



Southern California Association of
Marine Invertebrate Taxonomists

3720 Stephen White Drive
San Pedro, California 90731

April 1988

Vol. 7, No. 1

NEXT MEETING: May 9, 1988
TOPIC: Provisional Species of Bivalvia
LOCATION: Cabrillo Marine Museum, San Pedro CA

MINUTES FROM MEETINGS ON April 14th and 15th, 1988

SCAMIT begins Volume 7 of its monthly newsletter by reporting on the recent Polychaete Workshop held at the Hancock Foundation and led by Dr. Kristian Fauchald. Two full days of discussion, demonstration, and examination of polychaetes was experienced by all of those who attended. The obvious success of this meeting was due greatly to the generous supply of expertise provided by Dr. Fauchald. He opened the workshop by reviewing the historical development of polychaete systematics. The subsequent topics of discussion and displays on the microscope and video system included the families Paraonidae, Eunicidae, Cossuridae, Hesionidae, and Glyceridae. Our work didn't end there as we also delved into wintergreen oil clearing and the use of methyl green stain. Further discussions of cladistics and the importance of utilizing shared derived characters were also a main theme of the workshop. Dr. Fauchald later gave a very interesting commentary and review of Dr. Olga Hartman's long and productive career as a polychaete worker. More detailed notes from this well attended event will be compiled soon and will be made available to those who were unable to attend.

Included in this newsletter is an English translation of a paraonid report originally written in Russian by N. P. Annenkova. This translation was handed out at the recent polychaete workshop and made available through the skills of a fellow worker at Marine Ecological Consultants.

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The SCAMIT newsletter is not deemed to be a valid publication
for formal taxonomic purposes.

The Index to Taxa for Volume 6 of the newsletter is also included in this newsletter. If copies of indices from previous volumes are needed, please let the officers of SCAMIT know.

Worm Quiz #1 is now closed. All guesses and claims as to which polychaete does not possess setae, notopodia or neuropodia have been compiled. Attempts included:

.....most paraonids
.....larval Capitella capitata
.....juvenile Ctenodrilus sp.
.....young of Diurodrilus
....."No! Don't take these three characters,
I need them!"

AND THE WINNER IS.....the genus Hauchiella. Other good choices would have included members of the families Polygordiidae and Protodrilidae.

Which brings us to the realization that many of the features widely held as unique to polychaetes are actually only effective boundaries in certain cases. To more effectively describe and understand the differences of one grouping to another (whether this be at species, genus, or even family level), the use of techniques like cladistics will be relied upon. A review of cladistic concepts will greatly benefit us all.

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by N. P. Annenkova

PARAONIDAE OF THE FAR-EASTERN SEAS OF THE USSR

Until the present time, about 16 species of Paraonidae which comprise 4 genera (Paraonis, Aricidea, Aricideopsis and Cirrophorus), have been described. A large part of these species were collected in the Atlantic Ocean (in its tropical, subtropical, and boreal regions) and in Mediterranean seas. From the Pacific Ocean, there is only one known representative of this family-- Aricideopsis megalops Johnson (Puget Sound, Orchard port). In the material of the Hydrological Institute, which I examined at the Zoological Institute of the Academy of Sciences USSR, it was apparent that there were 4 new species (Paraonis ivanovi sp. n., Paraonis (Paraonides) lyriformis sp. n., Aricidea ramosa sp. n., and Aricidea antennata sp. n.) present in this rare encounter with this family of few species.

Paraonis ivanovi n. sp.

Very thin and long spirally twisted worms, with a large number of segments. The head lobe ends in a distinct sensory tubercle. The area posterior to this tubercle is somewhat enlarged. No eye spots; nuchal fossi are horse-shoe shaped. Branchiae start on the 5th segment; there are 16 pairs. Branchiae lanceolate shaped. Dorsal cirri are short in anterior segments; long and thin in abdominal segments. Noto- and neurosetae are of identical form, long, simple, with no fringe. In abdominal neuropodial bundles, there are 3 short thick unidentate hooded hooks (fig. 1A). P. ivanovi is very similar to Paraonis gracilis (Tauber), but is distinguished by having setae present on the 1st segment in the form of ventral hooks. This specimen was collected in the northern part of the Bering Sea (north of Kruzen-shterna) at a depth of 1500-2000 m.

Paraonis (Paraonides) lyriformis n. sp.

Body long and thin, consisting of a large number of segments. Head lobe is enlarged, but rounded anteriorly with a small sensory tubercle. There are two diverging slit-shaped slightly pigmented nuchal fossi. No noticeable eye spots. Parapodia of the first four segments furnished with dorsal capillary cirri. The setae are of identical form in both the noto- and neuropodia, thin and without a fringe. Branchiae start on the 5th segment and number 15-23 pairs. Dorsal cirri are short in anterior segments, but become thin and long in abdominal segments. Ventral cirri lacking. Beginning on the 5th segment in each notopodium, there are present 1-2 large forked setae (fig. 1B) with uneven branching, one of them short, broad and robust, and the other long and whip-like-- the base is slightly notched. This species is similar to Paraonis (Paraonides) lyra Southern known from the shores of Ireland and the Adriatic Sea (and Oresund), but can be distinguished from it by its large number of branchiae and that the branchiae and specialized dorsal setae begin on the 5th segment, and not the 4th, and that they are partly of forked form.

