

Falco columbarius (Merlin)

Family: Falconidae (Falcons)

Order: Facloniformes (Diurnal Birds of Prey)

Class: Aves (Birds)



Fig. 1. Merlin, *Falco columbarius*.

[<http://toateanimalele.ro/Pasari/Vultur/SoimDeIarna/SoimDeIarna.php>, downloaded 12 November 2014]

TRAITS. The merlin is a polytypic species (Temple, 1972) – i.e. having several forms. A small falcon, the merlin has a sturdily built body. Merlins are solitary birds however during migration they can be seen in groups or pairs during winter months (Newton et al., 1978). The Merlin's body length is around 24-33cm, with a broad wing-span of 50-73cm, with an average tail length of 15cm. There is sexual dimorphism – the male and female have different colouration. The male merlin has grey, purplish-blue feathers on its back and its chest is streaked with brown or black feathers (Fig. 1). They can weigh between 125-210g. The female and juvenile merlins are dark

brown with whitish speckled and brown feathered chests (Hoyo et al., 1994). The females are larger than the males and generally weigh between 190-300g.

ECOLOGY. Merlins can be found in areas where there is an open space – usually a strategy for hunting (Hoyo et al., 1994). Tending not to be partial to one habitat type, merlins can be found in taiga forests, moorlands, plains, prairies and other grasslands, near rivers or lakes and skirting coniferous forests are all less vegetation dense areas (Hoyo et al., 1994). According to Temple (1972) the type of location will determine the division of *F. columbarius* due to the prey found there and both of their adaptations. *Falco columbarius* is found mainly in the northern hemisphere generally they remain in the Nearctic, Palearctic and Indomalayan eco-zones (Temple, 1972), areas such as Europe, Asia, North America, and Canada, and due to migration they are also found in the southern hemisphere in places such as Central and South America and the Caribbean as well as South Africa and India (Hoyo et al., 1994). The merlin is a rare winter visitor to both Trinidad and Tobago. As a migratory bird, the merlin will follow its prey to the northern areas where it is common for the males to set up hunting territories (Newton et al., 1978). Once a territory is established the Merlins will hunt, breed, and raise young in the area.

FEEDING BEHAVIOUR. The agility of the merlin and its aggressive nature allow this relatively medium sized bird to be an intense predator. It is a carnivorous bird and uses its environment as an aid in its hunting. The merlin is either scouting its territory or scanning from the tops of trees for its prey. Merlins use their fast flying abilities (an average of 30km/hr) to ambush smaller birds, mammals and insects when exposed in open areas (Hoyo et al., 1994). They can attack from above and surprise the prey, they also glide in low; usually a metre off of the ground and they also ‘tail-chase’ their prey flying after them until the prey are caught after exhaustion, they will also catch small mammals such as voles, large insects, and reptiles by hunting on the ground (Wright, 2005). Mating pairs of merlins will form a team when hunting; one will draw out the prey while the other waits to make a capture. During the mating season especially merlins tend to eat more birds (preferring skylarks and sparrows) (Ellis and Okill, 1990). Diurnal hunters by nature (Johnsgard, 1990), their diet ranges from the preferential small and medium sized birds (Fig. 2), to reptiles, and large insects such as moths, dragonflies and grasshoppers and voles and other rodents such as rabbits during the day, and bats at dusk (Hoyo et al., 1994). As prey to larger bird such as peregrine falcons (*F. peregrinus*), and eagle-owls (*Bubo virginianus*) the Merlin due to its aggressive nature however is generally avoided (Hoyo et al., 1994).

BREEDING BEHAVIOUR. The breeding period of merlins occurs in the northern hemisphere and usually last around 5 months according to Becker and Sieg (1985). Starting in March the males arrive before the females to the breeding area – the area chosen generally has a good vantage point of the surroundings, and though Merlins tend to return annually to a particular area, it may not be the same site. Courtship follows in the beginning of April – March, with aerial displays by the male such as power dives, fluttering and slow landing displays. Other courtship acts include sharing of food (Fig. 3), bowing and fanning tail feathers. The couple tends to show monogamy for a breeding season, working together during the breeding period (Hoyo et al., 1994). Merlins are generally antisocial birds but will cooperate during brooding and for a short while after to ensure their offspring’s survival (Newton et al., 1978). Males become very protective during this period and will fight off other merlins, large birds and predators. They will also do the majority of the hunting and keep watch over the female and her brood (Becker and Sieg, 1985).

The merlin does not build a nest on its own but prefers to modify abandoned nests of hawks and magpies, and will build nests on cliffs and rock surfaces, and grass beds on the coast are also used (Becker and Sieg, 1985) favouring to establish nests in areas which are easily accessible to the bird but also well concealed from predators (Stephens and Anderson, 2002). Egg laying occurs from April to June depending on mating dates. Incubation occurs between April and June and is usually done by the females, although males may incubate for about one third of the total time (Newton et al., 1978) when the female leaves the nest to feed (Espie et al., 2004). The eggs are oval in shape and chestnut brown in color with darker brown speckles (Fig. 4), a female can lay up to 4-6 eggs per clutch (Newton et al., 1978).

JUVENILE BEHAVIOUR. Hatchlings which are too young to leave the nest will remain there for about a month from the end of May to the end of July while both parents keep guard and hunt (Newton et al., 1978). Fledging takes place from the end of June to mid July and the young Merlins or fledglings will leave the nest 26-33 days after. Once they leave the nest the parents will disperse and leave the young on their own (Becker and Sieg, 1985). The juveniles will however, remain in the general area of the nest for a few more days and begin to disperse from early July to early August. Merlins will reproduce two years after hatching when they have fully matured (Becker and Sieg, 1985).

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Fig. 2. Female merlin with prey.

[<http://www.arkive.org/merlin/falco-columbarius/image-G80316.html>, downloaded 15 November 2014]



Fig. 3. Merlin couple sharing prey.

[<http://www.arkive.org/merlin/falco-columbarius/image-G80315.html>, downloaded 15 November 2014]



Fig. 4. Nest and eggs of *F. columbarius*.

[<http://www.arkive.org/merlin/falco-columbarius/image-G76941.html>, downloaded 15 November 2014]



Fig. 5. Merlins copulating.

[<http://www.arkive.org/merlin/falco-columbarius/image-G80461.html>, downloaded 15 November 2014]