

other places of a like nature. It appears like an introduced species, and I suspected it was *V. arvensis*. So far as I know, it has not been previously recorded here, and there is no specimen in the herbarium of the botanical society. The other specimen also referred to *V. arvensis* was collected in the Allegheny Mountains near Altoona, and differed from the first in the size, shape and abundance of the leaves. It was growing on a hillside in the woods, far from any house or road and at some distance from cultivated ground, so that it appeared to be indigenous.

LETTERS TO THE EDITOR.

* * Correspondents are requested to be as brief as possible. The writer's name is in all cases required as a proof of good faith.

On request in advance, one hundred copies of the number containing his communication will be furnished free to any correspondent.

The editor will be glad to publish any queries consonant with the character of the journal.

FEIGNED DEATH IN SNAKES.

It was I who suggested to Professor Kilpatrick the possibility of the apparent biting of itself by *Heterodon* being in mimicry of that which was claimed for the rattlesnake. But I do not at all *know* that the rattlesnake *has* any such habit. I have often heard it from the herdsmen on our prairies in an early day concerning our short Massasaugas, *Caudisoma tergemina* (Cope). I have repeatedly heard persons say that they had taken a small switch and teased a rattlesnake till, in its anger, it would bite itself and die. But after reading Dr. Mitchell's statement that he had often injected the snake's own poison into its circulation without any apparent effect, I grew skeptical on the suicide theory. Professor Kilpatrick's narration to me recalled the traditions, and, knowing that this spread-head often mimicked the ways of poisonous kinds, it occurred to me this might be another manifestation. Cannot someone inform us whether it be true that any of the *Crotalidæ* have, or pretend to have, this suicidal habit, and can we not have some further statements from herpologists as to whether in any serpent its poison is fatal to itself or its fellows? Analogy would indicate that it might be. Bee stings are fatal to each other, and it seems well established that scorpions commit suicide by their own stings under certain circumstances of torment.

Apropos of the conduct of Professor Kilpatrick's snakes being a "*faint*, instead of a *feint*," it is perhaps well known that Dr. C. C. Abbott, in "Rambles About Home," claims that the similar conduct of the opossum is really a spasm from fear (rendering the creature unconscious), instead of a shamming of death.

J. N. BASKETT.

Mexico, Mo.

A PECULIAR FLORA IN CHICAGO.

WHILE in Chicago last July I spent some little time in botanizing in the vicinity of the Fair grounds, and I was much struck with the peculiar flora of two vacant lots in that neighborhood. One of these is at the corner of Oglesby avenue and Sixty-second street, and is very dry with the grass cropped short by grazing animals. Here I was surprised to find the ground covered with *Potentilla anserina*, which I have never found previously in any but very marshy places. Indeed, until I had analyzed it, I could scarcely believe that it was not some

other species. The plants were all very dwarfed, presumably from their unfavorable environment, but otherwise agreed perfectly with *P. anserina* from other localities. On the edge of this same lot was a thriving specimen of *Habenaria leucophaea*, also a plant of the marshes, and so out of place here. I am inclined to think, therefore, that before the extension of the city so far south these lots were marshes and the plants are but survivors of the former flora.

In the other lot, however, at the corner of Woodlawn avenue and Fifty-ninth street, the peculiar flora does not admit of as easy an explanation. In this field the soil was rich and moist (though nowhere wet) and covered with a good growth of grass and sedges. Here I found several specimens of *Galium boreale*; and *Calamintha nuttallii* was abundant. The former, according to Gray, is an inhabitant of the "rocky banks of streams," while the latter occurs only on "wet limestone river banks." So unlikely a place did it seem for *Calamintha* that I sent a specimen to the Gray Herbarium at Cambridge, but Mr. Fernald, who very kindly examined the plant, assures me that my identification was correct. He suggests also that the species may have been introduced in that place, but I must say that this seems improbable to me. Perhaps some one more familiar with the botany of Cook County may be able to explain the occurrence of these two species in such an unlooked-for locality.

HUBERT LYMAN CLARK.

Pittsburgh, Pa.

ESKIMO TRACES IN NEW YORK.

SIR DANIEL WILSON once suggested a connection between the Eskimo and the Iroquois, founded on physical structure. The habits of the two were so different, however, that this is probable only in a slight degree. That the Eskimo once roamed where the Iroquois afterwards lived seems certain. If the Northmen reached the shores of New England, the Eskimo must even then have dwelt along the coast, and archæology makes it probable that a large part of the Middle States had not then been occupied by the so-called Indian tribes.

The recent collections made far north have been especially interesting to me as bearing upon some relics found in New York and Canada, and in a less degree in New England. The one-sided harpoon of Alaska differs in no respect from those which the Mohawks and Onondagas used three hundred years ago. The half-circular slate knives found all through the territory mentioned are like those of the Eskimo women now. The Ninth Report of the Bureau of Ethnology contains other suggestive material. Through central New York, in portions of the Province of Ontario, in Canada, and along Lake Champlain occur double-edged polished slate knives, arrow-like in form, almost identical with those on page 151 of the report and some following pages. Rarely have I seen them single-edged, and, as they usually occur near streams, I have thought they were used in opening and cleaning fish. Almost all those I have seen in New York and Canada have slight barbs, a feature which seems lacking in the Eskimo knife. With us they are made of various kinds of slate, and I have one very broad form of red slate. Usually they are dark grey. The flat tong is always bevelled, and often notched. A very delicate and beautiful one I recently figured from the Oneida River.

