Star Kingdom, Manticore's diameter is approximately 13,500 km., with a hydrosphere of 76% and an axial tilt of 5°. This planet is slightly less dense than Earth, with a lower percentage of metals, but still boasts considerable mineral wealth. Average temperatures are close to Earth normal, and the climate is considerably moderated by the lower axial tilt.

Major Manticoran on-planet industries are agriculture, aquaculture, mining, and a well-diversified industrial sector and R&D base. Population as of 1900 pd (280 al) was approximately

1.5 billion. The major shipyards and space industry of the Star Kingdom of Manticore orbit the capital planet.

Sphinx: Sphinx (Manticore-A IV) is larger than Manticore (diameter=16,500 km.) It is also more massive and richer in metals than the capital world. Sphinx is habitable only because an extremely active carbon dioxide cycle effectively extends the liquid-water zone by giving it considerably more "green house" effect than its sister planets, and its hydrosphere is 68% with an axial tilt of 14°, which, coupled with its considerably lower average temperatures, gives it a much more active and less inviting climate than Manticore.

The major on-planet industries of Sphinx are mining, forestry, and animal husbandry (the planet has vast herds of Terran-adapted cattle and native prongbuck). Planet-side industry has been slow to develop but has made considerable ground in the last century. Planetary population as of 1900 pd was 1,048,000,000.

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Gryphon: With a diameter of 13,200 km., Gryphon (Manticore-B IV) is actually the most Earth-like (in terms of size and mass) of Manticore's three habitable planets, but its hydrosphere is only 51% and its axial tilt is almost 27°. Coupled with its orbital radius (it is almost as far from the cooler Manticore B as Manticore is from Manticore A), this gives it a rugged "continental" climate with extremely cold winters and (relatively speaking) scorching summers. The planetary biosystem is also the least Earth-like of the Star Kingdom's habitable worlds, and the colony's original cattle did not do well there, but a genetically-engineered variant of the Plains Buffalo, imported from Beowulf (Sigma Draconis) in 1612 pd (113 al), adapted with phenomenal success, and two of the Star Kingdom's major exports to the older planets are buffalo hides and meat. In addition, the Gryphon Kodiak Maximus provides one of the known galaxy's premiere peltries, though the Manticore Charter of Settlement requires that a relatively low ceiling be placed on the pelts taken.

Gryphon is poor in metals (relative to Manticore or Sphinx), and developed planet-side industry is primarily agrarian. Its severe climate has made this planet the last choice for colonization within the system, but, by the same token, this means it has the largest unclaimed areas (particularly with its limited hydrosphere), and it has tended to attract the more adventurous of the last two or three generations, giving it a particularly vigorous population. In addition, it actually has more *total* industry than Sphinx, despite its limited planetary supply of metals, because of Manticore-B's extensive asteroid belts. The Unicorn Belt's asteroid extraction operations (dominated by the Hauptman Cartel's Gryphon Minerals, LTD., subsidiary) produce the lion's share of the Star Kingdom's raw ores, and most Gryphons who don't want to herd buffalo end up employed in one part or another of their planet's sprawling near-space industrial activities. Perhaps because of this space-going orientation, Gryphon provides a quite disproportionate percentage of the Royal Manticoran Navy's personnel. Indeed, the backbone of the RMN's petty officers come from Gryphon and seem to feel a divine mission to keep the sissies of Manticore-A in shape.

As of 1900 pd, Gryphon had a planetary population of 575,000,000 and a belter population of 298,500,000.

## **(6) Interstellar Politics and Imperialism**

### **(A) Emergence of Multi-System Polities:**

Before the introduction of the Warshawski Sail, interstellar trade and warfare were impossible. The only practical uses for hyperships were those with a sufficiently valuable return to justify the high risk of the vessel's loss—i.e., survey work—which was carried out not by planetary or system governments but by private corporations, most based on Old Earth or the very oldest colony worlds, who paid their crews of specialists handsomely indeed. With his or her high salary pre-paid and invested throughout the duration of his voyage, a survey specialist could retire to a life of wealth after a single cruise, though there was never any real shortage of repeat surveyors. The lure of the unknown and the lust to explore produced survey crewmen who pressed their luck again and again—in many cases until it finally ran out—and the frontiers of explored space were pushed steadily back despite the casualties.

