

SCAMIT CODE: None

Date Examined: 5 March 2012
Voucher By: Don Cadien

SYNONYMY: *Lafystius sturionis* of Jensen et al 1982 not Krøyer 1842

LITERATURE: Bousfield, E. L. 1987. Amphipod Parasites of Fishes of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 217: 1-37
Jensen, L. A., R. A. Hickmann, M. Moser, & Murray D. Dailey. 1982. Parasites of Bocaccio, *Sebastes paucipinnis*, from southern and central California. Proceedings of the Helminthological Society of Washington 49:314-217

DIAGNOSTIC CHARACTERS:

1. Head wider than long, rostrum about ¼ head width, truncate
2. Eyes with 28-35 ommatidea; not partially covered by coxa 1
2. Lacinia mobilis of right mandible with 2 spine-like denticles on primary tooth
4. Dactyl of Gn1 excavated distally, with two short stout, and one long slender seta overarchng the central cavity; inner dactylar face bearing field of short setules distally
5. Coxa 4 very large, broadly acuminate below
6. Lobe of merus of pereopod 4 does not reach end of carpus, stopping mid-length
7. Pereopod 7 with coxal gill
8. Urosome relatively short, not elongate as in *Lafystius* and *Paralafystius*
9. Uropod 1 rami shorter than peduncle
10. Telson covered with fuzz of short setules

RELATED SPECIES AND CHARACTER DIFFERENCES:

1. Only one other species is known in the genus, the type *P. madillae* (Fig. 1) from British Columbia. Characters 5, 7, and 8 above place this species in the genus *Protolafystius*
2. *Protolafystius sp A* differs from *P. madillae* in character 1 (with head longer than wide and rostrum broad and distally rounded); in character 2 (eye partly covered by coxa 1, with ca. 50 facets); in character 3 (with primary tooth a simple spike lacking denticles on right lacinia mobilis); in character 4 (*P. m.* lacks overarchng setae); in character 6 (merus lobe covers nearly the entire anterior margin of carpus); in character 9 (rami longer than peduncle); and in character 10 (setules lacking).

3. Other families with which the species might be initially confused are Pleustidae, Lafystiopsidae, and Iphimediidae. Lysianassoids may have similar body forms, but differ in antennal peduncle and gnathopod structure. Pleustids are most similar, but differ in structure of gnathopods 1 and 2 as well as mouthparts. They also generally lack the enlarged, ventrally acuminate coxa 4 found in Lafystiidae. Lafystiopsids lack a cone-shaped mouthpart bundle, have a mandibular molar (lacking in lafystiids), and have much stronger antenna one dominance. They also parasitize invertebrates (typically crinoids) rather than vertebrates. Iphimediids are similar in overall form to lafystiids, but nearly always have either pereonal, pleonal, or urosomal ornamentation of spines, lobes, tubercles, or teeth. Iphimediids also have a tri or quadri-articulate maxillipedal palp, while lafystiids have only 2 articles in the maxillipedal palp. In other respects lafystiids fall within the range of variability exhibited by species placed in Iphimediidae.

We have several pleustids and iphimediids locally, but no lafystiopsids are currently known from Southern California Bight waters.

DEPTH RANGE: 305m.

DISTRIBUTION: known only from a single collection off Palos Verdes, Los Angeles County, California, May be the same as a MS species of E. L. Bousfield based on specimens taken in southern California.

DISCUSSION: Were it not for the relatively short urosome, and the presence of a coxal gill on P7, this species would be very reminiscent of *Lafystius morhuanus* from eastern Canada (Bousfield 1987), especially in the structure of the dactyl of P1, and the general configuration of the head. Sexual dimorphism in *P. sp A* is not pronounced, as it is in some members of the family. The animals were collected from the head of a *Sebastes melanostomus*, the Blackgill Rockfish. They were concentrated around the orbits, with a number being taken from the membrane lining the outside of the eye and the inside of the orbital cavity. Others were found in small (presumably sensory) pits on the top of the head, or out on the surface of the head. While alive and fresh-dead the animals had a base color ranging from translucent white to light pink, and bore three dorsal longitudinal lines of pink. All pink coloration vanished with transfer to ethanol.

