

Lepidotes vs Elepidote Rhododendrons

Glen Jamieson

Lepidotes vs Elepidotes

- Lepidote rhododendrons have scales on the underside of their leaves which protect the plant's stomata (leaf pores) through which oxygen, carbon dioxide, and water vapor pass.
- The scales have evolved to regulate moisture exchange, to help keep water in the cells in dry times, and help shed it in times of abundance. This allowed plants evolving in the tropics to live in the quick-drying forest duff on the very thin soils of the tropics, or even epiphytically on rocks or tree trunks.
- Elepidotes, on the other hand, are without scales to cover their stomata.
- Cold brings many of the same demands as do the tropics on a plant, such as desiccating it with dry winds, and scales have evolved to become adept at dealing with either harsh cold or heat. As a result, lepidote rhododendrons have adapted and spread to nearly all environments, from tropical jungles and Siberian woodlands to mountain meadows and alpine tundra. Because of this wide tolerance of soils, temperatures and exposures, they are especially useful to gardeners in more extreme environmental habitats.
- Other lepidote adaptations, such as fast regrowth after predation from grazing animals, and early bloom to deal with a short growing season in cold climates, give us a plant that is easily pruned to shape and that flowers early [to take advantage of a short growing season], again advantageous to northern gardeners.

Lepidote Rhododendron Species

- *R. groenlandicum* (Labrador Tea), *R. keiskei*, *R. minus*, *R. impeditum*, *R. cinnabarinum*, *R. edgeworthii*, *R. rubiginosum*, *R. augustinii*
- 'PJM', 'April Rose'
- All vireyas

Elepidote Rhododendron Species

- Rhododendrons
 - North American species
 - e.g., *R. catawbiense*, *R. macrophyllum*
 - Asian species
 - e.g., *R. williamsianum*, *R. calophyllum*, *R. arboreum*, *R. bureavii*, *R. decorum*, *R. rex*, *R. yunnanense*, *R. quinquefolium*
- Azaleas
 - Eastern North American azaleas
 - Asian species
 - *R. kiusianum*, *R. schlippenbachii*, *R. stenopetalum* 'Linearifolium'