PROPAGATION AND CONSERVATION

Joe Cartman

In recent Botanical Society newsletters and meetings there has been some concern and conflict between the growing of native plants and the conservation of the same plants. Certainly the removal from the wild of whole plants, in particular rare and endangered species, must be discouraged.

With a little thought and a little care these fine plants can be grown in the garden and can also remain in the wild where they belong.

The vast majority of plants grow very well from cuttings, seeds, or the removal of small rooted pieces. Most species transfer better from the wild state into cultivation as cuttings than they do if dug up from their native soil. The move, with the resultant tearing and removal of roots and replanting in a strange soil, with a different aspect, climate and soil chemistry, often causes the death of the plant, followed by a desire to go and dig up another.

The mortality rate must be very high even if care is taken with the plant.

If cuttings are taken only a small part of the parent plant need be removed. One or two twigs can give rise to quite a few cuttings without any harm coming to the parent plant. The vigour of the parent plant is often improved by selective pruning, a fact long known and practiced by gardeners.

Seed provides another ready means of increase, a limiting factor is finding a plant with ripe seed. One seed pod or capsule may contain many seeds e.g. Sophora microphylla, Ourisia, Parsonsia, etc.

Several plants are mat and clump forming and small rooted pieces can be removed from the outside of the mat without harming the parent plant.

Simple Propagation

Cuttings:

When taking cuttings select a plant that exhibits the best features of the species, look out for flower, leaf shape and colour, fruit size or colour, or any other desirable character. Always take the cuttings from a plant large enough to spare the cuttings without the removal being obvious.

Take the tips of well ripened growth up to 10cm long. The length will depend on the species, obviously a plant as small as Pentachondra pumila will only give cuttings of around 1-2 cm.

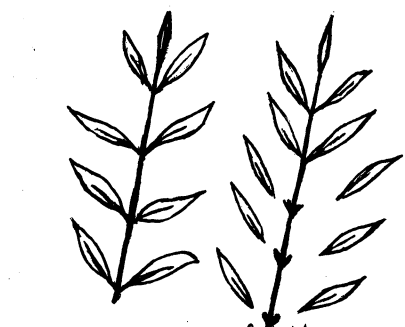
Using a sharp knife cut the leaves from the lower half to two thirds of the cutting, cut the base of the cutting off just below a node. Dip the end of the cutting in a hormone rooting preparation, insert the cuttings in a sandy compost making sure that at least half the length of

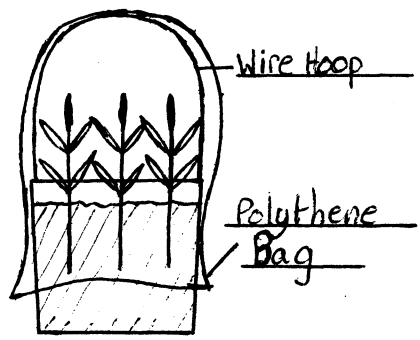
the cutting is in the compost. Keep the atmosphere around the cutting humid and avoid direct sunshine. If the cuttings are grown in a pot this can be enclosed in a polythene bag.

The best compost I have found for rooting cuttings is equal parts peat and course sand. When roots start growing through the bottom of the pot the cuttings are ready to pot on or plant out after being acclimatised to outside conditions.

The time taken to root and the percentage of rooted cuttings will vary with the time of the year. Late summer and autumn appear to be the best time for most woody species.

Some plants appear to be very difficult e.g. all species of Dracophyllum except D. pronum, Myrsine nummularia I have so far been unable to root but others have found this plant easy. Most of the native plants I have tried have rooted with ease and I think anything is worth a try.





Seed:

Having collected your seeds every care should be taken when sowing.

The seed compost should be sterilised to prevent disease and weed seedlings. The easiest method of achieving this is to use ready sterile media. The cutting mix of equal parts peat and sand is ideal for seed sowing.

