

Artificial Key to the Synopiidae Reported from the Southern California Bight, SCAMIT, Edition 14

Dean Pasko, 11-April-2016, Rev 7-Nov-201

(modified from Cadier 9-Dec-2014)

INFRAORDER LILJEBORGIDA

SUPERFAMILY SYNOPIOIDEA

FAMILY SYNOPIIDAE

Bruzelia tuberculata G.O. Sars 1883

Garosyrrhoe bigarra (J. L. Barnard 1962)

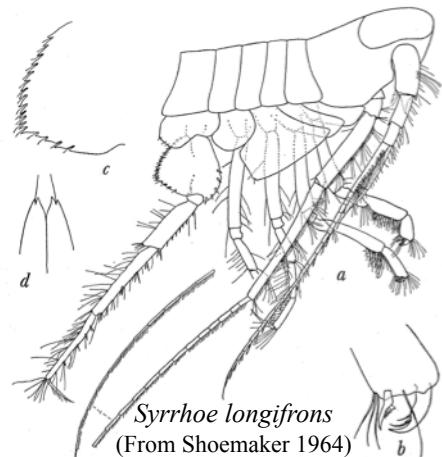
Metatiron tropakis (J. L. Barnard 1972)

Syrrhoe crenulata Göes 1866

Syrrhoe longifrons Shoemaker 1964

Syrrhoe sp A SCAMIT 1987 §

Tiron biocellata J. L. Barnard 1962

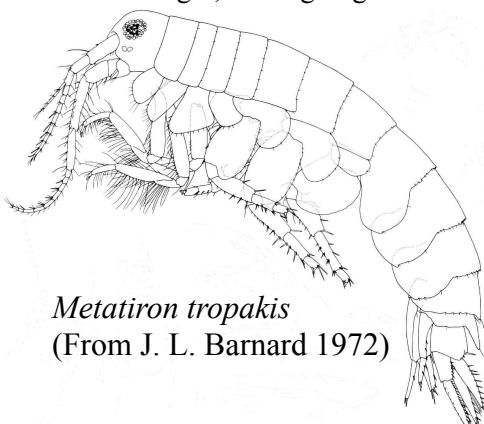


Syrrhoe longifrons

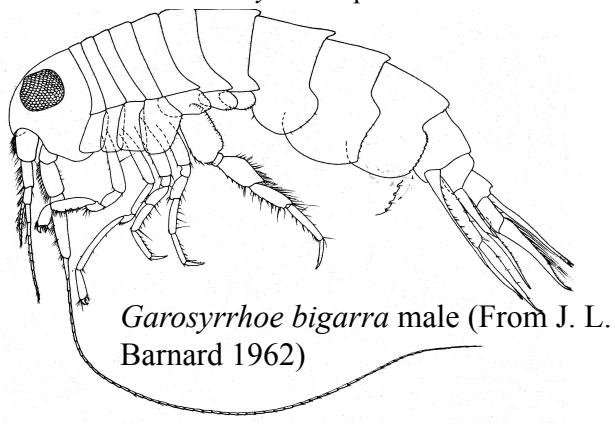
(From Shoemaker 1964)

Male: a, anterior end of animal; b, distal end of gnathopod 1; c, posterior margin of second joint of pereopod 3; d, distal end of telson.

1. Gnathopods simple, sixth articles elongate 2
- One or both gnathopods subchelate, sixth articles short 3
2. Mandible with palp; dactyls of pereopods 5–7 elongate; urosomite 3 with postero-dorsal tooth *Tiron biocellata*
- Mandibular palp absent; dactyls of pereopods 5–7 prehensile; urosomite 3 without tooth *Metatiron tropakis*
3. Gnathopodal palms transverse or nearly so; telson cleft 4
- Gnathopodal palms oblique; telson entire, basally broadened, strongly tapering distally *Bruzelia tuberculata*
4. Coxae 3–4 pelagont (adze-shaped; ventral margin straight; posterior margin distinctly excavate proximally) (*Syrrhoe*) 5
- Coxae 3–4 not pelagont (weakly to not excavate) *Garosyrrhoe bigarra*
5. Head protruding forward, overhanging rostrum, which is directed backward towards the body 6
- Head not strongly protruding forward, curving evenly downward, dorsal and anterior margins of head nearly perpendicular causing rostrum to point straight downward; epimeron 3 with as many as 17 teeth on posterior margin that are almost continuous with dorsal group *Syrrhoe crenulata*
6. Antenna 1 peduncular article 1 with curved cusp medially; pereopod 7 basis posteriorly subtriangular, with distinct ventral margin *Syrrhoe longifrons*
- Antenna 1 peduncular articles 1–3 with curved cusps medially, those on articles 2 and 3 becoming progressively smaller; pereopod 7 basis posteriorly rounded, lacking distinct ventral margin, bearing large teeth *Syrrhoe sp A* SCAMIT



