

SCAMIT CODE: None

Date Examined: 05 April 2005

Voucher By: K. Barwick/D. Cadien

SYNONYMY: *Crystallophrisson incrassatum* Schwabl 1963
? *Chaetoderma* sp B of Shrake 1985

LITERATURE: Schwabl, 1963; Scheltema, 1998; Salvini-Plawen, 1975

DIAGNOSTIC CHARACTERS:

1. Body regionated (Figure A); anterium and neck inflated, much broader than anterior trunk; posterior trunk broader than anterior trunk; posterium often has the appearance of an annulus or ring, and may be set off from posterior trunk by distinct ridge, lacking spicular fringe (Figure B)
2. Animal very short for a chaetodermomorph, with a BLI of 3-4 due to the inflated anterium/neck and posterior trunk (Figure A)
3. Oral shield incised, wider than tall, with well-defined dorsal lobes, less than half the width of the inflated anterium (Figure C)
4. Radula lacking denticles; radular cone continuous with robust forked process extending forward like tongs and covered in a heavy sheath of connective tissue (Figure E); cone narrow in anterior view, broad in lateral view
5. Anterior and posterior trunk spicules similar, adherent, lacking keel, ridges, or grooves, long and narrow (Figure D)

RELATED SPECIES AND CHARACTER DIFFERENCES:

1. Several NEP *Chaetoderma* species have inflated anteriums, but none have the combination of inflated anterium and neck and short broad posterior trunk which make this animal so distinctive. In *Chaetoderma elegans* the animal is very long and narrow (BLI 24) and the inflated anterium is carried at a nearly right angle to the main body axis. In *Chaetoderma hancocki* the animal is also much more attenuated than is *F. incrassatus*, with a typical BLI of 10
2. Other members of the families Chaetodermatidae and Falcidentidae have radulae very unlike that of *F. incrassatus*. While some *Chaetoderma* species may lack or have very tiny denticles (as discussed and illustrated by Salvini-Plawen, 1975), they also lack the robust forked anterior extension of the radular cone. All NEP *Chaetoderma* species have denticles, and are easy to distinguish from *Furcillidens* on that basis alone. The same is true of *Falcidens* species. Even those large specimens that lack a triangular plate still bear robust sickle-shaped denticles and lack the forked anterior process of *Furcillidens*.

