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A review of *Chiromantes obtusifrons* (Dana, 1851) (Decapoda: Brachyura: Sesarmidae), with descriptions of four new sibling-species from Christmas Island (Indian Ocean), Guam and Taiwan

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Abstract

The identity of *Chiromantes obtusifrons* (Dana, 1851), previously considered widespread in the tropical West Pacific region to the eastern Indian Ocean, is revised and found to be a species-complex. *Chiromantes obtusifrons* is now considered endemic to the Hawaiian Is., and four new species are described from Guam, Taiwan and Christmas Island. Two species live sympatrically in Taiwan. Species separation is based on carapace and frontal shape and granulation, leg proportions, abdominal somite proportions, and distinctive live colouration.

Key words: Sesarmidae, *Chiromantes*, intertidal, Christmas Island, Indian Ocean, Taiwan, Guam, Hawaiian Islands, Western Pacific, new species, taxonomy

Introduction

During expeditions to Christmas Island between 2010 and 2012, we were struck by the remarkable colour of the “Yellow-eyed Crab” that had been previously identified as *Chiromantes obtusifrons* (Dana, 1851). We had already suspected that this “species” may actually be a complex of several cryptic species, and this hypothesis was reinforced by the fact that the Christmas I. specimens were so different in colour from fresh material collected in the western Pacific from Taiwan and Guam. Comparisons with topotypic specimens of *Chiromantes obtusifrons* from the Hawaiian Is. with the other material showed that there are at least five related species, and four new species are described in the present work.

Ng & Liu (1999: 230) first pointed out that *Chiromantes* is polyphyletic and that *C. obtusifrons* may require a separate genus. This was further discussed by Ng *et al.* (2008), who signalled that genetic work being undertaken with Christoph Schubart (Universität Regensburg, Germany) also indicated that *Chiromantes* needed to be split, and that *C. obtusifrons* needed to be eventually referred to a new genus. We agree that the five species in the *C. obtusifrons* group, discussed and described here, do indeed warrant generic separation, but this action is deferred for the present as it will be part of the larger revisionary study of *Chiromantes* sensu lato that is being undertaken by the second author and Schubart. Material examined is deposited in the Florida Museum of Natural History, University of Florida (UFUF); National Museum of Marine Biology and Aquarium (NMMBA), Checheng, Pingtung, Taiwan; National Museum of Natural Science (NMNS), Taichung, Taiwan; Ryukyus University Museum (RYMF), Fujukan, Okinawa, Japan; Queensland Museum (QM), Brisbane, Australia; and Zoological Reference Collection (ZRC) of the Raffles Museum of Biodiversity Research, National University of Singapore. Abbreviations: G1 and G2 = male first and second gonopods, respectively; P1–P5 = pereopods 1–5. Measurements, in millimetres, are of carapace width and length, respectively.