SCAMIT CODE: None

Date Examined: 05 April 2005
Voucher By: K. Barwick/D. Cadien

SYNONYMY: None

LITERATURE: Heath, 1911; Schwabl, 1963; Scheltema, 1998

DIAGNOSTIC CHARACTERS:

1. Body not regionated, of uniform diameter throughout; spicular cover very even, adherant, shiny, silvery (Figure A)
2. Posterium not preceeded by a shank, continuous with trunk; spicular fringe short, not reaching peribranchial disk (Figure B); disk nearly flat, surrounded by narrow skirt lacking prominent spicules
3. Animal normally bent into a shallow C shape (Figure A), BLI 3-7, normally 3-4
4. Oral shield divided into two hemispheres separated by the mouth (as in prochaetodermatids), but the two halves approximated ventrally and widely separated dorsally; mouth large relative to cephalic shield dimensions
5. Radula large, distichous, with multiple rows of heavily sclerotized teeth, each with a large lateral denticle and a median denticle on a broad base (Figure D)
6. Mid-anterior trunk spicules relatively thick, relatively evenly tapered, with a very short keel at the distal end (evident in the right spicule in Figure C)

RELATED SPECIES AND CHARACTER DIFFERENCES:

1. Unlike chaetodermatids and falcidentids in being unregionated; unlike prochaetodermatids in lacking a shank and knob posteriorly; unlike all solenogastres in lacking a pedal groove; unlike scutopids in having a cephalic shield widely separated dorsally and approximated ventrally
2. Differs from the other NEP *Limifossor talpoideus* in body proportion, normally being shorter and thicker (BLI 3-5 vs 6). Unfortunately very relaxed *L. fossor* can extend to a BLI of 7, but this is very uncommon. *L. fossor* also has larger more robust teeth, with larger lateral denticles; larger spicules; and a thicker hypodermis which makes it more rigid than *L. talpoideus*. The later species is not known to occur south of San Francisco, and is not common south of Alaska

DEPTH RANGE: 131 - 1830m

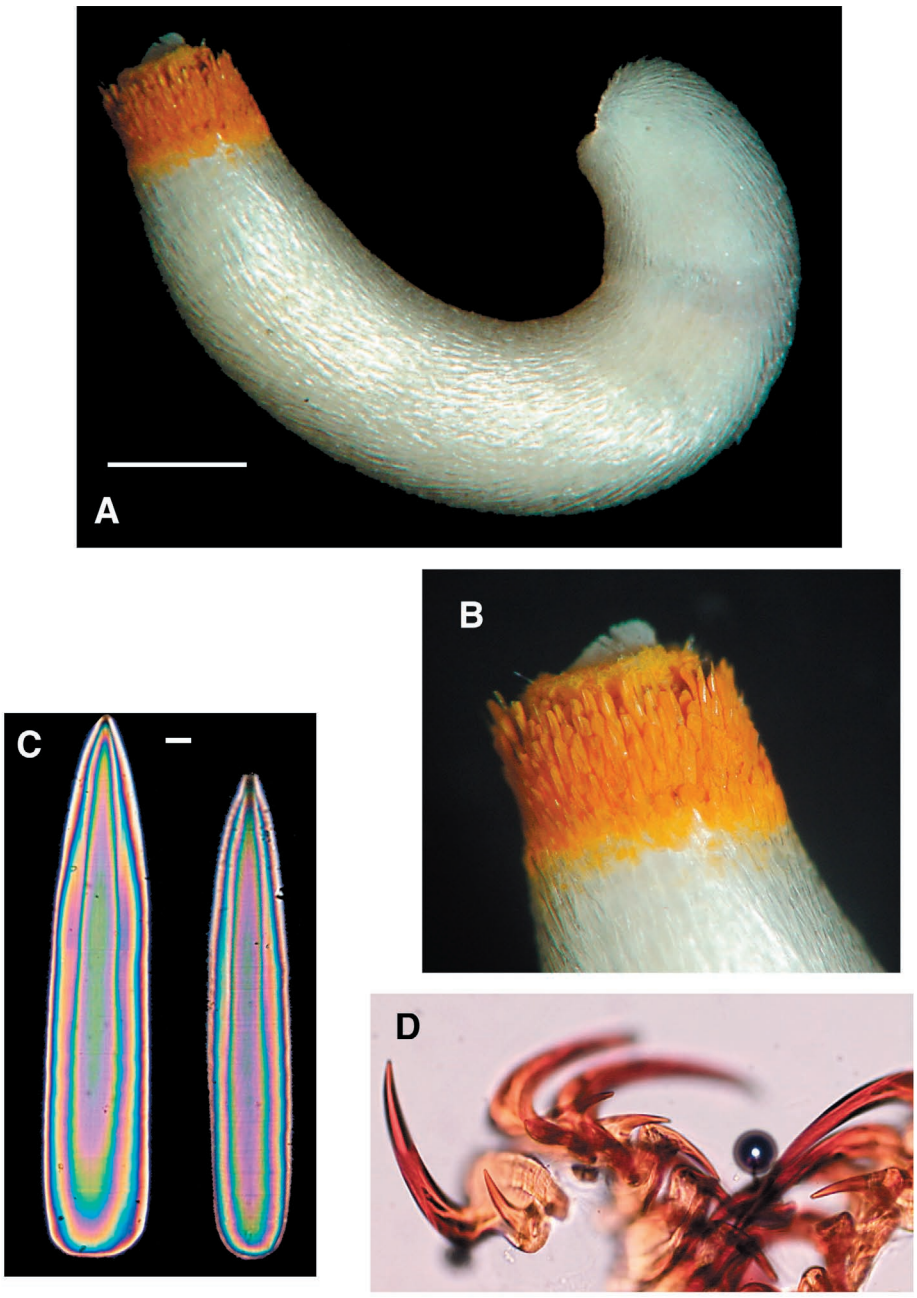
DISTRIBUTION: Outer Continental Shelf and Upper to mid Continental Slope, Southern California Bight to Oregon

DISCUSSION: One of the commonest and most easily recognized aplacophores in the NEP, occurring both on the Continental Shelf and on the Continental Slope. It is replaced from Oregon to Alaska by *Limifossor talpoideus*, which occurs as far south as San Francisco. In the Bight ’03 collections *L. fratula* was the third most abundant taxon, with 33 individuals.

During initial examination of the material there was some concern over relatively elongate specimens such as that illustrated in Figure A. These animals, with BLIs of 5-7 seemed too elongate to fit comfortably in the described body form of *L. fratula* (BLI of 3.2-3.5, Scheltema 1998). Comparisons of spicules and radulae from the most compact and the most elongate

specimens showed no differences. We concluded that there was just a single species in the genus in our material, and that it was *L. fratula*.

This sheet replaces one prepared by Jay Shrake in 1985 and published in SCAMIT Newsletter Volume 4 Number 8. Specimens were exchanged prior to the publication of the sheet. We haven't learned much more about the species in the intervening 20 years.



Limifossor fratula **Heath 1911 A. Whole animal, lateral view (scale bar 1mm) B. Posterior lateral view C. Spicules from mid-anterior trunk (scale bar 0.01mm) D. Radula (location unknown)**