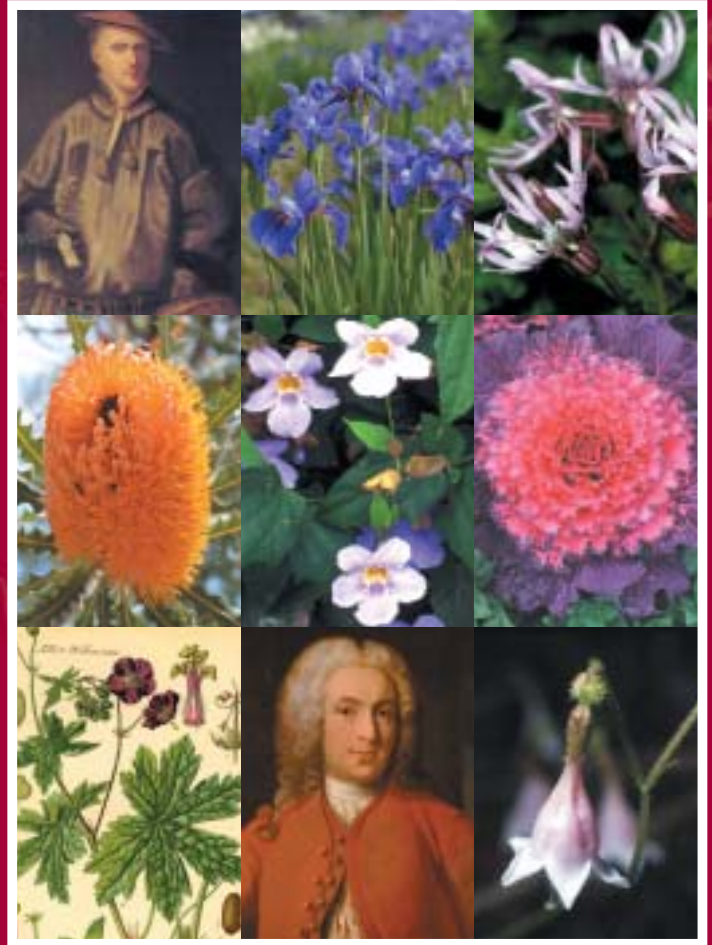


The  
**LINNEAN**  
**SOCIETY**  
of London



# Linnaeus' Legacy

300 YEARS OF NAMING NATURE

# If you do not know the names of things, the knowledge of them is lost too.

Carl Linnaeus, *Philosophia Botanica* (1751)



1

## What's in a name?

Giving something a name allows us to talk about it. Names are important not only for people, but also for the plants we cultivate in our gardens. In the early days of botany, in the 17<sup>th</sup> and early 18<sup>th</sup> centuries, plants were given long Latin phrases for names that described their particular botanical features. As more plants became known, names tended to become longer and longer, and more and more difficult to remember and use. Imagine, for instance, talking about two different types of geranium using the old names: *Geranium pedunculis bifloris, caule dichotomo erecto, foliis quinquepartitis incis; summis sessilibus* and *Geranium pedunculis bifloris folisque alternis, calycibus subaristatis, caule erecto*! How much easier it is to discuss *Geranium maculatum* and *Geranium phaeum*!



2

For these simplified names we have to thank Carl Linnaeus – the eminently practical Swedish botanist. Born in 1707, Linnaeus developed a passion for plants when still a boy. He became a medical doctor, but nature was always his abiding interest, and his studies took him to the great universities of Europe and on fieldwork across Scandinavia, including Lapland. Linnaeus clearly saw the drawbacks of long and unwieldy botanical names.

Linnaeus developed a two-word, binomial, naming system in his book *Species Plantarum*, published in 1753. The system gave each plant type a genus name and a second ‘trivial name’ – the species name. Before *Species Plantarum*, some plants did have two-word names, but Linnaeus’ innovation was to apply a consistent and uniform system to *all* plants (and ultimately animals too). The simplicity of the method delighted many botanists, and it soon caught on. This same system is still used today to name new species of plants and animals, and to communicate about them scientifically.

Linnaeus used Latin for his names, not just because Latin was the language of scholarship at the time, but also because it provided a common language across the globe. The Latin name of a plant can be understood by anyone – from England to China to Argentina – whatever its common name in the local language. Latin names are the universal language of botany.

Although Linnaeus dispensed with long descriptive names, his two-word names still tell something about the plant itself: they can describe its appearance, what it is used for or where it grows. Names can also be chosen to honour colleagues or competitors. Every name has a story.



3

26. GERANIUM pedunculis bifloris foliisque  
 calycibus subaristatis, caule erecto.  
 Geranium pedunculis bifloris alternatim  
 superne nudiusculo infidentibus. Hort.  
 Hort. ups. 198. Roy. Lugdb. 350.  
 Geranium montanum fulcum, Baub. pin.

