

on to Greenhithe, some returning at once to London, others remaining for tea. It was explained that although the chalk here abounds with fossils, the collaboration of the workmen is necessary for the acquisition of any considerable collection.

Appended is a report by Mr. Frederick Chapman on the microscopic fossils found in some chalk obtained from the Swanscombe pit.

NOTE ON SOME MICROSCOPIC FOSSILS FROM THE CHALK OF SWANSCOMBE.

By FREDERICK CHAPMAN, F.R.M.S.

DURING the excursion made by the members of the Geologists' Association to the above place on June 16th, 1894, a small specimen of chalk was taken, with the view of testing it for microscopic fossils.

The sample was obtained from the zone of *Micraster*, probably the lower portion, or zone of *Micraster cor-testudinarium*. The particular pit from whence the specimen came was the last one visited, and the section of chalk here showed very strikingly the peculiar intercalation, along the planes of bedding, of "some layers of brown sandy clay, sometimes eight inches thick, in parts rather finely bedded," as recorded by Mr. Whitaker,* in a Chalk-pit about one mile S.S.E. of Stone, and which, as he remarks, have evidently been washed down from the overlying beds, through rifts in the Chalk.

Taking into consideration the small quantity of Chalk examined (about two cubic inches), the results, especially as regards the Ostracoda, are particularly satisfactory.

There are twenty-six species and varieties of the Ostracoda, one of which, viz., *Cytheropteron laticristatum* (Bosquet), is new to British Cretaceous deposits; and amongst the number are two undetermined species of *Cythereis*.

Of the Foraminifera there are forty-eight species and varieties. It is a fact worth recording that the inornate species of *Globigerina* are here conspicuous by their almost complete absence, being represented by a solitary specimen of *G. bulloides*, d'Orbigny, whilst *G. marginata*, Reuss—the prickly-margined species—is common. The occurrence of the siphonate form of *Tritaxia*, *T. foveolata*, Marsson, is also interesting, as it is apparently confined to the Upper Chalk; and I take this present opportunity of mentioning its occurrence, with the type species *T. tricarinata*, Reuss, in the Phosphatic Chalk of Taplow, since it was inadvertently omitted from my list.†

* *Mem. Geol. Survey; Geology of London*, 1889, vol. i, p. 82, fig. 5.

† *Quart. Journ. Geol. Soc.*, vol. xlviii (1892), p. 516.

In the list given below, initial references are made as to frequency of occurrence, viz., very rare; rare; frequent; common; and very common.

Ostracoda.

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| 1. <i>Pontocypris triquetra</i> (Jones) v.r. | 16. <i>Cytheropteron laticristatum</i> ,
(Bosquet) v.r. |
| 2. " <i>trigonalis</i> , J. & H. v.r. | 17. " <i>sphenoides</i> (Reuss.) r. |
| 3. <i>Bairdia Harrisiana</i> , Jones v.r. | 18. " <i>concentricum</i>
(Reuss), var. <i>virginea</i> ,
Jones c. |
| 4. " var. <i>amplior</i> , J. & H. r. | 19. " <i>umbonatum</i> (Will.)
var. <i>acanthoptera</i>
(Marsson) r. |
| 5. " <i>subdeltoidea</i> (Münster) r. | 20. <i>Cytherella ovata</i> (Römer) v.c. |
| 6. <i>Bythocypris Brownei</i> , J. & H. r. | 21. " <i>Muensteri</i> (Römer) c. |
| 7. " <i>silicula</i> (Jones),
var. <i>minor</i> , J. & H. r. | 22. " <i>subreniformis</i> , J. & H. r. |
| 8. <i>Cythereis ornatissima</i> (Reuss.) f. | 23. " <i>obovata</i> , J. & H. f. |
| 9. " var. <i>reticulata</i> , J. & H. f. | 24. " <i>Williamsoniana</i>
Jones f. |
| 10. " var. <i>nuda</i> , J. & H. r. | 25. " var. <i>granulosa</i> , Jones f. |
| 11. " var. <i>stricta</i> , J. & H. v.r. | 26. " var. <i>stricta</i> , J. & H. r. |
| 12. " <i>Wrightii</i> , J. & H. v.r. | |
| 13. " <i>sp. indet.</i> v.r. | |
| 14. " <i>sp. indet.</i> v.r. | |
| 15. <i>Pseudocythere</i> (?) <i>simplex</i> , J.
& H. f. | |

Foraminifera.

