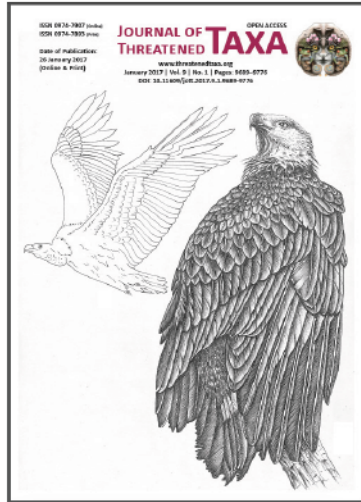


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NOTE

FIRST RECORD OF THE TWO-STRIPED BOX CRAB *CALAPPA BILINEATA* NG, LAI & AUNGTONYA, 2002 (BRACHYURA: CALAPPIDAE) FROM ST. MARTIN'S ISLAND, BANGLADESH

Muntasir Akash & Mostafa A.R. Hossain

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**FIRST RECORD OF THE TWO-STRIPED BOX CRAB
CALAPPA BILINEATA NG, LAI & AUNGTONYA,
2002 (BRACHYURA: CALAPPIDAE) FROM
ST. MARTIN'S ISLAND, BANGLADESH**

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Crabs in the family Calappidae are heterotrematan, eubranchyuran species distinguished by their normal ambulatory dactyli, triangular merus of third maxillipeds, buccal cavern without canal and not paddle-like, the right and always larger chela armed with a pair of special cutting teeth designed for 'cutting' open gastropods (Ng & Tan 1984). Rounded, dome-shaped, ovate to transversely ovate carapace being usually broader than long with wing-like side extensions that conceal the four pairs of walking legs; the broad, flat claws are held like shields, protecting the crab's front surface and completing the box-like appearance, hence, imply their common name Box Crab (Ng 1998; Ahmed & Hossain 2008).

Annotated checklists of brachyuran crabs published by Ng et al. (2008) and of decapod crustaceans published by Grave et al. (2009) list nine extant genera, with the genus *Calappa* holding the largest diversity, represented by 43 species.

Calappid crabs have a wide distribution, whereas, the genus *Calappa* is concentrated mostly along the Western

Pacific, Indian Ocean and in the Eastern Mediterranean (Sakai 1976; Dai & Yang 1991; Chen & Xu 1991; Chen 1993; Galil 1997; Holthuis 2001; Ng et al. 2002). The Indian Subcontinent has been hitherto represented by eight *Calappa* species which are *C. capellonis* (Laurie, 1906), *C. bilineata* Ng, Lai & Aungtonya, 2002, *C. exanthematosus* Alcock & Anderson, 1894, *C. gallus* (Herbst, 1803), *C. guerini* Brito-Capello, 1871, *C. hepatica* (Linnaeus, 1758), *C. lophos* (Herbst, 1782) and by *C. pustulosa* Alcock, 1896 (Galil 1997; Deb 1999; Lai et al. 2006; Ahmed & Hossain 2008; Kumar et al. 2007, 2013; Galil & Ng 2010; Ng et al. 2011). As information on crustacean diversity from this region is still limited, available reports of Two-striped Box Crab *C. bilineata* are only from Sri Lanka, Andaman Sea, Red Sea and from the western coast of India (Ng et al. 2002; Kumar et al. 2013). This present study records *C. bilineata* for the first time from Bangladesh as well as from the northern part of the Bay of Bengal.

Saint Martin's Island forms the southernmost part of Bangladesh lying in the northeastern part of the Bay of Bengal, about 9km off from the southern tip of Cox's Bazar-Teknaf peninsula (Fig. 1). This small island (8km²) is the only coral island of the country, an ecologically critical area (ECA) and rich in marine biodiversity.

