

The Archibald Archive – Genus Guides

ERYTHRONIUM

Dogtooth violets, trout lilies and fawn lilies

We have listed an unprecedented range of seed from the western American members of this small, fashionable genus of early flowering plants in Liliaceae. The genus as a whole is circumpolar in its distribution with approaching 30 species spread around the northern hemisphere but the greatest concentration is in northern California and Oregon.

Most grow in well-drained habitats usually in the light shade of sparse woodland or among scrub. The high altitude species often grow in dense colonies as snow-melt plants in fully open sites. When areas are hot and dry in summer, the single-scaled bulbs are likely to be growing deeply among stones, where soil-temperature and moisture is more even. Their preference for serpentine areas is marked and they grow below the thin humus layers in singularly inhospitable, infertile soils, deficient in nitrogen, phosphorous and calcium, with high concentrations of magnesium. We suggest caution in attempting these species in pure peat, which can become too wet for them. A mix of half granite chippings and half sphagnum peat or, much better, leafsoil might be more appropriate. Species from warmer, drier summer habitats might be best in well-drained sites in full sun, when cultivated in cool, wet climates. These may need a summer-rest. All seem remarkably temperature-hardy and many grow surprisingly well in the open garden in wetter climates. Cultivation in pots is not always easy as the bulbs penetrate deeply and end up in the bottom of the pot, where it is too wet for them and they rot.

Dried seeds from the *Erythronium dens-canis* complex have given problems over germination and we have temporarily stopped listing these. We have had excellent germination from some dried, wild-collected *E. dens-canis* seeds in the past and do not believe that it is invariably the case that seed either needs to be sown very freshly or stored moist. We shall resume listing these when we are happier as to the most appropriate treatment. So far, we do not have a great deal of experience with the eastern North Americans but seeds of most of the species from California and Oregon will come up easily after a sufficient cool period. Early experience with *E. klamathense*, *E. pusaterii*, *E. pluriflorum* and *E. purpurascens* showed them to be extremely difficult to germinate. (The following comments may also apply to various races of *E. grandiflorum*, *E. idahoense*, *E. nudopetalum* and other cold-climate taxa, like *E. montanum* and *E. citrinum* var. *roderickii*.) They appeared to require a very long cold period or repeated freezing. This was verified, wholly independently, in 1996 by John Andrews in California, Art Guppy in British Columbia and Norman Stevens in the UK. They all germinated *E. pluriflorum* and *E. pusaterii* after subjecting imbibed seed to long spells in the refrigerator. January 'sown' seed germinated with Norman in June, which meant they were producing leaves at a time of higher temperatures. Provided that the young seedlings are kept outside in a cool, shaded

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place, Norman did not feel this was a great disadvantage. Ascertaining the lengths of time and range of temperatures required would require more rigorous scientific experimentation but these are unlikely to be precise. In the latter respect it is worth noting that the seed sown by John Andrews germinated at a temperature below the freezing-point of water. This is an exceptional but not unique phenomenon. What would appear to be required is a period of about 6 months at a temperature around 0° C or 32° F. Against all this; several growers have reported that they have germinated these high altitude species by conventional sowing in summer to early winter and subjecting the seed to normal British winter temperatures.

Nomenclature: The standard account of this genus in western North America remains 'The genus *Erythronium*' by E.I. Applegate (1935). It is the basis for the account in 'The Jepson Manual' (1993), which deals only with Californian species, and for all subsequent horticultural publications. With the species from other areas, populations are so disjunct that we feel 'splitting' is common sense.

Further information: There is no single reference book for gardeners. The chapter on 'The Genus *Erythronium*' by Molly M. Grothaus in 'Bulbs of North America' (2001), ed. Jane McGary, gives a presentable overview of the genus in North America but it is not of the quality of some of the other contributions. One has the feeling that the author is not familiar with all the species either in nature or in cultivation and that much information is derivative and reprocessed. As with other genera, there is some brief, reliable information in 'The Bulb Book' by Martyn Rix and Roger Phillips, 'The Smaller Bulbs' by Brian Mathew (1987) and 'Growing Bulbs' by Martyn Rix (1983).