

Rod Attrill's



Bahamas Wildlife

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Land Crabs in the Bahamas



Crab 'n Rice - an island gourmet's favourite dish. These crabs don't live in the sea though, they live on land. The crab on the left is *Cardisoma guanhumi*. It's legs spread a foot from side to side and it lives in a burrow among the Mangroves and in low-lying broadleaf coppice where the water table is close to the surface. The island of Andros has a large population of land crabs and has recently established an 'Andros Crabfest'. This occurs in June at the time the crabs take to the road - quite literally - on their journey from their burrows to the sea where they must go to lay their eggs.

In the early summer, masses of eggs are laid by the female - maybe as many as 40,000. These are fertilized by the males and stuck to the underside of her shell in a foamy mass. The annual trek of hundreds of thousands of crabs begins three nights before the full moon. The eggs are released in the sea and soon hatch out into a planktonic larva called a zoea which then begins a hazardous journey.



The zoea (see photo on left) is a strange little microscopic creature with two very characteristic spikes protruding from what will later become its carapace or shell. As a part of the plankton (animals and plants that cannot control their overall movement but are at the total mercy of ocean currents), the zoea begin their life in incredible numbers. However, most of them are destined to become food for other living things - filter feeders such as corals, sponges, tunicates, anemones and many more.

Those few that survive will go through a series of moults or ecdyses and become megalopae - tiny larvae that look much more like a crab than a zoea does. Now it can be clearly seen to have ten legs (crabs belong to the Decapoda - ten-legged arthropods) and a carapace or shell from which the legs emerge. However it still has the 'primitive' long abdomen of other arthropods. As it metamorphoses into an adult land crab, the abdomen will shorten and then be tucked up beneath the carapace.



Just a very few do not become food for the fish and for larger planktonic organisms and will survive to crawl up a beach and mature into a land crab - maybe far from where the parent crab laid its eggs. The newly formed crabs will then climb the beach and disperse into the bush until they find a suitable place to dig a burrow.

In suitable habitats, there may be as many as a thousand crab burrows to an acre. The burrows go down as much as a metre to the water table where the crabs can immerse themselves in water and keep their gills moist. In the Bahamas, most crab burrows are well away from human habitation, but in Florida they can be somewhat of a nuisance where they dig up lawns and eat garden vegetables! Land crabs are primarily vegetarians, eating tender leaves, fruits, berries, flowers and some vegetables. Occasionally they will eat beetles or other large insects.

This little personal pool constructed by the crabs also provides a habitat for various other organisms that have evolved alongside the crabs. One of which is the Florida Crabhole Mosquito *Deinocerites cancer*. Altogether, there are eight species of Mosquito around the Caribbean that only use crabholes to reproduce. The photo on the left shows the larva of a crabhole mosquito. The little tube at the end of its



abdomen pierces the surface tension of the water and allows the Mosquito larva to take in air.

There is also a most unusual fish that lives in crab burrows. It is called *Rivulus marmoratus*. Its English name is the Mangrove Rivulus and it has a number of other names throughout its range from Florida through the Caribbean to central and northern south America. It has no common name in the Bahamas as far as I am aware. This little fish - growing to only 2 inches in length is hermaphroditic - both male and female and as many as 26 fish have been found in a single crab burrow.



In the islands few people know about the hidden life of the Land Crab. They never see it until it emerges from its burrows and begins the trek to the ocean to lay its eggs. Then, they come out in their dozens to catch the crabs as they run across the roads on their way to the sea. Some apparently, make a very good living from the crabs, while on some islands, the crabs are an important source of protein.

For the crabs though it is unfortunate. For an animal to be killed just before reproduction is the quickest way to kill off a resource. We can only hope that enough crabs get through for the species to survive.

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