

old brood of Mallard without disturbing the ducklings in the least. The only belligerent moves I have ever noticed was the driving away of ravens and gulls from the vicinity of the nests.

The osprey uses the rivers of the Park rather than the lakes for hunting grounds. He hunts either up or down stream, flying along with slow, heavy flaps that give him an undulating flight. When he sights his prey he stops and hovers for a few moments; perhaps the fish is too large or in an unfavorable position. If so, flight is resumed. Suddenly he stops, and after an instant's hesitation, closes his wings and shoots downward; as he nears the surface his long legs reach down, and at the moment he enters the water, his talons sink deep into the back of the fish. Seldom does he fail to make his catch. After a shake or two, he is off to his nest or to a favorite perch to devour his dinner. He is light in weight, rarely more than three pounds, and it is marvellous how many miles he can carry a fish of one-third his own weight. Fish are carried head foremost but I note no preference as to whether the fish is right side up or not. I imagine if the original striking hold is retained, the fish is carried back up; but if for any reason the grasp is shifted then the side or even the belly becomes uppermost. It is often the case that if a fish is dropped, no apparent effort is made to recover it, whether it falls into the water or on land.

The departure of the ospreys takes place about the middle of September (September 25, 1914, being the latest date in my records). This early departure is noticeable, for other fish-eating birds remain later. Gulls do not leave until November, and kingfishers and mergansers remain all winter to fish in the streams kept open by the warm geyser water. Yet the osprey seems to be as well protected against the cold as they.

Summerville, South Carolina, May 10, 1917.

HABITS OF THE MAGPIE IN SOUTHEASTERN WASHINGTON

By LEE R. DICE

(Contribution from the Zoölogical Laboratory, Kansas State Agricultural College, No. 13)

WITH TWO PHOTOS

MAGPIES (*Pica pica hudsonia*) are abundant in the timber along the streams in Walla Walla County, Washington. They also wander considerable distances out into the bare bunchgrass hills, though they are rare in the open and retreat to thick brush or timber, when alarmed. Except during the breeding season, magpies travel in flocks. These flocks are usually small, though in winter any number of individuals up to about fifty may be found together.

Nesting occurs very early in the year, and near Prescott the young are often able to fly before the first of May. In the appended table are given the records of nesting obtained in the years 1905, 1906, 1908, and 1913. All of the nests reported were found in the timber along the Touchet River about two miles east of Prescott. Other duties of the author interfered with regular observations, so the records are not at all complete.

The average number of eggs in a set, calculated from thirteen apparently

full sets, is nearly seven (6.85). The average number of young from eight nests is decidedly less, being not quite five (4.75). Probably the smaller number of young than eggs per nest is due to the failure to hatch of one or more of the eggs in each set.

The earliest record of eggs is the set of nine eggs found on March 26, 1905, while the latest that eggs were found still unhatched was April 22, 1906. Naked young were found on April 8, 1906, while in another nest feathered young were still in the nest on May 17 of the same year. By late summer the young have become fully grown and cannot be distinguished in appearance from the older birds.

The nests are bulky structures composed chiefly of a bushel or more of coarse sticks. They are placed from four to thirty feet high in the branches of a tree. Thorny growths are preferred, although orchard trees, locusts, cottonwoods, or practically any tree may be utilized. The nest is completely arched over the top with the sticks, only one opening, or at most, two, just large enough to admit the bird into the large central space, being left on the sides. Many of the sticks used in building the nest are thorny, so the structure makes an excellent defense for the eggs and young, as well as for the bird on the nest. The nest cup is made of somewhat smaller twigs than the rest of the nest and is thickly plastered with mud. On the inside it is thickly lined with dried grasses. In one case the lining was made of dry pine needles, but pines are absent from Walla Walla County, except the few that have been planted for shade.



Fig. 44. NEST OF MAGPIE IN OSAGE TREE; PRESCOTT, WASHINGTON.

In spite of the protection offered by the structure of their nest, at least one brood of young magpies was attacked by some enemy. This nest, on April 22, 1906, held five naked young birds and one egg. The egg later hatched, making six nestlings. However, on May 2, there were only four young birds in the nest, all still much too young to fly, and one of these had a badly lacerated wing.

The parent magpies are vociferous in the defense of their nests. Both male and female will closely approach an intruder, scolding with all their might, though at other times of the year they are notably shy and difficult to approach within gun-shot range. In one case at least, the same nest was used more than once. In this nest, in 1906, a brood of young was reared until they were nearly grown. Then both old birds were killed and some of the young

taken for pets, the rest being killed. The history of the nest in 1907 is not known, but in 1908 it was again occupied by a pair of magpies.

