Nevada's Land Snails

By Mark A. Ports

Rocky Mountain Land Snail from the southern Wasatch Mountains

You may think of escargot or the slimy critters that eat your garden lettuce, or the colorful shells your kids pick up on the beach, but these hardy invertebrates also inhabit many of Nevada's mountains.

Approximately 36,000 species of land snails live throughout the world, inhabiting tropical forests, deserts, and deciduous forests. Approximately 8 species of Mountain Snails are dispersed throughout isolated mountains of Nevada and western Utah. Nevada's largest and most conspicuous land snails are the Mountain Snails, found throughout the Western U.S., from the Rocky Mountains to the Pacific Ocean.

As with all invertebrates the Mountain Snails have no backbone so they depend on their shell for protection from predators. They survive bitter winters and hot summers by burrowing bemeath litter or talus rock. Like all land snails they have lungs and they are viviparous, meaning they give birth to live young. Eggs would freeze in these cold mountains. The Mountain Snails are hermaphrodites meaning they have both male and female parts, so if they cannot find a mate they simply give birth on their own. This comes in handy when a snail finds itself alone in a mountain canyon.

As with all land snails, they use slime to glide about in search of food such as moss, fungus, decaying plant material, and sometimes animal feces. Land snails are important decomposers, breaking down dead material and enriching the soil where plants can thrive and mule deer can browse. An individual snail may live up to 6 years, typically being active only in the spring and fall. During the dry heat of summer they go into a period of inactivity called aestivation and when snow buries their rocky habitats they go into hibernation.

Mountain Snails are attached to their home and cannot leave it so they simply grow a bigger shell from the inside. They depend on limestone to build their shells so they are most common in mountains having limestone, from the Ruby Mountains in the north to mountains around Ely. Any mountain without limestone rock, such as the Independence Range, is not likely to have this animal.

The Mountain Snails probably originated and dispersed from the Wasatch Mountains approximately two million years ago. How they got here is still a puzzle. Snails cannot survive in the salty soil of the Great Salt Desert or in valleys between Nevada mountains, since salt removes all of the water from their bodies. Mountain Snails are truly isolated and some species are considered endemic to several mountains, such as the Goshute Mountains south of Wendover.

Today, Mountain Snails are in trouble. Their colonies are dying out because they are dependent not only on slopes of limestone but also small areas of fir, pine, and aspen restricted to small canyons. These communities may be impacted by new roads, livestock grazing, and possibly climate change. More study is necessary to understand these impacts and the effects they may have on these unique animal.

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