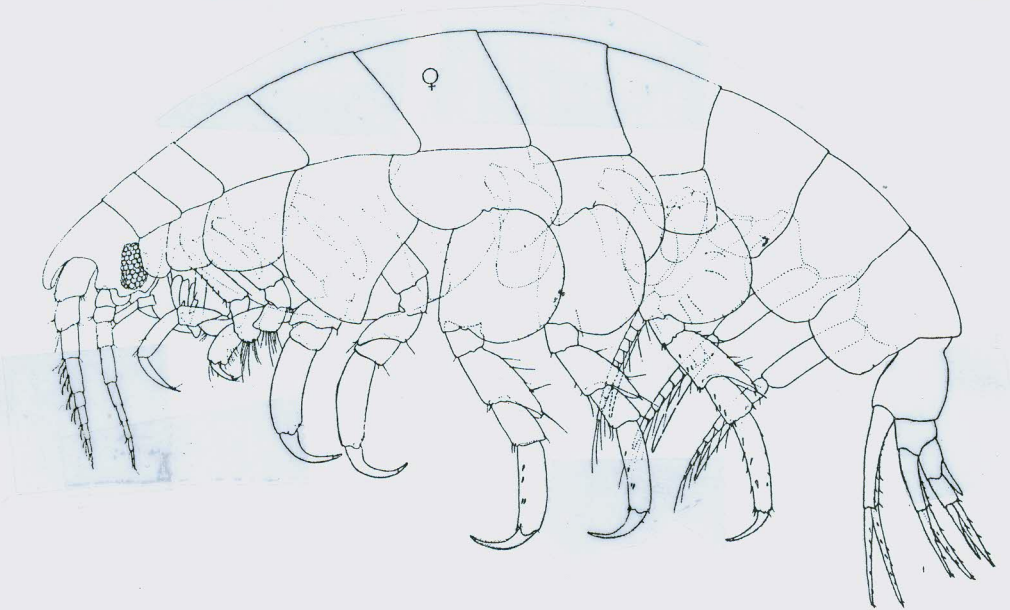


Figure 1 - *Protolafystius madillae* (from Bousfield 1987). *Protolafystius sp A* looks very similar overall, differing only in detail.

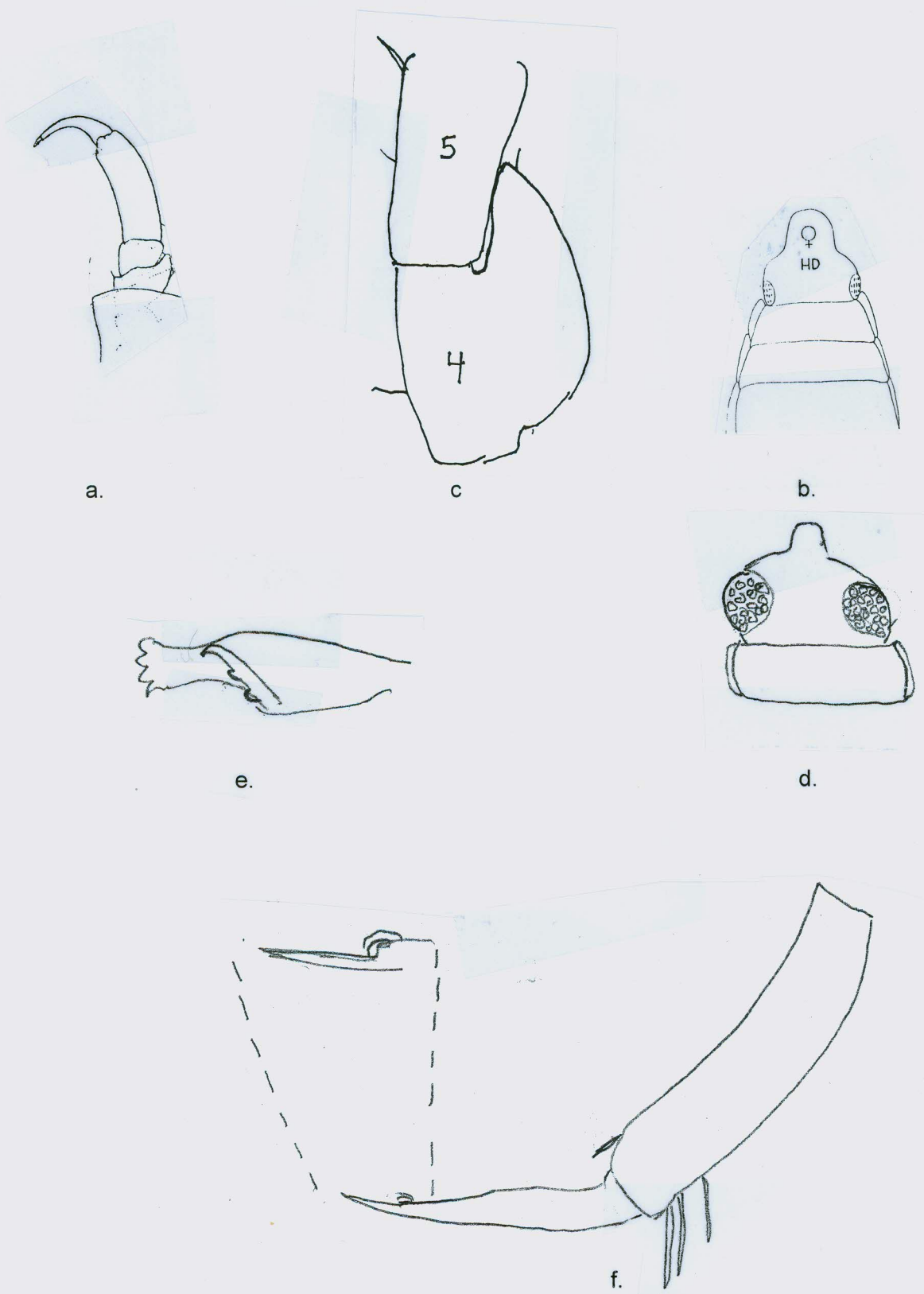


Figure 2 a) Fourth pereopod; b) head, dorsal view - *P. madillae*, 5.0mm holotype _ from Hecate Strait (from Bousfield 1987); c) Fourth pereopod, merus and carpus; d) head, dorsal view; e) lacinia mobilis of right mandible; f) dactyl of gnathopod 1 - *P. sp. A*, 5.0mm _, Station T1-305, 305m off Palos Verdes