

## Intriguing World of Weeds

### English Daisy (*Bellis perennis* L.)<sup>1</sup>

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"Daisies burn April grass with silver fires." John Clare (1793-1864), *Poems Descriptive of Rural Life and Scenery*, 1820.

#### INTRODUCTION AND ETYMOLOGY

The English daisy, *Bellis perennis* L., is a widespread lawn weed and a bane to those who favor daisy-free lawns and golf courses. The generic name *Bellis*, a designation used by Pliny, means "pretty"; *perennis* means "through the years," "continuing," or "perennial" (Gledhill 1985; Mabberley 1989). While pretty, the English daisy is a persistent weed that spreads by short stolons (Tutin et al. 1976).



It is a member of the cosmopolitan family Compositae, which encompasses 1,100 genera and 25,000 species (Heywood 1993). The genus *Bellis* comprises about 15 European and

Mediterranean species. Some of them are medicinal and some are cultivated ornamentals, especially forms of *B. perennis*. The signature of this species is a flower head that closes at night and in wet weather (Tutin et al. 1976).

Other common names for English daisy include daisy, dog daisy, day's eye, herb Margaret (because it was the emblem of Queen Margaret, wife to King Henry VI of England), bruisewort (Allan 1978; De Bray 1978), and bairnwort because children made daisy chains by slitting the stems and threading the flowers through them.

It took centuries for the word *daisy* to acquire its modern-day spelling. About A.D. 1310, Thomas Wright in his *Specimens of Lyric Poetry* stated, "Dayes-eyes in thio dales." In 1588, William Shakespeare in *Love Labour's Lost* wrote, "Daisies pied and Violets bleu." Joseph Addison in *The Tatler* (1710) wrote, "Visits to a Spot of Daizies, or a Bank of Violets." Finally, in 1803, John Leydon in *Scene of Infaney* inscribed, "When evening brings the merry folding hours, / And sun-eyed daisies close their winking flowers" (Simpson and Weiner

1989). Slang phrases using daisy are well known: "to push up daisies" or "to turn one's toes up to the daisies" obviously means to be in one's grave (Simpson and Weiner 1989).



English daisy (*Bellis perennis* L.)

Many are the legends and superstitions connected with the daisy, and it is the harbinger of spring. St. Louis of France wore a ring engraved with the daisy, the thing he most treasured (Hatfield 1969). Folklore maintains that if you dream of daisies in spring or summer, it's a sign of good luck, but it is a sign of bad luck to dream of them in fall or winter (Durant 1976).

Daisy is also the common name for oxeye daisy,

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*Chrysanthemum leucanthemum* L., another weedy species found in fields and along roadsides throughout the U.S. Native to Europe and Asia, it has been naturalized as a weed in North America. Although to English poets wild daisies were essential to a proper pastoral setting, in practical terms, both English and oxeye daisies are persistent weeds (Hatfield 1969). In *The Farmer's Encyclopedia*, published in 1851, English daisies were described as "gawky-looking flowers, and notwithstanding their celebration by poets, are a blemish in a neat grass-plot" (Durant 1976).

### DISTRIBUTION AND DESCRIPTION

While English daisy is native to Europe and western Asia (Hatfield 1969), it is now distributed in England, Germany, Iraq, Spain, Yugoslavia, Chile, New Zealand, and the U.S. (Holm et al. 1979). It was introduced to the U.S. as an ornamental and also with grass seed.

A perennial, it infests lawns, pastures, and waste places. Although confined chiefly in the Pacific Northwest, it also occurs locally in the northeastern states and southward (Muenscher 1948). In its range, it is one of the most common plants of short turf and lawns and meadows, and similar grassy places (Clapham et al. 1962; Le Strange 1977).

The leaves of English daisy are obovate or spatulate, entire or wavy margined, and form a basal tuft or rosette 5 to 20 cm across. From the axils of some of the rosette leaves, short prostrate shoots often develop, giving rise to the familiar patches formed by old plants growing in lawns. In bright sunlight, the leaves press down on the surrounding soil or vegetation, but in shady and moist situations, the internodes tend to lengthen and the leaves bend upwards.

