The Fuchsia Breeders Initiative

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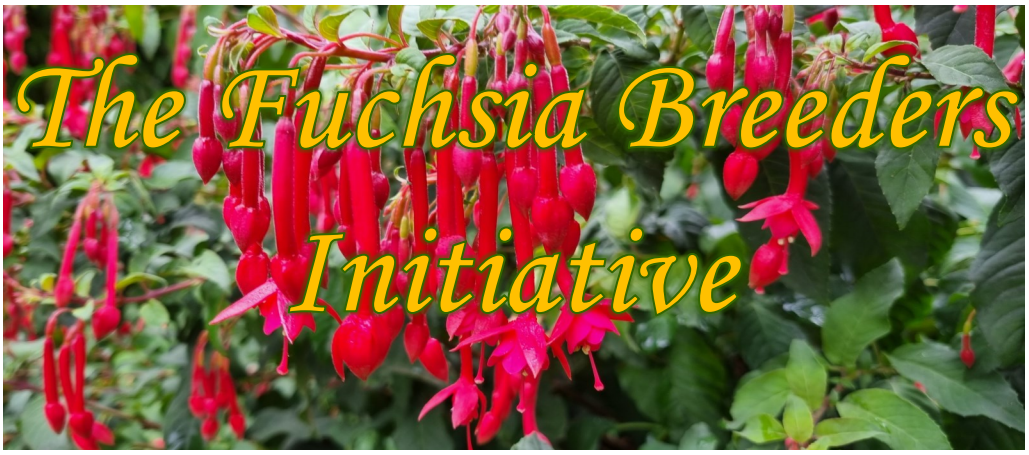
Contents of this issue:

Contributions for the next issue, which is scheduled for the end of December 2023, should be in the editor's possession ultimately on 10 December 2023.

Please send your contribution in Word, with the photographs attached separately. Large contributions can be transferred by uploading the file with , for example, WeTransfer.

Any new Fuchsia cultivars being released? Please provide a photograph and some descriptive information, and it will be seen and get attention all over the world!

Photograph on front page: Triphylla *Fuchsia* ' Scarlet Jester' (De Cooker, 2010)



Old Fuchsia breeders die, but they never fade away

Again we have lost a dear Fuchsia friend. Herman de Graaff, one of The Netherland's most prominent Fuchsia hybridists has passed away in March this year. On the verge of spring, with all the promises of a beautiful Fuchsia season still in the portfolio. He couldn't experience it anymore.

I can still remember the first time I met Herman and his wife Loeky. Herman gave a presentation about new interesting fuchsia developments at NKvF Region 28 in Limburg. It was, I think, in 1990 or thereabouts, at least I had just started growing fuchsias. I then asked him about the possibilities of making a beautiful, strong and easy-to-grow white triphylla. At that time we only had 'Our Ted', made by Edwin Goulding, at our disposal and that's certainly not the easiest fuchsia to grow. He didn't think it impossible, but it certainly wouldn't be easy. Indeed, it took more than 30 years for me for the first results to be obtained. In all those years I have often been able to philosophize with Herman about Fuchsias. This often happened at the Fuchsia judgement days of the NKvF in Aalsmeer, often at meetings of the Breeding Group and the Botanical Group, often also at his home. And what was still possible then: always with his inseparable pipe. All that is now a thing of the past. We will miss him very much.

Mr. Edwin Goulding wrote a tribute to Herman's hybridization work. Edwin clearly cannot resist the deep desire to write and transfer knowledge. And I am pleased to inform you that, unlike his

Editor of The Fuchsia Breeders Initiative

Mario de Cooker

message in the previous issue, several new articles by him are in preparation for publication in future issues.

I have postponed the article about the often excellent fertility of both pentaploid triphylla fuchsias and their highly aneuploid offspring because I would like to have some more information included on the fertility and crossing products of aneuploid tetraploid seedlings. But for that I still need some additional Flow Cytometry measurements in October. Instead an article is included about the 'work in progress' on making new triphylla Fuchsias starting from *F. magdalenae,* which is still an almost unexplored area.

And all readers are still invited to contribute to future issues of The Fuchsia Breeders Initiative about interesting observations or new developments in Fuchsia hybridisation, or about newly introduced cultivars or existing cultivars worth to be spotlighted.

I wish you all a fruitful and challenging fuchsia season.

Mario de Cooker

Testament

By Edwin Goulding

Photographs in this article courtesy Mr. Edwin Goulding

You may remember that in TFBI Issue 12, December 2018, pp.3 & 4, I said this was not the time to expand on Herman Jan de Graaff's huge influence within the world of Fuchsias. Now is the time.

On 20th March 2023, Herman's son Gerbrand told me his father had passed away (1934 – 2023). He had been battling illness for some time, but it is never possible to prepare for such a tremendous loss before it happens. Loeky will miss him immensely, but she will be loved and supported by her close family members in the future.

My last visit to see Herman and Loeky at their home was during August 2016. I was made welcome as always, although both of us had experienced a significant reduction in our energy and activity levels since my earliest visit to see them. In fact, I first saw Herman in the early 1970's when our local Fuchsia Club ran a bus from Ipswich to The Netherlands so we could visit Dr. Appel's garden and see his plants. (Our first sight of *F. hartwegii* in bloom.)

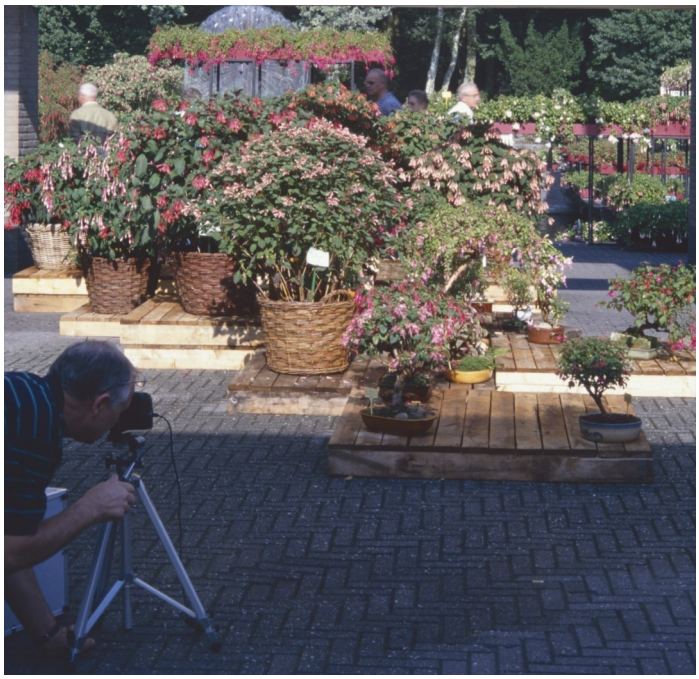
Herman shared my interest in Ferrets, which was an unusual experience for me at the time. He was also deeply interested in Bee keeping, another fascination of mine. His command of English was excellent, and this allowed a wide-ranging discussion on such things, as well as on Fuchsia hybridising. Another matter in which he took a great pride was the history of their house, which dated from the Tulip Trading days and had been the home of one, retaining much of its old character.

