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RIENDS and FOES of WILD LIFE

PUBLISHED BY
THE CONSERVATION COMMISSION
STATE OF NEW YORK

GENE WALKER

HELP WILD LIFE

TO DO ITS BIT

BIRDS MAKE AGRICULTURE POSSIBLE

*By Killing Insect and Rodent Pests, They Save
Crops Enough to Feed Our Army "Over There"*

FISH AND GAME FURNISH FOOD

THOUSANDS OF TONS ARE TAKEN ANNUALLY

*Conservation Laws are designed to make Fish, Game
and Birds more abundant and are vitally necessary
for National Welfare*

THE MAN WHO ILLEGALLY TAKES GAME OR FISH OR
KILLS BIRDS DECREASES FOOD RESOURCES AND
DEFRAUDS HIS COUNTRY

REPORT VIOLATIONS TO THE NEAREST GAME PROTECTOR
CONSERVATION COMMISSION, ALBANY

FRIENDS AND FOES OF WILD LIFE

A Discussion of Certain Predacious Birds
and Animals from the Standpoint of
the Sportsman, Trapper and Farmer

By
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Confidential Secretary and Editor

STATE OF NEW YORK
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ALBANY

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D. of D.
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THE BLACK LIST

1. COMMON CROW

2. COOPER'S HAWK

First year female

Adult male

3. GOSHAWK

First year

Adult

4. SHARP-SHINNED HAWK

Adult female

First year male

6. WEASEL

7. RED SQUIRREL

5. GREAT HORNED OWL

9. HUNTING HOUSE-CAT

8. RED FOX

FRIENDS AND FOES OF WILD LIFE

Damage Done by Vermin

"Vermin," with all the contempt that the word implies, is a name which only within comparatively recent years has come to be given in this country to the various kinds of birds and animals that prey upon useful wild life. Borrowed originally from the vernacular of English gamekeepers, it is now generally understood in America to apply to foxes, weasels, rats, hunting house cats, red squirrels, certain kinds of hawks and owls, crows, black snakes and other creatures that make their livelihood by the sacrifice of their more valuable and attractive neighbors.

Every intelligent movement for the protection of insectivorous birds, game birds and game animals has recognized the importance of holding vermin in check; in fact the success of such protection may usually be measured by the extent of the campaign against vermin. In England, for instance, where thousands of private gamekeepers are ever alert for an opportunity to nail up another cat's tail or crow's head in their "larder" of vermin trophies, the stranger is at once struck by the great abundance of song birds, and by the amazing quantity of game which it is possible to take in a single day. On the other hand, in many a neglected region in America, vermin have had things their own way for so long that many of the valuable denizens of wood and field have been reduced almost to the point of extermination.

The Conservation Commission is entirely awake to the vital importance of unstinting warfare upon "vermin," if a plentiful supply of game and other useful wild life is to continue. On the back of every hunting and trapping license issued in the year 1919 is printed in large letters the slogan: "Enlist in the Campaign against Vermin," together with the words, "Shoot all you can of foxes, cats hunting protected birds, harmful hawks, red squirrels and other enemies of useful wild life. You will benefit both the game and your own sport." Furthermore, in the tally card with which each sportsman is provided for the purpose of recording what he takes during the year, the list of vermin is given a place as prominent as that occupied by game and fur-bearing animals.

In addition, one hundred of the State game protectors have been provided during the last year with 25-20 Winchester rifles, which they are instructed to carry with them at all times when in the field, and to use for the reduction of vermin whenever opportunity offers. At the same time, there was sent to each protector the following list of vermin and other undesirable creatures, to which he was directed to confine the use of his rifle:

Lynx	Crow
Bobcat	English sparrow
Hunting house cat	Starling
Red fox	Sharp-shinned hawk
Gray fox	Cooper's hawk
Red squirrel	Goshawk
Weasel	Great horned owl
House rat	Great gray owl
Porcupine	Snowy owl
Woodchuck	

Every protector is required to report to the Commission the number and kind of vermin which he kills each month, and the record to date is a good one. But a force of some 125 game protectors, scattered over the State, each patrolling a territory averaging about 400 square miles, can hardly be expected to cause extensive diminution of vermin, no matter how conscientious they are in the work. Every sportsman, every farmer and everybody else who believes in the conservation of useful birds and animals, must enlist in the campaign and do his share. Only by such active cooperation, year in and year out, can a definite check be put upon these harmful creatures and beneficial results to desirable wild life be effected.

