

CHAPTER I

EXTENT OF PREHISTORIC LIFE

Ancient life in Kentucky began in the sea many millions of years ago. Until about the beginning of the Upper Carboniferous Period, which geologists estimate as being over seventeen millions of years ago, that part of North America (the old continent *Laurentia*) which is now Kentucky was the bottom of an ancient ocean in which swarmed myriads of animals—crinoids, corals, bryozoans, brachiopods and molluscs—the fossil shells of which can now be found in the rocks or on the surface of the ground in practically all parts of the State.

Later, higher forms of marine life gradually appeared in these ancient waters. Curious armored fishes, primitive sharks and giant bony fishes—each in their turn were rulers of the deep. All this we know from the record of the rocks.

At that time, also, there was apparently a struggle going on between the animals of the North and those of the South for the supremacy of these waters, for this part of the American continent was invaded by the sea from two directions, from the north by an extension of Hudson Bay and from the south by the Gulf of Mexico so that the waters of these two great seas intermingled and caused an overlapping of the northern and southern marine forms. In this conflict the southern forms became dominant for the northern waters slowly receded, due to uplift, while for ten or twelve million years more the Gulf of Mexico extended up into Kentucky. Southern marine waters then covered all of that region west of the present Tennessee River, now known as the "Purchase Region," so that even today this western district is quite distinct from the rest of the State in its geology, its fauna and its flora.

As time went on, the land began to appear above the water, at first with many alternate elevations and depressions. Parts of the ocean floor would be lifted up only to be submerged again as the position of the sedimentary masses shifted in their many foldings and faultings. This also is part of the story told us by the rocks.

At last, however, probably during the Mississippian Period, the waters receded for the last time and left much of Kentucky a permanent land mass. Then other forms of life appeared, the early types of amphibians—heavy-bodied newts and salamanders, and later frogs and toads—but of these animals we have almost no records, for practically no evidences of their distribution in Kentucky has yet been discovered. During this period, however (the Carboniferous or Age of Amphibians) the immense coal measures of the State were formed by the fossilization of the great masses of plant life which had by that time developed.

Following the Carboniferous Age there is a great gap in the known history of the ancient life of this State. We have practically no record of conditions in this part of the Mississippi Valley during the eight or ten millions of years of the Mesozoic Era. We know that in other parts of the United States the land animals appeared in rapid succession—the ancient reptiles, the toothed birds, the early mammals—all are known from the Connecticut Valley to the Western Plains and they were probably equally abundant in Kentucky but there are few Mesozoic formations in this State and these pages from the book of Nature are therefore missing.

But the story begins again in the Pleistocene Age and at once the pages are filled with abundant and fascinating facts. During the first part of this age (the Glacial Period) the great ice-sheets moved down from the north driving all life before them, but these enormous ice masses disturbed Kentucky very little. As they approached this State a milder climate arrested their progress with the result that only restricted areas were glaciated south of what is now the Ohio River. From the fringe of the glaciers southward through the State the prehistoric beasts of that period struggled for existence. Mammoths, mastodons, peccaries, tapirs, primitive horses and prehistoric elk roamed the forests, fields and cane-brakes and fought for possession of fords, springs, and salt-licks. Their bones may be dug up by the tons from the marshes and swamps around salt-licks where the animals perished and where their bones were trampled into the soft soil. Ancient bears and other carnivores

pursued and preyed upon the herbivorous forms. Kentucky teemed with life. All this story is told by the bones.

Toward the close of the Glacial period, primitive man appeared upon the scene—the first Kentuckian. Where he came from, we do not know. Possibly over the old land bridge from Siberia; perhaps from Europe by an eastern route; possibly even from the south where the Incas and Aztecs are known to have had very ancient habitations. As to what he looked like and what he did, however, we are better informed, for the crumbling human skeletons and evidences of early human occupation give us some clues as to his appearance and his ways of living. He was a man of the Stone Age; he was doubtless a barbarian and a savage; but he was the culmination of the Ancient Life of Kentucky.

