AMERICAN JOURNAL OF PHARMACY
Volume 70, #1, January, 1898

Botanical Medicine Monographs and Sundry

DR. PETER SMITH AND HIS DISPENSATORY[1] .

BY JOHN URI LLOYD, PH.M., PH.D.

Close following the frontiersmen, whose footprints were scarcely rubbed out, and whose rifles had not yet been silenced in the territory embracing the Ohio Valley, came a band of men who cleared away the forest and founded their homes among the stumps. The subject of this sketch may be numbered among these people. He was a typical Puritan, an educated, stern man, of indomitable will, and religious to the utmost degree.

The end of the War of the Revolution had been consummated before the Indian had departed from the Miami lands, where this man lived. John Filson tramped from Lexington to the Ohio River, laid out the village of Losantiville, afterward Cincinnati, and, venturing too far from the fort, left his bones somewhere among the adjacent hills. This happened several years after the subject of this sketch was married[2]. David Schoepf, the talented scientist, that energetic Hessian, who, after the surrender of the British, took his pack on his back and tramped over our land in search of American medicinal plants, had not yet written his *Materia Medica Americana*, which is the first systematic publication concerning the American Materia Medica.[3]

B. S. Barton, of the University of Pennsylvania, who, in 1798, contributed the first study of American drugs, from an educational institution[4], and Samuel Thomson[5], the

[1] Read at the December meeting of the Cincinnati Section of the American Chemical Society.

[2] John Filson was a surveyor and school teacher. September 6,1788, he published, in connection with Mathias Denman and R. Patterson, in the *Kentucky Gazelle*, of Lexington, Ky., a call for men to make a road to the mouth of the Licking, where judge Symmes expected to lay out a town opposite the mouth of the Licking. Filson was made surveyor for the proposed village, and coined for it the name L-os-anti-ville, making the name from ville (town), anti (opposite), os (mouth), and L (Licking). The place went by the name Losanliville until January 2, 1790, when Governor St. Clair changed it to Cincinnati John Filson did not live to complete this work. In company with Symmes and others, he started on an exploring expedition up the Miami River, wandered away from the party and was never heard of again. Probably the Indians were responsible for his death.

This historical note concerning a man who took no part in medicine is apparently out of place. But the author fails to find his record in biographical works where it ought to be in place, and therefore ventures to thrust a word into print concerning the man who made for General Washington the first scientific description of Kentucky, who wrote the first history of Kentucky, who surveyed the site where now stands Cincinnati, and who gave to this city a picturesque, original name, that was rudely brushed out of existence by the unfortunate General St. Clair, Governor of the Northwest Territory.

[3] "Materia Medica Americana," 1787.

[4] "Collections for an Essay towards a Materia Medica of the United States," by Benjamin Smith Barton, M.D., 1798.

[5] See "A Narrative of the Life and Medical Discoveries of Samuel Thomson", 1822.

combative champion of lobelia, who fought the medical profession and introduced the Thomsonian method of medication, were contemporaneous with Peter Smith. C. S. R. Rafinesque, that picturesque, gifted, erratic, enthusiastic scholar, who devoted his life to science, in his guileless confidence had not yet been misled and ridiculed by Audubon, the brilliant bird painter. The great ornithologist had not yet played his cruel practical jokes on his confiding guest when Peter Smith trod the Kentucky path that Rafinesque and Daniel Vaughn followed afterwards towards their miserable graves.[6]

But enough of this dissertation concerning the men who, in or near the day of Peter Smith, helped to make American Materia Medica history; their trials and privations cannot more than be touched upon in this paper; the subject is Dr. Smith.

Coming into the Ohio Valley from the South that he hated because of its slavery, preaching the Word of God and practising medicine, Peter Smith, the representative of a class of men who, sought neither fame nor gold, and who feared no privation, made his mark and passed away.

