

Information booklet for the “National Control of the myna”

(*Acridotheres* spp.)

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Common Myna
(*Acridotheres tristis*)



Jungle Myna
(*Acridotheres fuscus*)



Government of Samoa



Division of
Environment & Conservation

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1. Introduction

The Jungle myna (*Acridotheres fuscus*) was first recorded in Upolu in 1965, followed by the Common myna (*Acridotheres tristis*) in 1988 (Watling, 2001). It is believed they were introduced to control livestock ticks and unexpectedly became an invasive species; over the past two decades their populations have increased dramatically. They are now found throughout Samoa with high density populations concentrated in the Apia town area and neighboring villages.

The common myna and its cousin the jungle myna are both native to the sub continent of India but have been introduced or invaded many countries including many Pacific islands. Despite earlier support for mynas as a means of biological control of insect pests, they generally have at best become a nuisance and at worst a serious pest themselves (Parks, 2006).

The following document provides information regarding issues surrounding the myna: why mynas are a problem and what methods are currently been implemented to control and/or eradicate mynas from cities, islands, and countries.

2. General Facts

Myna Facts (two species found in Samoa)		
Scientific Name	<i>Acridotheres tristis</i>	<i>Acridotheres fuscus</i>
Common Name	Common Myna	Jungle Myna
Samoan Name	Maina fanua	Maina vao
Life Form	Bird	Bird
First recorded	1988	1965
Identification	25cm. A dark vinaceous brown bird with paler underparts, and a white abdomen and under-tail coverts. The head, nape and throat are almost black with a slight gloss. The wings and tail are darker than the body with a white wing patch and white terminal bar on the tail. The bill and feet are yellow and there is a conspicuous patch of bare yellow skin below and behind the eye. The eye has a brown iris.	23cm. A dark sooty-grey bird with paler grey underparts. The conspicuous white wing and tail markings are identical to those of the common myna. A black nasal tuff is diagnostic. The bill and feet are orange-yellow, and the iris yellow.
Flight	The white wing patch and tail bar are very conspicuous in flight.	Same characteristic as common myna.
Voice	A noisy bird with a large repertoire of rather harsh unmusical sounds, although it does include some tuneful whistles. The normal call is a medley of gurgles, screeches and chattering squawks	Less varied repertoire than the common myna, with more strident penetrating notes.
Habits	<ul style="list-style-type: none"> • Common mynas are restricted to the proximity of human dwellings, and they may be considered true commensals of man. • They are primarily a ground feeding insectivore which has expanded its diet to include any fruit, grains and/or domestic waste. • Common mynas nest under the eaves of houses, in thatched roofs and occasionally in holes of trees. They accumulate a considerable quantity of assorted nesting materials, but are particularly fond 	<ul style="list-style-type: none"> • A bird of human modified and heavily disturbed native habitats. Favors rough pasture and lightly wooded areas. They are common in parks and gardens of urban areas. • Primarily insectivorous bird feeding on the ground and normally seeking the company of cattle and horses, on which they readily perch. The frequently feed on fruits and soft vegetables. • Nests in holes, usually in trees and rock banks, and will readily nest in buildings but is usually evicted

	<p>of plastic bags and polythene strips.</p> <ul style="list-style-type: none"> • Three to four pale blue eggs are laid. • Breeding season between November and March. 	<p>by the common myna.</p> <ul style="list-style-type: none"> • Two to four pale blue eggs are laid. • Breeding seasons between November and March.
Distribution	<p>Common myna have been exported from their home land of origin of, the Indian sub continent, to many other parts of the world by people who like their jaunty attitude, clear and striking calls, and to control insect pests. They are now firmly established in South Africa, Australia, New Zealand, Solomons, New Caledonia, Fiji (abundant on Viti Levu, Vanua, Levu, Ovalau, Wakaya and Taveuni and their offshore islands), Cook Islands, Hawaii, American Samoa and Samoa.</p>	<p>The native range of the Jungle myna is the Indian sub continent to the Malaya Peninsula. It has a more restricted distribution in the region than the common myna</p>
Interesting Facts	<ul style="list-style-type: none"> • These birds are capable of mimicking human words and travel in pairs. • Mynas are extremely intelligent birds, making it difficult to capture them, as they are fast learners and will avoid anything which poses a threat to them. 	<p>and in their native India are often kept as pets. They</p>

