

## SHORT NOTE: 'FRIENDS IN POTS': GROWING BULBS AT THE ROYAL BOTANIC GARDEN EDINBURGH

*Elsbeth MacKintosh*<sup>1</sup>

### ABSTRACT

A method of growing bulbous species with stones as companions to small bulbs is described and illustrated. Statistics for the number of taxa in the ten largest genera in the bulb collection at the Royal Botanic Garden Edinburgh are provided.

### INTRODUCTION

A wide range of bulbs totalling over 1,000 taxa (Table 1) in bulbous genera from temperate to tropical climates is grown at the Royal Botanic Garden Edinburgh (RBGE); these are used for research, education and display purposes.

In the Alpine Department at RBGE mostly temperate bulbs are cultivated. These come not only from Europe, Turkey and the Mediterranean but also from the southern hemisphere: South Africa and North and South America. Most bulbs are winter-growers flowering in spring, and are grown in cold glasshouses and frames. A smaller number, representing South Africa and South America, are summer-growers and flowerers and these are grown in a frost-free glasshouse. The main purpose of the collection is for spring display, both in our Traditional Alpine House (Fig. 1) and at plant shows held throughout Scotland during the spring months (Fig. 2). Some genera are used for taxonomic research and for writing floras.

### BULB CULTIVATION

All bulbs in the Alpine Department are repotted annually. The repotting year starts in late summer when *Muscari* (grape hyacinth), *Colchicum* (autumn crocus), and autumn and spring-flowering *Crocus* species are repotted. These are followed by *Galanthus* (snowdrop), *Narcissus* (daffodil), *Erythronium* (dog's tooth violet) and *Fritillaria* (fritillary). The repotting of other genera is fitted in between these large groups and the work plan is to have all bulbs repotted by the end of September. *Tulipa* (tulip) are more forgiving and can be potted later without affecting their growth or flowering. All species are put into the same growing medium comprising 50 per cent John Innes No2 compost and 50 per cent sharp grit by volume. Clay pots are always used and each bulb is placed at a third to half of the pot depth depending on the bulb size. The bulbs are placed close

---

1. Elsbeth MacKintosh is a Senior Horticulturist in the Alpine Department at the Royal Botanic Garden Edinburgh.  
Address: 20A Inverleith Row, Edinburgh, EH3 5LR, UK.  
Email: emackintosh@rbge.org.uk

Genus	Number of taxa
<i>Iris</i>	126
<i>Crocus</i>	108
<i>Fritillaria</i>	101
<i>Allium</i>	78
<i>Tulipa</i>	77
<i>Galanthus</i>	61
<i>Narcissus</i>	40
<i>Corydalis</i>	37
<i>Cyclamen</i>	25
<i>Arisaema</i>	22

Table 1 The ten largest genera and number of taxa within them cultivated in the Alpine Department at RBGE.



Fig. 1 Plunging pots in the spring bulb display in the Traditional Alpine House. Photo: P. Palkova.

to each other without touching. Close proximity to each other aids bulb growth as well as providing a good display. The pots are top-dressed with a layer of hen grit 1 cm thick, which helps to conserve moisture. Pots are then plunged to the pot rim in sand bays. Sand bays provide a cool, damp but free-draining substrate for the bulbs, protecting them



Fig. 2 The Alpine Department's spring bulb display at a Scottish Rock Garden Club show. Photo: E. MacKintosh.

from extreme moisture levels and temperatures. They are watered thoroughly twice, first at the end of September and then a month later in October. This frequency mimics the autumn rains that occur in their natural habitats. The sand plunge is kept damp throughout winter and the bulb roots grow unseen. Irrigation resumes once leaf growth is established. The bulbs are kept well-watered whilst in growth, and watering and feeding is reduced as the foliage dies back. The bulbs are then given a summer rest, depending on their individual requirements.

Many bulb species in the living collection at RBGE are grown from wild-collected seed. It can take five or more years for a bulb to reach flowering size from seed. Bulb seedlings are very vulnerable and can fail for a number of reasons, and this often results in small numbers of flowering bulbs. Similarly, over years of cultivation, mature bulbs may either bulk up very slowly or fail, leaving a small number of offsets. These then need to be bulked up in order to maintain the collection and display.