What has become of the ruffed grouse, the noblest game bird of the east? Certainly the alarming decrease in the numbers of the much loved "partridge" cannot be attributed to sportsmen, who take only a small number during the limited hunting season and could never have brought the birds to their present low ebb. As part of a systematic investigation of this problem, the New York State Conservation Commission in 1917 sent a questionnaire to every game protector, every forest ranger and every sportman's organization in New York State, one question in which inquired into the chief causes of the birds' decrease. Altogether, 270 replies to the questionnaire were received by the Commission, and although the returns from the protectors and rangers were tabulated separately from those of the sportsmen, both groups not only named the same four

causes as having the greatest bearing on the decrease of the birds, but also placed them in the same order of importance, namely, (1) foxes, (2) bad nesting seasons, (3) hawks, and (4) common cats. It is very significant that three of these four causes point the finger of blame at some form of vermin. Many other concrete instances of the depredations of vermin might be cited; but they are unnecessary. Every sportsman and every farmer is well aware that vermin must be kept in check.

Bounty System Undesirable

Many states offer bounties for evidence that predacious creatures have been killed. Under present-day conditions in New York State, however, the institution of a bounty system would be of little or no benefit. The skins of the more destructive four-footed vermin already have a definite market value, and, with a prime fox pelt worth from twenty to twenty-five dollars, and even a weasel's skin bringing a dollar or more, the small bounty which the State could pay would hardly prove an incentive to more captures. In the case of birds, there is always danger under a bounty system that useful species will be sacrificed. *All* hawks and owls are not harmful, but, where there is a chance for a bounty, little distinction is likely to be made.

In fact in any campaign against vermin, the chief problem is whether the desirable characteristics of a certain creature of questionable habits more than outweigh the undesirable characteristics. For instance, the skunk, the mink and the raccoon undoubtedly do great damage to game birds and poultry; but the State Legislature has ruled that their value as fur-bearers is more important than their depredations as vermin, and it has therefore granted them protection throughout the greater part of the year (except in the case of skunks which are actually injuring property). On the other hand, foxes, both red and gray, are so exceedingly destructive of wild life that, in spite of the value of their fur, they are regarded as outlaws the year round.

Similarly, among birds, the barred owl may seize an occasional young partridge, although the bulk of his diet consists of destructive rats and mice. The balance is in his favor, and he is therefore protected in New York State at all times. But the great horned owl, whose meals consist largely of game and poultry, may be shot at any season.

The species whose records are overwhelmingly bad are surprisingly few; in other words, it is only a few kinds of marauders that

are taking the present large toll of useful birds and animals. It is upon these few that a concentrated fire should be directed by all sportsmen, farmers and trappers. In order to emphasize in the most vivid manner possible just who comprise this undesirable company, its chief members have been assembled in the accompanying colored plate, which is designated **THE BLACK LIST**.

Animals in the Black List

Of quadrupeds, the most conspicuous offenders are foxes, weasels, red squirrels and house cats. The depredations of foxes are too well known to require much comment; the answers to the Conservation Commission's ruffed grouse questionnaire would be sufficient condemnation, if any were needed. As a matter of fact, every sportsman and every farmer knows only too well from his own experience that the fox is one of the most bloodthirsty marauders in all nature. In spite of the fact that they are widely hunted with hounds and beset with traps, and in spite of the present value of their pelts, foxes seem to be on the increase, and only by more strenuous warfare upon them can these greatest enemies of our game birds be kept in check.

