

Onion

Allium cepa

Native range: Uncertain origin

Type: Fleshy bulb

Height: 1 foot (30 cm)

Onions have changed the course of history? Surely not! Well, it turns out the humble onion has provided science with some tearful revelations, assisted with the classification of the world's plants, and even helped to create the stereotypical image of a Frenchman, with his beret, striped sweater, and string of onions over the handlebars of his bike.

SHEDDING TEARS

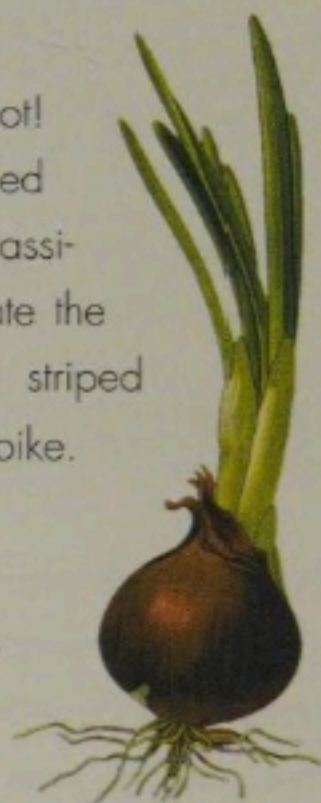
Cut into an onion, and a chemical—thiopropional-S-oxide—is released. It is a substance that reacts on the eye like a pepper spray: we are reduced to tears. Are these onion tears as genuine as the tears of grief? Charles Darwin, after much research, concluded that tears of sadness were no different from those shed by the onion cutter. Tears, he concluded, were a simple device to wet and protect the eye. He was proved wrong when the twentieth-century American biochemist William Frey discovered that while all tears are composed of water, mucus, and salt, tears of sadness contain additional proteins, suggesting that when people cry the body is having an emotional clear-out of stress-related chemicals. Shedding real tears is good for you.

**If the boy have not a woman's gift,
To rain a shower of commanded tears,
An onion will do well for such a shift.**

William Shakespeare, The Taming of the Shrew, 1592

It was but one of the helpful contributions made to science by the onion. The vegetable may have originated in southwest Asia as long ago as 5,000 years, but it is difficult to really "know your onions." Being one of the oldest of the world's vegetables (the pea, the lettuce, and the onion's cousin, the leek, are close contenders), it seems to have spread through the world, causing confusion in its wake.

The onion was a staple part of the diet in Greek and Roman times, with the Romans naming it *unio*, a word that suggests a singular, pearl-like quality, perhaps a reference to the translucent appearance of the peeled onion. Earlier in history, Egyptian slaves building the Great Pyramid of Cheops were fed on onions, garlic, and leeks; one Egyptian mummy was laid to rest holding an onion and there have even been suggestions of a strange cult devoted to the onion.



Both onion and garlic (*A. sativum*) have traditionally possessed mystical qualities. If garlic could ward off vampires, an onion (carried on the left-hand side) kept disease at bay. Burning an onion on a fire was a charm against bad luck, while just dreaming of an onion brought good fortune. Placing an onion under the pillow on St. Thomas' Eve (December 20) presented the sleeper with a vision of his future wife.

ALL IN THE NAME

The onion acquired as many names as there were different varieties: there were English "jibbles" and French *ciboule*, German *Zwiebel*, and Sanskrit *ushna*. It was a relief when Carl Linnaeus came along to sort it all out.

Linnaeus was born in a turf-roofed timber cabin at Råshult near Lake Mökeln, Sweden, in 1707. He was the eldest child of the parish priest and fanciful gardener, Nils Ingemarsson Linnaeus. Nils once created a curious raised bed in his garden to represent the family dining table, using shrubs to portray the dinner guests at supper. Carl was as intrigued by this horticultural oddity as he was by the natural world. Nils encouraged his son, teaching him the correct plant names and giving the child a plot of his own to cultivate. The garden was a good educator and Carl became a committed naturalist and gardener.

He left home to study medicine at his father's old university in Uppsala at a time when a flood of new plants was reaching Europe from overseas, brought home by adventurous Dutch, French, and English mariners from newly explored corners of the globe. In the ensuing horticultural confusion, some plants acquired several names, making the task of systematically giving them each a single scientific name something of a nightmare. Linnaeus went on to fix the calibration for the garden thermometer (it had been devised by Anders Celsius with the boiling point set at zero, until Linnaeus persuaded the inventor to reverse the calibration). He mastered the craft of growing bananas in the Netherlands and he set the standards for future botanical gardens

ONION JOHNNIES

In northwest Brittany, France, when the onion crop was in, young Breton men would borrow the family bike and, carrying as many strings of onions as they could hang on the handlebars, ride down to the fishing ports of Saint-Brieuc and Tréguier. They were departing on the *ournée d'Albion*, the trip to England to sell early onions door-to-door to English housewives. The Onion Johnnies, as they became known, wore the traditional Breton berets and sweaters just as their forefathers had done before them. It is a practice that has all but died out, although the stereotype of the Frenchman persists to this day.



