

geological record," as it seems to indicate the former existence of a family or tribe of creatures whose full history must ever remain unknown.

Order *Echinida*. Genus *Echinothuria*.*

E. floris, n. sp.; test globular?, diameter of compressed specimen 4 inches, thickness $\frac{1}{2}$ an inch, lantern projecting $\frac{1}{2}$ an inch; composed of ten segments or double series of imbricating plates, ornamented with obscure miliary granules and small spine-bearing tubercles, a few larger than the rest; *interambulacral* plates narrow, slightly curved, with the convex edge upwards and overlapping; the alternate plates bearing one large extero-lateral tubercle, perforated, and surrounded by a raised ring and smooth areola; largest plates measuring 6 lines in length, the smallest 3 lines or less (the longest in second specimen equalling 7 lines); *ambulacral* plates 7 lines long, equalling the breadth of the exposed portion of eight plates, similar to the former, but curving and imbricating downwards towards the dental orifice, and having two small plates, each perforated by a pair of pores, intercalated in a notch of the middle of the lower margin; a third pair of pores perforating the plate itself a little external to the centre; primary tubercles few, irregularly distributed.

Spines of three kinds; those adhering to the plates minute and striated; fragments of larger spines (not certainly belonging to the species), striated, annulated, and furnished with a prominent collar to the articular end (Fig. C); the third kind minute, clavate and truncate, articulated (?) to a slender stalk (Fig. E *d*).

EXPLANATION OF PLATE.

Fig. A. Mr. Flower's fossil; *a*, centre of upper surface; *b*, an interambulacral segment; *c*, ambulacrum; *d*, lateral half of a second interambulacrum.

Fig. B. Mr. Glass's specimen; *o*, dental apparatus; *a*, inner surface of apical portion of an ambulacrum; *c, e, g, i, l*, position of the five ambulacral segments; *b, d, f, h, k*, position of five interambulacral segments, of which only fragments remain; *d, k*, position of small clavate spines.

Fig. C. Three ambulacral plates near the summit, showing to what extent their outer ends are overlapped by the interambulacral plates.

Fig. D. One of the larger spine-fragments, natural size and magnified.

Fig. E. Oral disk and teeth of a recent *Cidaris*; *a*, the five ambulacral segments with notched and perforated plates.

CORRESPONDENCE.

Foraminifera of the Chalk.

SIR,—I was much pleased, in looking over your "Thoughts on Dover Cliffs," by meeting with the Foraminifera figured in Plate I. representing so many forms; also with the notes of the figured specimens by Professor

* Etymologists need not trouble themselves about the derivation of this name; it is intended merely to express the dilemma in the writer's mind, arising from imperfect knowledge, but which he believes to have no foundation in nature.

Rupert Jones, F.G.S., obligingly given you. I ask, would you have the kindness to give me a simple method of treating chalk so as to procure these microscopic creatures, whose carcasses build up so many thousand miles of solid chalk rock?

Yours truly,
R. M. F.

[To prepare chalk for microscopic examination, if only small quantities are to be treated, the best plan is to select a piece of soft white chalk,—that which has been kept some time in a cabinet is most easily worked,—especially chalk from the interior of an Ananchyte or Galerite, and to wash it with a moderately soft nail-brush in a hand-basin half full of water, keeping the chalk and brush under the surface, so that the loosened particles should all fall in the water. To prevent the chalk from being worn into longitudinal furrows, the part under the brush should be constantly moved round. It should also be looked at occasionally, with a hand magnifier, so that any large specimens of Bryozoa and Foraminifera may not be destroyed by rough brushing, but be more carefully picked out with a needle or penknife, or separated by the careful use of the brush. When a sufficient quantity has been brushed down, the water should be stirred and the chalky portion poured away, or water should be allowed to run into and overflow the basin, until the water remains clear over the sediment. The latter should then be placed in a round-bottomed cup or gallipot, and rubbed gently with the finger in water, until, by further washing, some more of the chalk has been removed, when the residue should be carefully dried in an oven or otherwise, without the least disturbance. When dry, it may be sifted and picked, but if it be still “chalky,” further manipulation by gentle rubbing in water will be necessary, especially if the chalk-dust has been put by for some time after having been prepared. On a large scale, chalk may be prepared by being broken up in a mortar, or roughly ground with a brick, stone, or roller, on a pavement, and then freely washed in water, the large fragments being excepted.

The above, and other instructions for “the preparation of clays, sands, and chalk for microscopic purposes,” were given in the first volume of the ‘*Geologist*,’ 1858, p. 248, by Mr. Rupert Jones; and in the same paper, a sieve, with a double cylinder, and fitted with different zinc perforated plates, was described and figured. Such sieves can be had of Mr. Snow, zinc-worker, 50, Millbank Street, Westminster, at the cost of about 3s.]

NOTES AND QUERIES.

DISCOVERY OF ANOTHER CAVE AT UPHILL.—Sir,—It may be interesting to your readers to learn that another cave has lately been opened at Uphill. Its entrance is on the south side of the rock, at an elevation of about sixty feet from the base. Besides the usual stalagmitic breccia, common to the caves of the Mendips, this is partially filled with an unctuous loam, which is exceedingly rich in animal remains. I have obtained bones of the wolf, fox, wild-boar, otter, and also the horns of a stag; and, which adds not a little to the interest of the discovery, several human remains associated with them—amongst others, a thigh bone, part of a frontal bone, and portions of the upper jaw with the teeth *in situ*, of a human adult. I have been informed several crania have been exhumed, but in consequence of there being no local museum in which to deposit them, they have been removed to Oxford. As yet no trace of any extinct animal has been met with; but should such hereafter be found, the problem of the antiquity of man will meet an unexpected solution. I believe the merit of the discovery of this cave is due to Mr. Parker, of Oxford, at whose expense the workmen are employed in exploring it.

I remain, Sir, your obedient servant,

CHARLES POOLEY.

Weston-super-Mare, August 25, 1863.