

This new group is allied to the genus *Janus*, and resembles it in the outward form of the body, in the arrangement of the dorsal papillæ, in the condition of the head, with its tentacles and rhinophoria, in the median position of the anal papilla on the posterior dorsal surface, and in the presence of the peculiar comb-like organ between the rhinophoria.¹ It differs, however, by the presence of a broad foot-brim, which probably assists the animal in swimming. This genus, however, is mainly distinguished by the enormous development of the mandibles, which, unlike what is found in *Janus*, form the sides of the bulbus; the lower portion of the mandibles resembles that of *Janus*, but the masticatory edge differs in so far as it is not provided with denticles as in the typical *Janus*. The radula is like that of *Janus*; the median series of teeth weak, with rudimentary hook; the lateral teeth numerous, with short recurved hook. In its internal structure the genus *Janolus* agrees on the whole pretty closely with *Janus*.

The two genera belong to a special group, which includes also the Proctonotidæ and the Madrellæ.² *Janolus* differs from the Proctonotidæ by the comb-like organ between the rhinophoria, and from the Madrellæ, moreover, by the dorsal position of the anus, by the presence of special tentacles, and by the numerous lateral teeth on the *radula*.

Only one species of this genus is known at present.

Janolus australis, n. sp. (Pl. VIII. figs. 15-22, Pl. IX. figs. 6-8).

Habitat.—Pacific (Arafura Sea).

A single example of this species was taken in the Arafura Sea, during September 1874. The specimen was treated with micro-sulphuric acid, and preserved in alcohol. The dorsal papillæ were nearly all wanting, but in other respects the animal was in good preservation.

The length was 3.2 cm., the height 1 cm., and the breadth of the dorsal surface 11 mm., of the foot 17 mm.; the breadth of that portion of the back which is beset with papillæ at most 3 mm. The height of the rhinophoria quite 6 mm.; the length of the tentacles 4 mm.; the height of the anal papilla 1.8 mm.; the length of the tail 5 mm.

The *colour* yellowish, but brownish or reddish along the middle line of the back; the region between the rhinophoria and the inter-rhinophorial "comb" is covered with a black spot, and the extremities of the rhinophoria are also blackish. The *form* of the body is somewhat short and depressed; the head flattened anteriorly, the mouth-opening perpendicular; the head is on every side produced into a rather narrow process, somewhat flattened below, which unites with the anterior edge of the foot and forms the upper lip of this anterior edge of the foot.³ This wing-like process measures about 8 mm. in length, and is provided on its edge with a fine groove. The conical or finger-shaped *tentacles* take

¹ Cf. Bergh, Beitr. zur Kenntn. d. Æolidiaden I., *Verhandl. d. k. k. zool.-bot. Gesellsch. Wien.*, Bd. xxiii., 1873, pp. 597-605, Taf. vii. figs. 1-6, Taf. viii. fig. 1.

² Alder and Hancock, Notice of a collect. of Nudibr. Moll. made in India, *Trans. Zool. Soc.*, vol. v. part 3, 1864, p. 141, pl. xxxiii. figs. 10-12.

³ Cf. Bergh, *loc. cit.*, 1873, Taf. vii. fig. 1.