AMERICAN INDIANS KNEW CHEMISTRY WELL YEARS AGO

Was Better Acquainted With Chemistry Than Half Of College Graduates

Girard in Philadelphia Inquirer

Nothing was said by the world chemists who met in Philadelphia recently about the chemistry of the first Americans.

But the American Indain knew more chemistry than half the college graduates ever learned.

On this topic of Indian chemistry none is better informed than James A. Branegan, head of the Kalf Company of this city. "I read," he writes, "your column regarding the prehistoric chemists in Egypt and the Holy Land. You failed to mention the prehistoric chemists of America."

Mr. Branegan admits the Indian chemistry is his hobby. It is the truth that he has delved extensively in that field and found many amazing results.

It is astonishing how many chemical secrets the red man knew centuries ago and before he ever saw a pale face.

By the simple use, says Mr. Brenegan, of barks and the brains of animals, the Indian made a leather from hides, "which in softness and durability can hardly be equaled today."

With glue made from fish scales he fastened feather to his arrow and than glue equaled the common fish glue of commerce.

Modern science has found no surer way to keep water out of a boat than the Indian employed when he used the pitch from pine trees to cement the seams of his frail birch-bark canoe.

To make his pottery more durable the Indian mixed with clay powdered clam or mussel shells, and did that chemical trick so well some of his bottles buried in the Mississippi valley for centuries are as strong today as when they came from the hand of their maker.

And to make his pottery the red man again drew upon his chemical instincts. He applied to the clay oxides of iron before he baked it.

As a geologist, the American aborigine knew a bookful.

In his way he was as smart and clever in cleavage of rocks and flint as are the most skillful diamond cutters.

Mr. Brenegan says the Indian used flint only for arrow heads, knives and spear points. "I have," he adds, "examined hundreds of indian axes and never found one made of flint."

A flint tomahawk would too easily split or become dull. It would flake off at every stroke. So the pioneer American chemist searched fields and streams for water-worn stones of basalt or diorite which have the closest grain.

Of this material he made his axe which retained a fairly good edge after years of use.

But the Indian displayed his supreme chemical knowledge in making the tool which he carved his flint arrowhead and ax.

What was that tool? A bone from the leg of a buffalo, deer or bear.

But the main trick was his preparation of that bone chisel. A bone with any grease on it would slip and break. It wouldn't chip the flint and stone, hard as armor plate.

The bone was scoured, then buried in hot ashes moistened with water which, as our chemists know, is the process of making soap. Chemistry! When the bone was truly dried it formed a chisel for chipping flint and sharpening stone axes. And Mr. Branegan says scarcely any other material known today would be better for that purpose.

In the West were found axes made of hematite, which, buried for hundred of years, retained their polish. As hematite will soon wear out the hardest steel file it can be seen that the Indian's method of making his ax had called for a high order of chemical research.

Widest interest of the white race is shown for Indian arrowheads, since these have been found by thousands.

Many legends told about the secret quarries of flint! How did the Indian find his flint, and how did he dig it out?

Sometimes he removed the earth, then built a big fire upon the rock, poured cold water upon it and thus cracked it.

Not all Indians could make a spear point or arrowhead, and the red artisan who did the work usually made them at his wigwam and not at the place where the flint was found.

Quartz and obsidian as well as flint, were used for arrows.

An Indian mint was not so crude as it seems.

His money, or wampum, was made of clam shells. But these required a delicate cutting and then had to be bored so that the wampum could be put upon a string.

And, in boring a clam shell, the red man displayed much mechanical skill. Using a strong, dry reed for a drill he employed his bowstring as a sort of engine.

Twirling the string revolved the drill and so the Indian could make holes through a rock. Boy Scouts today deem it a pretty trick to start a fire in similar fashion, but Indian boys were doing it before Columbus discovered America.

The Indan knew colors and by his chemistry produced some good and lasting ones. Hematite for brown and red, malachite for green, ochre for yellow, while for dyes he took the juice of pokeberry, the bark of walnut or butternut.

And the Indian knew how to make his pigments so as to withstand wet and time.

Mexican Indians had calculated the exact solar year before any white man saw those marvelous Aztecs.

Other Indians had grown their maize potatoes, hominy, squash, tapioca—all Indian names—before the pale face ever dined in the U. S. A.

And the Indians knew enough chemistry to understand fertilization of the soil. He was the first to use along the Atlantic coast tons of fish to enrich his fields.

The menhaden were driven upon the beaches by blue fish and then the Indian farmer reaped his harvest of fertilizer.

Perhaps, as a medicine man, the first race of Americans reached its prime in the domain of chemistry.

Nearly everybody knows now the use of aspirin. But centuries ago and before anybody had patented a drug on this continent the Indian knew the curative properties of wintergreen, using the leaves as a poultice for rheumatism.

Our white pioneers learned of that wonderful herb from the red man and so we today have a big family of what chemical highbrows call salicylates.

