



## Four new species of coral crabs belonging to the genus *Tetralia* Dana, 1851 (Crustacea, Decapoda, Brachyura, Tetraliidae)

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### Abstract

Four new species of *Tetralia* Dana, 1851, are described from the west Pacific. Like the six previously described sister species, the new species (*Tetralia aurantistellata*, *T. brengelae*, *T. brunalineata*, and *T. ocucaerulea*) are obligate symbionts of scleractinian corals belonging to the genus *Acropora*. The new species are described herein, placing particular emphasis on live color patterns.

**Key words:** Crustacea, Brachyura, Trapeziidae, Tetraliidae, *Tetralia*, new species, coral symbionts

### Introduction

The genus *Tetralia* Dana, 1851, currently consists of six species of small, brightly colored xanthoid crabs that are obligate symbionts of *Acropora* corals (*Tetralia cavimana* Heller, 1861, *T. cinctipes* Paul'son, 1875, *T. glaberrima* (Herbst, 1790) (= *T. fulva* Serène, 1984), *T. muta* (Linnaeus, 1758) (= *Tetralia vanninii* Galil & Clark, 1988), *T. nigrolineata* Serène & Dat, 1957, and *T. rubridactyla* Garth, 1971). Due to their close morphological similarities, some previous authors have mistakenly labeled separate *Tetralia* species as one species, *Tetralia glaberrima* Herbst, 1790 and used “forma” (Patton 1966) or subspecies (Serène 1984) to note morphological differences. In addition to the six species of *Tetralia*, two closely related species belonging to *Tetraloides* Galil, 1986 (*Tetraloides heterodactyla* (Heller, 1861), *T. nigrifrons* (Dana, 1852)) are also obligate symbionts of scleractinian corals, and together with *Tetralia* compose the family Tetraliidae Castro, Ng and Ahyong, 2004. Until recently, crabs of the genera *Tetralia* and *Tetraloides* were included in the family Trapeziidae Miers, 1886. Castro *et al.* (2004) removed *Tetralia* and *Tetraloides* and placed them in the new family Tetraliidae. A complete list of these previously described species with synonyms can be found in Castro *et al.* (2004). Members of the family Tetraliidae are found throughout the Indo-West Pacific region from the Red Sea and the east coast of Africa to French Polynesia. Tetraliids are absent from the Eastern Pacific region.

### Material and methods

Crabs were collected by snorkeling or scuba diving (surface to approximately 15 m) in Sept. 2002 in shallow water in Guam and Fiji. Whole colonies of *Acropora* corals approximately 5–50 cm wide were extracted using hammer and chisel. Colonies were placed in plastic bags underwater in order to prevent crabs from being dislocated during transport. Coral colonies were temporarily removed from the water and placed in a shallow tray. A thin, malleable stainless steel wire was used to separate the crabs from their host corals. Samples of coral branches approximately 1–2 cm in length were collected for potential species identification of *Acropora*