

# NEW RECORDS OF *KOONUNGA CURSOR* SAYCE, 1908 (SYNCARIDA, ANASPIDACEA)

by P. DE DECKKER\*

## Summary

DE DECKKER, P. (1980) New records of *Koonunga cursor* Sayce, 1908 (Syncarida, Anaspidacea). *Trans. R. Soc. S. Aust.* 104(2), 21-25, 29 February, 1980.

*Koonunga cursor* is recorded from two new localities, one in southwest Victoria and the other in northwest Tasmania. Specimens are illustrated with scanning electron microphotographs and drawings of the appendages.

## Introduction

Most parts of South Australia are too arid for anaspidacean syncarid crustaceans to live—permanent, natural freshwater bodies are rare except in the southeast near Mt Gambier where rainfall is highest. However, in Victoria very close to the S.A. border near Mt Gambier the living syncarid *Koonunga cursor* has recently been found and is described here.

## Discussion

Sayce (1908) described *K. cursor* from "freshwater reedy pools beside a tiny runnel joining the Mullum Mullum Creek at Ringwood near Melbourne". Drummond (1959) stated that J. Searle in 1930 failed to find *K. cursor* in the type locality because it had become a storm-water drain. However, in an introductory account of crustaceans from Victoria, Morrison (1955) mentioned that "*Koonunga* . . . had been extensively collected by various members of the Zoology Department of Melbourne University . . .". She also stated that "it now appears that the Koonungidae are widely distributed, with local abundance, in an area south of the Great Dividing Range extending from Portland to Wilson's Promontory". Unfortunately no localities were mentioned by Morrison. Drummond's (1959) short note on the Australian syncarids said that "*Koonunga* [is] . . . now known to occur sporadically right across the southern part of Victoria". Nevertheless, he made no reference to particular localities and none have since been reported. Even Schminke's (1978) paper, which included an illustration of the telson of a juvenile specimen of *K. cursor* given him by F. H. Drummond, gave no locality data.