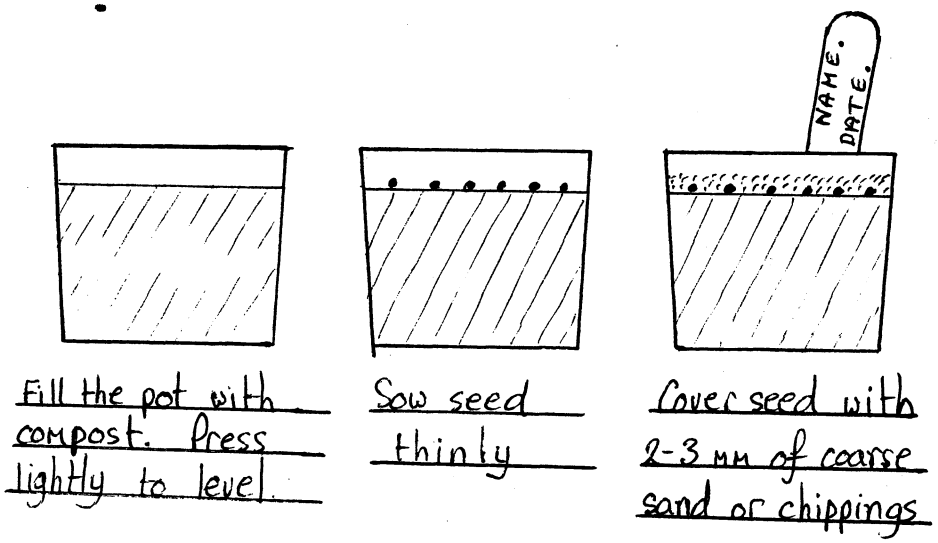
Seed is best sown in pots so that detailed observations can be made and some protection from vermin can be arranged if needed.

The method I use for sowing is quite simple; fill the pot level full of compost, press lightly witb a flat object, such as a coffee jar lid. Sow the seed thinly on top of the compost. Cover the seed with 2-3 mm of coarse sand or 3 mm chippings.

Label the pot and place out of direct sunshine. Natural rainfall and cool winter conditions will not harm the seeds.

Most seeds will germinate the spring after they are sown but don't throw the pots away for at least two years as some things take a long time to germinate - Pentachondra pumila has taken two years with me. Sophora germinate erractically over 18 months or more if the hard seed coat is not cut through.

The seedlings can be potted on or planted out when they are big enough to be handled. This operation is best done in the autumn.

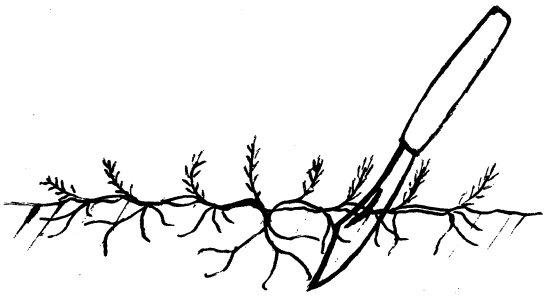


Removal of ready rooted pieces:

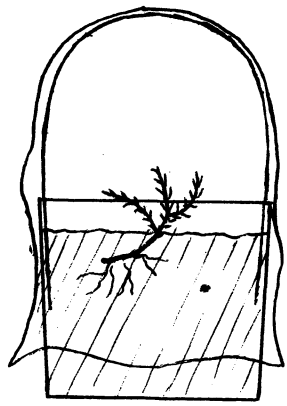
Many species form mats and clumps of stems rooting as they go and small pieces from the edges can be removed without damaging the parent plant. Examine the parent plant and carefully cut the chosen piece off. Do not tear a handful out as this can cause severe damage. The space left in the parent plant should be filled with a small stone or a handful of soil.

The removed piece should be potted for a while and given the same treatment as the cuttings until it has settled down and is looking healthy - 3 weeks should be enough.

This method is excellent for some species of Raoulia and Cotula, some ferns and any other plants with a similar mode of growth.



Cut the piece off with a sharp knife. Do not tear it away.



The above methods will enable enthusiasts to grow the majority of native plants without the need to remove any plant from its native habitat.

Stock plants in the nursery are cut to ground level several times per year and they still flourish so taking a few cuttings from a wild plant can do little harm and can give endless pleasure to the grower.

Many people for various reasons may never be able to see the more inaccessable plants unless they are grown in gardens.

Several plants are with us today in cultivation but are quite rare and localised in the wild and may be on the verge of extinction. Tecomanthe speciosa, Hebe speciosa and Clianthus puniceus are three well known plants that are fortunately quite showy and are assured of a place in the garden, but less conspicuous, but equally rare plants, may not be so fortunate - Cotula nana, Cotula rotundata and Gunnera hamiltonii to name three. There must be many more.

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LACK OF DORMANCY IN SEEDS OF NEW ZEALAND PLANTS

M.J.A. Simpson

True vivipary, or the growing out of the embryo from the fruit while still attached to the parent plant is best known in members of the grass family, especially in cultivated cereals where breeders have tried to overcome dormancy in order to grow crops quickly and in diverse climatic conditions. In consequence, sprouting barley and wheat can become a problem to farmers in unsuitable weather conditions. Gardeners may have noted seedlings sprouting from heads of calendulas while still on the parent plant.