GERANIUM  
 calycibus subari  
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 ERANIUM p  
 ecem-angulatis.  
 anium peduncu

## Plants named for their appearance

Linnaeus used many descriptive names because they are simple and easy to remember. *Cardamine bulbifera*, for instance, is named for the tiny bulb-like plantlets it bears on its upper leaves; *Trillium erectum* for its three bracts, petals and sepals; and *Carex remota* for its widely spaced flower heads (*remota* means scattered). Colour is a common characteristic used in plant names. *Geranium phaeum* refers to the dusky red colour of the flowers, from *phaeos*, the Greek for dark coloured; *Lamium maculatum* is named for its spotted leaves (*macula* is Latin for spot).



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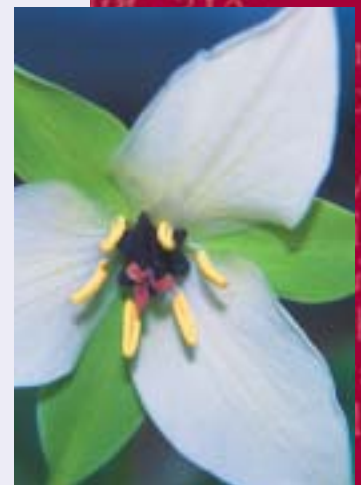
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Botanists can be quite fanciful in their choice of characteristics to use as names. The scientific name of the ragged robin, for example, *Lychnis flos-cuculi*, refers to another of its common names (flos-cuculi or cuckoo flower), which in turn refers to its flowering time in early spring – when the cuckoos are singing. The delicate *Primula auricula* is named for the shape of its petals (*auricula* means little ear).

- 1 *Geranium phaeum*
- 2 Carl Linnaeus from the 'Bridegroom Portrait' (1739)
- 3 *Species Plantarum* (1753)
- 4 *Cardamine bulbifera*
- 5 *Primula auricula* 'Immaculate'
- 6 *Lychnis flos-cuculi*
- 7 *Lamium maculatum* 'Silver Beacon'
- 8 *Trillium erectum* f. *albiflorum*



8

GERANIUM pedunculis bifloris foliisque alternis, phaeo  
 calycibus subaristis subaristatis, caule erecto.  
 Geranium pedunculis bifloris alternatim cauli integro  
 superne nudiusculo infidentibus. Hort. cliff. 343. \*  
 Hort. upl. 108. C. 198. Roy. lugdb. 350.  
 Plantanum fuscum. Baub. pin. 318.  
 Geranium biflorum. Bauh. pin. 318.



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## Plants named for where they grow

Some plants grow only in particular places, and species are often named for where they occur or where they were first discovered. Botanists usually use the Latinised form of place names: *Symphytum orientale*, for instance, is a plant from Turkey (*orientale* means from the east), while *Iris sibirica* is from eastern Russia, including Siberia, and *Meconopsis cambrica* was first described from Wales (*Cambria* is the Latin name for Wales), while *Fritillaria persica* (Persia) is native to Iran and Central Asia.

Some plants are known only from tiny areas – *Juniperus bermudiana*, for example, is native only to the tiny island of Bermuda, and the fact that ‘kentia’ palm’s range is limited to Lord Howe Island is commemorated in its genus name, *Howea*.

But mistakes can be made! *Scilla peruviana* is not from Peru, but is a native of the Mediterranean region. One story is that Linnaeus used this species name to commemorate the ship *Peru* that brought the plant to northern European gardens.

Plant names can also be used to tell us something about the habitat the plant is found in. *Sylva* means woods, and this features in the name of many woodland species, such as *Geranium sylvaticum* and *Fagus sylvatica*. *Geum rivale* is a plant of wet places; this is reflected in its name – *rivale* meaning ‘growing by streams’.



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### Plants named for their uses

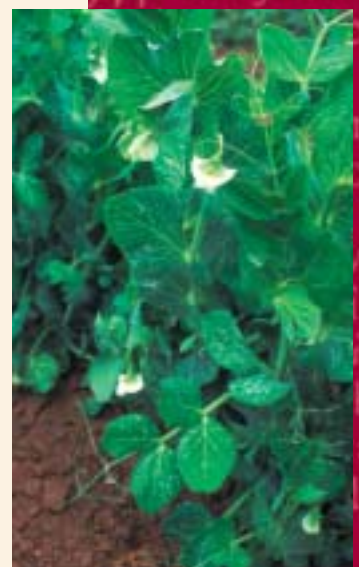
People have an especially intimate relationship with plants; they provide our food, our construction materials and many of our medicines. Any plant with the species name '*officinalis*' was probably once used as a medicine. The name comes from *opificina*, shortened to *officina*, which referred to a storeroom in a monastery – monks often being skilled in the medical uses of plants. Some plants were believed to have healing properties if they resembled a part of the body. The plant *Pulmonaria officinalis* records both these name origins – *Pulmonaria* refers to the plant's spotted leaves resembling (supposedly!) lungs. It was therefore thought to relieve lung conditions.