"Peter Smith, the Indian Herb Doctor." That name was familiar during the writer's boyhood in Kentucky. The name lingers yet about Western domestic medicine, and is occasionally seen in orthodox medical print. Rafinesque cited Peter Smith as one of the authorities consulted in the formation of his Materia Medica, but Smith's book was lost to sight. Tradition also told of a book by Peter Smith, but no such book was anywhere to be found. Secondhand booksellers, old men and women throughout the "Miami Country," old physicians' libraries were appealed to in vain. Neither is a copy of this book to be found in the Surgeon General's library. The name of the man alone remained, the book that he wrote had vanished. Then at last the writer gave up the search in despair.

Last summer, by invitation of Mr. Le Roy Brooks, the day was spent with the Toledo Club at Middle Bass Island, Lake Erie. General J. Warren Keifer, in speaking about old books, chanced to mention Peter Smith's Dispensatory, a copy of which he possessed. The lost book was found, and, in addition, the history of its author was recovered, for Peter Smith was the father of General Keifer's mother. Added interest accrued from the fact that it was learned that the field of Dr. Smith's operations about Cincinnati was near the spot where these lines are penned, the old Duck Creek church, a pioneer monument in the history of the Ohio Baptists, in which he officiated, being within a few moments' walk of the home of the writer.

HISTORY OF PETER SMITH.[7]

Dr. Peter Smith, a former resident of Old Columbia, now a part of Cincinnati, had, in pioneer days, some celebrity as a physician in the "Miami Country." He was a son of Dr. Hezekiah Smith, of the "jerseys," "*a home old man*, or *Indian doctor*." Peter was born in Wales, February 6, 1753, from whence this branch of the Smith family came. He was also a relative of Hezekiah Smith, D.D., of Haverhill, Mass. Peter Smith was educated at Princeton, and was married in New Jersey to Catherine Stout, December

[6] "The Life and Writings of Rafinesque." Prepared for the Filson Club, Louisville, Ky., and read at its meeting, Monday, April 2, 1894. By Richard Ellsworth Call, M. A., M. Sc., M. D.

[7] Credit is due General Keifer for the facts that gave this information.—L.

23, 1776. He seems to have early, under his father, given some attention to medicine, and became familiar with the works of Dr. Rush, Dr. Brown, and other writers of his day on “physic,” as well as with the works of Culpepper. He also, during his life, acquired much information from physicians whom lie met in New Jersey, Pennsylvania, Virginia, North and South Carolina, Georgia, Kentucky and Ohio. He called himself an “Indian doctor,” because, as he said, he relied in his practice much on herbs, roots and other remedies known to the Indians, though he did not confine himself to botanical remedies. He seems to have been an original investigator, availing himself of all opportunities within his reach for acquiring knowledge, especially acquainting himself with domestic and tried Indian remedies, roots, herbs, etc.

Starting from New Jersey about the year 1780, he commenced his wandering, emigrating life with his wife and “some” small children. He lingered for a time in Virginia, then in the Carolinas, and “settled” in Georgia. He sought out people from whom he could gather knowledge, “of the theory and practice of medicine,” and preached the gospel, possibly in an itinerant way. He was a devout Baptist of the old school. A strong anti-slavery man, even in that early day, he could not be content with his Georgia home, as he put it, “with its many scorpions and slaves.” Accordingly, he took his family on horseback; little children, twin babes among them, carried in baskets suitable for the purpose, hung to the horns of the saddle ridden by his wife, and thus, without roads to travel, crossed mountains, rivers and creeks. The wilderness was not free from danger from Indians, but he traversed the woods from Georgia through Tennessee to Kentucky, intending there to abide. But, finding that Kentucky had also become a slave State, the dogmatic old man and his family bid good-by to Kentucky. He left that State with a parting shot to the effect that it was the home of “head-ticks and slavery,” and emigrated to Ohio, settling on Duck Creek, near the Columbia Old Baptist Church, now adjacent to Norwood village, and near the limits of Cincinnati, reaching there about 1794.

