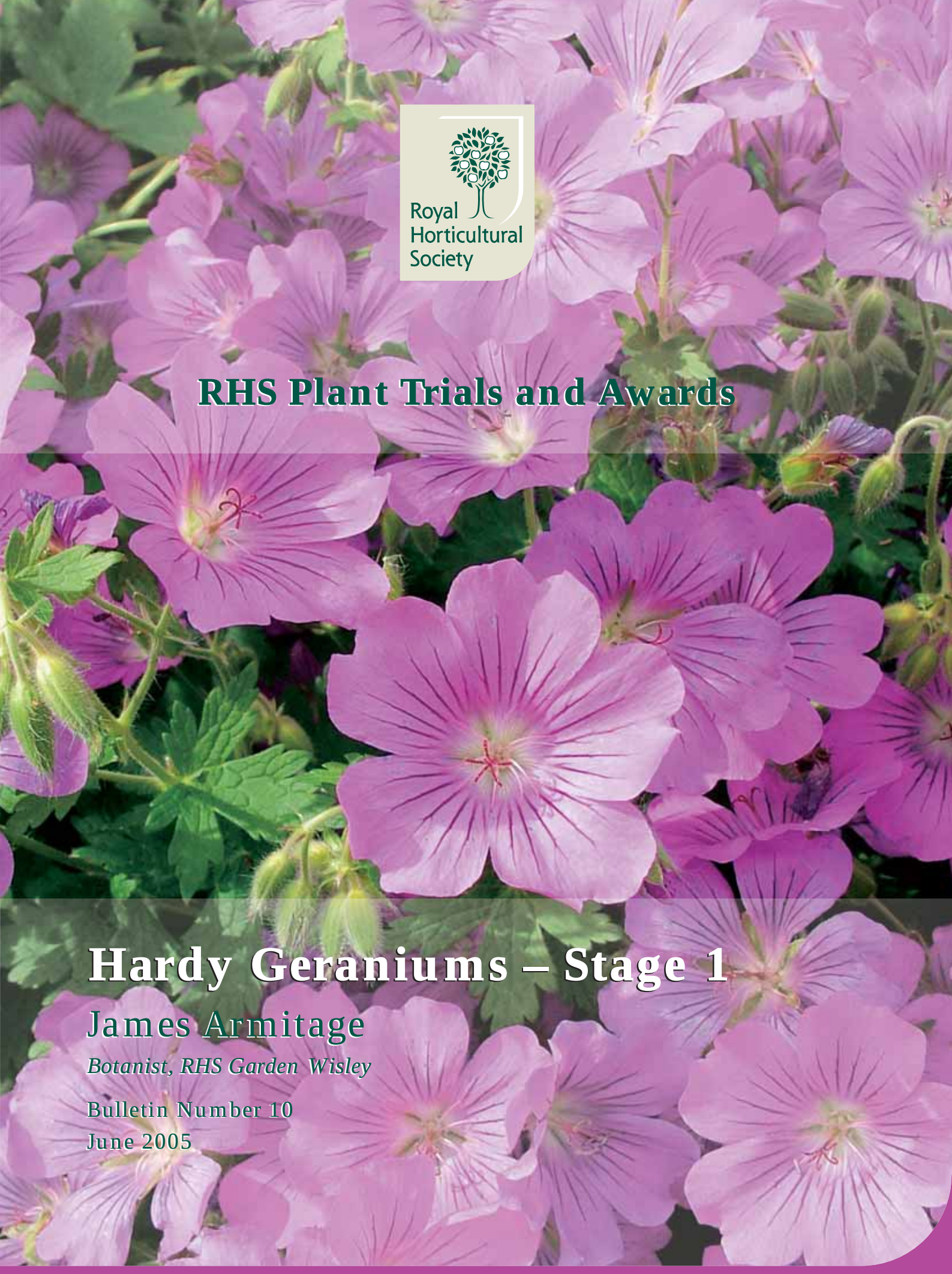

Royal Horticultural Society

RHS Plant Trials and Awards

Hardy Geraniums – Stage 1

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RHS Trial of Hardy Geraniums

Staging a Trial of Hardy Geraniums

The great number of geraniums available to gardeners meant that a comprehensive assessment of the genus could not be achieved in one trial without most of the Wisley Trials Field being given over to their cultivation. For this reason the Trial of Hardy Geraniums was divided into three staggered stages. The composition of each stage was decided by *Geranium* experts Elizabeth Strangman and David Hibberd based on cultivation requirements and taxonomic relationship. In Stage 1 geraniums best suited to a bright spot were grown. Many of the plants in this Stage were from the Pratense Group, which includes species such as *G. himalayense*, *G. clarkei* and *G. pratense* itself, joined by representatives of other species that enjoy similar conditions. Stage 2 was mainly comprised of *G.* × *oxonianum* cultivars with selections of *G. psilostemon*, *G. sanguineum* and summer dormant species also assessed. Stage 3 included species such as *G. macrorrhizum*, *G. phaeum* and *G. sylvaticum* which benefit from a little shade. To complete the set a separate trial of geraniums suitable for the rock garden was also conducted.

Elizabeth Strangman

David Hibberd

Objectives

- To recommend the Award of Garden Merit to those plants considered the best for garden decoration
- To compare the large number of new cultivars with older established plants
- To demonstrate and recommend different methods of cultivation
- To establish correct nomenclature
- To describe, photograph and take herbarium specimens of entries as a permanent record of the trial for future reference.

Records

- Flowering period – start and end of flowering
- Height and spread
- Staking – required or not
- Habit – groundcover, spreading, mound-forming, scrambling
- Evergreen – retention of foliage over winter
- Hardiness

Front cover: *Geranium* 'Sirak'
Right: *Geranium* 'Blue Cloud'

Entries

There were 136 entries in the Trial, submitted as plants by nurseries in the UK , Holland and USA, by collection holders and by individuals (listed on p.13).

The majority of entries in Stage 1 were cultivars, hybrids or variants of the following species:

G. asphodeloides
G. clarkei
G. collinum
G. gymnocaulon
G. himalayense
G. ibericum
G. × *magnificum*
G. oreganum
G. palmatum
G. pratense
G. pyrenaicum
G. regelii
G. renardii
G. ruprechtii
G. saxatile
G. transbaicalicum
G. traversii
G. yeoi

plus South African species

Cultivation of Stage 1

Three plants of each entry were planted on 9 July 2002 on a prepared site. The soil on the Trials Field, though sandy and free draining, is rich in nutrients, due to it being extensively cultivated for various trials. The soil has a pH of 7.5. Generally, hardy geraniums perform best on a soil of medium to low fertility soil, so no fertiliser was added.

Many of the entries in Stage 1 required staking, this was done in April before strong growth had begun, using birch or hazel twigs up to a height of 2m.

