

of consideration the anterior tooth which it possesses in common with some other genera, *Cyprina* has only two cardinal teeth in each valve: another difference consists in the left valve of this genus being provided with a posterior callous tooth which fits into a broad depression in the opposite valve. The Oban shell may be said to have a posterior tooth, as there is a small groove for one of the kind in the right valve, but it does not differ from that of many of the *Venuses**.

The only character which the Oban shell possesses to induce one to consider it a *Cyprina* is its slight pallial sinus; but, as before observed, this is general to the *Circes*, and it even belongs to some of the *Venuses*.

I am not aware who proposed the genus *Circe*; it is adopted by Mr. J. E. Gray in the Catalogue of the British Museum, and appears to be a good one.

XVI.—*Note on the Boring Apparatus of the Carnivorous Gasteropods, and of the Stone- and Wood-burrowing Bivalves.* By ALBANY HANCOCK, Esq.

DURING the investigation of the anatomy of the *Eolidæ* by Dr. Embleton and myself, we ascertained, as appears in the last Number of the 'Annals,' that the teeth of these animals are composed of silex. Directed by this interesting fact, I was induced to examine the nature of the instrument by which the carnivorous Gasteropods pierce the testaceous covering of bivalve and other shells. I found this apparatus in *Buccinum undatum* to be composed of rows of stout, much-curved spines or teeth, of great brilliancy, and as glossy and transparent as glass, and certainly to have no appearance whatever of horny tissue. They are so similar to those of *Eolis*, that there could be little doubt that they are formed of the same material; and accordingly, after subjecting them to the action of acid, such was found to be the case. Their capacity to drill holes in calcareous matter is therefore easily understood, without the necessity of supposing the aid of a solvent requisite, as surmised by Cuvier.

This result was to be expected after the discovery of the siliceous nature of the teeth of *Eolis*; but that the wood- and stone-burrowing Bivalves should work out their excavations by an instrument provided with the same material may, perhaps, appear somewhat startling. Such however I believe is the fact; a fact which if established will at once explain all the phænomena attending this much-controverted problem. It is not my intention

* I am acquainted with a greensand *Venus* which has a posterior tooth and depression as large as in *Cyprina*.

at present to enter into details; all that I now wish to communicate is the result at which I have arrived; and in a short time I hope to have the pleasure of publishing, at length, my observations in connexion with this interesting subject.

The excavating instrument of *Pholas* and *Teredo* is formed of the anterior portion of the animal, in the surface of which are imbedded siliceous particles. The particles penetrating the skin give to it much the character of rasping-paper. The whole forms a rubbing surface, which being applied closely to the bottom of the cavity by the adhesion of the foot, enables the animal to rub down, and so penetrate, shale, chalk, wood, or even the hardest limestones and marble.

Saxicava rugosa is also furnished with a rasping surface covered with siliceous particles. This surface, however, in this species is formed entirely of the anterior portion of the mantle, the margins of which being united are much thickened, forming a sort of cushion capable of considerable protrusion at the will of the animal. The foot is small, and passing through a much-constricted orifice, gives origin to a byssus, which anchors the shell close to the base of the excavation, and thus holds the rubbing apparatus in immediate contact with the part to be excavated.

XVII.—On a new species of *Platycercus*. By JOHN GOULD, F.R.S. &c.

DEAR SIR,

20 Broad Street, Golden Square, Jan. 11, 1845.

MY collector, Mr. Gilbert, has lately sent me the description of a new *Platycercus* discovered on the Darling Downs at the back of Moreton Bay, on the east coast of Australia, and which he states far surpasses in beauty every other species of the genus yet discovered. I have therefore thought it of sufficient importance to the ornithologist to send you a copy for insertion in the 'Annals of Natural History.'

Band across the forehead half an inch in breadth, scarlet, fading around the eyes, lores and cheeks into pale lemon-yellow, which again gradually blends with the green of the under surface; crown of the head and nape blackish brown; sides of the neck to the shoulders verdigris-green with yellowish reflexions; back grayish brown; rump and upper tail-coverts verditer-blue, the longer coverts with a band of black at their extreme tip; primaries and secondaries black edged with bluish green; shoulders with a spot of rich vermilion; under wing-coverts and edges of the pinions verditer-blue; two middle tail-feathers olive-brown at the base, gradually passing into greenish blue at the tip with olive reflexions; the three outer feathers on each side with a narrow zig-



Hancock, Albany. 1845. "XVI.—Note on the boring apparatus of the carnivorous Gasteropods, and of the stone- and wood-burrowing Bivalves." *The Annals and magazine of natural history; zoology, botany, and geology* 15, 113–114. <https://doi.org/10.1080/037454809495266>.

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DOI: <https://doi.org/10.1080/037454809495266>

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