



Part 1: How To Decide Which Seeds To Save

by **Steven C. Chamberlain** Manlius, New York

This column will appear regularly, complemented by separate articles from other hybridizers. It will cover various aspects of the hybridizing process—things I've learned from doing it for the past 10 years, including what worked for me, and sometimes what didn't work—with a focus on tips for beginners. My purpose is to provide practical information readers can use to start their own hybridizing efforts.

Our first topic: Which seed pods should you save?

There is no simple answer. The main issue is whether you decide to control for the pollen parent (the plant whose anthers provide the pollen) or not. When you harvest the pods, you know which plant is the pod parent.

There are three main approaches: letting the bumblebees pollinate; doing your own pollinating in the garden; and doing your own pollinating in a controlled environment. I've experimented with all three.

If you did not do your own pollinating, the pod will contain a mixture of self-pollinated seeds from the pod parent and cross-pollinated seeds, which had their pollen randomly chosen by the bumblebees. If you supplement this natural process by doing your own pollinating (in the early morning before the bumblebees get to the newly opened flower), you may get some intentional crosses into the mix. The only way to know the pollen parent of all the seeds is by isolating your flower and pollinating it without any danger of the bumblebees getting to it too.

In my first hybridizing experience, I followed the third option. I created controlled two-way crosses between *H. montana* 'Aureomarginata' and *H. sieboldiana* 'Frances Williams'; in other words, I put *H. montana* pollen on *H. sieboldiana* pistils and *H. sieboldiana* pollen on *H. montana* pistils. I raised about 1,000 seedlings to at least an age of three years, and got myriad landscaping plants that were either green or blue and looked like an *H. montana* or an *H. sieboldiana*. Out of these seedlings, I registered only three plants: (see photos at right) *H.* 'Academy Blue Titan', 'David F. Mahoney' and 'Academy Brobdingnagian Viridity' (sorry!).

The first was the bluest seedling, the second was the largest blue *H. montana*-like seedling and the third was the largest green *H. montana*-like seedling. I found the results boring, but my neighbors and friends loved all the free hostas.

Thereafter I fell under the influence of Mildred and Charlie Seaver. My version of their approach is to plant a diverse palette of potential pollen sources and wait for the bumblebees to select the pollen. I've planted lots of plants in my beds that were collected from their natural habitat, and I've tried to be certain there are multiple copies of some of my favorite, unusual cultivars. This approach combines the pod parent's genes with genes from a wide range of pollen, but there may not be many seeds that result from each cross. It is a particular challenge, then, to evaluate and cull the seedlings. Nevertheless, I find it far more interesting than making controlled crosses, and it's much less work during the time the plants are blooming.



H. 'Academy Blue Titan'.



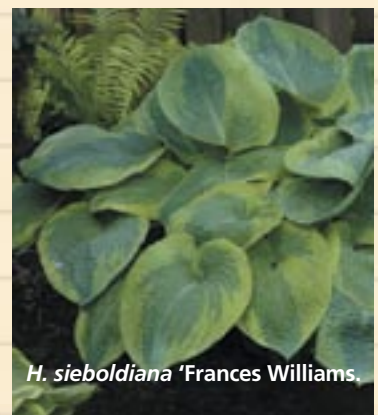
H. montana 'Aureomarginata'.



H. 'David F. Mahoney'.



H. 'Academy Brobdingnagian Viridity'.



H. sieboldiana 'Frances Williams'.

Controlled Crosses

axb and bxa

Ta = H. montana 'Aureo'

Lb = H. 'Frances Williams'

Offspring

① Bluest:

H. 'Academy Blue Titan'

② Blue montana like:

H. 'David F. Mahoney'

③ Largest green:

H. 'Academy

Brobdingnagian

Viridity'

How does one choose the pod parent from which to collect seeds at the end of the season? One approach is to take a hosta you already like and try to diversify it, such as trying to get a plant like 'Academy Flora', but with yellow leaves. Another is to pick plants that are almost right but have a quality you don't like, such as taking a plant whose scapes are far too tall and trying to get a similar plant with shorter scapes. I pursue these approaches occasionally. Another approach I like is to find those hostas in the garden that usually have not set seed in the past, but have done so this year. I don't think they are more likely to have cool seedlings, but I do think fewer hybridizers will have looked at their seedlings, so it's like virgin territory.