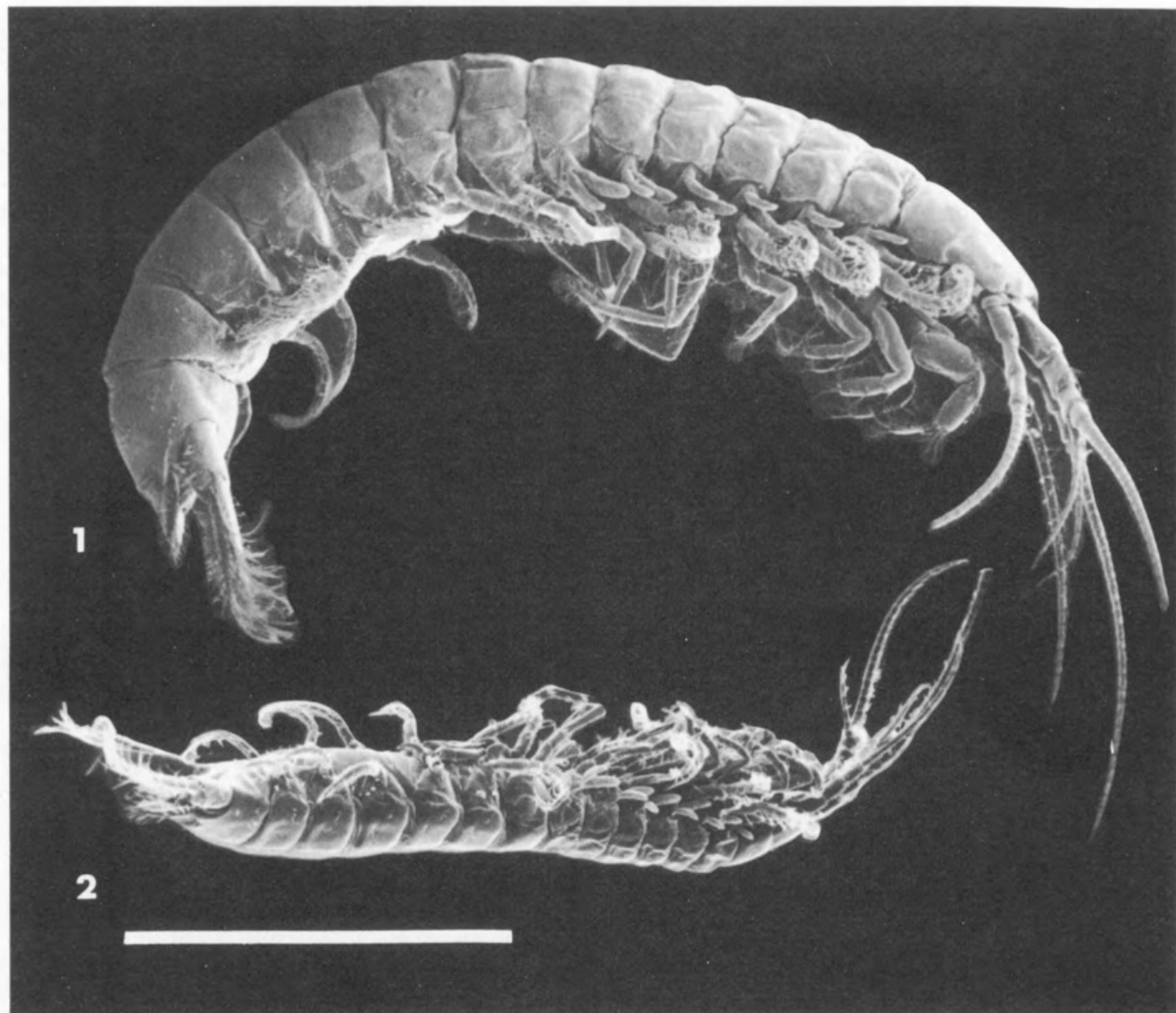
Recently *K. cursor* has been collected from the following localities; (1) Victoria, close to the S.A. border, under the footbridge over the rivulet at Bullocky Wells Picnic Area, 1.5 km E. of Greenwald on the main road between Mt Gambier and Heywood (35°58'42"S, 141°23'09"E) 24, v. 1979; (2) northwestern Tasmania, from Mowbray Swamp near Mella, 5 km W. of Smithton. This Tasmanian record is the first to be published, although P. S. Lake (in Williams in press) has informally reported its occurrence there. No locality data were given. At the Victorian locality, 15 females and seven males were collected from floating vegetation. The females were larger and darker in colour than the males. Adult males were easily recognized by the peculiar globular organ attached to the antennule (Fig. 4, 9). The largest female collected was 9.4 mm long (anterior tip of head to base of telson) and the largest male, 5 mm long. In Tasmania, several specimens were collected, but only one, a female 7.8 mm long, could be examined after preservation.

An undissected female and male are illustrated in Figs 1-2, and particular features of their anatomy are shown in more detail in Figs 3-8. To broaden Sayce's (1908) description, the left appendages of one male specimen from locality (1) were dissected (Figs 9-34). These specimens are deposited in the Australian Museum, Sydney, with two undissected specimens of each sex accompanied by the Tasmanian specimen.

