Sarracenia hybridisation: results of crossing complex hybrids

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Since 2004 I have been hybridising *Sarracenia*, and want to show the variations that can arise with complex hybrids.

Sarracenia courtii × (*alata* × *willisii*)

These two plants look completely different to one another. *Sarracenia courtii* produces many flowers simultaneously, which is useful when hybridising. Interestingly, while most of the offspring had similar shaped lids, there were differences. Some had decumbent thin dark red pitchers that widens towards the top, with an open rounded lid (Fig. 1B). Others were similar form, but with lighter, red-veined pitchers (Fig. 1A). Yet others resembled light, red-veined *S. minor*, but with a closed lid.

Sarracenia courtii × '*Evendine*'

While all the resulting plants had narrow and semi-decumbent pitchers with opened ruffled lids, the pigmentation was variable. Pitchers ranged from olive green with red veining and some light pink colouration between the veins on the lid, to very dark red to purple pitchers. Pitchers tend to cluster similar to *S. purpurea* and is a strong hybrid (Fig. 1D).

Sarracenia catesbaei × '*Evendine*'

I wanted to produce a plant similar to a dark purple *S. catesbaei* with some interesting colouration on the lid. Most of the seedlings are green or light red, turning very dark red, with frilly lids; the pitcher interior is green with red veins; fenestrations are on the upper pitcher and lid. One seedling had larger, semi-decumbent pitchers that are green, with a lid coloured similar to the *S.* 'Evendine' parent.

Sarracenia courtii × *flava* var. *rubricorpora* and *Sarracenia courtii* × *umlauftiana*

Interestingly, results from these two hybrids were uniform. The *S. flava* hybrids were all semi-decumbent and dark red to purple in bright sunlight, whereas the lid is a lovely wavy shape (Fig. 1C). Minor variation occurred in the pitcher and lid dimensions and colouration. Another plant produces almost the same shaped pitchers, except these are darker with smaller lids. The second hybrid is shown in Fig. 2C.

Sarracenia (*alata* × *psittacina*) × (*alata* × *willisii*)

One of my favourite hybrids is the open lid form of *S. alata* × *psittacina*. I have a closed lid version with beautiful dark red pitchers with white fenestrations and some red veining. It is a very strong plant and multiplies readily. My aim was to produce an open lid form of *S. alata* × *psittacina* except with darker pitchers. Three different variations resulted from the cross. The first was a plant that has the same size of *S. alata* × *psittacina* except with an open lid and lighter colour, the second also has an open lid except it is much thinner and very dark purple (Fig. 2A), and the third (only a single incidence) has the exact same closed lid shape as the ovary parent except pitchers seem to be a darker red and have less fenestrations.

