

geological affinity with strata which occur in great force near the Rhaetian Alps. At the distance of a half-a-mile further along the shore the red marls presented a thickness of nearly 100 feet, at about 60 feet below the upper limit of which abundance of fibrous gypsum (sulphate of lime) occurs in horizontal layers, intersected by nearly vertical veins and threads; strontian, too, occasionally occurs in this stratum. At this part of the cliff it was observed that the fish-bed resting on pale green marls, which at the southern end of the cliff was seen to be very thin, had gradually expanded to a thickness of eight or ten inches, and consisted of a conglomerated mass of rounded portions of the subjacent marly sandstone, coprolitic nodules, detached vertebræ and other bones of the *Plesiosaurus*, parts of Fishes, especially teeth, and some Shells. It is this bed which is famous in all text-books on geology under the name of the Aust Bone-bed.

In the course of the walk three examples of dislocation of the strata were seen; the nature of these faults were explained, and they were shown to possess all the characteristics of normal faults as they occur in coal-mining. Many of the party worked hard with hammers and chisels, and were fortunate in obtaining good illustrations of the Bone-bed, and other specimens. A portion of a vertebra and other bones of a *Plesiosaurus*, a spine-bone of a fish, *Nemacanthus*; teeth of *Ceratodus*, *Saurichthys*, and *Hybodus* were found, together with various fossil shells, as *Pecten Valoniensis*, *Cardium Rhaeticum*, *Modiola minima*, *Anatina*, *Avicula longispinosa*—a very rare shell in this locality, and *Ostrea liassica*.

On the return to the New Passage, that characteristic phenomenon of tidal rivers possessing a rapid down stream, the bore, or aeger, was well seen, like a perpendicular wall of water, about three feet high, advancing up the river. At the New Passage Hotel a most comfortable dinner awaited the party, and when they had done justice to it the members returned to Bristol by the 6.45 p.m. train.

We understand that the Council of the Society are endeavouring to form Geological, Botanical, and Chemical sections, for the special advancement and study of these branches of science. The first meeting of the next session will take place on the first Thursday in October.—W. W. S.

CORRESPONDENCE.

ON ESKERS OR KAIMS.

To the Editor of the GEOLOGICAL MAGAZINE.

THE Kaims, or Eskers, as we call them in Ireland, seem to be receiving attention, as I find them mentioned in nearly every recent geological publication; * but the observers all seem to examine only

* See GEOLOGICAL MAGAZINE, No. 1, pp. 34, 45; and No. 2, p. 89.

a part, and not the whole system of Kaims. In Ireland the Esker systems extend sometimes for over a hundred miles, but are modified by local circumstances. On low ground they are well defined ridges, which break into *Shoal-eskers* (consisting of irregular mounds and short ridges), crossing high ground, but again becoming well defined when the high ground is passed. If a hill occurs, the Esker will be either deflected and form a *Fringe-esker* round it, or there will be a break in the Esker system, as it ends on or near one side of the hill, but sets on again at the other side.

The Esker-drift seems to be *washed* Boulder-drift, or 'Post-drift Gravels;' and in sections which expose the two kinds a well-marked line of demarcation will be observed between them, which would seem to prove that they are different kinds of Drift. Of course if the 'Post-drift Gravels' were formed by the washing of the Boulder-drift, we shall not always find the latter entirely washed, as sometimes the washing power would not have been strong enough; and in these places the two kinds of Drift would seem to blend one into another. This is not the proper place to examine the 'Post-drift Gravels;' but where they are well developed they always have a marked boundary. In the basal beds of an Esker, or in an Esker in which the gravel is unstratified, blocks will be found that are striated and polished; but this does not prove that they are of the same age as the Boulder-clay; since these blocks may have been polished before they were removed from the Boulder-clay, and were not afterwards rolled enough to obliterate the old marks. That this is the case seems likely, as the marks on them are not nearly as fresh as if they were taken direct from a bank of Boulder-drift.

I would suggest to observers that they should trace *Kaims* or *Esker Systems* across a wide expanse of country, and that they should carefully note the different changes that occur;—what effect high land has on the Esker Systems; what is the height of the land on which they are in well defined ridges; what the height when they break into Shoals; when they break into shoals, is the Drift 'Post-drift Gravels' or Boulder-drift, denuded into ridges and mounds, or partly one and partly the other? They should also note carefully all junctions between the two kinds of Drift. The 'Post-drift Gravels' sometimes form a gently undulating country, and do not break into ridges; and an observer ought to be careful not to confound it with a much older gravelly Drift which underlies the Boulder-clay (the Drift of the country before the Glacial Period), for which I would propose the name '*Preglacial Drift.*'—Yours, &c.,

G. H. KINAHAN.

EXELISSA v. KILVERTIA.

To the Editors of the GEOLOGICAL MAGAZINE.

MR. LYCETT* has given to *Cerithia* having an entire aperture the generic title of *Kilvertia*; and has referred *C. strangulatum*, D'Arch.,

* Supplementary Monograph, Moll. Great Oolite, p. 93. 1863.