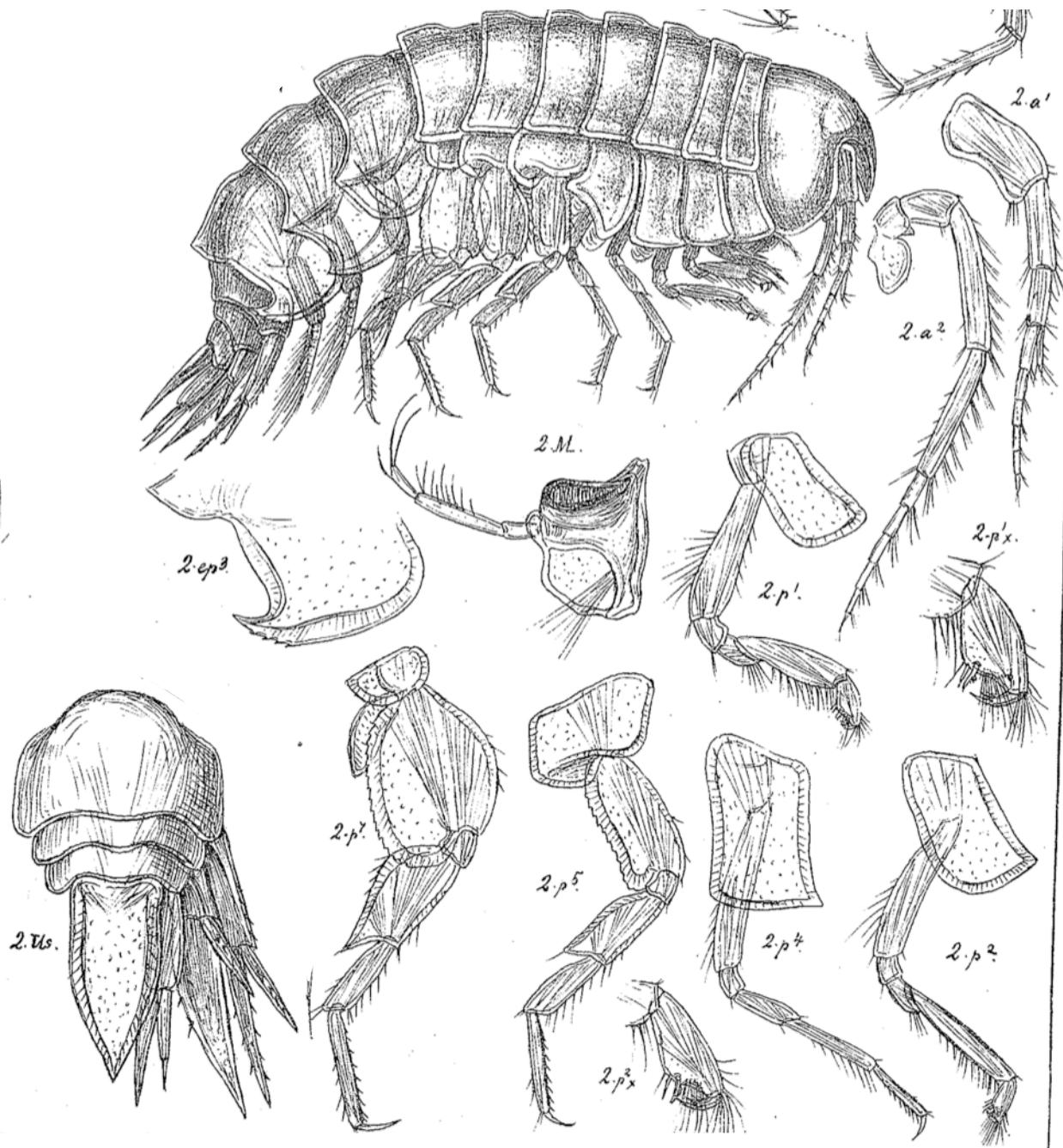
Metatiron tropakis
(From J. L. Barnard 1972)