## Acknowledgments

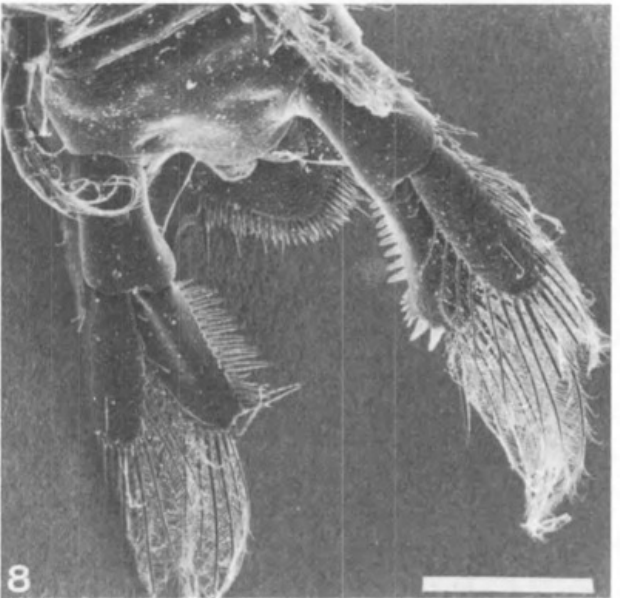
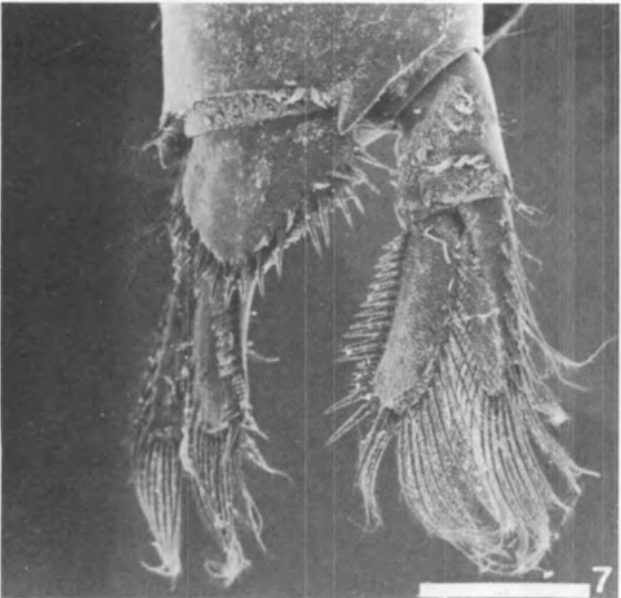
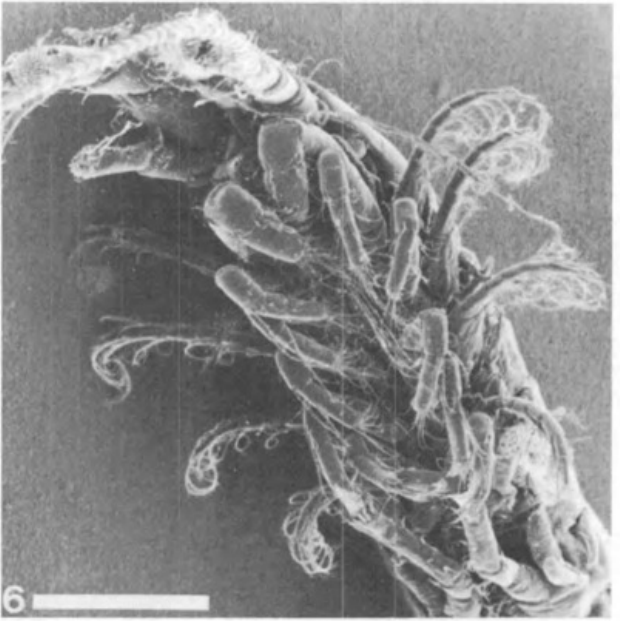
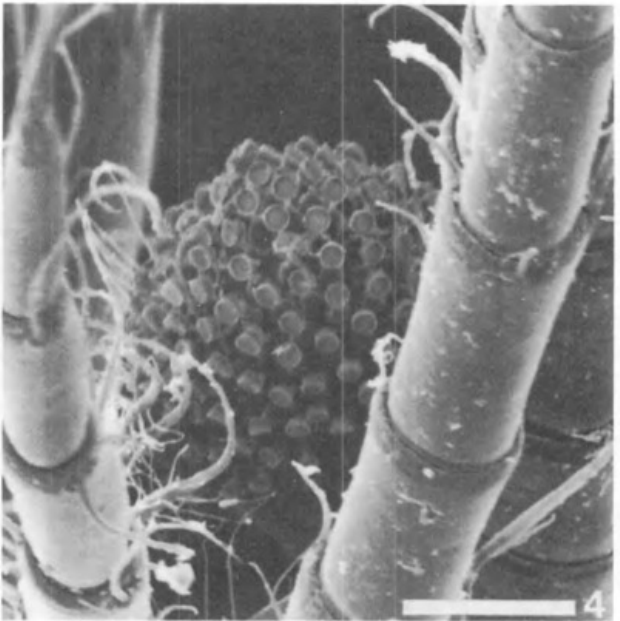
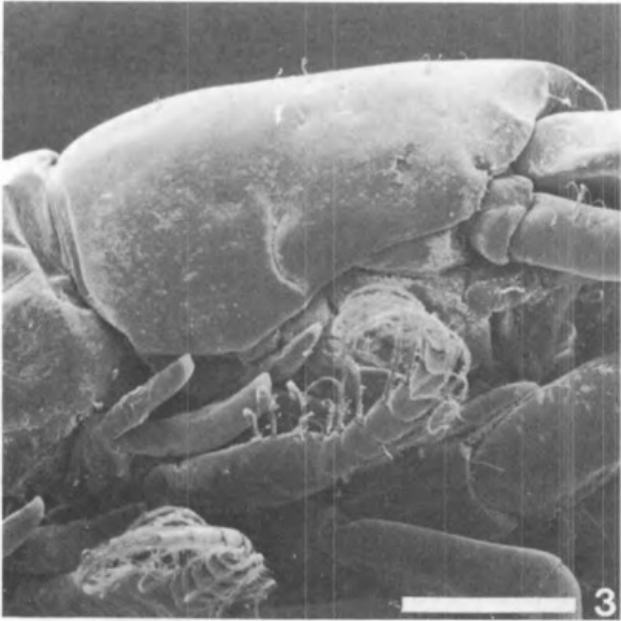
I thank Prof. W. D. Williams, Department of Zoology, University of Adelaide, for encouragement. Dr K. F. Walker brought my attention to the article by Morrison. Dr K. Bartusek, P. Kempster and J. Wright (University of Adelaide) are thanked for help with the SEM photography.

