



Whiteaves

GEOLOGICAL & NATURAL HISTORY SURVEY.
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Dear Sir,

The specimens of the Campbellton gastropod came safely to hand, for the loan of which I am much obliged. They are far better than any I have yet seen & show all the characters in a most satisfactory manner. Since I last wrote, a great many of our books have been unpacked, & I have accordingly been able to look up the literature of the Devonian gastropods but cannot find any genus in which the Campbellton ~~genus~~ species could be placed. Some species of Maticopsis, McCoy, are a little like it, but only in a very general way. Again, if the type of Euomphalus be the E. pentangulatus of the Carboniferous, our shell bears no great resemblance to that ~~same~~ type, but some upper palaeozoic shells have been & are still referred to that genus, which are not at all unlike the specimens sent. So vague indeed is the idea

conveyed by the word Euomphalus that some years since Jeffreys called a minute, recent, Margarite or Plicea-like, British shell, Euomphalus nitidissimus, though he subsequently made it the type of his genus Homalopyra. Microdoma, Meek & Worthen, differs from our shell in having flattened whorls & an imperforate base.

I have compared your description with the specimens & find it agree with them perfectly, though I should prefer to alter the phrase "a large open umbilicus" — to this — umbilicus between one third & one fourth of the diameter of the base, deep in the centre & rounded at the margin, not exposing the inner whorls. At least that is how I see it at present.

To my mind there is no inoperculated genus of recent land shells at all like it. Among the operculated it is certainly like a small Cyclotus, as seen from above, but in the latter genus, the umbilicus is always so wide as to expose all the inner whorls, & its aperture is

not patulous. In Valvata, again, which is still more like it, the ~~apex~~ lip is not spreading or expanded.

According to Dall, Margarita helicina is not hermaphroditic but bisexual. The shell of the males is somewhat elevated in the spire, & the lip is not spreading: but in the females the shell has a depressed spire & the lip is distinctly expanded. It was the expansion of the outer lip, coupled with other characters, that suggested the comparison with Margarita.

Apart from the surface markings, which, as the name shews, are of specific not of generic value, the Campbellton gastropod strongly resembles the Molleria costulata of the Gulf of St. Lawrence, & it also very closely approaches such genera ^{the genus} as Cyclostrema (vide Lars new book, plate 34.).

On the whole, it seems to me to present sufficiently valid characters to establish a new genus upon, & two names occur to my mind as suitable, viz., Cyclogyra (if that is

not preoccupied) If it is, then Gesnerella might be suggested. If my memory does not deceive me, Gesneria is in use for a genus of tropical plants. I have not yet had time to examine the original diagnoses of Cypridina Milne Edwards & Beprichia McCoy. The three Devonian species of Cypridina figured by Woodward in his chart of Fossil Crustacea are very unlike the Campbellton entomostracan.

I shall be glad to hear what you think of the conclusions arrived at so far in regard to the Campbellton gastropod, whether you think the names suggested appropriate or not.

As a whole I find the Campbellton fishes quite different from those from Scammanac, but much like those from the deposits at Gaspié holding Cephalaspis.

Could you lend me one or two good examples of the Campbellton Sporobis, as I am devoting all the time I can get to ~~the~~ ~~study~~ a study of the fossils of this locality.

Faithfully yours,
J. F. Whiteaves.