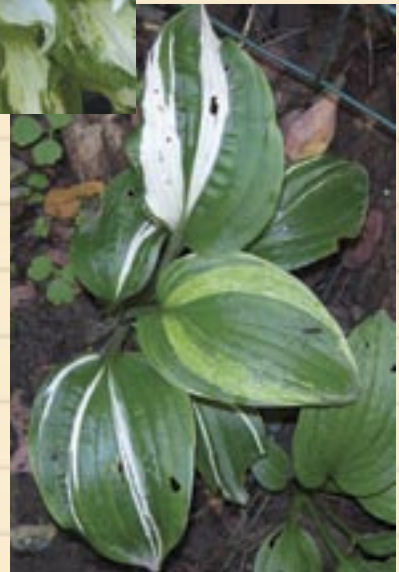
An example of success from the third approach, picking pods from a rarely fertile pod parent, is shown in the accompanying photographs. When my division of 'Allegan Fog', which rarely sets seed, showed three seed pods the first season, I harvested them. I got only three seedlings, but each of them had a new kind of variegation. The entire leaf on each is stippled with grass-clippings streaking, just like the white center of 'Allegan Fog'. This result runs counter to the conventional wisdom that stable variegated parents produce solid-colored seedlings. The largest of these I have registered as 'Academy Grass Clippings'. Best of all, it is fully fertile and its seedlings are wildly streaked. I have no clue what's going on here, but I discovered this stuff in the rarely plowed 'Fortune' field.



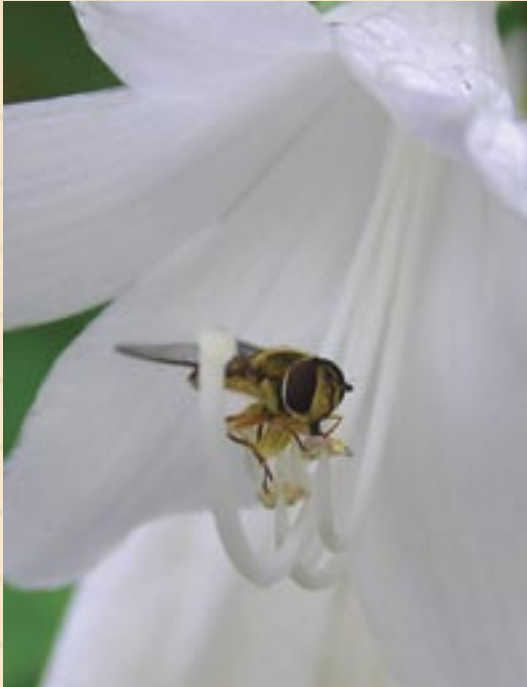
H. 'Allegan Fog'.

←
H. 'Allegan Fog'
- Rarely sets seeds,
so leave it to the bees
- Passes on central
streaking!

F1 hybrid: H.
'Academy Grass Clippings'
has streaking over
whole leaf.
F2 hybrid: →
These are wild, with
diverse streaking!



H. 'Academy Grass Clippings'.



A final alternative is to walk through the garden at the end of the season, pick a pod here and there on a whim and germinate the seeds. An example of success from this method is an open-pollinated seedling (in other words, the bumblebees chose the pollen) of 'Yakushima Mizu', which I named 'Academy Verdant Verge'. I don't know why I even germinated these seeds, because I rarely try for small cultivars in my hybridizing, but, according to hostaphiles who have seen it, the congested, hemispherical clump of 'Academy Verdant Verge' is proving to be a winner.

Next topic—collecting seeds and growing seedlings.

Contact me by e-mail with your comments and questions: sccham2@yahoo.com.

Bee photo by Patrick Coleman; others by Steven C. Chamberlain and Bob Olson.



Bees can produce surprises! Open-pollinated seeds of H. 'Yakushima Mizu' ↑ yielded H. 'Academy Verdant Verge.' ↓

