

## BIRDS OF PREY AND THEIR USES

BY

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(With 4 plates)

From time immemorial the Raptores, as a class, have been looked upon as 'vermin' to be destroyed at sight. The gamekeeper has no use for them whatsoever, the poultry farmer (particularly in this country), wages continual war on them, and even the Memsahib, and her cook, chiefly the latter, have given of their best mutton-chops or beef 'i-stakes' to satisfy the hunger of some marauding kite.

In England, even the little kestrel is persecuted by the gamekeeper as a destroyer of pheasant chicks and partridges, and in this country, as in parts of Ireland, 'the HAWK' is anathema to all who have anything to do with the preservation of game.

Yet, there is another side to the story, and if we go into the subject a little deeper than what appears on the surface, and consider the habits of the various species, one begins to wonder what we should do without them?

It, of course, must be thoroughly understood from the first that no bird of prey will ever refuse a good opportunity of taking an easy prey, such as a wounded or sick bird, or one in which the flight is defective from an injury to the wing or otherwise. A White-eyed Buzzard (*Butastur teesa*) who has spent his life catching rats, frogs and insects, will immediately bestir himself should a maimed partridge appear in the open within the range of his vision, whereas normally, a whole covey might feed with impunity in a field within fifty yards of his perch without his taking any notice of them or the partridges of him.

Let us now try and see to what extent the birds of prey, as a class, deserve this unenviable reputation.

From Mr. Stuart Baker's *Hand List of the Birds of India* we find there are 105 varieties of diurnal birds of prey. This represents almost one-sixth of the world's total number, so India is well supplied.

Of this number many are winter visitors which arrive in the autumn and disappear in the spring. Some are to be found in the hills and not in the plains, and *vice versa*, whereas many which are found in the north are wanting in the south, and southern birds are very often unknown in the north.

From this it is pretty evident that no hard-and-fast rule can be laid down for any particular locality, or even Province, and if we are to discover to what extent the Raptores are injurious to our

game preserves, we must first find out what species are normally found in that area.

To begin with let us make a list of the genera to be found in the whole of India, from which we must eliminate those which are harmless, and I have no doubt that many of our members will probably be surprised at the result.

The Order Accipitres is divided into three families, viz. Pandionidæ, Gypidæ and Falconidæ, the last being again subdivided into two sub-families, Gypaëtinae and Falconinae. It is unnecessary here to go into details regarding every species or variety, but we can enumerate the genera and state how many species each is comprised of, and these genera are:—

1. Pandion (Osprey), one; Vultures (*Ægyptius*, *Torgos*, *Gyps*, *Pseudogyps*, and *Neophron*) in all ten species: The Lammergeier (*Gypætus*), one; True Eagles (*Aquila*), six; Hawk-eagles (*Hieraëtus*, *Lophotriorchis*, *Ictinaëtus*, *Spizaëtus*), eleven; Serpent Eagles, Buzzards, Fishing Eagles, Kites, Harriers, Honey-Buzzards, Bazas and Falconets, in all forty-five species and varieties, beginning with No. 1621 *Circaëtus gallicus* to No. 1654, *Buteo b. japonicus*; No. 1670 to 1675 and again from 1692 to 1695.

This then leaves us with the hawks and falcons, i.e. *Astur*, *Accipiter* and *Falco*, which between them account for thirty-one species and subspecies.

Now out of this lot the following might safely be eliminated without further consideration as not coming within the range of game destroyers, viz. Osprey one, Vultures ten, the miscellaneous assortment from Serpent Eagles to Falconets forty-five, and the Lammergeier one.

That is fifty-seven species, or over one half of the birds of prey of India.

From this it must not be assumed that none of them ever catch a game bird, as harriers catch quail or even a very occasional partridge, and a fishing-eagle might often be seen flying off with a duck (though probably never one that has not been in some way maimed), but as a normal thing none of these birds are game killers and the majority are absolutely incapable of catching any game bird in full possession of its power of flight.

To this list we can add several others. The genus *Aquila* contains six species of big powerful birds, but of these six only one, the Golden Eagle (*A. c. daphanæ*) is a hunter, or capable of catching any game bird. The remaining five might safely join the list of the 'harmless'. The hawk-eagles must all remain in the list of suspects, and in fact are more or less, rather *more* than less all distinctly injurious, with the possible exception of *Hieraëtus pennatus* and *Ictinaëtus m. perniger*.

