

= Black @-@ shouldered kite =

The black @-@ shouldered kite (*Elanus axillaris*) , Australian black @-@ shouldered kite , or simply Australian kite , is a small raptor found in open habitat throughout Australia . It resembles similar species found in Africa , Eurasia and North America , including the black @-@ winged kite , a species that has in the past also been called " black @-@ shouldered kite " .

Measuring 35 ? 38 cm (14 ? 15 in) in length with a wingspan of 80 ? 95 cm (31 ? 37 in) , the adult black @-@ shouldered kite is a small and graceful raptor with red eyes . Their primary call is a clear whistle , uttered in flight and while hovering .

Black @-@ shouldered kites form monogamous pairs , breeding between August and January . The birds engage in aerial courtship displays which involve high circling flight and ritualised feeding mid @-@ air . Three or four eggs are laid and incubated for around thirty days . Chicks are fully fledged within five weeks of hatching and can hunt for mice within a week of leaving the nest . Juveniles disperse widely from the home territory .

= = Taxonomy = =

The black @-@ shouldered kite was first described by English ornithologist John Latham in 1801 , as *Falco axillaris* . Its specific name is derived from the Latin *axilla* , meaning " armpit " .

The name " black @-@ shouldered kite " was formerly used for a Eurasian and African species , *Elanus caeruleus* , with the Australian species , *Elanus axillaris* , and the North American species , the white @-@ tailed kite *Elanus leucurus* , treated as subspecies of this . These three *Elanus* species have comparable plumage patterns and sizes , however , they are now regarded as distinct , and the name black @-@ winged kite is used for *E. caeruleus* . Modern references to the black @-@ shouldered kite should therefore unambiguously mean the Australian species , *E. axillaris* . The Australian black @-@ shouldered kite was formerly called *E. notatus* , but it was not clear that the name applied to this species alone .

In 1851 , British zoologist Edward Blyth described *Elaninae* , the " smooth clawed kites " as a formal subfamily of *Accipitridae* . However , they are also grouped in *Accipitrinae* , the broader subfamily of hawks and eagles described by French ornithologist Louis Jean Pierre Vieillot in 1816 .

A taxonomic proposal based on DNA studies has recommended classifying *Elanus* kites as a separate family (*Elanidae*) . A 2004 molecular study of cytochrome @-@ b DNA sequences shows them to have split off from typical hawks and eagles at an earlier date than the Osprey , which has been classified in its own family .

= = Description = =

= = = Appearance = = =

Black @-@ shouldered kites are around 35 to 38 cm (14 to 15 in) in length and have a wingspan of between 80 and 95 cm (31 and 37 in) and an average weight of 291 g (10 @.@ 3 oz) . Adults are a pale grey with a white head and white underparts . The leading edge of the inner wing is black . When perched , this gives them their prominent black " shoulders " . Like related species they feature bright red eyes , set in a black comma @-@ shaped marking . They have a squared tail and a streamlined aerodynamic body . The bill is short with a sharp , hooked tip to the upper mandible . Their nostrils and the cere are bright yellow and the bill is black . The legs and feet are also yellow , and the feet have three toes facing forwards and one toe facing backwards . The sexes are similar , with females only just larger than males , although they can be up to 15 % heavier .

The juveniles ? markings follow a similar pattern to adult birds , but they are washed with a rusty brown on the head and upper breast , and the back and wings are mottled buff or brown with prominent white tips . The young birds ? eyes are brown .

The black @-@ shouldered kite is very similar to the related raptor species , the letter @-@ winged

kite (*E. scriptus*) but has the black mark above and behind the eye , a white rather than grey crown , and shows all @-@ white underparts in flight except for the black patch at the shoulder and dark wingtips .

