

# Extraordinary Land Snail Diversity of Belize



Above images represent only a tiny sample of the more 150 species of land snails found in Belize.

- 1) Belize Globe 25-30 mm front & bottom views
- 2) Orange-lip Dome, 8-10 mm 5 color phases
- 3-4) Banded Cone 30-35 mm tall
- 5-6) Sulfur Cone 25-30 mm tall
- 7) Toothed Dome 14-16 mm
- 8) Fringed Lucidella, 3-4 mm
- 9) Pyramid Pinecone, 3-4 mm
- 10) Muddy Temple, 3-4 mm
- 11) Angled Dome, 13 mm
- 12) Central American Scrubsnail, 8-10 mm
- 13) Princess Cone, 50-75 mm tall

- 14) Thomson's Oval, 20-30 mm tall
- 15) Brown Cone, 15-20 mm tall
- 16) Ghost Snail, 10-15 mm
- 17) Common Crater, 20-27 mm
- 18) Petén Splinter, 3-4 mm tall
- 19) Common Aggressor, 22 mm
- 20) Stripped Oval, 22-25 mm tall
- 21) Mayan Crater, 35-53 mm
- 22) Lesser Oval, 10-12 mm tall
- 23) Limestone Drum, 28 mm tall
- 24) Glossy Subulina, 18 mm tall

- 25) Hairy Button, 12-14 mm
- 26) Rimate Phora, 2 mm
- 27) Belize Tuba, 20-30 mm tall
- 28) Pearly Tuba, 10-15 mm tall
- 29) Detached Tuba, 10-12 mm
- 30) Amber Tuba, 10-13 mm tall
- 31) Mayan Quill, 15-17 mm tall
- 32) Cayo Horn, 28-33 mm tall
- 33) Mayan Marauder, 50-60 mm
- 34) Morelet Slug, 40-50 mm



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## “The Lesser Majority” Land Snails: Building Blocks of the Ecosystem

Part of a large and diverse group of organisms known as Gastropods, land snails are part of the Phylum Mollusca which contains around 85,000 described and living species world-wide.

While there remains a scarcity of information and understanding of the value of land snails in Belize, a building body of evidence suggests that snails are even more important than we ever imagined. In Belize, snails are a significant food source to small mammals like shrews and mice as well as bats, river otters, American and Morelet’s crocodiles, freshwater turtles, a variety of birds such as oscillated turkeys (suspected), great curassows (suspected), crested guan (suspected), wood thrushes, egrets and herons, snail and hooked billed kites, snakes (*Sibon* species), lizards (suspected), frogs (suspected), salamanders, carnivorous land snails and multiple invertebrates. As part of the lesser majority, land snails are considered important players in healthy, functioning ecosystems.

Declining land snail populations can have ripple effects to surrounding ecosystems. For example, many birds have declined as a result of disappearing land snails. A lack of snail shells (a known calcium source) in the bird’s diet causes the bird to lay eggs with thinner shells which break prematurely, reducing the birds reproductive success.

Sensitive to changes in the environment such as chemical pollution, forest fires, and excessive land clearing—native land snails could provide an early warning sign to impending “ecosystem-collapse” in both natural and agricultural lands found in Belize.

Most snails are dietary generalists consuming a wide variety of herbaceous plant leaves or stems, decaying vegetation and leaf litter (detritus), wood or bark, and fungal fruiting bodies (such as mushrooms), slime molds, animal scat and carrion.

Land snails use a variety of strategies to protect themselves from harm with hard shells made of calcium carbonate and teeth being the first line of defense. Although slugs are without protective shells, they are not defenseless. Slugs have copious, viscus, water-insoluble mucus which can gum-up the mandibles of beetles or cause antagonistic snakes to vomit.

Land snails are hermaphrodites (containing both sexes) and several species employ love darts to stimulate copulation.

There are 158 species of land snails confirmed from the arbitrary boundaries of Belize.



### 17 New Land Snail Species Described from Belize



Speckled Snail-sucker eating a Banded Cone



Breaking stone used by birds to eat snails



Fringed-lipped bat with a Princess Cone

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