

***Geranium*** is a genus of 422 species of annual, biennial, and perennial plants that are commonly known as **geraniums** or **cranesbills**. They are found throughout the temperate regions of the world and the mountains of the tropics, with the greatest diversity in the eastern part of the Mediterranean region.

The palmately cleft leaves are broadly circular in form. The flowers have five petals and are coloured white, pink, purple or blue, often with distinctive veining. Geraniums will grow in any soil as long as it is not waterlogged. Propagation is by semiripe cuttings in summer, by seed, or by division in autumn or spring.

Geraniums are eaten by the larvae of some Lepidoptera species including brown-tail, ghost moth, and mouse moth. At least several species of *Geranium* are gynodioecious.<sup>[1][2][3]</sup> The species *Geranium viscosissimum* (sticky geranium) is considered to be protocarnivorous.

## Name

The genus name is derived from the Greek γέρανος (*géranos*) or γεράνος (*geranós*) 'crane'. The English name 'cranesbill' derives from the resemblance of the fruit capsule of some of the species to a crane's head and bill. The ovary portion forms the head and the prolonged stigma creates the appearance of a beak.<sup>[4]</sup>



## Description

The flowers are typically five-petaled and white to purple. The leaves are palmate divided into narrow, pointed segments.<sup>[4]</sup>

The fruit capsule consists of five cells joined to a column produced from the centre of the flower. The cells form lobes which eventually separate, each containing one seed.<sup>[4]</sup> When the fruit is ripe, the beak-like stigma springs open and casts the seeds some distance, dispersing the seeds.

## Confusion with *Pelargonium*

Confusingly, "geranium" is also the common name of members of the genus *Pelargonium*, which are also in the family Geraniaceae and are widely grown as horticultural bedding plants. Linnaeus originally included all the species in one genus, *Geranium*, but they were later separated into two genera by Charles L'Héritier in 1789. Other former members of the genus are now classified in *Erodium*, including the plants known as filarees in North America.

Geranium

<i>Geranium dissectum</i>
Scientific classification 
Kingdom: <u>Plantae</u>
Clade: <u>Tracheophytes</u>
Clade: <u>Angiosperms</u>
Clade: <u>Eudicots</u>
Clade: <u>Rosids</u>
Order: <u>Geraniales</u>
Family: <u>Geraniaceae</u>
Genus: <u>Geranium</u>
<u>L.</u>
Species
<u>See list.</u>

The term "hardy geranium" is often applied to horticultural *Geraniums* to distinguish them from the *Pelargoniums*, which are not winter-hardy in temperate horticulture. However, not all *Geranium* species are winter-hardy (see below).

The shape of the flowers offers one way of distinguishing between the two genera *Geranium* and *Pelargonium*. *Geranium* flowers have five very similar petals, and are thus radially symmetrical (actinomorphic), whereas *Pelargonium* (and also *Erodium*) flowers have two upper petals which are different from the three lower petals, so the flowers have a single plane of symmetry (zygomorphic).

## Cultivation

A number of geranium species are cultivated for horticultural use and for pharmaceutical products. Some of the more commonly grown species include:

- *Geranium albanum* (crested cranesbill)
- *Geranium cinereum*
- *Geranium clarkei* (Clarke's geranium)
- *Geranium dalmaticum*
- *Geranium endressii* (Endres's cranesbill)
- *Geranium erianthum* (wooly geranium)
- *Geranium fremontii* (Fremont's geranium)
- *Geranium himalayense*, often sold under *Geranium grandiflorum*
- *Geranium ibericum* (Caucasus geranium),
- *Geranium macrorrhizum* (bigroot cranesbill or bigroot geranium)
- *Geranium maculatum* (wild geranium)
- *Geranium maderense* (giant herb robert)
- *Geranium* × *magnificum* (showy geranium)
- *Geranium phaeum* (dusky cranesbill)
- *Geranium platypetalum* (broad-petaled geranium)
- *Geranium pratense* (meadow cranesbill)
- *Geranium psilostemon* (Armenian cranesbill)
- *Geranium renardii* (Renard geranium)
- *Geranium sanguineum* (bloody cranesbill)
- *Geranium subcaulescens* (grey cranesbill)
- *Geranium sylvaticum* (wood cranesbill)

