REDESCRIPTION AND FAMILY STATUS OF THE MAGELLANIC ISOPOD JANTHOPSIS LAEVIS MENZIES, 1962 (ASELLOTA: ACANTHASPIDIIDAE)

Holger Winkler

Keywords: Taxonomy, Magellan Strait, Isopoda, Asellota, Acanthaspidiidae, Janthopsis laevis

ABSTRACT
A redescription of Janthopsis laevis Menzies, 1962 (Isopoda: Asellota: Acanthaspidiidae) is presented and new localities are added to literature. The taxonomic status of the genus Janthopsis is discussed.

ZUSAMMENFASSUNG

ABBREVIATIONS USED IN TEXT AND FIGURES
A2, second antenna; P1 - P7, pereopods 1-7; Plp1 - Plp3, pleopods 1-3; Urp, uropod; (F), female; (M), male.

INTRODUCTION
Janthopsis laevis Menzies, 1962 was rediscovered among many isopods found in a series of benthos samples from Magellan Strait. As Menzies' original drawings are incomplete and differences between his drawings and the new material are obvious, a supplementary description had to be prepared. Janthopsis is a mainly Antarctic and Subantarctic genus and up to now J. bovalli (Studer, 1884) was recorded from Patagonia only.

MATERIAL AND METHODS
The material examined was collected in April 1976 in Magellan Strait at locations listed in Table 1, carefully sorted out by Prof. V.A. Gallardo (Universidad de Concepción, Chile), and kindly submitted to Dr. J.W. Wägele (Universität Oldenburg, Germany). The samples were taken with bottom grabs. All animals were preserved in alcohol and examined in glycerine under a dissecting microscope. The taxonomic drawings were prepared with a camera lucida.
Tab. 1. - Station list of material used for redescription.

<table>
<thead>
<tr>
<th>Station</th>
<th>Station locations</th>
<th>Depth</th>
<th>Sediment type</th>
<th>♂♂</th>
<th>♀♀</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA. HJ</td>
<td>52°44.9'S 70°05.4'W</td>
<td>10m</td>
<td>barnacles</td>
<td>3</td>
<td>5.77-6.45mm</td>
</tr>
<tr>
<td>STA. HL</td>
<td>52°34.1'S 69°58.1'W</td>
<td>10m</td>
<td>shell and clay</td>
<td>1</td>
<td>2.95mm</td>
</tr>
<tr>
<td>STA. HH</td>
<td>52°34.5'S 69°52.0'W</td>
<td>12m</td>
<td>barnacle clusters</td>
<td>1</td>
<td>6.36mm</td>
</tr>
<tr>
<td>STA. HO</td>
<td>52°32.5'S 69°53.4'W</td>
<td>11m</td>
<td>shell and clay</td>
<td>1</td>
<td>3.93mm</td>
</tr>
<tr>
<td>STA. HP</td>
<td>52°39.3'S 69°45.8'W</td>
<td>26m</td>
<td>rock and large shells</td>
<td>1</td>
<td>6.1mm</td>
</tr>
<tr>
<td>STA. HEE</td>
<td>52°37.5'S 70°06.8'W</td>
<td>38-41m</td>
<td>shell, pebbles, slates</td>
<td>1</td>
<td>2.5mm</td>
</tr>
<tr>
<td>STA. HFF</td>
<td>52°38.8'S 70°04.9'W</td>
<td>30-32m</td>
<td>shell, sand, pebbles</td>
<td>1</td>
<td>5.84mm</td>
</tr>
<tr>
<td>STA. HHH</td>
<td>52°46.5'S 70°01.9'W</td>
<td>35m</td>
<td>slates, barnacle clusters</td>
<td>2</td>
<td>6.1-6.75mm</td>
</tr>
<tr>
<td>STA. HLL</td>
<td>52°17.0'S 69°20.5'W</td>
<td>10-11m</td>
<td>stones, shell on surface</td>
<td>1</td>
<td>3.67mm</td>
</tr>
<tr>
<td>STA. HOO</td>
<td>52°28.8'S 69°28.4'W</td>
<td>11m</td>
<td>rocks</td>
<td>1</td>
<td>6.3mm</td>
</tr>
<tr>
<td>STA. HPP</td>
<td>52°42.2'S 70°11.5'W</td>
<td>60m</td>
<td>rocks</td>
<td>1</td>
<td>7.21mm</td>
</tr>
</tbody>
</table>

**Janthopsis laevis** Menzies, 1962
**J. laevis** Menzies, 1962:85, fig. 27

SUPPLEMENTARY DESCRIPTION (figs.1-4)

Menzies already described and/or drew a dorsal view and many appendages of *J. laevis*. Habit, first antenna, mouthparts and pleopods 4 and 5 are not described again in this paper; differences between Menzies' figures and the new material are discussed under "Remarks".

Peduncle of A2 (fig.1) 5-articulated; first 3 articles short, article 3 shortest of all peduncular articles; cylindrical scale on article 2, with long, mainly distal simple setae; peduncular articles 4 and 5 cylindrical, of subequal lengths; articles 2-5 each covered by many long simple setae, 1 feathered bristle on second half of last peduncular article. Flagellum of 1 long and 20 short articles; flagellar article 1 covered by many long simple setae and obviously consisting of fused short articles distally; each short flagellar article with several long distal simple setae (see fig.1, A2).

