

Supplementary Material

The function of foliar scales in water conservation: an evaluation using tropical-mountain, evergreen shrubs of the species *Rhododendron* in section *Schistanthe* (Ericaceae)

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Table S1. A listing of all the accessions representing species used for this research

Scale type numbers refer to the following scale types: (1) sunken small peltate; (2) small peltate; (3) large peltate; (4) cushion; (5) cuneate; (6) stellate; and (7) dendroid. Growth form, growth type (epiphyte/terrestrial), and habitat information are derived from Argent 2006. Shrub – tree refers to plants that are predominantly shrubs but may form small trees. The epiphyte vs. terrestrial differentiation indicates that the plant is either most often found as an epiphyte or a terrestrially rooted plant

| Species | Scale type | Growth form | Epiphyte or Terrestrial | Habitat |
|--------------------|------------|-------------|-------------------------|------------------------|
| <i>acrophilum</i> | 3 | Shrub | Epiphyte | Dense Forest |
| <i>aequabile</i> | 4 | Tree | Terrestrial | Sub-alpine forest |
| <i>alborugosum</i> | 2 | Shrub | Terrestrial | Sub-alpine shrubland |
| <i>apoanum</i> | 4 | Shrub | Epiphyte | Sub alpine moss forest |
| <i>arfakianum</i> | 2 | Shrub | Terrestrial | Montane forest edge |
| <i>armitii</i> | 2 | Shrub | Terrestrial | Open woodland |

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|-----------------------|---|------------|-------------|--|
| <i>aurigeranum</i> | 5 | Shrub | Terrestrial | Grassy and shrubby hillsides |
| <i>beyerinckianum</i> | 7 | Shrub | Terrestrial | Mossy forest |
| <i>blackii</i> | 1 | Shrub | Epiphyte | Mixed montane forest, forest edge, post fire grassland |
| <i>brookeanum</i> | 5 | Shrub | Epiphyte | Mangroves and open forest along rivers at low elevation |
| <i>bryophyllum</i> | 7 | Shrub | Terrestrial | Tall (mature) forest |
| <i>buxifolium</i> | 5 | Shrub | Terrestrial | Open forest and shrubland |
| <i>carringtoniae</i> | 3 | Shrub | Terrestrial | Open hillsides, river banks terrestrial |
| <i>celebicum</i> | 3 | Shrub | Epiphyte | Mossy forest |
| <i>christii</i> | 3 | Shrub | Epiphyte | Mossy forest, terrestrial in open meadow |
| <i>commonae</i> | 1 | Shrub | Terrestrial | Open meadow, heathland, rocky fell field |
| <i>crassifolium</i> | 3 | Shrub | Epiphyte | Epiphyte in deep shade + terrestrial in open landslides |
| <i>cruttwellii</i> | 3 | Tree | Terrestrial | Margins of valley forest |
| <i>culminicola</i> | 3 | Tree | Terrestrial | Open forest, shrubland, sub-alpine forest |
| <i>dianthosmum</i> | 5 | Shrub | Epiphyte | Primary forest |
| <i>dielsianum</i> | 7 | Shrub | Epiphyte | Montane woodland, terrestrial on road banks |
| <i>fallacinum</i> | 4 | Shrub | Terrestrial | Montane mossy forest (variable light) |
| <i>gardenia</i> | 7 | Shrub | Epiphyte | Epiphyte in open forest and terrestrial on open ridges |
| <i>goodenoughii</i> | 3 | Shrub | Epiphyte | Open forest |
| <i>herzogii</i> | 3 | Shrub | Terrestrial | Open landslides and disturbed sites |
| <i>himantodes</i> | 4 | Shrub | Epiphyte | Open forest |
| <i>hyacinthosmum</i> | 7 | Shrub | Epiphyte | Mossy forest |
| <i>inconspicuum</i> | 1 | Shrub | Terrestrial | Mossy forest, heathland, landslides |
| <i>jasminiflorum</i> | 3 | Shrub | Terrestrial | Ridge forest, shrubland, rock outcrops |
| <i>javanicum</i> | 5 | Shrub | Epiphyte | Open forest, terrestrial on ridge tops craters |
| <i>kochii</i> | 3 | Tree | Terrestrial | Mossy forest on ridges |
| <i>konori</i> | 5 | shrub | Terrestrial | Heathland, open fern ridge top |
| <i>konori</i> var. | | | | |
| <i>phaeopeplum</i> | 5 | Shrub-Tree | Epiphyte | Montane forest, terrestrial in forest edge, grassland, swamp |
| <i>laetum</i> | 5 | shrub | Terrestrial | Forest edge and swamp |