He became, with his family, a member of the Duck Creek congregation, and frequently preached there and at other frontier places, still pursuing the occupation of farming and the practice of medicine. In 1804 he again took to the wilderness with his entire family, then numbering twelve children, born in the “Jerseys and on the line of his march through the wilderness, the States and the Territories.” He finally settled on a small, poor farm on Donnel's Creek, in the midst of rich ones, where he died December 31, 1816. It seems from his book (P. 14), published while he resided at his, last home, that he did not personally cease his wanderings and search for medical knowledge, as he states that he was in Philadelphia, July 4, 1811, where he made observations as to the effect of hot and of cold air upon the human system. It is certain that he not only taught to the end in the pulpit, but ministered as a physician to his neighbors and friends, often going long distances from home for the purpose. He concluded, near the end of his long and varied experiences, that: “Men have contrived to break all God's appointments but this: ‘*It is appointed for all men once to die.*’”

Peter Smith, preacher, farmer, physician, pioneer, aggressive abolitionist before Wendell Phillips or William Lloyd Garrison were born, is buried in a neglected graveyard near Donnelsville, Clark County, O. No photograph or other likeness remains to revive the features of this picturesque personage.

Such is the life-record of this man, who, so far as the writer can determine, published the first western Work on materia medica.

Following is a facsimile title-page of this unique book.

THE

INDIAN DOCTOR'S DISPENSATORY,

BEING

FATHER SMITH'S ADVICE

RESPECTING

DISEASES AND THEIR CURE;

CONSISTING OF PRESCRIPTIONS FOR

MANY COMPLAINTS:

AND A DESCRIPTION OF MEDICINES,

SIMPLE AND COMPOUND,

SHOWING THEIR VIRTUES AND HOW TO APPLY THEM

DESIGNED FOR THE BENEFIT OF HIS CHILDREN, HIS FRIENDS AND THE PUBLIC, BUT MORE ESPECIALLY THE CITIZENS OF THE WESTERN PARTS OF THE UNITED STATES OF AMERICA.

BY PETER SMITH,
OF THE MIAMI COUNTRY.

Men seldom have wit enough to prize and take care of their health until they lose it—And Doctors often know not how to get their bread deservedly, until they have no teeth to chew it.

CINCINNATI.
PRINTED BY BROWNE AND LOOKER,
FOR THE AUTHOR.
1813.

Next follows the rare and lengthy copyright, not of the United States, but of the "District of Ohio." Succeeding the copyright, which covers an entire page, follows the "Advertisement," in which Dr. Smith states that "he puts the price of one dollar on this book of advice, well knowing that seventy-five cents would be enough;" but he adds that "those who do not choose to allow him twenty-five cents for his advice may desist from the purchase " In the preface that follows, words are used in true Oliver Cromwell style, no equivocating, no evasion. An axe is an axe and a spade is a spade. He placed himself directly in the path of the medical profession, an extract from the preface being illustrative of how he censured himself for following the advice of the learned Dr. Rush ":

"While I lived in Georgia, a very great attention was paid by almost everybody there to calomel and jalap, for after Dr. Rush's publications relative to the yellow fever, there was calomel and jalap prescribed for everything, so that the poor old tartar-emetic lay dead in the shops, and I, like other fools, gave it liberally."

After the eight-page preface comes the "Introduction," in which, speaking of the "Doctrine of Respiration," Dr. Smith records an Indian legend that should not be lost:

"An Indian, it is storied, when asked what he thought was the reason of the ebbing and flowing of the tide, made answer : 'You know there is a great deal of odds between a big creature and a little one; a horse draws his breath a great deal slower than a mouse; the world is a big creature-he draws his breath only twice in the day and night; that makes the tide.' "

But it is not of disease expressions and their cure that we, as pharmacists, are chiefly concerned. We find, in the remedies of this old "Indian doctor," much to interest the historian in the line of American medicine, much information that has been used over and again, and which stands in our works to-day uncredited to its originator, who charged twenty-five cents more than his book was worth for the information his father and himself had gathered from the Indians and others.

Thus in his Materia Medica department, he speaks of "Home Ipecacuanha," a term lost to us now, but which he appropriately used for Indian physic. The absence of balances for weighing led him to instruct the reader to "take a pugil" of it, which is to be "made into a decoction of half a gill," which is to be given, one-third of it at a time, every ten minutes, "until it does work, either up or down."