After flowering all plants, with the exception of the South African species, were cut right down to the ground. This not only made the plants tidier by removing the seed heads and dead foliage, but gave them a new lease of life and encouraged a second flush of flowers. Over winter many entries proved to be evergreen, forming attractive mounds of foliage. The trial concluded after three years, at which time most plants would have benefited from being divided.

Pests

The most frequently encountered pests found on any hardy geraniums are:

Capsid bugs: Sap-feeding insects active from mid May to end of August. Their feeding on the shoot tips cause leaves to develop with many tiny holes.

Geranium sawfly: Greenish-grey, caterpillar-like larvae with black heads that live on the underside of the leaves where they make rounded holes. Damage occurs during May – September. The damage is mostly cosmetic.

Glasshouse red spider mite: A sap-feeding pest mainly found in late summer on hardy geraniums. The tiny mites cause a fine pale speckling on the upper leaf surface.

Vine weevil: It is the larval stage that causes problems by eating the roots. This leads to poor growth and sometimes the death of plants. Several plants in the trial were killed by this pest.

Leaf and bud eelworms: These are microscopic worm-like creatures that live inside the foliage, causing infested areas to dry up and turn brown. This pest was found in the trial plants but in most gardens will be overlooked.

Andrew Halstead
PRINCIPAL ENTOMOLOGIST

Award of Garden Merit (AGM)

Geranium 'Blue Cloud'	(H4) 2004
Geranium 'Brookside'	(H4) 2004
Geranium 'Mavis Simpson'	(H4) 2004
Geranium 'Nimbus'	(H4) 2004
Geranium 'Orion'	(H4) 2004
Geranium palmatum	(H3-4) 1993 Reconfirmed
Geranium pratense 'Mrs Kendall Clark'	(H4) 1993 Reconfirmed
Geranium pratense 'Plenum Violaceum'	(H4) 1993 Reconfirmed
Geranium × *riversleaianum* 'Russell Prichard'	(H4) 1993 Reconfirmed
Geranium 'Sirak'	(H4) 2004

Award of Garden Merit subject to verification of cultivar name

Geranium × *magnificum* 'Rosemoor'

Award of Garden Merit rescindments:

It will be recommended that the AGM be rescinded from the following at the next review of the Award in 2012

Geranium clarkei 'Kashmir White'	AGM(H4)1996
Geranium × *himalayense* 'Gravetye'	AGM(H4)1993
Geranium 'Johnson's Blue'	AGM(H4)1993
Geranium renardii	AGM(H4)1993

(H4) = hardy throughout the UK
(H3-4) = may require some protection over winter in some parts of the British Isles

The Award of Garden Merit

To gain this award a plant must:

- be excellent for ordinary garden use
- be available
- be of good constitution
- be reasonably easy to grow
- be reasonably resistant to pests and diseases
- be essentially stable in form and colour

Judging

The trial was assessed for the Award of Garden Merit by the Floral Trials Subcommittee using the following criteria:

- habit
- vigour (health)
- floriferousness
- length of flowering period
- foliage

The genus *Geranium*

'It is hard to imagine gardening without hardy geraniums. In their midst are plants that are totally indispensable. They are resilient, versatile, and offer something for every garden situation. Rich in colour and generous in display, the best hardy geraniums are deserving of any mixed border. RHS AGM trials are essential in order to pinpoint the truly excellent plants that every gardener should have. The RHS AGM is certainly one of the most important aspects of the work of the RHS.'

Fergus Garrett,
HEAD GARDENER AT GREAT DIXTER

Geranium or geranium?

Pelargonium is a genus of about 280 shrubby or herbaceous species mostly native to South Africa. They are most familiar to gardeners as the brightly coloured hybrids grown for containers and summer bedding. The confusion that persists between this genus and *Geranium* – the hardy geraniums or cranesbills – is due in part to the great Swedish botanist Carolus Linnaeus. In his monumental work *Species Plantarum* (1753) Linnaeus included all the *Pelargonium* species under *Geranium* and it was by the latter name that they first became known to the gardening public. In 1789 the French botanist L'Héritier made clear the differences between the two genera but the damage was done and, to the frustration of gardeners and botanists alike, *Pelargonium* is still known by the common name geranium. *Pelargonium* is distinguished by having umbels of irregular-shaped flowers, fewer fertile stamens and a nectary tube. Two other genera are generally included in the family *Geraniaceae*, the rock garden favourites *Erodium* and the tender genus *Monsonia* which now encompasses the succulent species formerly known as *Sarcocaulon*.

Geraniums in the wild

Few genera are more suited as a whole to horticultural use than *Geranium* and the qualities of hardiness, adaptability and ease of propagation that have fitted them so well to the garden have also encouraged their spread in the wild.

More than 420 species of *Geranium* are currently recognised and they are found on every continent on Earth, except Antarctica, usually in moist, temperate regions. Such conditions prevail over much of northern Eurasia and North America and across mountainous areas further south and it is from these places that many of our garden favourites, such as *G. phaeum*, *G. himalayense* and *G. maculatum*, originate. These species tend to be perennial, forming bold plants in meadows or open woodland. Where conditions become warmer around the Mediterranean and Arabian peninsula there are a greater number of annual and summer dormant species. In several areas of the world geraniums grow at such high altitudes that they have become true alpines; much smaller plants adapted to shallow soils and low temperatures. As is often the case species inhabiting islands are amongst the most eccentric, the Madeiran endemic *G. maderense* is a huge monocarp while the Hawaiian *G. arboreum* forms a shrub.

Geraniums in the garden

The hardy geraniums are undoubtedly one of the most popular groups of garden plants. They are beautiful, reliable and endlessly various, and today's stunning hybrids are the modern flag bearers of a genus with a long history in British gardens. There are no records to tell us when herb Robert (*Geranium robertianum*) was first used for its healing properties, or its ornamental relatives *G. pratense*, *G. sanguineum* and *G. sylvaticum* for their beauty.

Geranium maculatum (above left) with radially symmetric flowers and *Pelargonium* 'L'Elégante' (above right) with bilaterally symmetric flowers demonstrate one of the key differences between the two genera

As British natives their cultivation must date back many hundreds of years. In the late 16th century the first hardy geraniums from continental Europe arrived on British shores and over the next four centuries species were introduced from Asia, the Americas, South Africa and the antipodes. From these progenitors many hybrids and selections have been made, particularly as a consequence of the upsurge of interest in cranesbills following the first RHS Trial of Hardy Geraniums in the mid 1970s and the publication of Peter Yeo's *Hardy Geraniums* in 1985. Selective breeding programmes and the natural promiscuity of the species has resulted in the naming of a great number of variants and over 550 cultivar names are listed in the *Register of Geranium Cultivar Names* (Victor, 2004). Many of these names are given to indistinct plants and one of the functions of the Trial of Hardy Geraniums was to help make people introducing cultivars aware of the range already available before they name their seedling or selection.

