Corner, and at Cooloodee. It is about fifty miles due-east of Adelaide, and about 35° south latitude, and 139° 20′ east longitude. I found it while making my surveys for the direct eastern line of railway from Adelaide to the River Murray (see Council Paper, No. 47, September 10th, 1858, S. A.).

The River Murray and its tributaries drain an immense district in New South Wales, Victoria, and South Australia, discharging itself into the Lake Alexandria in South Australia; thence to the sea it is navigable for 1500 miles.

[Our readers are referred also to the Journal of the Geological Society, No. 63, August, 1860, pages 252–261, for some account of the geology of the South-Australian district above referred to.—EDIT. GEOLOGIST.]

CORRESPONDENCE.

The Accumulation of Cave Deposits.

DEAR SIR,—Without offering any opinion on the Rev. H. Eley's speculation, in the December Number of the GEOLOGIST, on the mode of "The Accumulation of Cave Deposits," I presume it is quite safe to conclude that it could only apply, at most, to caverns which were inhabited by animals.

Now, though we have satisfactory evidence that *some* caverns—Kent's Hole near this place, for example—were the homes of carnivora, *others*, and some of them very famous, are entirely destitute of any such indications, whilst their distinctly stratified deposits were certainly due to the long-continued action of water.

Amongst the numerous caves near the sea-level which occur in the limestone cliffs between Berry Head and Mudstone Bay, near Brixham, there is one into which the sea only enters at spring-tide high-water, or during very heavy gales. It is only accessible from the sea, and is situated at the apex of a small cove, the mouth of which is a passage, probably about twenty feet wide, between two walls of limestone; within it is somewhat wider. Except at high-water, a small, steep, terraced, shingle beach lies between the sea and the mouth of the cavern. The cove is simply a gallery, at least eighty feet long, about four feet wide, in some places not more than three feet high, but commonly high enough for a man to stand erect. In fact, it is nothing more than one of the north and south joints, or lines of fracture, so common in the district, eroded into a tunnel.

A considerable drip of water, apparently free from earthy matter, enters through the roof.

When recently visiting it, I found the floor, consisting of fine sea sand, more or less covered with fresh seaweed, which was most abundant at the inner end. About halfway in, I picked up several disjoined bones, probably parts of the same animal, undoubtedly a terrestrial mammal, and, judging from the state of the epiphyses, a young individual. I have still some of them by me. With one exception they are quite free from all marks of abrasion.

The sea had also carried in some evidences of the existence of man;

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,