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To: Multiple recipients of list taxon <taxon@SCCWRP.OR...>
Date: Mon, Nov 8, 1999 10:29 AM
Subject: Taxonomy Discussion Group: Sipuncula

From Dean Pasko, CSDMWWD
 Taxon: Miscellaneous Phyla, Sipuncula: Sipuncula sp SD1 (family uncertain)

Dear Bight 98 folks, I know we are all supposed to be done with this stuff...but, alas, some of us are not. Anyway, in two of my last remaining samples I have run across a sipunculid worm that does not seem to fit nicely into any of the described families.

It looks most like a cylindrical, smooth-bodied Phascolion sp A in that the retractor muscles are significantly fused. However, Sipuncula sp SD1 is distinct in several ways: (1) there are two simple, colorless, sac-like nephridia located just posterior to the anus, which is located in the anterior 1/5 of the trunk; (2) the retractors are not as completely fused; (3) the retractors do not extend to the posterior end of the body, but are located 4/5 down the trunk; and (4) the introvert is very short relative to the trunk, which is long, smooth and cylindrical. Sipuncula sp SD1 does not fit nicely into the family Phascolionidae because of the presence of two nephridia -- the family diagnosis includes species with only one nephridium.

Additionally, Sipuncula sp SD1 could potentially be mistaken for the cosmopolitan species *Antillesoma antillarum* (fam: Phascolosomatidae) because of its two simple nephridia and the high degree of fusion often present. However, in Sipuncula sp SD1 the body wall is smooth and the retractor muscles appear to be two rather than four. Even though the four retractor muscles of *Antillesoma* are highly fused so that there appears to be only two, according to Cutler (1994) a bifurcation near the origin of each branch is always present revealing the true number of retractor muscles. In the new species, there is no hint of a bifurcation at the muscle origin.

Sipuncula sp SD1 has the following distinguishing characters:

- Trunk much longer than short introvert (introvert was retracted in the specimens examined).
- Body wall smooth or nearly so with very low papillae.
- 2 simple, sac-like nephridia located just posterior to the anus.
- Anus situated far anteriorly on trunk.
- 1 pair of retractor muscles fused for most of their length (approximately 90 percent of their length) and originating posteriorly on the trunk (approx. 4/5 down the trunk), but do not extend to the extreme posterior (as in *Phascolion* sp A).
- Contractile villi are present.

Sipuncula sp SD1 has now been collected at two Bight 98 Stations:
 Channel Island Station 2480, 7-21-98, 106 m, and San Diego Region Station 2351, 7-22-98, 50.3 m.

Best regards,
 Dean

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 *** NOTE: please direct responses to
 dip@sdcity.sannet.gov. Thank you ****

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