Other plants record their medicinal use in their name. *Anthyllis vulneraria* was used by the Greeks and Romans in the treatment of wounds (*vulnus* means wound), and today is still considered to have healing properties.

The names of food plants also give clues to their use. The species names of *Pisum sativum* (garden pea), *Lathyrus sativus* (grass pea) and *Raphanus sativus* (radish) indicate that they are all grown for food (*sativus* means sown, planted or cultivated). *Brassica oleracea*, the humble cabbage, is also named for its usefulness – *oleracea* means coming from the kitchen garden, or *olerarium*.



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- 9 *Iris sibirica* 'Percheron'
- 10 *Geum rivale*
- 11 *Scilla peruviana*
- 12 *Howea* – 'kentia' palms

- 13 *Brassica oleracea* 'Northern Lights'
- 14 *Raphanus sativus* '18-day'
- 15 *Pulmonaria* 'Margery Fish'
- 16 *Anthyllis vulneraria*
- 17 *Pisum sativum* 'Early Onward'



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## Plants named for people

What better way to honour a colleague or commemorate a life spent in the service of science than to name a plant after them? This tradition began in Linnaeus' day, and still continues today. Linnaeus named many plants after his friends. *Alstroemeria*, for example, honours Baron Clas Alströmer, who first collected this plant. Linnaeus used the name *Sarracenia* to recognise Michael Sarrazin, a physician from Quebec, who used the plant to treat smallpox. *Fothergilla* honours John Fothergill, the Quaker doctor who shared plants grown in his garden in Stratford so generously with Linnaeus.

Linnaeus' beloved students, or 'apostles', were honoured with particularly beautiful plants – *Kalmia* for Per Kalm, who explored North America, *Thunbergia* for Carl Peter Thunberg, who went to South Africa and *Ternstroemia* for Christopher Tärnström, who died in Vietnam on his way to China. Linnaeus' son named the Australian genus *Banksia* for Sir Joseph Banks, who took Linnaeus' pupil Daniel Solander on the *Endeavour* voyage with James Cook that brought many Australian plant specimens to Europe.

It is not considered good form to name a plant after yourself, but Linnaeus, ever confident, had the distinguished Dutch botanist Jan Gronovius name *Linnaea borealis*, the tiny creeping Lapland herb, known as 'twinflower', in his honour. Linnaeus loved this little plant and took it as his emblem. Tongue in cheek, Linnaeus wrote, '*Linnaea* ... is a plant of Lapland, lowly, insignificant, disregarded, flowering but for a brief space – from Linnaeus who resembles it.'

Today's botanists are also honoured by their colleagues with plant names. The species name of the Costa Rican orchid *Masdevallia (Reichantha) chasei* refers to Mark Chase, whose work using DNA to uncover plant relationships has revolutionised our ideas about plant families. The genus name for *Dransfieldia micrantha*, a palm from New Guinea only named in 2006, honours the palm expert John Dransfield. Both these botanists have been Linnean Society Medal winners for their groundbreaking scientific research.

- 18 *Sarracenia purpurea*
- 19 *Thunbergia grandiflora*
- 20 *Alstroemeria* 'Red Beauty'
- 21 *Linnaea borealis*
- 22 *Banksia ashbyi*

## Linnaean tradition today

The Linnaean tradition continues today, innovation coupled with continuity is integral to the science of taxonomy – the discovery, description and documentation of plants and their evolutionary relationships. Modern botanists discover thousands of new species of flowering plants every year and continue to coin names for them using Linnaeus' binomial system. Without names, both old and new, we could not communicate the results of scientific endeavour, nor work together to conserve plants and ecosystems around the world. Linnaeus left us an incomparable legacy, not only in his life's work, but also in a simple naming system that we still use today to describe and document plant beauty and diversity in a consistent and universal way.

“*Precise names are the universal language with which we communicate, not only to understand, but also to conserve, plant diversity.*”

Peter Raven, President, Missouri Botanical Garden, USA

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*A living forum for biology*

## The Linnean Society of London

*'The cultivation of the Science of Natural History in all its branches'*

The Linnean Society of London is the world's oldest active biological society. Founded in 1788, the Society takes its name from the Swedish naturalist Carl Linnaeus (1707–1778) whose botanical, zoological and library collections have been in its keeping since 1829. As it moves into its third century the Society continues to play a central role in the documentation of the world's flora and fauna – as Linnaeus himself did – recognising the continuing importance of such work to biodiversity conservation.

### A living forum for biology

The Society uniquely embraces the entire sweep of natural history. It promotes the study of all aspects of the biological sciences, with particular emphasis on evolution, taxonomy, biodiversity and sustainability. It encourages and communicates scientific advances in these and associated fields through its three world-class journals, special publications, meetings and website. At the same time, the Society reaches out to future biologists through schools and educational programmes.

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Front cover, top left,  
Linnaeus in Sami  
dress, Linnean Society

23 The Library (2007)

24 Burlington House (c. 1870)