Among the hawks and falcons we have a number of keen hunters, but how many would normally take a bird as big as a partridge if smaller fry is available? Very few among the hawks, at any rate. From the falcons we can ignore the merlins, hobbies and kestrels as being too small to worry about, which leaves us with six falcons which are all capable of doing considerable damage.



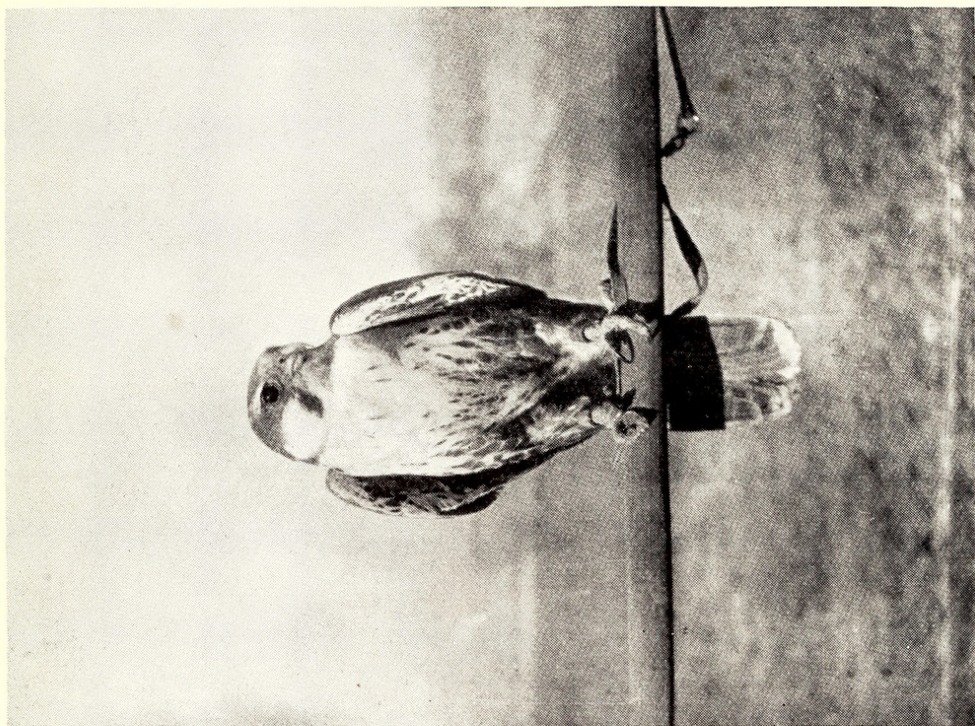
BONELLI'S EAGLE  
(*Hieraëtus fasciatus*)

Very destructive to game.



THE GOLDEN EAGLE  
(*Aquila chrysaëtus daphanæ*)

Destructive to hill game in Autumn and Winter.



THE LAGGAR FALCON  
(*Falco jugger*)

Might become destructive in a particular locality.



THE EASTERN GOSHAWK  
(*Astur gentilis schvedowi*)

Very destructive in the hills.

This reduces the list to one eagle, nine hawk-eagles, six falcons and perhaps as many hawks, say a little over a score of birds in all, out of a total of 105.

Having arrived at the number that should be watched as probable destroyers, the next question for the game preserver to consider is how many of these ever visit, or are ever likely to visit his particular preserves. For this purpose we can divide them into two classes, those that will be found in the plains, and those that live in the higher ranges of the Himalayas. Of course, the list will vary with each province, but if for the sake of argument we take the Punjab, which I happen to know best, we should arrive at approximately the following conclusion. I say approximately because stragglers and wanderers might turn up anywhere.