As part of a survey of a BS (honours) study tour conducted by the Department of Zoology, University of Dhaka, two specimens of box crabs were caught with a beach seine net from the northern beach in front of the Hotel Prince Heaven. Those box crabs were collected



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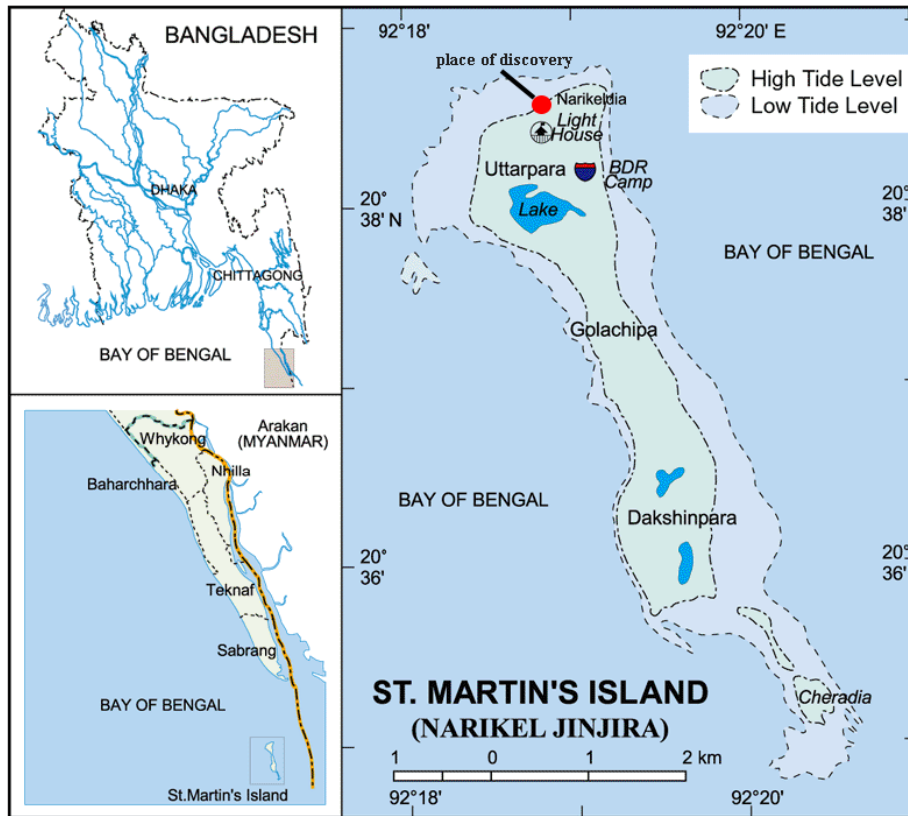


Figure 1 . Map depicting location at St. Martin's Island where *Calappa bilineata* was collected. © Sanjoy Roy.

live and then photographed, as part of the project entitled "Updating Species Red List of Bangladesh" led by IUCN Bangladesh, the first ever attempt considering the crustacean fauna of Bangladesh was made (IUCN Bangladesh 2015). The goal was to evaluate and determine the biodiversity status, national abundance, habitat condition of native crustaceans and depict their threats, to advance related conservation initiatives. The project, in the process, sought after evidence of new records, rediscoveries and quality photographs.

These crab photographs were then submitted to IUCN Bangladesh Team and later were identified as *Calappa bilineata*, turning out to be a new record of box crab species within the geographical area of Bangladesh.

Class: Malacostraca Latreille, 1802
 Order: Decapoda Latreille, 1802
 Infraorder: Brachyura Linnaeus, 1758
 Family: Calappidae Milne-Edwards, 1837
Genus *Calappa* Weber, 1795

***Calappa bilineata* Ng, Lai & Aungtonya, 2002 (Image 1)**

Common name: Two-striped Box Crab

Material examined: 07.xii.2012, two individuals (male), Saint Martin's Island, Bangladesh, 20°38'07.50"N & 92°19'34.68"E, coll. M. Akash.

Diagnosis: Two-striped Box Crabs as carapace with two bold longitudinal stripes locating on median carapace, in addition, the purplish to maroon longitudinally convex dorsal surface, laterally flattened chelae with multidentate dorsal margin. Legs were devoid of any pattern or texture; outer surface of chelae were evenly colored.

Description: Carapace is smooth and arched dorsally aided with small, flat tubercles on the front. Clypeiform structure highly prominent, edges frilled with setae. From the structure, four teeth are projected laterally from posterior margin. As of Ng et al. (2002), anterolateral margin is crested and beaded. Posterior carapace margin with seven well developed granulated, pale yellowish teeth, median tooth sub-equal to adjacent teeth with distinct concavity. Lateral margin of second abdominal segment angular.

