

FOWLERINA EIGENMANN A PREOCCUPIED GENERIC NAME

In the *American Naturalist* for 1907, p. 767, Dr. Carl H. Eigenmann proposes very magnanimously the generic name *Fowlerina* for a genus of stethaprionine characins. He gives *Tetragonopterus compressus* Günther as the type.

The name, however, is antedated by *Fowlerina* Pelseneer, *Trans. Linn. Soc. London* (2), X., February, 1906, p. 149, proposed as a new genus of mollusks.

I therefore propose the generic name EPHIPICHARAX, and give *Tetragonopterus compressus* Günther also as the type. Apparently, two species are known from the Amazons, Guiana, Paraguay and eastern Brazil. The genus is remarkable for the peculiar scale-like predorsal spine, which fits into a depression in the back. It is closely allied with *Stethaprion* Cope.

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SOME ADDITIONAL NOTES ON THE BLOWING OF SOILS

IN SCIENCE, Vol. XXVIII., pp. 653-654, I published an article on the "Blowing of Soils." I wish to add these further notes on the same subject.

It has snowed here (Nett Lake, Minn.) for practically one continuous week now and more than eighteen inches of snow has fallen in that time. The snow on the ground now is three and one half feet deep. Even the ice in the lakes is so pressed down by the additional weight of snow that the water rising on it on account thereof has stopped all lake transportation and travel. But to the subject. Yesterday with a nearly west wind, bearing a little to the north, with a velocity of probably eight miles per hour, the continuous snow that fell was so filled with dirt that it was brown. It was so conspicuous that even the Indians called my attention to the dirty snow. This dirt in the snow here was the product of a dust storm somewhere. With the snow three and one half feet deep here it

must have come from the country about Medicine Hat in Canada or from the northern part of the Dakotas. From conditions here it must at least have come five hundred miles.

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MOSQUITOES POLLINATING ORCHIDS

In August, 1899, seven mosquitoes bearing pollinia of the tall green orchid, *Habenaria hyperborea*, were taken at a camp on the Medicine Bow Range in northern Colorado, at an altitude of 10,200 feet. Four individuals carried two pollinia each; three carried one each. The viscid disks were attached to the lower front of the head and in some cases partially covered the eyes.

The captures were made on a rainy day within a tent located at some little distance from the stream on the banks of which the orchid grew. Examination of a considerable number of spikes showed that pollinia had been removed from many of the flowers, but actual removal by mosquitoes was not observed. Mosquitoes were extremely abundant, only a relatively small number was examined and few carried pollinia, but the impression remains that this undetermined species of mosquito may be regarded as of some importance as an agent in the pollination of this *Habenaria*.

This observation was recorded in *The Plant World*, 3: 6, January, 1900.

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PLUS AND MINUS AGAIN

DR. HALSTED's statement¹ on the use of the symbol + in Widman's arithmetic of 1489 is apparently in conflict with my own.² As neither Widman's book nor the descriptions of it in the *Bibliotheca mathematica*³ are readily accessible to most American readers, it may be well to give a fuller account. The

¹ SCIENCE, May 30, 1913, p. 837.

² SCIENCE, April 18, 1913, p. 610.

³ 3. F., Bd. 9, 1908-09, pp. 155-157, 248; Bd. 10, 1909-10, pp. 182, 183.

statement that, with Widman, + meant simply "und" (and) is correct as a description of Widman's general usage. There is just one exception. Once, but only once, does Widman in his book identify + with "meer" (mehr). It is in the passage quoted by Dr. Halsted, "was auss — ist, das ist minus . . . vnd das + das ist meer." It occurs in the explanation of a small table of weights.

Widman does not use the word "plus"; his word for addition is "vnd." As stated before, with Widman + had not yet become a purely mathematical sign. In his arithmetic (1489), as well as in a manuscript algebra in Latin, which he owned, + is used for "vnd" or "et" even in cases where "vnd" or "et" do not mean addition, as in the heading, "Regula augmenti + decrementi." It is interesting to note that he uses the word "minus" only twice in his book, and only once in the sense of —. Hence, in Widman, the words "plus" and "minus" do not occur as ordinary terms for addition and subtraction. The symbol + is often used for addition; — is used for subtraction at times, but not regularly. Apparently, the regular association of + with "plus," and — with "minus," came after Widman.

A further study of manuscripts and early printed books may throw more light upon the origin of + and — (as well as upon the first use of the decimal point), but the evidence now at hand goes against Dr. Halsted's claim that the + and —, used in the sense of $\pi = 3.14 +$ and $\pi = 3.1416 -$, "is historically the first meaning of the signs + and —, which arose from the marks chalked on chests of goods in German warehouses, to denote excess or defect from some standard weight." That they were so used is not denied, but the facts do not warrant the categorical statement that this "is historically the first meaning." No evidence has been adduced to establish the early use of + and — as marks chalked on chests. In the *Bamberger Rechenbuch* (1483) the tare to be deduced from the gross weight of a package is called "Das Minus," but the symbol — is not used. On the other hand, the regular connection of + with "vnd" in

Widman's book of 1489 is unmistakable; the resemblance of + with the "et" of Latin manuscripts of the fourteenth and fifteenth centuries rests upon independent paleographic researches carried on by several writers mentioned by Cantor and Tropfke.

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AN INSTITUTE FOR BIBLIOGRAPHICAL RESEARCH

THE writer has from time to time tried to interest librarians, bibliographers and men of science in the matter of bibliographical research and publication, or rather in organized work along these lines, in the hope that a concerted movement in its favor might be brought about—but in vain. Men of wealth have also been approached, but so far the man who would see his opportunity and endow this important work has not been found.

An effort is now being made to interest business men in the subject. Special emphasis has lately been laid on the value of an institution for the organization of bibliographical research in the interest of agriculture, manufacture and commerce. A prospectus has been sent out to a number of business men in Chicago calling attention to the value of research along these lines for both agriculture, manufacture and commerce. A "Committee on Research Institute" has been formed for the purpose of promoting the idea.

While the latest endeavor has been made along the line of business, the intention of the writer is now, as it has always been, that the only limits to the scope of the proposed institute should be the actual needs of those who might seek its assistance. The functions of the proposed research institute would be entirely practical. The institute staff would be in readiness to make researches into definite subjects at the request of those desiring special information; it would also try to anticipate the needs of inquirers and compile references on subjects of actual interest in advance of demand.

It has been estimated that a sum of \$50,000, or a guaranteed income of \$10,000 a year for five years, would place the institute on a basis