Structure of a cranesbill

Despite the great variation within the genus, hardy geraniums are immediately recognisable and upon seeing one, even if we can not be specific, we are able to say "That's a hardy geranium!" But what are the features that give them their characteristic appearance?

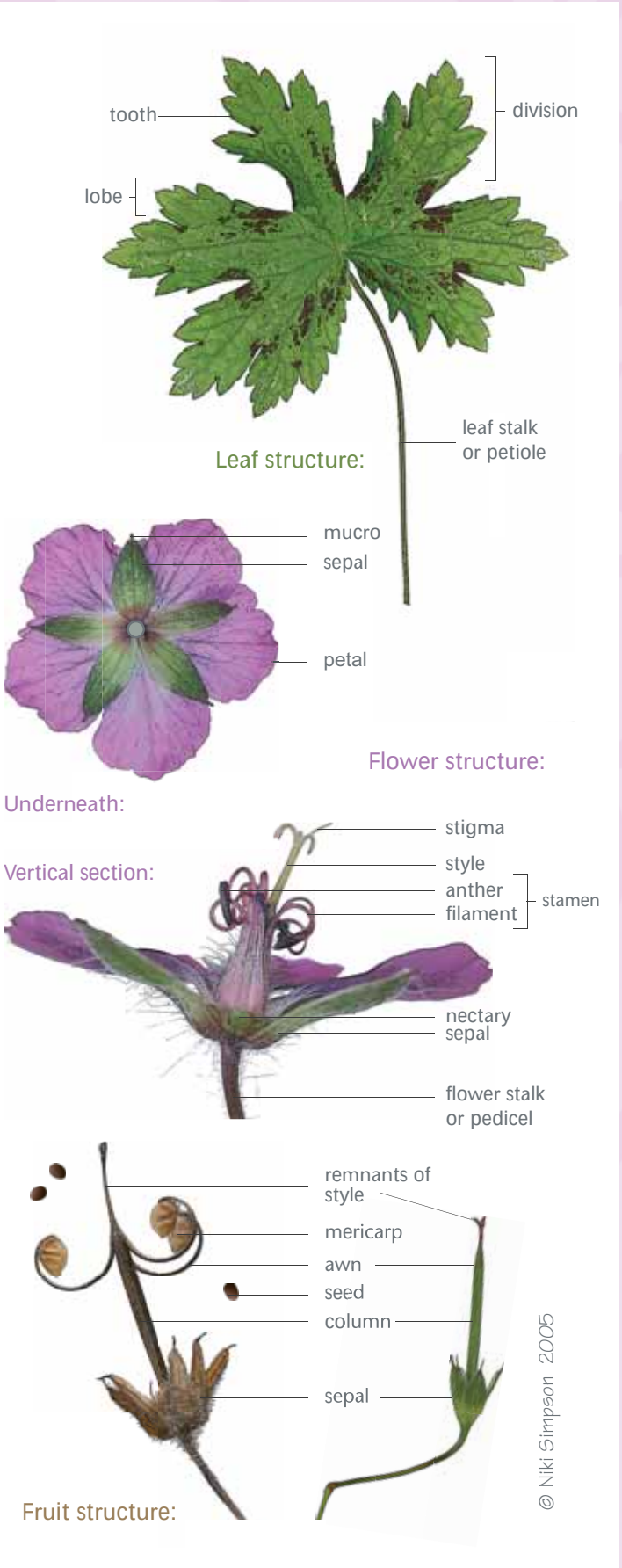
Habit: The majority of geraniums produce a rosette of basal leaves from which appears a dense, upright inflorescence, though others produce few basal leaves and have long, lax stems that scramble amongst other plants.

Roots: Geraniums usually spread on short, stout rootstocks but some have tubers or fast-spreading rhizomes.

Leaves: The basal leaves are generally hairy and separated into divisions. The divisions are lobed and the lobes are usually toothed. The degree of division differs significantly; in species of sunny sites, such as *G. sanguineum*, the leaves are deeply cut, those of shadier habitats have much shallower divisions. The leaves borne on the flower stems are mostly in pairs and become smaller as they approach the apex.

Flowers: Though somewhat variable in size, the simple, radially symmetric flowers of *Geranium* species are all rather similar with 5 petals, usually in shades of blue or pink, and 5 sepals which are tipped with a sharp point called a mucro. There are 10 anthers which often release their pollen before the 5 stigmas become receptive, encouraging cross pollination.

Fruit: The elongated fruit from which the genus gets its common name of cranesbill is technically called the rostrum and is formed from the style upon which the stigmas sit. At the base of the rostrum are the seeds held in a structure called the mericarp. *Geranium* has been split into three subgenera named *Erodioidea*, *Robertium* and *Geranium*, based on the way in which the rostrum disintegrates and the seeds are released.



The species included in Stage 1

G. asphodeloides

G. himalayense

G. asphodeloides

A leafy perennial or sometimes biennial plant native to southern Europe from the Caucasus to Sicily, Syria and Turkey and slightly tender in some parts of Britain. The basal leaves are rather round in outline with 5 to 7 divisions and the sprawling stems bear starry flowers around 2.5 to 3.5cm in diameter with narrow petals in a colour range from deep to pale pink or white. Not, perhaps, the most glamorous of the genus but its scrambling habit offers interesting options for the border. *G. asphodeloides* subsp. *crenophilum* differs in its larger leaves, upright habit, broader petals and dark flowers. Cultivars include 'Starlight' with white flowers, 'Prince Regent' with lilac petals and dark veins and 'Gorer's Pink' with purplish pink flowers.

G. himalayense

A spreading plant, low-growing and compact. The leaves can be up to 20cm wide and have a rather solid outline, though deeply divided into 7 sections. The stems carry flowers that are very large, to 5cm or more, and saucer-shaped, deep blue in colour, often with a pinkish ring at the base. Native to the Himalaya and perfectly hardy in British gardens, this is one of the finest plants for groundcover use. Several cultivars and hybrids have been named. Selections include 'Gravetye' which is applied to several clones in cultivation, 'Irish Blue' with pale flowers, 'Derrick Cook' with almost white flowers and 'Plenum' with double flowers. Amongst the hybrids are 'Johnson's Blue' a floriferous sterile cultivar and ROZANNE ('Gerwat'), a ground-hugging plant grown in Stage 3 of the trial.