(Watling, 2001)

2. Why are Mynas a problem?

In its native India the common myna is called the “Farmers friend” because it eats insects that destroy crop plants. The name myna is not a biological classification within the starling family, but rather a geographical one. The name myna comes from the Hindi word, ‘maina’ meaning a bird of the starling family, Sturnidea, to which the myna belongs, and this name has tended to be applied to starling species native to southern and southeastern Asia and the southwest Pacific. The word myna derives from the Sanskrit ‘madana’, meaning joyful or delightful, which comes from the word ‘mad’, to rejoice, which in turn is derived from a root meaning ‘bubbles’. So ultimately the word myna means ‘bubbling with joy’. In India mynas are also a symbol of undying love because they pair for life (Olliver, 2005; Tidemann, 2006)

2.1 Human Health

Common mynas love nesting in the roofs of houses, eaves of houses, and in thatch roofs. These nests are usually heavily infested with the mite *Liponyssus bursa* which disperses from the nests once the young fledge. If these mites are inhaled they can cause asthma, hay fever and their bites cause rashes. It is believed that mynas also have the potential to spread salmonellosis¹, Newcastle Disease², Avian influenza³, and infections leading to pneumonia (Thomas, 2004; Tidemann, 2006).

2.2 Economic Problem

Mynas can also be an economic problem because they damage fruit and grain crops (Tidemann, 2006). In Samoa it has been reported by farmers that they inflict damage to papaw, tomato and banana plantations. They also cause damages to buildings by nesting in them causing an accumulation of bird droppings and organic/synthetic material to build up on roofs and/or between walls. Roosting sites which are in buildings are also a major problem as their smell and noise can be annoying. For example mynas are now roosting in the newly built South Pacific Games Aquatic Centre at Tuana’imato; large amounts of money will have to be spent in order to keep the facilities hygienic as bird droppings will be continuously falling directly into the swimming pools and chairs every night. Mynas are also a major nuisance for chicken farmers as they feed from the chicken feed and are often seen chasing the chickens away.

¹ Food poisoning caused by consumption of food contaminated with bacteria of the genus salmonella, characterized by the sudden onset of abdominal pain, vomiting, diarrhea, and fever.

² A rapidly spreading virus-induced disease of birds and domestic fowls, as chickens, marked by respiratory difficulty, reduced egg production and chicken paralysis.

³ Also known as ‘Bird Flu’ the highly contagious avian strain A virus known to have been transmitted directly and with increased virulence to humans.

2.3 Biodiversity

Perhaps the most serious crime the myna has committed is that it competes aggressively with native wildlife for nesting sites and food. Mynas have been observed chasing away competitors and even throwing other birds' chicks out of nests. In Australia a group of nesting mynas have been witnessed going to the trouble of filling up near by vacant nesting hollows with rubbish - the mynas didn't need the extra nests, but they sure as hell weren't going to allow any other bird use them (Thomas, 2004; Tidemann, 2006). In New Zealand mynas prey on the eggs and nestlings of feral pigeons, silver and southern black-back, and on those of native and introduced passerines (GISD, 2005).

In Samoa they have been observed harassing our native birds such as the miti, segasegama'u and segavao by chasing them away from food sources and just for fun. Our only native birds that have been observed to hold their own against the myna are the iao and fuia, who in turn fight back. Mynas are even capable of attacking large mammals such as cats and dogs; groups of mynas have been seen swooping down and pecking and clawing at these house hold pets. Mynas have also been seen taking food put out for dogs, cats, pigs, and chickens.

Mynas have also been observed here in Samoa to facilitate in the spread of invasive plant species such as the Ivy gourd (*Coccinia grandis*) as they feed off its bright red fruit.