With my great friend, Brain Morrison, I travelled to The Netherlands in the spring and autumn for many years, visiting nurseries and enjoying the massive exhibitions that were staged throughout the country. Sometimes Fuchsias were part of general horticultural shows, but at other times they formed the whole exhibition. These were not competitions as in England, but co-operative events put on by club members from all around the country. One such was staged at Keukenhof. This was the only time I ever saw this marvellous venue without its Tulips.

Herman was a brilliant communicator and enthusiastic member of Nederlandse Kring van Fuchsiavrienden. Until the very end he wrote his column entitled "Product of Holland". He helped to write and produce several high-quality books on Fuchsias. His own, *Fuchsias*, was produced by Rebo Productions, in The Netherlands, in 1997, ISBN 1-9010-94-73-1. Much of his writing was in Dutch for a large and interested domestic audience.

As could be expected from this generous and modest man, Herman kindly wrote the Foreword to my book *Fuchsias The Complete Guide*, Batsford, London, 1995, ISBN 0-7134-6948-X. Timber Press marketed this widely in America.

In the 2018 TFBI article I showed examples of his crosses and illustrated just a few of these. Herman and John Wright first discussed in the 1980's a wider use of genetic material than was usual at the time. He acted



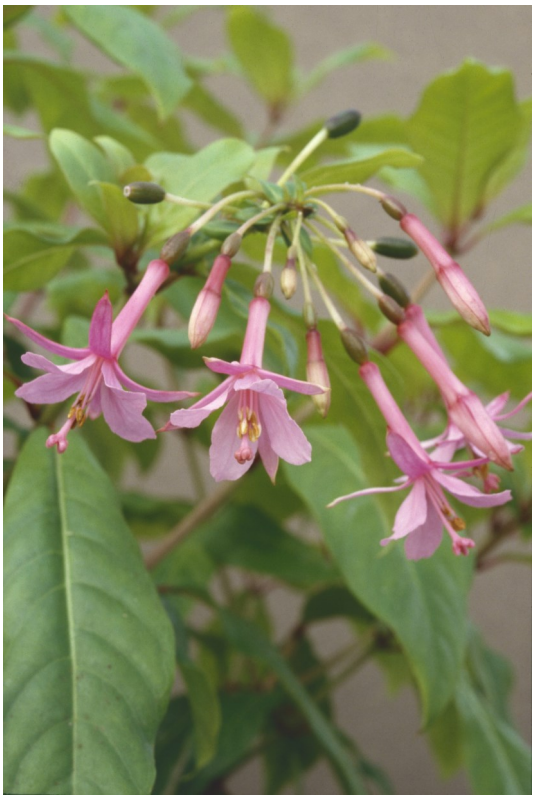
Brian Morrison taking pictures at 'Keukenhof' (1999)

on this when many others appeared disinterested. Hardiness was explored first, crossing *F. lycioides* and *F. magellanica*. Later his evaluation of the possible riches to be found in the Genus Fuchsia became much wider and deeper as can be seen from this select group, my personal 'Top Ten' of his cultivars.

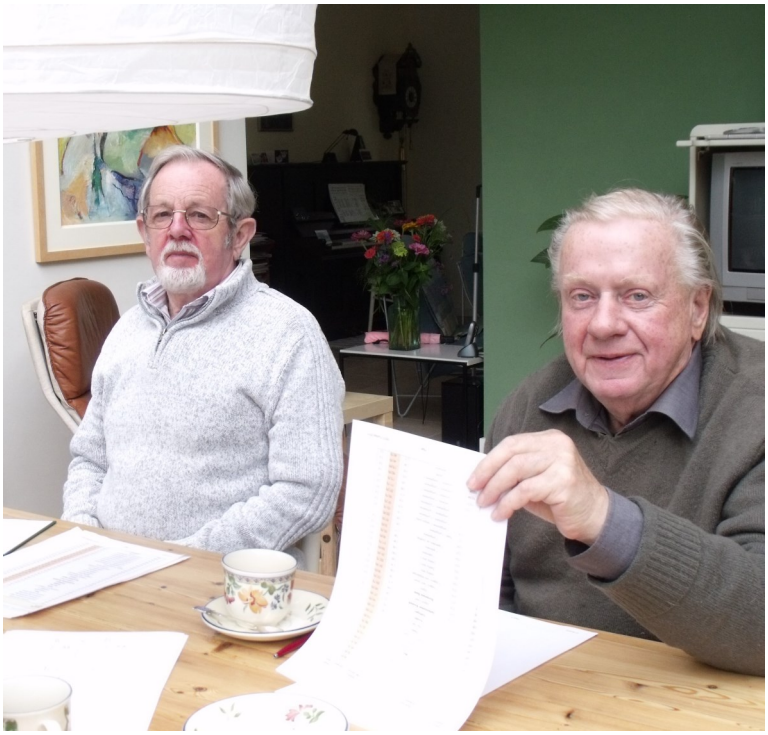
Top Ten – a personal selection chosen by date order.

1. Miep Aalhuizen (1987)

This single flowered, triphylla type of Fuchsia was very unusual in its day and still is today. It is an example of the unusual seedlings created by Herman using very different parents from among species available at the time to create his introductions; *F. arborescens* x *F. venusta*. It is one of the few Fuchsias that have been produced showing the everted petals of its pollen parent. These add significantly to the size and impact of open flowers. Growth is rather woody and more like its seed parent in type, have moderate numbers of side shoots



Miep Aalhuizen



Herman de Graaff (at the right) together with the author (2010)

on a stiff upright habit. It can truly be said that Hermann's hybridising was imaginative and experimental. Miep Aalhuizen is an excellent example of his terminal flowering introductions at a time when such developments were still in their infancy.

