

Mr. Davies, in his communication in your April number, refers to the greater imbrication of the scales "mentioned by Mr. Mitchell" (no new discovery), and also to the general character of the ridges on the scales, as being differently and distinctly marked in the two genera. Undoubtedly, retaining the old nomenclature, the scales in *H. giganteus*, *H. nobilissimus*, etc., are less imbricated, and have the ridges more wavy and boldly marked than in *H. Flemingi*, but on examining a large collection of the Dura Den fishes, a pretty regular gradation from the less to the more imbricated and from the bold wavy ridges of the larger species to the almost parallel and delicately marked lines found on the scales of some of the others, may be traced. Mr. Davies's remark as to the position of the scales showing the crescent of points scarcely corresponds with my experience, but this may very probably be occasioned by our observations being principally confined to different species. In *H. Flemingi* many scales on every part of the body sufficiently preserved and exposed, which I have yet examined, show the crescent of points, while in other species these are only to be found on the scales along the flanks.

I am very glad to learn from Mr. Davies that the characteristic specimen of *Holoptychius Andersoni* in the British Museum shows, what I have been unable to detect in that species, the crescent of points,—as this is a considerable step towards clearing up the dispute *Holoptychius v. Glyptolepis*. Professor Huxley states in his introductory Essay to the X Decade of Plates published in connection with the Geological Survey (p. 9), "The clear recognition of the fact that this elegant structure really characterizes *Glyptolepis* is of great importance, for . . . it enables one to discriminate between *Holoptychius* (*whose scales have no semilunar area of backwardly-directed points*) and *Glyptolepis*."

I have to express my gratification at the notice Mr. Davies takes of these communications; to local geologists situated at a long distance from collections affording facilities for comparing the many species of such genera, and ever comparing nearly allied genera with one another, such hints as he gives are very valuable indeed. I am, dear Sir, yours truly,

JAMES POWRIE.

Reswallie, April 10th, 1863.

Bones at Macclesfield.

DEAR SIR,—You obligingly inserted a paper from me in Vol. IV. of the 'Geologist,' and the following communication may perhaps interest some of your readers:—

A few days ago, in levelling a piece of ground as a site for an infirmary, a few bones and a molar tooth were discovered by the workmen. Thirty feet below, there is a small brook, which runs into the river, distant about a quarter of a mile, at a further decline of about 70 feet. The bones were embedded a little apart from each other, in a layer of fine sand about 18 inches in thickness; above that there was a deposit, about 2 yards in depth, of coarse sand and gravel, thickly studded with large waterworn pebbles of the Primary, with a few of the Secondary sandstone rocks. About 18 inches of soil (alluvium) surmounted the whole. The excavation was continued about 2 yards below the bed of sand in which the bones were found, and it consisted of thin layers of gravel with marl and fine sand at irregular intervals, interspersed with carbonaceous markings and thin seams of drifted coal or shale. I have resided here many years, and the osseous remains I have sent for your inspection are the first I have seen or heard of; and, with the object of affording assistance to a solution of this disco-

very, perhaps I may be allowed to state a few particulars respecting the geological character, etc., of this district.

The surface immediately around Macclesfield is covered by the drift deposits, except in the valleys, where the river and its tributaries have, more or less, cut through them; and the prevailing feature of this locality, except on the eastern side of the town, is of an undulating character, consisting of mounds, inclined planes, and rounded ridges, composed chiefly of stratified sand and gravel, with an elevation occasionally of about 300 feet. The boulder clay, or till, which underlies the whole and reposes upon a lower gravel, often forms the beds of the river and smaller streams. This clay is unequally distributed in some places with respect to regularity, thickness, and extent; sometimes it approaches the surface with a depth of 60 or 70 feet, and it contains fragments of drifted coal, pieces of wood, and small boulders belonging to the Azoic and Palæozoic periods. Occasionally for yards not the smallest pebble is to be found in it. It is of a solid and tenacious quality; colour, dark-brown or slaty. The upper portion is of a more sandy nature and is made into bricks, the lower part is made into tiles, tubing, etc. Superficial patches of peat containing trunks of trees are prevalent. About a mile southward of the town, there is a large peat-bog 20 or 30 feet in depth. Here and there in the fields are to be seen erratic boulders of every size and variety. One weighing above 20 tons and of a sagenitic character was transferred to the public park a few years ago. The brick-clay had been its bed, and it was only about half covered with drifted sand and gravel.

