FERALS

INVASIVE BIRDS - STARLINGS AND THEIR IMPACTS

Anna-Marie Penna

Landholders are generally familiar with the local birds in their area. But what do you usually do when you notice a bird that appears to be unfamiliar? Do you know what it is, where it is from, and what impact it may be having on your business, infrastructure or environment? What if it is an introduced pest?

To protect WA's environmental, production and infrastructure assets, the Department of Agriculture and Food's Biosecurity Section is working on researching and controlling or eradicating numerous invasive species around the state in partnership with the community and other government agencies such as DEC.

The critical importance of the need for landholders to report sightings of any unusual birds has been highlighted through a recent South Coast starling research project. Starlings were tracked with tiny radio transmitters to provide more in-depth information on their populations and locations. The outcomes of this successful research trial were that many more flocks of starlings were detected and the area of the infestation was greater than had previously been known.

The significant impacts of this highly invasive species that can build up into very large flocks (listed as one of the worst 100 invaders by the IUCN www.issg.org) include:

Biodiversity impacts

Starlings impact significantly on the natural environment. They compete with native species for resources and they are known users of nesting hollows. Larger populations of starlings will increase the demand and impact on this already scarce and critical resource.

Flocks of starlings are roosting in wetlands in the South Coast areas around Munglinup, which will increase eutrophication of wetland waters through the large input of droppings, as well as introducing weeds. Starlings are known to spread weed species such as bridal creeper, blackberry, African box thorn, and olives amongst other species, leading to increased weed management costs for land managers, ratepayers and community groups.

Starlings are particularly notorious for their demolition actions on roosting trees. This also has impacts on amenity for stock and communities through loss of shade trees, native vegetation, and economic impacts from damage to tree plantations etc.

The birds also compete with native species for food resources such as insects and fruits, particularly given that starlings are such prolific feeders when their populations build up to very significant sizes. For example, it has been noted that in NSW where starlings are present, that there is a significant decline in the presence of native bird species.

Social and infrastructure impacts

Increased health management, building maintenance costs and community stresses from noise and excreta levels are among some of the most likely impacts of starling incursions.

Starlings can also transfer parasites such as mites (causing skin irritations) and some 25 exotic diseases to humans, particularly as a result of their nesting activities in buildings. Many of these diseases also have the potential to affect the livestock, poultry and bird breeding industries.

The birds also cause significant fouling of houses and public buildings, eaves and gutters through the vast amounts of droppings and nesting materials. The nesting materials (eg lots of grasses and fines) leads to increased fire hazards, and blocking of gutters and downpipes may lead to water inundation.

The fouling of rainwater tanks by starling droppings and regurgitation destroys water quality, and may lead to disease risks to landowners. These unsociable habits also lead to fouling of machinery which will impact on farm production and asset management costs.

The bird's habit of regurgitation and defecation of seeds (eg from olives) has also proven to be a 'slip hazard' for local governments in SA, dramatically increasing their public liability risks and management costs through on-going clean up of this horrible mess.

Incursions in SA have led to losses in the tourism industry, as some caravan parks have recorded significant decline in visitor numbers

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LITTLE WHITE BAT

Teagan Smith

During an annual biological expedition to the Murchison in July of this year an amazing find was made. In caves where bat colonies of Hill's Sheathtail Bat (*Taphozous hilli*) and Inland Cave Bat (*Vespadelus finlaysoni*) have been monitored for over 45 years a little white fluff ball of a bat was discovered. This little white fluff ball turned out to be a Hill's Sheathtail Bat, which is very common throughout the arid zone of Australia, however these bats are normally brown in colour.

One would naturally jump to the conclusion that this bat was an albino. However, the little bat does not display albinism but rather leucism. Leucism is a condition characterised by the reduction of pigmentation within an animal. Leucism can cause the reduction in all types of pigment, which differs from albinism as it results in the reduction of melanin (a pigment in the skin, eyes and hair) production only, despite the melanocytes which produce melanin still being present.

The result can be all over or only patches of the body having a lack of cells capable of making pigment. Partial leucism is more common than complete absence of pigment cells, and is localised or incomplete, resulting in irregular patches of white. This is known as a "pied" or "piebald" effect. In contrast, albinism always affects the entire animal.

Another difference between albinism and leucism is in eye colour. Due to the lack of melanin production in the retina (eye) albinos typically have red eyes due to the underlying blood vessels showing through. In contrast, leucistic animals have normally coloured eyes.

Leucism is found in many species but only a few cases have been recorded in bats.