<i>Varieties</i>	<i>Hills</i>	<i>Plains</i>
Golden Eagle	1	nil
Bonelli's Eagle	1	1 (up to 8000')
Changeable Hawk-Eagle (rare)	nil (low hills)	1
Hodgson's Hawk-Eagle	1	nil
Goshawk	1	nil
Shikras and Sparrow Hawks	5	5
Falcons	4	6
	<hr/> 13 <hr/>	<hr/> 13 <hr/>

The above then is a rough list of what might reasonably be expected to appear in either the hills or the plains of any district in the Punjab. It includes such birds as the Shanghar and Red-capped falcons, which are rare at best, whereas many species are restricted to particular tracts and are by no means universally met with throughout the Province.

This means, that in a province like the Punjab we need only bother about some thirteen species of the *Raptores* as being *likely* to destroy our game in any particular locality, and if each province was taken separately, the result would be more or less similar.

Having arrived at the above conclusion for the province, let us see how the thirteen birds effect our particular area, be it in the plains or in the hills, so let us start with a game preserve in the plains ; what do we find :—

(a) *Bonelli's Eagle*. They hunt in pairs and are undoubtedly destructive.

(b) *Booted Eagle*. Rare at best and will seldom take a bird as quick on the wing as a partridge.

(c) *Changeable Hawk-Eagle*. Only in the vicinity of low hills, but very destructive where found.

(d) *Shikras and Sparrow Hawks*. Not normally destructive to birds the size and strength of a partridge, but will take young chicks and cheepers.

(e) *Falcons*. If near water, the Siberian Peregrine will be a constant visitor in the winter, but partridges are only in danger when feeding far from cover.

(f) *The Indian Peregrine Falcon*. Not very common and birds only in danger when away from cover.

(g) *The Laggar Falcon*. Hunts in pairs and a pair may become attached to a preserve and do considerable damage when cheepers are about.

(h) *The Saker Falcon*. Is not likely to be found over scrub jungle, and prefers open plains and sandy tracts. Can be ignored.

(i) *The Red-capped and Shanghar Falcons*. Too rare to matter.

It will thus be seen that an intelligent interest in the doings of the Raptores which frequent any area is all that is necessary to find out the real culprits that are doing, or apt to do, damage but to call the whole family 'vermin' and try to exterminate them is the surest way of ruining any game preserve, as I shall endeavour to show.

#### Real enemies of ground game.

The next question is, when does ground game need most protection? Obviously in the nesting season.

During the nesting season what is its worst enemy? Here we have a number of things to contend with such as rats, mongooses, the larger snakes, monitor lizards, and to a smaller extent foxes, cats and perhaps jackals. Of these, again, which are the worst? Monitor lizards, rats (because of their numbers), snakes and mongooses. The last, however, might be allowed considerable latitude because of the good they do in keeping down snakes and rats. Snakes also eat rats, but the actual number of rats killed by snakes in the year must be, at best, comparatively small and almost negligible.

Any of the above-mentioned will wipe out an entire clutch of eggs in a few moments. It would take a hawk or a falcon, even if it took to a game diet and ate nothing else, a week or ten days to accomplish such a result.

On the other hand what keeps down rats and snakes, besides a mongoose, cats and foxes? The birds of prey. There is not a single bird of prey (except vultures), that will not catch and eat a rat, given the chance; not even the noble Peregrine or the mighty Golden Eagle, will refuse the tit-bit, whereas the majority of them practically live on them. Remove this host from any area and the result will probably spell disaster.

I have recently been through the best partridge preserves in the province, during the gun dog trials in Patiala and Jind, and the fact was very noticeable that we came upon patch of jungle where the birds were extremely plentiful, in fact too plentiful for the peace of mind of the working dogs, whereas we also came upon patches where for half an hour at a time, not a bird was flushed. This fact led me to keep an eye on the nature of the ground and I noticed that many of these barren beats were infested with rat holes, and the mounds of the mole-rat were much in evidence. Was this a coincidence, or does it bear out my theory that rats are one of the biggest enemies that ground game has?

Throughout the six days, four in Jind and two in Patiala, that I was there, I also kept a close eye on the birds of prey we encountered, and these are the species I saw:—Shikras, in plenty. One chased a partridge that had been very slightly wounded for



THE EASTERN STEPPE-EAGLE  
(*Aquila nipalensis nipalensis*)

An excellent rat killer



THE BOOTED EAGLE  
(*Hieraetus pennatus*)

More friend than foe.



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