G. clarkei Purple-flowered Group

G. ibericum subsp. *jubatum*

G. clarkei

A rhizomatous perennial native to Kashmir and in many respects resembling the more common *G. pratense*, with which it freely hybridises, differing in its smaller, more finely divided basal leaves. The stems are open and airy and reach a height of approximately 50cm carrying open flowers to about 5cm diameter that are purple, pinkish or white. Known in gardens through cultivars such as 'Kashmir Purple', 'Kashmir White' and 'Kashmir Pink' it is also one of the parents of such attractive cultivars as 'Kashmir Blue', 'Kashmir Green', 'Brookside', 'Nimbus' and 'Natalie'.

G. ibericum

From Turkey and Iran this fine species, growing to about 50cm tall, is an excellent choice for the border, bearing broad, hairy leaves with 9 to 11 divisions that are attractively cut. The upward facing flowers are large, to about 5cm, lavender blue and carried on flower stalks without glandular hairs. *G. ibericum* subsp. *jubatum* differs in having paler flowers and a mixture of glandular and non-glandular hairs on the flower stalk. *G. ibericum* subsp. *jubatum* 'White Zigana' has very pale flowers and hybrids include SABANI BLUE ('Bremigo'), 'Sirak' and the similar but more compact 'Karis'.

G. × *magnificum*

G. pratense

G. × *magnificum*

Sterile hybrids between *G. ibericum* and *G. platypetalum* growing to 70cm or so in height, representing some of the most frequently grown, useful and attractive members of the genus. Often confused with *G. ibericum* and differing in its less angular leaves, failure to set seed and more vigorous growth. The 7 to 9 divisioned leaves measure more or less the same in every direction and the large, open flowers, often with a notch in the petal, are purple to violet. This cross has arisen independently a number of times and several cultivars have been named including 'Rosemoor', 'Peter Yeo', 'Hylander' and 'Ernst Pagels' but these are rather similar and much confused in cultivation.

G. pratense

The common cranesbill from Europe and parts of Asia, a variable perennial widely grown in gardens. Growing to 1m or more in height the profusion of usually blue, saucer-shaped flowers sit atop basal leaves divided into 7 or 9 with lobes narrower than those of *G. himalayense* and generally less finely divided than *G. clarkei*. The variety *G. pratense* var. *stewartianum*, is early flowering and has coarser leaves and flowers at the pink end of the spectrum. Cultivars include pure white 'Galactic', 'Mrs Kendall Clark' with lavender-blue, prominently veined flowers, blue-striped 'Striatum' and 'Wisley Blue' with clear blue flowers profusely borne. Unusually for the genus there are some double-flowered cultivars such as 'Plenum Violaceum' and SUMMER SKIES ('Gernic').

G. palmatum

G. pyrenaicum 'Isparta'

G. palmatum

A large, dramatic plant native to Madeira and with a reputation for being rather tender. Eventually supported by a short stem the leaves are like a giant version of those of herb Robert and form a rosette from which emerge tall plumes of cheering pink flowers. After flowering the plant usually dies and should be raised again from seed. Plants in the Trial, though subjected to some cold weather, showed no susceptibility to low temperatures.

G. pyrenaicum

A long-flowering species from south western Europe, naturalised in parts of the British Isles and a resilient, hardy plant in gardens. The leaves are split into 7 or 9 divisions but have a very circular outline, growing to about 10cm across. The sprawling stems bear small flowers, to 2cm across, the pretty petals, each deeply notched at the tip, are usually pinkish purple. This species will often self seed prolifically; the cultivars seem to come true if crossing can be prevented. *G. pyrenaicum* f. *albiflorum* has white flowers and cultivars include 'Bill Wallis' with deep blue-purple flowers and dark stems and 'Isparta' which has larger, lighter flowers than normal.

The species included in Stage 1

G. renardii

G. Rambling Robin Group

G. renardii

From the Caucasus this clump-forming species is a plant worth growing for its foliage alone. The basal leaves are round in outline with 5 to 7 divisions and of a curious yellowish green, the surface much wrinkled and textured, the overall effect being most striking. The leaves are topped by large, flat, pale blue or white flowers, which may be sparsely borne compared to other members of the genus. Amongst selections of the species are 'Tcschelda' with heavily veined petals and 'Whiteknghts' with quite dark flowers while the hybrids include 'Zetterlund', 'Philippe Vapelle', 'Terre Franche' and 'Stephanie'.

South African species

Several South African species were grown in the Trial including *G. pulchrum*, *G. incanum*, *G. drakensbergense* and *G. caffrum*. These species tend to have narrow leaf divisions and silvery leaves making them effective foliage plants. They will eventually become quite shrubby but do not recover well from being cut back and, though sensitive to frost, will usually reappear from seed if lost over winter. *G.* Rambling Robin Group are hybrids between *G. incanum* and *G. robustum* with pale pink to bluish flowers and may be good plants for gardeners to try.

G. × *riversleaianum* 'Russell Prichard'

G. saxatile

G. traversii

From the windswept Chatham Islands, about 500 miles off the coast of New Zealand, this species is a very attractive, low-growing plant with long-stalked, silver-hairy leaves, circular in outline with 7 divisions. The white flowers, to 2.5cm, are saucer-shaped and borne over a long period. Almost always known in cultivation from its pink-flowered variety, *G. traversii* var. *elegans*, this species is intolerant of winter wet and can be frustratingly difficult to cultivate. However, several of its hybrids do make good garden plants, amongst them *G.* × *riversleaianum* 'Russell Prichard', 'Jean Armour' and 'Aya' which make eye-catching groundcover or border plants, though several others are best suited to the rock garden.

Other species

Also included in Stage 1 of the Trial of Hardy Geraniums were *G. collinum*, *G. gymnocaulon*, *G. oreganum*, *G. saxatile*, *G. regelii*, *G. transbaicalicum*, *G. ruprechtii* and *G. yeoi*.

Findings

The comprehensive nature of the Trial of Hardy Geraniums offered an unprecedented opportunity to assess the distinctiveness of the huge range of *Geranium* cultivars available and how best these plants can be used in gardens.

A growing trade

Dr David Hibberd has made a detailed study of the rapidly burgeoning number of *Geranium* cultivars. By studying listings for *Geranium* in the *RHS Plant Finder* he has been able to track the explosive increase in the number of geraniums available, from 125 in 1987 to 642 in 2005. Of these plants around 40% are selections from just five species and one hybrid and it must be doubted if all these names represent a useful distinction for gardeners. Many of the plants in trial neither offered the gardener novel features or an improvement on named plants already available. One of the key functions of the Trial was to help gardeners decide, through the AGM, which of the glut of geraniums now offered are most worth growing.

Gaining the most from geraniums

Hardy geraniums are ideal for cultivation in the open ground but are poorly suited to pot cultivation. They are plants that are best grown in conjunction with other specimens. Good companions include silver-leaved shrubs such as *Elaeagnus* and perennials, like *Sedum* or *Eryngium*, that will extend the flowering season.

Hardy geraniums are sometimes criticised for having a short flowering season. However, by cutting the plant back to ground level after flowering a second flush can often be gained.

