Upper Keuper is well displayed, whilst there is a sharp line of demarcation between the former and the *Avicula-contorta* Shales. Most of the characteristic fossils of the British Rhætic are met with at Pylle Hill, together with a few forms which are new to England, and some of these possibly new to science.

A detailed section of the subdivisions of the Rhætic and adjacent beds, and a list of Rhætic fossils found in the section, are given by the author.

2. "A Microscopic Study of the Inferior Oolite of the Cotteswold Hills, including the Residues insoluble in Hydrochloric Acid." By Edward Wethered, Esq., F.G.S., F.C.S., F.R.M.S.

The author gives the following main divisions of the Inferior Oolite of the Cotteswold Hills in descending order:

Ragstones.
Upper Freestones.
Oolitic Marl.
Lower Freestones.
Pea Grit.
Transition beds resting on Upper Lias.

The strata are described, and the results of microscopic examination of the different beds given. These latter confirm the author's views as to the important part which *Girvanellæ* have taken in the formation of oolitic granules; whilst an examination of the borings referred to by Prof. Judd in the discussion of Mr. Strahan's paper "On a Phosphatic Chalk" convinces the author that these have no connexion with the genus *Girvanella*.

In the second part of the paper the insoluble residues left after treating the various deposits with acid are considered. They contain chiefly detrital quartz, felspars, zircons, tourmaline, chips of garnet, and occasionally rutile. In the argillaceous beds silicate of alumina was found to occur plentifully. The detrital material is considered to be due to denudation of crystalline felspathic rocks, and not of stratified ones. This view seems to be supported by the quantity of felspar and its good state of preservation.

The paper concludes with a consideration of the quantity of residue and the size of the quartz-grains in the different deposits, which are summarized in the following table:—

	Percentage of Residue.	Size of quartz grains, in millim.
Ragstones	2·8	·17
Upper Freestones.....	1·1	·12
Oolitic Marl	3·2	·09
Lower Freestones.....	1·8	·13
Pea-Grit Series	5·0	·14
Transition Beds	38·3	·13

This shows a great falling off in the percentage of residue above the Transition Beds. That of the Freestones is remarkably low, and it would appear that these rocks were formed under conditions which allowed of very little sediment being deposited.

ERRATUM.—In the May Number, p. 240, last line but one of first paragraph, *for* "Metamorphic" *read* "Metatropic."