

## Desert Islands

The San Juan Islands may be on the wet side of the Cascades, but can be as dry as eastern Washington. The reason: the rain shadow of the Olympic Mountains, which also affects Victoria, Sequim, Anacortes and Whidbey Island. The southernmost parts of San Juan County get the same annual rainfall as Spokane (18 inches), and only a little more than Santa Fe, New Mexico (16 inches).

Our islands accordingly lack many of the “wet coastal” plants that are commonly seen elsewhere in western Washington, such as Western Trillium (*Trillium ovatum*) and Vine Maple (*Acer circinatum*). And we have plants that can only otherwise be seen east of the Cascades. Soopalalie (*Shepherdia canadensis*), from which “Indian ice cream” is made, is one example. Another example is a locoweed (*Oxytropis monticola*) found only in two parts of Washington State: San Juan County and... Okanagon County!

The most obvious example is our native cactus, the brittle prickly pear (*Opuntia fragilis*), which is much more common east of the Cascades. Other drought-adapted local plants are less obvious. Conifers such as Douglas fir (*Pseudotsuga menziesii*) and broad-leaved evergreens such as Madrona (*Arbutus menziesii*) and Manzanita (*Arctostaphylos columbiana*) can photosynthesize in winter when water is abundant. Their waxy leaves reduce moisture loss in summer. Trees that only have leaves during the dry months grow more slowly on our desert islands.

Many of our local wildflowers have adapted to drought by growing bulbs, corms, or tubers. Collectively called geophytes, they produce leaves in early spring when water is still abundant, photosynthesize madly, and then store the energy from photosynthesis underground. Their leaves die back by early summer. Some bloom early while they still

have leaves, for example Camas (*Camassia* spp). Others send up flowery shoots in mid- to late-summer long after their leaves have completely disappeared, like Hooker's onion (*Allium cernuum*) or Harvest brodiaea (*Brodiaea corinaria*). With all their stored energy geophytes can skip a year of growth and thus easily survive especially dry winters.

Since our local plants are already well adapted to droughts and variable rainfall, they are less likely to be affected by the warmer, drier conditions predicted for our region by climate models than our favorite non-native garden plants and crops, most of which require summer water. So when making landscaping choices, you might want to consider that we live on desert islands!

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Two native plants of the driest parts of the San Juan Islands: Showy polemonium (above) and Brittle Prickly Pear (below); photos by R. Barsh

