Department of **Agriculture and Fisheries** Biosecurity Queensland

Invasive animal risk assessment

Jungle myna

Acridotheres fuscus



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Front cover: Jungle myna

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Summary

Acridotheres fuscus (jungle myna) is native to an extensive area of India and parts of southeast Asia.

Naturalised populations exist in Singapore, Taiwan, Fiji, Western Samoa and elsewhere. In Fiji, the species occasionally causes significant damage to crops of ground nuts, with crop losses of up to 40% recorded. Within its native range (South India), it is not a well documented pest, but occasionally causes considerable (localised) damage to fruit orchards.

A. fuscus is currently absent from Queensland (and Australia) but appears to have the potential to naturalise over substantial areas of the state. Ecologically, the species is well-suited to disturbed, open habitats, such as grasslands, crop lands and urban areas, in seasonally dry tropical and subtropical regions. Its biology and ecology appears similar to its congener, the Indian myna (*A. tristis*)—an abundant invasive species in eastern Queensland.

Potential impacts of a naturalised population in Queensland could include localised damage to certain tree crops (such as fruit orchards), competition for resources with certain native bird species (mainly in open, disturbed habitats) and perhaps urban nuisance. While the significance of such impacts is difficult to predict, it seems wise to treat *A. fuscus* as a 'high-risk' species and a worthy candidate for preventative restrictions on possession and sale. Similarly, surveillance and early detection and eradication of any wild populations is desirable.

Introduction

Identity and taxonomy

Species identity: Acridotheres fuscus (Wagler 1927)

Common names: Jungle myna

Several races (subspecies) exist across the species' native range.

Description and biology

A. *fuscus* has a black/grey body and yellow eyes, beak and legs (see Figure 1). It is about 23 cm long, with white wing patches that are obvious in flight. Males and females are similar, but juveniles are browner. A race in South India has a blue iris. It tends to live in pairs or small flocks of 10–30 or more individuals (Long 1981).



Figure 1: Jungle myna (A. fuscus) (Photograph courtesy of Wikimedia Commons)

Diet

A. *fuscus* has an opportunistic diet, eating a range of fruit, seeds and insects. In some areas, it shows a preference for grasshoppers. It has been recorded to consume figs, lantana berries and nectar (Long 1981). In urban areas, it readily adapts to utilise food scraps.

Reproduction

A. *fuscus* usually has two successive broods each year. It tends to nest in colonies. Nests are built from twigs, roots, grass and rubbish, usually in a tree hollow. A normal clutch is 3–6 eggs and nests are often close to water or rice fields.

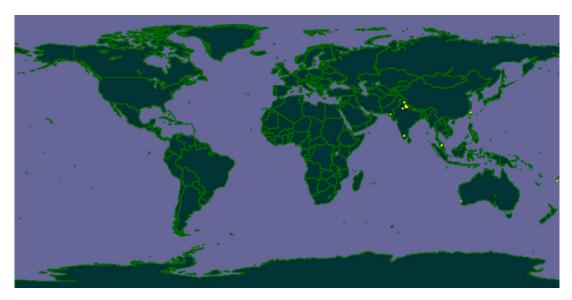
Preferred habitat and climate

Preferred habitat tends to be open, disturbed sites such as cropping lands, orchards, fields, grasslands and urban areas, but can also include forest margins. In India, the species is generally found in lowland areas but sometimes up to 2000 m above sea level.

Preferred climate is tropical and subtropical, with the species' native range extending over a very broad area that includes semi-arid, savannah and more mesic habitats close to the coast.

Native range and global distribution

A. fuscus is native to an extensive area of India, Pakistan and tropical South-East Asia, including the lower Himalayas, parts of Nepal and east to Malaysia.



Naturalised populations exist in Singapore, Fiji, Western Samoa, Tokelau, Taiwan and Tonga.

Figure 2: Locations where *A*. *fuscus* has been recorded by the Global Biodiversity Information Facility database (GBIF undated).

Current distribution and impact in Queensland

Currently, A. fuscus is absent from Queensland.

History as a pest overseas

In Fiji, *A. fuscus* occasionally causes significant damage to crops of ground nuts, with nut crop losses of 30–40% recorded (Long 1981). Within its native range (South India), it is not a well documented pest, but occasionally causes considerable (localised) damage to fruit orchards (Long 1981).

In Samoa, the introduced Indian and jungle mynas may threaten certain locally-native bird species, including two species of native starlings: the fuia or Samoan starling (*Aplonis atrifusca*)—the only bird endemic to Samoa (found nowhere else)—and the miti vao or Polynesian starling (*Aplonis tabuensis*) (GISD 2009).

Use

A. fuscus is sometimes kept as a pet overseas.

Potential distribution and impact in Queensland

To assess the species' potential range, climate-matching software called Climatch (BRS 2009) was applied to predict areas of Queensland where climate is similar to that experienced across the native range of *A. fuscus*. Seasonally dry tropical areas across northern Queensland appear to be most suitable, with subtropical coastal areas being marginally suitable (see Figure 3).

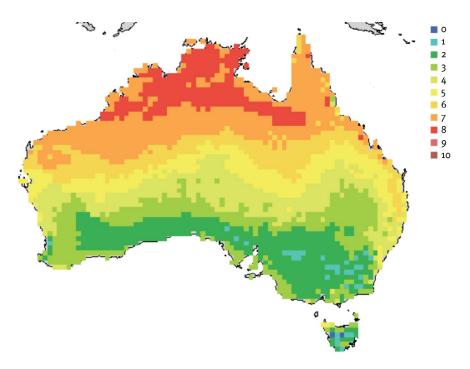


Figure 3: Areas of Australia where climate appears suitable for *A. fuscus*. Red and dark orange indicate areas where climate is highly suitable, light orange and yellow indicate areas where climate is marginally suitable, green and blue indicate areas where climate is considered unsuitable for this species.

A. fuscus has several attributes that confer pest potential in Queensland:

- It is a locally significant pest of certain crops (ground nuts and fruit orchards) in India and Fiji.
- It has naturalised repeatedly after being released outside its native range.
- It is well-suited to tropical and subtropical climate types experienced in Queensland (see Figure 3).
- It appears well-suited to disturbed, open habitats, including farmland and urban areas, much like its highly successful invasive congener, the Indian myna.

It seems reasonable to predict that *A. fuscus* could become widespread and abundant over substantial areas of northern and eastern Queensland. Habitats most at risk are predicted to include open (disturbed) sites—especially orchards and urban areas. Potential impacts could include damage to certain crops—mainly fruit crops. In urban areas, the species could become locally abundant, perhaps occupying similar habitats to the Indian myna.

Based on the evidence at hand, *A. fuscus* appears to be a 'high-risk' species. As such, a precautionary approach to its management in Queensland seems wise. Restrictions on possession and sale, combined with surveillance and early detection and eradication of any wild populations, are readily justified.

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