South American Indians showed the first Spanish invaders the use of a strange bark which they grew upon the cinchona tree. They chewed the bark, but we now enjoy the same thing in the powdered form of quinine, or as calisaya.

And were not Indians the first to employ auto-suggestion as a great aid in the sick room, a thing all physicians now regard as highly important?

The Indian medicine man was not a humbug when he danced and employed other antics before the sick. By pretending to remove a pain in the form of a devil he employed psychology to make the patient help cure himself.

Which proves that not all learning is found in books.

A "Correct" Likeness of Washington

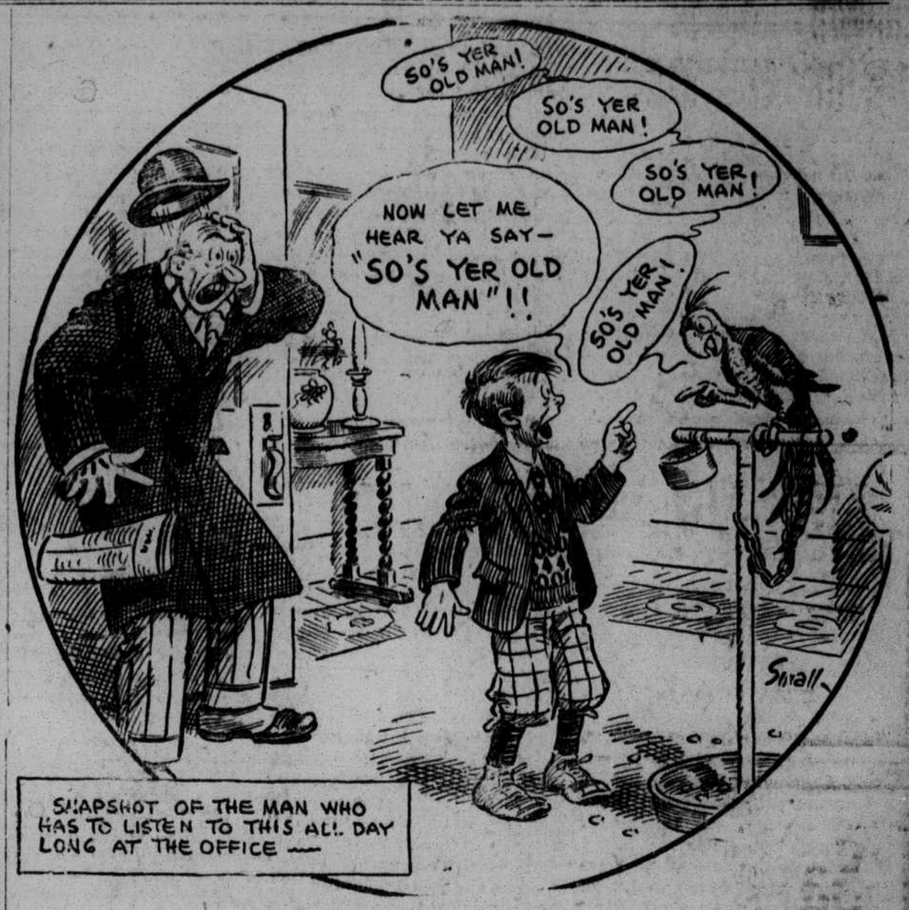
This heroic statue of the commander-in-chief of the first armies of the United States was made for the city of Portland, Oregon, though not yet delivered there by the artist. The western municipality has loaned it to the Sesqui-Centennial International Exposition, opening in Philadelphia June 1 and continuing until December 1, to celebrate 150 years of American Independence. At the foot of the sculpture is shown Pompeo Coppini, the sculptor. Dr. Henry Waldo Poe, of Portland, declares the face to be the most correct likeness of Washington ever modeled.

NOTICE OF SERVICE BY PUBLICATION.

North Carolina—Cleveland county—In the Superior court.
Cora Henry, plaintiff,
vs.
Tom Henry, Defendant.

The defendant above mentioned will take notice that an action entitled as above has been commenced in the Superior court of Cleveland county, N. C., for the purpose of dissolving the bonds of matrimony as in case of divorce absolute on the grounds of five years separation; and the said defendant will further take notice that he is required to appear at the term of the Superior court of said county to be held on the first Monday of November, 1926, at the court house door of said county, in Shelby, N. C., and answer or demur to the complaint in said action, or the plaintiff will apply to the court for the relief demanded in said complaint.

GEO. P. WEBB, Clerk of the Superior court.
Bynum Weather Atty.



British Strike Momentous to These Men

The general strike of 5,000,000 workmen in Great Britain is a crisis, but to these men it represents more than that. To the left is Lloyd George, former premier, who is standing by, ready to step in if the present administration falls. In the center is J. H. Thomas, Labor leader in Parliament, possible choice for the premiership if the present regime falls. To the right is Stanley Baldwin, present premier, whose continuance in office may depend on a quick settlement of the trouble.