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NOTES ON THE SPECIES OF *ALLOSQUILLA* AND *PLATYSQUILLOIDES* (CRUSTACEA: STOMATOPODA)

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Abstract.—A second specimen of an *Allosquilla* from the Adriatic Sea is reported, and *A. adriatica* Stevcic, 1979, is shown to be a synonym of *A. africana* (Manning, 1970). *Allosquilla* is compared with the related *Platysquilla, Mexisquilla,* and *Platysquilloides,* and the second species of *Allosquilla, A. lillyae* Manning, 1977, is transferred to *Platysquilloides.*

The genus *Allosquilla* was erected by Manning (1977:64) for two species from off West Africa, *A. africana* (Manning, 1970) and *A. lillyae* Manning, 1977. *Allosquilla africana* was known from the unique holotype, a female 39 mm long, taken at a depth of 174–148 m off the Niger delta, and *A. lillyae* was known from fragments of two specimens taken in depths of 260–225 and 345 m in the Azores. Two years later a third species, *A. adriatica* Stevcic (1979:642), based on our then unpublished account (Manning and Froglia 1979:178), was described from a female, 67 mm long, taken in the Adriatic Sea in 130–150 m.

Manning (1977:65) pointed out that the species then assigned to *Allosquilla* differed from other genera of lysiosquilloids in lacking the mandibular palp, having four rather than five epipods, and in the number of papillae on the antennal protopod. *Allosquilla africana* was characterized as having two papillae on the antennal protopod, one small one mesially and one larger one ventrally, and *A. lillyae* was characterized as having one mesial and two ventral papillae. *Allosquilla adriatica* also was characterized as agreeing with *A. lillyae* and differing from *A. africana* in having one mesial and two ventral papillae (Manning and Froglia 1979: 179).

Subsequently, Holthuis (1984:132) reported two specimens of *A. lillyae* from the Azores in 52 m; one of these, a female, 42 mm long, was the first intact specimen of the species to be studied.

The discovery and description by Holthuis of a complete specimen of *A. lillyae* and the capture of a second specimen of a species of *Allosquilla* in the central Adriatic Sea by one of us (C.F.) prompted us to reexamine the species of *Allosquilla,* for the second specimen differed from the holotype of *A. adriatica* in several features that initially suggested it might belong to a different species.

The Status of *Allosquilla adriatica*

The second specimen of *A. adriatica* from the Adriatic (Fig. 1), an adult female 70 mm long with ripe ovaries, was taken at a depth of 216–222 m during trawling investigations in the western Pomo Pit (net shot 42°50′N, 14°33′E, hauled 42°48′N, 14°47′E), a few miles south of the type locality, on 7 March 1981. It is preserved in the reference collection of the Istituto di Ricerche sulla Pesca Marittima in Ancona. We are able to add some color notes made in the field from the living specimen, and some data on morphology to the original description.

In life, the background color is olive brown, with the deep pink ovaries clearly visible through the background color. The rostral plate, ocular peduncles, and antennal peduncles are light brown, and the cornea is green. The raptorial claw is covered with

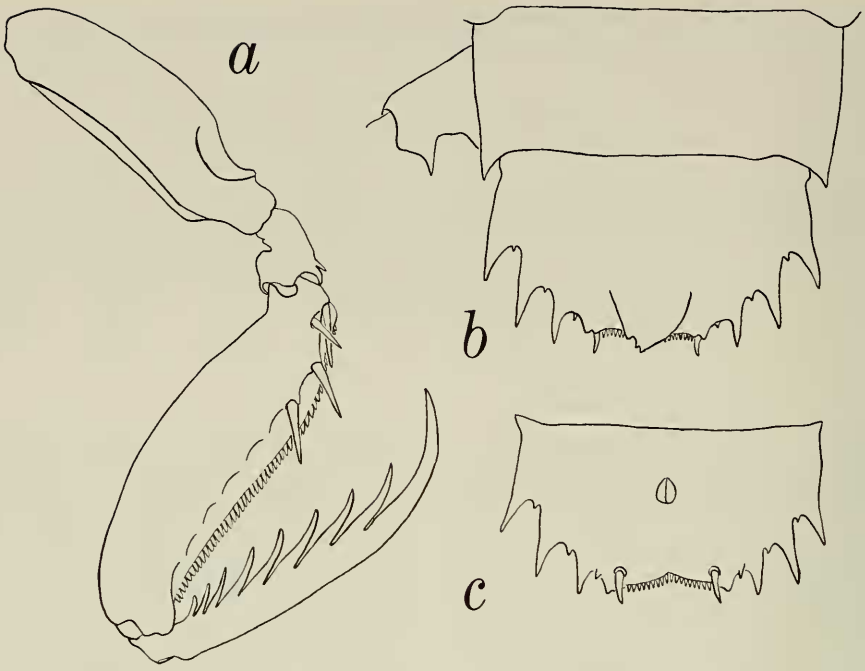

Fig. 1. *Allosquilla africana,* ♀, TL 70 mm: a, Claw; b, Sixth abdominal somite and telson; c, Telson, ventral view.

pink chromatophores, with a band of orange chromatophores proximally and brown chromatophores distally on the merus, and an orange spot on the propodus at the articulation with the dactylus. The thoracopods, pleopods, and uropods are clear. The edge of the telson is marked by a brownish white line.

