

Unidentified Synallactid
Group: Synallactidae

Synallactes alexandri

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Date Examined: 25 September 2003
Vouchered By: Lisa Haney LACSD

IDENTIFYING CHARACTERS:

1. Body elongate, almost cylindrical, and similar in form to Pannychia.
2. Peltate tentacles nearly equal in size, average twenty in number, large circular discoidal ends.
3. Ossicles are in the form of tables with long thin spires and a needle like opening towards the top. Also present are C-shaped supporting rods in the tentacles and small club-shaped ossicles in the tube feet.
4. Color in alcohol and in live material is brown/grey.
5. Terminal part of the tentacles covered with minute papilla-like projections
6. Smooth dorsal body wall with small projections/bumps.
7. Body wall rigid and well formed with large tube feet located ventrally only.
8. Calcareous ring very poorly calcified with neither long anterior or posterior extensions.

RELATED SPECIES AND CHARACTER DIFFERENCES:

The only reported Synallactid from southern California is *Synallactes challengeri* of which there is no way this specimen could be confused. *Synallactes challengeri* has long pointed papillae dorsally and the ossicle tables are different in form, though the spires of both of these animals are similar.

DEPTH RANGE: Taken from 500 m

HABITAT AND DISTRIBUTION: Taken from the Palos Verdes Peninsula in Los Angeles, California within the slope environment. Muddy substrate.

LITERATURE:

Lambert, Philip. 1997. Sea Cucumbers of British Columbia, southeast Alaska and Puget Sound. UBC Press.

CLASS HOLOTHOROIDEA

Prepared by Lisa Haney/LACSD

Subclass Aspidochirotacea

Diagnosis. 10-30 leaflike or shieldlike oral tentacles, lacks retractor muscles, tube feet present. (e.g., *Enypniastes*, *Holothuria*, *Isostichopus*, *Parastichopus*, *Pelagothuria*, *Scotoplanes*, *Stichopus*)

Order Aspidochirotida Grube, 1840

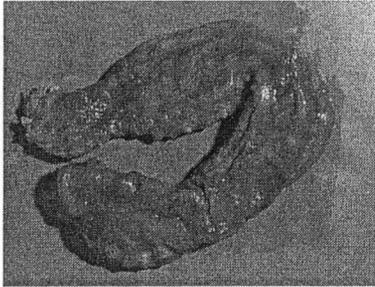
Diagnosis. Tentacles peltate, 15-30 in number. Respiratory trees present. Gonads in 1 or 2 tufts. Ossicles usually include tables.

Family Synallactidae

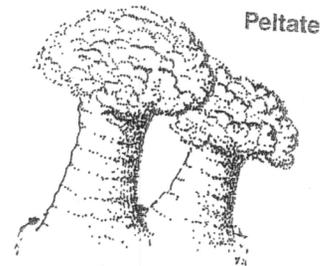
Diagnosis. Body with tube feet in rows ventrally, papillae dorsally. Body wall soft and pliable. Twenty equal, peltate tentacles. Tentacle ampullae absent. Retractor muscles absent. Rete mirabile absent. Posterior mesentery attached to right ventral body wall. Gonad single tuft, of double tuft. Cuvierian organs absent. Calcareous ring simple; not a mosaic of smaller pieces. Typical skin ossicles: Tables or C-shaped bodies.

~~Unidentified cucumber~~ (Possible Synallactid) *Synallactes alexandri*

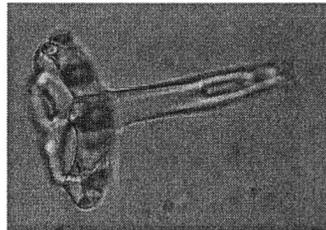
General Body Design:



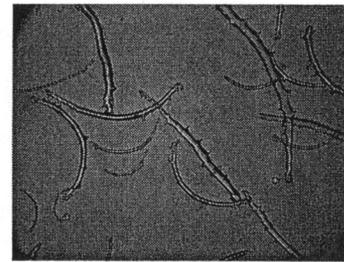
General Tentacle Morphology:



