



Prickly Problems and Spikey Snacks

A Guide to Identifying Bindis, Burrs and Prickles

They may be a nuisance, and you most certainly don't want them around when walking barefoot, but bindi-eye and burrs are a favourite snack of birds in Central Australia, and we guarantee that you'll have a variety of bird species feasting on them in your garden. We have produced this pictured guide so you can identify what prickles the birds in your backyard are eating, or what's embedded in the bottom of your foot.

Burr-Daisies

Calotis belong in the family Asteraceae and of the 26 species, 24 are endemic to Australia. There are approximately seven species of *Calotis* in the Alice Springs region. The most common that you will come across is Bogan Flea (*Calotis hispidula*), common in gardens around the area.

Calotis as a name comes from the Greek '*kalos*' meaning beautiful and '*otos*' meaning ear; after the ear-shaped pappus of the Purple Burr-daisy (*Calotis cuneifolia*).

Blue Burr-daisy, Purple Burr-daisy

Calotis cuneifolia

Perennial herb with erect to prostrate stems, that are sparsely branched, covered in hairs and woody at the base. White to mauve daisy flowers, either solitary or in clusters of two to three. Producing brown, round, spiny fruit-heads that release triangular-shaped seeds with two long spines at one end.



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Showy Burr-daisy

Calotis cymbacantha

Annual/perennial herb with erect, branching and hairy stems, becoming woody at the base. Yellow flower-head in loose clusters of two to five flowers. Brown round spiny fruit-head with seeds that have two large spines.



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Tangled Burr-daisy

Calotis erinacea

Undershrub to 90 cm high, forming dense clumps. Branching and hairy stems, becoming woody at the base. Yellow flower-head in loose leafy cymes with numerous flowers. Dark brown to black round spiny fruit-head with triangular seeds possessing two short, curved and barbed spines at one end.



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Bogan Flea, Bindi-eye, Hairy Burr-daisy

Calotis hispidula

A prostrate herb to 30 cm wide with bright green leaves and irregular teeth at the tip. Round and prickly bindi-like seed pods are produced.



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Leafy Burr-daisy, Yellow-flowered Burr-daisy

Calotis latiuscula

Perennial herb to 40 cm high with erect branching stems and woody at the base. Yellow flower-heads in loose leafy terminal cymes of 4-30 flowers. Brown, dense round spiny fruit-head with brown wedge-shaped seed to 2 mm, with numerous hairy spines at one end.



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Woolly-headed Burr-daisy

Calotis plumulifera

Annual herb to 50 cm high with branching and haired erect or ascending stems. Flower-head of 2-8 white or mauve florets in loose leafy terminal cymes. Brown, round and spiny fruit-head. Brown woolly seed to 2 mm long, possessing numerous barbed spines at one end.



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Channel Burr-daisy

Calotis porphyroglossa

Annual herb to 40 cm high with branching erect or ascending hairy stems. Mauve flower-head solitary or in loose cymes of 2-8. Brown, round and spiny fruit-head. Brown triangular seed to 1.5 mm, which is hairy and has spines at one end.



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Saltbush

Originally classified within *Bassia* and *Sclerolaena*, the Cannon-ball Saltbush is now classified within *Dissocarpus* and therefore stands on its own, though looks similar to other *Sclerolaena* on casual observation. The naming comes from *Dissos* meaning two fold and *carpos* meaning fruit.

There are two species generally found within Central Australia.

Twin Flower Saltbush, Twin-horned Copperburr

Dissocarpus biflorus var. *biflorus*

Annual or perennial to 40cm tall. Leaves linear to flattened cylindrical and hairy, up to 1 cm long. Woody fruiting perianth hairy, with two or more horns, spines absent.



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Cannon-ball Saltbush, Curious Saltbush, Hard-head Saltbush

Dissocarpus paradoxus

paradoxus: contrary to the usual type, anomalous.

Annual or perennial to 50 cm high. Woolly branches with white, woolly, slender and semiterete leaves, 15 mm long. Woolly fruiting perianth to 15 mm, covered in hooked spines.



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Occurs on clay or on scalded zones.

Dysphania

Dysphania belong in the family Chenopodiaceae with approximately 11 species found in the Alice Springs region. The most common in the region is Pale-fruit Crumbweed (*Dysphania melanocarpa*) known to produce prickly fruit, while the others tend to have softer fruit that lack prickles *.

* Pending confirmation

Pale-fruit Crumbweed

Dysphania melanocarpa

Upright herb germinating after winter rains. It has bright green stems and leaves, which are heavily scented. Produces black seeds with prickles.



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Tumbleweed

Salsola, like the *Sclerolaena* genus, belongs in the family Chenopodiaceae (though some botanists classify it under Amaranthaceae). Of the 28 species, two debatable varieties are found in the Alice Springs region, though taxonomy for the subspecies are constantly being revised and therefore the species differences aren't defined here.