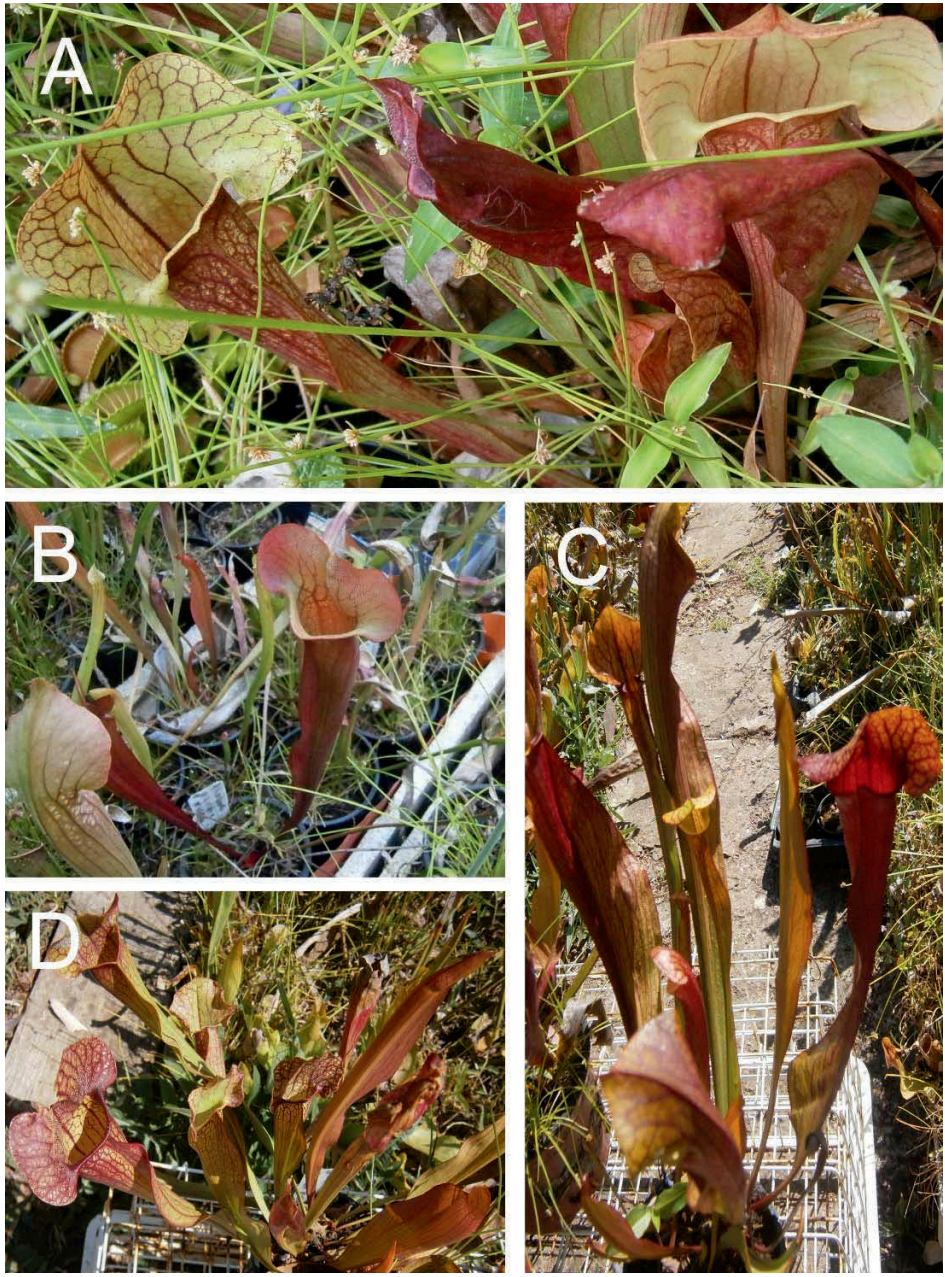

Figure 1: A, B: *Sarracenia courtii* x (*alata* x *willisii*); C: *S. courtii* x *flava* var. *rubricorpora*; D: *S. courtii* x 'Evendine'.

