

transverse sections of the same, showing the structure at different stages of growth.

Fig. 2. Transverse section of another example of the same, Lower Carboniferous, Brockley, near Lesmahagow, Lanarkshire.

Fig. 3. Transverse section of *Campophyllum Murchisoni*, E. & H., Lower Carboniferous, Durnish, County Limerick. (In the collection of the Geological Survey of Ireland.)

Figs. 4, 4 A. Longitudinal and transverse sections of another example of the same, Lower Carboniferous, near Beith, Ayrshire. In all these examples the narrow outer vesicular zone is more or less completely filled up.

Figs. 5, 5 A, 6, 6 A, 7, 7 A. Longitudinal and transverse sections of different examples of a coral possibly belonging to *Calophyllum*, Dana. The structure is nearly allied to that of *Campophyllum*; but there is an absence of any exterior zone of vesicular tissue. The specimens are from the Lower Carboniferous of Ayrshire.

PLATE VII.

Figs. 1, 2, & 3. Transverse sections of a large species of *Cyathophyllum*, closely allied to *C. giganteum*, Mich., but differing in the nature of the dissepiments, the number of the septa, and certain other particulars. The specimens exhibit a large septal fossula. Lower Carboniferous, Ireland. (In the Collection of the Geological Survey of Ireland.)

Figs. 4 & 5. Transverse sections of *Cyathophyllum*, sp., exhibiting fissiparous development. Lower Carboniferous, Brockley, near Lesmahagow, Lanarkshire.

Figs. 6, 6 A. *Amplexus (Cyathopsis) cornu-bovis*, Mich., showing the septa passing inwards to near the centre of the visceral chamber. Lower Carboniferous, Ayrshire.

Fig. 7. *Cyathophyllum paracida*, M'Coy, showing calicular gemmation; 7 A, longitudinal section of the same; 7 B-7 D, transverse sections of the same. Lower Carboniferous, Lanarkshire.

Fig. 8. *Cyathophyllum*, sp., transverse section. Carboniferous, Ireland. (In the collection of the Geological Survey of Ireland.)

Fig. 9. *Cyathophyllum regium*, Phill., transverse section of a small slab; 9 A, longitudinal section of a single corallite of the same.

[To be continued.]

IX.—Descriptions of two new Coleopterous Insects belonging to the Families Buprestidæ and Melolonthidæ. By CHARLES O. WATERHOUSE.

Fam. Buprestidæ.

Stigmodera Saundersii, sp. n.

Oblonga, convexa, lata, nitida, viridi-cærulea; elytris cyaneis, maculis quatuor coccineis; thorace convexo, longitudine $\frac{2}{7}$ latiori, fortiter crebre punctato; scutello parvo, nitido; elytris thorace vix latioribus, at $2\frac{1}{5}$ longioribus (apicibus rotundatis), punctato-striatis. Long. 8 lin., lat. $3\frac{4}{5}$ lin.

This species is peculiar for its broad, very convex form, and

rounded apices to the elytra. The sides of the thorax are rounded in front; the posterior angles are rather less than right angles. The elytra are deep steel-blue, strongly punctate-striate; the interstices are scarcely convex, very finely and not thickly punctured; but there are some large punctures about the shoulders. Each elytron has two bright red spots; the larger one occupies all the base except the scutellar region; the second spot is near the apex, commencing on the margin, and, extending obliquely upwards, nearly reaches the suture.

Hab. New South Wales. Brit. Mus.

This species differs considerably from all the other *Stigmoderæ*, but should, I think, be placed next to *S. bifasciata*, Saund., which it most nearly resembles in form.

Fam. Melolonthidæ.

CALONOTA, Hope.

I have examined many examples of *Calonota*, and am unable to detect more than eight joints to the antennæ (not nine, as given by Lacordaire). The third joint is very long, cylindrical; the fourth the same form, but shorter; the fifth very short, thickened at the internal apical angle; the sixth, seventh, and eighth form the club, elongate in the male, ovate in the female.

The name *Pyronota*, Boisd., although prior to that of Hope, is given without any proper characters for the genus; and I therefore adopt Hope's name.

I am unable to distinguish more than one species of this genus. I am even unable to find any definite characters to separate the piceous form, with pale margins and broad thorax (which at first appeared quite distinct), from the typical bright green *C. festiva*. I find intermediates both in form and colour.

PHYLLOCOCERUS, Hope, MS.

Antennæ nine-jointed; first joint much enlarged at the apex; second nearly globular; third, fourth, and fifth cylindrical, subequal, a little shorter than the second; sixth joint very short, but broader than the previous joint; the seventh, eighth, and ninth joints forming a club, very long in the male, elongate-ovate in the female. Clypeus somewhat deeply triangularly emarginate in the middle. Mesosternal projection long, conical. Posterior coxæ with the internal angle not produced into a spine; posterior femora with a small triangular projection on the internal lower margin. Claws simple.

This genus is founded on a well-known Australian insect, but it appears to be undescribed. It is intermediate between *Calonota* and *Colymbomorpha*.

Phyllococerus purpurascens, Hope, MS.

Ovalis, convexus, nitidus: capite thoraceque viridibus; elytris griseo-purpurascens; corpore subtus piceo, æneo tincto, dense albo-pubescente; elytris sat fortiter striato-punctatis, interstitiis alternatim seriatim punctatis. Long. 6 lin., lat. $3\frac{1}{2}$ lin.

Form of *Colymbomorpha lineata*, but more regularly oval and more convex; very shining. Clypeus thickly and moderately strongly punctured, narrowed in front, triangularly notched in the middle. Thorax not very thickly and somewhat obscurely punctured. Scutellum green, obscurely punctured. Elytra greyish purple, somewhat strongly striate-punctate: the interstices not convex; the first irregularly and somewhat strongly punctured; the third, fifth, and seventh each with an irregular row of punctures; the second, fourth, and sixth are rather narrower. Club of the antennæ black. Anterior tibiæ slender, with an oblique incision in the middle of the outer edge, surmounted by a somewhat acute (but not projecting) tooth.

Hab. Swan River. Brit. Mus.

COLYMBOMORPHA, Blanch.

This genus is united to *Calonota* in Gemminger and Harold's Catalogue. I think it should certainly be kept distinct. It differs from both the foregoing genera in being hirsute above, and in having the mesosternal projection in the form of a blade instead of conical; from *Calonota* it differs in having no appendage to the claws. These characters have already been noted by Lacordaire; but that the males have five lamellæ to the nine-jointed antennæ seems to have been entirely overlooked.

In the British-Museum collection there are three or four specimens, which differ considerably in colour and sculpture from each other and from the type of the genus, *C. lineata*; but I cannot satisfy myself that they are more than varieties, as there appear to be intermediates.



Waterhouse, Charles Owen. 1876. "Descriptions of two new coleopterous insects belonging to the families Buprestidae and Melolonthidae." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 70–72.

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