Our species was obtained in the Gulf of Peter the Great

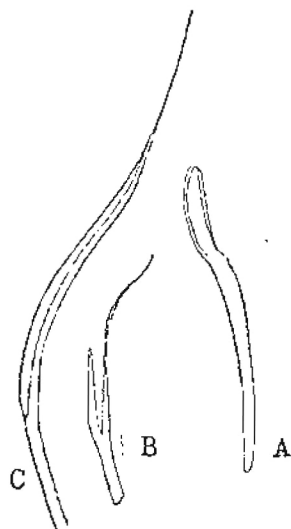


Fig. 1: A--Ventral abdominal hooks of Paraonis ivanovi
 B--Dorsal forked setae of Paraonis lyriformis
 C--Ventral setae of Aricidea antennata

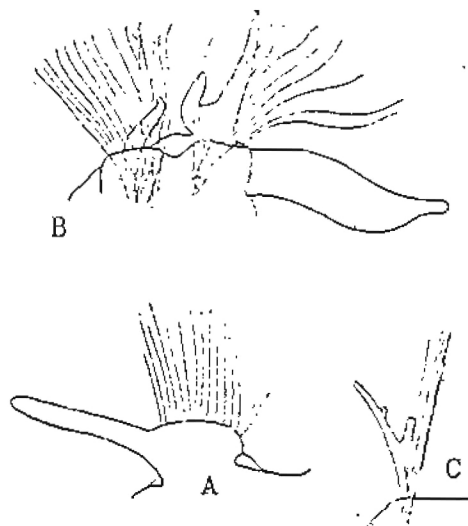


Fig. 2: Aricidea antennata
 A--Dorsal cirrus of a branchial segment
 B--Anterior view of parapodium
 C--Dorsal abdominal cirrus

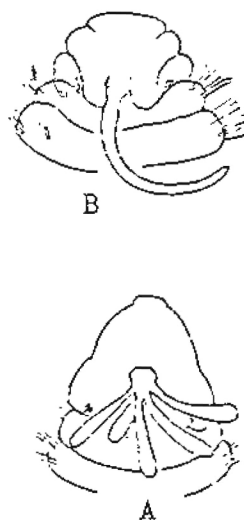


Fig. 3 A--Aricidea ramosa
 Prostomium
 B--Aricidea antennata
 Prostomium

(42°26.5'N -- 131°52.2'E) at a depth of 230-240 m.

Aricidea ramosa n. sp.

Often found in the Gulf of Peter the Great. Our collection is made up of 10 specimens. Body elongated and thin with 40-60 segments. Anterior branchial section of the body is wide and flat, like that of Aricidea, posterior is cylindrical. Head lobe (fig 3A) rounded anteriorly with clearly defined sensory tubercle, area wide posteriorly. No eyes; nuchal fossi in this species are lateral, not deeply pigmented slits; "tentacles" have a wide and short base, from which extend 4-6 dissimilar (in length) branches. The branches are elongate and almost cylindrical in shape, and are rounded terminally. Branchiae begin on the 4th segment; there are 16 pairs. They are leaf-like, enlarged at the base and pointed at the tip. Dorsal cirri in anterior segments are short; in abdominal, are elongated; ventral cirri are absent. In the first 3 segments, the parapodia have noto- and neurosetae of identical length and form. They have a fringe and are double bent. Beginning on the 4-5th segment, dorsal setae become long, thin and simple, with fringes; ventral setae are not changed. However, in the last (posterior) segments, these setae are replaced with thin, fringed ones. The thickened anal segment is ring-shaped, and warty; anal papillae were not detected. Aricidea ramosa lives at a depth of 44-2400 m., having quite a wide vertical distribution. The specimens were obtained from the Gulf of Peter the Great (42°15.5'N -- 131°06. E; 42°34.3'N -- 132°02.2'E; 42°24.2'N -- 132°21.5'E) and in Ussurijsk Bay.

Aricidea antennata n. sp.

Anterior branchial section of the body is wide and flat; posteriorly, is cylindrical with elongated segments. Head lobe (fig 3B) is short and very wide, in a condition as if having 3 sections ("tri-lobed"). The most anterior section twisted with a slightly noticeable sensory tubercle; second section is furnished with a very long antenna, and in back of it are two curving lobes. The rear section has, on the sides, 2 large "accumulated" pigment spots located on the edge of the nuchal fossi, and not appearing to have eye spots, which, I believe, is similar to Aricidea ramosa; the nuchal fossi themselves are not distinguishable. The first three segments bear noto- and neurosetae and, moreover, dorsal and ventral cirri. In the following segments, ventral cirri are absent. Branchiae begin on the 4th segment, consisting of 18 pairs. Dorsal cirri of the branchial section of the body have a wide base and a long thin branch (fig. 2A) on several specimens, and a 2nd shorter lower branch (fig. 2B). Both the dorsal and ventral cirri are situated posterior to the parapodia. In the abdominal section, the dorsal cirri are very long, simple, and sometimes branching (fig. 2C).

In the first 3 segments, noto- and neurosetae are identical, thin, long and without a fringe. In branchial segments, notosetae remain in this form, and the neurosetae become strong, shorter and "S"-shaped. The setae in each bundle are arranged in 3-4 vertical rows. Regarding the form of the head, this species has a long antenna present behind the lobe, resembling Aricidea quadrilobata (Webster--Eastport, Maine), but is distinguished

from it by the absence of eyes and the form of the dorsal cirri. Aricidea antennata was found in Chuckchi Sea ($71^{\circ}19'N$ -- $178^{\circ}12'W$, at a depth of 11.5 m.; soft-pebble bottom, temp.-- $.48^{\circ}C$.); in the Sea of Okhotsk (in material of Ushakova) and in the Sea of Japan--Gulf of Peter the Great ($42^{\circ}26.5'N$ -- $132^{\circ}02.2'E$, depth 85 m.; $42^{\circ}26.5'N$ -- $131^{\circ}52.2'E$, depth 230 m. It lives at depths between 11.5 and 230 m.

Note: Head lobe = Prostomium