2.4 World Wide

It is not just Samoa that is suffering from the onslaught of mynas. In 2000 the International Union for the Conservation of Nature (IUNC) declared the myna bird among 100 of the world's most invasive species. It is now a pest in many regions from Singapore to the Seychelles, and has pushed native birds to the brink of extinction in Polynesia, Hawaii and Mauritius (Thomas, 2004; Tidemann, 2006).

3. Management Information

Tokelau has proposed to eradicate all mynas from its Fakaofao Atoll where mynas are a very recent introduction, as of 2004. They have proposed to use two techniques: (1) a walk in funnel trap; (2) a nest box trap (Nagle, 2006).

On Mangaia Island the second largest island in the Cook Islands they propose to eradicate the myna using a toxin called DRC1339 (Starlicide®). The poison is highly toxic to most birds and freshwater invertebrates, but only moderately toxic to mammals and freshwater fish. Mynas usually die in a coma within 48 hours after eating a lethal dose, and often at their night roosts (Parkers, 2006).

In Australia councils and community groups have set up hotline numbers to track the spread of the birds, with some councils considering putting a reward on every mynas head. Local residents are being asked for eternal vigilance, with media advertisements and radio promotions asking for reports of any sightings. In rural communities residents are taking up fire arms against mynas (Thomas, 2004).

While the desire to catch mynas has never been lacking, their ability to elude their captors with intelligence and complex behaviour, they quickly learn to avoid traps and warn other mynas if caught with loud distressed calls (Thomas, 2004; Tidemann, 2006).

In 2004 an Australian by the name of Dr. Chris Tidemann of the Australian National University developed a relatively low-tech myna trap (Figure 1) that relies on a sound understanding of the biology and behaviours of mynas. The trap is made up of two sections, a base for catching the birds and a top for roosting. At the base food and water is provided for the bird. Birds willingly enter the trap at the bottom to feed, entering through special valves designed to allow in only mynas and closely related starlings. Birds are then allowed to feed for several days and once trust is established they are easily caught. Sometimes a pair of birds are placed in the trap to act as call birds luring in others. When its dark and the birds are roosting the top section is removed and the birds are killed using carbon dioxide (Thomas, 2004; Tidemann, 2006). Appendix 2 describes techniques used by Chris Tidemann when using this trap.

In August 2004 to first half of 2005 the Ministry of Natural Resources & Environment, Division of Environment & Conservation, Samoa trialed Dr. Tidemanns traps. In the beginning the trap failed to capture any mynas, but by 2005 a trap placed behind the government building was a success as it managed to capture several mynas. It is now proposed that more of Dr. Tidemanns traps be constructed and dispersed throughout Apia to capture more mynas. Please see attached document “Operation Myna”.

Figure 1: Photos by Chris Tidemann of Myna bird trap

Assembled cage



Removing trapped birds from cage



Placing the catcher in the euthanasia sleeves



Euthanasia



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Appendix 1 – Methods used in Fakaofu Atoll, Tokelau

The following explanation was taken from Bill Nagles 'Protection of Tokelau Fakaofu from myna bird (*Acridotheres* spp.) invasion: report of a feasibility study, 12-16 May 2006.

Method 1 – Nest box traps

Nest boxes have been fixed to sites adjacent to places where mynas were sighted.

- 1.1 Nest boxes must be checked every morning to make sure the trap-door is open.
- 1.2 Nest boxes should be observed many times during the day as mynas may investigate the boxes at any time. If a bird begins to check a box regularly, someone should hide and pull the fishing line to drop the trapdoor when the bird is completely inside.
- 1.3 A trapped bird should be removed as soon as possible, but great care should be taken. The bird will try and escape and mynas are very smart and very fast.
- 1.4 Before a bird is removed, a large bag or other covering should be placed over the whole nest box before the lid is opened. Slowly open the lid and cover the whole opening with the bag. Catch the bird with the bag, remove it and quickly close the bag. Alternatively, stuff the bag into the gap as the lid is opened and carefully catch and securely hold the bird. The bird will try and escape and great care is needed. Once the bird is out, it can be kept as a call-bird for a cage trap (see method 2), or killed.
- 1.5 The exact time of the breeding season is not known in Tokelau. In other Pacific countries it is between November and March.