Garosyrrhoe bigarra male (From J. L. Barnard 1962)



Bruzelia tuberculata (From Sars 1895)



- Forehead not protruding, lateral cephalic lobe unproduced, eyes absent; rostrum large down turned
- Antenna 1 with 1-articulate accessory flagellum
- Gnathopods 1 & 2, article 5 narrow, elongate, article 6 oblique
- Coxa 4 variably shaped, drawn out posterio-marginally
- Pereonites dorsally carinate
- Pleonites ventro-distally produced
- Urosomites without dorsal teeth
- Telson narrowing distally



Garyosyrrhoe bigarra (from JL Barnard 1962)

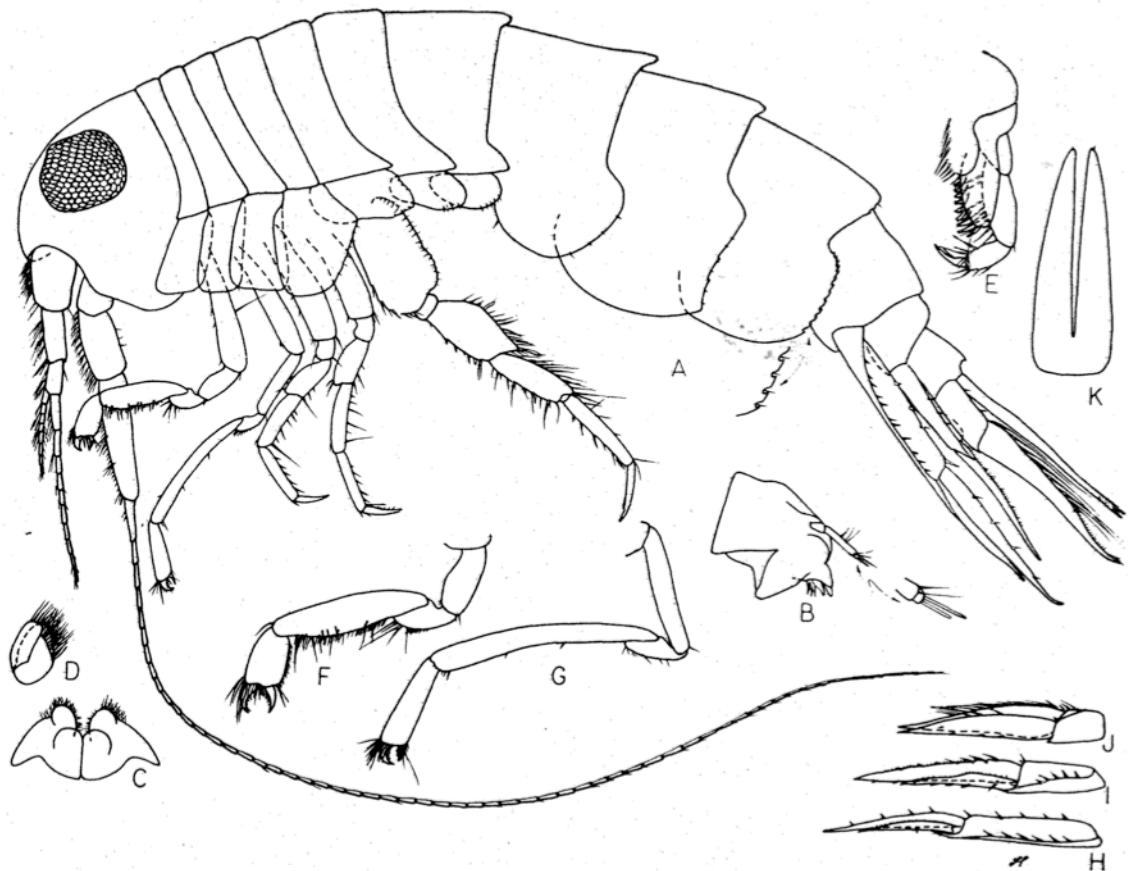
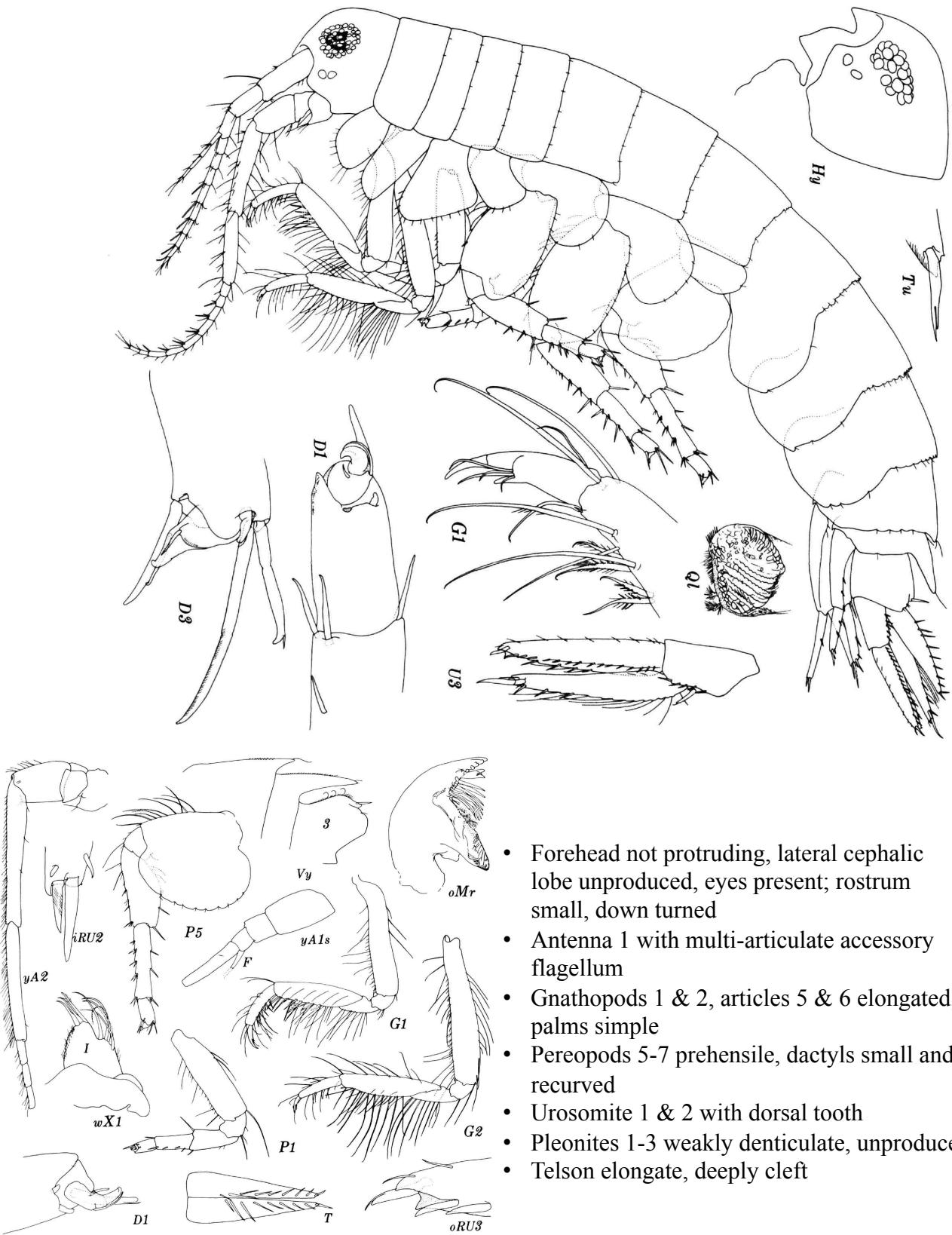


