

III.

ON THE DISCOVERY OF A KITCHEN-MIDDEN ON INCHKEITH. By DAVID GRIEVE, Esq., F.S.A. Scot.

In the summer of 1870, having occasion to pay a visit to Inchkeith to inspect what I had been informed was a raised beach, I found that the place referred to, instead of being such, was in reality a kitchen-midden. The locality is within a gunshot of the landing pier on the east side, and in the slope or talus inclining from the cliffs to the beach. At the bottom, close to the beach, this talus is worn or washed away, so as to

form a section of earth and stones, varying in height from 8 to 10 feet above high water-mark. In the face of this section I observed bones protruding in various places; there was also abundance of the shells of edible molluscs, and, in short, I saw sufficient to convince me of the exact nature of the deposit. On returning to town I brought some of the bones with me, which I showed to our respected Keeper, Mr Anderson, who arranged to accompany me on a second visit to the island. This we accomplished some weeks afterwards. On that occasion Mr Anderson inspected the ground, and helped to fill another basket with bones, &c., and on the whole, I believe, was satisfied that this was a veritable kitchen-midden.

Some of the bones have been split, and a few bear the marks of fire. The earth in some places of the bank is very black, and seems to have a considerable intermixture of carbonaceous matter.

The collection of bones I placed in the hands of my friend Dr M'Bain, R.N., of Trinity, who was so kind as to take very considerable trouble in identifying and naming them, and to whom my best thanks are due.

The following is the list he has furnished me with :—

1. Basi-occipital and basi-sphenoid portions of skull of the grey seal (*Halichærus gryphus*); probably a female skull.
2. Cervical vertebra of grey seal.
3. Left occipital condyle, mastoid process, temporal fossa, and petrous bone of sheep (*Ovis aries*).
4. Four lumbar vertebræ of sheep.
5. Head of ulna of sheep.
6. First dorsal vertebra of sheep.
7. Humerus of sheep.
8. Fourth cervical vertebra of pig (*Sus scrofa*).
9. Head of left tibia of ox (young) (*Bos taurus*).
10. Cannon bone of hind foot of *Bos*.
11. Mastoid process of *Bos*.
12. Dorsal vertebra of *Bos*.
13. Metacarpal bone of *Bos*.
14. Atlas of *Bos*.
15. Toe bone of *Bos*.

16. Cannon bones of horse (*Equus*).
17. Parts of jaw, and several teeth, of horse.
18. Jaw bones and other bones of the rabbit (*Lepus cuniculus*).

Besides the bones named in the above list many portions of bones, chiefly of the sheep and ox (some split), were also found.

The shells found were—*Littorina littorea*, *Patella vulgaris*, *Buccinum undatum*, *Ostrea edulis*, *Tapes pullastra*, *Purpura lapillus*, *Pecten varius* and *Pecten maximus*.

The latter named esculent mollusc is not now common in the Firth of Forth, but all the others mentioned are to be found in abundance.

With regard to the bones, it will be seen they are all of domestic animals, with the exception of the seal and the rabbit. The rabbit burrows and is in a wild state on the island at present, and was most probably so at the period when the midden was deposited. The grey seal is now extinct in the Firth.

My opinion is that the encampment or lodgment in connection with this midden was situated on a former plateau in front of, and under the cliff at the top of the embankment, and that the soil (which is very loose) has, in the lapse of time, gradually slipped away and carried the debris of bones and shells along with it. I am inclined to this belief, because abundance of shells are still found at the top of the bank, although the bones are more abundant at the bottom.

There is no evidence as to the period when these rejecta were first cast forth, and it would be difficult, and indeed unnecessary, to hazard a conjecture. This much, however, may be said, that judging from the decayed state of the bones and shells, more particularly the shells, they are of very considerable antiquity.

The delay which has occurred in reporting this matter to the Society was owing to a desire on my part to make a further exploration, but the nature of my engagements has hitherto prevented this. The mention, however, by Mr Milne Home, in his recent work on "The Estuary of the Forth," of the bones of the grey seal having been found "in the Kitchen-midden at Inchkeith" (his informant being Dr M'Bain), before any public announcement of the discovery of a midden had appeared, I take to

be a quiet and just rebuke (although not meant as such) for my dilatoriness, and it induces me at once to chronicle this small matter and to offer the foregoing particulars.

The remains described are presented to the Society's Museum.