Mickfield Hostas Newsletter

Issue 3 | March 2007

Our collection

We have been keen gardeners for most of our lives but only began collecting hostas in 1976.
At that time there were only a handful of varieties available - now the list of registered varieties tops 3,500 and the number of unregistered varieties pushes the total number above 5,000. Needless to say, we didn't appreciate in 1976 how all-consuming this emerging interest would become. Now, in 2007, our own collection tops 1,200 varieties, which are all listed on our website.

This issue of the newsletter introduces the collection by way of illustrating the difference between species and cultivars of hosta and why there are so many varieties now in existence compared with 30 years ago.

A note on taxonomy...

Before we look at specific hostas we need to be clear about where the huge range of varieties come from. One area of consistent change is that of the taxonomy of the genus hosta. It is argued that of the 5,000-odd varieties of hosta only a small subset are actually species. A species plant is an original variety from which numerous hybrids, or cultivars, are created either by natural or artificial means. Several eminent authors have proposed lists of hosta species but there has yet to be an agreed definitive list from the 58 potential candidate species.
The Hosta Journal, Volume 36, Number 3, produced by the American Hosta Society, contains a good article on efforts to arrive at a definitive list. Currently the accepted botanical species are:
H. albofarinosa, H. capitata, H. clausa, H. gracillima, H. hypoleuca, H. jonesii, H. kikutii, H. kiyosumiensis, H. longissima, H. longipes, H. minor, H. plantaginea, H. pulchella, H. pycnophylla, H. rectifolia, H. rupifraga, H. shikokiana, H. sieboldii, H. sieboldiana, H. tibae, H. tsushimensis, H. ventricosa, H. venusta, H. yingeri

Newly introduced varieties can clearly exhibit characteristics of their origin, for example; *H. plantaginea* is the only species that has fragrant flowers so any cultivars with fragrant flowers will have *H. plantaginea* in its ancestry. However, the origin of some new varieties is not always so obvious.
To illustrate this, and give a flavour of what we hold in our collection, we have chosen species *H. sieboldiana*.

H.sieboldiana with examples of two natural mutations or sports

Olive Bailey Langdon - a natural mutation of *H. sieboldiana*

H. sieboldiana

Borwick Beauty - a natural mutation of *H. sieboldiana*

The appliance of science

The science of genetics has opened up a method of hybridization that can reinforce specific characteristics allowing plant breeders to 'breed in' desirable traits, such as more intense colours, rugosity and pest-resistance.

In a nutshell, the term **ploidy** refers to the number of complete chromosome sets found in a cell or organism and **polyploidy** is the process by which genomes multiply so that cells and organisms contain multiple complete matching sets of chromosomes: **diploids** contain a complete set of chromosomes, male and female, **triploids** contain three complete matching sets of chromosomes, **tetraploids** contain four sets, and so on...

H. ventricosa is a natural tetraploid and comes true to form from its own seed. Tetraploid hostas generally have thicker leaves so are generally more resistant to pest attack.

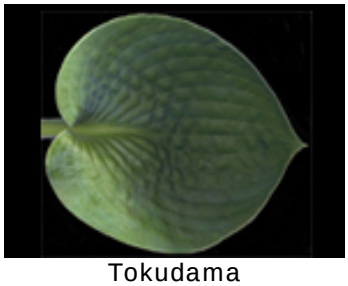
Elegans is a natural sport of H sieboldiana, and here are examples of two natural Elegans sports

George Smith - a natural mutation of Elegans

Elegans is a natural sport of *H.sieboldiana*

Frances Williams - a natural mutation of Elegans

The following examples are the result of deliberate crossing of H. sieboldiana with other species or cultivars



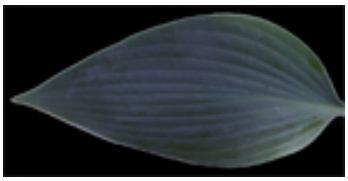
Tokudama

Abiqua Drinking Gourd is a cultivar from *H. sieboldiana* crossed with **Tokudama**

Abiqua Drinking Gourd

H. nakaiana

Blue Blush is a cultivar from *H. sieboldiana* crossed with another species hosta, ***H. nakaiana***



Blue Blush

H. plantaginea

Royal Standard is a cultivar from *H. sieboldiana* crossed with ***H. plantaginea*** to produce fragrant flowers

Royal Standard

There are many more cultivars related to H. sieboldiana and obviously very many cultivars derived from breeding the other species and cultivars plants. Every year we do our best to introduce new varieties to our collection and this year is no exception with more than 300 additions. All the new cultivars are listed on the website and the photos will follow over the course of the season.

psst...

So, is there such a thing as a pest-resistant hosta?

We are naturally sceptical of such claims by plant breeders. Whether these hybrids would actually withstand a full-scale assault by a group of very determined pests has yet to be confirmed in our experience. Therefore, we advise that any claims of pest resistance should be treated with a degree of caution.

Next month: Variety availability for 2007 and looking forward to the shows...

A key issue with hybrids is stabilizing their characteristics over time to ensure that they do not revert to those of the originating parents. This is something we have seen in hostas and it is one of the main reasons why many 'new' varieties do not become commercially available for a number of years.

A good example of this is Jack of Diamonds, another *H. sieboldiana* hybrid

Jack of Diamonds

First registered in 1983, we have had this cultivar in our collection since 2003 but we have not yet had sufficient quantity to offer for sale.

Some varieties have been introduced over recent years claiming to be slug-resistant. These new varieties have multiple complete sets of chromosomes and have been breed specifically to carry through pest-resistant characteristics.

For more information on this fascinating subject, visit the following sites:
The Polyploidy Portal
The Comai Lab at the University of California Functional Genomiocs of Plant Polyploids

The advice and opinions contained within this monthly newsletter have been formed over more than 30 years of experience with the Hosta genus. We are constantly learning and refining that knowledge and would welcome any suggestions that readers of this newsletter would like to make so please contact us.