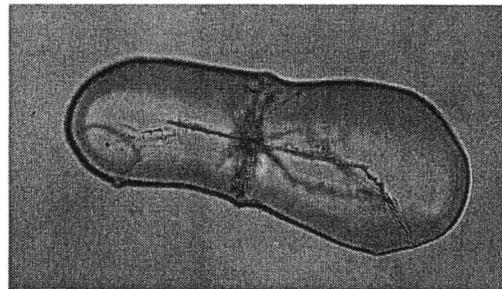
Larvae Morphology:



General Ossicle Morphology:



General Ring Canal Morphology:



Synallactes alexandri

Possible Synallactidae in the genus Synallactes

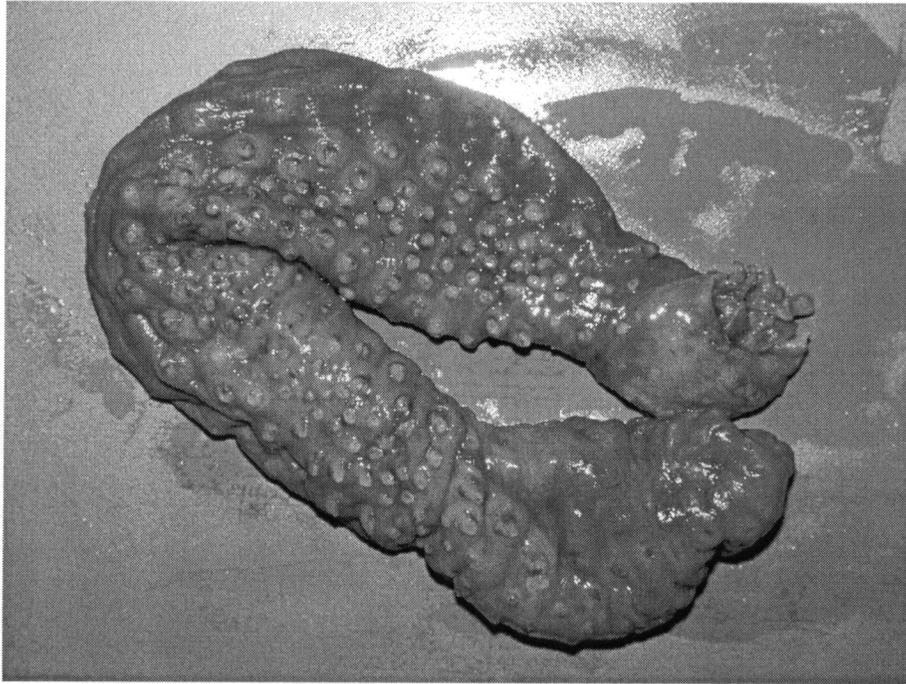


Fig. 1: Ventral view

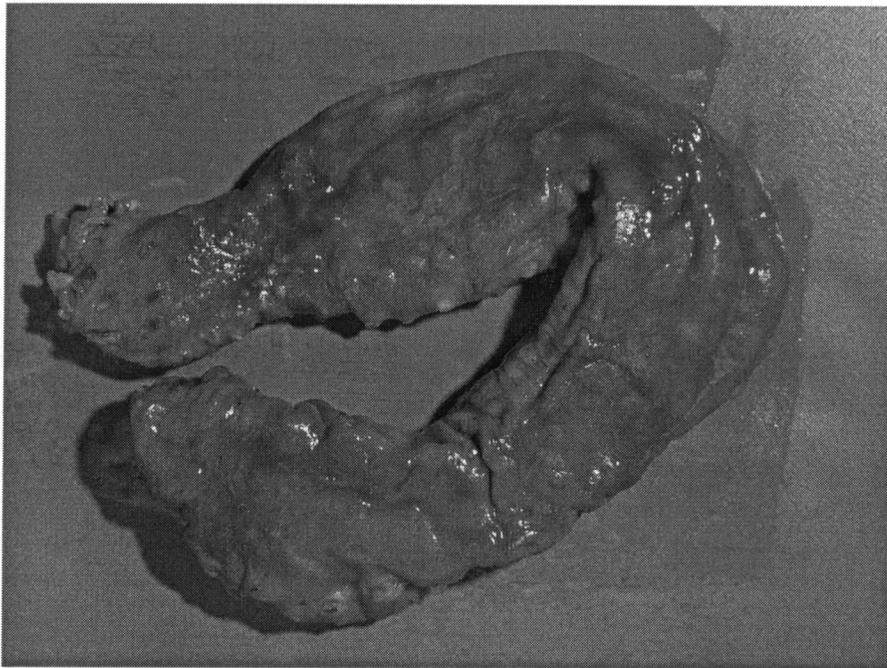


Fig. 2: Dorsal view

Synallactes alexandri

Possible ~~Synallactidae~~ in the genus *Synallactes*