Other measurements of this specimen, in mm, are as follows: carapace length 11.7; rostral plate length 3.3, width 3.2; cornea width 3.2; antennal scale length 3.9; telson length 6.1, width 10.4. There are only nine teeth on the dactylus of the claw (Fig. 1a); there are ten teeth on the claw of the holotype. There are five movable teeth on the uropod, the proximalmost very small, triangular, the remainder larger, spatulate; the holotype had three or four movable teeth on the uropod. The rounded lobe on the inner distal margin of the uropodal endopod is ornamented with 10–11 setae.

The main morphological difference between this specimen and the holotype of *A. adriatica* is in the posterior armament of the telson. The second marginal projection denticle is enlarged, so that the telson has three rather than two pairs of major, fixed marginal teeth lateral to the movable submedians, each separated by an intervening denticle. Also, the median dorsal projection on the telson (Fig. 1b) is asymmetrical; it probably has been damaged.

This specimen, like the holotype of *A. adriatica* (Fig. 2a, b), has one mesial and two ventral papillae on the antennal protopod (Fig. 2c, d). Reexamination of the holotype of *A. africana* reveals that it, too, has the same number of papillae (Fig. 2e, f). That was one of the more important characters used by Manning and Froglia (1979: 180–181) to distinguish these two species.

Manning and Froglia also used the following characters to separate the two species:

1. The submedian denticles are in two convex rows in *A. africana,* one transverse

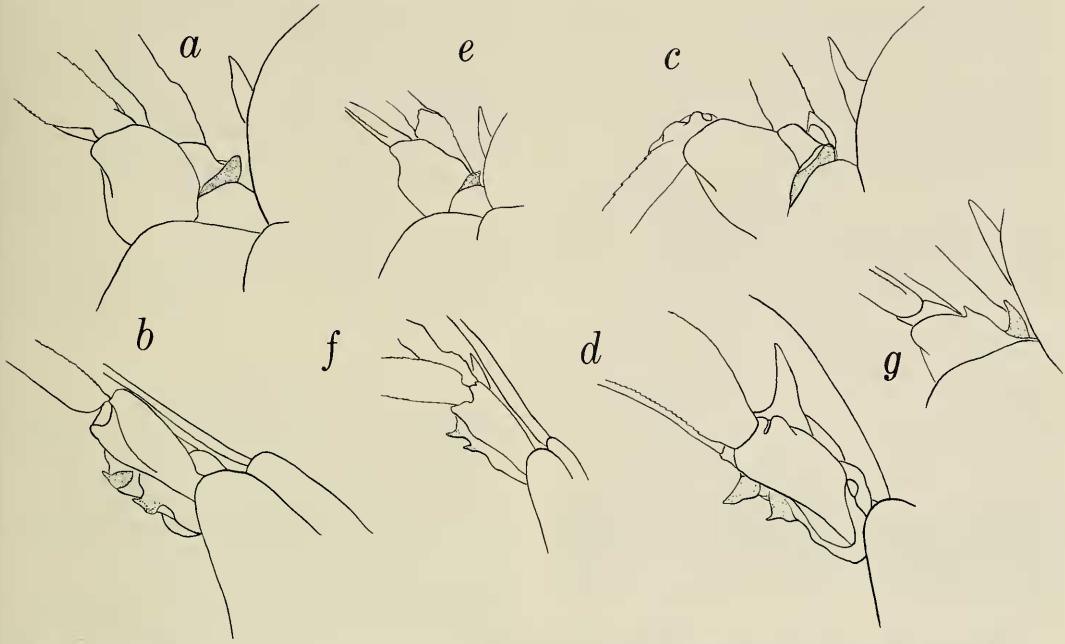

Fig. 2. Antennal protopod in dorsal (a, c, e, g) and lateral (b, d, f) views to show antennal papillae in: a, b, *Alllosquilla adriatica,* ♀ holotype, TL 67 mm; c, d, *A. africana,* Pomo Pit, ♀, TL 70 mm; e, f, *A. africana,* ♀ holotype, TL 39 mm; g, *Platysquilloides enodis,* ♀ holotype, TL 57.5 mm (note dorsal spine on antennal protopod).

row in *A. adriatica.* In the second Adriatic specimen, these denticles are arranged in two convex rows (Fig. 1c), as in the holotype of *A. africana.*

2. Both species were interpreted as having four intermediate marginal denticles on each side of the midline of the telson, with the first and third bluntly triangular and larger than the spiniform second and fourth denticles in *A. adriatica* and the first and third blunter but not much larger in *A. africana.* The second Adriatic specimen indicates that the telson has four distinct marginal teeth separated by intervening denticles, with the mesial one or two intermediate teeth smaller than the lateral two; the smallest of these marginal teeth is a low lobe flanking the movable submedian tooth. In this feature the holotypes of both *A. africana* and *A. adriatica* differ from the second Adriatic specimen.

