margins of aperture tuberculate. Intercellular surface covered with finely tubercular ridges, whose terminations form the marginal denticles. Non-celluliferous aspect finely granular, faintly striate. Cells encroach irregularly on this face (Plate IX. *bis*, fig. 5); and small apertures (fig. 4) seem to represent aborted cells.

Locality.—Gillfoot, Carluke; Gair; Robroyston: in Upper Limestone shales.

The ornament of a very young branch (fig. 6) has a curious resemblance to that of *Sulcoretipora*. Figure 7 shows one of the apertures at the margin of the non-celluliferous aspect, and the wavy striæ around it.

The generic position of the fossil is uncertain. It is not a *Polypora*, since it is not reticulate. *Thamniscus*, King, shows a tendency to reticulation; but the junctions are at small angles. *Synocladia* presents the next step towards the *Fenestella* type. If the gemmuliferous vesicles described by King are essential to his *Thamniscus*, this character is wanting in our species, even in the best-preserved specimens. Longitudinal sections show the cells starting from an imaginary axis, and reaching the surface at various levels; but the tendency to an arrangement in transverse series, seen in fig. 2, is apparent. We have not yet found the base of attachment. Meanwhile, though strongly disposed to regard this fossil as a true *Hornera* or a member of a closely allied genus, we think it safer to leave it in the Palæozoic genus *Thamniscus*, and to name it *Th.? Rankini*, after the gentleman to whom we owe the finest examples.

XLIII.—*Note on the Geographical Distribution of the* Temnocephala chilensis *of Blanchard*. By James Wood Mason, Professor of Comparative Anatomy, Medical College, Calcutta.

Some months ago I received from Captain F. W. Hutton, Curator of the Otago Museum, Dunedin, New Zealand, a series of specimens of the freshwater crayfish lately described by him in this Journal under the name of *Paranephrops setosus*, and was astonished to find, in the sediment at the bottom of the jar containing these crustaceans, numerous examples of this remarkable little Trematode (which owes its generic name to the fact that the cephalic end of its body is divided by four fissures into five tentacular processes, and

which is always found living ectoparasitically on the bodies of freshwater crustaceans); but none of them being still adherent to the integument of their "chum," and it consequently appearing to me just possible that they might have been detached from some other animal previously received from Chili in the same jar, I deemed it the wiser course to wait for more conclusive evidence of so interesting a distributional fact.

I have since received from my friend Mr. W. Guyes Brittan, of Christchurch, New Zealand, an abundant supply of each of two species of crayfish, from the rivers Avon and Waimakiriri respectively, two or three individuals of each of which have great numbers of this Trematode still affixed to the smooth intervals between the spines, both of the carapace and of the chelipeds. The occurrence of *Temnocephala* in New Zealand is thus established.

In their present shrunken condition, the little creatures closely resemble a split pea, with the tentacles projecting, fringe-like, from a portion of the circumference, and range from 1 to 4 or 5 millims. in diameter.

Dr. R. A. Philippi, who gives (in 'Archiv für Naturgesch.' 1870, vol. xxxvi. pp. 35–40, pl. i. figs. 1–6) some details of its structure, states that he himself found it in Chili on a species of *Æglea*, and on no other river-prawn. Dr. C. Semper, who met with it in the Philippines on various species of freshwater crabs, in an interesting and full account (in 'Zeitschr. für wiss. Zool.' 1872, vol. xxi. pp. 307–310, pl. xxiii.) of its anatomical structure, shows conclusively that its true position is amongst the Trematodes, and not amongst the Leeches, as was supposed by Blanchard and Moquin-Tandon.

Calcutta, March 5, 1875.

P.S.—Since the above was written, I have received the zoological collections made by Major Godwin-Austen during the expedition against the Daflas (as certain of the wild Mongoloid inhabitants of the north-east frontier of India are called), and found a single specimen of *Temnocephala chilensis* in a bottle containing, besides numerous land animals of various groups, two fishes, to one of which it had in all probability been attached.

Indian Museum, Calcutta,
March 19, 1875.