It is to be regretted that Dr. Smith neglected the use of botanical names. His plants are all employed under common names, but he describes the appearance and habitat of each specimen so carefully as to enable the experienced reader to identify most of them. Rafinesque, who credits Dr. Smith, objects to his common names, which, however, are very interesting in connection with the text. The pains he takes to credit authorities from whom he obtained information is very refreshing, the relationship of their names to the substances used being familiar to us to-day in connection with many drugs.

A few examples of lost terms and others still in use may be cited :

Brinton's or Culver's Root.
Miami Columbo (American Columbo) Root.
The Nine-bark Root.
The Square-stalk Root.
The Corn Snake Root.
The Horse Balm.
The Mountain Mint,
The Sure Throat or Blueberry Root.
The Devil's Nip.
The Devil's Bit.
The Backache Root, etc.

Following the description and uses of simples comes recipes for diseases, in which the originator of each compound is conscientiously credited. We find a few of these names familiar yet, e. g., green ointment and ointment of red lead. Concerning this latter, he refers to an interesting revolutionary incident where it had been used with good result on a soldier "who had been wounded at the Germantown battle, 1777, in the Revolutionary War. One of his legs had been broken and shattered while he was one of the forlorn party sent to tear down the fence and palings about Chew's house."

Passing to some of his remedies, we are reminded of the animal drugs of mediaeval times; e.g., a dead toad is recommended as an application to a wen, and Smith's remedy for toothache—well it would credit the animal extract men, past or present. But this subject must be touched lightly; for are not many members of the medical profession seemingly gravitating again towards the "moss that grows on a dead man's skull" of European Mediaeval medicine? Dr. Smith seems to have anticipated the cold water curers (hydropaths), but he recorded his views in language that demonstrates that he stood close to some of the sanative surgeons of to-day. He says :

"COLD WATER APPLICATIONS

"I reckon among the choicest of my discoveries.

"The following I recommend:

"When the accident of a bruise, piercing of a nail, a cut, a broken bone, an eye knocked out and put in again, etc., takes place, immerse the part in cold water as quick as possible, and then dip a large, soft linen cloth in to cold water and apply it, and keep out the air. This cloth should be kept close; aid this by dropping cold water upon it for fifteen minutes, and continue it close for twelve hours. The inflammation by this means will be kept back, and the cure by anything else will be almost forestalled; and then a bruise, a strain or broken bone, will scarcely swell at all; and a like application to a burn will have a similar effect. In about fifteen minutes the first pain will be over, and the future ease will be steadfast.

"I have tried the foregoing application of cold water, with full demonstrations, for forty years past."

And it needs but little imagination to credit this stern man with a poetic spirit, for he pathetically laments (p. vi) the fact that through his own fault, the "Leotrill" was lost.

So earnest is he concerning this precious “Leotrill,” met as he journeyed from Virginia to Georgia, that he states that he sometimes thinks of travelling the weary way over again, hoping yet to obtain this “Leotrill.”

And that his observing eye caught yet finer lines, is evidenced by the fact that he pointed out an “insect” theory of disease, and placed himself (pp. xiv, xv) in the ranks of the microbe theorists of to-day by asserting, in an extended argument, that the “plague, yellow fever and other bilious and contagious complaints” were caused by “invisible insects;” and in accordance with his methods the Doctor takes pains to credit another for the suggestion.

But enough has been said concerning this upright, picturesque character—too much some persons may say. Still, the writer feels that his pen has not taken too much space in placing in print these notes concerning the history of this man whose name has been nearly lost, whose face has left no print, but who wrote the first Materia Medica “Dispensatory” published in the West.

AN EXAMINATION OF SOME COMMERCIAL POWDERED EXTRACTS OF LICORICE.

BY CALVIN O. KINZEY.
Contribution from the Chemical Laboratory of the
Philadelphia college of Pharmacy. No. 173.

The fact is well known that the powdered extract of licorice offered for sale in our markets is adulterated with such materials as starch, pea meal, sugar, etc., to a very large extent, and the extract can be readily adulterated with these materials without causing any very perceptible change in its appearance. It is evident that the evils arising from a practice like this will have a very bad effect on the market, and cause no small amount of loss and annoyance to purchasers.