Habit and Habitat: During extraction from the seines, specimen showed noticeable aggression relative to the other species, might be a reflection of the species' highly carnivorous, predatory nature. The beach from which specimens were collected represents sandy flats at low tide, devoid of limestone rock compared to the other parts of the island. The adjoining shallow sea-shelf, however, has submerged coral associations and dead coral colonies (Tomascik 1997). Formation of such sandy inter-tidal layers



Image 1. Adult and live Two-striped Box Crab *Calappa bilineata* Ng, Lai & Aungtonya, 2002 from the St. Martin's Island. Male. Carapace length 9.1cm, carapace width 11.63cm (including the spines).

supports an efficient burrowing habitat for callappid crabs.

Remarks: This new record of a benthic crab from the northern Bay of Bengal indicates the potential of the ecologically critical St. Martin's island ecosystem as well as the largest bay of the world itself. It is believed that in-depth expeditions within the vast marine boundary of Bangladesh will bring out more unique and bewildering species accounts.

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Article

Influence of substrate features on distribution of polypores (Fungi: Basidiomycota) in central part of Peechi Vazhani Wildlife Sanctuary, Kerala, India

-- Muhammed Iqbal, Kattany Vidyasagaran & Narayan Ganesh, Pp. 9689–9699

Reviews

Nepal's National Red List of Birds

-- Carol Inskipp, Hem Sagar Baral, Tim Inskipp, Ambika Prasad Khatiwada, Monsoon Pokharel Khatiwada, Laxman Prasad Poudyal & Rajan Amin, Pp. 9700–9722

Current status, distribution and conservation status of Algerian bats (Mammalia: Chiroptera)

-- Mourad Ahmim, Pp. 9723–9733

Short Communications

Incipient loss of a rainforest mutualism?

-- Johannes H. Fischer, Heiko U. Wittmer, Endro Setiawan, Sarah Jaffe & Andrew J. Marshall, Pp. 9734–9737

First record of the Woolly-necked Stork *Ciconia episcopus* Boddaert, 1783 (Aves: Ciconiiformes: Ciconiidae) breeding in the lowland wet zone of Sri Lanka

-- Hemachandra Kularatne & Susantha Udagedara, Pp. 9738–9742

Bibliography and checklist of the dragonflies and damselflies of Bhutan

-- T. Gyeltshen, T. Nidup, P. Dorji, T. Dorji & V.J. Kalkman, Pp. 9743–9747

Checklist of terebrantian thrips (Insecta: Thysanoptera) recorded from India

-- R.R. Rachana & R. Varatharajan, Pp. 9748–9755

Notes

Two jasmine (Oleaceae: *Jasminum* L.) taxa newly recorded in Vietnam

-- Bui Hong Quang, Vu Tien Chinh, Le Thi Mai Linh & Ritesh Kumar Choudhary, Pp. 9756–9760

First record of Rusty-spotted Cat *Prionailurus rubiginosus* (Mammalia: Carnivora: Felidae) from Ramgarh-Vishdhari Wildlife Sanctuary in semi-arid landscape of Rajasthan, India

-- Sailaja Nayak, Sunny Shah & Jimmy Borah, Pp. 9761–9763

Re-sighting record of Fulvous Leaf-nosed Bat *Hipposideros fulvus* Gray, 1838 (Mammalia: Chiroptera: Hipposideridae) from Thar Desert, Rajasthan, India

-- Sumit Dookia, Gajendra Singh & Rajlakshmi Mishra, Pp. 9764–9767

Record number of Yellow-billed Oxpeckers *Buphagus africanus* Linnaeus, 1766 (Aves: Passeriformes: Buphagidae) foraging on a single host

-- Diogo Veríssimo, Jean-Christophe Cugnière, Suzanne Cugnière, Julien Cugnière, Géraldine Cugnière & Laure Cugnière, Pp. 9768–9770

First record of the Two-striped Box Crab *Calappa bilineata* Ng, Lai & Aungtonya, 2002 (Brachyura: Calappidae) from St. Martin's Island, Bangladesh

-- Muntasir Akash & Mostafa A.R. Hossain, Pp. 9771–9773

A record of *Limenitis rileyi* Tytler, 1940 (Lepidoptera, Nymphalidae, Limenitidinae) from Arunachal Pradesh, India

-- Purnendu Roy, Pp. 9774–9776