Nonetheless, the repeat voyages which would make an interstellar cargo-carrier profitable were extremely unlikely, and no freight carrier could afford to pay the salaries survey crews commanded. Further, the same pressures which caused colony expeditions to prefer cryo ships to hyper-capable transports applied to any military expedition, and the distance between star systems effectively limited warfare to intramural affairs within a given system.

The Warshawski Sail changed that, along with everything else. Transit speeds soared as higher hyper bands were entered and their predominant grav waves slowly charted, and a Warshawski Sail hypership with inertial compensator could be of almost any desired mass. Huge ships might be slower than small ones, but they were still far, far faster than cryo ships, and their cargo carrying capacity could be enormous.

The first interstellar warships were (probably inevitably) piratical. Hyperships were scarcely needed for system defense, as any attacker was required to reenter normal space and could then be engaged by sublight ships with normal impeller drives, and after centuries of being literally unable to get at one another, there were no such things as power struggles between rival star systems. Humans had not changed appreciably, however, and the emergence of latter day "vikings" to prey on newly established or weakly defended colonies was almost a forgone conclusion. Ownership of at least eleven colonies changed hands by force during the first half-century of Warshawski Sail capability, financed in many cases by "respectable" corporations formed for the express purpose of mounting filibustering expeditions. In time, particularly as interstellar shipping established itself and began to grow, actual squadrons of independent pirates came into existence. As always, threats to commerce provoked the creation of navies to police the trade lanes, and the first system navies of interstellar warships appeared.

These navies were remarkably successful in running down and eliminating outright pirates, but they themselves didn't go away once the threat abated. Having been created, they took on a life of their own, particularly as the Warshawski Sail began knitting the far-flung community of Man back together. Traditional sources of contention reappeared, and the discovery of wormhole junctions created a whole new source of rivalry, as these were of immense value to trade, expansion, and warfare alike.

Since the restoration of the precious gift of the ability to make war upon one's neighbors, several inter-system polities have been created. Most have grown relatively peacefully, on the pattern of the old Solarian League; others have been forged by more forceful means, and no political unit can afford to overlook its own security needs any longer.

Aside from the Star Kingdom, the other three major polities of concern to Honor Harrington are: The Solarian League, the Anderman Empire, and the Republic of Haven. Although important as a trade partner and near-neighbor of the Star Kingdom, the Andermani have not (as yet) impinged as directly on Manticore's prospects of survival as have the League and the People's Republic, which are briefly described below.

### **(B) The Solarian League:**

Composed of the oldest colony worlds, the Solarian League extends for roughly ninety-eight light-years from the Solar System. Old Earth is the League's capital but is only first among equals, as her daughter colonies had enjoyed centuries (in some cases over a millennium) of independence from the mother world and were unwilling to surrender their sovereignty when the new star nation emerged.

As a result, every member world of the Solarian League exercises full local autonomy. That is, the League's Executive Council, its highest governing body, has no legal authority over the local policies of its member worlds. On the "national" level, the Executive Council consists of delegates from all member worlds, and each world holds a veto right. On the surface any central government ought to find it impossible under such circumstances to maintain any sort of sustained policy, but there are countervailing pressures.

First, most of these worlds are quite populous, wealthy, and content, and pursue a consensual domestic policy, both locally and for the League as a whole, in which disputes which might draw a veto are unlikely to arise.

Secondly, the League's member worlds work off a great deal of their contentiousness in foreign policy debates because they feel safe in treating foreign policy as an area in which to make "statements of principle." Most League statesmen realize that this attitude makes any coherent military or diplomatic policy impossible, but the League is enormous. With the greatest concentration of wealth in human history (and counting almost two-thirds of the total human race as its citizens), it feels unthreatened by external dangers. Its navy is the largest in the galaxy, and the idea that any foreseeable combination of foreign powers could threaten its security is unthinkable.