Fig. 1. *Syrrhoites bigarra*, n. sp. ?Male, holotype, 4.5 mm, sta. 5190: A, lateral view; B, mandible; C, lower lip; D, maxilla 2; E, maxilliped; F,G, gnathopods 1, 2; H,I,J, uropods 1, 2, 3; K, telson.

- Forehead not protruding, lateral cephalic lobe unproduced, eyes large; rostrum small, down turned
- Antenna 1 with multi-articulate accessory flagellum
- Pereonites compressed relative to pleonites
- Gnathopods 1 & 2, article 5 elongated; palms nearly transverse, defined by large serrate spine making palm appear chelate
- Pereonite 7 and pleonites 1-2 with dorsal tooth
- Pleonites 1-3 weakly denticulate, unproduced
- Telson elongate, deeply cleft



Metatiron tropakis (from JL Barnard 1972)



- Forehead not protruding, lateral cephalic lobe unproduced, eyes present; rostrum small, down turned
- Antenna 1 with multi-articulate accessory flagellum
- Gnathopods 1 & 2, articles 5 & 6 elongated, palms simple
- Pereopods 5-7 prehensile, dactyls small and recurved
- Urosomite 1 & 2 with dorsal tooth
- Pleonites 1-3 weakly denticulate, unproduced
- Telson elongate, deeply cleft



Tiron biocellata (from JL Barnard 1962, top; JL Barnard 1972, bot)

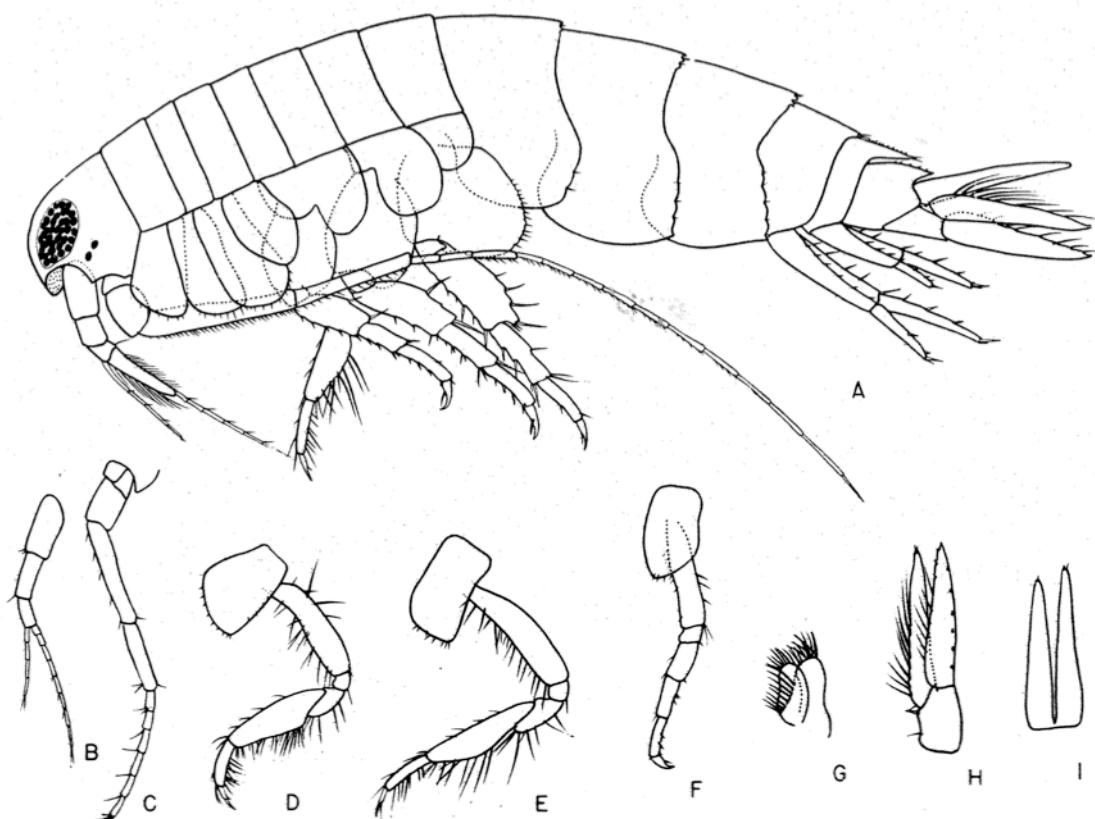
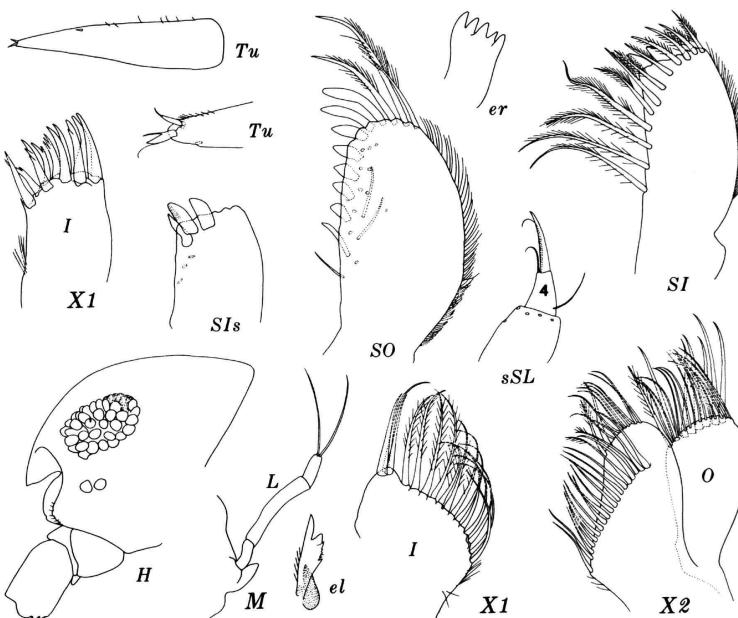


