LACHENALIAS

By Jim Forrest. Te Puke. N.Z.

This South African genus was one of the first to attract Europe. As early as 1787 it was named after Werner de Lachenal, a Swiss Professor of Botany, by Jacquin. Over the years the number of species described, have steadily risen and now total over fifty. Unfortunately no systematic study has been made of the genus to date. Some plants formerly in Lachenalia, have been transferred elsewhere, and no doubt the number of species will eventually be reduced.

I've found it difficult to identify satisfactorily the forty plus species I'm supposed to have, using what articles have been published. I'll just have to ask people to suffer with me, as the descriptions are of my own plants raised from seed bought from reliable sources.

Lachenalia is a purely South African genus, and its nearest ally is Polyxena. The latter is supposed to always have its perianth-segments equal, whilst in the former, they are at least a bit unequal.

All Lachenalias grow from bulbs, but there is quite a range of shape and size among these bulbs. In general, they are white or light brown, on the outside. They are easily damaged and will dry up if left out of the ground for too long. Most come from the winter rainfall areas so don't mind dry in summer. I've not had trouble with them rotting here even though we have a lot of summer rain, but that could be because the pumice soil is excellently drained.

The leaves of Lachenalias I find a real attraction in themselves. Coming from such a large genus, there is a big range in shapes and forms. It's not possible to positively identify them by the leaves, but it's quite a help. Most species have either one or two leaves but a few have several - up to eight in L. contaminata.

The shape of the leaf varies enormously also, ranging from the threadlike leaves of L. contaminata to the almost circular L. tricophylla.

The base of the leaves clasp the base of the flower spikes and these are often prominently marked with coloured bands or tinged or blotchy.

The surface of the leaf may be smooth or covered in raised lumps, or on occasions, with hairs.

Alternately, or as well, the leaf surface may have few or many blotches over it. I've also noted a big range in the stage of leaf growth at flowering in the different species. Some flower as the leaves grow, others when the leaf has finished growing, while in a few cases the leaf has almost withered before the flowers appear.

The types of inflorescence in the genus, seem to fall more or less into three categories. Firstly, where the flowers are more or less sessile (as in Massonia and Polyxena). Secondly, where the flowers are pedicellate and usually pendulous and thirdly, where the pedicel is short and the flowers often spreading.
Flower sizes vary greatly also, though none are particularly large. In *L. bulbifera*, they are about 45mm long and at the other end some species are as little as 4mm. As well as in size, there is usually an easily noted difference between the length of the inner and outer segments. An extreme example is to be found in *L. tricolor* with inner segments twice as long as the outer segments. *L. contaminata* on the other hand has the segments almost the same length and all of the same colour. Generally the outer segments seem to be a brighter colour than the inner segments.

Another obvious difference is that in some species, all the flowers develop, while in others they get progressively smaller as you move up the spike and do not develop at all. This seems more common in the brilliantly coloured species having blues, purples and golds.

The stamens provide another interesting feature. In one group (pendulous) they are about as long as the inner segments, whereas in the others they are well beyond the length of the segments.

The seeds apparently are a means of identification, but they all look alike to me, small, shiny and black. Apparently they are weighted with oil as you can feel it by holding them in your fingers.

The flowers, unlike many South African bulbs, stay open all the time and do not close at night or on dull days. From my own observations, honey bees do all the pollination but obviously other insects could have a hand in the pollination. Generally, they set a lot of seeds but as so often happens, the most desirable species appear reluctant to set seeds.

One other interesting variation I have noticed in my plants, is the length of time the flowers stay open. Usually each flower lasts for a few days but in at least one species, it’s several weeks. As far as possible, all are grown under identical conditions so everything is equal.

Lastly, there is a big variation in the number of flowers per spike, ranging from half a dozen in *L. rubida*, to dozens on *L. mutabilis*. The thickness of the spike does not appear to be related to the size or number of flowers.

**Cross-pollination:** There can be little doubt that this does occur. However, the chromosome counts on all the species have not been done, but as there is a big variation in what have been counted, some species at least would seem to be not compatible. For those interested, the following figures were obtained by the University of Berkeley, California:

2n = 10, 12, 14, 16, 18, 22, 28, 56.