Third, although every member world has veto right, the Executive Council has a counter-weapon; a two-thirds vote of the Council can strip any planet of its League membership. This power has never been used, but the *threat* of its use has brought several obstinate delegates to see reason over the centuries.

Despite its lack of an organized foreign policy, the League has an almost uninterrupted history of gradual expansion. From time to time an independent world will request admission to the League, and these requests are almost always granted, but any form of organized League imperialism is virtually impossible. In a sense, the League is isolationist—willing to trade with anyone, still the greatest source of recruitment for new colonies, but content to stand aloof from the power struggles prevalent in other regions of the galaxy. For all that, however, the League's size, power, and historical record of attracting requests for admission have given it a sense of manifest destiny. Its view (which, so far, has been justified by events) is that *any* of its neighbors will eventually recognize the advantages of League membership and ask to join. There is thus no need for the League to conquer anyone, as passing time and the inevitability of peaceful expansion will take care of the problem.

There have, however, been two exceptions to the League's "non-imperial" policy. First, the League has a tradition of extending protectorate status to what might be called "third-world planets" along and beyond its current frontiers. This is justified on the basis that such worlds are vulnerable to piratical raids and/or economic exploitation by less principled interstellar powers. As such, they need looking after . . . which just happens to give the *League's* merchants the inside track and prepares the ground for the protectorate's eventual admission to the League.

The second exception is a consistent policy of extending the same protectorate status to wormhole junctions with termini in or near League space. Among those junctions was the Erewhon Junction roughly a hundred light-years from the People's Republic of Haven's "southern" frontier, but this effort failed. The Erewhon Republic rejected League "protection," despite the proximity of the threat of the PRH. Instead, Erewhon chose to place its reliance upon the Manticoran Alliance and the assistance of the Royal Manticoran Navy—probably because the League's lack of a coherent foreign policy failed to fill the Republic with confidence in the face of Peep expansionism.

The League itself contains no wormhole junctions, but at least five junctions have termini in League territory. Where possible, the League has secured control of the junction at the far end of the wormhole as a defensive measure, though the use of *force majeure* to do so remains contrary to League policy. Nor, for the most part, has force been required, as the League is well able to proffer economic and industrial incentives to encourage most colony worlds to accept League membership quite eagerly.

The most important junction not to pass under League control is the Manticore Junction. Historically, Manticore has enjoyed congenial relations with the League but has no desire to submerge itself within the League's bureaucracy, and the combination of the revenues generated by the junction and the sturdily independent, continually growing population of its three worlds make the League's traditional incentives less attractive to the Manticorans than to most struggling colonies. In the last thirty years, however, an undeniable edge of strain has crept into League-Manticoran relations due to the looming conflict with the People's Republic. The one thing the Star Kingdom most fears is a situation in which the Peeps would be able to purchase advanced technology from the League, thus redressing their tactical inferiority vis-a-vis the Royal Navy. In its efforts to prevent that situation from arising, the Cromarty Government was forced to resort to strong-arm economic pressure to get a technology embargo out of the Executive Council. The effort succeeded, but at the result of strained relations.

### **(C) The People's Republic of Haven:**

Although the Haven System lies 667 light-years from Old Earth, 155 light-years further distant than Manticore, the first shuttle landed on its habitable planet (also called Haven) in 1309 pd, over a century before Manticore was settled. This was possible because of the fashion in which the introduction of the Warshawski Sail had revolutionized the logistics of colonization. Haven's day is 24.56 standard hours in length, and its year is 412.25 local days in length, divided into 13 months: 9 of 32 days each and 4 of 31 days each. The short months are the 3rd, 5th, 10th, and 12th. Every 4 years, the 3rd month is 32 days long.