== Vocalizations ==

Black @-@ shouldered kites are generally silent , except in the breeding season when their calls , though weak , can be persistent . They primarily utter clear whistled ' chee , chee , chee ' calls in flight and while hovering , or a hoarse wheezing ' skree @-@ ah ' when perched . The call has been confused with that of a silver gull . A short high whistle is the primary contact call between a pair , while a harsh scraping call is the most common call used by females and large young , and brooding females call to their young with a deep , soft , frog @-@ like croak .

A variety of different calls have been recorded from captive birds , including harsh , harmonic , chatter and whistle vocalisations . Harsh calls were made when a bird was alarmed or agitated , whistle @-@ type calls were emitted in general contexts , sometimes monotonously , and shorter duration ' chatter ' calls were given when a bird sighted a human near the enclosure .

== Distribution and habitat ==

Australian kites may be sedentary or nomadic , and generally occur in open grasslands or valleys where there are scattered clumps of trees . In urban areas they are found on the edge of towns on wasteland , irregularly mown areas , or grassy roadside verges . They also hunt over coastal dunes , drier marshland , and farmland .

Their numbers fluctuate during drought and floods , and can be irruptive in response to sudden increases in mouse populations . The most distant banding recovery was from South Australia to eastern New South Wales , a distance of 1 @, @ 000 km (620 mi) .

Although reported throughout Australia , they are most common in the relatively fertile south @-@ east and south @-@ west corners of the mainland , and in south @-@ east Queensland . They are rare in the deep desert and are only occasional visitors to northern Tasmania and the Torres Strait islands . As the species has a large range and an increasing population , it has been listed as " Least Concern " on the IUCN Red List of Threatened species . In southwestern Australia , they are now one of the most commonly recorded raptors in the wheatbelt .

European occupation of Australia has , on the whole , benefited black @-@ shouldered kites through land clearing and irrigation for agriculture and grain harvesting and storage practices which provide suitable conditions for much larger numbers of mice . According to raptor researcher Dr Stephen Debus , this species did not suffer from eggshell thinning during the period of DDT use in Australia , though he believes it is possible that secondary poisoning may occur from rodenticides used during mouse plagues or from pesticides used during locust plagues . Populations in areas with high sheep and rabbit numbers may decline , as these animals compact the soil and reduce the available habitat for mice .

== Behaviour ==

== Sociality ==

Black @-@ shouldered kites usually hunt singly or in pairs , though where food is plentiful they occur in small family groups and can be loosely gregarious at times of irruptions , with up to 70 birds reported feeding together during a mouse plague . They roost communally , like other *Elanus* species .

They are territorial when food is not abundant . The practice of " tail flicking " where , on landing , the tail is flicked up and lowered and the movement repeated persistently is thought to be a possible territorial display . Black @-@ shouldered kites have been observed in aerial combat at the margins

of territories , locking talons in a behaviour described as " grappling " .

== Food and hunting ==

Black @-@ shouldered kites live almost exclusively on mice , and have become a specialist predator of house mice , often following outbreaks of mouse plagues in rural areas . They take other suitably sized creatures when available , including grasshoppers , rats , small reptiles , birds , and even (very rarely) rabbits , but mice and other mouse @-@ sized mammals account for over 90 % of their diet . Their influence on mouse populations is probably significant : adults take two or three mice a day each if they can , around a thousand mice a year . On one occasion , a male was observed bringing no less than 14 mice to a nest of well @-@ advanced fledglings within an hour . In another study , a female kite was seen to struggle back to fledglings in the nest with a three @-@ quarters grown rabbit , a heavy load for such a small bird .

Like other elanid kites , black @-@ shouldered kites hunt by quartering grasslands for small creatures . This can be from a perch , but more often by hovering in mid @-@ air . When hunting the kite hovers with its body hanging almost vertically , and its head into the wind . Unlike the Australian kestrel , the black @-@ winged kite shows no obvious sideways movement , even in a strong breeze . One study of a nesting pair noted that the male searched aerially for 82 % of the search time . Typically , a kite will hover 10 to 12 m (33 to 39 ft) above a particular spot , peering down intently , sometimes for only a few seconds , often for a minute or more , then glide swiftly to a new vantage point and hover again . When hunting from a perch , a dead tree is the preferred platform . Like other Elanus kites , The black @-@ shouldered kite grips a vertical branch with a foot on either side , each one above the other and turned inwards , which enables them to maintain a secure footing on relatively small branches . Though hovering is the most common hunting method , the kites have been observed searching the ground beneath a vantage point for periods of up to an hour .