2. Pink Rain (1987)

This single has most of the appearances of a small flowered triphylla but it is not terminal flowering. The tubes and spreading sepals are pale pink while the petals are rather darker in hue. Its parentage is given as (*F. lycioides* x *F. magellanica*) x (Dorothea Flower{Thornley, 1969} x Golden Glow {Munkner, 1958}). This plant is remarkably weather resistant and tolerates heat better than most other cultivars. Pink Rain has a spreading habit that makes it especially suitable for hanging containers. Curiously, despite its floriferousness and highly tolerant nature it has never achieved the popularity in sales it deserves. There can, indeed, be few Fuchsias with more benefits. During these early years of his hybridising much interest by Herman, as can be seen here, was in Winter hardiness.

3. Dark Venus (1988)

This is the outcome of another unusual cross, *F. excorticata* x *F. venusta*. Like so many of his releases, in this one Herman showed he understood Fuchsia marketing and sales. Each release was clearly different from other plants on the market at the time. The tubes are tapered less than those of its pollen parent and are dark aubergine like the petals; sepals are green tipped and held horizontally outward at 45° to the tubes. The latter are long, like triphyllas but flowering is axillary not terminal. Flower texture is waxy and robust. Novelty is accompanied here by good growth. Foliage is dense but branches are less so. This plant is part of The Netherland's push towards a whole range of what was then a very new colour among Fuchsias, Aubergine. Herman headed this advance.

4. Mood Indigo (1988)

This double Fuchsia has white tubes and swept-back sepals. Its overlapping petals are dark purple maturing to red, with some marbling present. Although these are not the largest of flowers, they make up for this in their quantity and unusual appearance. Growth is strong, many branched and pendulous. Mood Indigo's parents are as follows, (*F. lycioides* x *F. magellanica*) x Florentina {Tiret, 1960}. Again, we can see Herman at his confident best as he moves effortlessly between the different types of Fuchsia in his quest for novelty and marketability. His parentage is almost always highly innovative as in this case. Bernard Baker, of Bourne Brook Nurseries, England, once told me the Fuchsia he liked most was the one that produced the most cuttings. This plant surely tops the bill.

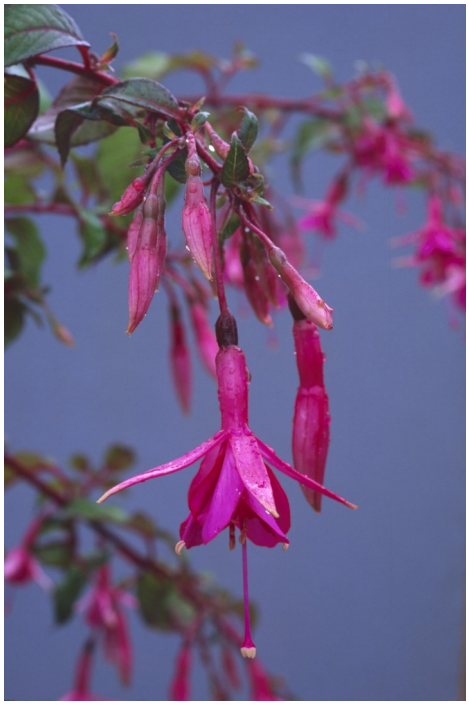
5. Christ Driessen (1989)

Small Pipes x Small Pipes is the parentage of this introduction. Here we see an experienced hybridist in action, selfing stock to establish the genetic characteristics so that their value in further crosses can be explored and utilised. The tubes and sepals are moderately long, and medium to dark pink in hue; sepals droop slightly. The petals in the single corollas are larger than those of triphyllas and of a darker pink. Flowers are held in sub-racemose, multiple clusters, that partially resemble those of *F. arborescens* but are less symmetrical in their presentation. Growth is robust but also rather irregular. Branches spread outward so that blooms are best displayed at eye level in hanging containers. Plants such as this

Pink Rain

Dark Venus

Mood Indigo



Christ Driessen

Ratatouille

Art Deco

were revolutionary in their day and remain so very much even today.

6. Ratatouille (1989)

Ratatouille is another Fuchsia, like Mood Indigo, that moves through a complex series of crosses between species before a large double hybrid is used as the final pollen parent to achieve the ultimate result. The full parentage is as follows,
[(*F. lycioides* x *F. magellanica*) x *F. excorticata*] x Seventh Heaven {Stubbs, 1981}. The tubes are quite short and ivory white flushed pale pink. Flyaway sepals are waxy white. These allow the dark and velvety-red petals of fully double corollas to be shown to their maximum effect. The habit of growth is bushy but spreads under the weight of its flowers. Really, this makes for an ideal basket plant with eye-catching, substantial, and plentiful blooms. Herman's choice of names is eclectic with nothing to identify himself as the hybridist.

7. Art Deco (1990)

Here, the work of two of our greatest Fuchsia hybridists is combined in a cross between Haute Cuisine and Pink Marshmallow {Stubbs, 1971}. Haute Cuisine was produced by Herman in 1988 as a result of his experiments with very dark reds. It is a double cultivar. Pink Marshmallow is one of the most famous very large pale pink doubles that was created in California by Annabel Stubbs. Art Deco is a substantial double with red tubes and sepals. Its petals are white heavily infused with red. Growth is spreading and robust. Side shoots are produced in moderately large quantities. This plant is most suitable for hanging containers and is best grown in more sheltered positions. Like many of Herman's hybrids this one has great eye appeal and has no significant faults.

8. Gerharda's Aubergine (1990)

This robust single has some of the darkest colours to be found among Fuchsia flowers. This is to be expected given the parentage involved, Lord Byron {Lemoine, 1880} x Foolke {Bögemann, 1984}. Again, we see Herman's willingness to experiment widely to produce appealing and marketable plants. The massive amounts of seedlings he produced for the nursery trade is indicative of the wealth of experience that Herman acquired during a long and active life. He saw and grew huge numbers of Fuchsias produced by other hybridists. Gerharda's Aubergine has short glossy red tubes, like the fly-away sepals. Petals are almost purple-black. This cultivar spreads with relatively long internodes on strong branches. It is best suited to hanging containers.