While the value of extract of licorice depends altogether upon the amount of glycyrrhizin present, there seems to have been no effort made to establish a standard amount of this principle required in a good extract; furthermore, very little seems to have been written on the methods of assaying the extract of licorice for glycyrrhizin; and what has been written is rather vague regarding the solvent employed for dissolving the glycyrrhizin from the extract, and the details of reprecipitating the glycyrrhizin.

The author has lately had several brands of commercial powdered extract of licorice to estimate for glycyrrhizin, and he found himself' confronted with the state of affairs already mentioned. Therefore, to estimate the samples, it became necessary to make some preliminary experiments, in order to devise a method that would afford comparative results.

The method which is ordinarily used in the estimation of glycyrrhizin is to exhaust the extract with either boiling water, cold water made alkaline with ammonia water, or with a cold mixture of water and alcohol, made alkaline with ammonia water. The

insoluble matter is then filtered off, and the clear filtrate, containing the glycyrrhizin, is precipitated by making it acid, usually with dilute sulphuric acid.

During the course of these experiments, it was found that the method in which the ammoniacal water is used was not practical on account of the starchy materials present closing up the pores of the filter so the liquid could not pass through it. More success was had from the solvent containing alcohol, as the alcohol seemed to coagulate the starch to a sufficient extent to make it possible to filter off the insoluble part of the extract; but even under these conditions it required about twenty hours to effect filtration, An attempt was made to shorten the time required by using a suction pump, but this was found to be impracticable, on account of the filter clogging.

The following solvent for the extraction of the glycyrrhizin was found to give the most satisfactory results

Official Ammonia Water	40 c.c.
Official Alcohol	240 c.c.
Sufficient Water to make a litre.	

METHOD OF ANALYSIS.

Moisture.—A weighed quantity (about 1 gramme) of the extract was put in a porcelain crucible, and dried in an air bath at a temperature between 100˚ and 110˚ C. The loss in weight was taken as the amount of moisture present.

Ash.—The residue remaining after treating as above was ignited to low redness over a Bunsen burner, until, on prolonged ignition, the weight remained constant. The residue gave the inorganic matter in the extract.

InsolubleMatter.—One gramme of the extract was carefully weighed, and treated in a beaker with 25 c.c. of the solvent previously mentioned. The mixture was stirred at close intervals during an hour, and then allowed to stand for about twelve hours, so that the insoluble matter could settle out. The supernatant liquid was decanted upon balanced filters, the residue in the beaker treated with 5 c.c. more of the solvent, allowed to settle again, decanted as before, and the insoluble matter transferred to the filter and washed until the washings passed through colorless. The filters and residue were then placed in an air-bath and dried at 100˚-110˚C.

Glycyrrhizin.—The filtrate from the above was acidified with dilute sulphuric acid, which precipitated the glycyrrhizin as a dark brown scale, which coagulated on standing. The precipitate was collected on balanced filters, washed with water made slightly acid with acetic acid until all the sulphuric acid was washed out, and then dried in an air bath at 105˚C., a higher heat being avoided on account of the liability of decomposing the glycyrrhizin above that point.

Two estimations were made on most of the samples, the figures given in the statement being the average of the two.

Manufacturer.	Brand.	Moisture.	Ash.	Insoluble Matter.	Glycyrrhizin.
1	Spanish . . .	6·52	3·70	36·52	6·40
2	Greek	6·26	8·18	22·06	14·39
2	Spanish . . .	5·00	5·51	25·54	10·75
3	American . . .	5·62	6·79	12·27	7·63
3	Spanish . . .	7·08	6·52	29·20	5·28
4	Spanish	6·96	6·56	20·35	10·41
4	Greek	6·71	7·82	9·65	18·59
5	—	7·96	5·77	15·21	8·90
5	—	8·25	5·54	7·40	27·78
5	—	8·46	4·67	19·41	9·50
5	—	9·19	6·76	11·12	8·94
6	—	5·78	7·49	5·95	11·63