

- ROTHSTEIN, A. T. V., 1963. Remarks in discussion on paper by D. R. Bowes and R. G. Park. *Proc. geol. Soc. Lond.*, **1608**, 85-6.
 STEWART, F. H., 1947. The Gabbroic Complex of Belhelvie in Aberdeenshire. *Quart. Jour. geol. Soc. Lond.*, **102**, 465-498.

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 15th March, 1964.

TONSTEIN BAND IN THE SOUTH LANCASHIRE COALFIELD

SIRS.—R. A. Eden *et al.*¹ refer to the discovery of several tonstein bands in the coalfields of the East Midlands. In May 1961, a 1 inch tonstein band was discovered in the upper part of the Worsley Four Feet Seam at Agecroft Colliery, Lancashire, in the course of work on the petrology of coal seams and associated measures, at the Chester Coal Survey Laboratory (now operating from Shade House, Pendlebury).

Macroscopically, the band had been recorded as an inferior dull coal. However, on microscopical examination, with oil immersion objectives, of stained polished blocks, vermicules of kaolinite, displaying the characteristic "cat's tail" structure, were clearly visible. A considerable amount of carbonaceous matter was also present, the ash content of the band being 46 per cent.

Thin sections were prepared at the Sheffield Coal Survey Laboratory and it was confirmed that the band was indeed a tonstein, containing lenses of microcrystalline kaolinite in addition to the vermicules.

Examination of crushed samples of the seam from the nearby Astley Green Colliery also indicated the presence of the band at the same horizon. This band may be the equivalent of that recorded in the High Main Seam of the East Midlands.

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¹ EDEN, R. A., R. W. ELLIOTT, R. E. ELLIOTT, and B. R. YOUNG, Tonstein Bands in the Coalfields of the East Midlands. *Geol. Mag.*, 1963, **100**, 47-58.

THECOSMILIA KAMBENSIS NOM. NOV. FOR *T. MAGNA* GREGORY SP. *NON* ÉTALLON

SIR.—J. W. Gregory described a coral from the Kambe Limestone of Kenya as *Aplophyllia magna* (*Monog. geol. Dept. Hunter. Mus.*, **4**, (10), 1930, p. 204, pl. 19, figs. 3a, b), which in 1963 (*Overseas Geol. Min. Resources*, **9**, (1), p. 36, pl. 3, fig. 4) I showed should be referred to *Thecosmilia* Edwards and Haime. I am indebted to Prof. O. F. Geyer, of Stuttgart, for pointing out to me that *T. magna* (Gregory) is thus a junior homonym of *Thecosmilia magna* Étallon (*in* Thurmann, J. and Étallon, A., *Leth. bruntr.*, 1864, p. 385, pl. 54, fig. 11; see also Koby, F., *Monographie des polypiers jurassiques de la Suisse, Mém. Soc. paléont. Suisse*, **11**, (4), 1884, p. 166, pl. 44, figs. 1-3, and Geyer, O. F., *Paläont. Zeitsch.*, **29**, (3/4), 1955, p. 119). I therefore propose the name *Thecosmilia kambensis* for *T. magna* Gregory sp. *non* Étallon.

As Gregory designated no specimen as holotype of *Aplophyllia magna*, I choose as lectotype the Hunterian Museum specimen figured by Gregory, *op. cit.*, pl. 19, fig. 3*b*, which is part of a block with the Register number C.4075.

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17th March, 1964.

The Editors regret that on page 190 of the previous issue of the *Geological Magazine*, in a letter by I. M. WEST on the "Age of the Alpine folds of Southern England", a text-figure, belonging to another letter not yet published, was inadvertently inserted.

REVIEWS

EARLY INVESTIGATIONS OF THE DEVONIAN SYSTEM IN NEW YORK, 1656-1836.

By J. W. WELLS. *Geological Society of America, Special Publication*, Number 74. 74 pp., 11 plates, 8 figs., 5 tables. 1963. Price, 2 dollars.

The great areas of Devonian rocks in New York State are famous for their well exposed and often highly fossiliferous sections, and for the splendid demonstration these provide of a diachronous succession of facies. In this little book, J. W. Wells presents a chronological account of published observations and hypotheses up to 1836, the date of the foundation of the Geological Survey of New York. These were pioneer days, before the definition of the Devonian System by Sedgwick and Murchison in Europe, and before the accumulation of any organised body of field observations or the realisation of the importance of accurate fossil description and localisation.

French explorers and missionaries, approaching from the Great Lakes, made the first published observations, mainly on scattered oil springs. Lewis Evans first distinguished the Devonian terrane from the more highly deformed rocks to the East, on geomorphological evidence. During the "Mitchillian-Maclurean Era" (1790-1818), the New York region was classified into lithological or structural areas, and attempts were made, principally by Maclure, to fit these into the Wernerian classification. And, in spite of the recognition by C.-F. C. Volney of great lateral facies changes across the State, attempts to correlate with European formations, on gross lithology, were to retard New York geology for years to come. Mitchill recognised the marine significance of many of the fossils and reasonably suggested, on structural grounds, that the flat-lying strata were deposited in marine forerunners of the Great Lakes.

During the "Eatonian Era" (1818-36), Amos Eaton published a number of attempts at a generalised lithological succession, but was continually hampered by incomplete evidence of the relations of the different rock units to each other. He abandoned the struggle to force the terminology into a framework of European names and recognised the existence of cycles of alternating marine and terrestrial sedimentation and the lateral passage of one facies into another. However, in the absence of fossil control, transatlantic correlation was a matter of guess-work, and he supported a correlation of the lower Devonian limestones of New York with the Lower Carboniferous Mountain Limestone of England. Eaton's general contribution to a synthesis was remarkable, and came at a time when geological work in the area "might soon have reached a dead center of vague generalization and haphazard observation." This was achieved in the face of sniping criticism by, amongst others, the Englishman, G. W. Featherstonhaugh (Fernshaw), a Wernerian then resident in America.