



## A new intertidal octopus species, *Octopus incella* (Cephalopoda: Octopodidae), from Okinawa, southern Japan

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### Abstract

A new *Octopus* species, *Octopus incella* **sp. nov.**, was found on a shallow coral beach on Okinawa Island, in the tropical waters of Japan. This species possesses the following characteristics: small size (28.2–31.0 mm mantle length [ML]), robust body with medium and approximately equivalent length (3.4–4.6 × ML) arms, relatively large normal suckers without abruptly enlarged suckers, shallow arm webs, lack of primary papillae on dorsal surface and above eyes, absence of white dorsal spots, low number of gill lamellae (5–6 per demibranch), V shaped terminal organ with well-developed diverticulum. This octopus lives in small holes in boulders or dead corals on the beach, where it is completely exposed during low tide. The generic status of this species is discussed.

**Key words:** *Octopus incella*, new species, coral beach, Okinawa

### Introduction

Recent studies have revealed high species diversity of the shallow benthic octopus fauna in the tropical Indo–West Pacific, and several new species have been reported from this region (Huffard & Hochberg 2005; Nateewathana 1997; Norman 1992a–c; 2001; Norman & Hochberg 1994; 2005a, b; Norman & Sweeney 1997; Norman & Finn 2001; Okutani 2005). The Ryukyu Archipelago is located between the East China Sea and Pacific Ocean, and is included in the northern periphery of the Indo–West Pacific zoogeographic region. Okinawa Island is at the center of the Ryukyus. The octopus fauna around the Ryukyus has been poorly investigated, and recent surveys in this region by the authors clarified the existence of at least 20 species of octopus in Okinawa and adjacent islands (Kaneko, unpublished data). Kaneko and Kubodera (2005) recently described one small intertidal octopus, *Octopus laqueus*, from Okinawa; however, almost half of the species from the above islands still remain unidentified.

Here we report a small octopus species found in the intertidal waters of Okinawa Island as a species new to science. This octopus inhabits small holes in boulders or coral debris, which makes them difficult to find.

In this study, we placed this new species in the genus *Octopus*, in accordance with the definition of *Octopus sensu lato* Lamarck. Further discussion of the generic status of this species is given in the Discussion section.

### Material and methods

Field surveys were carried out at Hamamoto Beach in Okinawa Island from November 2003 to January 2004. Four specimens were collected by hand from the intertidal rocky reefs during nocturnal low tide. All collected