

ARTICLE XXXVIII.—Notice of the remains of a species of Seal, from the Post-pliocene deposit of the Ottawa River,—By Professor JOSEPH LEIDY, M. D.

(From the Proceedings of the Academy of Natural Sciences, Philadelphia.)

"E. Billings, Esq., of Ottawa, West Canada, recently sent to the Academy, for the inspection of its members and for description, a specimen consisting of a slab or portion of a concretion of indurated clay, containing some imbedded bones, which Mr. B. observes, in a letter accompanying the specimen, 'appear to him to be those of the extremities of a small animal of aquatic habit.' Mr. B. further states, 'the specimen was discovered by Mr. Peter McArthur, in a bed of blue clay containing boulders and marine shells and fishes. The locality is in the township of Gloucester, county of Carleton, Canada West, about nine miles east of the City of Ottawa. From this city the river Ottawa runs easterly for about sixty miles, in a channel excavated through a bed of the glacial drift, composed in some places of clay, and in others of sand, gravel and boulders. Where the specimen was discovered, the bank of the river is of clay about thirty feet high, at the time of low water. The water washes out of the bank numerous nodules of the clay, which are consolidated into a pretty hard kind of stone. Many of these nodules, when split open are found to contain shells, or the skeletons of fishes, often beautifully preserved. The species of shells found up to the present time are *Tellina groenlandica*, *Mytilus edulis*, *Saxicava rugosa*, and a small rostrated one like a *Leda*; and of fishes two species, *Mallotus villosus* and *Cyclopterus lumpus*. They also contain leaves of trees, broken wigs and grass, showing that there was land at no great distance. There is a ridge of low metamorphic hills on the north shore of the river, extending for a great distance parallel with and near the stream. On the south side the country is level, and underlaid with lower Silurian rock, Utica slate, Trenton, Black River, Bird's-eye and Chazy limestones, with here and there a strip of the lower rocks brought up to the surface by undulations. I think there was an ancient valley excavated in those rocks before the period of the drift, that it was filled up during that period, and that the river is now cleaning it out again.'

The bones referred to prove, on examination, to be those of the greater portion of the hinder extremities of a young Seal, but whether of a species distinct from those now found living in the neighboring seas, is a question only to be determined by careful comparison with the corresponding parts of the recent animals. The soft distal extremities of the tibia and fibula are crushed together. The bones of the ankle and foot are well preserved, but the epiphyses of the latter are separated and only partially developed. The matrix in the vicinity of the bones, is marked by the impressions of the hairs and skin, which enveloped them.

"SIR W. E. LOGAN, in a report on the "Geological Survey of Canada," (1850, '51, p. 8,) refers the deposit in which the above described specimen was found, and similar deposits of the St. Lawrence and its tributaries, to the