



# African Daisy

Department of Primary Industries

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## Common and scientific names

African daisy, winged groundsel.

*Senecio pterophorus* DC.

Family Asteraceae (daisy family)

The name African daisy is also used for species of *Osteospermum*.

## Origin and distribution

African daisy is native to South Africa and was introduced to South Australia in ship ballast at Port Lincoln in about 1930. From there it spread to the Adelaide Hills and occupied much of the southern Eyre Peninsula and south-east South Australia in areas with over 500 mm annual rainfall. It was first collected in Victoria in 1908 at Coode Island and 1909 at North Melbourne but apparently failed to spread from these introduction points. It did not become notably invasive in Victoria until about 1972 and current infestations are believed to be a result of spread from South Australia. Numerous infestations have been found in Victoria: in the southern Wimmera and South West (Douglas, Cavendish, Greenwald, Mt Napier, Portland), the Avoca-Maryborough-Clues area, in areas near Horsham, Dandenong, Bendigo and Mildura and at Somerville, Crib Point, French Island and other localities in the Port Phillip region.

African daisy tolerates a wide range of soil types and occupies areas with 500 to 1500 mm annual rainfall. In Victoria it is mainly a weed of roadsides, wastelands, denuded and newly sown pastures and forest margins. Plants grow in a variety of situations from well-drained hillsides to semi-waterlogged areas.

## Description

An erect herb or shrub generally about 1.5 m high, with a perennial crown and a ground cover diameter of 2 to 2.5 m at 2 years old; reproducing from seeds.

**Stems** – several growing from a central crown, generally 1 to 1.5 m high but up to 3 m, grey-green or green, stout, woody when mature, soft and sappy when young; with longitudinal, parallel, raised, ridges and serrated ridges on the lower sections, the ridges more pronounced on younger



*Figure 1. African daisy.*

plants; stems usually covered with white hairs like cobwebs when young, but becoming smooth and hairless.

**Leaves** – leathery, upper surface dark green, rough, becoming hairless and often shiny, under side covered with dense white or grey woolly hairs; narrow lance-shaped, 50 to 120 mm long and 3 to 25 mm wide (mainly 7 to 15 mm); margins with 2 to 8 forwardly directed teeth or without teeth (upper leaves). Towards the top of the plant the leaves are longer and narrower and are more serrated than toothed. The leaf margin is often curled under and there are usually short wings at the leaf base which continue onto the stems as ridges.

**Flowers** – yellow, numerous in flattened heads 5 to 30 cm (mostly 10 to 20 cm) across at the ends of stems; each head consisting of 40 to 200 or more flowers; each flower bell-shaped, 12 to 15 mm wide, surrounded by 18-22 bracts with hairy brown tips and up to about 20 shorter and smaller bracteoles (small leaf-like appendages below and outside the bracts surrounding the flowers); each flower consisting of 9 to 13 petal-bearing female florets 4 to 7

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How much do they cost you?**

mm long arranged around the outer edge, and 40 to 95 tubular florets (lacking petals) grouped in the central disc.

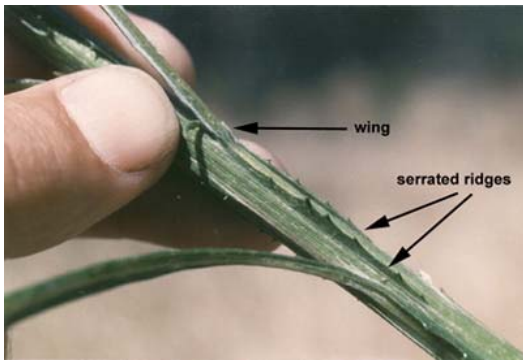


Figure 2. Stem of African daisy showing distinctive wings at the base of the leaf stalk (inclined against and pointing up the stalk) and serrated stem ridges.



Figure 3. Leaf of African daisy.

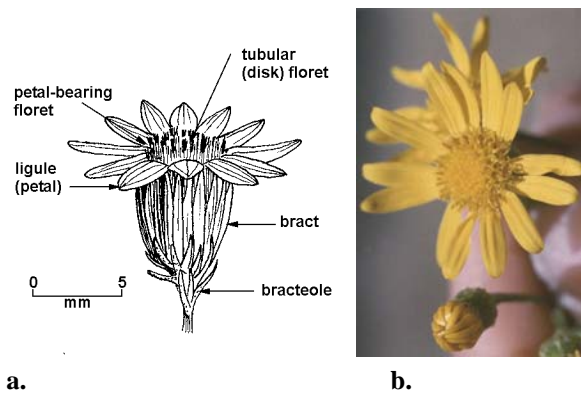


Figure 4. Flower of African daisy: a. showing the floral parts and the overall bell shape; b. mature flower and flower bud.