Magpies are sometimes kept as pets, and, if taken when young and kept away from their own kind, readily learn to say a number of words and phrases. They are more apt to be friendly with, and talk to, strangers than to members of the family where they are kept. Especially the person who does the feeding is likely to be discriminated against in favor of some one else less familiar to the bird. A magpie will sometimes be very talkative to a person dressed in "Sunday" clothes, who would not be noticed in ordinary ranch attire.

Magpies have a bad reputation as thieves. In the Touchet Valley they are destructive to hens' eggs and small chickens. They break the eggs with their strong bills and usually devour them on the spot. They also destroy the

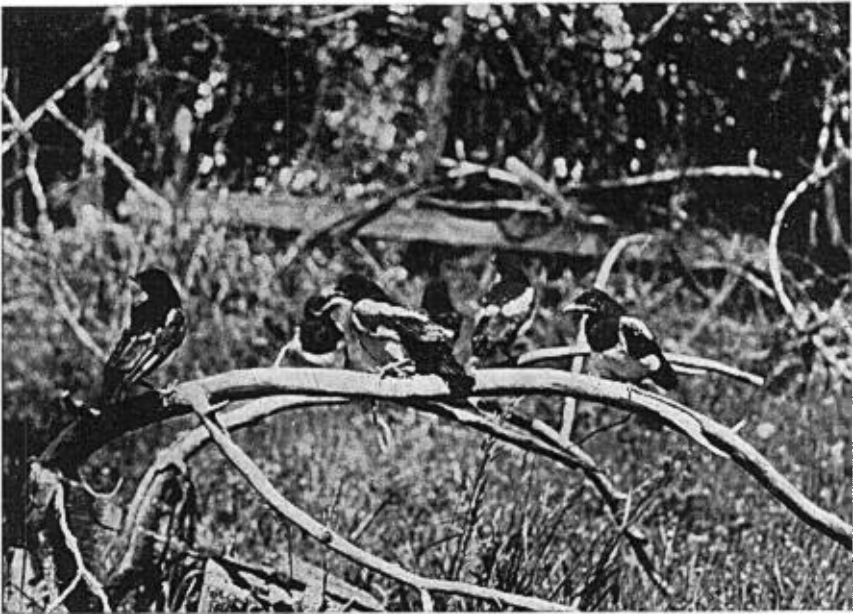


Fig. 45. YOUNG MAGPIES, NEARLY LARGE ENOUGH TO DESERT THE NEST; PRESCOTT, WASHINGTON.

eggs and young of native wild birds. On April 27, 1906, one ate two eggs from the nest of a Long-eared Owl, from which the parent birds had been driven away by shooting. Ripe cherries are a favorite food when they can be obtained; these are eaten at the tree, or may be carried away in the bill to be eaten in the seclusion of the more dense brush. The birds feed also on the carcasses of dead animals, or on any offal that may be available.

On account of their depredations, magpies are constantly hunted. They are very wary, however, and this, combined with their adaptability in the matter of food, their protected nests, and good-sized families, enables them to thrive. In spite of an occasional one that is shot, or of a few nestful of young that are destroyed with malignant intention, they are not decreasing in abundance in the region.

RECORDS OF MAGPIE NESTS, PRESCOTT, WASHINGTON

Nest No.	Year	Eggs, first found	Eggs, full set	In same nest		Nestlings	Fledglings
				Eggs	Young		
1	1905	1 (Mar. 31)	0 (Apr. 12)	.....	.....	.....	.....
2	1905	.....	9 (Mar. 26)	.....	.....	2 (Apr. 18)	.....
3	1905	6 (Mar. 26)	8 (Apr. 8)	.....	.....	.....	.....
4	1906	5 (Apr. 3)	6 (Apr. 6)	1	5 (Apr. 22)	4 (May 2)	.....
5	1906	.....	5 (Apr. 4)	.....	.....	5 (Apr. 22)	.....
6	1906	.....	7 (Apr. 7)	1	6 (Apr. 22)	.....	.....
7	1906	.....	7 (Apr. 8)	1	6 (Apr. 22)	.....	.....
8	1906	.....	.....	1	7 (Apr. 8)	7 (Apr. 11)	7 (Apr. 22)
9	1906	2 (Apr. 8)	4 (Apr. 11)	.....	.....	.....	3 (May 17)
10	1906	.....	6 (Apr. 8)	.....	.....	4 (Apr. 22)	.....
11	1906	.....	9 (Apr. 22)	.....	.....	.....	.....
12	1908	.....	6 (Apr. 5)	.....	.....	.....	.....
13	1908	.....	7 (Apr. 12)	.....	.....	.....	.....
14	1913	.....	7 (Apr. 20)	.....	.....	.....	.....

Manhattan, Kansas, February 19, 1917.