Its stems are simple and leafless, may grow from 1 to 2 dm high, and are terminated by a solitary head of flowers ranging from 3 to 5 cm in diameter. The involucre bracts are herbaceous, and occur in two rows. The ray flowers are numerous, distillate, and may be white, pink, or rose in color; the disk-flowers are always yellow. The flower head closes at night but opens in sunlight, a process that starts about 1½ h after sunrise and is completed in about an hour and a half. The flowers are produced mainly from about March to November, but year-round in mild-winter areas. The achenes are linear, about 2 mm long, finely striate, and yellow-brown in color; the pappus is bristly. Seeds are dispersed by wind, normally just around the parent plant; but the fruits are often distributed to a distance in mud, by birds, and also

by ants (Hatfield 1969; Le Strange 1977; Muenscher 1948; Salisbury 1961).

### ORNAMENTAL VALUE

By the Elizabethan period, several double-flowering varieties of the English daisy had been introduced into English gardens (Le Strange 1977). Today, the cultivated varieties of *B. perennis*, treasured as ornamentals, are those that have been bred for size and in colors that range from white to purple to red. They come in both single- and double-flowered forms (Hatfield 1969; Hyam and Pankhurst 1995) and often are treated as an annual for winter-spring bloom in hot-summer areas. It is considered an edging or low bedding plant, being especially captivating with spring bulbs (Sunset Books 1979).

### MEDICINAL USES

The English daisy was long valued for its ability to heal (Higgins 1980), and several of its folk names came from its reputed curative powers. John Gerard, the 16th-century herbalist and surgeon, noted in his famous *Herball*, "The leaves stamped take away bruises and swellings proceeding of some stroke, if they be stamped and laid thereon, whereupon it was called in old time Bruisewort" (Hatfield 1969). Indeed, in the Middle Ages, Crusaders made an ointment from the plant to heal their bruises, broken bones, and wounds.

Gerard recommended English daisy as a catarrh cure, and said in his earliest herbal, "The juice of the leaves and rootes snift up into nostrils purgeth the head mightilie of foule and filthy slimie humours: and helpeth the Megrim [migraine]." The plant also is good for heavy menstruation, in the form of a decoction, which is also reputed to be good for rheumatism, bronchitis, and similar ailments; chewing the fresh leaves will help to cure mouth ulcers (De Bray 1978; Higgins 1980). Gerard also pointed out that the English daisy was the best sort to use in physic. Another notion: eating three heads of daisies after having a tooth pulled will alleviate toothaches forever (Durant 1976).

Nicholas Culpeper, in his *Herbal of the English Physician* (1652), referred to the plant as Little Daisy and relates: "The leaves, and sometimes the roots, are used, and are reckoned among the traumatic and vulnerary plants, being used in wound drinks, and are counted good to dissolve congealed and coagulated blood, to help the pleurisy and peripneumonia." He goes on to recommend infusions "just boiled in asses milk" as "very effectual in consumption of the lungs." Decoctions of

the whole herb taken inwardly, and cataplasms of the leaves applied, were used in the treatment of "varicose veins pains and aches—especially of the liver, including inflammation—and of the joints fevers—agues—the King's Evil" and a little later on "for the scurvy" (Le Strange 1977).

Another early custom practiced throughout parts of Europe during the medieval period was to administer milk laced with English daisy juice to puppies "to keep them small" for use as lapdogs, or, as Gerard put it, to "keepeth them from growing great." This practice of stunting growth had already spread to children. A small child would be kept that way on purpose and made to look much older than he really was by regularly feeding him on the juices of the English daisy and several other common herbs (Le Strange 1977).

Currently, the English daisy is rarely or ever prescribed in herbal medicine, although in some countries the rather acrid-tasting leaves are used as a potherb (Le Strange 1977). It is also used to make daisy whisky, the good old country tippie. The basic ingredient, of course, is daisies, and enough flowers, without stalks, must be gathered to loosely fill a gallon measure (Hatfield 1969).