All pereopods (fig.1-4) ambulatory, no sexual dimorphism; increasing in length from anterior to posterior, mainly due to a slight elongation of all articles, but with subsimilar shape of the articles. Basis longest article, dorsal and ventral margins setose; 1 or 2 feathered bristles on medial or on proximal part of dorsal margin. Ischium shorter than basis, dorsal and ventral margins setose. Merus distally wider than proximally, ventral margin setose, further simple setae on merus; 1 sensory seta and 1 simple seta on dorsodistal corner of P1 (fig.1), 3 sensory setae in the same place on P2-6 (figs.2, 3) and 2 on P7 (fig.4), 1 additional simple seta on P5 and P6 and 2 on P7. Carpus and propodus cylindrical, propodus narrower than carpus; a row of sensory setae on ventral margins, long simple setae on dorsal margins, a long feathered bristle dorsodistally on each article, further short simple setae as shown on the drawings. Dactylus shortest article, 1 long claw dorso-distally, 1 short claw ventrally; 2 simple setae between claws, 3 or 4 marginal simple setae dorsodistally.

Male Plp1 (fig.3) longer than broad, proximally wider than distally, lateral margins of the proximal 2 thirds of pleopod setose; distally 2 diverging points with short apical simple setae; medially and subapically of points 2 cylindrical "horns", bearing long simple setae, which surpass points of pleopod distally.

Protopodite of male Plp2 (fig.4) longer than wide; lateral margin setose, distal setae setulat (see detail in fig.4). Exopodite small; with 2 medially directed vauls, distal one with marginal simple setae. Endopodite 2-articulated; distal article bearing a long and slender whiplike prolongation, nearly twice as long as protopodite.
Fig. 1 - Female in lateral view. A2, first 3 peduncular articles and rest of second antenna; P1, first pereopod of female.
Fig. 2. P2, P3, P4, pereopods 2-4 of female.
Female Plp2 (Operculum, fig.4) longer than broad, apically projected into a rounded point; lateral margins setose, long plumose setae apically (see detail in fig. 4);

Plp3 (fig.4) not sexually dimorphic. Protopodite ovate, broader than long. Endopodite and exopodite ovate, longer than broad and with plumose setae distally each; endopodite broader than exopodite; margins of exopodite setose, medial margin of endopodite with clusters of 3 simple setae each (see details in fig.4).

Urp (fig.4) of 3 cylindrical articles, covered by many long simple setae; protopodite broadest and longest article, exopodite shorter than endopodite.

REMARKS

*Janthopsis laevis* Menzies, 1962 was known only from its type location in southern Chile. The specimens from Magellan Strait are very similar to those illustrated by Menzies (1962:83, 84). Contrary to the latter, in the present material the flagellum of the first antenna consists of 7 articles instead of 4 drawn by Menzies (1962:85, fig.27 O); the first flagellar article is the longest, the last 6 articles are bearing a single aesthetasc each. The middle and the distal article of the mandibular palp are covered by setose scales in the present material, and the body of the first maxilla - not only its margin - bears many setae. Also, there are 4 coupling hooks on the maxilliped and some dorsal setae on the body of its endite. Finally, the margin of the distal article of the exopodite of pleopod 4 has insignificant setules.

The marginal setae of the pereonites shown by Menzies (1962:85, fig. 27 A) are also present in the Magellanic material; however, they are only seen on the right side (fig.1). The new material shows that the eyes are not only bulging, but that there are well developed and lateroproximal directed eyestalks is present. Furthermore, pereonite 6 has a notch laterodistally.

DISCUSSION

Menzies placed the genus *Janthopsis* in the family Janirellidae Menzies, 1956, but later on one recognized that important characters distinguish *Janthopsis* from other genera of this family (see e.g. discussion of Janirellidae and Acanthaspidiidae in Wägele, 1989: 80-85). Menzies' diagnosis of the Janirellidae includes that "at least six [pereopods] are unmodified walking legs" (Menzies, 1962:83), whereas in *Janthopsis* all pereopods are ambulatory (see e.g. Brandt, 1991:224). In *Janthopsis* the exopodite of pleopod 3 has distally many plumose setae - not only 3, which is common in the Janirellidae. At last, the characteristic shapes of the pereonites in lateral view - pereonite 1 with a distally or distofrontally directed lappet, pereonites 2-4 each with two lateral lappets and pereonites 5-7 with a single lateral projection - do not occur in the latter family. So, the decision to remove *Janthopsis* from the family Janirelli-dae must be supported.

The main characters of *J. laevis* and other species of *Janthopsis* correspond nearly completely with the diagnosis of the family Acanthaspidiidae Menzies, 1962, given by Brandt (1991:204). At this point there is no objection, to relegate *Janthopsis* out of the Acanthaspidiidae.

Two characters of *J. laevis* are, however, not very common in *Janthopsis*; prominent eyestalks in *J. laevis* (see fig.1) against ocelli normally located on small bulges, whenever functional eyes are present, and the male pleopod 1 with diverging lateral horns. Although medially situated setiferous cylindrical bulges are seen as well in *J. nasicornis* Vanhoffen, 1914 and in *J. multispinosa* (see Brandt, 1991:239,246 respectively), they are never as proximal as in *J. laevis* (see fig.3).

ACKNOWLEDGEMENTS

This study was supported by the "Deutsche Forschungsgemeinschaft" (Wa 530/11). I wish to thank Iris Zaehle, who prepared the ink drawings and I am also very grateful to Dr. J.W. Wägele for his critical review of the manuscript.

REFERENCES


Fig. 3 - P5, P6, pereopods 5 and 6 of female. Plp1(M), first male pleopod.
Fig. 4 - P7, Plp2(F), Plp3(F), Urp, pereopod 7, second and third pleopod, uropod of female. Plp2(M), second pleopod of male.