Method of Trapping Foxes

The natural cleverness of the fox makes his capture in a trap no easy matter, and success will follow only perseverance and the utmost care in obliterating human scent throughout all operations. In places where there are springs and small streams, there is no better method of trapping foxes than the old water set, which is made as follows:¹ "It is best to find a spring which does not freeze, but for early fall trapping a brook will do. The rise and fall of the water in small streams sometimes makes trouble, and a spring or small pond gives best results. The spring should be at least four feet in diameter and should be prepared for the set in the summer, but if care is used, may be fixed up during the trapping season. A moss covered stone, or a sod (according to surroundings) should be placed about a foot and a half from shore, and should rise about two or three inches above the water. This is the bait sod. The trap is set half way between the sod and the shore, and the jaws, springs and chain should be covered with mud, or whatever is found in the bottom of the spring.

"The pan of the trap should just be covered with water. A piece of moss or sod should now be placed on the pan of the trap, so

¹E. Krebs, "The Science of Trapping," p. 113. (A. R. Harding, Pub., St. Louis, Mo.)

that it will rise an inch above the water. When properly placed, this sod will look natural and will apparently be a safe stepping place for the fox. The pan should be so adjusted, by means of a dried goldenrod stalk or otherwise, so that it will not spring too easily. A small piece of bait and preferably also some "scent"² should be placed on the larger sod.

" In making this set the trapper should wade up the outlet of the spring, and stand in the water while making the set. Do not touch the bank or any of the surroundings. The trap should be

WATER SET FOR TRAPPING FOXES

fitted with a chain about three feet in length, with a two-prong drag attached, but most trappers simply wire a stone of eight or ten pounds' weight to the end of the chain. The drag, whatever is used, should be buried in the bed of the spring.

" The flesh of the muskrat, skunk, opossum or house-cat is recommended for bait, and it should be allowed to taint by remaining about a week in a glass jar. Two men have been known to catch over one hundred foxes in a season with this method, besides considerable other furs taken in the same traps, for the method is good for many other animals besides the fox.

" One trapper recommends setting the trap in exactly the same manner, except that the bait sod is omitted, and the bait, a bird,

² Prepared "scent" may be obtained from R. L. Hayes, Bloomingdale, Essex Co., N. Y.

is fastened by means of a stick thrust in the bottom of the spring. The stick must be entirely out of sight, and the bird apparently floating in the water. Both of these methods are very good, and are especially recommended for the novice, as they are the easiest and surest methods to start on."

Weasels and Squirrels

The tireless hunting instinct of weasels and their insatiable desire to kill are well known to all. They are not satisfied with supplying the call for food, but, whenever opportunity arises, kill from sheer lust of slaughter. They unhesitatingly attack prey many times their own weight — rabbits, quail and ruffed grouse falling easy victims.

Of the squirrel family, the red squirrel is admittedly the most destructive, and seems to have few redeeming qualities. Dr. E. W. Nelson, Chief of the Biological Survey, U. S. Department of Agriculture, writes: "The worst trait of the red squirrel is his thoroughly proved habit of eating the eggs and young of small birds. During the breeding season he spends a large part of his time in predatory nest hunting and the number of useful and beautiful birds he thus destroys must be almost incalculable. The number of red squirrels is very great over a continental area, and one close observer believes each squirrel destroys 200 birds a season. The notable scarcity of birds in northern forests may be largely due to these handsome but vicious marauders."³ In the destruction of birds' eggs and young birds, red squirrels are far more serious offenders than gray squirrels or chipmunks, the largest part of whose menu consists of nuts, acorns and seeds.

Cats

The toll of useful wild life taken annually by domestic cats would undoubtedly amaze many a person who is accustomed to associate cats only with the warmth of the kitchen fireside. Dr. Frank M. Chapman of the American Museum of Natural History believes that there are not less than 25,000,000 cats in the United States and that there may be twice that number.¹ Practically all of these cats gain part of their livelihood by hunting. Even cats that are household pets are bound to indulge their natural instinct of bird killing—often unobserved, at night or in the early morning—whereas vagrant cats, abandoned cats, surplus cats and cats gone wild form

¹ Nat. Geographic Mag., May, 1918, p. 454.