Method 2 – Cage trap

The cage trap has been prepared. A hole for the funnel has been cut into the sides of the larger one. The small one is ready for a cage bird. The cage should be placed somewhere where the mynas will feel safe, i.e. away from people cats and rats. As they are comfortable at the piggery, the top of a pig pen could be a good place.

- 2.1 If a call-bird has been caught in a nest box, it should be placed in the smaller cage next to the larger cage. The call-bird must be given food, water and shade and this will attract the other mynas.
- 2.2 With or without a call-bird, a small amount of food should be placed in the large trap and outside. Do not put the funnel in place so that the birds can freely walk in and out. This is to teach the birds to go inside the large trap. Do this until the mynas are regularly going into the cage to eat the bait. When that happens, the funnel can be put in place.
- 2.3 Start with 2 slices of cut up bread each day as bait (the bread should be cut up to make cubes of approximately 1 cm). Try for one month. If the mynas do not eat that, try other foods. The mynas are now eating pig food so they will probably eat that. Try each different food for two weeks until the mynas eat it each day.
- 2.4 When the mynas go in through the funnel and are in the trap, quickly stuff rag into the tunnel entrance, to prevent the bird(s) escaping, cover the cage with the tent (push some of the tent into the funnel to stop the mynas escaping). Carefully remove the top of the cage underneath the tent.
- 2.5 When the top is gone, reach in using the sleeve attached to the tent and grab a bird. If these are the first birds caught, keep them as call birds. If not, they can be destroyed.

Appendix 2 - Trapping Myna - Techniques to use by Chris Tidemann

Mynas and starlings are highly intelligent and wary birds with keen eyesight and good communication.

- Mynas and Starlings learn quickly to avoid danger through their own experience and by watching and listening to others of their kind.
- The more they are hassled the more wary they become and the harder to catch - if you want to trap mynas and starlings don't let them know your intentions.
- Don't let them see you watching them – observe only out of the corners of your eyes.
- Don't approach traps during daylight hours unless you absolutely need to.
- It is critically important to select an appropriate trapping site – an ideal site is near where birds are already feeding: restrict access to what they are eating and wean them onto the food provided in the trap.
- Otherwise, select a site in full sunshine that has at least a radius of 3 m clear of cover around it – these birds are not comfortable feeding near where predators may be lurking.
- Use the right bait – mynas and starlings will eat a huge variety of foods, but we have found that the best attractant is VIP Petfoods MegaBite or Chicken dog food rolls - and a dish of water.
- Time of year is important – during the breeding season mynas and starlings are territorial – at other times of the year, particularly during autumn/winter – they are short of food and form large flocks - which is when large catches can be made.
- We recommend at least three days of free-feeding prior to trapping for one day, followed by another three days of free-feeding and so on - it is most important for trapping continuity that the birds usually get a free feed.
- During free-feeding, wild birds can enter and leave the trap at will - during free-feeding the catcher should be mis-aligned so that birds can also get in through the top - the base valves are installed only when you are ready to trap.
- Free-feeding attracts wild birds; you can also use decoy birds or tape-recordings of myna and starling calls – the two species often feed together and one is attracted by the other.

- Some non-target species will also be attracted into the trap during free-feeding - this is not cause for worry as these species will be excluded once the base valves are inserted.
- Always approach traps slowly, particularly when there are birds inside – if you are free-feeding make sure that birds are able to leave without panic.
- Ideally remove trapped birds at night, or at least when you are sure there are no others that can see or hear.
- Keep other people, dogs and cats etc away while the trap is in operation – particularly when wild birds are free-feeding.
- In the rare event that non-target species are trapped - simply release them by removing the base valves.
- You may need to tie the trap down in windy situations - if it blows over with birds inside all your efforts may be wasted.

(Tidemann, 2006)