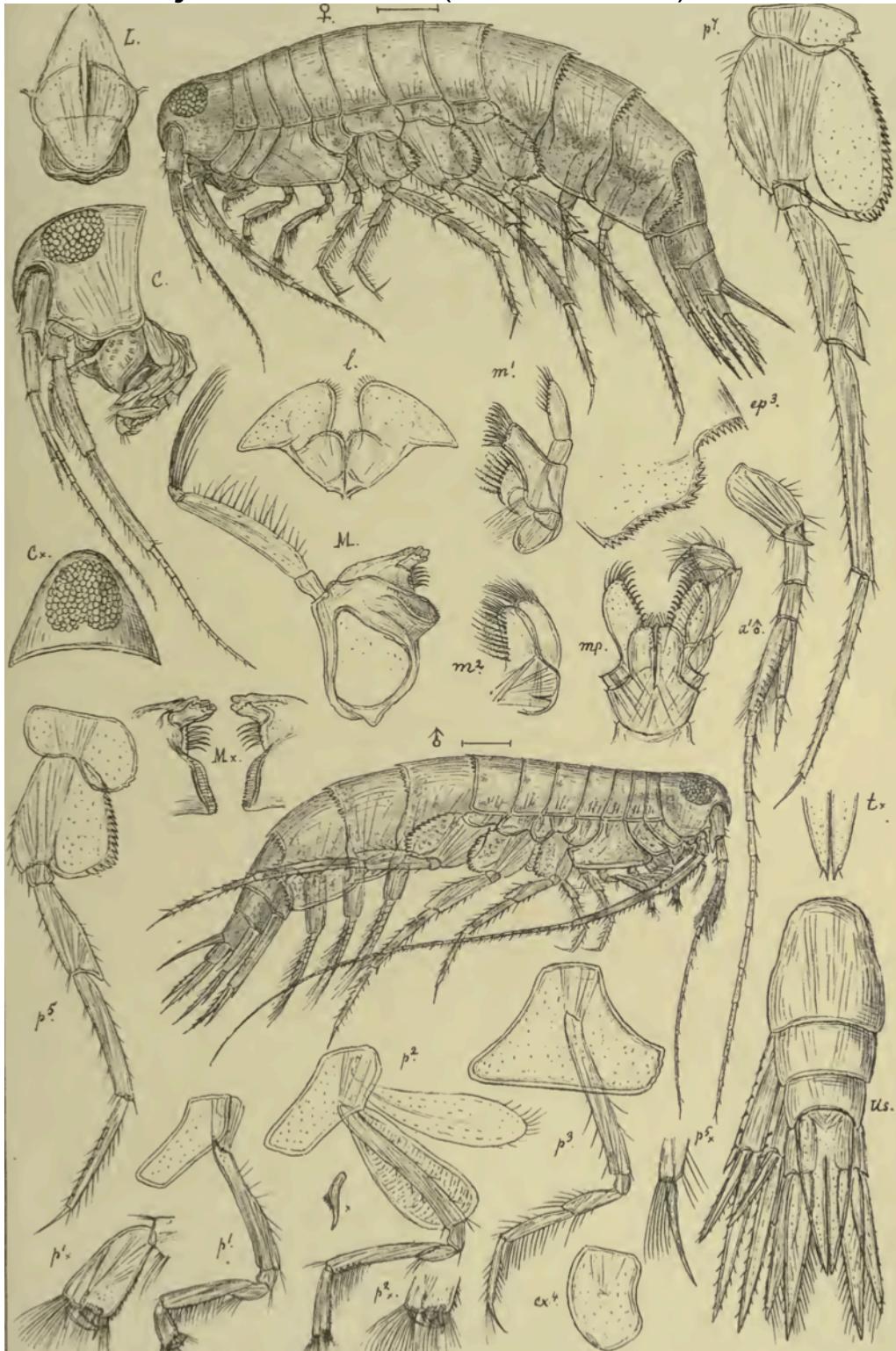
Fig. 2. *Tiron biocellata*, n. sp. Male, 3.5 mm, sta. 4843: A, lateral view; D,E, gnathopods 1, 2; F, peraeopod 2; G, maxilla 2; H, uropod 3; I, telson. Female: B,C, antennae 1, 2.



