THE SYSTEMATIC POSITION OF AN AUSTRALIAN MANGROVE CRAB *HELOECIUS CORDIFORMIS* (CRUSTACEA: DECAPODA: BRACHYURA)

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SUMMARY

Males of *Heloecius* possess a coxo-sternal genital opening. This character suggests that *Heloecius* is the most primitive crab within the classical Ocypodidae. It is therefore excluded from the Ocypodinae and a new subfamily, the Heloecinae, is proposed for it. The relationships of this subfamily are discussed and *Ucides*, an American genus of mangrove crab, is provisionally included in the new subfamily.

Introduction

The name *Heloecius* was introduced by Dana (1852a: 248) for *Gelasimus cordiformis* H. Milne-Edwards 1837. Dana (1852b: 319) identified the main characteristic of the species as follows: "Second joint of male abdomen narrower than sternum behind". He also stated that *Gelasimus* was significantly different in this and in other respects. However, the general appearance of the species as well as several other similarities in position and direction of antennal and antennular appendages, led him to conclude that *Heloecius* might be closely allied to *Gelasimus*. Therefore, he left the former in subfamily Ocypodinae.

The position of the genus in the subfamily Ocypodinae has remained unquestioned by subsequent workers. For example Alcock (1900) and Borradaile (1907) left *Heloecius* with *Ocypode* and *Uca* in the subfamily. This classification was also used by Tesch (1918), who, however, used the ratio abdomen:sternum to separate *Heloecius* from the two other Ocypodinae genera. Balss (1957) also accepted the mentioned classification without change.

A number of characters have been used for distributing the ocypodid genera to subfamilies. Many of these, however, are only applicable to certain genera within each subfamily and are of no help in differentiating between the subfamilies. There are, however, three characters which together have historically been used to separate the subfamilies: the mode of folding of the antennules, the breadth of the interantennular septum, and the existence and position of the supplementary respiratory openings. The latter have hair-tufts at their sternal ends, which have been found to function as organs of moisture uptake from damp substrata (see Verwey, 1930 and Bliss, 1968). The three subfamilies of the Ocypodidae were defined as follows:

	Ocypodinae	**Scopimerinae**	**Macrophthalminae**
1)	Antennules folded lengthwise or oblique.	Antennules folded lengthwise or oblique.	Antennules folded transversely or slightly oblique.
2)	Interantennular septum broad.	Interantennular septum broad.	Interantennular septum very narrow.
3)	A hairy-edged pouch leading into the branchial cavity between the bases of third and fourth pereiopods.	A hairy-edged pouch between bases of second and third pereiopods or none at all.	No hairy-edged pouch present at the base of of any pereiopod.

This classification is not satisfactory, as the main characters of the frontal appendages (1 and 2 above) do not clearly differentiate the subfamilies. The remaining character (3) will be discussed later.