The southern termination of the Cheshire coal-field extends to about two miles eastward of the town; and beyond that point, for about four or five miles towards Buxton, there is a large tract of high and barren moorland of the millstone grit formation. This district comprehends what is called the "Macclesfield Forest," its highest point (Shutlinglow) being above 1700 feet above the sea-level. From historic records, centuries ago this was royal hunting-ground, and abounded in wild boars, deer, badgers, otters, etc. The discovery of these bones may possibly lead to another fact, viz. that at an epoch far more remote,—the close of the Pliocene period,—the climatal conditions of this part of the island were even then favourable to the existence of at least some of the above animals, until the advent of the Pleistocene era, when the glacial drift, with its submerging effects and conflicting tides and currents, swept away their remains with other looser deposits from the higher grounds into the levels below. The otter still survives, but the last badger seen in this neighbourhood was killed about twenty years ago. It is rather surprising that the reliquæ of the Tertiary fauna are not oftener met with, together with human relics, viz. bones, implements of war, husbandry, and the chase, especially in the gravels of these valleys.

At 70 yards deep, the coal-measures (superficially flanked by the boulder clay) are worked within half a mile of the town. They then take a north-westerly dip, both under it and the river, at a very acute angle, and are no longer available, being overlaid by the drift and probably the Lower New Red Sandstone. This remains to be investigated, and I believe there is a fair prospect of its being done this summer by officers of the Geological Survey.

Perhaps there are few parts of this kingdom which are attended with a greater variety and complexity of strata, with their apparent dislocations and disturbances, than this corner of Cheshire. Within a distance of 8 or 10 miles south and east, there are encompassed no less than seven or eight distinct geological divisions; viz. drift, Cheshire coal-field, millstone

grit, mountain limestone (Derbyshire), North Stafford coal-fields with millstone grit, mountain limestone near Congleton, and the Permian and Triassic systems of Cheshire and Staffordshire. This survey has been long looked forward to, and will be hailed with pleasure and satisfaction when published.

I am, dear Sir, yours respectfully,
J. D. SAINTER.

Macclesfield, April 8th, 1863.

[The bones referred to as from the gravel, which have been sent to us for examination, are, 1, metacarpal of ruminant (*Bos longifrons*); 2, calcaneum of ditto; 3, fragment of mammalian bone; 4, upper molar of ruminant (*Bos* of small size); 5, base of shed antler of red deer (*Cervus Elaphus*). This last specimen, which is but a mere fragment, seems to have the remains of a hole that had been drilled or worked in it previous to its embedment, possibly for the insertion of a celt or other instrument to which this deer's horn served as a handle. All the bones are in a porous condition, and not in any way petrified.—ED. GEOL.]

Glyptolepis.—Upper Ludlow Fossils.

MY DEAR SIR,—I beg to call your attention to an error in the last number of the 'Geologist,' at page 134. I know nothing of the claims of Mr. T. Walker as having made known the fact that *Holoptychius Flemingi* is in reality a *Glyptolepis*.* My communication to you referred simply to the detection of Keuper fossils at Ripple, near Tewkesbury.

It may be useful to some collectors if you will make it known, in a future number of the 'Geologist,' that Samuel Sturge, shoemaker, of Ledbury, has discovered a highly fossiliferous band of the Upper Ludlow bone-bed, within a few miles of Ledbury. This bed is remarkably rich in spines of fish (*Onchus*), and the earliest known traces of terrestrial vegetation, which are small seeds of a plant allied to the Lycopodiaceæ.

Yours very truly,
W. S. SYMONDS.

Pendock Rectory, Tewkesbury, April 4th, 1863.

Human Remains in Brick-Earth at Luton, Kent.

SIR,—I have the pleasure to inform you that a few weeks ago two skeletons were found in a brick-field near here. The soil is brick-earth, the top part for about 4 feet mingled with flint, below that the pure clay. The skeletons were found between 6 and 7 feet from the surface, one lying on the back, the other on the side, with their heads towards the north; near them was found a triangular stone weapon, rudely formed to be wielded with the two hands, its weight is 14 lbs. The skulls exhibit a very debased form, the foreheads very low and receding, the back part very large; in one the bone of the nose turns up in a very peculiar manner. They are evidently of great antiquity, and have been undisturbed for very many years, for above them were the decayed roots of very large trees. The site was a large forest and hunting-ground in the reign of Elizabeth, who had a hunting-lodge in the neighbourhood, remains of which are still in existence. The skeletons were exhibited at a meeting of the Anthropological Society, held on April 7th; and the stone implement will be shown at their next meeting on the 21st.

I remain, yours sincerely,
N. F. RIVERS.

Sidney Villa, Luton, Chatham, April 16th, 1863.

* The passage referred to was, by a singular error of the printer, inserted in Mr. Symonds's letter instead of in "Notes and Queries." It was a note sent by Mr. James Powrie, of Reswallie.—ED. GEOL.