- Forehead not protruding, lateral cephalic lobe produced, accessory eyes present; rostrum small, down turned
- Antenna 1 with multi-articulate accessory flagellum
- Gnathopods 1 & 2, articles 5 & 6 elongated, palms simple
- Pereopods 5-7 normal, dactyls elongate and straight
- Urosomites 1, 2, & 3 with dorsal tooth
- Pleonites 1-3 denticulate; pleonites 2 & 3 quadrate
- Telson elongate, deeply cleft



Syrrhoe crenulata (from Sars 1895)



- Forehead not protruding, lateral cephalic lobe acutely produced, eyes present, dorsally fused; rostrum down turned
- Antenna 1 with bi-articulate accessory flagellum
- Gnathopods 1 & 2, article 5 elongated, palms subchelate, transverse
- Pereopods 5-7 with basis posteriorly serrate
- Pereonite 7 and pleonites 1-3 posterior margins serrate
- Urosomites smooth; telson elongate, deeply cleft



Syrrhoe longifrons (from Shoemaker 1964)

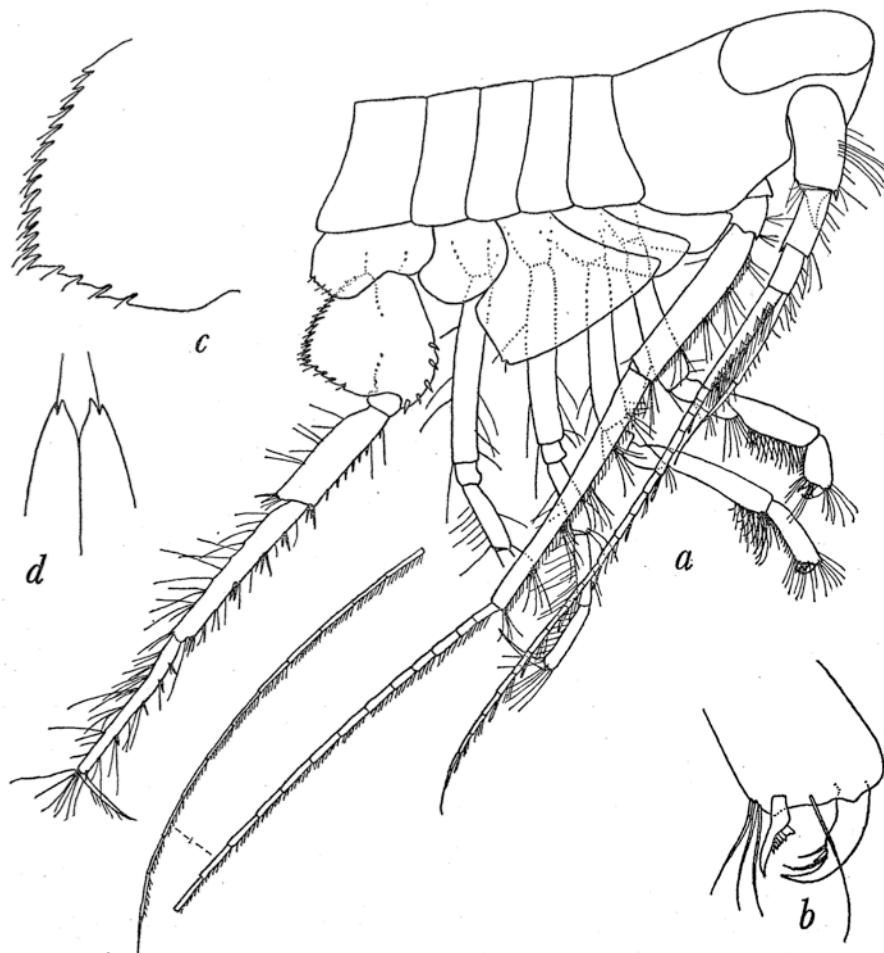


FIGURE 7.—*Syrrhoe longifrons*, new species, male: *a*, anterior end of animal; *b*, distal end of gnathopod 1; *c*, posterior margin of second joint of pereopod 3; *d*, distal end of telson.