² Bird-Lore, 1902, p. 70.

probably the most dangerous destructive force, when their numbers are considered, that insectivorous and game birds have to cope with. The wide extent to which cats carry on their depredations is revealed by their tracks in the snow in game covers far from any human habitation. E. H. Forbush, State Ornithologist of Massachusetts, writes of "two Maine trappers who asserted that as many cats as other fur-bearing animals were caught in their traps even in locations upward of thirty miles from any house or clearing."⁵

The cat nuisance can be remedied only by the cooperation of farmers and other harborers of cats in closely limiting the number of cats on their premises and in destroying their litters; and by the assistance of sportsmen in shooting hunting cats found afield. New York State was the first state to take cognizance of the cat menace to bird life in the enactment of a "cat law" in April, 1918, which provides that "Any person over the age of twenty-one years, who is the holder of a valid hunting and trapping license, may, and it shall be the duty of a game protector or other peace officer to, humanely destroy a cat at large found hunting or killing any bird protected by law or with a dead bird of any species protected by law in its possession; and no action for damages shall be maintained for such killing."⁶

Birds in the Black List

In a discussion of birds in the vermin class, we must first observe that under the provisions of the New York Conservation Law and of the Federal Migratory Bird Law, one may kill at any season in this State only the English sparrow, starling, crow, hawk, snow-owl, great gray owl, great horned owl, and kingfisher. Eliminating the English sparrow, starling and kingfisher, which, while they may be regarded as a nuisance in certain fields, do not come exactly within the category of vermin, we come to a consideration of the crow, which has well been placed by the artist at the top of the "Black List."

Crows

In a bulletin lately issued by the Board of Game Commissioners of Pennsylvania⁷ upon methods of combating the crow, he is branded as the leader of all vermin, "who destroys individually more birds of all kinds, more birds' eggs and young poultry than any other bird that ever flapped a wing." Certain it is that anyone who has watched the ceaseless procession of crows winging their way in the

⁵ "The Domestic Cat," State Board of Agriculture, Boston; p. 22.

⁶ Chap. 333, Laws of 1918, Conservation Law, §193-b.

⁷ "The Crow," Bul. No. 3, Harrisburg, Pa.

late afternoon to their common roosting place, or leaving it in the morning, has been impressed with the tremendous aggregate damage that must be done by this army of black marauders, whose numbers seem to have no end. A judicious use of poison and the gun are undoubtedly the best cure for the crow's many bad habits.

It has been found that crows can often be easily brought within gun range through the use of a stuffed owl. All birds seem to have an instinctive fondness for tormenting owls which they may discover abroad in the daylight, and by displaying a large stuffed owl in some conspicuous spot and then imitating the call of the

CROWS MOBBING A STUFFED OWL

crow from a nearby hiding place, it is possible to gather together the crows of an entire neighborhood, who seem to lose their natural suspicion in their eagerness to mob the owl. An added assistance in this fun of fooling the crows is an arrangement by which the stuffed owl can be made to move its head and wings when certain strings are pulled.² For those who are not good bird mimics a "crow call" is also desirable. This is a small wooden instrument resembling a whistle and can be purchased from any sporting goods dealer or hardware store for from seventy-five cents to one dollar. Even without the help of a stuffed owl, skillful use of the crow call will often attract crows within gun shot.

²Stuffed owls with this mechanism may be bought from Fred Sauter, 42 Bleecker St., N. Y., and Von Lengerke & Detmold, 200 5th Ave., N. Y.

