STUDIES ON ATYIDAE (DECAPODA, CARIDEA) OF SRI LANKA I.
ON A NEW SPECIES, A NEW SUBSPECIES, AND TWO SPECIES NEW
TO SRI LANKA

BY

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INTRODUCTION

Seven species of Atyid shrimps have hitherto been recorded from Sri Lanka, namely, *Atya spinipes* Newport, 1847; *Caridina femandoi* Arudpragasam & Costa, 1962; *C. gracilirostris* De Man, 1892; *C. pristis* J. Roux, 1931; *C. simoni* Bouvier, 1904; *C. singhalensis* Ortmann, 1894 and *C. zeylanica* Arudpragasam & Costa, 1962. *C. simoni* and *C. zeylanica* had earlier been considered to be subspecies of *C. nilotica*, but they have later been raised to species level (Johnson, 1963; Costa, 1980). Of the seven species, *C. femandoi*, *C. pristis*, *C. singhalensis* and *C. zeylanica* have so far been recorded only from Sri Lanka.

The present work is the result of surveys carried out by the author in the southern part of the island. The descriptions are mainly based on ovigerous females. The measurements of the appendages as well as the body segments and the carapace were made after treatment with 10% KOH and mounting in Canada Balsam.

The following abbreviations are used in the text: a, preorbital length of antennular peduncle; c, postorbital length of carapace; 6s, dorsal length of the sixth abdominal segment; d1-d5, dorsal length of dactylus of pereiopods 1-5; p1-p5, dorsal length of propodus of pereiopods 1-5; cp1, cp2, maximum length of carpus of pereiopods (chelipeds) 1 and 2.

*Caridina costai* sp. nov.

Habitat. — Specimens of both sexes, including ovigerous females, were collected by the author from three streams in “Sinharaja forest” (fig. 1), which is one of the few primary forests still remaining in Sri Lanka. Specimens were collected using a hand-net from the rock-pools of the slow-flowing streams containing crystal-clear water. From the three streams, 8, 32, and 46 specimens were collected respectively.

Description. — Specimens are about 20 mm long and brownish in colour. There were also a few blackish individuals in the collections. Ten females (in-
cluding six ovigerous ones) of the size range 16-20 mm, and ten males of the size range 14-16 mm were examined and measured in detail. Others in the collections were also examined for rostral, carapace and telson characteristics.

The carapace shows a strongly developed suborbital spine (fig. 2a). The pterygostomian angle is a little more than 90°. The rostrum extends to about the middle of the distal segment of the antennular peduncle. The dorsal border of the rostrum bears 14 to 20 teeth, of which 3 or 4 lie behind the level of the orbit. The ventral border of the rostrum bears 5 to 8 teeth (in one specimen, there were only three).

The eyes are developed normally with a slightly dilated cornea. The first segment of the antennule is long, and is about as long as the second and third segments together. The stylocerite is slender and does not reach the distal end of the first segment of the antennular peduncle (fig. 2a). The antero-external spine of this segment is triangular and well-developed; it extends to about a third of the length of the second segment. There are about six additional spines on the distal border of this segment. The spine of the scaphocerite reaches about to the tip of the antennular peduncle (fig. 2a).

The carpus of the anterior chelifeds is excavated somewhat at the distal end. Its length is 1.90 to 2.45 times its width. The chela is 1.75 to 2.40 times as long as wide, and is 1.10 to 1.25 times the length of carpus. The finger is 1.40 to 1.85 times as long as the palm. The second pair of chelifeds is slender and longer. Its carpus is 4.55 to 5.75 times as long as broad (fig. 2c); the chela is 2.15 to 2.85 times as long as broad, and is 1.53 to 2.12 times as long as the