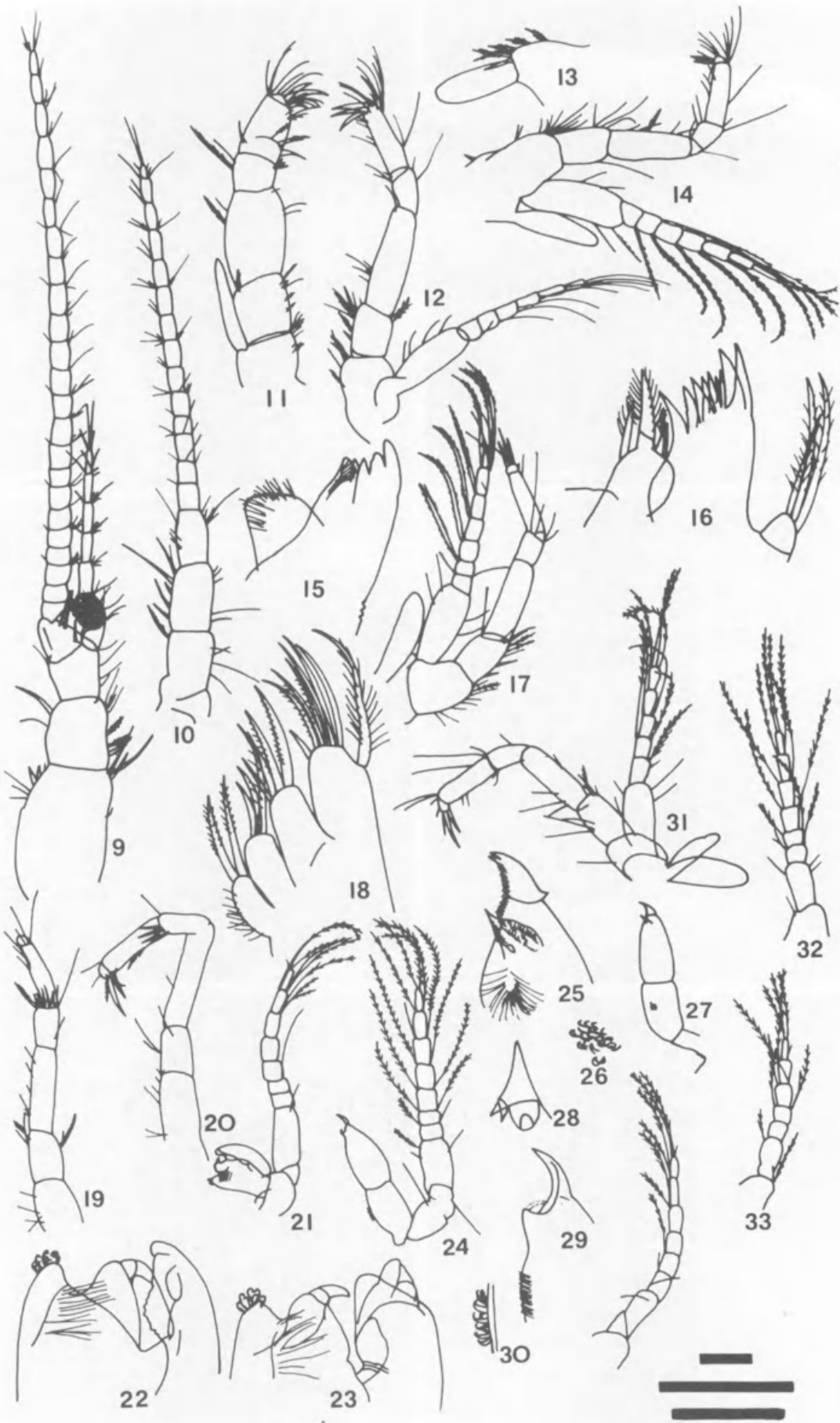
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Figs 1-2. *Koonunga cursor* from locality (1). 1, undissected ♀; 2, undissected ♂. Both at same magnification. Scale: 500 $\mu$ . Specimens frozen dried and coated with gold palladium before SEM photography.

