

## Radiation in land snails on Venezuelan tepui islands

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Venezuelan Guayana is re-known for its unique flora and fauna, consisting of many endemics on table-top mountains ("tepui"). These mountains act as "islands in the air", their summits rising steeply above the surrounding lowlands. Many (but not all) tepui summits are connected to the surrounding lowlands by valleys and ridges; they may be regarded as ecological islands with a distinctive biodiversity.

The land snail fauna of this inaccessible area is only poorly known, with not more than 55 specimens collected during the past 100 years. Currently, 17 taxa are recognized from these tepuis, of which 16 belong to the family Orthalicidae and divided into two genera. A recent revision shows a radiation, with separate (sub)species on the different tepuis. Due to scarcity of data, little information is available about the ecological niches of these snails; several of them seem to be associated with bromeliads or *Bonnetia* (Clusiaceae). An analyses of their distribution reveals a high correlation with biotic (plant diversity, forest types) and abiotic factors (e.g. elevation range and slope area of the tepuis).

Several hypotheses have been proposed to explain speciation of faunal elements in Venezuelan Guayana. The fragmentary nature of the data available is itself a problem in evaluating the various hypotheses. Further phylogenetic studies could help to clarify the evolutionary and biogeographical processes in this fascinating area.