



## No. 8 Emu

### Description

The emu (*Dromaius novaehollandiae*), is the largest native bird in Australia. It sometimes eats and tramples crops and for this reason it is a declared pest of agriculture in Western Australia.

Emus are large, flightless birds up to two metres in height and weigh 31-48 kilograms. The body feathers are greyish brown in colour and the head and neck are black with blue skin on the throat and sides of the head. Emus have three large toes. Immature birds look similar to adults except that they are slightly paler and lack the blue skin on the head. The chicks are downy and creamy in colour with dark horizontal stripes (Figure 1). Emus make deep grunting sounds and the female makes drumming sounds.



Figure 1 Emu (*Dromaius novaehollandiae*) (Photo Scribbly Gum - ABC Science Online).

### Distribution and habitat

Emus inhabit a wide range of habitats but remain in 20 kilometres of drinking water from waterholes, river pools, stock troughs and dams. They are found over most of Western Australia except for waterless deserts and the Nullarbor Plain. They favour flats where fresh vegetation grows after rain. Emus are less common in settled areas and are now greatly reduced in numbers on most of the Swan Coastal Plain and much of the Wheatbelt.

### Diet

As an omnivorous species, the Emu feeds on the fruits of plants such as quondong and sandalwood (*Santalum* spp.) and zamia palm (*Macrozamia riedlei*). Other foods include flowers, green grass,

herbage and insects like grasshoppers, beetles and caterpillars. They eat very little dry matter or roughage.

Emus are very mobile and continually seek out new food sources. They eat cultivated grains such as wheat (*Triticum aestivum*), barley (*Hordeum vulgare*) and lupins (*Lupinus* spp.)

### Breeding

Emus lay up to 13 (usually seven to nine) large dark green eggs from April to July. The nest is a simple depression in the ground lined with a few leaves and twigs. More than one female may lay in the same nest. After laying the eggs, the female may remain near the nest and later accompany the male and the chicks, or she may leave the area and mate with another male. The male incubates the eggs for about 55 days. He seldom leaves the nest during this time and may lose up to 20 per cent of his body weight. After hatching, the chicks remain with the male for up to 18 months before dispersing. Up to 40 young have been observed with one male as a result of orphaned young joining the male.

### Behaviour

Emus are highly nomadic and move in response to changing food supplies. Some birds have been reported moving 600 kilometres in a few months. In Western Australia, emus usually move into areas where substantial rain has recently fallen. Thus, they tend to move south-west in winter and north-east in summer. They live as individuals or in small family groups but spectacular mass movements can result from rapid population growth followed by low rainfall. This sometimes occurs in the eastern and northern Wheatbelt of Western Australia. On such occasions, flocks of hundreds or thousands of birds may gather together in an area where their movement is blocked by barrier fences.

Good rains in the pastoral areas of Western Australia leads to rapid plant growth and an abundance of food for emus. When food is abundant, emus enjoy high rates of reproductive success resulting in large population increases. Frequent contact with other individuals and groups at this time triggers migration.

### Damage

Emus can cause significant damage by feeding on grain crops, especially when bird numbers are high. However, the majority of damage results when large groups of birds walk or run through crops.

When mass movements occur from the north-east, many hundreds of birds gather together along state barrier fences between pastoral lands and Wheatbelt properties. The fences are designed to keep emus and wild dogs out of the agricultural areas. However, they sometimes break through this barrier and cause substantial damage to grain crops.

Populations of emus also occur inside the fences and when they increase in number and trample crops, control measures may be necessary.

Emus do not compete with sheep in pastoral areas because their dietary preferences differ.

## Status and damage reduction methods

The emu is a declared pest of agriculture under the provisions of the *Agriculture and Related Resources Protection Act 1976*, administered by the Western Australian Department of Agriculture and Food. This declaration allows for the approval and implementation of a management program in various areas of the State.

As a native species, the emu is protected under the provisions of the *Wildlife Conservation Act 1950*, administered by the Department of Environment and Conservation (DEC). Emus can only be destroyed on private land after a damage licence has been issued by DEC, except where a restricted open season has been declared in the event of a build-up of birds along the barrier fences.

For management options see the table below.

Option	Application	Benefits	Costs
Shooting	Only legal method of destruction. Damage licences may be required from DEC. Firearms must be licensed.  Fauna note no. 9. Destruction of birds to reduce damage. DEC, Western Australia.	Humane if properly carried out. Effective when used intensively and combined with other methods. May be useful for control of problem birds.	Must be applied intensively.  Not suitable in built-up areas.  Only temporarily reduces the population size.
Poisoning	Illegal for landholders without a licence under the <i>Wildlife Conservation Act 1950</i> .  Carried out by officers of the Western Australian Department of Agriculture and Food after issue of an appropriate damage licence by DEC (landholders can lay free-feed).		

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## Further Information

Contact your local office of the Department of Environment and Conservation.

See the Department's website for the latest information: [www.dec.wa.gov.au](http://www.dec.wa.gov.au).

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## Commercial emu farming

There are a small number of licensed commercial emu farms operating in Western Australia, regulated under the provisions of the *Wildlife Conservation Act 1950*. Emus are farmed for their leather, oil, meat, eggs and feathers and it is illegal to sell emu eggs, skins or carcasses unless they are from a licensed farm.

Export of emu products is controlled by the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*, which requires that products are from animals bred in captivity.

## Further reading

- [History of the state vermin barrier fences](#), Department of Agriculture and Food, Western Australia.

## References

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- Davies, S.J.J.F. (1978) The food of emus. *Aust. J. Ecol.* 3: 411-422.
- Riggert, T.L. (1975) The management of the emu *Dromaius novaehollandiae* in Western Australia. Wildlife Bulletin No. 4. W.A. Wildl. Res. Centre, Perth.
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