### WEEDINESS

Centuries ago, the English proclaimed, "When you can put your foot on seven English daisies, summer is come" (De Bray 1978). Heavy infestations frequently occur in lime-deficient lawns. The plant has the ability to manufacture lime, thus making it a troublesome weed. In the past, a lawn control recommendation was to dig out all the plants with a plantain lifter, filling the small holes with a mixture of soil and grass seed (De Bray 1978). The English daisy has an acrid secretion in its foliage that makes it unpalatable to insects (Hatfield 1969).

Research shows that population differentiation exists in English daisy. Plants grown in four grassland types and subjected to different management, viz. old established lawns; intensively grazed grasslands; grasslands seasonally reduced in height by cutting and/or grazing; and grassy areas not seasonally reduced in height by

grazing and/or mowing were investigated for a 17-month period. Plants in certain lawns and heavily grazed grasslands were significantly reduced in height. Most of the plants in the experiment grew successfully and approximately 60% produced seeds, indicating that there was no evidence of distinct "races" of English daisy in the regularly defoliated habitats of lawn and pasture studied.

In 1901, Neltje Blanchan in *Nature's Garden* expounded on the plant's weediness. "A naturalized immigrant from Europe and Asia, how could it so quickly take possession? In the over-cultivated Old World no weed can have half the chance for unrestricted colonizing that it has in our vast unoccupied area. Once released . . . they find life here easy, pleasant; as if to make up for lost time, they increase a thousandfold . . . Small wonder that our fields are white with daisies" (Durant 1976).

### LITERATURE CITED

- Allan, M. 1978. *Weeds*. New York: Viking Press. 191 p.
- Clapham, A. R., T. G. Tutin, and E. F. Warburg. 1962. *Flora of the British Isles*. Cambridge, Great Britain: Cambridge University Press. 1267 p.
- De Bray, L. 1978. *The Wild Garden*. New York: Mayflower Books. 191 p.
- Durant, M. 1976. *Who Named the Daisy? Who Named the Rose?* New York: Dodd, Mead. 214 p.
- Gledhill, D. 1989. *The Names of Plants*. 2nd ed. Cambridge, Great Britain: Cambridge University Press. 202 p.
- Hatfield, A. W. 1969. *How to Enjoy Your Weeds*. London: Frederick Muller. 116 p.
- Heywood, V. H. 1993. *Flowering Plants of the World*. New York: Oxford University Press. 335 p.
- Higgins, R. S. 1980. Daisy [*Bellis perennis*]. *Garden* (New York Botanical Garden). 4:6-7.
- Holm, L., J. V. Pancho, J. P. Herberger, and D. L. Plucknett. 1979. *A Geographical Atlas of World Weeds*. New York: J. Wiley. 391 p.
- Hyam, R. and P. Pankhurst. 1995. *Plants and Their Names, A Concise Dictionary*. Oxford, Great Britain: Oxford University Press. 545 p.
- Le Strange, R. 1977. *A History of Herbal Plants*. London: Angus and Robertson. 304 p.
- Mabberley, J. D. 1989. *The Plant-Book*. Cambridge, Great Britain: Cambridge University Press. 706 p.
- Muenscher, W. D. 1948. *Weeds*. New York: Macmillan. 579 p.
- Salisbury, E. 1961. *Weeds and Aliens*. London: Collins. 384 p.
- Simpson, J. A. and E. S. C. Weiner. 1989. *The Oxford English Dictionary*. 2nd ed. Oxford, Great Britain: Clarendon Press. 22 vols.
- Sunset Books. 1979. *Sunset New Western Garden Book*. Menlo Park, CA: Lane Publishing. 512 p.
- Tutin, T. G., V. H. Heywood, N. A. Burges, D. M. Moore, D. H. Valentine, S. M. Walters, and D. A. Webb. 1976. *Flora Europaea*. Volume 4. Cambridge, Great Britain: Cambridge University Press. p. 111.
- Warwick, S. I. and D. Briggs. 1980. The genecology of lawn weeds. IV. Adaptive significance of variation in *Bellis perennis* L. as revealed in a transplant experiment. *New Phytol.* 85:275-288.