One often-overlooked contribution of hardy geraniums to the garden is their potential use as winter groundcover. A surprising number of entries proved evergreen if basal foliage was left uncut over winter. Good plants to use for this purpose include *G.* × *riversleaianum* 'Russell Prichard', *G. renardii*, *G. ibericum* and some *G. pratense* cultivars such as 'Mrs Kendall Clark'.

Botanical and nomenclatural notes

The number of geraniums available and the similarity of many of the cultivars have led to frequent misnaming of plants. The raising of cultivars from seed has been a major source of confusion, encouraging variability within cultivars and the retailing of inferior plants. The interfertility of so many of the species, though very useful to the plant breeder, can cause problems in accurately attributing parentage to chance seedlings and several plants submitted to trial as cultivars of a particular species were shown to be hybrids. Below are some points of interest emerging from a botanical and nomenclatural study of the Trial.

The faint blotches seen on the leaves of *G.* 'Mavis Simpson' suggest it may be a triple hybrid involving *G. versicolor* rather than a cultivar of *G.* × *riversleaianum* so its attribution to that epithet was rejected.

At least two clones were entered under the name *G. himalayense* 'Gravetye' and a Nomenclatural Standard specimen was made of a plant that closely matched the description of the plant awarded an Award of Merit in the first RHS Trial of Hardy Geraniums in the 1970s.

Committee members commented that a plant is frequently grown in northern gardens under the name 'Mrs Kendall Clark' differs from the entries in trial with this name.

Cultivars of *G.* × *magnificum* were extremely similar and several differed from their published descriptions. Their nomenclature could not satisfactorily be resolved and a small trial of *G.* × *magnificum* cultivars was initiated.

G. clarkei 'Kashmir Purple' was grown in the first Trial of Hardy Geraniums but this name has since become applied to a range of purple-flowered variants. In order to distinguish the purple-flowered plants from the original named clone and other colour variants of the species the *Geranium* registrar David Victor has published the name *G. clarkei* Purple-flowered Group. Another clone collected by Roy Lancaster in Kashmir and sometimes sold as 'Kashmir Purple' has been named 'Gulmarg'.

The range of *G. incanum* × *G. robustum* hybrids grown as 'Rambling Robin' have been given the name Rambling Robin Group in the *Register of Geranium Cultivar Names* (2004).

Several new cultivar names were applied over the course of the trial: 'Cornish Candy' and 'Laura' were given to new double-flowered selections of *G. pratense*; a plant similar to 'Sirak' but lower growing was named 'Karis'; a floriferous clone of *G.* × *magnificum* was called 'Ernst Pagels' and the name 'Scapa Flow' was provided for a *G. ibericum* subsp. *jubatum* and *G. renardii* hybrid raised by Alan Bremner.

RHS Award of Garden Merit Descriptions

All descriptions are based on plants grown in Stage 1 of the RHS Trial of Hardy Geraniums and plants grown elsewhere may differ slightly according to cultivation or local conditions. Colour codes were taken using the RHS Colour Chart. The fourth edition (2001) is available from RHSE Mail Order, Wisley, Surrey GU23 6QB. One further plant grown as *Geranium* × *magnificum* 'Rosemoor' was judged worthy of the AGM, this award was given subject to verification of the correct name.

Geranium 'Blue Cloud'
AGM (H4) 2004
Sent by Hellyer's Garden Plants

Probably a seedling of 'Nimbus' and sharing that cultivar's narrow petals and fine foliage but with a spreading habit and flowers of a lighter hue.

Spreading perennial to 90 × 170cm in trial. Basal leaf blades to c.95 × 120mm, soon withering away, with sparse, white, adpressed hairs, mid green, pale on the underside, divided almost to the base into 7 and appearing heavily dissected in silhouette; divisions rhomboid, overlapping, palmato-pinnately lobed; lobes broad lanceolate, tapered with a short, acute tip, teeth coarse, irregular. Stem leaves in pairs, much cut, becoming small and bract-like towards the apex and lacking on uppermost nodes. Stems yellowish, long and spreading with short, patent, glandular hairs. Inflorescence becoming diffuse. Sepals narrowly ovate, glandular hairy, mucro to 3mm. Flowers to 40mm diameter, pinkish violet (85A/B) with fine, purple veins, paler at centre; petals obovate, to 21 × 14mm, overlapping only at base, most rounded at apex, some faintly notched.

Geranium 'Brookside'
AGM (H4) 2004
Sent by Howards Nursery

Floriferous and desirable border plant with attractive cut foliage and appealing violet-blue flowers. A hybrid between *G. clarkei* and *G. pratense* combining grace and reliability.

Spreading perennial to 60 × 190cm in trial. Basal leaf blades to c.65 × 130mm borne on long petioles with sparse, white, adpressed hairs becoming thick at the top of the petiole, yellowish, particularly on the underside, divided almost to the base into 7 and appearing heavily dissected in silhouette; divisions widest about the middle, very little overlapping, heavily lobed to about half way; lobes broad lanceolate, tapered to a sharp point, teeth irregular. Stem leaves in pairs, much cut, becoming very small and bract-like towards apex. Stems with patent gland-tipped hairs, becoming sprawling so flowers borne around periphery of basal foliage. Inflorescence becoming diffuse but remaining upright. Sepals narrowly ovate, glandular hairy, mucro to 2mm. Flowers to 40mm diameter, violet-blue (88B) with fine reddish veins, white at the centre; petals broad obovate, almost truncate at apex.

Geranium 'Mavis Simpson'
AGM (H4) 2004
Sent by Glebe Cottage Plants

A ground-hugging cultivar for use in the rock garden, as groundcover or at the front of the border, with prominent pale pink flowers that combine well with silvery foliage.

Low-growing perennial to 20 × 55cm in trial. Basal leaf blades to c.55 × 70mm with short adpressed hairs, mid-green, paler on the underside, appearing silvery with faint brown blotches at the notches that are lost with age, somewhat angular in outline with 5 or 7 divisions; divisions tapering to each end from above the middle, lobed to about one third; lobes broad, rounded, aristate, sparsely toothed. Stem leaves carried in pairs, similar to basal leaves, becoming smaller towards apex. Stems lax and sprawling bearing silvery adpressed hairs especially at nodes and towards apex. Inflorescence diffuse, flowers carried above foliage. Sepals ovate, silvery hairy, mucro to 1.5mm. Flowers to 30mm diameter, pink (74C) becoming paler at the centre with darker veins (74A); petals broad, faintly notched. Stigmas crimson.

Geranium 'Nimbus'
AGM (H4) 2004
Sent by Waterpump Plants

A terrific, extremely floriferous border plant bearing the happy combination of delicate cut foliage and violet star-like flowers. A class act.

