

SCAMIT CODE: None

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SYNONYMY: *Crystallophrisson nitidulum* var. *pacificum* Schwabl, 1963

LITERATURE: Schwabl, 1963; Scheltema, 1998

DIAGNOSTIC CHARACTERS:

1. Body regionated; neck narrower than either anterior or anterior trunk (Figure B); anterior and posterior trunk subequal in length, posterior trunk larger in diameter (Figure A); spicules frequently lost or reduced on anterior trunk.
2. Posterium flaring, with short spicular fringe that protrudes along peribranchial skirt (Figure D); peribranchial skirt bare or with few scattered spicules; peribranchial plate slightly convex but not bulbous.
3. Oral shield dorsally incised, wider than tall, with large well-defined dorsal lobes (Figure C).
4. Radular denticles of moderate size, plate-like, slightly curved; radular cone tapering evenly in both frontal and lateral view; cone nearly equal in width in lateral and frontal aspects. (Figure E).
5. Mid-anterior trunk spicules with strong central keel and thickened edges (Figure G); lateral ridges generally lacking; tapering more strongly at distal end; if unbroken can be sharp tipped (Figure F).

RELATED SPECIES AND CHARACTER DIFFERENCES:

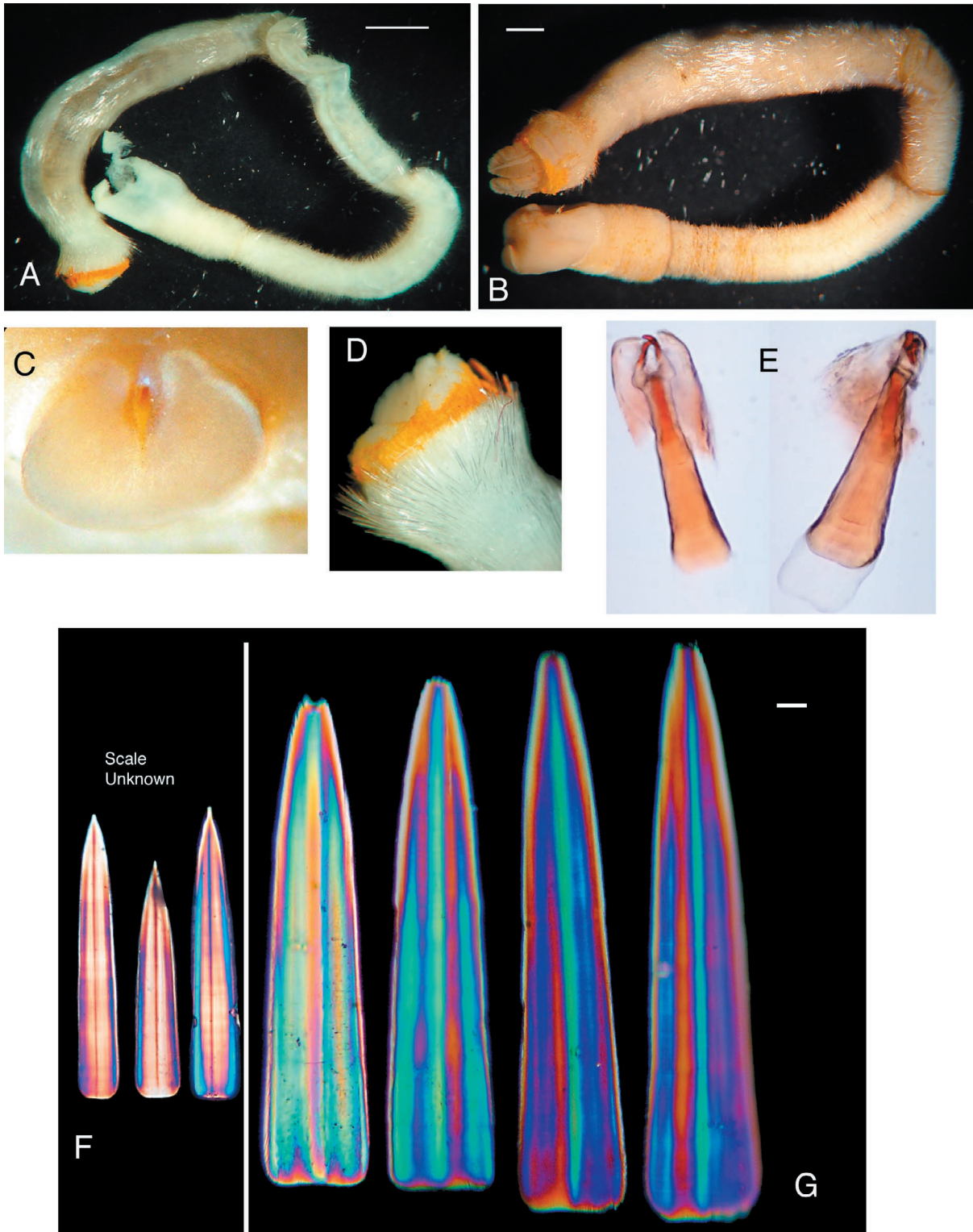
1. *Chaetoderma pacificum* is in the elongate group of species with BLI over 10. Other group members are *C. elegans*, *C. hancocki*, and *C. marinelli*. *Falcidens hartmanae* can also be relatively elongate, but can easily be separated from any of the *Chaetoderma* group members by its inflated anterior trunk and very narrow posterior trunk.
2. *C. elegans* can be separated from *C. pacificum* by having: anterior inflated, but carried at a large angle (about 90°) to the body axis; a much higher BLI (20.6-22.9 vs 11.1-15); an oral shield with small poorly defined dorsal lobes; a more bulbous peribranchial plate; and anterior trunk spicules bearing lateral ridges.
3. *C. hancocki* can be separated from *C. pacificum* by having: more inflated anterior separated by a strong constriction from the neck; anterior trunk significantly longer (20%+) than posterior trunk; very short posterium fringing spicules; a barbell shaped branchial aperture; anterior trunk spicules that lack or have very weak central keels; very small radular denticles; and anterior curvature of the radular cone (in lateral view).
4. *C. marinelli* can be separated from *C. pacificum* by having: neck tapering (often strongly) from front to rear; oral shield about as tall as wide; a flat peribranchial plate; a radular cone which is bulbous basally in frontal view; anterior trunk spicules with numerous lateral ridges; and by lacking a bare peribranchial skirt on the posterium.
5. *Falcidens longus* can be confused with smaller specimens of *C. pacificum*, with which they co-occur. They can be separated by the radular differences (sickle-shaped denticles and triangular plate in *Falcidens*), and by having: anterior trunk significantly longer than posterior trunk; longer spicular ring on the posterium; flat rather than dome-shaped peribranchial plate; and lack of spicule-free peribranchial skirt.

