

Holoptychius of the Coal Measures, but the contrast in size was somewhat less marked. One of the most singularly formed bones of the formation will be found, I doubt not, when perfect specimens of the upper part of the creature shall be procured, to have belonged to the *Holoptychius*. It is a huge ichthyodorulite, formed, box-like, of four nearly rectangular planes, terminating in a point, and ornamented on two of the sides by what, in a work of art, the reader would at once term a species of Chinese fretwork. Along the centre there runs a line of lozenges, slightly truncated where they unite, just as, in plants that exhibit the cellular texture, the lozenge-shaped cells may be said to be truncated. At the sides of the central line, there run lines of half lozenges, which occupy the space to the edges. Each lozenge is marked by lines parallel to the lines which describe it, somewhat in the manner of the plates of the tortoise. The centre of each is thickly tubercled; and what seems to have been the anterior plane of the ichthyodorulite is thickly tubercled also, both in the style of the occipital plates and jaws of the *Holoptychius*. This curious bone, which seems to have been either hollow inside, or, what is more probable, filled with cartilage, measures, in some of the larger specimens, an inch and a half across at the base on its broader planes, and rather more than half an inch on its two narrower ones.*

Geologists have still a great deal to learn regarding the contemporaries of the *Holoptychius nobilissimus*. The lower portion of that upper formation to which it more

* This bone has been since assigned by Agassiz to a new genus, of which no other fragments have yet been found, but which has been named provisionally *Placothorax paradoxus*.