Manicou crab: a marvellous mountain-dweller

BY AMY DEACON

MOST of us associate crabs with a trip to the beach – scuttling across the sand or hiding in a rockpool. However, here in TT, these ten-legged crustaceans have even colonised the upper reaches of our forest streams.

The mountain, or manicou, crab (Rodriguezus garmani – formerly placed in the genus Eudaniela) is typically found at between 50-800 metres elevation, and displays several impressive adaptations that allow it enjoy an inland existence.

The first relates to its reproduction. Most species of freshwater crab, including our blue crab, need to migrate or remain close to the coast in order to release their eggs into the water and out to sea, where the larvae develop as part of the zooplankton before migrating back into the rivers. However, the manicou crab is one of only a few species worldwide that no longer produce free-swimming larvae. Instead, astonishingly, its 200-300



eggs hatch and develop within a pouch formed on the female's abdomen.

This incredible adaptation is the origin of its common name; "manicou" is an Amerindian word for the opossum which, as a marsupial, also raises its young in a pouch.

It is quite surreal to stumble upon a female with a pouch full of miniature crabs clinging onto her underside, as she goes about business as usual.

Eventually these babies will leave the pouch and venture out into the mountain streams alone, having enjoyed a safe head-start in life. Pale yellow on hatching, juveniles become a bright orange-red colour, turning a darker red-brown as they mature, at around three years old. The diet of young crabs consists mainly

of insects - primarily mosquito larvae, as well as vegetation and fruit. As adults, they are also known to eat meat, and will adopt a "sit and wait" strategy to ambush prey such as crayfish (Macrobrachium spp.) – and even each other; individuals have also been observed predating on several different species of snake. Their cannibalistic tendencies may be the reason for their



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largely solitary existence, coming together only for mating.

Another adaptation to living in ephemeral mountain streams is a reliance on breathing air (thanks to a lung-like brachial chamber); this has gone so far that manicou crabs can no longer survive the sustained submersion that is normal for most crabs. As a result they construct burrows on the river bank, or find crevices under suitable rocks.

Being able to breathe air also means that crabs can travel a long way through the forest when foraging, generally making such trips at night time. They have been recorded as travelling up to 200m in one night.

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Crabs play central role in ecosystem

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Manicou crabs are native to TT (both islands), Venezuela and the island of Margarita. They can grow to around ten cm carapace width, and can weigh up to 250g. They are one of three crab species in T&T that are commonly harvested for use in popular dishes such as crab and dumplings and callaloo.

Crab hunters can be seen on mountain roadsides at the onset of the rainy season, as this is when the crabs are most active and easily caught.

This task has to be undertaken with care, as their claws (or 'chelipeds') are powerful and capable of inflicting a painful wound.

When threatened, they will spread their chelipeds in a wide defensive pose, at which point it is wise not to let your fingers get within striking range.

They also use their chelipeds for communication by striking the inside of their burrows which produces a tapping sound. The exact purpose of this display



Manicou crab displaying cannibalistic behaviour.

PHOTO BY: AMY DEACON

is unclear, but it may be related to territoriality or courtship.

Their non-human predators include birds of prey, such as the common black hawk - it is not uncommon to happen upon crab remains on riverside rocks up in the Northern Range streams, which are most likely hawk "dining tables".

They are even eaten by their

namesake - the manicou or opossum.

Although not currently endangered, it is possible that declines in other crab species such as the blue crab, are starting to place increased pressure from hunting on the manicou crab.

As generalist predators and scavengers, they play a central role in the ecosystem of our for-



Crab offspring in a 'pouch' on their abdomen.

PHOTO BY: AMY DEACON

est streams and therefore should be valued for more than just their contribution to crab and dumplings. We should all feel lucky to share this island with such an amazing and unusual crustacean!

> For more information on our natural environment contact

the T&T Field Naturalists' Club at admin@ttfnc.org, or website at www.ttfnc.org, FaceBook and YouTube pages. The club's next monthly meeting will be on August 13 at St Mary's College, Port-of-Spain and the lecture will be on "Eco-tourism and conservation in T&T" by Robyn Bath-Rosenfeld, AWNC.