Gerharda's Aubergine

Summer Daffodil

Gerharda's Panache

9. Summer Daffodil (2000)

This is an interesting Fuchsia because it's one parent (Gerharda's Panache x Gerharda's Panache), had not at that time been released for sale to the public. Gerharda's Panache will be the subject of our final example of Herman's innovative work. Summer Daffodil has many of the characteristics of triphyllas but flowers in sub-terminal, slightly irregular, racemes. The tubes are longer than the average among hybrids, they and the slightly everted sepals are a waxy white, flushed with pale pink. Petals are a darker shade of pink, and single in form. Summer Daffodil has branches that are arching and of delicate appearance. Nevertheless, they are strong, and amenable to pinching and training. This plant can be grown as a standard but is also suitable for most shapes, and many different types of container.

10. Gerharda's Panache (2003)

The last of this small selection of Herman's introductions is Gerharda's Panache. It resulted from crossing Small Pipes x Pan, both of which were introduced by Herman, the first in 1987 and the second in 1990. This also closely resembles a triphylla except that its blooms are in sub-racemose clusters rather than terminal racemes. Gerharda's Panache has tubes that are long but sepals that are short. Both are pink. The single corollas are a very slightly darker hue. Growth is spreading and, again, of slim stature. This cultivar shows the importance of non-visible characteristics as a feature in the justification for plant introductions. Gerharda's Panache has proved highly fertile across a wide range of Fuchsias. Its partners vary widely in characteristics as do its progeny. Great.

Conclusion

The huge total of new seedlings Herman created shows his 'broad brush' approach. The dates given in this article are those taken from the American Fuchsia Society's Cultivar List. His relationship with nurseries was good and he was supremely sympathetic to their needs. He provided marketable names, attractive and different flowers, and ample growth for cuttings. 158 introductions were registered with the American Fuchsia Society. He is also listed in the extensive Dutch *Cultivars Inventaris*. If you wish to explore Herman's creations further these lists are a good way to certify the authenticity of those selected.

In closing this tribute, I speak for so many Fuchsia growers when I say,

Nou, mijn Fuchsia-vriend, tot ziens.
Uw nalatenschap leeft voort. Bedankt.

Now, my Fuchsia friend, goodbye.
Your legacy lives on. Thankyou.

Making new triphyllas with Fuchsia magdalenae

By Mario de Cooker

Photographs by Mario de Cooker

Introduction

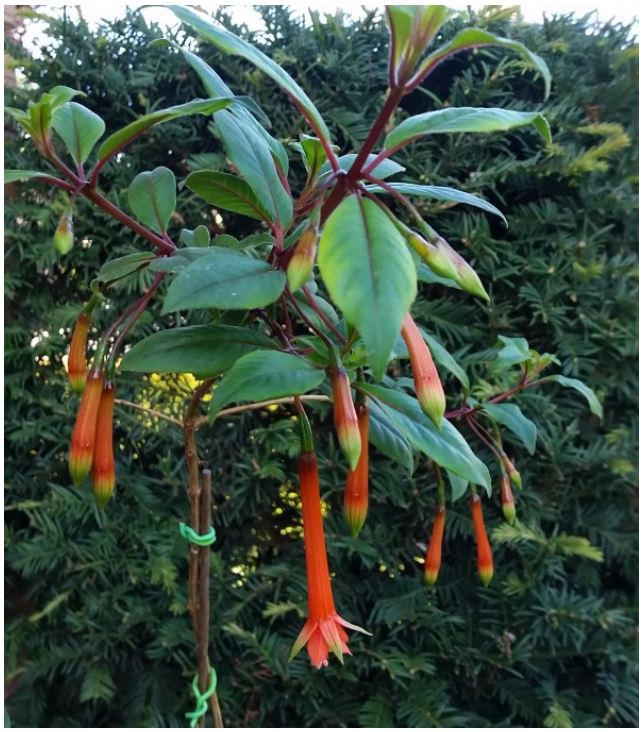
Fuchsia magdalenae is a fuchsia species endemic to the Department of Magdalenae in Columbia. The species forms large upright shrubs with vining branches that can reach 5-7 m in length. The flowers are bright orange and grow in clusters from the leaf axils. The plant tolerates pruning poorly, is difficult to shape and must be kept growing in the cold greenhouse in winter [1].

In practice, cuttings are not easy to keep alive. This could be one of the reasons why *F. magdalenae* is not widely available. A few years ago, the author succeeded in growing a few plants from seeds obtained through the NKvF Botanical Group. One of these plants *F. magdalenae* (A) has produced flowers.

A number of crossings has been carried out with this plant. The results of this 'work in progress' are described in this article.

Fertility of *Fuchsia magdalenae* (A)

In 2019, two plants were grown from seed of a selfing of *F. magdalenae*. Seedling (A) flowered for the first time in the following year; the plant had good fertility as the female parent with different partners. Both berries and seeds have a dark brownish/black colour. The plant has not produced any pollen. This could well have been caused by the weather conditions during flowering, when often very high temperatures were met, even up to 40 C. A certain degree of infertility can also be caused by aneuploidy, which would not be unusual with a



Seedling *Fuchsia magdalenae* (A)

***Fuchsia magdalenae* (A) berries**

***Fuchsia magdalenae* (A) seeds**

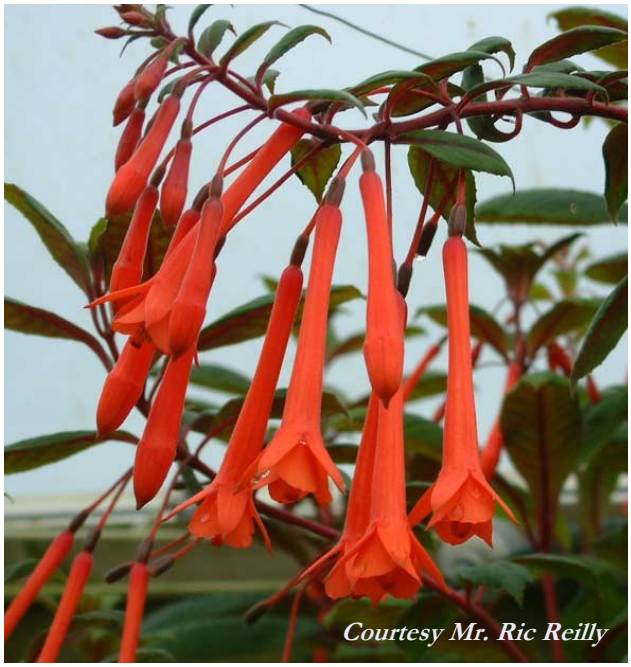
selfing of the tetraploid *F. magdalenae* [2]. In the crosses, therefore, *F. magdalenae* (A) could only be used as the female parent. The second seedling, *F. magdalenae* (B) has never produced any flowers so far.
Unfortunately, *F. magdalenae* (A) was lost during a severe heat wave in 2021 [3].

