

very much and ends in a long whip-like tail, bearing a fin-lobe above and below, near the tip. A long fin passes down the back, nearly the whole length, and in front of it, immediately behind the head, there rises a high first dorsal fin, triangular in shape, and provided with a powerful anterior spine, curiously serrated upon its front edge. The wing-like pectoral fins are a most striking feature as they possess a fleshy peduncle or arm portion, and the pointed fins protrude most prominently on each side of the head. When lying flat against the body they extend over one-fifth of its length. A similar but much smaller pair, the ventral fins, protrude some distance behind the pectoral fins. Both pairs are like very flexible grey wings, resembling Indian rubber in texture, semi-transparent, and supported by horny fin-rays. I was enabled to examine specimens of both sexes, a fortunate circumstance as they differ considerably in their external characters. On the forehead of the male, between the eyes, there exists a finger-like protuberance partly bent upon itself, with a flattened tip, fimbriated, and studded underneath with sharp denticles. This spine-covered surface fits into a soft mucous depression in front. Oil and mucus occur in the cavity which is no doubt glandular in nature. One writer has suggested that it is phosphorescent, and that the *Chimæra* carries a lamp upon its forehead; while Buckland fancifully compared it to a crown, whence he says, the Norwegians have called the *Chimæra* the "king fish" and also the "King of the Herrings."

The hind part of each ventral fin forms a separate bifurcate appendage, covered with a soft glandular membrane complexly folded and perforated by a longitudinal channel.

The male shark and skate have similar curious structures but in the *Chimæra* they are even more complex and curious, and impossible to be clearly described without the aid of figures.

The eyes are large and brilliant, unprovided with lids, and show a glowing green opalescent in the living fish. The iris is of a pale steel-blue colour. Buckland presaged that "the eye in life must have a monstrous and fierce appearance" and