GARLIC CHARM

A member of the same family (Alliaceae) as the onion, almost all parts of the garlic plant can be used in cooking, including the leaves and flowers.

such as the Eden Project in Cornwall, England. But above all, he cleared up the confusion with the onion and created a system for classifying every living plant and animal.

At Uppsala, Linnaeus befriended a fellow student, Peter Artedi, who shared his fascination with the natural world. Together the two

young men hatched the ambitious plan of classifying all of God's plants and creatures. They divided the task of classifying the animal and plant kingdoms between them and swore that whoever finished first would come to the aid of his

friend. When, in 1735, Artedi drowned after falling into an Amsterdam canal, Linnaeus undertook the whole task himself. When he died in 1778, possibly due to overwork, he had successfully created a system that has lasted to the present day.

Up until then, plants like the onion went by a variety of vernacular names and several, sometimes conflicting, Latin names. The Greek physician, Dioscorides, had diligently named some 500 plants in his *De Materia Medica* around the time of Christ, but it would be another thousand years before his work was disseminated, first among Arab scholars and then in the Christian world. But Linnaeus, in his two-volume *Species*

Plantarum (1753), classified all the 5,900 known plants, each with its own two-word name in Latin. By the 1700s, botanists and naturalists agreed that different plants could be grouped in the same families: the onions, leeks, and garlic in the lily or Liliaceae family; beans, peas, and sweet peas in the legume or Leguminosae family; and corn (maize) and bamboo in the grass (Poaceae) family.

These plant families could be subdivided into distinct groups, or genera, and again into different species, and again into subspecies. After throwing out or shortening some of the old Latin names, Linnaeus used the genus for the first name (as with *Pisum*) and the species for a second name

It is the genus that gives the character, and not the characters that make the genus.

Carl Linnaeus (1707–1778)

HEALTHY BALANCE

The *Tacuinum Sanitatis* (1531) was a guide to health that included a summary of the hazards and benefits of various plants and foodstuffs. The print below, which featured in the original publication, shows farm laborers picking garlic.



CARL LINNAEUS

After the first edition was published in 1735, *Systema Naturae* was reprinted ten times in two decades. Together with another book, *Species Plantarum* (1753), also by Linnaeus, it became the bedrock of modern botanical nomenclature.

(as with *P. sativum*, or the garden pea). The convention is to use a capital letter for the genus (*Pisum*), the lower case for the species (*sativum*), abbreviating it when it was repeated (*P. sativum*) and adding a deferential “L” if it had been published by Linnaeus himself, as with *P. sativum* L. Additional varieties, cultivars (plants that are cultivated for particular traits), or subspecies were noted with an additional name: *P. sativum* “Kelvedon Wonder,” for example.

A degree of order was brought to the rather confused world of the onion when Linnaeus began to divide the genus *Allium* into various species, such as *A. porrum* (leek), *A. schoenoprasum* (chive), *A. sativum* (garlic), and *A. fistulosum* (Welsh onion). He classified the genus and species of plants within families according to the number of stamens and stigmas they have—an approach known as a “sexual system” of classification. One of his contemporaries was Johann Siegesbeck, a St. Petersburg academic after whom Linnaeus named the *Siegesbeckia orientalis* plant. When Linnaeus published his findings, Siegesbeck denounced his work as “lewd.” How, he ranted, could onions be up to such vegetative immorality? Even worse, how could young people be taught “so licentious a method” of classification? Despite its “loathsome harlotry,” Linnaeus’ system was adopted universally and the Swedish naturalist became a household name.

Linnaeus was a modest man and stipulated for his funeral arrangements: “Entertain nobody . . . and accept no condolences.” But when he died in January 1778, his instructions were ignored. Even the King of Sweden came to pay his respects at the funeral of the man who gave a name to the onion, and to every other plant in the world.

OLD AS ONIONS?

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The leek, *Allium porrum*, may be older than the onion. It was listed as an ingredient in one of the world's oldest recipes, a lamb and leek stew inscribed on a 4,000-year-old Babylonian tablet. The Greeks called it *prasa*, the Arabs *kurrats*, and the Romans, who brought the leek into northern Europe, *porrum*. The Celtic Welsh, who did their best to resist the invading Romans, called it *cenhinen* and adopted the leek as their national plant. The reason for this is something of a mystery, although, given their love of song and oration, it may have been associated with the leek's throat-soothing, mucilaginous qualities. Another legend is that soldiers fixed leeks to their hats before a battle so that they could identify one another.