



## FrontiersEcoPics

### A pygmy rice rat eats a peppery snack

It's a clear night in July in a lowland rainforest of Costa Rica. The moon is less than a quarter full and it is just before 11 pm. A Costa Rican pygmy rice rat (*Oligoryzomys costaricensis*) is perched on a branch, feasting on the seeds of an unripe pepper plant (*Piper* sp) fruit (left). This small rodent species is often found within mature forests and along forest edges, where it can be seen running on the ground or climbing among small branches, usually looking for fruits and insects. This small mammal uses its front paws to manipulate the *Piper* stalk and cracks open the seeds with its teeth to consume the endosperm



inside. It discards the seed husks on the leaves of the plant, leaving little “trash piles” behind (right). The frequent and heavy rain in this area usually washes these piles to the ground beneath the plant, perhaps providing some nutrient cycling for the soil. *Piper* is a highly diverse genus of plants, and an important food resource for many animals. When *Piper* fruits ripen, birds and bats feast on them and disperse their seeds, forming mutualistic relationships with the plants. Little is known about other species that consume *Piper* fruit, so this observation of *O costaricensis* provides new insight about other *Piper* consumers, and raises questions about whether *Piper* consumption by rodents incurs considerable costs to the plants.

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