Salsola, Buckbush, Rolypoly, Tumbleweed, Prickly Saltwort, Soft Rolypoly, Slender Saltwort, Russian Thistle

Salsola tragus ssp. *tragus*

Salsola australis

Large herb or sub-shrub to 1 m with variable-shaped soft needle-like leaves. Prefers disturbed sites and when the plant is dead it produces a tumbleweed. While the fruit do not produce prickles as such, prickly spines develop around the fruits when dried.



Burrs

Belonging to the family Chenopodiaceae, all 80 species of *Sclerolaena* are endemic to Australia. Pictured below are some of the *Sclerolaena* species that are common in the Alice Springs region.

Note that an additional species of Burr known as Squash Bush (*Sclerolaena urceolata*) is not listed here as it lacks the characteristic spines. Pearl Copper Burr (*Sclerolaena limbata*) and *Sclerolaena minuta* not included due to only a few observations in the region.

Goathead Burr, Bassia Burr

Sclerolaena bicornis var. *bicornis*

bicornis: 2 horned, referring to the fruit.

Branching shrub to 50 cm high. Succulent leaves 8-10 mm long with simple hairs. Woody fruiting perianth is white and woolly with two (rarely three) divergent spines 5-15 mm long.

Distinguished from other species by large, densely white hairy fruiting perianth with two long spines.

Grows in red and black clayey soils, often in disturbed areas. It is an indicator of poor soil condition.



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Tall Copper Burr

Sclerolaena convexula

A perennial forb up to 40 cm high, with a covering of silky hairs. Small, pointy leaves 0.5-1 cm long. Woody fruiting perianth has five short spines.

Distinguished from the similar *S. costata*, however the perianth has more hairs.

Found in most habitats except for sand dunes, saline areas, claypans and heavy soil plains dominated by Mitchell Grass.



Cartwheel Copper Burr

Sclerolaena cornishiana

cornishiana: named after William Cornish, 19th century SA Government surveyor.

Small, branched woolly annual or perennial forb, 30-60 cm height. Small soft and dense shrub with whitish hairs. Leaves are oblong to oblanceolate and 9-30 mm with medium to dense often woolly simple hairs. Woody fruiting perianth 3-6 mm, densely hairy, with five or six spreading spines 4-7 mm long.

Distinguished from *S. deserticola* by differences in leaf, fruit and spine characteristics as well as different habitat preference.

Occurs in small colonies on sandplains, alluvial flats, red earth plains and swales, rocky or gravelly slopes and intermittent watercourses and run-on areas.



Ribbed Bindi-eye

Sclerolaena costata

Perennial up to 30 cm high with fleshy, linear leaves 4-17 mm long with simple hairs. Woody fruiting perianth is 1.5-3 mm, flat-topped, has vertical ribbing, and has four spreading spines 2.8-5 mm long.

Distinguished from *S. convexula* by lack of hairs and clear ribbing.

Occurs on gravelly or low sandy rises, red earth plains, fertile alluvial plains, run-on areas and claypans.



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Succulent Copper Burr

Sclerolaena cuneata

Dense, prickly, short-lived perennial forb up to 50 cm high. Linear to oblong fleshy leaves 7-35 mm with no or few hairs. Woody fruiting perianth is 1.5-3.5 mm, hairless, and has three (sometimes four) strong spines 6-15 mm – two are straight and the third is recurved around the stem.

Occurs on gravelly slopes, plains, including saline alluvial plains, run-on areas, and claypans. Recognised as an increaser species and an indicator of overgrazing or over-utilisation.



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Green Copper Burr

Sclerolaena decurrens

Erect perennial up to 20 cm high with variably haired stems. Alternate, succulent leaves 6-24 mm long, with 2-armed hairs of variable density. Woody fruiting perianth is 1.7-2.7 mm, vertically ribbed, largely hairless, and has two main divergent spines 4.5-8 mm long and up to two shorter spines.

Distinguished by a combination of features, with spine number being a particularly salient feature.

Occurs on Chenopod-rich plains, and saline alluvial plains.



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No common name

Sclerolaena deserticola

Much-branched spreading perennial up to 50 cm high with simple hairs on stems. Leaves are alternate, mostly linear to oblong and 5-16 mm. Woody fruiting perianth 1.5-3 mm, densely hairy and has five spreading spines 5-12 mm long.

Distinguished from *S. cornishiana* by leaf shape, smaller fruiting perianth with longer spines and different habitat preference.

Occurs on the sandy fringes of temporary claypans and other salty depressions.



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Grey Copper Burr, Horned Saltbush

***Sclerolaena diacantha* s.lat.**

diacantha: with two thorns or prickles.

Perennial up to 30 cm high with densely hairy stems. Linear to oblong, succulent leaves 7-25 mm with dense hairs. Woody fruiting perianth 2-5 mm, densely hairy with a deeply hollowed base. It has two divergent spines 0.5-3 mm.

Distinguished from *S. eriacantha* by shorter hairs on the perianth and shorter spines.

Occurs on rocky or gravelly hills, red earth and Chenopod-rich plains, saline patches, intermittent watercourses, run-on areas and claypans.



