

one, and, further, that I can satisfactorily demonstrate most that I have put forward, yet further research is needed to render the matter more certain, and especially to clear up the question of the ultimate termination of the nerve filaments.

The following is the list of authors' works referred to; and to those who may be desirous of entering more fully into the history of the subject I would specially recommend the work of Paul Meyer on the 'Labyrinthe Membraneux,' just published.

Max Schultze.—'Ueber die Endigungsweise des Hörnerven im Labyrinth,' 1858. J. Müller, 'Archiv für Anat. u. Phys.'

Kölliker.—'Handbuch der Gewebelehre des Menschen,' 1867.

M. V. Odenius.—'Ueber das Epithel der Maculæ Acusticæ beim Menschen,' 1867. 'Archiv für Mikros. Anat.'

C. Hasse.—"Der Bogenapparat der Vogel," Siebold u. Kölliker, 'Zeitschr. für Wissensch. Zoologie,' Bd. xvii, p. 381.

C. Hasse.—'Das Gehörorgan der Fische.' Idem, p. 454.

Rüdinger.—'Stricker's Histology,' vol. iii.

Ebner.—"Das Nerven-Epithel der Cristæ Acusticæ," in 'Schriften des Med. Natur. Wissensch. Vereins zu Innsbruck,' 3 Jahrg., 1872.

Paul Meyer.—'Etudes Histologiques sur le Labyrinthe Membraneux,' 1876.

On some FORAMINIFERA from the LOO CHOO ISLANDS. By
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A PRESSED and mounted specimen of a small alga, labelled "*Laurencia paniculata*, Loo Choo Islands," was recently sent to me by Dr. E. Perceval Wright, with the suggestion that some Foraminifera which had been entangled in its meshes might be worth examination, and that at any rate it would be interesting to know what particular species had lived amongst its miniature branches. As the sea-weed itself was of some value, two or three inches were taken, and the portion as separated yielded examples of the following species of Foraminifera, some of them in sufficient number to supply two or three good mountings.

Hauerina compressa, d'Orbigny.

Quinqueloculina subrotunda, Montagu.

„ *bicornis*, Walker and Jacob.

„ *ornatissima*, Karrer.

Peneroplis pertusus, Batsch.

¹ From 'Proceedings Royal Irish Academy,' vol. ii, ser. 2, 'Science.' Read May 8th, 1876, published July, 1876.

Vertebralina striata, d'Orbigny.
Orbitolites complanata, Lamarck.
Discorbina rosacea, d'Orbigny.
 „ *globularis*, d'Orbigny.
Planorbulina Mediterranensis, d'Orbigny.
Calcarina Spengleri, Gmelin.
 „ *calcar*, d'Orbigny.
 „ *hispida*, spec. nov.
Tinoporus baculatus, Montfort.
Cymbalopora Poeyi, d'Orbigny.
Heterostegina depressa, d'Orbigny.

These form altogether a considerable list, considering that the entire weight of sea-weed, shells, and extraneous adherent matter could not be more than fifteen or twenty grains. One or two forms were represented by a single specimen only, but no species had been retained of which a good characteristic example, large or small, were not present; doubtful forms were rejected, or the list might have been considerably extended. The most abundant species of *Calcarina* was the pretty hispid modification figured by Dr. Carpenter (Introd. Foram., Pl. xiv, fig. 6), but not hitherto described or named as far as I know. I propose to call this *C. hispida*, and its characters will stand as follow. I have met with larger specimens in Australasian sands, but have never seen any so beautifully perfect.

CALCARINA HISPIDA, *spec. nov.*—Test free, unequally biconvex, rotalian; margin, thin, lobulate or rowelled; segments numerous, slightly inflated; peripheral borders thin, rounded, angular, or produced sufficiently to form radiating spurs. Surface covered with adpressed spiny processes, obscuring the sutures, except those of the later chambers. Diamet. $\frac{1}{20}$ inch (1.3 mm.) or more (*vide* Carpenter, *op. cit.*, Pl. xiv, fig. 6). The characters are, indeed, very much those of *Calcarina calcar*, excepting for the superficial spiny armature.

Quinqueloculina ornatissima (Karrer, Sitzungsber. k. Akad. Wiss. Wien, 1868, vol. lviii, p. 151, pl. 3, fig. 2) deserves a passing notice. It is an interesting, highly ornate form with transverse crenulations crossed by longitudinal striæ, and though I had previously found it in some Polynesian sands, it has not been recorded as a recent species. Dr. Karrer's specimens were from the Miocene of the Banat, in Austria. Only a single example was found in this Loo Choo gathering, and that is slightly broken.

At the time I received the sea-weed from Dr. Wright I was endeavouring to summarise what was known of the

parasitic types of Foraminifera in connection with my work upon the Rhizopod fauna of the Carboniferous rocks, and I had arrived at the conclusion that adherent growth, at one period of life or another, was a much more common and more significant character in this group of organisms than has hitherto been supposed. It was therefore of interest to ascertain not only what species of Foraminifera were present, but how many of them, if any, were really parasitic, and not simply entangled in the meshes of the weed amongst which they had lived, or adherent by the mucilaginous matter coating the surface. The piece of the alga which had been separated, consisting chiefly of the root and the commencement of the larger branches, was therefore put into warm water and allowed to macerate for twenty-four hours, by which time it had swollen to its original size. Repeated sharp agitation during the maceration served to liberate most of the Foraminifera. It was then cut into little pieces, and the filaments of a conferva with which it had been associated in growth were carefully removed, the pieces were put into a sieve and washed under a strong stream of warm water from a tap, using every means even to the extent of some violence to dislodge anything that had not some connection with the surface of the plant beyond mere chance adhesion. The specimens that remained were comparatively few in number, and pertained to a limited range of species, but for the most part they had evidently lived in the parasitic condition in which they were found. They were chiefly the young of *Orbitolites complanata* and *Cymbalopora Poeyi*, with small examples of *Planorbulina Mediterranensis*. The last-named needs no comment, as it is an essentially parasitic species, but I am not aware that either *Orbitolites* or *Cymbalopora* has ever before been noticed in this condition. The little specimen of *Cymbalopora* might have passed for the fry of one of the other Rotalian genera, but for the presence of larger specimens of the same species.

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