DEPTH RANGE: 22 - 1464m

DISTRIBUTION: Continental Shelf and upper to mid Continental Slope; San Diego to Santa Maria Basin

DISCUSSION: *Chaetoderma pacificum* is one of the more common species encountered on the outer shelf and upper slope of the Southern California Bight. It was the second most abundant aplacophore species in the Bight '03 samples. It often co-occurs with *Falcidens longus*, the two being, along with *C. marinelli*, the main constituents of the shelf aplacophore fauna. While not as large a species as *C. hancocki*, *C. pacificum* can reach up to 30mm in length (Scheltema 1998). Their tendency to have the spicules of the anterior trunk loosely attached and easily lost is noteworthy. The identification of figures A and D thru F were confirmed by A. Scheltema (personal communication 10 May 2003)

Schwabl originally described this (1963) as a subspecies of the North Atlantic *Chaetoderma nitidulum*. It was raised to full species status by Scheltema (1998).



*Chaetoderma pacificum* (Schwabl 1963) A. Whole animal, lateral view B. Whole animal, lateral view (scale bar 1mm) C. Anterior view D. Posterior lateral view E. Radula frontal and lateral views F. and G. Spicules from mid-anterior trunk (horizontal scale bar 0.01mm) (Fig. A, D - F: Kelvin Barwick voucher #0255 CSD Sta. 2747(1), 16JUL01, 585ft.) (Fig. B, C and G: Bight 2003 Sta. 4007, 24AUG03, 430m)