In general, when potting, the size of pot chosen takes into consideration the ultimate size and root volume of the species. However, in instances where there are only a small number, or the bulblets are very small, the pot size cannot be reduced too much because of the danger of it drying out. Nor can a small number of bulbs be put into a disproportionately large volume of compost. This would stay too wet and consequently rot the bulbs. Our solution is to use 'friends' or, more professionally, surrogate bulbs.

The origin of this method is lost in the mists of time, however it is used by a number of bulb growers. Quartz stones of a similar size to that of the bulblets are placed around and amongst the bulblets (Fig. 3). The pot is then filled and finished as usual. Ian Young, one of Scotland's most accomplished bulb-growers and long-time author of

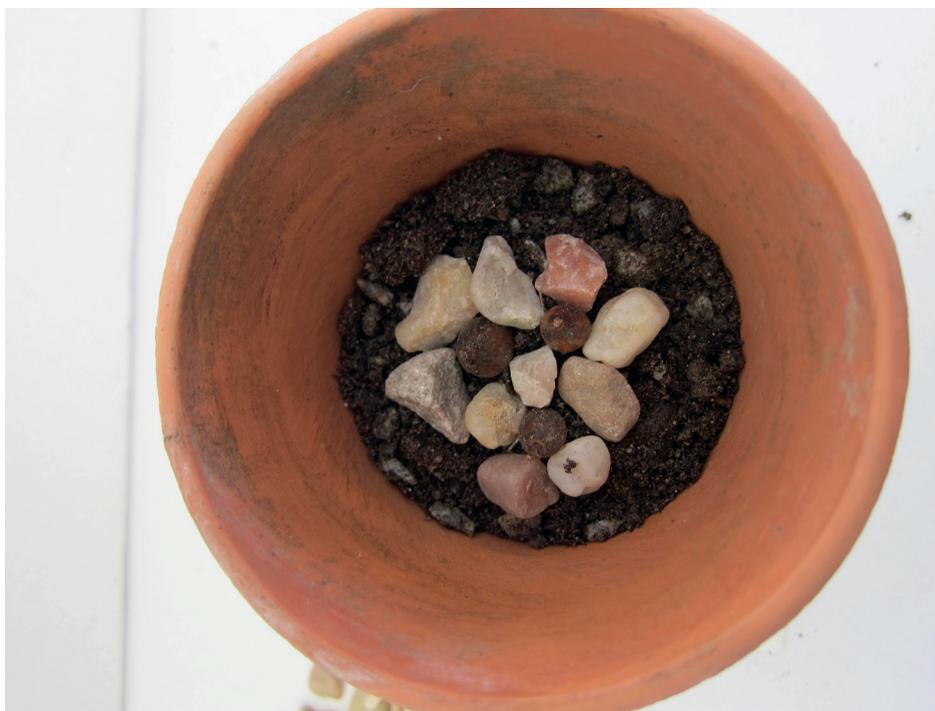


Fig. 3 Small bulbs of *Narcissus bulbocodium* potted with 'friends'. Photo: Elspeth MacKintosh.

the bulb log featured on the Scottish Rock Garden Club website (Young, 2003–), uses S-shaped polystyrene packing in his pots. Both stones and polystyrene shapes perform the same function: they do not degrade and they mimic bulb companions, providing a drier growing environment and possibly, by reducing the volume of compost in the pot, enabling the compost to dry out and encouraging the bulblets into summer dormancy.

To grow bulbs successfully, it is important to consider growing conditions in the natural habitat. A bulb native to shady woodland has different cultivation requirements from that of a species which comes from a dry, sunny mountainside. With proper care and cultivation bulbs will flourish and multiply, giving much pleasure over many years.

#### ACKNOWLEDGEMENTS

With thanks to Alan Elliott, Research Associate at RBGE, for supplying the information for Table 1.

#### REFERENCES

YOUNG, I. (2003–). Bulblog 34, 22 August 2007, Ian Young's Bulb Log Diary, Scottish Rock Garden Club. Available online: <http://www.srgc.net> (accessed August 2018).