3. The anterior prominences of the telson are less prominent in *A. adriatica* than in *A. africana.* This may be a function of size, for the holotype of the latter species is much smaller than either of the two Adriatic specimens.

4. Differences were noted in the armature of the basal segments of the walking legs in the two species. A reexamination of this feature in the types of the two species reveals that it is the same in all three specimens.

We conclude that *A. adriatica* is a synonym of *A. africana,* and that the holotype of *A. africana* is much younger than either of the two specimens collected in the Adriatic.

Allosquilla can be characterized as having 1 mesial and 2 ventral papillae on the antennal protopod and 4 pairs of fixed marginal teeth on the telson, the inner one or two of which can be much smaller than the lateral two; the marginal teeth are separated by smaller intervening denticles. In addition, *Allosquilla* lacks a distinct dorsal spine on the antennal protopod (Fig. 2a–f) and has

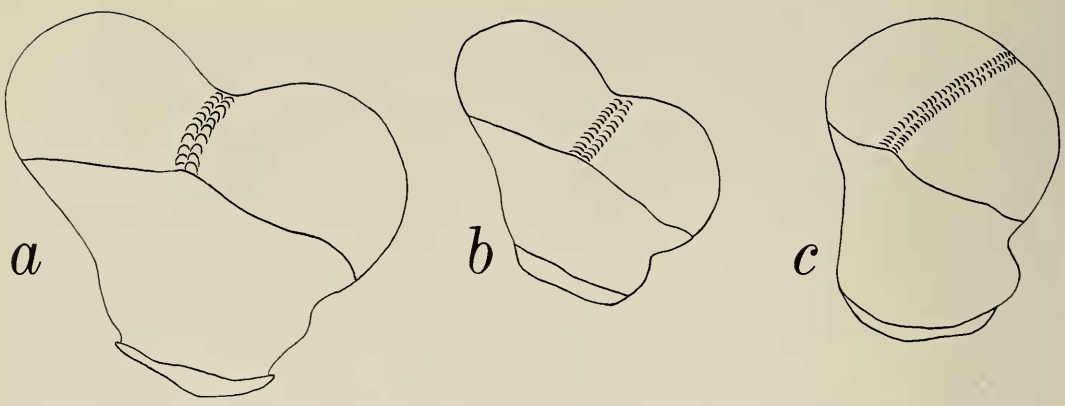

Fig. 3. Eyes of: a, *Allosquilla adriatica,* ♀ holotype, TL 67 mm; b, *A. africana,* ♀ holotype, TL 39 mm; c, *Platysquilla enodis,* ♀ holotype, TL 57.5 mm.

the cornea distinctly bilobed (Fig. 3a, b). In other features *Allosquilla* closely resembles *Platysquilloides.*

The Status of *Allosquilla lillyae*

The account of a complete specimen of *A. lillyae* by Holthuis (1984:132) shows that it shares several features with *Platysquilloides enodis* (see Manning and Camp 1981: 593, fig. 2), as follows: the cornea is expanded laterally (Fig. 3c) but not distinctly bilobed as in *A. africana* (Fig. 3a, b); the rostral plate is subrectangular rather than distinctly cordiform; there is a distinct dorsal spine on the antennal protopod (Fig. 2g); the marginal armature of the telson comprises, on each side of the midline, four fixed teeth separated by intervening denticles; and the inner two pairs of teeth are small and distinctly spatulate, whereas the outer two pairs are produced into large, slender, sharp teeth.

In these features, *A. lillyae* closely resembles the west Atlantic *Platysquilloides enodis* (Manning, 1962) and differs from *Allosquilla africana.* We conclude that *A. lillyae* was incorrectly placed in *Allosquilla,* and we transfer it here to *Platysquilloides,* which until now was considered to be monotypic.

Genera Related to *Allosquilla* and *Platysquilloides*

Allosquilla and *Platysquilloides* share many characters with two other genera of the family Nannosquillidae, *Platysquilla* Manning, 1967, and *Mexisquilla* Manning and Camp, 1981 (see Manning and Camp 1981 for accounts of these other genera). They differ from *Platysquilla* in having only one mesial papilla on the antennal protopod, a much broader cornea, only four rather than five epipods, and a much smaller median projection on the telson; they also differ in lacking a pair of spines ventrally on the sixth abdominal somite. The eyes of *Platysquilla* resemble those of *Mexisquilla* and *Platysquilloides* in being somewhat broadened, not distinctly bilobed as in *Allosquilla. Allosquilla* and *Platysquilloides* differ from *Mexisquilla* Manning and Camp, 1981, in several features, including the anteriorly spined rostral plate, having four rather than three epipods, and in overall size; species of *Mexisquilla* are not known to exceed 20 mm in length, whereas species of *Allosquilla* are as large as 70 mm and species of *Platysquilloides* as large as 67 mm are known (Howells, Karp, and Langton 1980).

Platysquilla differs from all of these gen-

era in having four papillae on the antennal protopod and slender, non-spatulate movable spines on the outer margin of the uropodal exopod, and *Platysquilloides* differs from all of these genera in having a distinct dorsal spine on the antennal protopod.

Acknowledgments

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