

# Unlocking the potential of interspecific breeding

Carrie Kruger

Interspecific *Clivia* flowers hold the added appeal of extending the flowering season. With the forming of the first flower, on crosses made four or five years previously, excitement is in the air. The hope that the flower will bloom in a way anticipated from your crossing, holds you in suspense and hope.

With all *Clivia* breeding there are good and disappointing results. Occasionally there are some outstanding results, which justify the time and effort spent hybridising the plants.

The range of colours found in the interspecific crosses, provides a treasure trove of hidden genetics. Most of the new and unusual colours found in clivia today originate from



Fig. 1 Star Green Destiny – Carrie Kruger



Fig. 2 'Ember Spirit' – Carrie Kruger



Fig. 3 'Planet Earth' – Carrie Kruger



Fig. 4 'Lucid Dreams' – Carrie Kruger



Fig. 5 'Over the Moon' – Carrie Kruger

the interspecific breeding programmes. The inclusion of the interspecific plants in a breeding programme, may be considered a 'new age' of clivia breeding.

As with many breeding programmes, patience is needed. Some of the F1 hybrids of interspecific crosses, provide pleasing results, but the largest improvement takes place with the second generation. Many of the F1 hybrids are tubular with a slight flare, which is not that spectacular. Many breeders may be discouraged by the appearance of the F1 hybrid flower, but will be rewarded when the F2 hybrids flower.

The interspecific breeding popularity is a relatively recent development. When I started breeding interspecifics, several years ago, the choice of plants was limited. Most of the plants available were mainly the tubular F1 hybrids. Selecting from these hybrids, for the best flower shapes and colours, I started our breeding programme. I now use the best of our F2 hybrids, making either sibling crosses or self-pollination.

Working with the interspecific plants has made me aware of the large gene pool involved in these crosses. As a result, the offspring colours are not always guaranteed. Ideally, I would grow all these plants to a flowering stage and then select the best. Unfortunately, like most breeders, I do not have the space to keep the plants until they flower.

Advice I can offer from breeding with interspecific clivia plants:

Start with superior F1 and F2 plants from the start. By doing this you will save a good few years in your programme, instead of starting from scratch.

We have bred some superior versi-colours flower plants from non-versi- coloured parents, for example 'Ember Spirit' Fig. 2. Versi-colour traits are carried over in the pollen as well as pod parent plants.

Avoid using *miniata* pollen, too often, on the interspecific cross. The repeated use of *miniata* pollen may result in an inferior looking 'miniata' type flower.



Fig. 6 'Mirror Beauty' – Carrie Kruger

Results from self-pollinating F2 hybrids have often resulted in flowers that are superior to the parent. Consider self-pollination as an option when developing your interspecific plants. An example of this is 'Planet Earth' Fig. 3.

When you do decide to hybridise plants, know which groups your plants belong to, to avoid unwanted orange offspring.

To produce shorter leaved plants, use a compact plant as a parent. I have been working with a yellow Daruma plant as a parent, producing good results. 'Mirror Beauty' Fig.6 is a good example of this type of cross.

Crossing your interspecific plants with either variegated or LOB type plants have resulted in beautiful plants. "Light of Africa" is an example of this type of cross. This cross was made by Francois van Rooyen.

#### Plants I used in breeding the various hybrids

Fig 1: 'Star Green Destiny' - F1 of 'Star Green Original' ('Star Green Original' is a F2 bred by Nakamura)

Fig 2: 'Ember Spirit' – 'Carnival' (*miniata* x



Fig. 7 'Carnival' – Carrie Kruger

*gardenii*) x 'Secret Wish' ('Stella Parish' *miniata* x *gardenii*) x Grp1 Yellow)

Fig.3: 'Planet Earth' – 'Jupiter' (*gardenii* x *miniata*) x (*miniata* x *gardenii*) x Self

Fig 4: 'Lucid Dreams'- 'Dreaming' (Best Nakamura F1 x self) x sibling

Fig 5: 'Over the Moon'- 'Secret Whisper' ('Stella Parish' *miniata* x *gardenii* x Grp1 Yellow) x 'New Moon' (Yellow F2 interspecific)





Fig.8 'Jupiter' – Carrie Kruger

Fig 6: 'Mirror Beauty'- (Yellow Daruma x *mirabilis*) x Yellow Daruma

Fig 7: 'Carnival' = (*miniata* x *gardenii*)

Fig 8: 'Jupiter' = (*gardenii* x *miniata*) x (*miniata* x *gardenii*)

Fig 9: 'Dreaming' = (Best Nakamura F1 x self)

### Developments and observations

The popularity of the interspecific hybrids has grown in the past few years and continues to attract many collectors and breeders. Many clubs now have exhibitions of the interspecific flowers. The advantage of the interspecific flowers is that they flower from the beginning of June up until the end of August in the Southern hemisphere. They often flower at odd times during the year, extending the flowering season of the *Clivia* plants.

Another advantage of interspecific flowers is that they are more disease resistant than the *Clivia miniata*. Interspecific plants grow faster and multiply well with some of the plants forming offsets before they have flowered.

The range of colours and flower forms are unlimited. These plants should be found in every collection.

I look forward to the next year's variety of interspecific colours!



Fig.9 'Dreaming' – Carrie Kruger