

amongst other things I remember a portion of a tin kettle and a fragment of a basket, of the coarse kind used on board colliers and other ships.

Here, then, is a cavern which the sea is at present filling, and in which it is depositing relics of man and portions of terrestrial mammals, but not, so far as I could discover, any marine organism, excepting the seaweed. Probably a careful search might have detected some small shells and other sea-offerings amongst the weeds, but I certainly saw nothing of the kind, nor were there any of the larger mollusks so constantly cast up on our beaches. There appears no reason, *à priori*, why some caves belonging to earlier periods may not have received their contents in a similar manner.

Again, those who have visited the Cheddar Cliffs, in Somersetshire, probably remember that a considerable body of water issues from the foot of the right-hand cliff, not far above the village of Cheddar. This stream commences its subterranean journey about two miles off, where it enters a "swallet."

It is scarcely possible to believe that it fails to introduce specimens of the natural history of the district into this cavern, or that it does not deposit organic relics, together with mud and stones, in at least some of the sheltered nooks and recesses which probably occur along its course of fully two miles.

I have no doubt that, at least, one of the celebrated caves of this county was in this way furnished with the materials which have rendered it famous.

I am far from believing that the history of any cavern can be regarded as generally typical. Neither of the agencies above described could have produced the phenomena observed at Orestone, near Plymouth, where, in all probability, the fossils and the materials in which they were inhumed found a passage through an open fissure into the cavernous interior of the limestone.

It would not be safe to generalize from any individual case, whether it be Kent's Hole, Windmill Hill Cave at Brixham, the caverns at Orestone, or a dirty dog on a study hearth-rug.

I am, yours, etc., WM. PENGELLY.

Lamorna, Torquay, December 14th, 1861.

Northampton Sands.

DEAR SIR,—In replying to Dr. Wright's communication in the last number of your excellent periodical, I offer him my apologies. The origin of my mistake was, in carelessly reading that part of Mr. Aveline's 'Memoir on the Geological Survey of a part of Northamptonshire,' where he speaks of the confusion that formerly existed with regard to these sands.

These beds have been assigned to the Upper Lias, although not by Dr. Wright, and are so coloured on more than one geological map. For instance, in Reynolds's 'Geological Atlas,' lately published under the revision of Professor Morris, all the country over which the Northampton sands are so well displayed has been coloured, with the *Lias*, brown, a mistake which should be avoided if a second edition of that neat and otherwise useful little work is contemplated.

The fact is, no one knows exactly where to place or with what to class these sands. Lias they assuredly are not. Mr. Aveline considers them to be equivalent to the Stonesfield Slate of Oxfordshire. This seems likely,

both from their position and their organic remains. But a deal yet remains to be done with them; they have yet to be accurately traced, searched, and studied. Strata which yield, as they do, such valuable iron-ore, demand attention and examination.

Yours very truly,

JOHN H. MACALISTER.

Oxford, January 1st, 1862.

PROCEEDINGS OF GEOLOGICAL SOCIETIES.

GEOLOGISTS' ASSOCIATION.—The ordinary monthly meeting was held on Monday, December 2nd, at 5 Cavendish Square. The Rev. Thomas Wiltshire, M.A., F.G.S., President, in the chair. The following papers were read:—"On two beds of re-deposited Crag Shells in the vicinity of Yarmouth, Norfolk," by C. B. Row, Esq., F.G.S. "On a Newly Discovered Outlier of the Hempstead Strata on the Osborne Estate, Isle of Wight," by Dr. E. P. Wilkins, F.G.S. "On the Exchange of Fossils among the Members," by A. Bolt, Esq., A.A.

Professor Tennant exhibited several specimens of gold recently forwarded from Nova Scotia to this country. He read extracts from a Report which has made by Mr. Howe to Lord Mulgrave, the Governor of the Colony, in September last, from which it appears that the gold-discoveries made in the colony in 1860 were unimportant, the gold being found in quantities so small as not to afford a satisfactory return for the labour of seeking for it. The excitement had accordingly subsided. Last March, however, a man accidentally discovered a piece of gold among the pebbles at a brook; this led to further investigation, and it is now generally believed that gold in abundance exists in the colony within an easy distance of means of transport, and Mr. Howe considers that the Government will be warranted in assuming that at the localities where the chief working has been hitherto carried on, viz. Tangier, Lunenburg, Lawrencetown, and Lake Thomas, gold-mining will be permanently established as a new branch of industry, tempting to the capitalist and attractive to the emigrant. The gold is found in quartz veins and in the sand on the shore. Specimens of gold in the matrix, and some of the gold grains found in the sand were exhibited, as also two ingots of pure gold cast from that discovered in the above-mentioned workings.

Mr. Rickard exhibited a machine recently patented, the object of which is to render peat available as fuel, to the same extent as coal, at a greatly reduced price.

MANCHESTER LITERARY AND PHILOSOPHICAL SOCIETY.—*November 26th, 1861.* J. P. Joule, LL.D., President, in the chair. A Paper was read by Mr. E. W. Binney, F.R.S., entitled "Additional Observations on the Permian Beds of South Lancashire." This was a continuation of two previous papers read before the Society. Since that time the author had made further observations on the Permian strata at Heaton Norris, near Stockport; Medlock Vale, between Ashton and Manchester; Chorlton-upon-Medlock, and Ordsal near Manchester; and Skillaw Clough and Bentley Brook, near Newburgh, in the west of Lancashire.

At Heaton Norris, in the sand delf of Mr. Howard, near the railway station, the lower New Red Sandstone was seen dipping to the south-west at an angle of 25°. This was succeeded by red and variegated marls having