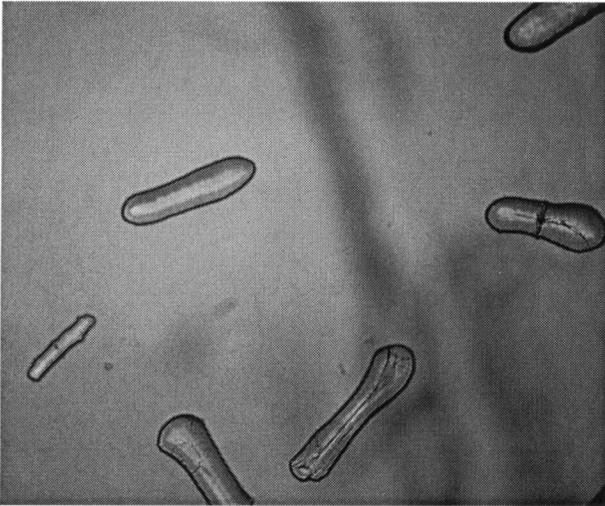


Fig. 1: Tube feet ossicles

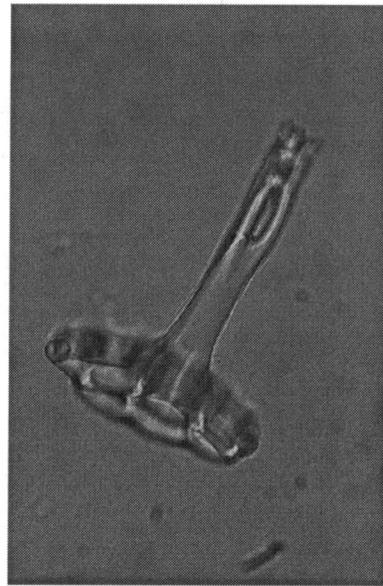


Fig. 2: Body wall ossicles

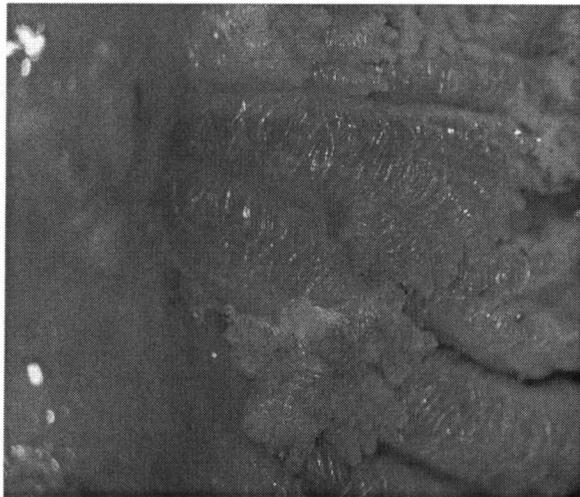


Fig. 3: Tentacle mass

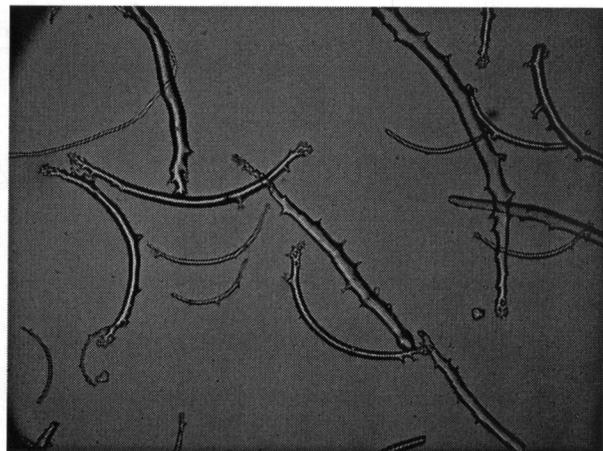


Fig. 4: Tentacle ossicles

Synallactes alexandri Ludwig, 1893

Synallactes alexandri Ludwig, 1893: 2; 1894: 21-24, Pl. 9, figs. 10-19.

