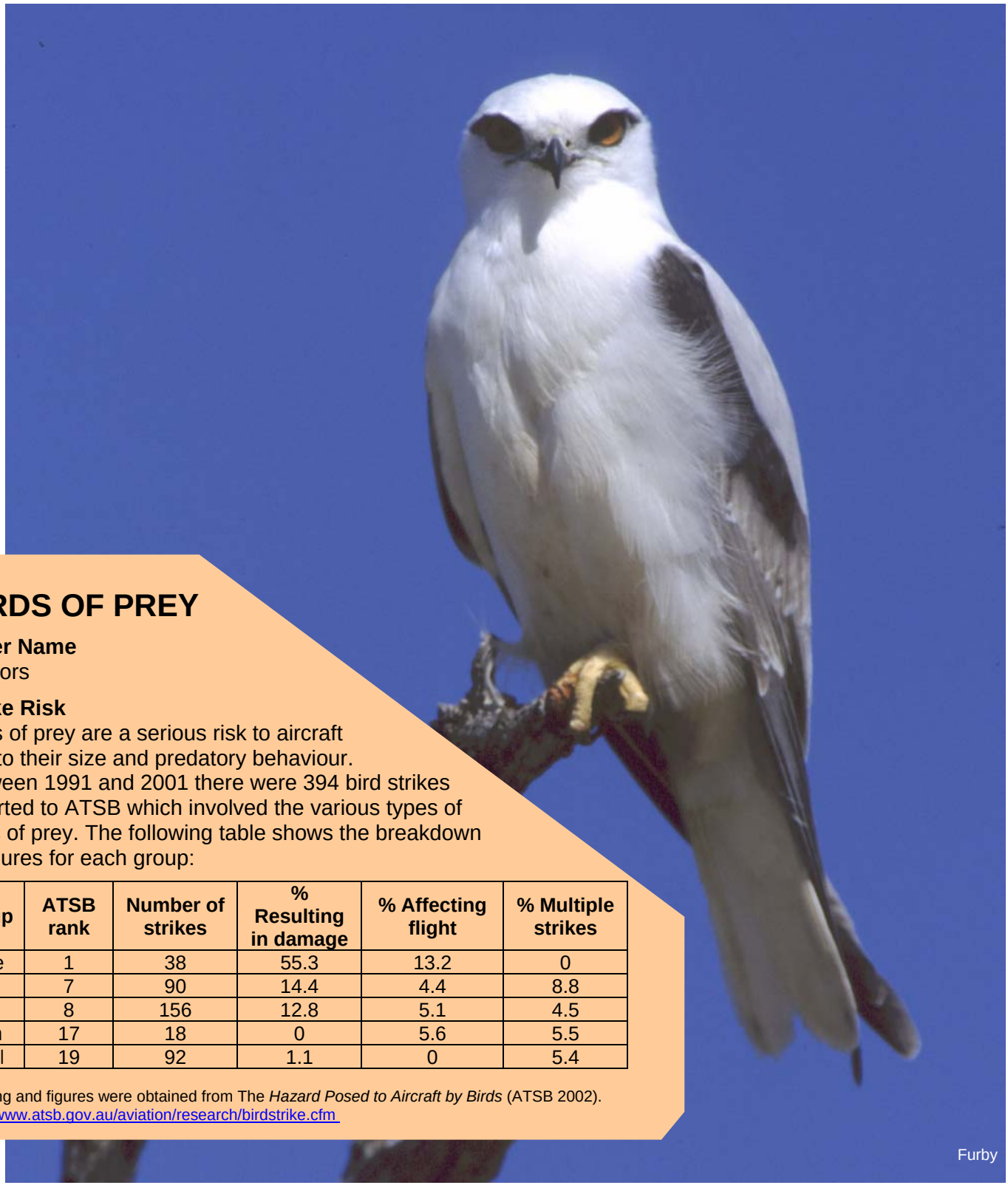
Australian Government
Australian Transport Safety Bureau

ATSB Bird Information Sheet No.4

Birds of Prey

Managing bird strike risk at Australian airports



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BIRDS OF PREY

Other Name
Raptors

Strike Risk
Birds of prey are a serious risk to aircraft due to their size and predatory behaviour. Between 1991 and 2001 there were 394 bird strikes reported to ATSB which involved the various types of birds of prey. The following table shows the breakdown of figures for each group:

Group	ATSB rank	Number of strikes	% Resulting in damage	% Affecting flight	% Multiple strikes
Eagle	1	38	55.3	13.2	0
Kite	7	90	14.4	4.4	8.8
Hawk	8	156	12.8	5.1	4.5
Falcon	17	18	0	5.6	5.5
Kestrel	19	92	1.1	0	5.4

Ranking and figures were obtained from The *Hazard Posed to Aircraft by Birds* (ATSB 2002).
http://www.atsb.gov.au/aviation/research/birdstrike.cfm

About Birds of Prey

Identifying Birds of Prey

Whilst there is much variation in size, colour, pattern and behaviour, all birds of prey have taloned feet for capturing prey, a strongly hooked bill designed to tear at the flesh of prey, exceptional sense of sight, and an outstanding command of flight. Females are generally larger then the males.
The main groups in Australia include: Osprey; Kites; Baza; Goshawks; Sea Eagles; Eagles; Harriers and Falcons.
When identifying birds of prey, if you are unsure which particular species or group they belong to, it is best to simply call them “birds of prey”.

