

lost, never to be restored. He believed that Mr. Darwin and Dr. Hooker were right in their mode of investigation, and that the records of Insular and Arctic floras, combined with the aid given by fossils, may yet solve the problem which so interests every scientific man, since the publication of Mr. Darwin's work, and the results arrived at by Dr. Hooker.

MONTREAL NATURAL HISTORY SOCIETY.—The last meeting of this body for the session of 1866-67, was held at its rooms on April 29th. Principal Dawson read a paper "On Insects from the Carboniferous and Devonian Formations." Up to last year no remains of insects had been found in the Coal-fields of Nova Scotia, except a single head and small portions of a large insect found in the excrement of a reptile, which, along with other animal remains, were found in the trunk of a tree at the Joggins. This specimen seemed to indicate that the coal reptiles were insectivorous creatures. Last year Mr. James Barnes was fortunate enough to find the wing of an insect, in a bed of shale at Glace Bay, Cape Breton. Mr. Scudder, an eminent entomologist at Boston, considers that it belongs to the *Ephemera* group, and that it is a Neuropterous insect closely allied to the day and shad flies. The insect appears to have been of large size and it seems not improbable that this species may have haunted the swamps of the period, and have been preyed upon by Carboniferous fishes. Wings of four species of insects have been found by Mr. C. F. Hartt, in the plant-bearing Devonian shales, of St. John, New Brunswick. These are of considerable interest to the geologist, as being the oldest fossil insects known; the antiquity and exact date of the beds from which they are procured being unquestionable. These insects also belong to the Neuroptera, and seemed allied to the *Ephemera*. Like many other insects, they appear to have had a mechanical apparatus on their wing for producing sound, the structure of which was explained in detail. They appear to be a connecting link between the Neuroptera and Orthoptera.—*Montreal Gazette*, May 1, 1867.

CORRESPONDENCE.

DRIFT OF THE EASTERN COUNTIES.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—There are one or two facts which I think are serious objections to the view Mr. Maw has taken as to the age of the Cromer beds. The first is, that there does not exist along the Norfolk coast any such *continuous* margin of comparatively low ground as his paper would seem to imply. On the contrary, some portions of the cliffs are, I believe, as high as any part of the watershed of East Norfolk, and, as a rule, higher.

For example, at Trimmingham, one of the highest points of the coast and of the county, the spire of the Cathedral at Norwich, standing in the valley there but a few feet above the level of the sea,

and more than twenty miles from it in a direct line, is visible across a comparatively low country. I am not aware of any point inland, equally distant, from which it can be in the same manner seen. Other similar cases could be given. A reference to the Ordnance maps will show that the only line of hills which presents the appearance of an old coast line, at a higher level than the cliffs, is that which runs due west from Cromer; but this is distinctly intersected by the present coast line at the Lighthouse Hill, and certainly, the beds under discussion do not show there any signs of disappearing. From this point to Hasbro' the country very often slopes inland from the cliffs, and in a southerly direction is comparatively flat.

The rapid and unceasing encroachment of the sea along the Norfolk coast should also be remembered. Mr. Gunn gives an instance where ninety yards of the cliff have been swept away in thirty-five years; and I do not know any reason why this may not have been going on at a more or less rapid rate, perhaps from the very commencement of the present period. It will be thus seen that the present coast-line is a purely accidental one, and cut across what may have been once almost the centre of the county.

A very satisfactory reason can be given for the absence of the Boulder-clay (upper drift) from the coast section between Hasbro' and Weybourne; and that is, it has been completely denuded from the northern part of the county, as shown in Mr. Wood's map.

I am not aware of a single outline existing north of a line joining Hasbro', North Walsham, and Holt. I ought to say that Mr. Gunn thinks the Upper Drift does appear in the cliff at Hasbro'. I am sorry that I am unable to agree with him in this, but if it does occur there, it settles the question.

I am, yours truly,

F. W. HARMER.

HEIGHAM GROVE, NORWICH,
June 4, 1867.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—All I need say in reference to Mr. Maw's remarks is, to suggest that he give some sections drawn from his supposed high level Boulder-clay to that on the coast. I do not mean a hypothetical section like that at page 98, of vol. iv., but actual sections drawn to not less than half the horizontal scale of the Ordnance map (half-inch to the mile), and showing all the places marked on that map along the line taken. To have any value at all, such sections should show every bed, from the Crag upwards, that may come to the surface *en route*. Of these sections, two at least would be required: one from Norwich to some part of the coast section between Hasboro' and Weybourne; and another from Norwich to the Boulder-clay of Pakefield and Corton cliffs.

I hope that Mr. Taylor may succeed in obtaining recognizable specimens of shells from the Middle Glacial beds, so as to afford the means of comparison with those obtained from Macclesfield; for although I have examined hundreds of sections in this formation,