

Weed profile – Gallant Soldier *Galinsoga parviflora*

In the first issue of the Organic Grower we focused on Fat Hen, the most ubiquitous of weeds. This time the spotlight is on a rather lesser known species, but one worthy of a few moments' consideration nevertheless. It is an annual weed of the compositae family that has infested my walled garden and while the couch grass, creeping thistles, bindweed and others have been kept at bay the gallant soldier has been marching on relentlessly.

Gallant soldier (a corruption of its Latin title) is an inoffensively named plant recalling a line from a catchy Planxty song I seem to remember, but its true nature can belie this impression. No thanks then to the bright spark from Kew who thought it would be a good idea to introduce it to these shores (from Peru) in 1796. Only seven years later it was described as 'quite as common as groundsel' in the area between Kew and East Sheen. It has since become a well-established weed of arable and

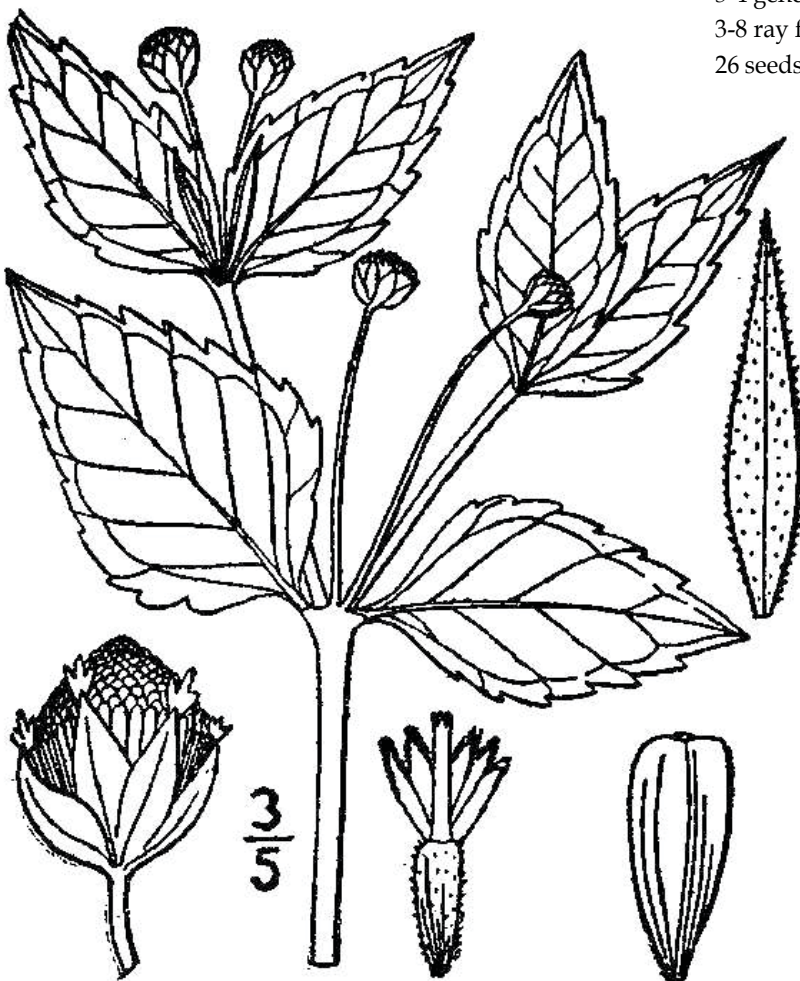
particularly horticultural land, especially in South East England and particularly frequent on sandy soil. As well as my particular patch of Leicestershire I have also seen it at Sunnyfields near Southampton and Flights Orchard in Herefordshire. In the 1970-1980's it became tolerant to the herbicides used in lettuce and increased rapidly in the southern counties where lettuce was grown repeatedly. I have to salute gallant soldier for its speed of growth, adaptability and profligacy of its seeding make it very successful in its opportunism. There is also a closely related 'shaggy soldier', *G. quadriradiata* that is similar in appearance and distribution, but generally less common.

What makes it tick?

Gallant soldier flowers from May to October, or until killed by frost. It can cross or self-fertilise and may have 3-4 generations in a year. The composite flower head has 3-8 ray flowers and 15-50 disc flowers. There are around 26 seeds (achenes) in a flower head. The average number of seeds per plant is 2,000 but a large plant can have up to 15,000 seeds, and a possible total of 400,000 has been suggested. The seeds are shed 11 to 14 days after flowering. The main period of seedling emergence is from March to October and generally follows soil cultivation. However, seedlings are frost sensitive. Light is needed for germination and soil burial induces dormancy in the seeds. Seeds germinate from the surface 0-20 mm of soil. Subsequent growth is encouraged by high temperatures.

Persistence and spread

In the soil seedbank both ray and disc seeds remain viable for up to 2 years. The ray seeds may persist at a low level beyond this time. Viable seeds were still present in trials after 5 years, in cultivated soil. Seeds that have been recovered during house demolitions and dated at 20 years old have been reported to germinate. Seeds are dispersed by the wind and on clothing. The spread of gallant soldier has been calculated at 1.6 km over 10 years.



USDA- NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. Illustrated flora of the northern states and Canada. Vol. 3: 502.

Management

As with other annual weeds control is by repeated surface cultivations and it is vital to prevent seeding. Seedlings can come into flower very quickly and should be hoed off when small. With little seed dormancy, regular cultivations can eliminate gallant soldiers in 3-4 years if there is no further seeding. The fibrous nature of the rooting system enables it to keep growing after hoeing, if it remains in contact with the soil, a nightmare in a season such as this last one, especially as it seems slower to wilt than other weeds. It can also re-grow from stem fragments after cultivation. Putting a field down to grass/clover ley for the same period has also proved effective. A thick organic mulch will also prevent seedling emergence. It can make an effective green manure if let to grow in the autumn on bare ground and will be killed by frost, just don't let it seed! The luxuriant green growth will out-perform most commercial green manures and the mass of fibrous roots will improve soil structure.

What you may not know about Gallant Soldier...

Gallant soldier can be rubbed on the body to treat nettle stings, as you would use dock, and the juice of the plant can be applied to treat wounds as it helps coagulate the blood. It is poisonous to goats but edible for us and is said to be a useful salad plant, rich in minerals. That's a relief as the odd leaf has made it into my salad packs! Maybe it is a case of personal taste, as I find the texture too fibrous and the after-taste not too pleasant to include on an intentional basis. It is better cooked, used as a



herb added to soups and stews and is part of Ajiaco, the national dish of Columbia. This is a chicken soup, with potatoes, onions, sweetcorn, capers, celery and leeks. The gallant soldier, or guascas as it is known in Columbia, is added minced at the end of cooking with coriander and thick cream (I used crème fraîche), and is delicious! The fresh juice can, apparently be mixed and drunk with tomato or other vegetable juices, if you're into that sort of thing. So if you're losing the battle (my last military pun, I promise) with it as a weed, just set about marketing it!

Phil Sumption

This article is loosely based on the review of gallant soldier on the www.organicweeds.org.uk website, with thanks to Bill Bond and Becky Turner.

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