Birds of Prey

The birds of prey — hawks and owls — offer a far more difficult problem to the conservationist who is anxious to discriminate between those species which are harmful and those which do more good than harm. It is to be regretted that the Conservation Law of New York uses the general word "hawk" in the list of birds which may be shot at all seasons, regardless of the many beneficial hawks which inhabit the State. In the case of owls a reasonable distinction is made in the law, only the "snow-owl, great gray owl and great horned owl" being in the unprotected class. Of these three, the snow owl (or snowy owl, as it is more often called) and great gray owl are both so rare as very seldom to be seen by the ordinary sportsman or farmer. The snowy owl occurs very irregularly and only in winter; the great gray owl is practically confined to the Adirondaek forests. The great horned owl, on the other hand, is fairly common. All three are very large owls — the largest that occur in the State — and range from 22 to 27 inches in length. All of the owls of smaller size are included in the beneficial class — their chief food being mice — and they are protected by the State throughout the year. The only protected owl that approaches in size the three unprotected kinds is the barred owl, which is our commonest woodland owl and, considering the quantity of harmless rodents it disposes of in a year, is a friend of both farmer and sportsman. Unlike the great horned owl, it has no ear tufts.

The Great Horned Owl

Standing in a class by itself, in the damage it does to useful wild life, is the great horned owl. This "tiger among birds" should be killed wherever found. Its voracious appetite, powerful frame and habit of hunting at night, when many of its victims are asleep and helpless, combine to make it an exceedingly dangerous enemy of partridges, pheasants, fur-bearing animals, rabbits and other game, as well as of the inhabitants of the poultry yard. Every lover of birds knows how the quail covey sleeps — in a little circle on the ground — each night in about the same spot. Let a great horned owl once discover the sleeping place of a covey of quail, and he will "clean them up" to the very last bird.

The Hawk Family

To identify correctly the various members of the hawk family in the field is puzzling even to an expert, and it is to be expected that sportsmen and farmers in attempting to kill noxious hawks,

and at the same time spare the beneficial species, will have difficulty in avoiding mistakes. If, however, they will take the pains to learn, using the accompanying plates to name hawks that have been shot, it will not be long before they can readily distinguish the free-booters of the bird world from some of man's best feathered allies.

Whether a hawk is harmful or beneficial cannot be judged from a few isolated acts. All hawks will eat flesh and blood, and if under stress of starvation or the pressure of hungry nestlings to be fed, a certain kind of hawk is seen to take a quail or young chicken, the conclusion must not be jumped at that the majority of his meals consist of just this prey. Fortunately we are not obliged to rely upon guess-work or surmises in this connection, for the U. S. Biological Survey has made an exhaustive study of the food habits of hawks and has learned what each kind eats — not from field observations, but from actual examination of the stomach contents of hundreds of hawks, taken at all seasons of the year and in many localities, and sent to Washington. Dr. A. K. Fisher, of the Biological Survey, has published the conclusions of these investigations as Circular 61, entitled "Hawks and Owls from the Standpoint of the Farmer," which is full of authoritative information on this much misunderstood subject. It may be secured for five cents from the Superintendent of Documents, Washington, D. C.

Harmful Hawks

From the data obtained, it may be definitely stated that with the exception of the very rare duck hawk, there are only three kinds of hawks that deserve a place in the "Black List." These are the goshawk, the Cooper's hawk, and the sharp-shinned hawk. As may be seen in the colored plate, these three hawks are all similar in coloring and shape. The sharp-shinned hawk is, so to speak, merely a smaller edition of the Cooper's hawk, which, in turn, resembles a small goshawk.

Fortunately the *goshawk* is a northern species and is uncommon in New York State except in the colder months. Occasionally, however, when food is scarce in its Canadian home, it descends in great numbers upon our forests and covers, and decimates the supply of partridges, rabbits and poultry to an appalling extent. Called, sometimes, "partridge hawk," and "blue darter," it is relentless and fearless in pursuit of its quarry, little regarding the presence of man, and seldom failing in the capture of its intended victim.

