Its longer and sharper teeth may have been better suited for devouring worms, larvæ or soft-skinned fishes, while those of the larger *Dendrerpeton* were better adapted to deal with the mailed ganoids of the period, or with those smaller reptiles which were more or less protected with bony or horny scales.

VI. Remains of Skin and Horny Scales.

Plate I, Fig. 5; Plate IV, Figs. 22 to 34, and Plate V, Figs. 22 to 29.

In one of my earliest explorations of the reptile-bearing stumps of the Joggins, I observed on some of the surfaces, patches of a shining black substance, which on minute examination proved to be the remains of cuticle, with horny scales and other appendages. The fragments were preserved; but I found it impossible to determine with certainty to which of the species whose bones occur with them they belonged, or even to ascertain the precise relations of the several fragments to each other. I therefore merely mentioned them in general terms, and stated my belief that they may have belonged to the species of *Hylonomus*.* More recently other specimens have been obtained, and I have undertaken the detailed examination of the whole. I shall now endeavour to describe the principal or most continuous fragments, and afterward to consider the probabilities of their having belonged to certain of the reptiles entombed with them. I do this here, rather than under the titles of these several animals, on account of the uncertainty which still rests on the assignment of certain portions of this cuticle to the species in question, and which renders it more convenient to consider these peculiar remains in one place, and to compare the different portions with each other.

(1) One of my specimens is a flattened portion of cuticle $2\frac{1}{4}$ inches in length. The greater part of the surface is smooth and shining to the naked eye, and under the microscope shows only a minute granulation. A limited portion of the upper, and I suppose, anterior part is covered with imbricated scales, which must have been membranous or horny, and generally have a small spot or pore near the outer margin, some having in addition smaller scales or points on their surfaces, (Pl. IV, Figs. 22 and 25). In contact with the upper part of this specimen there were many fragments of the skull of *Dendrerpeton Oweni*.