If the Iroquois used combs at all before European contact, they were very simple, but some of their later examples remind one of those of the Eskimo under similar circumstances. The wooden and horn spoons are also suggestive, the broad wooden spoon occurring

among the Onondagas yet. In both cases these may be due to a new environment. The flat soapstone vessels, with their many perforations, are earlier in New York than the Iroquois occupancy, and altogether apart from it. Many of them have handles, and they occur along the larger streams. The material is not found in the State, as far as I remember, and they seem to have been brought here by fishing parties. The common forms are like some Eskimo vessels.

The figure on page 136, representing a man's belt, is of special interest, as showing the reputed form and material of the primitive Iroquois council belt, afterwards made of wampum. The foundation of this Eskimo belt is like that of a wampum belt, but quills, or shafts of feathers, form the pattern instead of beads. Now, it is a clearly proved fact that the Iroquois and their predecessors in New York had no shell beads suitable for belts, and very few at all. Loskiel said that they used small colored sticks. In a paper on "Hiawatha," and in my "Iroquois Trail," I have given some Iroquois stories on their first use of wampum, in some of which the wampum bird figures. One of these represents Hiawatha stringing the quills of the legendary black eagle. The Mohawk chief, however, cannot call down the sacred bird, and sends a string of partridge quills in return. An Onondaga told me that their early belts were made of the quills of birds or of porcupines, which were afterwards replaced with beads. The latter have been found on no early sites, and are quite modern with them.

W. M. BEAUCHAMP.

Baldwinsville, N. Y., Dec. 4, 1893.

A MINIATURE WATER LILY.

DURING an extended tour the past summer in northern Minnesota I came upon a beautiful little white water lily. It is an almost exact miniature of *Nymphaea odorata*. The flowers are about an inch and a half across. The leaves are oval-sagittate, three-fourths inches long. I found it only on the south branch of the Tamarack river, which flows into the northeast corner of Red Lake. It is there quite abundant. Can any of your readers give more information concerning it?

J. E. TODD.

University of South Dakota, Dec. 1.

FEIGNED DEATH IN SNAKES.

IN *Science* for Nov. 3 is an article on "Feigned Death in Snakes." Probably the writer is correct in his statement that the Heterodon does not (usually) bite himself just before feigning death. I recall one instance, however, in which a large black blowing viper, in the act of feigning death, contrived somehow to get his teeth (such as they were) caught in the skin on his side, and he was lying thus when I picked him up and loosed the teeth. This may have been accidental. I have often tried to get these snakes to bite something—anything—my hand, for instance, and never succeeded. But I have occasionally had one of them strike me a sharp rap with the end of his nose—of course without doing any damage. Moreover, I have not observed that they usually eject the contents of the stomach. When one of them has recently swallowed something, especially if it is something bulky, he will often (perhaps always) eject it before trying to escape or feigning death. But otherwise, my observation has not led me to believe that it is a common practice.

However, the thing that I especially desired to hear about was the action of rattlesnakes under similar circumstances. I have never seen a rattlesnake feign death, but reliable parties have reported the fact; only they generally speak of it as the snake killing himself.

For they all state that the rattlesnake does bite himself and then seems to die. (The quickness with which they appear to die is suspicious). Now Dr. Mitchell states, after much study and experiment with the poison of snakes, that the poison of a rattlesnake injected under the skin of the same animal does not cause death. It is about these animals and their apparently pretended suicide that I would much like to hear.

J. W. KILPATRICK.

Payette, Mo., Dec. 1.

DR. TOPINARD AND THE SERPENT MOUND.

IN the November 10th issue of *Science* Dr. Brinton has very properly replied to Dr. Paul Topinard, the eminent French anthropologist. American students, who have been so frequently told how much more the French know concerning prehistoric archæology than the scientists of this country, will find a great deal of satisfaction in noting the ignorance which the great savant Dr. Topinard displays in his article. I wish to call the attention of the readers of *Science* to the fact that, while Squier and Davis published an excellent map of the Serpent Mound (in Adams County, Ohio), Caleb Atwater wrote concerning it in 1820. So the eminent Frenchman has made a mistake of about sixty years in attributing the discovery to Professor Putnam. One can easily understand and overlook a mistake in locating or describing the small earthworks or western ruins on the part of the distinguished foreigner, but, after all that has been published about our greatest monument, the Serpent Mound, it is very strange that one whose entire life has been given to the study of prehistoric peoples should have fallen into such an error regarding it.

WARREN K. MOOREHEAD.

THE HARDNESS OF CARBORUNDUM.

REFERRING to my article on "Carborundum" (*Science*, XXII., 141), it is there stated that the discoverer of this substance claimed that it would cut and polish the diamond. In the December number of the *Am. Jour. Sci.*, XLVI., 473, Mr. G. F. Kunz states the result of an experiment made by him to determine this. A new wheel was provided, and, after several trials, it was found that the carborundum, though hard enough to cut sapphire and corundum, would not cut or polish the diamond. The carborundum crystals may be scratched by diamond points. The hardness is thus between 9 and 10, and it is, next to the diamond, the hardest substance known.

WM. P. BLAKE.

LATE-BLOOMING TREES.

WHILE at Brielle, N. J., I noticed, during the first week in September, several apple trees blooming quite freshly, and I have reports from Alpine, N. J., of pear trees and horse chestnuts being in bloom. Can any of your readers give an explanation of the cause and the effects (upon the trees) of this occurrence?

WALTER MENDELSON.

New York City.

TELLURIDE OF GOLD, CRIPPLE CREEK, COLORADO.

THE native gold of Cripple Creek, whether obtained from the placers or from the veins, is remarkably fine, being worth twenty dollars, or more, per ounce. It contains very little silver, and appears to be derived from a telluride allied to, if not identical with, the species calaverite, which contains about 41 per cent. of gold. The telluride is silver white, and is in prismatic crystals, much striated. In the oxidized ores the tellurium has leached out and left the gold behind in a spongy condition, but retaining the form of the original crystal. A purple-