

classed together with the rotating currents of the *Charæ*, *Valisneriæ*, &c. This treatise, under the title of 'Nouvelles observations sur la circulation dans les plantes,' is printed as an appendix to the above prize-paper; and, in the 'Botanical Register' for 1839, p. 48, there is an extract from this important work of M. Schultz, under the title of 'Circulation of the blood in plants.' The author of this extract is anonymous, probably because he very well knew that in this subject he was not capable of forming any judgement; the title alone shows evidently that he knows nothing at all about the matter.

The second point in this prize-paper to which I cannot agree, is the bringing together of the most different formations under the one name of latex-vessels. M. Schultz believes that he has discovered that the bark as well as the wood contains a peculiar vascular system, which forms the central point of every development. In the ligneous fascicles of the monocotyledons, M. Schultz considers the soft long cells which are filled with a mucilaginous fluid, and which Mohl calls *vasa propria*, as latex-vessels; though it is so very easy, even in succulent plants of this kind, to observe the true latex-vessels near the ligneous bundles, and which have no similarity to those in the interior of the bundles. M. Schultz even considered the small cells of the ferns which are filled with starch as latex-vessels; they surround the fascicle of spiral tubes, and are deposited on the inner surface of the bast-tubes, &c. M. Schultz has by no means correctly understood the peculiarity of the latex-vessels of the *Euphorbiaceæ*, which, as I have long since shown, possess the structure of the bast-tubes of the *Apocynæ* and *Asclepiadeæ*, and also occupy the place of the bast-tubes (which are wanting in the *Euphorbiaceæ*), and still contain latex, while the bast-tubes of the *Apocynæ*, which do not ramify, contain but very little latex; but here there is a true vascular system a little on the outside of the bast-tubes, whose stems exhibit anastomoses, and contain only a little opake latex.

[To be continued.]

XLII.—*Additional Particulars respecting Antechinus Stuartii, a new Marsupial Quadruped.* By W. S. MACLEAY, Esq., F.L.S., &c.

To Richard Taylor, Esq.

DEAR SIR,

SINCE I wrote you* concerning what I had reason at that time to think might possibly prove to be a new quadruped

* See our preceding Number, p. 241.

belonging to the group of *Insectivora*, I have had an opportunity of examining a skeleton, now in the possession of Major Christie, and which Mr. Stuart himself had prepared at the time the animal was killed. This skeleton, by the presence of the marsupial bones, distinctly shows that the quadruped in question belongs to the group *Marsupialia*. It also demonstrates that there was an important error in the dental formula as given me in the MS. of Mr. Stuart,—the very error, indeed, which led me to think that the animal might eventually be found to belong to the *Insectivora*. The true dental formula, as taken by me from the skeleton, is as follows:—

Incisors $\frac{4-4}{3-3}$ + canines $\frac{1-1}{1-1}$ + pseudomolars $\frac{3-3}{3-3}$ + molars $\frac{4-4}{4-4} = 46$.

Now this formula is that of *Phascogale*, from which genus our animal however differs in the three lateral incisors of the upper jaw being of equal size, and also in the pseudomolars being all of equal size. I am however in hopes of soon possessing a specimen from Spring Cove, when I shall be able to determine how far this animal differs from the genus *Phascogale*, or whether it may not be safely assigned to it.

I remain, &c.

Elizabeth Bay, near Sidney, Aug. 9th, 1841.

W. S. MACLEAY.

XLIII.—*Notice of a hitherto unobserved Character distinctive of the Sexes in certain Cetoniidæ.* By J. O. WESTWOOD, Esq., F.L.S., &c.

IN a short notice published in these 'Annals' for October last, I communicated the curious discovery, that whilst the females in certain groups of *Lucanidæ* possess a short horny tooth at the extremity of the basal or internal lobe of the maxillæ, their males are destitute of this character. I have now to announce the existence of precisely the same sexual distinction in certain groups of *Cetoniidæ*. Until very recently the maxillæ of the species in this family have been described as possessing entirely membranous lobes, with the exception of *Cremastocheilus*, in which this organ is horny, and armed in both its lobes with strong curved corneous teeth. More recently Gory, Perchéron, and MacLeay have detected corneous teeth in the maxillæ of other *Cetoniidæ*, which character has accordingly been employed, especially by the last-named author, to characterize many of the groups which he has proposed in his quinary arrangement of the family, published in Dr. Smith's 'African Zoological Researches.'



Macleay, W S. 1842. "XLII.—Additional Particulars respecting Antechinus Stuartii, a new Marsupial Quadruped." *The Annals and magazine of natural history; zoology, botany, and geology* 8, 337–338.

<https://doi.org/10.1080/03745484209442765>.

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DOI: <https://doi.org/10.1080/03745484209442765>

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