



Department of  
Agriculture, Conservation,  
Environment and Land Affairs

# Pompom Weed

ARC • LNR

an invader of grasslands that  
threatens conservation and agriculture in South Africa

compiled by Lesley Henderson, Jeremy M Goodall & Hildegard Klein,  
ARC-Plant Protection Research Institute, July 2003.



Pompom weed has fluffy pink flowers and brown wind-dispersed seeds.



Pompom weed tubers and new aerial shoots arising from a short woody rootstock.



Infestation at the Voortrekker Monument in Pretoria

Pompom weed (*Campuloclinium macrocephalum* (Less.) DC.) is an ornamental South American herb belonging to the daisy family, Asteraceae. It is rapidly becoming the most serious threat to the conservation of grasslands in South Africa. Infestations become conspicuous when the plants are in flower between December and March, transforming the veld from green to pink. The plant initially establishes itself in disturbed sites such as roadsides, but then invades natural grasslands, open savanna and wetlands. This weed displaces native species, reducing both the biological diversity and carrying capacity of vleis and veld.

## Origin and distribution

Pompom weed has a wide natural distribution that extends from Argentina in South America to Costa Rica and Honduras in Central America and Mexico. How or when the plant was introduced into South Africa remains unknown. The earliest record in the Pretoria National Herbarium is of a specimen collected in Johannesburg in 1962. Currently it is most prominent in Gauteng, but also occurs in Mpumalanga, Limpopo, NW Province, KwaZulu-Natal, E Cape and Free State.

The earliest record of its establishment in the wild is from Westville near Durban in 1972 and 1974 for the Fountains Valley in Pretoria. In the 1980's its distribution expanded in the Pretoria area, and it was also recorded from Hilton in KwaZulu-Natal and Wolkberg in Limpopo Province. In the 1990's it spread further to Port St Johns in Eastern Cape, Rooiberg in Limpopo and Nelspruit in Mpumalanga. From 2000 to 2003 it exploded in Gauteng and was recorded for the first time in the Free State at Kroonstad. During the same period there was much spread in the Nelspruit, White River and Barberton areas.

## Morphology

Pompom weed is a perennial, erect herb up to 1.3 m high. The stems and leaves are covered with rough, bristly hairs. Leaves are scattered along the length of the stem but clustered at the base to

form a rosette. The plant has a short woody rootstock that ends in thick tuber-like perennial roots. In spring shoots arise from, and in autumn die back, to the rootstock. The showy pink flowerheads are produced in dense clusters at the ends of the aerial stems. Each flowerhead consists of hundreds of tiny, star-shaped florets surrounded by purple bracts. Mature florets each produce a single-seeded dry fruit (achene) with a tuft of hairs (pappus) that promote wind dispersal.

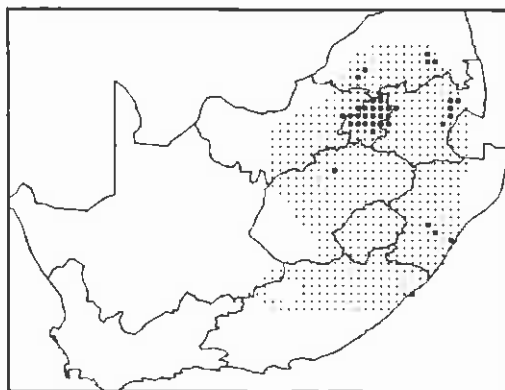
## Ecology

Pompom weed has put considerable investment into its perennial underground structures (rootstock and tubers). The annual shoots and leaves visible in summer only account for about 30% of the total biomass. It survives fires and frost during the winter months because all its living components are in a dormant state underground. Under drought conditions during summer the plant can revert to a dormant state by withdrawing its nutrients from the shoots back into the roots. It has therefore evolved strategies to survive and multiply in grassland and savanna ecosystems in South Africa.

Preliminary observations in Gauteng indicate the weed is tolerant of a wide range of growing conditions. It is able to establish on most soil types. Highly disturbed sites such as roadsides and abandoned fields are occupied as readily as are under-grazed grasslands and open savanna. In bottomlands it is usually seen in association with another invasive alien plant, purple top (*Verbena bonariensis*).

### Characteristics that contribute to the 'weedy' nature of pompom weed

- prolific seed production
- vigorous growth from seed to flowering in one growing season
- ability to produce new stems from a rootstock
- efficient wind dispersal of the seed, combined with enormous reproductive potential, enables it to rapidly encroach large areas.
- ability to establish in disturbed or denuded areas after fires
- drought tolerant
- tuber-like food storage organs enable it to recover rapidly after winter or damage
- aerial stems, leaves, flowers and seeds are suspected of containing allelochemicals which inhibit the growth of other species
- retreats underground during winter – and people tend to forget about it - 'out of sight out of mind'
- very ornamental and is being spread by people who are ignorant of its weed status
- long distance seed dispersal by 'flower pickers', roadside grass cutters and vehicles
- potentially wide distribution and altitudinal range (0 – 1900m or more)



The current (bold dots) and potential distribution of pompom weed.

## Legislation

Pompom weed is a declared weed (category 1 plant) according to the Conservation of Agricultural Resources Act, Act 43 of 1983, and amended in March 2001. In terms of Regulation 15A concerning category 1 weeds, it is illegal to harbour, plant, propagate or sell pompom weed. Landowners are therefore compelled to control pompom weed by whatever means is deemed appropriate.

## Management and control

Management should aim to maintain the natural vegetation in a healthy, productive state as this will help to limit pompom invasion. This may require a combination of control methods together with agro-pastoral practices such as mowing, burning and minimum tillage with grass overseeding. Pompom weed is sensitive to a range of herbicides but as yet no herbicide has been registered for its control. For advice on herbicide control contact Mr Jeremy Goodall (details below).

Physical methods of control include uprooting and burning the plant. However this is only recommended where there are few plants, as disturbance of the soil will only encourage further invasion of weeds.

It is not advisable to plough lands with pompom weed, as this will damage the rootstock, stimulating further vegetative growth and denser stands.

Spread of the plant can be limited by preventing seed production. Aerial stems can be cut right back before the flowers produce seed. However be warned that the plants will be stimulated to produce more stems and in order for this method to work the plants will have to be cut back several times until the end of the growing season. Repeated cutting back of aerial growth should deplete nutrients stored in the roots, weaken the plant and limit seed production. This method however is only practical on a small scale.

All aerial parts of pompom weed are suspected of being able to chemically inhibit the growth of other plants (allelopathy). Allelochemicals can even be leached out of dead plant material. Where there is little pompom weed it is advisable to remove all stems from the site, being careful not to spread the weed further, and dispose by burning.

Biological control using introduced insects and pests of pompom weed is only in the planning stage, and it will be several years before any agents could be released.

Send locality records of pompom weed to: Lesley Henderson, stationed at National Botanical Institute, Private Bag X101, Pretoria, 0001  
Tel 012 804 3200  
Fax 012 804 3211 e-mail lh@nbipre.nbi.ac.za  
Include date, GPS or nearest town, habitat, abundance

For further information contact: Jeremy Goodall, Cedara Weeds Lab, Pietermaritzburg  
Tel 033 3559416 e-mail ntjg@natal1.agric.za  
Hildegard Klein, Rietondale Weeds Division,  
Tel 012 3569841 Fax 012 329 3278  
e-mail riethdb@plant2.agric.za

For more ARC-PPRI publications on weeds go to the website: [www.arc-ppri.agric.za](http://www.arc-ppri.agric.za)

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