Haven lay in a particularly attractive region, with an unusually high proportion of F, G, and K class stars, and the original expedition was extremely well financed as a joint venture by no fewer than eleven corporations based on member planets of the Solarian League. Moreover, the planet

of Haven proved well-named, for terrestrial life forms adapted to its environment with a minimum of difficulty and its climate was very nearly idyllic. With a powerful PR organization to tout its attractiveness, it exercised a magnetic effect on the would-be colonists of the League and, with the availability of the new hypership technology, grew at incredible speed. By 1430 pd, the Republic of Haven already boasted a planetary population of almost a billion and was beginning to mount colony expeditions of its own in what became known (despite the fact that six other systems in the same region had been colonized before or almost simultaneously with Haven) as the Haven Quadrant.

By 1475, the Haven economy and government had proven themselves extremely efficient and effective. Politically, Haven was a representative democracy with a strong and politically active middle class, and its economic policy enshrined the principles of liberal capitalism with minimal government interference. Coupled with the "jump start" provided by the colony's highly favorable initial circumstances, this combination of market efficiency and flexible government created a planetary standard of living at least as high as that of most Solarian League member worlds, and it became the envy and the pattern for every other world in the quadrant.

For the next two centuries, Haven continued to fulfill its promise, rising to a system population of almost seven billion and becoming a sort of interstellar Athens. The Haven Quadrant, although composed of independent worlds and star systems, rivaled the Solarian League for economic power, and it remained a vibrant and expansive entity, unlike the essentially satisfied and content League. Although the quadrant contained no wormhole junctions, it had access to the Manticore Junction (and, later, to the Erewhon Junction) and thence to the League, and there was every reason to believe that its expansion and prosperity would continue.

It did not. Precise identification of a specific event which caused the change within the quadrant is impossible, but in general terms it might be called over-achievement. The quadrant—and, in particular, Haven—had done too well. Its wealth was incalculable, and it began to seem unfair that that wealth was not more evenly distributed. In particular, capitalism, as always, had produced stratified classes, ranging from the extremely wealthy to the marginal and even sub-marginal, and if the members of Haven's "sub-marginal" class were immeasurably better off than, say the pre-Anderman citizens of New Berlin, they were *not* well off compared to their own affluent fellow citizens.

The Republic thus began to experiment, cautiously at first, with assistance and welfare programs to increase the opportunities of its less advantaged citizens. Unfortunately, what began as an experiment gradually became something else. Transfer payments became increasingly important for the maintenance of the industrial poor, requiring greater levies on the productive elements of society. Marginal industrial operations were shored up by protective tariffs, government loans, and outright grants to encourage full employment, which both undercut the overall efficiency and productivity of the industrial base and encouraged inflation. Inflation further worsened the condition of the poor, requiring still higher transfer payments—payments which were soon adjusted for inflation on a mandated basis—and, as the network of assistance proliferated, it came to be seen as a fundamental "right" of those receiving the aid. By 1680 pd, Haven had issued its famous "Economic Bill of Rights," declaring that all of its citizens had an "unalienable right" to a relative standard of living to be defined (and adjusted as inflation required) by statute by the legislature.

In the process, the government had initiated an unending spiral of inflation, higher transfer payments, and increasing deficit spending. Moreover, it had (quite unintentionally, at least at first) undermined the fundamental strength of its own democracy. The middle class, the

traditional backbone of the Republic, was under increasing pressure both from above and below, caught in the squeeze between an increasingly less productive economy and ever larger levies against its earnings to support the welfare system. Whereas the middle class had once seen the upper class as (at worst) essentially friendly rivals or (at best) allies in their joint prosperity, they came to see the wealthy, like the poor, as enemies, fighting over a dwindling prosperity. Worse, the middle class's traditional aspiration to upward mobility had become an increasingly remote dream, and it was much easier to focus resentment on those who had more than the middle class than on those who had less—a tendency which became ever more pronounced as "enlightened" commentators and academics secured dominant positions in the media and educational system.

