

chapter xi. of the Principles of Geology), for supra-cretaceous eocene, and by uniting the meiocene and older pleiocene periods. Upon this basis it appears worth while to inquire how far the shells found in lacustrine sediments support the inferences of the change of organic life, since the age of the chalk, which have been drawn from marine remains and bones of terrestrial quadrupeds, though there is reason to regret the neglect which this important subject of research has experienced.

*Eocene, or lower tertiary Period.*

The fresh-water sediments of the Paris basin, studied in connection with those of Auvergne, Velay, and Cantal, offer a very complete view of the eocene lake deposits, and lead to the conclusion that the marine and fresh-water strata of that basin are to be considered as marking sometimes the independent action of the sea and land floods in one basin, and sometimes their periodical alternation; the land floods always coming from the south, and the marine sediments from the north or west.

The gypseous deposit of the Paris basin is a repository of many extinct species of quadrupeds, while of birds 10 species, and several fishes and reptiles, also extinct, remain to augment the value, and complete the evidence presented by these precious relics. Four fifths of the quadrupeds belong to the division of pachydermata; and nearly all the species are such as might be supposed habitually to frequent the margins of rivers and lakes. Among them are

|              |   |                                    |
|--------------|---|------------------------------------|
| Cheiroptera  | - | Vespertilio Parisiensis.           |
| Carnivora    | - | Nasua ?                            |
|              |   | Viverra Parisiensis, and 2 others. |
|              |   | Canis, 2 species.                  |
| Marsupiata   | - | Didelphis Cuvieri, and another.    |
| Rodentia     | - | Myoxus, 2 species.                 |
|              |   | Sciurus.                           |
| Pachydermata | - | Adapis Parisiensis.                |
|              |   | Chæropotamus Parisiensis.          |