Cooper's hawk is by far the most destructive hawk in New York State, not because it is individually worse than the goshawk,

but because it is so much more numerous that the aggregate damage it does far exceeds that of all other birds of prey. To Cooper's hawk the names of "chicken hawk" and "hen hawk" ought properly to be given, instead of being misapplied to the more conspicuous, but practically harmless, red-shouldered and red-tailed hawks. Almost every stomach of Cooper's hawk examined by the Biological Survey contained remains of wild birds and poultry.

The *sharp-shinned hawk*, a miniature of Cooper's hawk, is fully as destructive to bird life as its larger cousin. It employs the same swift, "darting" methods of pursuit, and sometimes even relentlessly follows its prey on foot through the undergrowth. Of 107 stomachs containing food that were examined, no less than 105 contained birds. Among the victims it was possible to recognize the remains of nearly fifty kinds of birds, ranging from quail, mourning doves and flickers—which are as large as the sharp-shinned hawk itself—down to birds as small as warblers and chickadees. This hawk is therefore well named "bird hawk" in some districts.

The goshawk, Cooper's hawk, and sharp-shinned hawk form the group of hawks whose habits are responsible for the condemnation of birds of prey as a class. All farmers and sportsmen should learn to identify and kill them whenever possible. Their comparatively short, rounded wings, their long tails, their characteristic flights—which, in pursuit of prey, is low and dashing, and in the open consists of alternate flapping and sailing—and their usual silence of voice, all serve to distinguish them from the useful group of hawks. The latter watch for their prey from some conspicuous perch or while soaring slowly on outspread wings, and all have characteristic cries that can easily be recognized by anyone who takes the trouble to learn them.

Beneficial Hawks

The commonest members of this group have been assembled in the plate entitled THE WHITE LIST, and include the red-tailed hawk, the red-shouldered hawk, the broad-winged hawk, the sparrow hawk and the marsh hawk. The rough-legged hawk also falls in this group, but it is so rare that, to avoid perplexity, it has been omitted from the plate.

While classing these hawks as mainly beneficial, it is not to be denied that all of them may make an occasional raid upon the poultry yard or take an occasional game bird. But these irregularities are more than outweighed by their good services in waging constant warfare upon noxious rodents and insects during most of the year.

Red-tailed and red-shouldered hawks, which are so closely related that immature birds are difficult to distinguish, are the splendid, loud-voiced, soaring hawks, so familiar to every dweller in the country, and to which the misnomer "hen hawk" is so frequently applied. Dr. Fisher describes their favorite and principal food, as learned from many stomach examinations, to be mice, squirrels, shrews and insects, with frogs, snakes and crawfish also taken.

Of the two species, perhaps the red-tailed hawk is slightly more "harmful" than its red-shouldered cousin, about 7 per cent of its food consisting of poultry or game, according to Dr. Fisher. A pair of red-shouldered hawks are recorded to have nested for successive years within a few hundred yards of a poultry farm containing 800 young chickens and 400 ducks, and the owner never saw them attempt to catch a fowl.

The "whitest" of the members of the "White List" is the *broad-winged hawk*. Similar in shape to the red-tailed and red-shouldered hawks, it is smaller in size, and less common, except during its spring and fall migrations. It is also more sluggish by nature, and seldom flies far when disturbed. Insects form the largest part of its diet, and it seems to have a special predilection for the large, juicy caterpillars, which devour the leaves of trees and vines, and are too formidable for the smaller insectivorous birds to attack. Snakes, frogs and toads are its second choice. Of 58 stomachs of broad-winged hawks that were found to contain food upon examination, 30 contained insects and 24 contained reptiles, frogs, and toads. Only 2 contained remains of small birds. Certainly, by any wholesale war upon hawks or indiscriminate bounty system, it would be folly to destroy as valuable a bird as the broad-winged hawk.

