Chapter

The Robber Crab *Birgus latro* (Linnaeus, 1767)

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Abstract

The robber or coconut crab *Birgus latro* (Linnaeus, 1767) is a terrestrial hermit crab. It is the largest—land living arthropod in the world. As far as India is concerned, distribution of this crab is restricted to Great Nicobar Island and South Sentinel Island in Andaman and Nicobar Archipelago. The crab divided into a front section (cephalothorax), which has eight legs, and an abdomen. The front-most pair of legs has large chelae (claws), with the left being larger than the right. The next two pairs, as with other hermit crabs, are large, powerful walking legs with pointed tips, which allow coconut crabs to climb vertical or overhanging surfaces.

Keywords: *Birgus latro*, Nicobar, India, robber crab

1. Introduction

The robber or coconut crab (*Birgus latro*; Linnaeus, 1767) is a terrestrial hermit crab. It is the largest—land living arthropod in the world. As far as India is concerned, distribution of this crab is restricted to Great Nicobar Island and South Sentinel Island in Andaman and Nicobar Archipelago. In the Nicobar Islands the species has been reported from Car Nicobar [1], Little Nicobar, Katchal, Camorta and Great Nicobar [2]. The crab separated into a visible section (cephalothorax), which has eight legs, and an abdomen. The next two pairs, as with other hermit crabs, are large, powerful walking legs with pointy tips, which allow coconut crabs to climb vertical or overhanging surfaces. The fourth pair of legs is slighter with tweezer-like chelae at the end, allowing young coconut crabs to grip the inside of a shell or coconut husk to carry for protection; adults use this pair for walking and climbing. The last pair of legs is very small and is used by females to tend their eggs, and by the males in mating. In the present study, the general ecology of coconut crabs in around great Nicobar is focused.

2. Methods

Coconut crabs are generally "easy to collect" and most often hand picking is very effective in intertidal zones, Crabs can be preserved wet in 6–10% formalin for further study. Field photographs by using the following taxonomic identification keys [3].

Coconut crab

Birgus latro (Linnaeus, 1767)

3. Results

3.1 Habitat

Coconut crabs are viewed as a standout amongst the most earthly decapods; the crab is an all-around adjusted loner crab, it is diurnal and night-time in propensities. Coconut crabs live alone in underground tunnels and shake hole, contingent upon the nearby territory. They delve their very own tunnels in sand or free soil. During the day, the creature remains concealed to diminish water misfortune from warmth. While resting in its tunnel, the coconut crab shuts the passages with one of its hooks to make the clammy microclimate inside the tunnel fundamental for its breathing organs They live solely ashore, coming back to the ocean just to discharge their eggs.

3.2 Size

This large sized crab grows up to 40 cm long and 22 cm wide (single sighting observed).

3.3 Feeding habit

Adult coconut crabs feed on fruits, nuts, seeds, and the pith of fallen trees, smaller worms, crustaceans and molluscs. The species is popularly associated with the coconut, and has been widely reported to climb trees to pick coconuts, which it then opens to eat the flesh.

3.4 Behavior

These Hermit crabs have a series of complex physical movements to communicate with other crabs in different situations. They are active at night which makes it difficult to see slight differences in body motion. They raise a single leg out and above the rest of their body as a warning to keep away.

3.5 Lifecycle

Coconut crabs are terrestrial animals whose eggs are hatched at sea. The female once her eggs have been fertilized by a male crab, will release her eggs into the sea with a new moon and a spring tide, when the humidity and temperature are right. The number of eggs she releases be a great as 138,000. The species' only dependence on the sea is for releasing eggs, which hatch in contact with seawater; the planktonic larvae then migrate onto land where they develop into long-lived adults [4]. And migrate to the shoreline with other terrestrial hermit crabs. The coconut crab reaches sexual maturity around 5 years after hatching. They reach their maximum size only after 40–60 years.

3.6 Distribution

South Sentinel Island and Nicobar Islands in the Bay of Bengal, Central Pacific Ocean, Ryukyu Islands, Coast of Tanzania, Tropics of Cancer and Northern and Southern limits of Capricorn mark, Australia, Madagascar and Mauritius Island.

4. Discussion

The population of this crab is dwindling due to habitat loss as a cause of coastal development and exploitation by human for food. Large populations exist on the Cook Islands especially Pukapuka, Suwarrow, Mangaia, Takutea, Mauke, Atiu, and Palmerston Island. The coconut crab *Birgus latro*, characterized as Data Deficient on the IUCN Red List [5], is the largest land crab. In worldwide conservation and management strategies have been put in place such as ban on the capture of egg-bearing females and avoid the hunting of non-egg-bearing adults having above carapace length 30 mm. In India the species protected under Schedule I category of Wildlife (Protection) Act, 1972. The Conservation needs of the coconut crab *Birgus latro* on the Nicobar Islands, India [6]. We recommend that more extensive surveys be carried out in all potential coconut crab habitats on the Andaman and Nicobar archipelago.

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