Eagles and Hawks.

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Much has been written in favor of giving protection to the Wedge-tailed Eagle, commonly known as the "Eagle Hawk," but little has been done to put forward the claims of the Whistling Eagle, Little Eagle, Brown Hawk, Fork-tailed Kite, Kestrel, and Goshawk.

The writer, from observations gained through a life long experience with Eagles and Hawks in the interior of South Australia, ventures to give a few facts about them in the hope that those persons not as conversant with the habits of these birds may be in a position to weigh their respective merits.

In using the word Eagle, it must be clearly understood that

it applies only to the Wedge-tailed Eagle.

The Eagle is a noble bird, and is recognised as the largest

true Eagle in the world.

In the interior it is very numerous, especially during the lambing season, when it congregates in large numbers, and at times, as many as forty are to be seen in the air within one's vision.

Before the introduction of sheep and rabbits, the Eaglamust have subsisted upon kangaroo, wallaby, other small mammals, or birds. Even now, when the rabbit is a curse to the country, it is not unusual to see a pair of Eagles capture a young kangaroo or wallaby.

Some people, in advocating protection for this bird, claim that it kills rabbits in such numbers that a great heap of bones, etc., is accumulated under its nest and feeding platform. It is not advisable to accept this as a correct deduction. The Eagle secures the greater portion of these rabbits from dogs, foxes, cats, and hawks.

All bushmen know that it wil follow a dog, fox, or cat some distance to secure what it kills. When one of these animals has made a capture, often a rabbit, the Eagle will swoop down, causing it to clear off, leaving its intended food; this the Eagle usually carries away. Many a wild-dog or dingo has been caught by myself or employees, simply through the knowledge of this habit. When Eagles are seen slowly flying along at a little distance from the ground, it can be taken as a sure sign that a dog, fox or cat is being followed. As a proof of this, the following instances are given. When out hunting for a dingo that had caused considerable damage to the station flock, five eagles were observed flying lazily, close to the ground. This

suggested that it was possibly the dog that they were following, so we rode our horses carefully towards them. After a few minutes the Eagles were seen to circle round, swoop down, and settle; we therefore galloped towards them and had the satisfaction of viewing the dog, which was eventually run down and killed. Out of curiosity, we returned to the spot where the Eagles had swooped, and on our approach, three of them rose from the ground, one carrying away the remains of the rabbit, which, judging by the tracks, was certainly killed by the dog-

Often when out after dogs we have been misled by the actions of Eagles, for instead of a dog, we found that a fox or cat was being followed. On one occasion we found an Eagle feasting on the remains of an Australian Dotterel, which was, undoubtedly, killed by the fox, as the latter was disturbed from under a large cotton bush close by.

A domestic cat was noticed, carrying and dragging a halfgrown rabbit towards the homestead, when an Eagle swooped at her; she dropped her burden and made for cover. The Eagle landed, secured the rabbit, and flew off with it.

Many of the Hawks, such as the Whistling Eagle and Little Eagle, kill many more rabbits than they are generally given credit for. These hawks, after killing, cannot carry a large rabbit away, but eat it on the ground. The Eagle, ever on the watch, notices the feast, comes to earth alongside the smaller birds, drives them away and, usually, flies off with the remains to its nest or feeding platform.

It is seldom that Eagles have been seen to kill rabbits in the interior, there are plenty of animals and hawks to do this for them. To catch a rabbit, it would appear necessary for two Eagles to hunt together. When the running rabbit is sighted, one bird swoops at it, causing it to squat, the other bird immediately lands right on top of the rabbit and kills it with its claws.

It has often been stated that the Eagle takes up a rabbit in the swoop, without coming to earth. Taking into consideration the length of its wings, such a thing seems well nigh impossible; this deduction is strengthened by the fact that the Eagle cannot rise directly from a standing position on the ground. It is necessary for it to make a few hops or strides with wings outstretched before it can get up into the air. To carry away a rabbit or the remains of a lamb, the Eagle holds it in one claw only, until it is well away from the ground, then the other claw helps to carry it. If the load was held in both claws on the ground, the bird could not hop or stride sufficiently to enable it to rise. Eagles, in fact, all hawks, never carry any weight in their bills.

They do not attack with the bill, but always strike with the talons.

Any sheepowner, in Eagle-infested districts, who personally attends to his sheep during lambing time, knows from experience that the Eagle does much destruction amongst lambs. In many districts, where Eagles are numerous, a bonus is paid for killing them. This payment would not be made without good reason; this has been the result of much observation. It might be of interest to state that the pastoralist does not encourage the destruction of Hawks, and regret is frequently expressed that so many of these useful birds meet their end by eating poisoned baits laid for dogs, foxes and Eagles. In the "bush" one comes into close contact with nature and soon realizes the "good" and the "bad," or friend and foe.

I have seen Eagles kill lambs that were in good, strong condition, and attended by their mothers and on one occasion I noted several Eagles swooping at a three months old lamb, that they were driving out of a flock, with its mother following along bleating for its lamb. Before I could reach them, the lamb fell, and two of the Eagles landed alongside. The lamb however, struggled to its feet and staggered, on with the birds still attacking. My arrival disturbed them from effecting a The lamb when caught, was exhausted and so badly mauled on neck and back that it had to be destroyed. The body. which had many talon marks, two of which had penetrated into the stomach cavity, was poisoned with strychnine, and three hours later nine dead Eagles were found close at hand.

It is doubtful if a single Eagle can secure a healthy lamb from its mother, but two or more certainly can. They worry the ewe until it cannot protect its lamb, in much the same way that several wild dogs will worry a cow till it is too exhausted to save its calf.