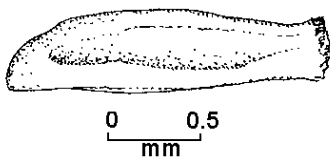


Figure 5. Seed of African daisy with pappus detached.

**Seeds** – 1.5 to 2 mm long, oblong to cylindrical, brown or reddish-brown with a pappus (parachute) of fine hairs to 5 mm long that is readily detached.

**Roots** – much branched, fibrous, shallow, extending mat-like up to 3 m from the crown.

Established plants produce new growth from the crown after autumn rains. Seeds germinate mostly in autumn with some germination through winter. Stem growth is rapid in late winter and spring. Flowering commences in November and continues until autumn. Seeds mature 2 to 3 weeks after the flowers open. A mature plant produces about 50,000 seeds per annum. Plants can live for as long as 7 to 10 years.

**Similar species**

*Senecio* includes about 1500 species and is one of the largest genera of flowering plants in the world. There are 37 species in Victoria, 5 of which are naturalised aliens. Ragwort, *Senecio jacobaea*, is the best known of these weeds. African daisy is most likely to be confused with the common native *Senecio linearifolius*, fireweed groundsel, which has cylindrical rather than bell-shaped flowers, leaves that are usually not woolly-white underneath and tends to occur in taller forests.

The following characters together enable African daisy to be separated from all other Victorian *Senecio* species, both native and introduced: Flowers yellow, bell-shaped, each consisting of outer ligulate florets and tubular inner florets. The ligulate florets have a strap-like petal (ligule), which is 4 to 7 mm long; there are 18 to 22 bracts around the flower that are fused for less than half their length; bracteoles are present; the undersides of the leaves are covered with white woolly hairs; the maximum leaf width is 25 mm; the leaves lack stem-clasping bases and at least the lower leaves have several prominent, forward-pointing teeth. If difficulty is experienced in identifying a plant, consult the keys and descriptions in Walsh (1999) or forward a specimen to the Herbarium of Victoria.

African daisy is known to form sterile hybrids with *Senecio hypoleucus* in the Mount Lofty Ranges, and *S. glomeratus* and *S. picrioides* on the Eyre Peninsula.

**The Problem**

African daisy is an aggressive weed that establishes after disturbance, particularly bushfires, clearing and soil degradation, and can outcompete other plants and become dominant. In agricultural areas heavy losses in productivity can result. In natural areas the plant is a strong competitor, forming dense thickets that exclude native species. Infestations tend to naturally thin out after a period of initial dominance.

The plant contains the toxic alkaloids senecionine and seneciphylline but is rarely eaten by grazing livestock. No stock deaths have been reported in Australia, however a test in South Africa showed that a sheep fed the equivalent of 8% of body weight over 9 days suffered severe jaundice

**All land managers have a responsibility to control weeds on their property.**

and died.

## Dispersal

The pappus of the seed is easily shed so seeds are rarely dispersed far from the parent plant by wind. Some dispersal occurs by seed movement in water over the ground surface. Seeds are also carried in mud adhering to animals, on clothing and machinery, in contaminated agricultural produce and road-making materials.



*Figure 6. Flowering heads of African daisy.*

## Management

***Some control methods described in this note are only effective if used in combination with other control options as part of a long-term management program.***

***If used in isolation, these methods do not effectively destroy the plant, allowing it to re-shoot or continue to grow. Authorised officers from DPI or DSE may direct landowners to undertake specific control activities to ensure methods are used that are capable of destroying plants and preventing their spread.***

***Where directed to do so, landowners must use the method or methods as directed by the authorised officer. In most cases the landowner will be able to choose from a variety of options appropriate for use in their particular situation.***

Long term management programs must be initiated in order to control African daisy effectively. In planning these programs integrated management strategies will achieve the best results. Early treatment of new infestations prior to plants reaching the flowering stage should be a priority.