Making crossings with *F. magdalenae*

This species with its beautiful flowers has only been used sporadically in breeding new fuchsias in the past. The AFS registration list does, however, describe a significant number of plants with *F. magdalenae* in their lineage. But these references are largely plants originating from a single seedling: B 83-05, a pentaploid seedling from Dutch Fuchsia breeder Henk Waldenmaier.
B 83-05 originates from a crossing of *F. magdalenae* x *F. fulgens* 'Gesneriana' [4]. Most of these AFS-described cultivars are not triphyllas.

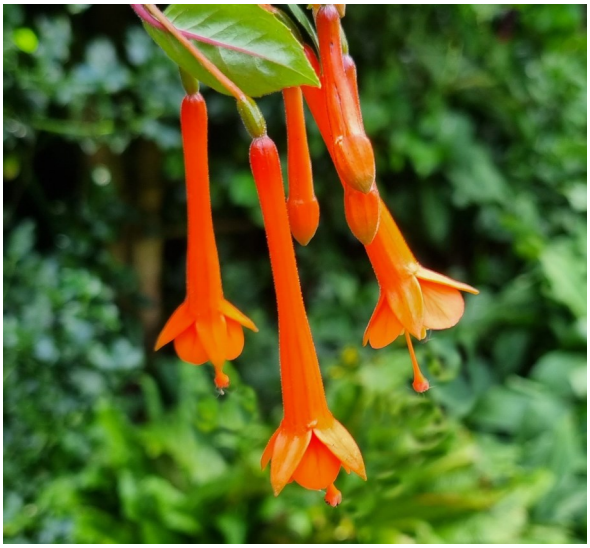
Crosses of F. magdalenae with F. triphylla

For making new triphyllas starting from *F. magdalenae*, the most straightforward way is, of course, making crosses with *F. triphylla*. Only little information on this is available.
A triphylla derived from *F. magdalenae* through the cross of *F. triphylla* x *F. magdalenae* that shares some characteristics of the seedlings described in this article is 'Tubular Bells' (Bielby/ Oxtoby, 2001. More information on this cultivar can be found in TFBI, issue 19, p.6, July 2022).



Tubular Bells (Bielby/Oxtoby, 2001)

From own experiments it becomes clear that *F. magdalenae* (A) proves to be very fertile when

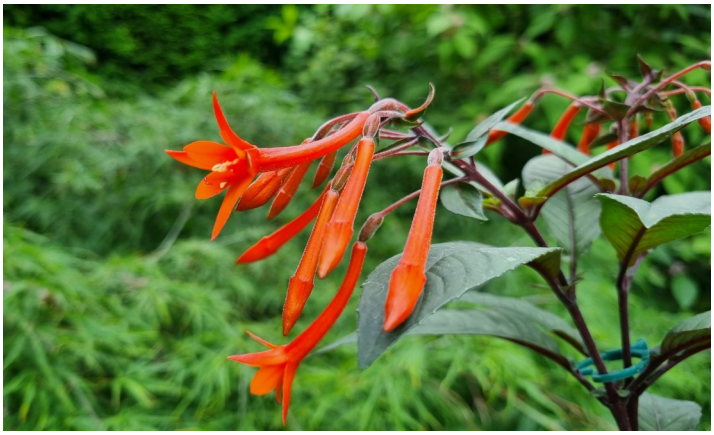


Seedling N 22-22
***F. magdalenae* x 'Purcellian Elegancy'**

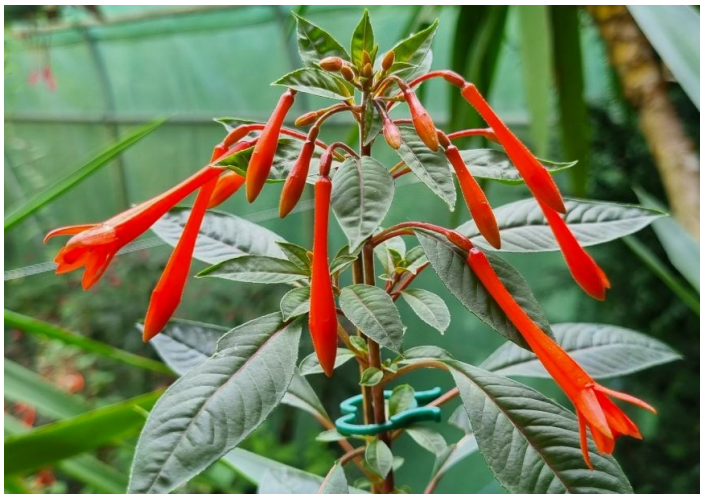
Seedling MP 21-02, a plant with slightly drooping twigs

crossed with different males with a *F. triphylla* species genome. Crosses were performed *F. magdalenae* x *F. triphylla* 'PB7760#6' and *F. magdalenae* x *F. triphylla* 'Purcellian Elegancy'. Due to the large variability in genetic properties in the different forms of the tetraploid *F. triphylla* (with the genome TTTT, where T represents a full set of 11 *F. triphylla* chromosomes [5]), the offspring of the cross *F. magdalenae* x *F. triphylla* is also variable. This is mainly reflected in the shape of the flower, the length and shape of the flower tube and corolla, the size of the leaves and the seedling's growth properties. In addition to the variability of the tetraploid *F. triphylla*, the variation in genetic properties of the as well tetraploid *F. magdalenae* may also play a role, resulting in a range of varying progeny characteristics.
The growth habit varies from small trailing (often with relatively small leaves) to upright growing larger plants. Most offspring are profusely flowering. The flowers are always bright orange, with a small variation in colour hues. Examples of such seedlings are MP 22-22 and MP 21-02 (pictures on p. 8)[6]. A number of different flower shapes are shown on page 11.

In these *F. magdalenae* x *F. triphylla* crosses, the expected genome of the first generation offspring is a tetraploid MMTT (M representing a full set of 11 *F. magdalenae* chromosomes). This means that they are very likely to be fertile, both as the male and female parent, because a partner is available for each chromosome in the formation of gametes in meiosis. This is also confirmed in practice.



Seedling N 22-21, a second generation seedling with a curved tube.