DEPTH RANGE: 504 - 868m

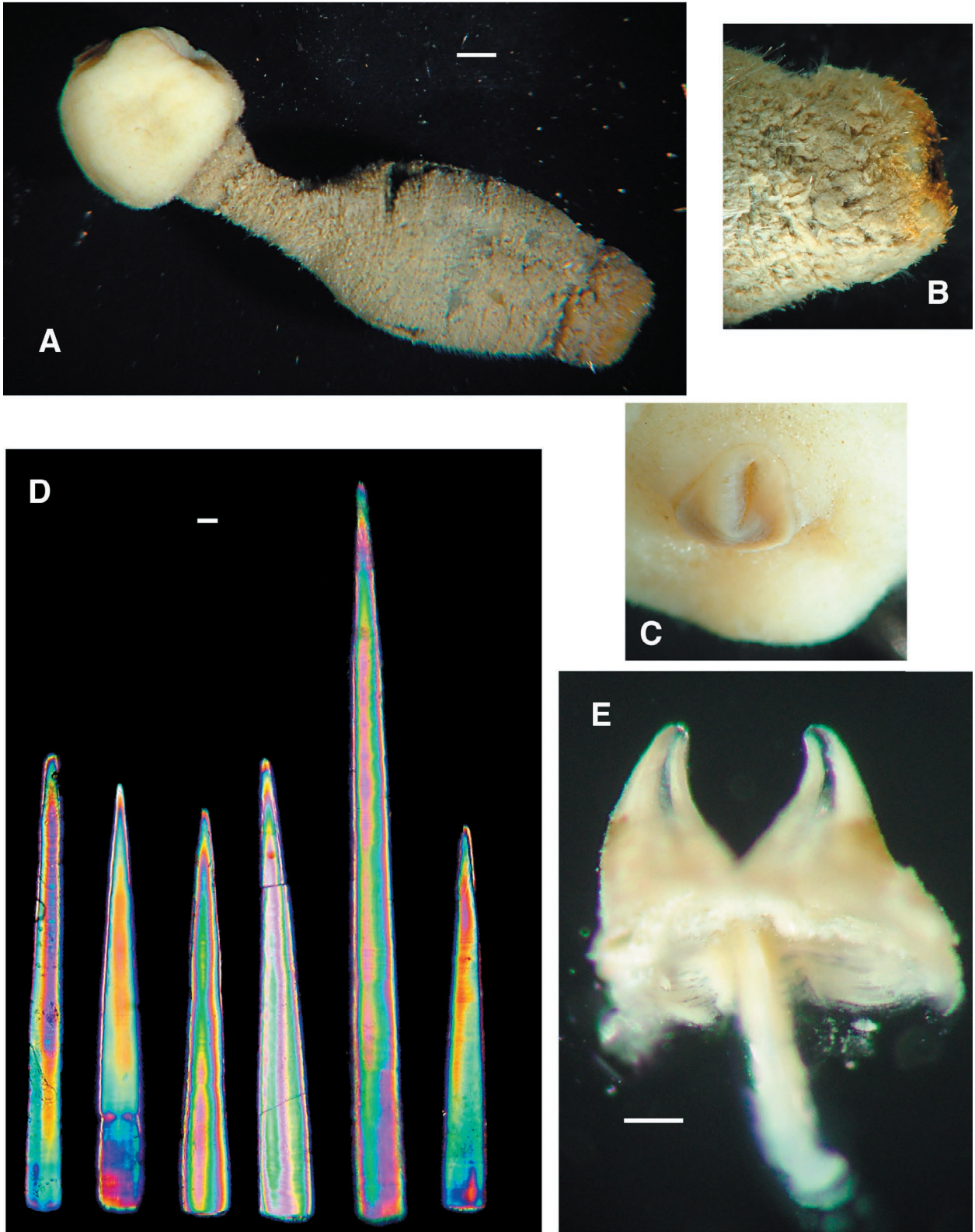
DISTRIBUTION: Upper Continental Slope; Southern California Bight

COMMENTS: If, for some reason, the exterior appearance of a specimen does not unequivocally place it in *F. incrassatus*, a radular preparation will soon demonstrate the difference from other chaetodermomorphs. At present the genus is monotypic, but there may be other species in the genus yet undiscovered. It cannot yet be determined which of the characters mentioned above is unique to this species, and which will be common to other members of the genus once they are found.

DISCUSSION: The radula of this species is very odd, even for a chaetodermomorph. The large forked anterior process looks like a pair of fangs, and seems in some views to have a central lumen or canal. It is not impossible that this may carry some substance for immobilization or digestion of prey. Too little is known of the detailed anatomy of the animal to evaluate this supposition.

Scheltema (1998) indicates that in the three lots she examined no other species of aplacophores occurred. Schwabl (1963), in her original description of the animal indicated that it was taken with *Limifossor fratula* at one of the two sites where it was found. In Bight '03 the three collected specimens did not co-occur with any other species. Scheltema suggests that the fineness of the sediments at sites where this species occurs (silts with less than 5% sand and up to 35% clay) forms a habitat not favored by other aplacophore species.

Comparison of the figure provided by Schwabl in the original description, the drawing in Scheltema (1998) and figure A shows that the length of the posterior trunk is quite variable in this species. It is consistently longer than the anterior trunk, but varies in length and degree of inflation relative to the anterior trunk



Furcillidens incrassatus (Schwabl 1963) A. Whole animal, lateral view (scale bar 1mm)
B. Posterior lateral view C. Anterior view D. Spicules from mid-posterior trunk (scale bars 0.01mm) E.
Radula frontal view (scale bar 0.1mm) (Bight 2003 Sta. 4219, 19JUL03, 610m)