

in the Memoir. The Hoar Edge Group is one of the more attractive of the Caradoc subdivisions, for not only do the rocks show a reduction in thickness and a lithological change from grits to calcareous sandstones when traced north-eastwards along the strike, but the grit has yielded wind faceted pebbles.

In the Coalbrookdale Coalfield the abbreviated succession of the Carboniferous Limestone, referable to the Dibunophyllum Zone, is succeeded unconformably by the Middle Coal Measures; in the Shrewsbury Coalfields only Upper Coal Measures are developed, and of the divisions recognized in North Wales or the Midlands only the Coed-yr-Allt Group and the Erbistock Group have been determined within the boundaries of Sheet 152. The concluding chapters of the Memoir are devoted to glacial and post-glacial deposits, and to economic resources including mineral products, water supply, roadstones, and other items. Among the appendices are contributions on soil and agriculture, and on age-determinations by the helium method of the Little Wenlock and Clee Hill basalts.

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CORRESPONDENCE.

ASHDOWN SAND—WADHURST CLAY JUNCTION.

SIR,—In consultation with members of the Weald Research Committee (Geologists' Association), I am investigating in detail the Ashdown Sand—Wadhurst Clay Junction in a part of the Weald, and hope to extend my work throughout the area. I am communicating with you in the hope of avoiding unnecessary duplication of this work by others, and to put on record a few points which I have already established. Most of the localities already studied are on the 6 in. sheets 44, 45, and 58.

The topmost few feet of the Ashdown Sand are usually horizontally bedded and may contain a small percentage of glauconite and a Brittany suite of minerals. They are always found to be capped by a highly current-bedded series of grits or conglomerates. These indicate a phase quite distinct from that below (e.g. they overstep the occasional oblique beds of the lower phase in deltaic fans). Their upper surface (on which the lower Wadhurst shales rest) is ripple-marked with the ripples normally aligned in a N.E.—S.W. direction.

The basal Wadhurst shales and siltstones exhibit certain distinct and fairly widespread phases :—

(1) The lowest phase is a bone-bed containing *Hybodus* and *Lepidotus*, well exposed in the neighbourhood of Brede. (2) A beautifully developed *Equisitites* sp. "marsh", in which all the specimens are in a vertical posture, occurs also in the lowest foot. The species closely resembles *E. lyelli*, but is much smaller, and is not referable

to *E. burchardti* described by Seward, because of the greater number of scale leaves at each node. This marsh has already been mapped over an area of 12 square miles with a length of at least 6 miles. Its N.E., E., and S.E. boundaries are not yet fully ascertained, for there the horizon becomes sandier and the marsh fades out. (3) Above this bed, and partly intermingled, is a layer of *Equisitites lyelli* (Seward) often packed with large specimens lying horizontally. Whether this represents a wrecked marsh or drifted material is still uncertain. Its known extent, at present, is about 11 square miles. (4) A shelly bed (3 inches of smashed *Cyrena* shells) supervenes in one district, and this has been traced along an apparently restricted belt for $1\frac{1}{2}$ miles. (5) In the sandier facies about Rye and Fairlight, where the lower marsh is not found, less sandy conditions developed later and brought with them the *Equisitites* "marsh" for the first time at a horizon 2 feet above that of its occurrence in Brede. By that time it had probably disappeared in the west and north. (6) In several localities the shales are succeeded by a thick series of sandstones full of casts of *Cyrena*, with bands of Tilgate stone capped by another bone-bed in Brede. This is very distinct from the lower one in its greater faunal variety (*Hybodus*, *Lepidotus*, *Tretosternum*, ? *Iguanodon*, *Goniopholis*, *Cyrena*, plants) and in its conglomeratic character. I have little doubt that it is this bed which is of the same age as the Battle, Crowhurst, and Hollington occurrences. (7) The succeeding 9 feet of siltstones and shales may include a second *Equisitites* "marsh" with nine shelly bands and a third (shelly) bone-bed (*Lepidotus* and *Hybodus*). The top of this is certainly less than 25 feet above the Ashdown grits.

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THE UNIVERSITY, READING.
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REPORTS AND PROCEEDINGS.

MINERALOGICAL SOCIETY.

3rd November, 1938.

(1) "On an example of α -quartz showing good cleavages parallel to the three prism-faces." By Dr. J. Drugman.

(2) "On an example of α -quartz crystals with a steep rhombohedron as predominant form." By Dr. J. Drugman.

(3) "The relation of stellerite and epidismine to stilbite." By Dr. A. Pabst. (Communicated by Mr. F. A. Bannister.)

It is shown that stellerite and epidismine are varieties of stilbite which, though truly monoclinic, are both optically and morphologically pseudo-orthorhombic. A new analysis of stellerite-like stilbite is reported.