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| 1. <i>Textularia globulosa</i> , Ehrenb. f. | 26. <i>Nodosaria obliqua</i> (L.) v.r. |
| 2. " <i>turris</i> , d'Orb. r. | 27. " <i>Zippeti</i> , Reuss. v.r. |
| 3. " <i>sagittula</i> , DeFr. r. | 28. <i>Fron dicularia angustissima</i> ,
Reuss. v.r. |
| 4. <i>Verneuilina triquetra</i> (Münst.) r. | 29. <i>Vaginulina legumen</i> (L.) v.r. |
| 5. " <i>spinulosa</i> , Reuss. f. | 30. <i>Cristellaria cultrata</i> (Montf.) c. |
| 6. <i>Tritaxia foveolata</i> , Marsson f. | 31. " <i>rotulata</i> (Lam.) f. |
| 7. " <i>tricarinata</i> , Reuss. v.r. | 32. " <i>navicula</i> , d'Orb. v.r. |
| 8. (?) <i>Spiroplecta annectens</i> (P.
& J.) v.r. | 33. " <i>Gaudryana</i> , d'Orb. r. |
| 9. <i>Gaudryina Jonesiana</i> , Wright v.r. | 34. " <i>crepidula</i> (F. & M.) v.r. |
| 10. " <i>pupoides</i> , d'Orbigny v.r. | 35. <i>Flabellina Baudouiniana</i> ,
d'Orb. r. |
| 11. <i>Bulimina elegans</i> , d'Orb. r. | 36. " <i>rugosa</i> , d'Orb. r. |
| 12. " <i>obtusa</i> , d'Orb. f. | 37. " <i>pulchra</i> , d'Orb. v.r. |
| 13. " <i>brevis</i> , d'Orb. r. | 38. <i>Ramulina globulifera</i> , Brady r. |
| 14. " <i>Murchisoniana</i> ,
d'Orb. r. | 39. <i>Globigerina marginata</i> (Reuss.) c. |
| 15. " <i>variabilis</i> , d'Orb. f. | 40. " <i>bulloides</i> , d'Orb. v.r. |
| 16. " <i>obliqua</i> , d'Orb. v.r. | 41. <i>Truncatulina Ungeriana</i>
(d'Orb.) f. |
| 17. " <i>Preslii</i> , Reuss. v.r. | 42. <i>Anomalina ammonioides</i>
(Reuss.) c. |
| 18. " <i>elegans</i> , d'Orb. new
var. ? v.r. | 43. " <i>Lorneiana</i> (d'Orb.) c. |
| 19. <i>Virgulina Schreibersiana</i> ,
Czjzek. r. | 44. " <i>rotula</i> , d'Orb. r. |
| 20. <i>Bolivina obsoleta</i> , Eley, = <i>B.</i>
<i>quadrilatera</i> (Schw.) c. | 45. <i>Pulvinulina Micheliniana</i>
(d'Orb.) c. |
| 21. <i>Lagena sulcata</i> , W. & J. r. | 46. " <i>repanda</i> (F. & M.) v.r. |
| 22. " <i>gracilis</i> , Will. v.r. | 47. " var. <i>concamerata</i> (Mont.) v.r. |
| 23. <i>Nodosaria aculeata</i> , d'Orb. r. | 48. <i>Rotalia Soldanii</i> , d'Orb. f. |
| 24. " <i>oligostegia</i> , Reuss. r. | 49. " <i>exsculpta</i> , Reuss. f. |
| 25. " <i>consobrina</i> (d'Orb.) v.r. | |