Mound-forming perennial to 100 × 180cm in trial. Basal leaf blades to c.75 × 95mm, soon withering away, with sparse, white, adpressed hairs becoming thicker at the top of the petiole, mid-green, paler on the underside, divided almost to the base into 7 and appearing heavily dissected in silhouette; divisions tapering both ways from about the middle, very little overlapping, palmato-pinnately lobed; lobes broad lanceolate, to 4 times as long as broad, tapering to a sharp point, teeth few, irregular. Stem leaves in pairs, much cut, becoming small and bract-like towards apex. Stems yellowish, mound-forming with short, patent, glandular hairs. Inflorescence remaining fairly compact. Sepals narrowly ovate, glandular hairy, mucro to 3mm. Flowers to 35mm diameter, violet (87A) with fine, dark red veins, white at the centre; petals obovate, to 23 × 13mm, overlapping only at the base, some faintly notched.

Geranium 'Orion'

AGM (H4) 2004

Sent by Coen Jansen

A stunning cultivar for a prominent spot promising a long display of large violet-blue flowers in such profusion that the foliage is almost entirely obscured. A delightful and worthy plant.

Mound-forming perennial to 100 × 200cm in trial. Basal leaf blades to c.100 × 180mm borne on long petioles with sparse, white, adpressed hairs becoming thick at the top of the petiole, mid-green, paler on the underside, divided almost to the base into 7 and appearing heavily dissected in silhouette; divisions widest about the middle, little overlapping, heavily lobed to about half way; lobes broad lanceolate, tapered to a sharp point, teeth irregular. Stem leaves in pairs, much cut, becoming small and bract-like towards apex. Stems with patent, gland-tipped hairs, somewhat sticky, forming a floriferous mound. Inflorescence remaining fairly compact. Sepals narrowly ovate, glandular hairy, mucro to 3mm. Flowers large, to 50mm diameter, violet-blue (88A/B) with fine dark red veins, white at the centre; petals broad obovate to suborbicular, faintly notched.

Geranium palmatum

AGM (H3/H4)

Sent by Linward Hardy Plants

With is huge leaves and pink plumes of flowers this species from the sun-kissed slopes of Madeira shares all that islands exotic appeal.

Biennial or short-lived perennial to 110 × 210cm in trial forming a massive rosette on a short stem. Basal leaf blades to c.230 × 250mm, fleshy, glandular hairy and aromatic borne on long, succulent petioles, yellow-green, divided more or less to the base into 5; divisions very little over-lapping; middle division stalked, much lobed, lateral divisions with short stalks or lacking stalks, lobed almost to the base; lobes to 4 times as long as broad with toothed secondary lobes. Stem leaves in pairs becoming rapidly smaller and less lobed towards the apex. Stems upright and open, thickly covered with purple, sticky, patent, gland-tipped hairs. Inflorescence held above foliage, dense. Sepals narrowly ovate, sticky, glandular hairy, mucro to 2mm. Flowers to 40mm diameter, light purple-pink (74C), purplish red at the base (71B); petals long-obovate, rounded.

Geranium pratense 'Mrs Kendall Clark'

AGM (H4) 1993

Sent by Margery Fish Garden and Waterpump Plants

An old cultivar but still one of the best for the border with violet, white-veined flowers. The epitome of the romantic cottage garden perennial.

Scrambling perennial to 80 × 80cm in trial. Basal leaf blades to c.170 × 170mm borne on long petioles with very short, bristly, adpressed hairs confined to the veins on the underside, mid green, somewhat paler underneath, divided almost to the base into 7 or 9 and appearing rather square in outline; divisions tapered to either end from above the middle, open and overlapping, lobed to more than half way; lobes irregular, narrowly triangular with numerous coarse, irregular teeth. Stem leaves in pairs, similar to basal leaves becoming smaller towards the apex. Stems with patent, gland-tipped hairs, straight but requiring support. Inflorescence compact. Sepals narrowly oblong, glandular hairy,

mucro to 4mm. Flowers to 40mm diameter, violet-blue (91A), flushed pinkish violet (87B) towards the centre with a broad network of white veins; anthers very dark; petals broad obovate to suborbicular, rounded to faintly notched.

Andrew Norton

Geranium pratense 'Plenum Violaceum'

AGM (H4) 1993

Sent by Hardy's Cottage Garden Plants

One of the few double hardy geraniums producing flowers like tight violet pompons over a long period in summer. Different and attractive.

Scrambling perennial to 90 × 80cm in trial. Basal leaf blades to c.170 × 190mm borne on long petioles with sparse, white, adpressed hairs confined to the veins on the underside, mid green, somewhat paler underneath divided almost to the base into 7 and appearing heavily dissected in silhouette; divisions tapering to either end from about the middle, somewhat overlapping, lobed to more than half way; lobes triangular to broad lanceolate, blunt tipped with coarse teeth. Stem leaves in pairs, similar to basal leaves becoming smaller towards the apex. Stems yellowish with patent, gland-tipped hairs, upright but requiring support. Inflorescence dense. Sepals obscured by petals, ovate-oblong, glandular hairy, mucro to 2mm. Flowers to 25mm, fully double, forming a dense, globular rosette, violet (87A), blushed pinkish (80A/B) becoming greenish-yellow at the centre; petals numerous, obovate, small, to c.12 × 8mm, becoming smaller and distorted towards centre.

Geranium* × *riversleaianum 'Russell Prichard'

AGM (H4) 1993

Sent by Blacksmiths Cottage Nursery

Superior groundcover, rock garden or border plant with startling purple-pink flowers and silver-hairy foliage, requiring a well-drained spot to ensure survival overwinter.

Low-growing perennial to 40 × 130cm in trial. Basal leaf blades to c.75 × 90mm with very short adpressed hairs, mid-green, paler on the underside, appearing silvery, lacking faint brown blotches at the notches, square to sharply angular in outline with 7 divisions; divisions tapering to each end from just above the middle, pointed with a short blunt tip, lobed to about one third; lobes narrow, pointed with few teeth. Stem leaves in pairs, similar to basal leaves, divisions little overlapping, becoming smaller towards apex. Stems lax and sprawling, yellowish, bearing silvery adpressed hairs especially at nodes and towards apex. Inflorescence diffuse, flowers carried above foliage. Sepals ovate, silvery hairy, mucro to 2mm. Flowers to 30mm in diameter, purple (78A) with reddish veins (71A); petals broad obovate, faintly notched.

Geranium 'Sirak'

AGM (H4) 2004

Sent by Cambridge University Botanic Gardens and Andrew Norton

A substantial plant for the border becoming broad and sprawling as the season progresses with bold, glossy foliage and punchy, pinkish purple flowers.

