

Heuchera and Its Allies[©]

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The Saxifragaceae contains 80 genera and 1200 species. These include the popular genera of:

- *Astilbe* — Many flowers and colored leaf forms including a new yellow-foliaged form.
- *Bergenia* — Fleshy leaves, earliest spring bloomers, some repeat like *Bergenia* ‘Herbstblüte’.
- *Darmera* — Large-leafed northwest native, hardy in Vermont.
- *Francoa* — Chilean relative of *Heuchera* with full rosettes of foliage and wand-like flowers from pink to blue to white.
- *Heuchera* — Evergreen groundcovers in myriad foliage colors.
- ×*Heucherella* — Bigeneric hybrids of *Heuchera* and *Tiarella*.
- *Mitella* — Quiet woodlander. Asian species have larger leaves and better color and texture.
- *Mukdenia* — Perfect woodland plants that prefer acidic soils. *Mukdenia* prefer cooler evening temperatures although they are grown in hot/humid areas of Japan in an all-mineral mix.
- *Rodgersia* — Large leaves in different shapes (palmate, pinnate) Flowers from buff-white to strong pink. Must have moisture and acidity.
- *Saxifraga* — Woodlanders and montane species that are adapted to limey conditions; many have attractive spikes of flowers.
- *Tellima* — Northwest woodlander tolerant of drought and shade
- *Tiarella* — Native to much of the U.S.A. and Canada. One species is native to Asia.
- *Tolmiea* — The piggyback plant. Shad-tolerant woodlander with adventitious plantlets on their leaves.

Heucheras (coral bells) have risen in the perennial ranks from anonymous border gems to one of the hottest genera obtainable today. From the rather drab green and purple forms of the wild, these plants have exploded a paint pot of foliage colors from ambers to reds to metallic sheens. In 12 years of existence, Terra Nova has grown hundreds of thousands of seedlings of such varied genera as *Heuchera*, *Tiarella*, ×*Heucherella*, *Campanula*, *Pulmonaria*, *Verbascum*, and *Echinacea*. In total, over 500 new selections have been offered for the first time in wholesale quantities by Terra Nova. In the trial gardens of the Royal Horticultural Society (RHS) and such renowned events as Plantarium in Holland, Terra Nova’s plants have gone on to win an impressive 70 international awards of merit. Terra Nova’s founder and president, Dan Heims, was honored to receive the prestigious Reginald Cory Cup from the Royal Horticulture Society to recognize the advancement he has brought to the genus *Heuchera*. There is a “breeder’s view” of the different *Heuchera* species used and what each has added to the perennial palette available today. *Heuchera* make excellent cut flowers (and cut foliage!). The foamy bells (×*Heucherella*) are the bigeneric hybrids of *Heuchera* and *Tiarella*. Come explore!

Heuchera Species and Their Attributes

- *Heuchera americana* — Tough, shade tolerant, no mildew problems, good variation in coloring, long petioles, tolerance of high heat and humidity combined.
- *Heuchera cylindrica* — Some mildew susceptibility.
- *Heuchera sanguinea* — Much mildew susceptibility, intolerance of high heat and humidity combined.
- *Heuchera micrantha* — Intolerant of high heat and humidity combined, good mildew resistance.
- *Heuchera maxima* — Intolerant of high heat and humidity combined, less hardy than most.
- *Heuchera richardsonii* — Extreme hardiness and scope.
- *Heuchera villosa* — Tolerant of high heat and humidity combined, very late bloomer.
- *Heuchera hallii*, *H. merriamii*, *H. rubescens* (montane forms) — Intolerant of high heat and humidity combined, extreme hardiness, early bloom.

From their first introduction, a million-selling variegated *Heuchera sanguinea* named 'Snowstorm'; enough profits allowed the building of a small laboratory and the rental of a windowless basement of a bookstore in the early 1990s. Here Dan teamed up with Ken Brown, a food microbiologist, and became 50/50 partners. From transitional greenhouses in Wilsonville, Oregon, Terra Nova moved to its current headquarters on 15 acres of rich Oregon farmland, near Canby, Oregon in 1995. Here the labs and 5 acres are dedicated to research and development. The rest of the property is covered with production greenhouses, offices, a laboratory, and display gardens. At this time, Terra Nova employs 55 people with 65% of our payroll dedicated to R&D. Once plants are selected by the breeding and sales teams, they are placed into tissue culture. Test tubes of these new plants are sent with extensive documentation and protocols to labs in New Zealand, Germany, Costa Rica, Indonesia, and other countries for continued propagation because the Terra Nova pilot lab is working at full capacity. Plants are brought into the U.S.A. and weaned into soil. These are then shipped around the U.S.A., Canada, and the rest of the world.

Breakthroughs in *Heuchera* breeding occurred on a yearly basis in the mid 1990s. Tiny flowered forms of the common coral bell were supplanted by large-flowered plants with prodigious displays. Cut flower varieties with meter-tall blooms were not unheard of in the trial fields. By using different species, Terra Nova's breeders transformed a generally "quiet" genus to one with the highest demand in today's marketplace. The current craze for container plants and the "strategic partnership" with Proven Winners™ has caused exponential leaps in orders.

Many selections are patented in the U.S.A. and protected under E.U. breeder's rights. Unscrupulous labs around the world are very quick to snap up the unprotected forms and diminish the payback of tremendous time and labor required to produce a new introduction.