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Poverty Bush, Tangled Copper Burr, Pale Poverty Bush, Tangled Bassia

Sclerolaena divaricata

Perennial, with terete leaves to 10mm. Woody fruiting perianth 2.5 mm, hairless and a slightly concave base. It has four spreading spines 5-15 mm with one much shorter than the others that sits parallel to a longer spine.



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Silky Copper Burr

Sclerolaena eriacantha

Perennial to 40 cm. Leaves are linear to oblong, succulent or scarcely so, 7-35 mm, with dense simple hairs. Woody fruiting perianth is 3-4.5 mm with a deeply hollowed base and densely hairy. It has two divergent spines 3.5-6 mm.

Distinguished from *S. diacantha s.lat.* by longer hairs on the perianth and longer spines. Distinguished from *S. lanicuspis* by larger fruiting perianth with a larger basal cavity and fewer spines.

Occurs on rocky or gravelly slopes and Chenopod-rich stony valleys.



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Tangled Poverty Bush

Sclerolaena intricata

Low compact to spreading perennial up to 50 cm. Leaves 2-15 mm, hairless or sparse simple hairs. Woody fruiting perianth 1.5-8 mm, hairless with five (rarely four) recurved to spreading spines 3-13 mm.

Distinguished by a combination of features, with hairless stems and leaves being a particularly salient feature.

Occurs on Chenopod-rich plains, stony slopes, saline flats, waterways and claypans.



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Johnson's Copper Burr

Sclerolaena johnsonii

Much-branched spreading perennial to 40 cm. Succulent leaves are 3-22 mm, hairless or sparsely hairy. Woody fruiting perianth 1-3 mm, hairless and slightly hollowed base. It has five (rarely four) spreading spines 3.5-6 mm.

Distinguished by a combination of features, with hairless stems and leaves being a particularly salient feature and a preference for sandy habitats.

Occurs with Spinifex on sandplains and sandy rises.



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Woolly Copper Burr

Sclerolaena lanicuspis

Perennial up to 40 cm high. Succulent leaves 5-20 mm long, with sparse to medium density simple hairs. Woody fruiting perianth 1.7-2.7 mm, with a circular cavity in the base, dense white hairs and three (rarely four) divergent spines 5-7 mm.

Distinguished from *S. eriacantha* by a smaller perianth and smaller hollowed base, more spines that are also shorter.

Occurs on rocky or gravelly slopes, Chenopod-rich plains, saline alluvial plains, heavy soil plains, waterways and claypans.



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Spear-fruit Copper Burr

Sclerolaena patenticuspis

Perennial to 30 cm. Succulent leaves 4-14 mm long, with medium to dense simple hairs. Woody fruiting perianth 1.5-3.5 mm, hairy, and has two divergent reddish spines 6-8 mm.

Occurs on or near gravelly slopes.



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Caltrop

Caltrop, also known as Bindi-eye, belong to the genus *Tribulus* in the family Zygophyllaceae. There are approximately 13 accepted species of *Tribulus*, with seven appearing in the wider central Australian region and two that are common to the Alice Springs municipal area; the native *Tribulus eichlerianus* and the introduced *Tribulus terrestris*. *Tribulus eichlerianus* is distinguished from *T. terrestris* by leaves and flower/fruit size. *Tribulus eichlerianus* has 6-10 pairs of leaflets, compared to *T. terrestris*, which has 4-7 pairs of leaflets. *Tribulus eichlerianus* also has a larger flower and larger, hairier, and less angular burrs.

Note that an additional species of Bindi-eye (*Tribulus hirsutus*) is not listed here as it is soft and lacks spines. Bindi-eye (*Tribulus minutus*) is not included due to only a few observations in the region.

Mulga Caltrop, Star-burr, Star-head

Tribulus astrocarpus

Prostrate to spreading annual herb. Leaves with 3-5 pairs of leaflets. Fruit distinctively star-shaped when viewed from above.



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Bindi-eye, Bull-head

Tribulus eichlerianus s.lat.

Prostrate to spreading annual herb. Leaves with 6-10 leaflet pairs. Fruit divided into five segments with dense silky hairs and prominent dorsal spines.



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Sandhill Picture Vine, Sandhill Spiky Caltrop

Tribulus hystrix

Prostrate or ascending perennial herb covered with hairs and 8-10 pairs of ovate leaflets. Hairy fruit covered with unequal spines 12 mm long.

Found south-east of Alice Springs, unlikely around town.



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Winged-fruit Caltrop

Tribulus macrocarpus

Spreading or prostrate herb with 5-7 leaflet pairs. Large winged fruit with two downward pointing spines between wings.



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Caltrop (INTRODUCED)

Tribulus terrestris

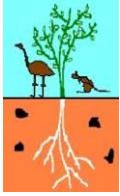
Spreading to trailing prostrate annual herb. Leaves densely haired with 4-7 pairs of leaflets. Flowers small, petals <15 mm in length. Fruit to 7.5 x 13 mm, silky hairs and prominent median spines 3-8 mm long.



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