All the above species are perennials and generally winter-hardy plants, grown for their attractive flowers and foliage. They are long-lived and most have a mounding habit, with palmately lobed foliage. Some species have spreading rhizomes. They are normally grown in part shade to full sun, in well-draining but moisture retentive soils, rich in humus.<sup>[5]</sup> Other perennial species grown for their flowers and foliage include: *Geranium argenteum*, *G. eriostemon*, *G. farreri*, *G. nodosum*, *G. procurrents*, *G. pylzowianum*, *G. renardii*, *G. traversii*, *G. tuberosum*, *G. versicolor*, *G. wallichianum* and *G. wlassovianum*. Some of



Floral diagram of a *Geranium* garden hybrid called 'Ann Thomson', showing 5 free sepals, 5 free petals, 10 free fertile stamens, and a superior ovary consisting of 5 merged carpels, with 5 style branches



The "bill" and seed dispersal mechanism of *G. pratense*

these are not winter-hardy in cold areas and are grown in specialized gardens like rock gardens.<sup>[6]</sup> *Geranium* 'Johnson's Blue' is a hybrid between *G. himalayense* (southwestern China), with *G. pratense* (European meadow cranesbill).<sup>[7]</sup>

## Cultivars

The following hybrid cultivars have gained the Royal Horticultural Society's Award of Garden Merit (other cultivars are dealt with under their species name - see above):-<sup>[8]</sup>



Close up of a geranium flower  
(probably 'Johnson's Blue')

- 'Ann Folkard'<sup>[9]</sup>
- 'A. T. Johnson' (G. × *oxonianum*)<sup>[10]</sup>
- 'Ballerina'<sup>[11]</sup>
- 'Blue Cloud'<sup>[12]</sup>
- Blue Sunrise='Blogold' (PBR)<sup>[13]</sup>
- 'Brookside'<sup>[14]</sup>
- 'Danny Boy'<sup>[15]</sup>
- 'Dilys'<sup>[16]</sup>
- 'Gypsy' (G. × *lindavicum*)<sup>[17]</sup>
- 'Ivan'<sup>[18]</sup>
- 'Mavis Simpson'<sup>[19]</sup>
- 'Nimbus'<sup>[20]</sup>
- 'Orion'<sup>[21]</sup>
- Patricia='Bremptat'<sup>[22]</sup>
- Rothbury Gem='Gerfos'<sup>[23]</sup>
- Rozanne='Gerwat'<sup>[24]</sup>
- 'Russell Prichard'<sup>[25]</sup>
- 'Sirak'<sup>[26]</sup>
- 'Wageningen'<sup>[27]</sup>
- 'Wargrave Pink' (G. × *oxonianum*)<sup>[28]</sup>

## Gallery

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Pink Wild Geranium

Geranium  
maculatum

Geranium phaeum -  
from Thomé *Flora*  
von *Deutschland,*  
*Österreich und der*  
*Schweiz* 1885

Pink Geranium  
flowers in a flower  
farm

Pink Geranium



Geranium  
platypetalum



Geranium  
sanguineum



Geranium pratense  
(meadow cranesbill)



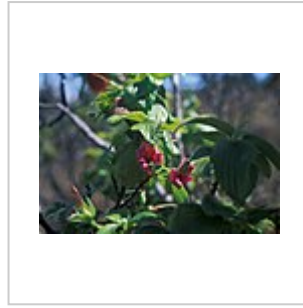
Geranium  
robertianum (herb  
robert)



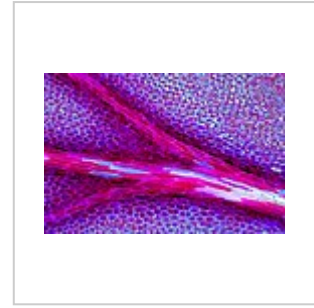
*Geranium maderense*



*Geranium maculatum*



*Geranium arboreum*



Geranium  
under  
microscope

petal  
the



*Geranium* (probably  
'Johnson's Blue')

## See also

- List of *Geranium* species

## References

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## External links

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- ITIS list of Geranium species ([https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=29104](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=29104))
  - Geranium Taxonomic Information System (<http://www.geranium.es/>)
  - Preparing Geraniums for Winter (<https://www.gardenbuildingsdirect.co.uk/blog/how-to-prepare-your-plants-to-survive-winter/>)
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