

6. Life cycle and growth form

Three terms are used to describe the life cycles of plants from germination of a seed to flowering, and production of new seed:

- Annual – The entire life cycle occurs within one year, and the plant dies, e.g., *Atriplex* species.
- Biennial – A plant flowers and produces seed in the second year after it germinated, e.g., New Zealand gentians.
- Perennial – Continue from one year to the next. Includes most New Zealand species from the smallest herbs to the largest trees. Many exotic plants are also perennial.

There are a variety of different habits or growth forms for native plants. They include divaricating, erect, prostrate, scrambling, matted and rhizomatous:

Divaricating/ filiramulate: branching at a very wide angle with stiff intertwined stems.



e.g., *Corokia cotoneaster*

Prostrate / procumbent (if not rooting): stems lying flat on the ground.



e.g., *Coprosma acerosa*
Photo: Lisa Forester.

Erect: stem perpendicular to the ground.



e.g., rimu (*Dacrydium cupressinum*)

Scrambling / climbing: multiple thin stems adhering to and entwining its host.



e.g., mangemange (*Lygodium articulatum*)

Matted / cushion: cushioned, low, closely packed leaves.



e.g., *Raoulia* aff. *australis*.

Heteroblastic: different forms in juvenile and adult phases of the plant.



e.g., lancewood (*Pseudopanax crassifolius*), juvenile (left) and adult.

Fastigate (like Lombardy poplar): branches erect and close to central axis.



e.g., young rewarewa (*Knightia excelsa*).

Tufted
Sprouting from a single base portion.



e.g., *Poa billardierei*.

Rhizomatous
Creeping on rooted rhizomes below the surface.



e.g., *Dianella nigra*.

Floating: lying flat on open water.



e.g., duckweed (*Lemna minor*).

Duckweed (large green leaves) growing with *Wolffia australiana* (small green leaves) and *Azolla filiculoides*.

Rosette: leaves arising in a circle from the base.



e.g., *Celmisia semicordata*.

Photo: John Sawyer.