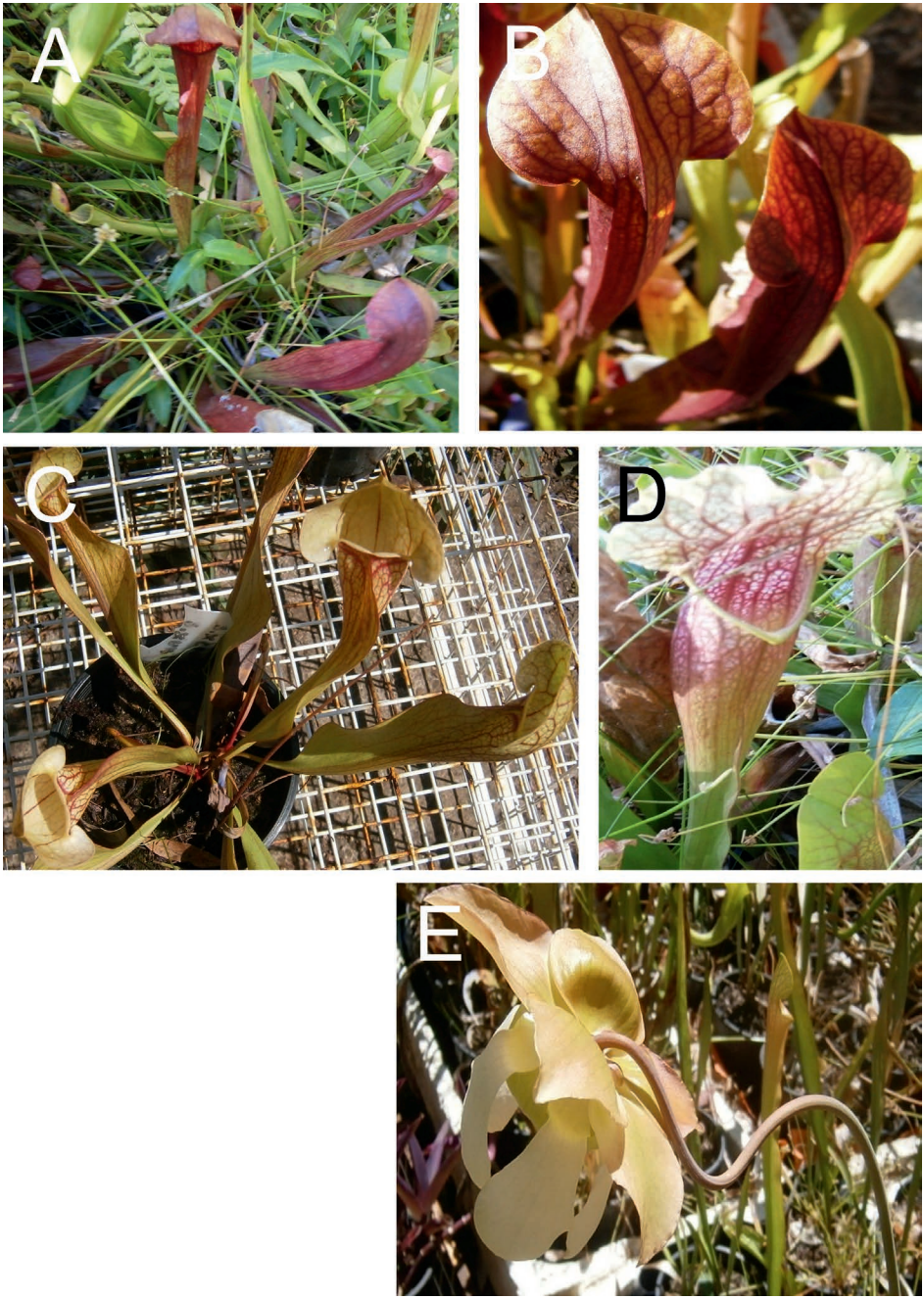

Figure 2: A: *Sarracenia* (*alata* x *psittacina*) x (*alata* x *willisii*); B: *S.* (*minor* x (*psittacina* x *purpurea* subsp. *purpurea* var. *heterophylla*)) x (*flava* x *rubra* subsp. *alabamensis*); C: *S. courtii* x *umlauftiana*; D, E: *S. catesbaei* x (*leucophylla* x *mitchelliana*).

Sarracenia (*minor* × (*psittacina* × *purpurea* subsp. *purpurea* var. *heterophylla*)) × (*rubra* subsp. *alabamensis* × *flava*)

The seed parent in this cross does not resemble *S. psittacina* at all; it has slightly inflated pitchers (light green to yellow and red-veined), with influence in the lid shape from some *S. minor*. The cross of this with *S. rubra* subsp. *alabamensis* × *flava* resulted in a plant that is mostly unchanged, except that the lid and pitcher bodies are influenced by the pollen parent; also, the pitchers develop a dark red colour as they age in bright sunlight (Fig. 2B).

Sarracenia (*leucophylla* × *oreophila*) × (*leucophylla* × *mitchelliana*)

After reading a wonderful paper by Clemesha (1979) where he attempted to produce a strong and beautiful *S. leucophylla* backcross, I wanted to produce a plant that looked similar to *S. leucophylla* that would produce more offshoots and pitchers. The pollen parent has tall thin green pitchers, white on the lid and top section of the pitcher, with prominent pink venation. The lids are sometimes slightly curved and this plant produces beautiful pitchers throughout the entire growing season. The seed parent is very tall and mostly green with very light red venation and have a small number of very faint white fenestrations on the lid, which has a similar ruffled shape as the lid of *S. leucophylla*. *Sarracenia leucophylla* × *oreophila* usually produces beautiful pitchers in spring and early autumn, producing leaf blades as the *S. leucophylla* parent during summer.

The resulting seedlings have the appearance of tall *S. leucophylla* plants with white lids and upper pitchers (One plant produces folded lids similar to the pollen parent.) The hybrid produces offshoots easily and produces light red petals.

Sarracenia catesbaei × (*leucophylla* × *mitchelliana*)

When crossing *S. catesbaei* with *S. leucophylla* × *mitchelliana*, I intended to produce a hybrid similar to *S. catesbaei* but with some bright white fenestrations on the lid. Instead, I got a hybrid shaped like *S. catesbaei*, green in the lower half of the pitcher and bright white above, veined pink throughout (Fig. 2D). This hybrid unusually produces pure white petals in early spring, a characteristic neither parent hybrid possesses (Fig. 2E). The origin of the white petals is unknown. Pitchers currently are 30 cm in height and the plant is approximately in its tenth year of growth and so far, seems to be smaller in size relative to the large *S. catesbaei* parent used to produce this hybrid.

Sarracenia (*oreophila* × *purpurea*) × *purpurea* selfing

A commercially available plant (with the informal name "Paradisia") is a hybrid composed of *S.* (*oreophila* × *purpurea*) × *purpurea*. Many years ago, it self-seeded and most of the offspring resemble parent plant, but some have light green pitchers and one plant a very light green yellow colour.

Final thoughts and conclusion

While it is possible to hybridise plants to varying extents both in nature and horticulturally, I think excessive hybridisation can produce plants that are interesting in shape and colour but may not be as tough as early first-generation hybrids or backcrosses with one of its ancestral species. On

the other hand, F1 and some F2 backcrosses do produce some very nice plants that have beautiful colouration and are strong.

It is common knowledge among growers and plant hobbyists that when plants are hybridised and there are more than two species involved in the crossing, the seedlings begin to display some variation in shape or colour, or both. As shown in my hybridisation experiments, crossing complex hybrids did produce some beautiful and unusual shaped plants and the seedlings from many of these crossings did vary. These included differences in either lid shape and colour.

References

Clemesha, S. 1979. *Sarracenia* species in Australia. Carniv. Pl. Newslett. 8(4): 106-109,114.