Spreading perennial to 40 × 140cm in trial. Basal leaves c.105 × 115mm, with long petioles, sparsely hairy, mid green, paler on the underside, divided to about two thirds into 7 and in silhouette appearing much cut around the edge; divisions widest towards apex, little overlapping, lobed; lobes oblong with a short tip and irregular teeth. Stem leaves in pairs, pointed becoming ternate and very small towards apex. Stems becoming sprawling so that the flowers are borne around the periphery of the basal foliage. Inflorescence diffuse, procumbent. Sepals narrowly ovate, hairy, mucro to 3mm. Flowers to 40mm diameter, pinkish purple (78A/B) with very dark veins (79A), white at the centre; petals broad, obovate or obcordate.

Floral Trials Committee

Chairman: Tony Lord

Vice-chairmen: Roy Cheek, Pam Schwerdt

Members:

Bill Boardman, Bob Brown, Marina Christopher, John Coke, David Creese, Ivan Dickings, Fergus Garrett, John Gibson, Diana Hart Dyke, Tony Hender, Ian Howell, Sibylle Kreutzberger, Christopher Lloyd, Alison Mulvaney, John Paton, Graham Rice, Jean Sambrook, Chris Sanders, Keith Sangster, Terry Smale, Mike Smallwood, Brian Talman, Ray Waite, Victoria Wakefield, Stuart Williams

Senders of plants to the trial

Nurseries and Gardens:

Aline Fairweather, Hilltop Nursery, Beaulieu, Hampshire SO42 7YR
Blacksmiths Cottage Nursery, Langmere, Diss, Norfolk IP21 4QA
Blackthorn Nursery, Kilmeston, Alresford, Hampshire SO24 0NL
Cally Gardens, Gatehouse of Fleet, Castle Douglas, Scotland, DG7 2DJ
Cambridge University Botanic Garden, Cory Lodge, Cambridge, CB2 1JF
Catforth Gardens, Roots Lane, Catforth, Preston, Lancashire PR4 0JB
Coombland Gardens. no longer trading
Croftway Nursery, Yapton Road, Barnham, Bognor Regis, West Sussex, PO22 0BH
Glebe Cottage Plants, Pixie Lane, Warkleigh, Umberleigh, Devon EX37 9DH
Hardy's Cottage Garden Plants, Freefolk Priors, Whitchurch, Hampshire RG28 7NJ
Hellyer's Garden Plants, no longer trading
Hillside Cottage Plants, no longer trading
Hoo House Nursery, Gloucester Road, Tewkesbury, Gloucestershire GL20 7DA
Coen Jansen, Vaste Planten, Ankummer Es 15, 7722 RD Dalfsen The Netherlands
Linward Hardy Plants, 12 Sutton Close, Skegby, Sutton-in-Ashfield, Notts NG17 3DP
Margery Fish Garden, East Lambrook Manor, South Petherton, Somerset TA13 5HH
Meadow Cottage Plants, Pitt Hill, Ivybridge, Devon PL21 0JJ
Notcutts Nurseries, Woodbridge, Suffolk, IP12 4AF
Pennine Perennials, 15 Mount View, Upper Mill, Saddleworth OL3 6DB
Proculture Plants, Knowle Hill, Badsey, Evesham, Worcs WR11 7EN
RHS Garden Wisley, Woking, Surrey GU23 6QB
Spinners Garden, School Lane, Boldre, Lymington, Hampshire SO41 5QE
Stewart's Nursery, God's Blessing Lane, Broomhill, Holt, Wimborne, Dorset BH21 7DF
The Old Withy Garden Nursery, Cury Cross Lanes, Helston, Cornwall TR12 7AY
Waterpump Plants, Waterpump Farm, Ryeford, Ross-on-Wye, Herefordshire HR9 7PU

Individuals

M Baron; Mrs D Hart Dyke; L W Plants Christine Morley; Andrew Norton; Ms Robin Parer of USA; Allan Robinson.

Acknowledgements

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RHS Floral Trials Curatorial staff, headed by Jonathan Webster (Trials Supervisor)

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Andrew Norton (*Geranium* National Plant Collection® holder) and David Hibberd (author and genus specialist) have both been very generous with their time and expertise throughout the trial.

Elizabeth Strangman without whose enthusiasm and knowledge the trial would not have taken place.

David Victor, the *Geranium* registrar

Further reading

Bath, T. & Jones, J. (1994) *The Gardeners Guide to Growing Hardy Geraniums*. David & Charles, Newton Abbot
Bendtsen B. H. (2005) *Gardening with Hardy Geraniums*. Timber Press, Portland, Oregon.
Hibberd, D. (2003) *RHS Wisley Handbooks: Hardy Geraniums*. Cassell Illustrated, Great Britain
Parker, G. (ed.). (2001) *Hardy Geraniums for the Garden*. Hardy Plant Society, Pershore
Victor, D.X. (2nd edition, 2004) *Register of Geranium Cultivar Names*. The Geranium Group, UK
Yeo, P.F. (3rd edition, 2002) *Hardy Geraniums*. B T Batsford, London

Societies and websites

The Hardy Geranium Group. Secretary: Mrs T. Fraser, 16 Hallam Grange Croft, Sheffield S10 4BP

The Geraniaceae Group. Membership Secretary: Mr Peter Starking, 22 Northfields, Girton, Cambridge CB3 0QC

www.hardy geraniums.com – website of *Geranium* National Plant Collection® holder, Andrew Norton.

Stage 1 selection guide

Habit
1 = Groundcover
2 = Spreading
3 = Mound-forming
4 = Upright (including staked plants)