Figs 3-8. *Koonunga cursor* from locality (1). 3, detail of fig. 1 to show cephalon with transverse sulcus; 4, detail of fig. 2 to show globular organ on ♂ antennule; 5, detail of fig. 2 to show ♂ copulatory appendages in ventral position; 6, detail of fig. 2 to show anterior appendages and globular organs on antennules; 7, ♀ telson viewed posterolaterally; 8, ♂ telson viewed ventrally. Scale: 500 $\mu$  for figs 3, 6, 7, 8; 50 $\mu$  for fig. 4; 200 $\mu$  for fig. 5.





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Figs 9-34. *Koonunga cursor* ♂ left appendages except for figs 24, 29. 9, antennule; 10, antenna; 11, maxilliped; 12, first peraeopod; 13, endopodite plate of peraeopod; 14, second peraeopod; 15, mandibular coxale; 16, first maxilla; 17, third peraeopod; 18, second maxilla; 19, third peraeopod (claws missing); 20, fourth peraeopod; 21, first pleopod with endopodite; 22, detail of tip of endopodite; 23, detail of tip of endopodite, different orientation; 24, right second pleopod with endopodite; 25, detail of fig. 27—tip of endopodite of left second pleopod; 26, detail of fig. 27—coupling spines; 27, left second pleopod; 28, median appendage attached to sternum; 29, detail of fig. 24—tip of endopodite of right second pleopod; 30, detail of fig. 29—coupling spines; 31, fifth peraeopod; 32, penultimate pleopod; 33, last pleopod; 34, third pleopod.

Note: not all peraeopod endopodites are illustrated. Top scale: 500 $\mu$  for figs 9-21, 31-34; middle scale: 500 $\mu$  for figs 25, 28, 29; bottom scale: 100 $\mu$  for figs 22, 23, 26, 30.





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