Diagnosis. Subcylindrical body, slightly flattened. Bodywall thick. From 18 to 20 peltate tentacles. The ventro-lateral radii with tubefeet and papillae that protrude in the mouth area and (more pronounced) around the anus. Six rows of papillae on dorsal side, a similar distance from each other. Four rows of papillae in dorsal radii. Calcareous ring with interradiial pieces loosely connected. From 1 to 4 Polian vesicles. 2 respiratory trees well developed. Two gonads, consisting of 3-5 very long gonadal tubes. Each gonadal tube branches dichotomously 2-3 times. **Ossicles.** Few ossicles in the thick bodywall. Tubefeet and papillae ossicles similar to those in bodywall. Those in tubefeet smaller and more fragile than those in papillae. In tubefeet and papillae, numerous rounded connections. The connections have spines around the rim. Ossicles in tubefeet with a strong calcareous end plate. When adult, tables show smaller base discs and slender pillars. Bodywall tables more complex dorsally than ventrally. In dorsal bodywall four-armed tables, of which one sometimes is missing; arms thick and short (stubby), one or several perforations at their distal end. Distal end of two or three, more rarely all four arms connected. Stem solid that extends from the middle of cross, splitting into three or more fine, connected projections, which are rounded off at their distal ends. Tentacles contain only rods, straight, curved, forked, and sometimes branched.

Material examined. USNM E18185, syntype, 1 specimen, *Albatross* St. 3354, North Pacific Ocean, Azuero Peninsula, Gulf of Panama, 07° 09' 45"N, 80° 50' W, 23 February 1891, 588m; USNM E18212, syntype, 1 specimen, *Albatross* St. 3406, South Pacific Ocean, Galapagos Islands, 00° 16' 00"S, 90° 21' 30"W, 3 April 1891, 1007m; ZMUC, no cat. Number, 1 specimen, *Galathea* St. 745 Pacific Ocean, Gulf of Panama, 7° 15' N, 79° 25' W, 16 May 1952, 938m; LACM 301.4, 2 specimens (specimens in bad condition, Paratype of *Bathyplores hancocki* Domantay), *Velero* St. 1400-41, 6¼ miles NE of Long. Pt. Santa Catalina Island, California, 33° 25'05"N, 118° 14'42"W, 8 September 1941, 480m; LACM 302.1, 1 specimen, *Velero* St. 1306-41, 7 miles E. of Long. Point Santa

Catalina Island, California, 33° 24'50"N, 118° 14'05"W, ??-05-41, 410-480m; LACM 301.2, 4 specimens (including the holotype of *Bathyplores maccullochae* Domantay), *Velero* St. 1430-41, 7¼ miles SE of Seal Rocks, Santa Catalina Island, California, 33° 14'20"N, 118° 10'45"W, 25 October 1941, 273m.

Type material. Syntypes, USNM E18212 (2 specimens); USNM E18185 (1 specimen).

Type locality. *Albatross* St. 3354, North Pacific Ocean, Azuero Peninsula, Gulf of Panama, 07° 09' 45"N, 80° 50' W, 588m, 23 February 1891.

Geographic distribution. Pacific Ocean, from California to Gulf of Panama and Galapagos Islands.

Bathymetric distribution. 273-1018m.

Biological information. On green mud and rock substrates.

Remarks. I review Domantay's species type material of *Bathyplores hancocki* Domantay, 1953 and *Bathyplores maccullochae* Domantay, 1953, and they show exactly the same body and ossicle pattern as *Synallactes alexandri*.