Perhaps worst of all, was the emergence of the "Dolist" blocs. The Dolists (so called because they were "on the dole," receiving government assistance in greater or lesser degree) were still franchised voters and, quite logically, supported the candidates who offered them the most. It was a case of self-interest, and the Dolists' self-interest interlocked with that of increasingly careerist politicians. A new class of machine politicians, the "Dolist managers," emerged, playing the role of king-makers by delivering huge blocks of votes to chosen candidates. Incumbent politicians soon realized that their continued incumbency was virtually assured with the managers' backing—and that the converse was also true. A politician targeted by the "People's Quorum" (the official term for the alliance of Dolist managers) was doomed, and as the leaders of the Quorum became aware of their power, they selected specific politicians to punish as an example to all politicians of the power the Quorum represented.

Finally, as if to complete the system-wide outbreak of mass insanity, most of those who recognized that something was wrong embraced a "conspiracy theory" which assumed that their problems must result from someone's hostile machinations—probably those of the domestic "monied classes" or foreign industries who "dumped" their cheap, shoddy products on the Haven economy. Almost worse, there was an entrenched element of "this wouldn't be happening to us if we weren't somehow at fault" in the vast majority of mid-18th century Havenite political and societal analysis and rhetoric, and this masochistic tendency only became more pronounced as the century wound to a close.

By 1750 pd, the Republic—no longer "The Republic of Haven," but now "The People's Republic of Haven"—had become the captive of a coalition of professional politicians (indeed, politicians who had never had and were not qualified for any other career) and the Quorum, aided and abetted by a morally and intellectually bankrupt academic community and a mass media philosophically at home with the Quorum's objectives and cowed (where necessary) by threats of blacklisting. That the Quorum could succeed in blacklisting journalists had been demonstrated in 1746 pd, in the case of Adele Wasserman, one of the last moderate journalists. Her moderation, which was actually a bit left of center by mid-17th century standards, was labeled "conservative" or, more frequently, "reactionary" by her 18th century contemporaries. She herself was called "an enemy of the common man," "a slave of the monied powers," and (most cutting slur then available on Haven) "a fiscal elitist," and her employer, one of the last independent news services, was pressured into terminating her contract (for "socially insensitive and inappropriate demagoguery") by means of an economic boycott, strikes, and governmental pressure. Her firing, followed by her subsequent relocation to the Kingdom of Manticore and a successful career as a leading theorist of the Centrist Party, was the writing on the wall for any who had eyes. Unless something quite extraordinary intervened, the current Havenite system was doomed.

The problem was one which had arisen as long ago as Old Earth's Roman Empire: when power depends on "bread and circuses," those in power are compelled to provide ever greater

largess if they wish to remain in power. In effect, the politicians required a bottomless and ever-filled public trough to pay off the Dolists and provide the graft and corruption to support the lives to which they themselves had become accustomed, and after almost two centuries of increasingly serious self-inflicted wounds, not even the once-robust Havenite economy could support that burden. It became apparent to the political managers that the entire edifice was in trouble: tax revenues had not matched expenditures in over 143 T-years; R&D was faltering as an increasingly politicized (and hence ineffectual) educational system purveyed the pseudo-scientific mumbo-jumbo of collectivist economic theory rather than sound scientific training; and the decreasing numbers of truly capable industrial and technical managers produced by the system were increasingly lured to other star systems whose economies allowed them to use their talents and enjoy the benefits thereof. The "Technical Conservation Act" of 1778, which revoked emigration visas for all research and production engineers by nationalizing their expertise "as a resource of the Republic," was intended to put a stop to that, but it could not reverse the fatal trends.

Real economic growth had stopped—indeed, the economy was contracting—but ever higher Basic Living Stipend payments were politically inescapable, and the stagflation which had resulted was becoming a self-sustaining reaction. In 1771 pd, a highly classified economic report to the House of Legislators predicted that by the year 1870 the entire economy would collapse in a disaster which would make Old Earth's Great Depression and the Economic Winter of 252 pd look like mild recessions. The Chiefs of Staff, apprised of the degree of collapse to be anticipated, warned that it would precipitate pitched warfare in the streets as Haven's citizens fought for food for their families, for Haven had long since attained a population which could not feed itself without imports, and imports could not be paid for with a negative balance of trade.