**Growing Lachenalia in the garden, or as pot plants:**

I grow mine both in the garden and as pot plants, in an endeavour to check on hardiness. Slugs are a real problem in the garden as they adore Lachenalia leaves.

Lachenalia must be one of the longest flowering genus of any bulb. The season begins in Te Puke with *L. rubida* in April and comes to an end in January with *L. salteri*. Between those months, there is scarcely a day in which there is not at least one species in flower, usually several, though the bulk are August to September.
Most species come from the winter rainfall area, but the majority also grow in well-drained sandy soils. For this reason I use a sandy soil to which is added some leaf mould and well-rotted cow manure. The bulbs are placed about 2cm deep in the mix, the number depending on size of bulb and pot. As I foliar feed during the growing season I find you can crowd the bulbs in to get plenty of flowers. Like most bulbs, too much nitrogen produces leaves, but not flowers.

The pots are stood in a cool shady position until growth appears, when they are placed in the shade-house and watered freely. Actually, because I have so many, some get left out in the open where they do equally well.

Once the leaves commence to dry off, the water is restricted and they are kept dry during dormancy, which in most cases, I've found to be very short.

**Propagation:** Many Lachenalias make small bulbs around the base and sides of the parent bulb. (Large bulbs divide). Some such as *L. unifolia*, are embarrassing in their number, others produce hardly any. As a further bonus, many species produce bulbs at the base of the leaves and this can be encouraged by cutting off the leaf or tearing it and just covering with soil.

I sow seeds in autumn and find that they usually germinate quite quickly. For the first season, a single onion-like leaf is produced. If you can keep your seedlings growing for a long time, it speeds up the time to flowering and many will do so in their second year, the rest in the third.

**Pests:** I've not had problems with pests apart from slugs.

**Disease:** Lachenalias get one fatal disease (Fusarium) which can be identified by the distinct pink colour of the bulbs when lifted. There is no cure, so I burn infected bulbs. It is caused by poor drainage.

**Frost:** I can't answer this one. Some species are certainly frost tender though to what degree depends possibly on dampness as well as temperature. If in doubt, I'd plant in pots and risk one outside.

**The Species:**

*L. rubida* - the first to flower in April before the leaves are fully grown. Two broad glaucous leaves that end in a sharp triangular tip, can reach 18cm long and 6cm wide. Flowers can be described as strawberry coloured, 6-20 on a spike, individual flowers at right-angles to the stem, 5mm wide and 12mm long.

*L. reflexa* - the next to flower in May, but can continue till August depending on bulb size and when planted. Bright yellow flowers point skywards, but do not seem to extend far out of the sheath. The two blue-green leaves, have crenulated edges and are rolled inwards. A desirable species.

*L. bulbifera* - is a large and popular species. Normally produces two large dull green leaves from which, in June, arises a large thick spike with bright red flowers. This is the largest of all the species that I've seen, with spikes up to 30cms or more, tall.
It is not however very tolerant of frost. The outer segments are almost as long as the inner, which often have purple tips and green centres.

L. aloides - this popular species has long been cultivated so is probably familiar to everyone. It is easily distinguished from the other large tubular species by the fact that the outer segments are very much shorter than the inner. It is found in a number of varieties - var. quadricolor has inner segments green tipped with purple, while the outer are red, changing to yellow. The variety aurea, has deep golden flowers. The leaves have purple markings over them.

L. contaminata - is one of the last to flower. The numerous leaves are a bit like onions, while the flowers face outwards instead of hanging downwards. Creamy white in colour, the ends tipped with red.

L. unicolor - possesses several bright green strap-like leaves covered in blisters. Its beautiful blue and purple flower spike, makes it a very attractive plant. Flowers July-August.

L. viridiflora - is another species which flowers in July. It has two large leaves similar to L. aloides, that may be covered in spots or plain. Its bright metallic green flowers, can vary a good deal but the best specimens are really handsome.

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