

## RAPTORS FEEDING WHILE ON MIGRATION OVER BUSKETT

Martin A. Thake

In the course of systematic raptor watches made at Buskett in autumn 1976 five species of *Falconiformes* displayed behaviour patterns which could be interpreted as hunting. This behaviour is described below.

In autumn the concentration of many small birds, chiefly *Passeriformes*, is greater at Buskett than elsewhere in the islands. There is evidence that at least some species use the area to build up a fuel store (Gauci and Sultana 1976) and a large number of passerines have been observed feeding at Buskett. Avian food available to raptors here belongs to three main categories: aerial feeders, tree-dwelling species and birds which converge on Buskett to roost. Birds skulking in the dense vegetation at the bottom of the valley are rarely taken. The mammalian and reptilian fauna is rich by Maltese standards. The insect fauna is diverse and profuse. The largest insect taken by raptors to date was a large grasshopper *Locusta* sp. There are usually a number of large dragonflies flying just above the canopy. All the species observed hunting (except *F. tinnunculus*) habitually capture prey in flight. *Passeriformes*, particularly Hirundines, frequently display escape responses associated with the approach of a hunting raptor. The birds uttered short, high-frequency calls and generally flew away from the raptor. These responses were most pronounced with approaching *Falco eleonora* and *F. peregrinus*.

Although many of the Hobbies sighted displayed behaviour patterns strongly suggestive of hunting, these data were not recorded quantitatively. Two types of hunting behaviour were observed. Generally birds glided slowly around 10 m above the canopy making mock swoops at the trees. Birds breaking cover were chased. This method was observed to be successful on three occasions. Within seconds of capture, prey was taken to a prominent perch for plucking and eating. The successful bird was on each occasion mobbed by another Hobby, the assault being short-lived (approximately 3 seconds). This method appears to have been used when the prey were already alarmed by the presence of other raptors or when several Hobbies were hunting together. Up to nine Hobbies have been observed hunting together. On one occasion success was achieved in a different way. A single Hobby flying fast, low over the deciduous coppice in the upper reaches of Wied il-Luq, surprised a flock of Hirundines feeding in the valley and took a single swallow. It immediately flew to a perch and proceeded to pluck its victim. Only one insect was taken. A juvenile Hobby was observed taking a dragon-fly (*Anax* sp.) while in an apparently leisurely glide. Although Hobbies were observed stooping at flocks of Hirundines, no successes were observed.

A single male *Falco peregrinus* was observed stooping at a flock of mixed Hirundines. It could not be ascertained whether prey was taken. *Falco eleonora* was observed hunting on three occasions but no successes were observed.

Although greater numbers of *Falco tinnunculus* were observed than of any other raptor mentioned here, hunting behaviour was only observed infrequently. Success was observed on one occasion but prey could not be identified. On two occasions birds flying overhead were carrying prey (mammalian unidentified). Towards dusk one Kestrel was observed attempting to catch a bat in flight. The attempt was unsuccessful.

The only member of the family *Accipitridae* observed hunting at Buskett was *Accipiter nisus*. A single female was observed hunting but the attack was unsuccessful. A juvenile male was observed carrying avian prey in its talons.

Aggression between raptors was frequently observed. *Falco subbuteo* was the most aggressive species observed and birds were observed threatening *Pernis apivorus*, *F. naumanni*, *F. tinnunculus* as well as other *F. subbuteo*. *F. naumanni* was also observed threatening *F. cherrug*. Mobbing by smaller birds was less easy to observe but a single *F. tinnunculus* was observed being mobbed by about thirty House Martins. It is difficult to detect interactions between raptors at distances of more than five hundred metres and hunting behaviour could not be followed to advantage at distances of less than a hundred and fifty metres from the bird. Successful hunts in particular, may have been more frequent than was recorded.

#### References

Gauci, C. and Sultana J. 1976. Migration of the Subalpine warbler *Sylvia cantillans* through Malta. *Il-Merill* (17): 15-20.

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Species	Time of Day (C.E.T.)	Date	Notes
<i>A. nisus</i>	15.55	6/10/76	Observed carrying avian prey. Disturbed while feeding.
<i>F. subbuteo</i>	12.55	21/ 9/76	Observed catching a swallow in flight, plucking and eating it.
" "	15.55	2/10/76	Observed catching a Hirundine in flight. Feeding was observed.
" "	13.40	3/10/76	" "
" "	15.50	3/10/76	Spanish Sparrow taken in flight. Feeding was not observed.
" " (juv.)	12.42	23/ 9/76	Caught a dragon-fly in flight. Prey discarded immediately.
<i>F. tinnunculus</i>	10.35	24/10/76	Observed carrying mammalian prey while flying overhead.
" "	14.25	7/11/76	Observed taking unidentified prey on the ground.
" "	16.40	8/11/76	Observed carrying mammalian prey while flying overhead.