The government saw only two ways out: to bite the bullet, end deficit spending, abolish the BLS, and hope to weather the resultant catastrophic reorganization, or to find some other source of income to shore up the budget. The possibility of admitting they could no longer pay the interest on Haven's mortgaged future was too much for them to stomach, which meant only the second solution was a real possibility, but there was no more money to be squeezed out of the economy. A panicked group of legislators suggested draconian "soak the rich" schemes, but the majority recognized that any such panacea would be purely cosmetic. Aside from their own hidden assets, the wealthy represented less than 0.5% of the total population, and the totally confiscatory taxes proposed would provide only a temporary reprieve . . . and eliminate both future private investment and the highest tax brackets (already taxed at 92% on personal income and 75% on investment income) as a long-term revenue source. A self-sustaining tax base could be produced only by a strong middle class, and the middle class had been systematically destroyed; what remained of it was far too small to sustain the government's current rate of expenditure and had been for almost a century.

That left only one possible way to find the needed revenue, and the government, with the cooperation of the Quorum, prepared to seize it under the so-called "DuQuesne Plan."

The first step was a "Constitutional Convention" which radically rewrote the Havenite Constitution. While maintaining a facade of democracy, the new constitution, by redefining eligibility requirements and office qualifications and giving the House of Legislators the right to refuse to seat even a legally elected representative if the House found him or her "personally unfit for public office," created a legislative dictatorship with hereditary membership. (It was not a strictly parent-to-child inheritance but rather a codification of the "adoption" process which had become the normal career route for Havenite politicians over the past century; true dynasties



came later.) The second step was not to limit deficit spending but to increase it, this time with the enthusiastic support of the military, which underwent the greatest peacetime expansion in Havenite history. And the third step, launched in 1846 pd, was to acquire additional revenue from a totally new source: military conquest.

The initial attacks were almost totally unopposed. The quadrant was so accustomed to the idea that Haven represented the ideal to which all humanity aspired that its steady collapse had been sadly underestimated. Haven's problems were known, but their severity was misjudged, and the consensus was that all of them could be solved if Haven would only put its house in order. Indeed, the majority of Haven's neighbors felt that Haven was on the right track but had simply gotten temporarily out of control, and many of them were in the early stages of the same process in a sort of lemming-like emulation of disaster. The sudden expansion of the Havenite military caused some concern, but those who suggested that long-friendly Haven contemplated hostile action were viewed as hysterical alarmists. Besides, the quadrant's other systems found their own economies were becoming increasingly strapped, and warships and troops cost money which was required for their own welfare programs.

The result was a turkey shoot for the Peoples' Navy. Between 1846 and 1900 pd, a period of barely more than fifty years, the People's Republic of Haven had conquered every star system within a hundred light-years of it, incorporating them by force into a new, interstellar PRH ruled by the now openly hereditary "legislature" of the Haven System.

Unfortunately for the Legislaturalists, they soon discovered that conquest was not the solution they had hoped. True, they could loot the economies of conquered worlds, but unless they wanted servile insurrection, there was a limit to how badly they could wreck their subject economies. Worse, the military machine required to conquer and then police their new empire cost even more than they had anticipated, particularly as their alarmed and (so far) unconquered neighbors began to arm in reply. Despite all efforts, their budgets remained stubbornly in the deficit column; they simply could not pay for both their military and the support of their subsidized population out of available resources. There was an appearance of prosperity on the home front, but those in informed positions knew that it was only an appearance. In short, the "Republic" had only two options: continue to expand, or collapse.

And so, in 1900 pd, the People's Republic had no choice but to look for fresh fields to conquer . . . and found, directly in its path, between it and the additional worlds it had to have, a small but wealthy star system known as the Star Kingdom of Manticore.