

Bathurst burr

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What you should know about Bathurst burr

Bathurst burr (*Xanthium spinosum*) is a shrubby plant originating in South America. It is in the composite or daisy family, *Asteraceae*, which includes many weeds, such as thistles, as well as useful crops, garden plants and native species. Bathurst burr has spread to become a major weed in many regions of the world including the Mediterranean, Africa, the USA and New Zealand. In America it is called spiny cockleburr. Bathurst burr is a declared plant in Western Australia.

Bathurst burr is believed to have first arrived in Australia as burrs tangled in the tails of horses imported from Chile. It became established near Bathurst in NSW in the early 1800s and is now widespread in the Eastern States. In WA it is confined to parts of the goldfields and the Nullarbor with occasional outbreaks elsewhere. Infestations in agricultural areas are not common because of vigorous action taken to prevent the spread of the weed once it has been found. Imports of livestock, wool and agricultural produce from other states are carefully inspected to reduce the risk of further introductions of the weed.

Noogoora burr (*Xanthium occidentale*) is a closely related plant that is found in northern WA (see Farmnote 97/99).

Why Bathurst burr matters to you

Bathurst burr is mainly a pasture weed but it is also a weed of summer growing crops such as cotton, sugarcane, grapes, soya beans and maize. The weed spreads entirely by seeds. Burrs are usually carried by people or animals, attached to clothes, fur or other fibres by their hooked spines. Burrs may also be dispersed by water or as a contaminant in seed or hay, and have occasionally been found as a contaminant of imported birdseed.

Bathurst burr seedlings are poisonous, especially the cotyledons (seed leaves). Young plants are quite palatable to stock, but older plants are not eaten. Some people develop dermatitis from handling the plants. The main problem in Australia is burr contamination of wool. The burrs are difficult to remove during processing, so buyers pay lower prices for contaminated fleeces. Burrs also make stock unpleasant to handle.



Bathurst burr has conspicuous spines and burrs

What to look for

Bathurst burr is an erect, much-branched, bushy plant. It usually grows to about 45 cm high but may reach 1.2 metres. It is best recognised by the presence of three-pronged, straw coloured spines set in the angle between the leaf stalk and the stem. These spines are up to 25 mm long.

The leaves are arranged alternately on the stem. They are thick in texture with three lobes; a large central lobe and two smaller side lobes. The upper surface is dark green with prominent veins, while the lower surface is pale with downy hairs. The stem is hairless.

Bathurst burr flowers are small and inconspicuous. They are greenish white and set in the angle of the leaves.

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Burrs showing hooked spines

Those near the top of the stem are mostly male while female flowers form further down. Egg-shaped burrs about 10 mm long form from the female flowers. These are covered with numerous hooked spines, perfectly adapted for attaching to wool and other fibres.

Life history of Bathurst burr

Bathurst burr is a mainly summer growing annual plant, but plants can germinate at other times of the year if conditions are favourable. It reproduces only from seed. Some mature plants survive well into winter, with the result that burrs may be found for most of the year.

The plant flowers from January until autumn, producing up to 150 burrs per plant. Each burr has two cells, with each cell containing one brown, flattened seed about 9 mm long. Seeds are known to remain viable for at least three years. Dormancy depends on the permeability of the seed coat. High temperatures break this down. Day length and daytime temperatures may also control germination. The result is a staggered germination, which makes seedlings difficult to control and allows the plant to exploit the variable environmental conditions under which it grows.

What you can do about Bathurst burr

Practice good biosecurity to keep Bathurst burr and other weeds off your property. For example, take particular care when purchasing fodder to avoid buying anything contaminated with weed seeds or toxic plants. Ensure contractors entering your property have clean equipment to avoid the introduction of new weeds.

It is an offence under the *Agriculture and Related Resources Protection Act 1976* (ARRPA) to sell or transport produce or other material contaminated with declared plants. All offences under ARRPA should be reported to the nearest office of the Department of Agriculture and Food.

Prompt action is necessary to eradicate new and/or isolated patches of Bathurst burr and to prevent the weed becoming established in new areas. Report suspected Bathurst burr or any other unusual weeds as soon as possible. In country areas, contact the nearest



Rosettes



Mature plant

office of the Department of Agriculture and Food, or call the Pest and Disease Information Service on Freecall 1800 084 881.

For identification of suspected Bathurst burr or any other new or unusual weeds, please take a sample to the nearest office of the Department of Agriculture and Food, or post a sample to *AGWEST* Plant Laboratories, Locked Bag 4, Bentley Delivery Centre WA 6983 (Tel. 9368 3721).

For further information on Bathurst burr identification or control, go to www.agric.wa.gov.au and type "Bathurst burr" in the search box or contact your local Biosecurity Officer.

Where can I get more information about Bathurst burr?

The book *Noxious Weeds of Australia*, by W.T. Parsons and E.G. Cuthbertson (2001, CSIRO Publishing) has detailed information about all species that are declared plants or noxious weeds in every State.

Two useful sources of weed information are the Weeds CRC (Cooperative Research Centre) webpage www.weeds.crc.org.au, and the Weeds Australia webpage www.weeds.org.au.