The foliage taxa soon followed, but were plagued by tall, inconsequential flowers. Here's where the breeding team stepped in and brought the two worlds of flower and foliage together in many of the newest forms. Further additions like ruffling and a whole new color palette of foliage (including 'Amber Waves' and 'Peach Flambé')

were introduced in the early 2000s. This fusion of color, ruffling, and bloom is where we begin our story of the ‘Dancer Series’. This series began as a controlled breeding project to produce dark-foliaged *Heuchera* with good flowers. In 2001, the existing Terra Nova *Heuchera* were evaluated and the 30 best dark-foliaged types, flowering types, and those with a combination of dark foliage and good flowers were put together and hand crosses were made. *Heuchera* seed is very fine, and seed flats can hold a thousand plants. At the three-leaf stage, when plants are barely half an inch across, early selections can be made. We grew out the darkest 200 plants per cross (of 156 crosses) and selected only the darkest seedlings to grow on to 4 inch. These we gave a winter chill and let them flower before selecting for the best. Of these, 100 plants were selected to be used for further breeding.

The Terra Nova Breeding team walks through the greenhouses weekly and evaluates the crops. At the *Heuchera* breeding table, one plant continuously stood out with its compact habit, dark, well-veiled foliage, prolific light pink flowers, and continuous bloom (till frost!). Dan thought it looked like the flowers were dancing over the leaves. The colorful undulating leaves were like a Gypsy’s skirt. ‘Gypsy Dancer’ was selected by the breeding team for introduction to the trade.

‘Fandango’ and ‘Tango’ were selected in 2003 from the 60 plants selected from 250 crosses sown. There were many great plants that year with more colorful flowers and outstanding, prolific bloom.

‘Fandango’ stood out with its tight habit, cut and veiled leaves, numerous medium pink flowers, and its free-flowering nature.

‘Tango’ glowed with its dark foliage, compact habit, bright fuchsia pink flowers on short stalks, and reblooming habit.

Heuchera perform and bloom best if given 12 weeks of vernalization at below 40 °F. They like to be planted high in their pots, and they prefer mineral rich soils with good drainage. Fertilizer needs are low, with most plants happy with 75 to 100 ppm feeding. Hardiness of most taxa is Zone 4, and a replanting every 2 to 3 years is recommended to keep the clumps vigorous. The most serious pests are strawberry or vine weevils whose “C-shaped,” beige larvae consume the fleshy parts below ground.

What’s a *Tiarella*? The name is derived from the Greek word “Tiara” — meaning “turban.”

It’s also called: foam flower, false miterwort (after *Mitella*), sugar scoop (in Pacific North West), and lace flower.

What makes them great?

- Nice evergreen foliage.
- Blooms in the shade (but takes morning sun).
- Many forms to choose from.
- Great fall color.
- Splendid spring (and longer) floral display.
- Deer resistant.
- Excellent ground cover.
- Easy to ship (flexible leaves and flowers).
- Adapt well to garden conditions.

Ranges from Nova Scotia through the Piedmonts all the way to Mississippi. Several species are found from Alaska to the Pacific Northwest to central California and east to Montana. Only one species is known in Asia.

What can go wrong?

- Mildew on some forms (mostly species).
- A favorite of vine or root weevil.
- Do not take well to drying out completely.
- Over fertilization.

Fix it by providing:

- A pH 5.0 to 6.3.
- Well-draining, fertile soil.
- 55% shade.
- Even moisture.
- Fertilizer rate at 75–100 ppm (drop to 50 ppm after flowering)
- Watch for symptoms of *Rhizoctonia* and *Pythium* (Banrot® for control, preplant)

The breeders and their progeny:

- **Sinclair Adam** – Dunvegan Nsy. – The “Pharoah” of foamflowers; ‘Oakleaf’, ‘Brandywine’, ‘Dunvegan’, ‘Laird of Skye’ 1993, ‘Winter Glow’ 1993, ‘Slick Rock’
- **Don Jacobs** – “Eco Man”, ‘Running Tapestry’, ‘Eco Red Heart’, ‘Eco Rambling Silhouette’, ‘Eco Eyed Glossy’, ‘Eco Blotched Velvet’, ‘Eco-Rambling Tapestry’
- **Charles Oliver** – Primrose Path – The “Godfather”, ‘Pink Brushes’, ‘Pink Pearls’, ‘Butterfly Wings’, ‘Elizabeth Oliver’, ‘Arpeggio’, ‘Running Tiger’, ‘Tiger Stripe’, ‘Filigree Lace’
- **Dan Heims** – Terra Nova Nurseries, Inc. ‘Black Snowflake’ 2001, ‘Black Velvet’ 1998, ‘Candy Striper’ 2004, ‘Crow Feather’ 1998, ‘Cygnet’ 1998, ‘Dark Eyes’, 1996 ‘Dark Star’, ‘Freckles’ 1996, ‘Heronswood Mist’ 1998, ‘Inkblot’ 1997, ‘Iron Butterfly’ 1999, ‘Jeepers Creepers’ 2000, ‘Lacquer Leaf’ 1998, ‘Mint Chocolate’ 1998, ‘Neon Lights’ 2000, ‘Ninja’ 1998, ‘Pink Bouquet’ 1998, ‘Pink Skyrocket’ 01, ‘Pinwheel’ 1996, ‘Pirate’s Patch’ 2004, ‘Sea Foam’ 2001, ‘Skelton Key’ 1995, ‘Snowflake’ 1996, ‘Spanish Cross’ 1997, ‘Spring Symphony’ 1997, ‘Starfish’ 2000, ‘Sugar and Spice’ 2004, ‘Stargazer Mercury’ 2004, ‘Stargazer Venus’ 2004

As a whole, the Saxifragaceae has given the horticultural community a wealth of genera and species and promises even more excitement as new selections are introduced.