The remains of many birds have been found on and under the Eagle's nest and feeding platforms, but it is not advisable to claim that they were killed by the Eagle; it is quite possible that some of these were taken from hawks or animals. The remains of lambs are often seen under and on the Eagle's nest, but no one can, with certainty, say that they were killed by the Eagle, as it is a great carrion feeder, and may have carried to the nest something that it had found dead, though as a rule only freshly killed food is brought to the young.

The Little Eagle is a very much smaller edition of the Wedge-tailed Eagle, it has feathers right down to its claws, but in its habits differs greatly from the former. It is the best bird agent for killing rabbits in the interior, and so far as observa-

tions go, principally subsists upon them. It is a most inoffensive bird, does not attack lambs, and has never been seen to feed On account of it being despoiled of much of its kill on carrion. by the Wedge-tailed Eagle, it is not generally given credit for all the good work it accomplishes. It will watch a rabbit for a considerable time, then suddenly descend right on top of it, clutch it in its talons for a few seconds, let go and rise again, only to land fairly on the rabbit and complete the killing. has been observed to attempt to carry off a full-grown rabbit that it had just caught, but in each instance was unsuccessful. Lizards are also killed for food, for, on one occasion, when a bird was disturbed, a half-dead "sleeping" lizard was left behind. The young are fed on pieces of rabbit, lizards and mice. On one or two occasions remains of small birds were seen on the nest with the young, though no record has been made of seeing the Little Eagle kill birds. It is to be regretted that this bird is not more numerous, and that there is little likelihood of is increasing, as the number of eggs laid for a sitting is never more than two, and only one egg is found as often as the larger From a pastoralist's point of view, this is a pity, for undoubtedly the Little Eagle kills a great many rabbits and has no vices.

The Whistling Eagle is one of the most numerous of the inland Hawks, and is an inoffensive and useful bird. considerable number of rabbits, making the capture in the same way as the Little Eagle, but is often robbed of its food by the Wedge-tailed Eagle. In the interior, plagues of grass-hoppers and caterpillars are frequent, and it is during such times that the Whistling Eagle does a considerable amount of good, for it prefers the open country where the pests are thick, and it is then very unusual to see it hunting for other food. It is amusing to watch it catching grass-hoppers. One would expect it to catch such a small object in its bill; not so, for only the claws It can often be seen half flying, half leaping after a grasshopper. It certainly uses the bill when picking up grubs or caterpillars from the ground. It does not attack sheep or lambs, but lives a great deal on carrion. The young birds, which number two or three, are fed on mice, lizards, birds, and pieces of rabbit and lamb. At times a few pieces of rabbit skin are found on the ground under the nest, but it is seldom that any bones or refuse are found there; the bird must evidently carry

The Brown Hawks, Fork-tailed Kites, and Kestrels can be dealt with together; they are quiet, harmless birds, do not attack lambs and have not been observed to kill rabbits. The

Brown Hawk has been seen to catch small birds by suddenly pouncing upon them, but the Fork-tailed Kite and Kestrel have not been seen to catch birds, though the writer has seen the Fork-tailed Kite make an attempt to catch shell parrots which were in a large flock, but without success. All these Hawks are very destructive to the caterpillar and grass-hopper pests, spending practically all day chasing them on the flats. It is interesting to note that while the Brown Hawk and Kestrel almost invariably catch the grass-hoppers their bills, the Fork-tailed Kite does not do so any extent. It. the claws. uses Ιt is а common thing to see these Kites accompanying a horseman as he travels along. They catch the disturbed grass-hoppers in their claws, eating them as they fly along, often coming almost within reach of the man on horseback in their endeavour to capture one of the insects. Whilst the Kite is very keen on offal, etc., the Brown Hawk and Kestrel prefer killing their own food.

The Kite is quite harmless to fowls and chickens and may often be seen feeding amongst the fowls on scraps thrown from the house, but should any other hawk appear the fowls instantly

seek shelter.

Though insects would appear to be the chief food of these birds, they certainly feed their young on small lizards, mice, birds, and pieces of meat from various animals; for remains of this food have been found on the nests containing young.

The Goshawk does much good work by killing rabbits. He seems to realize that he cannot carry away a full-grown rabbit, so invariably attacks the young only. He always captures his victim in the swoop, without coming to earth, and flies straight off with it. It is quite a common thing to see a Goshawk swoop down to the top of a large warren and rise with a young rabbit, still squealing, in its claws. He also eats a lot of grass-hoppers, catching them in the claws when on the wing. Its young are fed on rabbits mice, lizards, and birds, judging by the refuse thrown from the nests.

It is well-known that the Goshawk destroys many birds and takes chickens, but from observations made, it does more good than harm to the pastoralist and is considered of far greater value than the Wedge-tailed Eagle, for it does not destroy any of his lambs but helps to check the increase of rabbits, and destroys a large quantity of grass-hoppers.

The Goshawk, undoubtedly the most destructive of hawks, is shot on sight if he ventures near a fowl-yard, yet many of his destroyers advocate protection for the Eagle, which troubles them not at all, for it has long ago been so thinned out near towns that the few remaining birds are looked on as "novelties." It is all very well to ask the "back-blocker" to protect a bird, that while doing him considerable harm, in no way hurts the people of the settled areas, for they have already decided whether the Eagle is worthy of protection. The back-blocker would be equally justified in asking for protection for Rosella Parrots or Starlings, the latter being an insect eater would be useful to him, whilst the former does him little harm and would be nice to look at when he comes on a holiday.

There are other Hawks in the interior, such as Black Falcon, Grey Falcon, Little Falcon, Black-breasted Buzzard, Spotted Harrier, and Collared Sparrow Hawk; but these are so rarely seen that it would be unwise to generalise from the

few observations that have been made of their habits.