The *marsh hawk's* record is not quite so clean. This is the familiar long-winged hawk, which is so often seen sailing low over meadow and marsh. In some plumages it is gray, in others brown, but it is always easily distinguishable by the conspicuous white patch upon the rump. It beats tirelessly over the ground and occasionally pounces suddenly down upon some luckless meadow mouse or other creature hiding in the grass below. The marsh hawk does far more good than harm, as may be seen from Dr. Fisher's statement: "Of 124 stomachs examined, 7 contained poultry, or game birds; 34, other birds; 57, mice; 22, other mammals; 7, reptiles; 2, frogs; 14, insects; 1, indeterminate matter; and 8 were empty."

1. RED-TAILED HAWK
Adult
First year

2. RED-SHOULDERED HAWK
Adult
First year

3. BROAD-WINGED HAWK
Adult
First year

5. SPARROW HAWK
Male
Female

4. MARSH HAWK
Adult male (chased by red-winged blackbird)
Female or immature

HAWKS THAT AID CONSERVATION

THE WHITE LIST

Last and least, but commonest of all in the "White List" group, is the handsome little *sparrow hawk*, so often seen standing on a telegraph pole or dead tree by the roadside, or else hovering, as though suspended in mid-air, preparatory to dropping upon its diminutive prey. Were it not for its occasional weakness for very young chickens in the spring-time, the sparrow hawk might receive a "clean bill of health." But surely we must agree that at other seasons of the year it more than makes reparation for any possible misbehavior in the poultry yard, when we read the official analysis of 320 stomachs, wherein "1 contained a game bird; 53, other birds; 89, mice; 12, other mammals; 12, reptiles or batrachians; 215, insects; 29, spiders; and 29 were empty." Grasshoppers, crickets and beetles form its principal food during the warm months, while mice predominate during the rest of the year.

In his "Hawks and Owls from the Standpoint of the Farmer," Dr. A. K. Fisher writes of a Mr. W. B. Hall, of Wakeman, Ohio, "who, while the hawk law was in force in Ohio, was township clerk in his native village and issued 86 bounty certificates; of these, 46 were for sparrow hawks. He examined the stomachs and found 45 of them to contain the remains of grasshoppers and beetles, while the remaining one contained the fur and bones of a meadow mouse."

The sparrow hawk has many local names, among them being "Killy Hawk," from the sound of its cry — *Killy-killy-killy-killy* — and "Pigeon Hawk," because its flight is thought to resemble that of a pigeon. There is another hawk called Pigeon Hawk by ornithologists, a bird of about the same size and shape as the sparrow hawk, but with a dark blue or brown back, instead of reddish. Its beneficial and harmful qualities are said about to balance, but it is rare in New York State — occurring only as a passing migrant — and for this reason it has been omitted from both of the plates.

The only other hawk which may legally be killed in New York is the *osprey* or fish hawk. This splendid bird of prey, which cannot fail to arouse the admiration of the onlooker, whether it be soaring on outstretched pinions or plunging with wonderful aim beneath the surface of the water, should long ago have been placed in the protected class, together with the eagles, for which it is often mistaken. It feeds largely upon fish that are undesirable as human food, and, except that it occasionally takes a few good fish, it has no bad habits. It is perhaps unnecessary to add that the so-called night-hawk is an insectivorous bird and not a true hawk.

Conclusion

That the misdeeds of a few should not bring all birds of prey into wholesale condemnation must be evident to one who has read the foregoing pages. He will see that with the exception of four species—the great horned owl, goshawk, Cooper's hawk and sharp-shinned hawk—the commoner hawks and owls are indefatigable workers in the interest of farmer and sportsman. But while it is the part of true Conservation to make known the beneficial qualities of most rapacious birds, it is equally the part of Conservation to impress upon sportsmen and farmers alike the harm that can be done and is done by the noxious birds included in the "Black List," and which are Vermin.

Every lover of the valuable game and useful wild life of the great outdoors would do well to study closely the creatures included in the "Black List" plate, to learn to know them and to set his hand against them. The saying "Look after the vermin and the game will look after itself," is a saying which has stood and will stand the test of time. Destroy the vermin.

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THE OSPREY—A HARMLESS HAWK THAT SHOULD BE PROTECTED

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