Seedling N 22-32, a second generation seedling

Expectations are not high about the fertility of offspring of this first generation of triphylla seedlings. For example, crosses MP 21-02 x *F. triphylla* = MMTT x TTTT produce a second generation triphylla offspring with the genome MTTT, where little fertility is to be expected. Indeed, the first offspring obtained in this way do not appear to be fertile.
Examples of such second generation triphylla seedlings, most likely to be non-fertile, are seedlings N 22-21 and N 22-32 (pictures shown), both originating from the cross MP 21-03 x *F. triphylla* 'Purcellian Elegancy'.

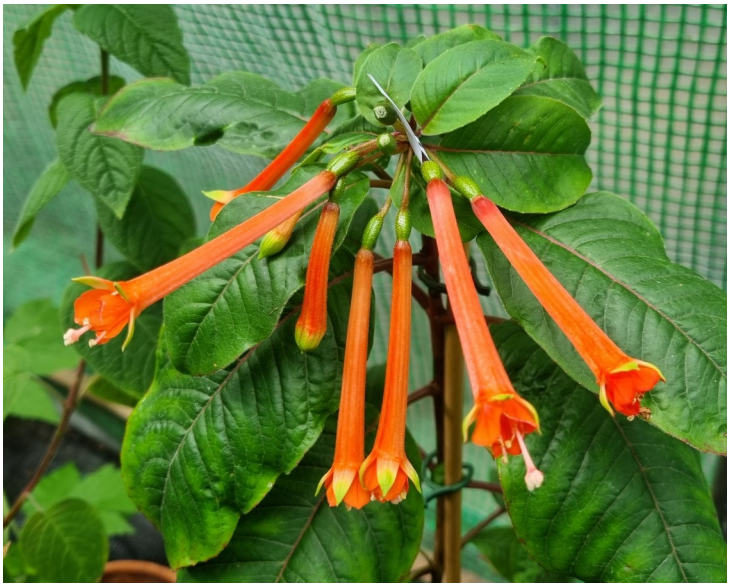
The value of the second generation offspring of the crosses with *F. magdalenae* will therefore have to be sought in producing phenotypically attractive (infertile) cultivars in the second generation. There are of course countless interesting possibilities because the number of potential crossing parents is considerable.

Exceptions to this may arise due to the possible production of unreduced gametes by the first generation seedlings or the crossing partner, that could lead to fertile tetraploid, pentaploid or even hexaploid offspring in the second generation. Also the use of polyploid crossing partners (such as many existing cultivars) could lead to unexpected results, but such outcome can hardly be predicted.

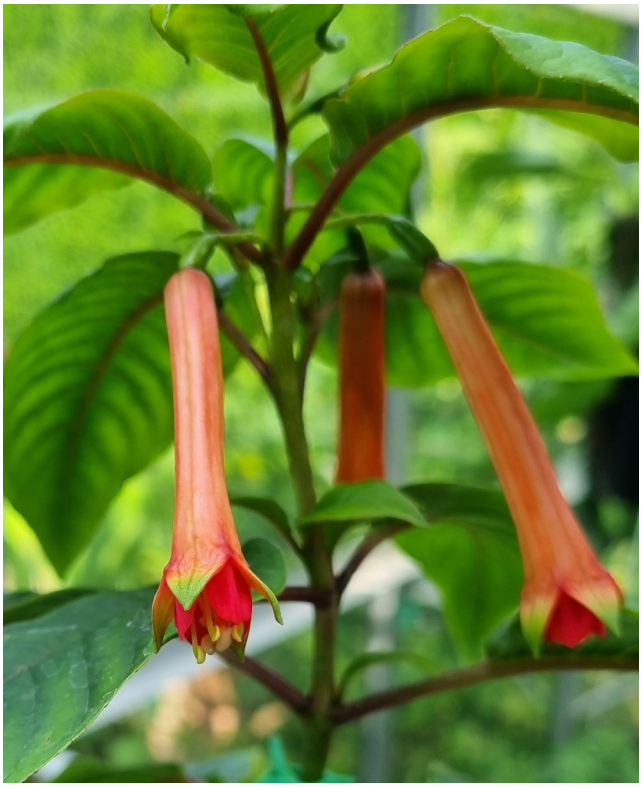
Crosses of F. magdalenae with various other crossing partners.

Another way to create new triphyllas based on *F. magdalenae* is to start by making non-triphylla precursors. This seems worth trying, but is not always a guarantee of success. Crosses of *F. magdalenae* with diploid parents, e.g. 'Sparkling Whisper' and *F. fulgens*, produce triploid offspring with a genome such as, respectively, MMF and MMS. It is expected that such seedlings are not fertile.
An exception seems to arise with seedling N 23-05 = *F. magdalenae* x *F. fulgens* 'Rubra Grandiflora', which should be a triploid MMF offspring based on the cross. The seedling has exceptionally large leaves, and the flowers produce pollen. All this could indicate the production of an unreduced gamete in meiosis. The genome of N 23-05 could then be described as MMMMF or MMFF, which are in principle both fertile genomes [7]. Flow cytometry measurements will provide more information about this. No definite answer has yet been obtained about the fertility of seedling N 23-05 as the male or female parent.

Other exceptions might be found in crossings of *F. magdalenae* with parents having an unknown complex polyploid genome (in fact: many of the existing cultivars). No predictions can be made about the fertility of such offspring. Seedling N 23-07, in which amongst others *F. decidua* genes are contained, is an example, but its fertility has to be further explored.



Seedling N 23-05, a second generation seedling that produces pollen.

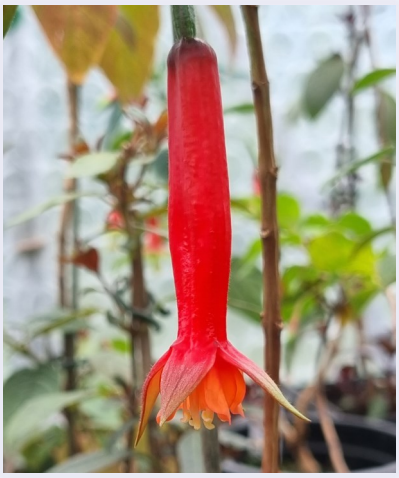


Seedling N 23-07, a second generation seedling with a complex lineage.

The currently still small number of second-generation seedlings will be increased considerably in the coming years.