When a mouse or other prey is spotted , the kite drops silently onto it , feet @-@ first with wings raised high ; sometimes in one long drop to ground level , more often in two or more stages , with hovering pauses at intermediate heights . Prey is seized in the talons and about 75 % of attacks are successful . Prey can either be eaten in flight or carried back to a perch . Birds will have a favoured feeding perch , beneath which accumulate piles of pellets or castings .

They are diurnal , preferring to hunt during the day , particularly in the early morning and mid to late afternoon , and will occasionally hunt in pairs . Their hunting patterns , outside breeding periods and periods of abundant prey , have distinct crepuscular peaks , perhaps corresponding to mouse activity .

== Flight ==

Black @-@ shouldered kites spiral into the wind like a kestrel . They soar with v @-@ shaped up @-@ curved wings , the primaries slightly spread and the tail widely fanned . In level flight progress is rather indirect . Their flight pattern has been described as ' winnowing ' with soft steady beats interspersed with long glides on angled wings . They can most often be seen hovering with wings curved and tail pointing down .

== Breeding ==

Aerial courtship displays involve single and mutual high circling flight , and the male may fly around slowly with stiff exaggerated flaps , commonly known as butterfly @-@ flight . Courting males dive at the female , feeding her in mid @-@ flight . The female grabs food from the male 's talons with hers while flipping upside @-@ down . They may lock talons and tumble downwards in a ritualised version of grappling , but release just before landing . All courtship displays are accompanied by constant calling .

Black @-@ shouldered kites form monogamous pairs . The breeding season is usually August to

January , but is responsive to mice populations , and some pairs breed twice in a good season . Both sexes are involved in building the nest , which is a large untidy shallow cup of sticks usually in the foliage near the top of trees , taking about two weeks to complete the nest @-@ building . The flat nest is built of thin twigs and is around 28 to 38 cm (11 to 15 in) across when newly built , but growing to around 78 cm (31 in) across and 58 cm (23 in) deep after repeated use . The nest is lined with green leaves and felted fur , though linings of grass and cow dung have also been reported . It is generally located in the canopy of an isolated or exposed tree in open country , elevated 5 to 20 m (16 to 66 ft) or more above the ground . Black @-@ shouldered kites have been known to use old Australian magpie , crow or raven nests .

Females perform most of the care of eggs and nestlings , though males take a minor share of incubation and brooding . The clutch consists of three to four dull white eggs of a tapered oval shape measuring 42 mm x 31 mm (1 @.@ 7 in x 1 @.@ 2 in) and with red @-@ brown blotches that are often heavier around the larger end of the egg . The female incubates the eggs for 30 days and when the eggs hatch the chicks are helpless but have soft down covering their body . For the first two weeks or so the female broods the chicks constantly , both day and night . The female does no hunting at all for the first three weeks after hatching , but calls to the male from the nest , and he generally responds by bringing food . The female feeds the chicks with the mice brought back to the nest by the male , feeding them in tiny pieces for the first week or two , at which time the chicks are capable of swallowing a mouse whole . The nestling period lasts around 36 days , and the post @-@ fledging period at least 36 days with parental feeding for at least 22 days . When the chicks are older both parents take it in turns to feed them . Black feathers start to appear along the chicks ' wings when they are about a fortnight old , and they are fully fledged and are ready to fly in five weeks . Within a week of leaving the nest the young birds are capable of hunting for mice on their own .

Juveniles disperse widely , taking up territory that can be as far as 1 @,@ 000 km (620 mi) from the nest site .