

aceæ, Schizæaceæ, Ceratopteridaceæ, etc.) form with it a related group which we denominate *Order Filicales*. If Professor Campbell wishes to make a class to include the order Filicales and other related orders, no one could have the slightest objection, but in accordance with the recognized principles of modern systematic botany Professor Campbell is not at liberty to name his classes with the termination *-ales* for that is reserved for orders and for orders alone.

The usage of 'Our Native Ferns' (sixth edition), to which reference is made, is strictly in accord with the above in the two cases quoted from the systematic portion of the work. On page 63 where the term *Order Equisetaceæ* is used, there is clearly an error, resulting from an oversight in correcting the electros, which at that point have escaped revision since their first printing in an earlier edition when *order* was still used as a synonym of *family*.

The orders of pteridophytes which we would recognize at the present time are: (1) Ophioglossales, (2) Marattiales, (3) Filicales, (4) Salviniæ, (5) Equisetales, (6) Lycopodiales, (7) Isoetales. I believe this disposition of the last group, which contains a single genus, is much more logical than the plan followed by Professor Campbell in his 'University Text-book' of leaving these humble aquatics dangling between two classes with no secure resting place whatever. They have certainly become differentiated from other pteridophytes to this extent, as Professor Campbell himself clearly states.

L. M. UNDERWOOD.

COLUMBIA UNIVERSITY,
November 4, 1902.

A POINT IN NOMENCLATURE.

REFERRING to Professor Cockerell's note in SCIENCE, November 7, permit me to say:

Under the name of *Monacanthus oblongus*, Schlegel included two species, one large in size (since called *modestus*), the other small and more strikingly formed (since called *broekii*). I have retained Schlegel's name for the smaller species, because his figure represents it, his description is chiefly based on

it and his references to the larger species are casual and comparative. The larger species Schlegel regarded as '*Individus adultus*' in which the specific characters of caudal filaments and dorsal serrations had been lost. As Schlegel's 'type specimen,' in the modern sense, was clearly one of the smaller species, I retain his name of *oblongus* for it, although he regarded the larger species (*modestus*) as the adult of the same species. Wherever possible, the question of type of genus or species should be decided on data in the original work, without reference to subsequent literature.

DAVID STARR JORDAN.

NEW YORK ARCHEOLOGY.

TO THE EDITOR OF SCIENCE: Dr. Merrill, of the New York State Museum, suggests that a brief account of archeological collections of interest be added to the bulletins now being issued, as a convenience for students of our local antiquities. This might be inserted in one of the bulletins yet to appear, or, if the amount of material warrants it, form a subject by itself. I know fairly well the more important collections, but there are many which have escaped my personal attention, and some inconspicuous ones contain valuable articles. With a view to carrying out this plan I would be glad to receive notes of any and all collections, public or private, which serve to illustrate the aboriginal history of New York. Photographs of articles or cases will be of great assistance, and correspondents may well give brief accounts of any local collections known to them.

I can not definitely say what the published results will be, for these will depend on the importance of the matter sent in. Ample reports are very desirable and will be placed on permanent record, but may necessarily be much reduced for publication. The idea is to make such a report as will enable students easily to find what they want in the way of illustration and information. At the same time an idea may be gathered of the abundance and character of local relics. For preliminary use the number of specimens may be given, character, material, locality, with fuller accounts of special forms. The intelli-

gent collector will scarcely need directions on those points.

Of course all this is intended to illustrate New York archeology, but this has relations to other parts of the land, and some cabinets contain fine and valuable specimens from other states. These are not to be overlooked, and I have several such cabinets in my mind. They are interesting in themselves and valuable for comparison.

This communication will not directly reach all those whose aid is desired, but if others will call attention to it good results may be expected. I am often surprised at finding some article of special interest in some hitherto unknown collection. Hence the importance of reaching every student of this great subject. May I hope for a speedy and general response from those interested.

W. M. BEAUCHAMP.

204 MAPLE ST., SYRACUSE, N. Y.
October 22, 1902.

PRICKLES OF THE PRICKLY ASH.

It might be well to call attention to an error occurring in Bailey's 'Elementary Text-book of Botany,' 1901, p. 105, figure 157, where it states that the 'prickles' of the prickly ash are modified stipules. Seeing that the same error occurs in Bailey's 'Encyclopedia of Horticulture,' it may be supposed that it is not a mere typographical error.

In the case of the prickly ash, *Xanthoxylum americanum*, Mill., the prickles are true prickles, having no connection with the internal structures, as they would have if they were stipular in nature. These prickles occur frequently at the bases of the leaves, giving rise very probably to the false notion as to their morphology. However, they do not occur at the bases of all the leaves, there being not infrequently no signs of them. Furthermore, they are occasionally found elsewhere, on the branch, and also on the rachis of the compound leaf.

In Chapman's 'Flora of Southern United States,' 1897, it states, under family characters, 'exstipulate leaves,' and, under *Xanthoxylum*, 'trees or shrubs, commonly armed with stipular prickles.'

Gray states, as a character of the order, 'stipules none,' and, under *Xanthoxylum*, 'stems and often leaf stalks prickly.' Gray is correct, but Chapman, with many others, is in error. The structures referred to are not stipular, but are true prickles. Stipules are not found in any of the genera of the family to which *Xanthoxylum* belongs.

J. B. DANDENO.

THE NEXT ERUPTION OF PELÉE.

In the Boston *Transcript* of September 3, 1902, the writer called attention to the peculiar sequence of eruptions in Martinique, as follows:

Date.	Preceding Interval.	Violence.
May 5.		Destruction Guerin Factory.
May 8.	3 days.	Destruction St. Pierre.
May 20.	12 days.	Further destruction St. Pierre and destructive wave at Carbet.
June 6.	17 days.	More incandescent material.
July 9.	33 days.	Larger stones at Morne Rouge; more incandescent material; detonations heard at Barbados.
Aug. 30.	52 days.	Destruction of Morne Rouge: great wave; many lives lost.

It will be seen that the interval is increasing and each time the culminating explosion of steam and hot waters has been somewhat more violent, though until recently there have been no good records kept. At present Lacroix is recording the phenomena from day to day. There were minor eruptions other than those above recorded, notably on May 26, three times in June, and after August 21; but those tabulated may be described as eruptions of first magnitude.

Exploration of the craters has shown that they contain boiling water during periods of calm, and the eruptions begin with the ejection of this water; steam follows, charged with débris. An eruption of this kind is comparable to a geyser. If such comparison is permissible, the sequence may indicate for each great eruption a release of strain and an increased cavity system, allowing infiltration of larger volumes of water, and requiring a