NANKEEN KESTREL *Falco cenchroides*

This is the smallest of the falcons and is comparatively pale in colour, making it easy to distinguish from other Australian falcons. It is widespread throughout a variety of habitats across Australia, and can often be observed hovering over paddocks adjacent to roadsides.

Length 30-35cm;
weight 165-185g;
wingspan 60-80cm

BROWN FALCON *Falco subniger*

A medium to large falcon that is widespread throughout the grasslands and woodlands of arid to semi-arid habitats, excluding most of WA. The largest of the falcons, it has relatively long wings that tapers to a tip and is considered to be the most domineering of the falcons.

Length 45-55cm;
weight 630-900g;
wingspan 95-115cm

WHITE-BELLIED SEA-EAGLE
Haliaeetus leucogaster

Its striking white and grey plumage easily identifies this large raptor. Found throughout Australia’s coastal habitats, it is also observed throughout large river and lake systems. Primarily feeds on fish, and when soaring holds it’s wings on a distinctive angle, making it easy to identify at a distance.

Length 75-85cm;
weight 2.5-4.2kg;
wingspan 180-220cm

WHISTLING KITE *Haliastur sphenurus*

A medium sized mottled sandy-brown kite. Distinctive dark markings on underwings can be easily observed when in flight. Also easily recognisable by it shrill whistling call. Observed throughout most of Australia and in a wide variety of habitats.

Length 50-60cm;
weight 700-850g;
wingspan 120-145cm

BLACK KITE *Milvus migrans* **Juvenile**

Not to be mistaken with the Whistling Kite, this medium sized kite is a variable mottled brown-grey in colour. It's distinctively long forked tail distinguishes it from the Whistling Kite and is found throughout most of Australia in a variety of habitats.

Length 45-55cm;
weight 570-600g;
wingspan 120-140cm

BLACK SHOULDERED KITE *Elanus axillaris*

A small raptor that is predominantly white with distinctive black shoulders. Often observed hovering persistently when hunting. Distributed throughout Australia in a range of habitats.

Length 35cm;
weight 260-300g;
wingspan 80-100cm

Identifying Bird Strike Remains

Getting as much information as possible from the bird strike remains can assist in developing an airport's bird management program. For instance, if bird counts identify Black Kites as following mowers around the airport then being able to identify a strike as involving Black Kite rather than simply a Kite would assist in linking the information and identifying the problem to be addressed. There are some professionals who can identify remains from just a single feather. Further, identifying the age and sex of the strike victim may indicate certain trends. Some airports send the carcasses of their bird strikes (or culled birds) to specialists who can identify stomach contents providing an indication of the food attraction to birds at airports.

Managing the Bird of Prey Hazard at Airports

Active Management

Active bird management involves scaring or removing birds from the airport. There are numerous options available for the task, some of which have limited effect in the long term as birds become used to them. Generally, a combination of techniques provides the best results. For birds of prey, the following active management options can be considered:

- ✓ Disperse birds of prey using pyrotechnics (such as cracker shells), sirens, lights and/or vehicles. Some long range pyrotechnics that have recently become available can be used on birds of prey.

Where resident birds of prey resist dispersal efforts, a suitably qualified and experienced wildlife specialist should be consulted to consider the following options (all of which require permits from state/territory authorities as birds of prey are protected species):

- ✓ Nests of birds of prey on or close to airports should be carefully relocated to a more suitable location prior to egg-laying.
- ✓ Trapping and relocation of individuals a substantial distance away from the airport in suitable habitat.
- ✓ If the abovementioned options do not work, culling may be considered as a last resort where an individual bird of prey is found to be a resident of the airport.

Note: not all the suggested strategies have been trialed at Australian airports and it may be necessary for each airport to independently trial any particular method before incorporating it into their bird management plan.

Habitat Modification

All bird management strategies should seek to initially make an airport as undesirable as possible to birds through habitat modification. An assessment of the airport should be completed by a person qualified and experienced in identifying bird attractions and recommending site-specific modifications.

Long grass used to deter other species may harbour rodents, lizards and other prey items, thus attracting birds of prey Airport managers need to make a risk based judgment about the relative merits of different habitat management methods depending on the habitat and bird species at their airports.

Limiting Bird of Prey attraction at airports may require:

Limiting Food Supply

- ✓ Vertebrate pests such as rodents may need to be controlled using suitable baits like Talon (active ingredient Brodifcoum). Consideration must be given to possible environmental impacts of using such chemicals.
- ✓ Remove dead birds and animals from the airport and dispose in suitable receptacles which prevent access by other birds and animals.

Restricting perching areas

- ✓ Install anti-perching spikes, wires and gels to eliminate attractive perching areas and remove all unnecessary signs and posts.

Restricting Off-Airport Attractions

- ✓ Planning in the vicinity of airport must consider bird attractive land use. Landfills, piggeries and abattoirs can attract birds of prey and should not be permitted near an airport without a proper assessment of the risk.
- ✓ Existing land uses near an airport which attract birds of prey should be managed in an appropriate way. For instance, landfills may require birds to be dispersed.

For further information:

ATSB (02) 6274 7452
www.atsb.gov.au

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