- Forehead protruding forward, overhanging rostrum, lateral cephalic lobe bluntly produced, eyes large, dorsally fused; rostrum down turned
- Antenna 1 with bi-articulate accessory flagellum
- Gnathopods 1 & 2, article 5 elongated, palms subchelate, transverse
- Pereopods 5-7 with basis posteriorly subtriangular, serrate
- Pereonite 7 and pleonites 1-3 posterior margins serrate
- Urosomites smooth; telson elongate, deeply cleft



Syrrhoe sp A

Syrrhoe sp. A SCAMIT 1987
Amphipoda: Synopiidae

SCAMIT Vol. 6, No. 6

SCAMIT CODE: MBC 65

Date Examined: 14 September 1987
Voucher by: Don Cadien

SYNONYMY: None

LITERATURE: Barnard, J. L. 1972. A review of the family Synopiidae (=Tironidae). Mainly distributed in the deep sea (Crustacea: Amphipoda). Smithsonian Contributions to Zoology. Vol. 124, 94 p.

Gurjanova, E. 1951. Amphipoda-Gammaridea of the seas of the USSR and Adjoining waters. Keys to the fauna of the USSR. Zool. Inst. Acad. Sci. USSR. No. 41, 1029 p.

Shoemaker, C. R. 1964. Seven new amphipods from the West Coast of North America with notes on some unusual species. Proc. USNM. Vol. 115, p. 391-430.

Stebbing, T. R. R. 1906. Amphipoda. I. Gammaridea. Das Tierreich. Vol. 21, 806 p.

DIAGNOSTIC CHARACTERS:

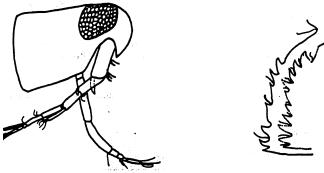
1. Article 1 of antenna 1 peduncle with one or more mediodistal recurved prongs, extending approximately 1/2 the length of the second article. Articles 2 and 3 bearing progressively smaller single teeth in similar positions.
2. Epimeron 3 with between 7 and 13 lateral teeth which may be separated into upper and lower groups. Tooth number increases with age. Lateral and dorsal teeth always separated by a smooth area.
3. Pereopod 7, article 2 broadly oval in shape with large teeth which may extend to ventral margin of article in older specimens.

RELATED SPECIES AND CHARACTER DIFFERENCES: (Key in Barnard 1972)

1. *S. crenulata* has more numerous teeth on article 2 of peropod 7 although the article's shape is similar. Epimeron 3 has more lateral teeth which are continuous with the dorsal group. Anterior margin of head less produced, and head shorter than in sp. A. (See Stebbing 1906 and Gurjanova 1951.)
2. *S. longifrons* has teeth on anterior margin of article 2 of peropod 7 which are lacking in sp. A. Posterior margin inflated to form a triangle. Anterior margin of head more produced, forming an oblique rather than right-angle where it meets the dorsal margin. (See Shoemaker 1964.)

DEPTH RANGE: 168-206 m.

DISTRIBUTION: From Coronado Submarine Canyon to Pt. Bu



Relevant Literature

- Barnard, JL. 1962. Benthic marine Amphipoda of Southern California; 2. Families Tironidae to Gammaridae. *Pacific Naturalist* 3(2):73-115.
- Barnard, JL. 1972. A review of the family Synopiidae (=Tironidae), mainly distributed in the deep sea (Crustacea: Amphipoda). *Smithsonian Contributions to Zoology* 124: 1-94.
- Barnard, JL. and GS Karaman. 1991. The Families and Genera of Marine Gammaridean Amphipoda (except marine gammaroids). Records of the Australian Museum Supplement 13 (Parts 1 and 2): 1-866.
- Cadien, DB. 2014. Amphipoda of the Northeast Pacific (Equator to Aleutians, intertidal to abyss): XVII. Synopioidea: a review Donald B. Cadien, LACSD. 22July2004 (revised 9Dec2014)
- Sars, GO. 1895. "Amphipoda." An Account of the Crustacea of Norway, with short descriptions and figures of all the species 1: 1-711.
- Shoemaker, CR. 1964. Seven new amphipods from the West Coast of North America with notes on some unusual species. Proceedings of the United States National Museum 115(3489): 391-430.

