

GENERAL GEOLOGY.

As the rocks associated with the coals at Edmonton all belong to the one formation, a brief description only is necessary.

Edmonton Formation.

The Edmonton formation is a series of shales and sandstones, often merely clays and sands, which were deposited during the brackish water period which succeeded the marine invasion of the central part of the continent during Cretaceous times. These deposits were formed while the surface was not elevated much above sea-level. The underlying deposits are mainly shales containing the remains of salt water shells. The overlying deposits form a thick series of sandstones without marine fossils, but with abundant impressions of leaves of land plants and a few shells, evidently of fresh water origin.

The brackish water formation between these two—the salt water below and fresh water deposit above—is found to be very rich in coal seams, denoting an abundant vegetable growth during its period of low altitude and possibly mild climate. The formation is classed with the undoubted Cretaceous beds below and represents the upper member of this series.

Fossil Remains.

The faunal remains so far found do not represent a very wide range, but among the brackish water forms the following have been recognized: *Ostrea glabra*, *Uno danae*, *Corbicula occidentalis*, *Panopaea simulatrix*, *Panopaea curta*.

Land or wading animals are represented by a few bones of dinosaurs. Of the plants which formed the coal little is known save that the leaves of plants, found in the adjacent beds, represent the early forms of plants which continued through Tertiary times. Forms recognized or described are: *Abietites tyrrellii*, *Sequoia reichenbachii*, *Platanus newberryana*, *Taxodium occidentale*, *Taxites olriki*, *Lemna scutata*, *Platanus nobilis*, *Castanea* Sp., *Sapindus affinis*, *Aesculus antiqua*, *Trapa borealis*, and *Trapa microphylla*.

Character of Beds.

The top of the formation is distinctly a zone of coal-bearing beds, which increase in value from their southern exposures until at the crossing of the Saskatchewan and Pembina rivers the economic coal