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| <i>leptanthum</i> | 5 | shrub | Epiphyte | Terrestrial on cliffs and rock outcrops, epiphytic in mossy forest |
| <i>leucogigas</i> | 2 | shrub | Epiphyte | Riverine forest and mossy Nothofagus forest |
| <i>lochiae-devils thumb</i> | 3 | Tree | Terrestrial | Alpine dwarf forest and shrubland |
| <i>loranthiflorum</i> | 3 | shrub | Epiphyte | High elevation rain forest, dwarf forest |
| <i>lowii</i> | 3 | Tree | Terrestrial | Gullies , mossy forest, shrublands |
| <i>macgregoriae</i> | 1 | Tree | Terrestrial | Shrubland, mossy forest, disturbances |
| <i>malayanum</i> | 4 | shrub | Epiphyte | Montane forest |
| <i>multicolor</i> | 2 | shrub | Terrestrial | Open sites, pastures, hillsides |
| <i>multinevium</i> | 3 | shrub | Epiphyte | Terrestrial on grassy slopes, epiphytic in montane forest |
| <i>orbiculatum</i> | 1 | Shrub-Tree | Epiphyte | Terrestrial on cliffs and rock outcrops, epiphytic in mossy forest |
| <i>pauciflorum</i> | 2 | shrub | Epiphyte | Mossy forest or peaty soil |
| <i>perakense</i> | 3 | shrub | Epiphyte | Alpine forest, mossy forest |
| <i>phaeochitum</i> | 7 | shrub | Epiphyte | Ridge forest can be terrestrial |
| <i>polyanthemum</i> | 3 | Tree | Terrestrial | Mossy forest, cliffs, ridges |
| <i>praetervisum</i> | 2 | Shrub | Epiphyte | Montane forest |
| <i>pseudobuxifolium</i> | 3 | Shrub | Terrestrial | Mossy open areas on ridge |
| <i>quadrasianum</i> | 3 | shrub | Terrestrial | Rocky open slopes |
| <i>radians</i> | 6 | shrub | Terrestrial | Low forest organic grit soil |
| <i>rarilepidotum</i> | 3 | Shrub | Terrestrial | Subalpine open areas, shrubland |
| <i>retivenium</i> | 5 | Shrub-Tree | Terrestrial | Montane forest, ultrabasic soil |
| <i>retusum</i> | 3 | Tree | Terrestrial | Sub-alpine mossy forest |
| <i>rhodopus</i> | 5 | Shrub | Terrestrial | Open montane forest |
| <i>robinsonii</i> | 3 | Shrub | Epiphyte | On trees over rivers, terrestrial on river banks and swampy areas |
| <i>rousei</i> | 5 | Shrub | Terrestrial | Open sub-montane forest |
| <i>rugosum</i> | 3 | Tree | Epiphyte | Low mossy forest open exposed ridges, dense dark forest |
| <i>rushforthii</i> | 3 | Shrub | Epiphyte | Secondary broad leaf forest |
| <i>salicifolium</i> | 3 | Shrub | Terrestrial | Open forest and rock outcrops |
| <i>santapaui</i> | 2 | shrub | Epiphyte | Mossy forest and on river banks |
| <i>saxifragoides</i> | 2 | shrub | Terrestrial | Open fields and bogs |

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| <i>sessilifolium</i> | 2 | Shrub | Terrestrial | Open forest, crater edges |
| <i>stapfianum</i> | 5 | Shrub | Epiphyte | Sub-montane forest on tall trees; terrestrial on road banks |
| <i>stenophyllum</i> | 7 | Shrub | Terrestrial | Open forest |
| <i>suaveolens</i> | 3 | shrub | Epiphyte | Montane forest occasionally terrestrial |
| <i>sumatranum</i> | 1 | Shrub | Terrestrial | Open forest, shrubland, meadows |
| <i>superbum</i> | 3 | Shrub | Epiphyte | Montane forest (upper branches) and terrestrial in shrubland |
| <i>taxifolium</i> | 3 | Shrub | Epiphyte | Mossy open forest on ridges |
| <i>vaccinioides</i> | 5 | Shrub | Epiphyte | Open montane forest |
| <i>viriosum-pink</i> | 3 | shrub | Epiphyte | Sub-alpine forest, shrubland, outcrops |
| <i>williamsii</i> | 2 | Tree | Terrestrial | Steam banks and riverine forest |
| <i>womersleyi</i> | 2 | Shrub | Terrestrial | Forest margins, grasslands, open forest |
| <i>wrightianum</i> | 2 | Shrub | Epiphyte | Epiphytic in mossy forest, terrestrial in forest openings |
| <i>x-coriifolium</i> | 3 | Shrub-Tree | Terrestrial | Subalpine forest and shrubland |
| <i>x-nervulosum</i> | 3 | Shrub | Terrestrial | Open forest or landslides |
| <i>x-planecostatum</i> | 3 | shrub | Epiphyte | Mossy forest, landslides |
| <i>x-sheliae</i> | 3 | Shrub | Terrestrial | Alpine shrubland |
| <i>yongii</i> | 3 | Shrub | Terrestrial | Mossy open forest on ridges |
| <i>zoelleri "decimas"</i> | 2 | Tree | Terrestrial | Open forest, disturbed sites |
| <i>zollingeri</i> | 5 | Shrub | Terrestrial | Open forest, shrubland, exposed ridges, dry grassland |