Conclusion

Fertile triphylla offspring are obtained from the crossing of *F. magdalenae* x *F. triphylla*. These are a starting point for creating a second generation of triphyllas that are most likely sterile for the most part if the crossing partner for making the second generation is *F. triphylla*. Exceptions to this may arise due to the possible production of unreduced gametes by the first generation seedlings or the crossing partner, that could lead to fertile tetraploid, pentaploid or even hexaploid offspring in the second generation. Also making use of polyploid existing cultivars could lead to unexpected results.



Seedling N 23-01 = *F. magdalenae* x 'Sparkling Whisper', a non-fertile second generation seedling.

F. magdalenae seedlings at the right:

N 22-22 = *F. magdalenae* x 'Purcellian Elegancy' [8]

MP 21-01 = *F. magdalenae* x 'Purcellian Elegancy'

N 23-12 = *F. magdalenae* x *F. triphylla* 'PB#6'

N 22-14 = *F. magdalenae* x *F. triphylla* 'PB#6'

References and remarks

[1] Mia Goedman-Frankema, *Botanische Fuchsia's,* Zutphen: Terra, ISBN 90-6225-486-5 1992), p. 43-44 (in Dutch).

[2] J. Ramsey, D.W.Schemke, 2002; *Neoploidy in Flowering Plants*; Annu. Rev. Ecol. Syst. 33: 589 – 639.

[3] The sad loss of *F. magdalenae* (A) was not caused by the very high temperatures in itself, but by rather poor caretaking of some plants by the author during some severe heat waves.

[4] In this crossing, *F. fulgens* has contributed an unreduced gamete to the seedling. The B 83-05 genome therefore looks like MMMMF. Such genome has proven to have excellent fertility.

[5] M. de Cooker, *In search of the white F. triphylla*, The Fuchsia Breeders Initiative, Issue 3, July 2014, p. 12-14.

[6] The first seedlings in the series of crossings *F. magdalenae* x *F. triphylla* 'Purcellian Elegancey', flowering in the first year after sowing, were encoded as '**MP** *year-serial number*', referring to **M**agdalenae and **P**urcellian Elegancy. Thereafter the more standard encoding by the author '**N** *year-serial number*' has been resumed.

[7] The phenotype of the seedling N 23-05 suggests an MMMMF genome, which would imply a similar genome as Henk Waldenmaier's seedling B 83-05. Such genome would therefore be far less interesting than an MMFF genome.

[8] 'Purcellian Elegancy' has a species *F. triphylla* genome. It has a rather slender flower shape.

Please update your e-mail address!

It happens rather frequently that subscribers to The Fuchsia Breeders Initiative change their e-mail address. However, if this has not been communicated to the editor, it's not possible providing you with the most recent issue at the moment it is sent around. And you might be wondering why you are not on the subscribers list anymore.

So if you want to stay connected, please communicate any changes to **fuchsia@decooker.nl** and you will receive your copy at the appropriate moment.

New fuchsia from Mario de Cooker

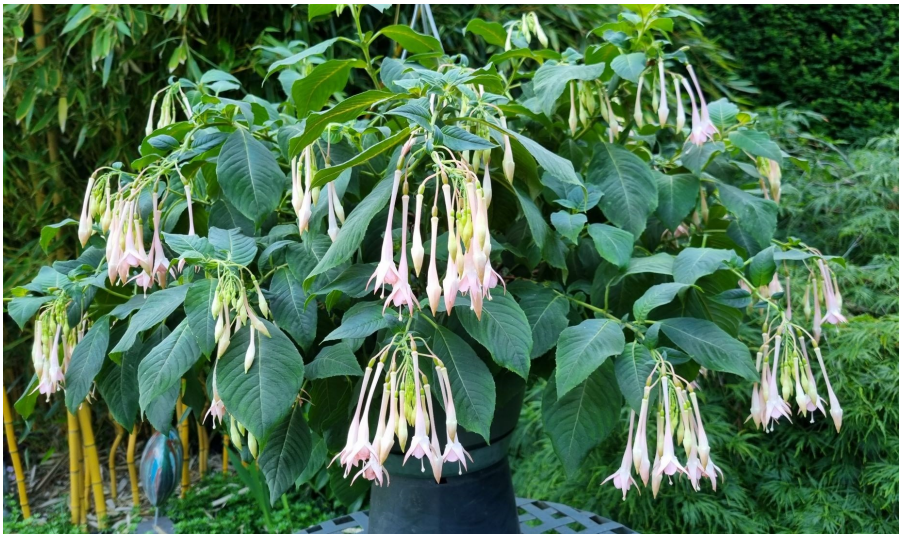
Photographs by Mario de Cooker

Fuchsia 'Our Ophelia'

Triphylla *Fuchsia* **'Our Ophelia'** (De Cooker, 2023) originates from the crossing N 05-31 x *F. triphylla* 'Purcellian Elegancy'.
The female parent N 05-31 is a semi-trailing seedling originating from the crossing (('Göttingen' x 'Our Ted') x ('Göttingen' x 'Our Ted')).
From the crossing it is clear that 'Our Ophelia' has inherited its white/soft pink colour from two sides because both 'Our Ted' and 'Purcellian Elegancy' contain the alba-form *F. triphylla* genes for making white flowers. It clearly inherited its shape from seedling N 05-31.

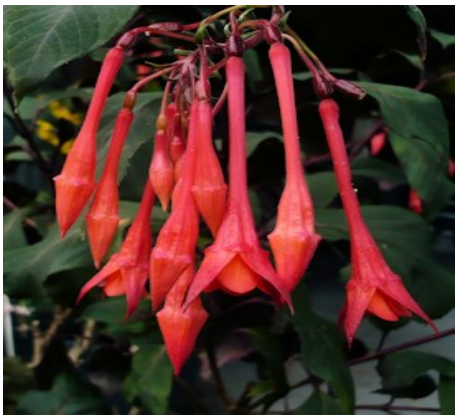
'Our Ophelia' is named after one of the four dogs of the family, the Irish Terrier 'Ophelia'. Growing 'Our Ophelia' is less of a challenge than growing 'Irish Ophelia'. On the contrary, the plant is easy to grow, best as a trailing fuchsia, both as an older plant or from young cuttings, several cuttings in a basket. If grown as an older plant and pruned in October it can be overwintered in the cold greenhouse without any problems. Growth starts early in the season, and pinching is not really necessary. It makes blooms throughout the whole season on large terminal racemes.