Blue-flowered plants in order of height

Name	Colour	Habit	Dimensions	Notes
G. pratense 'Wisley Blue' (1)	Pale violet (88D)	3	140 x 190cm	Very attractive but suffered from mildew in trial.
G. 'Orion' 🏆	Violet-blue (88A/B)	3	100 x 200cm	Extremely floriferous with large flowers marked with dark veins.
G. 'Nimbus' 🏆	Violet (87A)	3	100 x 180cm	Dark-veined flowers profusely borne.
G. pratense 'Plenum Caeruleum' (2)	Violet-blue (93B/C)	4	100 x 100cm	Attractive double flowers, petals pinkish at base, but spent flowers remain on plant.
G. 'Blue Cloud' 🏆	Pinkish violet (85A/B)	2	90 x 170cm	Floriferous with fine purple veins on flowers.
G. 'Johnson's Blue' (3)	Violet-blue (89C)	4	90 x 120cm	Flowers flushed pinkish violet.
G. pratense 'Plenum Violaceum' 🏆	Violet (87A) flushed pinkish (80A/B)	4	90 x 80cm	Beautiful double flowers but spent flowers remain on plant.
G. × *magnificum*	Purple	3	80 x 120cm	Flowers round periphery of foliage.
G. pratense 'Mrs Kendall Clark' 🏆	Violet-blue (91A)	4	80 x 80cm	Flowers flushed pinkish at centre with white veins.
G. pratense 'Cluden Sapphire' (4)	Purple-blue (94B)	4	80 x 80cm	Flowers flushed pinkish violet at base.
G. 'Prima Donna' (5)	Violet (92A)	2	70 x 150cm	Large flowers becoming pinker with age.
G. 'Stephanie' (6)	Violet (85A/B)	2	70 x 110cm	Attractive, glossy, yellow-green foliage.
G. 'Brookside' 🏆	Violet-blue (88B)	2-3	60 x 190cm	Centre of flowers pale, flowers borne on periphery of foliage.
G. 'Terre Franche' (7)	Violet-blue (88C) flushed pink (82B)	2-3	60 x 100cm	Attractive yellow-green foliage, petals veined dark purple.
G. pyrenaicum 'Isparta'	Purple-violet (82B) with paler eye	4	50 x 150cm	Pretty though flowers are small. Plant has fragrance of milk chocolate.
G. pratense Black Beauty ('Nodbeauty')	Violet (88C)	3	50 x 50cm	Compact growth. Foliage dark green, almost black at margins.
G. ibericum subsp. *jubatum* (8)	Violet-blue	2	45 x 100cm	Strongly notched petals with reddish purple, feathered veins.
G. 'Nunwood Purple'	Violet (88C)	4	40 x 140cm	Sprawling growth requiring support. Foliage yellowish.
G. renardii 'Whiteknights'	Violet (85B) flushed purple	3	40 x 65cm	Large-flowered with attractive wrinkly foliage.
G. pyrenaicum 'Bill Wallis'	Deep violet (82A)	2-3	40 x 50cm	Less vigorous than other cultivars of the species.
G. Rambling Robin Group	Pinkish purple	4	30 x 120cm	Attractive silvery foliage. Growth loose and open.

Only cultivars have been colour coded. Colour codes refer to the RHS Colour Chart.

Pink-flowered plants in order of height

Name	Colour	Habit	Dimensions	Notes
G. pratense var. *pratense* 'Elizabeth Yeo' (1)	Pinkish purple (74C)	4	115 x 150cm	Strong growing and floriferous.
G. palmatum	Purple-pink	3	110 x 210cm	Rosette-forming with large leaves and upright inflorescence.
G. asphodeloides subsp. *asphodeloides* 'Prince Regent' (2)	Pale pink (69C)	2-3	50 x 140cm	Inflorescence becoming very spreading with maturity.
G. 'Sue Crûg' (3)	Pinkish purple (74B)	3	45 x 100cm	Open habit. Flowers heavily veined purple.
G. × *riversleaianum* 'Russell Prichard'	Purplish pink (70A)	1	40 x 130cm	Attractive, silvery foliage. Requires good drainage.
G. 'Sirak'	Pinkish purple (78A)	2	35 x 70cm	Flowers borne around the periphery of the foliage.
G. 'Orkney Pink' (4)	Rich purple pink (closest to 78A)	3	35 x 65cm	Compact plant. Foliage dark yellow-green.
G. 'Pink Delight'	Pink (68B), paler at centre	1	30 x 110cm	Silvery foliage combines well with flower colour.
G. 'Mavis Simpson'	Pink (74C), paler at centre	1	20 x 55cm	Similar to 'Pink Delight' but with brighter flowers.

White-flowered plants in order of height

G. pratense var. *pratense* f. *albiflorum* 'Galactic' (1)	White, occasional violet stripes	4	110 x 100cm	Vigorous and attractive but suffered from mildew in trial.
G. pratense 'Striatum' (2)	White, streaked with violet	3	95 x 80cm	Good upright habit.
G. pratense 'Laura' (3)	White	3	90 x 130cm	A floriferous, double-flowered plant becoming twiggy with age.
G. pratense 'Album'	White.	4	90 x 80cm	Stamens inky blue-black.
G. 'Kashmir Green'	White, green towards centre	2-3	55 x 130cm	Flowers borne around periphery of foliage.
G. renardii	White with purple veins.	3	45 x 65cm	Foliage attractively wrinkled but not as floriferous as some.
G. himalayense 'Derrick Cook'	White with purple veins	2-3	40 x 130cm	Flowers borne on the periphery of the foliage.
G. clarkei 'Kashmir White'	White with pinkish purple veins	3	40 x 90cm	Attractive cut foliage. Flowers appearing greyish.
G. asphodeloides 'Starlight' (4)	White, tinged pink on veins	2	30 x 150cm	Unusual small, star-like flowers.

The Royal Horticultural Society

The RHS is the UK's leading gardening charity dedicated to advancing horticulture and promoting good gardening. Its charitable work includes providing expert advice and information, advancing horticulture, training the next generation of gardeners, helping school children learn about plants, and conducting research into plants, pests and environmental issues affecting gardeners. The RHS AGM plant trial scheme is an important part of this work.

The RHS receives no government grants and for every pound received from members' subscriptions we need to raise more than twice as much again to fund our charitable work. We also rely on donations and sponsorship to supplement income from our garden operations, flower shows, shops and plant centres.

RHS Plant Trials

With so many different types of gardener and so many different cultivars available to them in each group of plants, it is important that a system of recommendation is in place to help with selection at point of sale. These recommendations must be clear and reliable to ensure that of the thousands of plants available in the UK, a proportion are known to be excellent garden plants. The RHS provides this information through its extensive programme of plant trials held at RHS gardens in the UK. The RHS Award of Garden Merit 🏆 signifies the selection of the best plant for general garden use.

RHS plant trials serve the professional gardener who wants to know the range of plants available, including the latest breeding and selection programmes, with their distinctive characteristics and provenance. They also serve the amateur who wants to know which plants will grow and perform well in a particular garden situation.

The RHS has an unrivalled resource of knowledge and expertise and is therefore best placed to conduct plant trials for the UK gardening market.

RHS Herbarium

The RHS Herbarium keeps a record of trial cultivars as dried specimens with detailed descriptions and photographic images. This forms an important reference for the horticultural industry. Any new cultivars are highlighted and a Standard Specimen is preserved and described.

The RHS Herbarium, stored at RHS Garden Wisley, is the largest active horticultural herbarium in the world. At present the collection contains about 80,000 herbarium specimens and over 30,000 images of plants. Material is actively collected from a wide spectrum of sources including RHS plant trials.

RHS Bulletins

Canna: September 2003
Daisies (yellow, perennial): September 2004
Delphinium: June 2004
Lavender (hardy): July 2003
Miscanthus: October 2004
Potentilla (shrubby): July 2002
Potatoes (salad): November 2004
Saxifrages (silver): May 2005
Spiraea japonica (with coloured leaves): November 2003

These bulletins can be viewed at a larger size on the RHS Website:

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