beds, which, as yet, are free from doubt as regards their identification with living species. The two exceptions are *Limopsis Belcheri* (Adams and Reeve) and *L. aurita* (Brocchi). But these two, certainly, do not represent one per cent. of the species determined to be extinct, and, consequently, if we are not prepared to reject the *per-centage* method in the determination of the great divisions of the tertiary period, we must assuredly refer the Table Cape beds not to the *miocene* but to the *eocene*, or "early dawn," of the tertiary period in Australia. It is now five years ago (pp. 86-87, Proc. Roy. Soc. of Tas.) since I made use of the following statement before the members of this Society:—"This continual lessening of the per-centage of living to extinct forms as our knowledge increases is most significant. According to the principle which has been adopted by Mr. Lyell, and through him by nearly all English geologists, this low per-centage of living representatives indicate rather more an *eocene* than a *miocene* age for our marine beds at Table Cape." The investigations carried on by Professor Tate and other indefatigable workers, since that time, have placed this matter beyond all reasonable doubt, and now there is every reason to believe that the Table Cape beds, with their Australian equivalents, mark the earliest dawn of the eocene period in Australia. In conclusion, I may venture to prophecy, notwithstanding the gap between the cretaceous rocks of Maryborough, Queensland, and the eocene beds of Table Cape, that the day is not far distant when passage beds will be discovered connecting these systems more closely together, if not completely merging the one insensibly into the other.

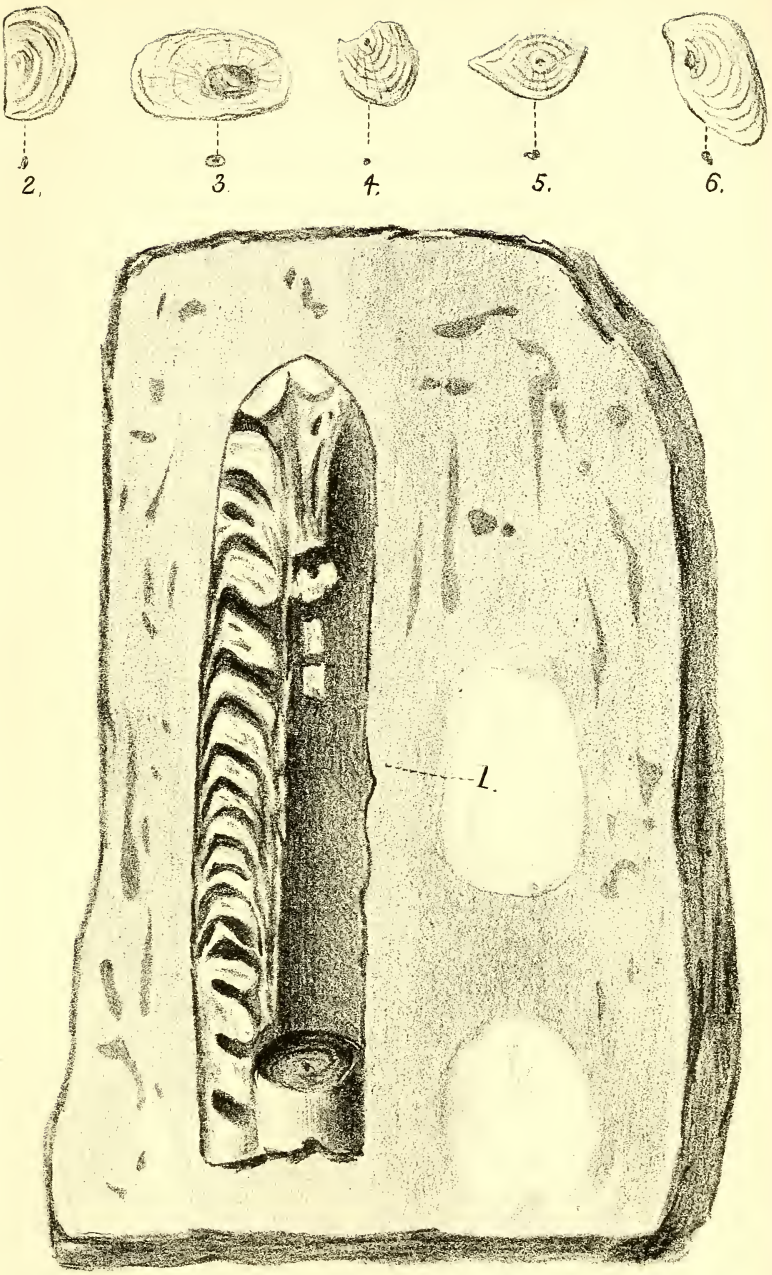
DISCOVERY OF ENTOMOSTRACA IN THE UPPER MEMBERS OF THE TRAVERTIN BEDS, GEILSTON, AND A DESCRIPTION OF A NEW SPECIES OF CYPRIS.

By Robt. M. Johnston, F.L.S., Etc.

[*Read June* 9, 1884.]

Cypris Alburyana (*n. s.*).

Carapace oblong-oval, somewhat flattened on one side; valves convex, smooth, shining, white; breadth contained in length two-and-a-half times; length usually $\frac{3}{4}$mil. Gregarious in the altered opalescent rock overlying the basalt in the Travertin Limestone Quarry at Geilston.



1.—*Lepidostrobus Mluelleri*, Johnston.
From Coal Measures Sandstone Campania.

2–6. *Minute Scale like impressions in Shale, associated with L. Mluelleri*

Specimens of this freshwater entomostracan were collected by me some two or three years ago in abundance at Geilston. It is an interesting form, as it affords us valuable information regarding the condition under which opal-like rock was formed prior to the peculiar change in its structure.

DISCOVERY OF A CONE, PROBABLY OF A SPECIES OF LEPIDOSTROBUS, IN THE SANDSTONES OF CAMPANIA.

By Robt. M. Johnston, F.L.S., Etc.

[*Read June* 13, 1882; *accidentally omitted from Proceedings of the year* 1882.]

The very interesting impression in the block of sandstone appears to be the remains of a narrow, oblong, cylindrical strobilus, or cone, of a species of *Lepidostrobus*. It measures about $4\frac{1}{4}$ inches long and $\frac{7}{8}$ inch in diameter. The strobilus agrees with general characters of the genus *Lepidostrobus*, having a central axis throughout its whole length, which is longitudinally striated, from whence radiate upwards and outwards narrow chambers, which evidently contained the sporangia. These chambers narrow and bend downwards abruptly towards the outer edge, where, if a section could be seen, it would, no doubt, show an imbricated appearance. So far as I can learn this is the first strobilus or fruit of a form of Lepidodendron discovered in Australia. Associated with the fruit, in a layer of shale, I discovered impressions of numerous microscopic wing-like seedlets, some of which I have magnified; these latter are frequently depressed near the centre and are almost invariably concentrically striated Impressions of *Zeugophyllites* are also abundant in the shales associated with the sandstone, which I believe to be of the same horizon as the Jerusalem coal. I propose for this fruit the name of *Lepidostrobus Muelleri*, in honour of Baron von Müeller, K.C.M.G., F.R.S., etc. (See Figure.)