'Our Ophelia' has good fertility both as the male and the female crossing partner. Flow cytometry measurements have not provided unequivocal conclusions about the genomes of N 05-31 and 'Our Ophelia'. The 2C DNA values suggest a pentaploid genome for both plants with a substantial contribution of *F. fulgens* via 'Göttingen' and 'Our Ted'. This is also reflected in the shape of the flowers.



'Our Ophelia', older plant (July 2023), not pinched.

'Our Ophelia'



Seedling N 05-31

A couple of years ago the seedling was already in the process of being introduced, but because of severe damage of the flowers by bumble bees this process was stopped. No damage has been observed in the last years, so it was decided to re-start the introduction process.

In the spotlight: 'White Twinkle'

Photographs by Mario de Cooker

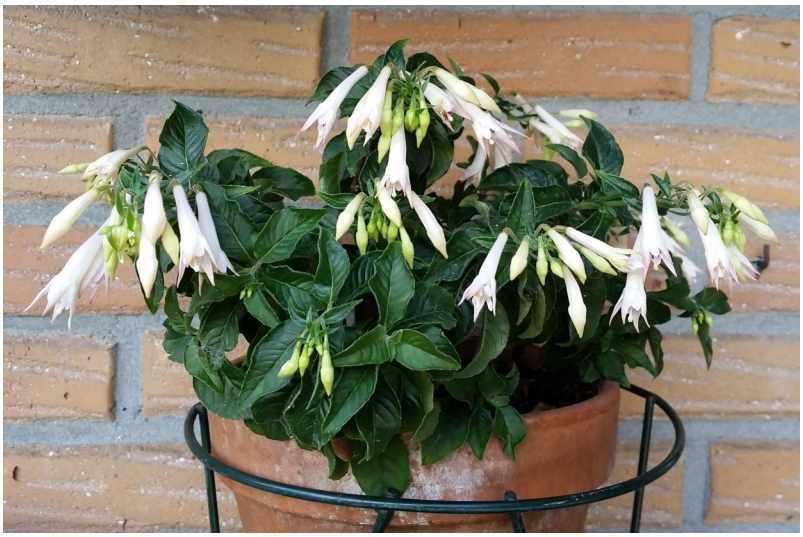
Fuchsia **'White Twinkle'** De Cooker, 2020) originates from the crossing (Göttingen' x 'Our Ted') x 'Purcellian Grace'. It has small, near pure white triphylla blooms and dark green foliage.

The plant is a real dwarf fuchsia. The original seedling dates from 2015, and is still very small. Although being a dwarf, it's a strong plant. It makes many ground shoots, and cuttings root easily. It can be pruned at the end of the season and overwintered without problems in the cold greenhouse. If not pruned, it can bloom all year round.

Seedling N 02-16 = 'Göttingen' x 'Our Ted' is the seedling's female parent. Most probably, this seedling is responsible for providing so-called 'dwarfing genes' to the progeny, which causes the dwarfism of 'White Twinkle'.

Seedling N 02-16 also produced the near-dwarf mini-triphyllas 'Silence is Golden' (De Cooker, 2016) and 'Skyward Dwarf' (De Cooker, 2016).

'White Twinkle', blooms



'White Twinkle', original seedling

At the time, the cause of producing mini-triphyllas was sought in gene silencing, but the presence of dwarfing genes in seedling N 02-16, which can be transferred to the progeny, seems the more plausible explanation. This will be further investigated. By its dwarf-like growth 'White Twinkle' lends itself perfectly to making a bonsai.

An overview of the background of Dwarfing Genes is provided by S.C.K. Milach and L.C. Federizzi in *Dwarfing Genes in plant improvement*, Advances in Agronomy, Vol. 73, December 2001, p. 35-63.

'White Twinkle', young bonsai

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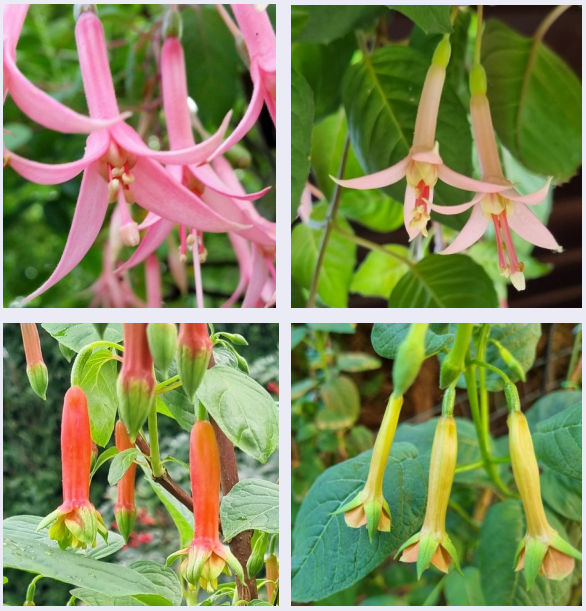
Phenotypic Plasticity

By Mario de Cooker

So far this year has provided excellent conditions for several fuchsias to show their phenotypic plasticity properties. Before the summer started we already had two local heat waves in the south of the Netherlands, the first lasted 15 days, the second lasted 5 days.

Several fuchsias tend to change reddish and pinkish hues to greenish-yellow hues at such prolonged high temperatures. Examples are 'Lechlade Martianess' (bottom right row) and 'Phaenna' (top row). If you show them separately, you could easily think they are different cultivars.

More information on this phenomenon can be found in The Fuchsia Breeders Initiative, no. 8, p. 2-5 (Dec 2018).



Contents of the next issue

The next issue is scheduled for the end of December 2023.

The Markets (by Edwin Goulding

Fuel prices have impacted Fuchsia production costs in unexpected ways. Trade is naturally split between Wholesale and Specialist Retail growers. The former are now supplying large purpose bred plants in flower. Traditional Specialist nurseries growing cuttings have been almost wiped out. Inflation is widespread, and Fuchsias are less important than food and shelter for most of the population.

On the fertility of pentaploid triphylla fuchsias (by Mario de Cooker)

The often excellent fertility of both pentaploid triphylla fuchsias and their highly aneuploid offspring, and the broad spectrum of colours and shapes of their flowers will be explored.

Want to learn more about all this? Then stay connected!

Your contribution to the The Fuchsia Breeders Initiative is highly appreciated.
Contributions for the next issue should be available no later than December 10, 2023.

The Fuchsia Breeders Initiative

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