

Supplementary Figure 1. Two views deriving from the three-dimensional orientable view of the large and medium-sized neurovascular canals and main bone cavities (red) within the premaxilla (pink) of *Omorhamphus storchii* (juvenile) YPM 13106 (SI_3D pdf File). A, rostro-lateral (left) and slightly dorsal view; B, caudo-lateral (right) and slightly ventral view. The canals are rostro-caudally elongate. The larger openings on the dorsal surface (situated caudally) approach the same size as the large, ventral openings paralleling the beak tomia, which were previously confounded with possible tooth alveoli (arrows show some of them on the left side). The large ventral canals merge with one-another and the main cavities just beneath the outer surface of the bone. The large dorsally-opening canals also merge just beneath the bone surface, thus each individual canal is very short. On the left and right sides, respectively, the large ventral canals communicate with each side's main cavity and then with the large dorsally-opening canals. Smaller canals diverge from this system and open laterally.