### **Limiting dispersal**

Efforts should be made to ensure that machinery and animals that enter infestations are clean before movement to new areas.

### **Manual control**

Isolated plants and small infestations should be hand pulled in winter and spring when the ground is soft. To prevent seed dispersal, flower heads should be cut from plants and placed in a plastic bag for disposal. Larger plants should be cut close to ground level and the stem-stumps painted with herbicide.

### **Mechanical control**

Repeated slashing of dense infestations will minimise flowering and seed production.

### **Pasture management**

Cultivation followed by establishment of a strong competitive pasture with a legume component will control African daisy. Soil disturbance is likely to bring on a flush of seedlings. During the establishment phase of the pasture the emerging African daisy plants should be hand pulled or slashed.

In pastures that cannot be cultivated, sheep or goats should be grazed heavily to destroy seedlings.

Seedlings establish readily on bare ground created by overgrazing. Pastures in susceptible areas should be managed to prevent invasion.

### **Chemical information**

The Australian Pesticides & Veterinary Medicine Authority (APVMA) is responsible for the assessment and registration of agricultural and veterinary chemicals in Australia. As chemical products are registered on a daily basis and renewal of these registrations are undertaken each financial year, there is much change in the registration status of products each year. APVMA information is available at: <http://www.apvma.gov.au/>

The Chemical Standards Branch (CSB) of the Department of Primary Industries provides information on agricultural chemicals registered in Victoria and their uses. Enquiries will be referred through the Customer Service Centre on 136 186. Information can also be obtained by visiting the Chemical Standards Branch website: [www.dpi.vic.gov.au/chemicalstandards](http://www.dpi.vic.gov.au/chemicalstandards)

***Under Victorian legislation there are controls on the use of agricultural chemicals. It is the responsibility of the user to be familiar with these controls. These responsibilities are outlined in Agriculture Note AG0520: "Responsible use and handling of farm chemicals".***

Farm chemicals are registered for specific uses. Each chemical has a 'product label', which documents the approved use and the approved rate of use within each State of Australia. This label is important in determining the appropriateness of chemical use.

***Choose only products registered for use on African feather grass in your particular situation. Read the product label carefully and follow all label instructions.***

**Early treatment of new infestations will give you the best value for your weed control dollar.**

Your chemical retailers can provide information on registered chemical products that are available in their store. They can also supply a 'material safety data sheet' which outlines the health and safety issues associated with use of a product.

**Legal use of some restricted chemicals requires the user to possess an Agricultural Chemical User Permit (ACUP). Other chemicals have restrictions on their use in Agricultural Chemical Control Areas (ACCAs).**

Information on ACUPs, ACCAs and other chemical information can be found at the website:

<http://www.dpi.vic.gov.au/chemicalstandards>

Use a product containing active constituents registered for use in Victoria to control African daisy in the particular situation in which you need to use chemical control, eg. in pastures. Consult the product label for detailed information.

Herbicide should be applied when plants are actively growing, immediately prior to flowering. Plants should be thoroughly wetted.

Isolated plants and small areas can be spot-sprayed. Specialist application by high volume misting is effective on large infestations and steeper ground.

### Further advice

- Contact your local landcare or friends group for further assistance and advice.
- Call the DPI/DSE Customer Service Centre on 136 186.
- Contact your local DPI Pest Management Officer Catchment Management Officer for advice on local programs.
- Visit the DPI website at: <http://www.dpi.vic.gov.au> and the Weeds Australia website at: <http://www.weeds.org.au>



*Figure 8. Seedling of African daisy.*



*Figure 7. Mature African daisy plant.*

### References

- Everist, S.L. (1981) *Poisonous Plants of Australia*. Rev. Ed., Sydney, Angus and Robertson.
- Parsons, W.T. and Cuthbertson, E.G. (1992) *Noxious Weeds of Australia*. Melbourne, Inkata Press.
- Walsh, N.G., 1999. Senecio. Pp. 941-965 in Walsh, N.G. and Entwisle, T.J. (Eds.) *Flora of Victoria Volume 4. Dicotyledons, Cornaceae to Asteraceae*. Melbourne, Inkata Press.

### Acknowledgements

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The advice provided in this publication is intended as a source of information only. Always read the label before using any of the products mentioned. The State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

**Working together is the best way to tackle weeds.  
If you're having a weed problem, your neighbours are too.**