A NEW FAIRY SHRIMP, *BRANCHINECTA ACANTHOPENES* N. SP.  
(ANOOSTRACA, BRANCHINECTIDAE), FROM INDIA

BY

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The only previous record of fairy shrimps from the Indian subcontinent is that of Sars, 1901, viz., of *Branchinecta orientalis* Sars obtained from Tibet. The species was redescribed by Bond (1934). The present communication is the first record of a *Branchinecta* from India.

These crustaceans appear in warmer parts of Kashmir Valley towards the beginning of May, their time of appearance coinciding with the irrigation of the paddy fields. The overwintering eggs are present in the dried mud of the paddy fields.

So far, only one generation of these shrimps in a year has been observed by the authors.

*Branchinecta acanthopenes* n. sp. (figs. 1-5)

Kashmir Valley, India, in paddy fields. Holotype in the collections of the Department of Zoology, University of Jammu & Kashmir, Srinagar, India.

Description. — General. Body elongated, somewhat cylindrical, without any carapace. Head large and truncate anteriorly. The compound eyes prominent and stalked. The first pair of antennae short and simple. Thoracic segments bearing appendages 11 in all, each appendage biramous, lobed and setose. The endopodite of each appendage narrow, terminating in a more or less oval lobe, with its entire surface covered with spines. The exopodite is broad and leaf-like. The genital segment single, being nearly double the length of the other segments. The post-genital segments are 7 in number, devoid of any appendages except the last (= telson) which bears a pair of cercopods. Each cercopod in living specimens is brilliant brown in colour. There are two rows of chitinous spines on each cercopod, an inner row of more or less perpendicularly placed spines and an outer row of backwardly directed spines (fig. 5).

Male. The proximal segment of the 2nd antenna bears a bifid knob-like accessory structure (a in fig. 1). Of this accessory structure, the inner lobe assumes the shape of a very small fork. The distal segment is 1.5 times as long as the proximal segment and is strongly curved nearer its broadened free end. The penes are paired, placed ventro-laterally on the single genital segment, which in a few
specimens appears to be two segments partially fused into one. Each penis bears on its outer side a longitudinal series of broad-based spines directed obliquely backwards (fig. 2).

Female. The 2nd antenna is short and stumpy, terminating in a finger-like distal segment (fig. 3). The ovisac (fig. 4) in living specimens is brightly coloured, blue or bluish-green, and extends as far as the beginning of the first postgenital segment (= third caudal segment of Sars, 1901). The ovisac contains brownish, hard-shelled globular eggs for a considerable period of time, and the extrusion of the eggs takes place one by one.

Measurements (in mm).

<table>
<thead>
<tr>
<th></th>
<th>Body length</th>
<th>Length of 2nd antenna</th>
<th>Length of cercopod</th>
<th>Length of penis or brood pouch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10.2</td>
<td>1.72</td>
<td>2.6</td>
<td>0.68</td>
</tr>
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<td></td>
<td>13.5</td>
<td>2.48</td>
<td>3.9</td>
<td>0.81</td>
</tr>
<tr>
<td>Female</td>
<td>14.0</td>
<td>1.06</td>
<td>2.08</td>
<td>2.48</td>
</tr>
<tr>
<td></td>
<td>20.0</td>
<td>1.60</td>
<td>2.96</td>
<td>4.60</td>
</tr>
</tbody>
</table>

The cercopod length: body length is 1 : 4 (male) or 1 : 7 (female). The length 2nd antenna: body length is 1 : 6 (male) or 1 : 12 (female).

**DISCUSSION**

The present specimens differ from *Branchinecta orientalis* Sars, in that the marsupial pouch does not extend beyond the third caudal segment. The penes are not so strongly bipartite as described for *B. orientalis*. This penial feature appears to be characteristic of *B. orientalis*, for it is not reported for any other species of the genus (Dexter, in Ward & Whippie, 1959).

The present specimens stand unique in having a series of broad-based spines on each half of the penis. This feature appears to be of high taxonomic importance and justifies the creation of a new species, distinct from *B. orientalis*, and also from *B. schaniz* Mackin, 1952, the species which, otherwise, show the closest morphological similarities with the present form.

The proximal segment of the 2nd antenna in the male of the present form differs from that of *B. orientalis* in being provided with a basal bifurcate knob-like additional appendage. Such an additional appendage is also present on the 2nd antenna of males in *B. schaniz*, but the latter differs from the former in the absence of the short fork on the inner division of the knob. Moreover, the length of the cercopods (see measurements in the text) is proportionately twice that in *B. orientalis*, while the body length of the latter species is nearly twice the body length of the present form.

In conclusion, although the present form appears fairly close to the Tibetan species (*B. orientalis*) and the North American species (*B. schaniz*), the authors feel that the presence of unique features, like the penial armature, the structure of the basal segment of the male clasping (second) antenna, and the proportionate