

## MAGPIES VERSUS LIVESTOCK: AN UNFORTUNATE NEW CHAPTER IN AVIAN DEPREDATIONS

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WITH TWO PHOTOS

WHEN civilized man extends his domain into an hitherto unoccupied region, as he has done in the case of much of the territory of our western states during the last half century, one of the first results of the impact is an inevitable severe dislocation of the whole nice dynamic equilibrium existing in the life relations of the myriad of humbler animals and plants endemic in the area. Some of these, unable to meet the new conditions involved in the introduction of so all-invading a competing or conflicting organism as man, never recover from their first reverses and sink rapidly into extinction. Others linger on, continuing a losing battle in the face of ultimate defeat until perhaps man himself rouses in interested admiration to temper the odds against them. Still others are able to maintain themselves in the old way without much discomposure, while a fourth class meet the invader half way and by divers quaint counter-adaptations to the human environment attain such powers of survival as to hold their own willy-nilly, the pleasure of omnipotent man in large degree to the contrary notwithstanding. The detection, observance, and recording of these secondarily acquired adaptive habits form by no means the least profitable field open for investigation by the biologist in any new country. In the older regions, it is true, these changes still present themselves at intervals, but no doubt less frequently, and the complete history of the transformation in any given case is generally more difficult to trace.

Viewed in this light the few observations here recorded possess a somewhat wider significance than the mere recognition, in the economic sense, of "another pest", although whether the modifications of habit noted will ever become permanently established or sufficiently widespread to be considered a specific part of "picine" ecology, only the future will reveal.

It is well known that magpies, like their relatives, the jays, habitually devour, not only coarse seeds, berries, and insects of many species, but also small mammals, the eggs of other birds, and all too often, alas, the young birds themselves. Likewise they are and doubtless long have been energetic scavengers demolishing carrion with a speed and assiduity that their human observers can scarcely envy. Yet we do not generally think of them as raptorial in habit, at least in any major sense, and to find them becoming so tempers our natural indignation at their bloodthirstiness with surprise at their ready aptitude in learning to adapt themselves thus readily to so new a source of food. The frequenting of the backs of animals, especially the various ungulates, by magpies and other birds has ever been a commonplace observation, but while the knowledge that magpies may resort to such situations for the purpose of preying directly on the animals themselves has been the little treasured property of western stockmen for some time, little seems to have found its way into print regarding the birds' assumption of so malevolent a habit.

It was in July, 1912, that the writer had his first experience with an attack by magpies (*Pica pica hudsonia*) upon one of the larger mammals, in this in-

stance sheep. The occurrence was reported verbally a few months later to Drs. W. K. and A. K. Fisher, who stated that such behaviour on the part of these dashing denizens of the air was wholly new to their experience, and accordingly urged that the observation be placed on record in one of the ornithological journals. However, in the press of other circumstances and likewise the expectation that further data on the subject would come to hand, such notes as I had were laid to one side. I have jotted down a few additional observations from time to time since. The recent appearance of a very brief but valuable note on the subject by A. W. Schorger (*Auk*, vol. 38, 1921, pp. 276-277) impels me to add what information I can while the interest aroused by Schorger's note is still warm. The present paper covers observations made during a decade of summers spent at Winnecook, Wheatland County, Montana. It doubtless fairly summarizes the actual experience of almost any cattle and sheep ranch in central Montana where the magpie is one of the most abundant and ubiquitous of birds, whether on the open prairie or among the woods and pastures of the river bottoms.



Fig. 10. MAGPIE IN CHARACTERISTIC ATTITUDE ON BACK OF RAM IN PASTURE. PHOTOGRAPH TAKEN BY ELWYN H. DOLE AT WINNECOOK, MONTANA.

The depredations committed by the saucy black and white beauties in 1912 were of a very serious nature. It is the custom in many of the western ranches to bring the rams into a roomy bottom-land pasture after shearing, where they remain fenced in, usually without the constant care of a herder, through the summer. Magpies abound in just such localities as those generally chosen for the "buck pasture", the isolation of which gives them a better opening for any deviltry to which they may be inclined than is afforded by the sheep bands out on the prairie with their herders always watching over them. Now ordinarily the abundant wool of the range sheep is an ample protection against even so powerful a weapon as a magpie's bill, but in July a Montana sheep has just been deprived of this padded armor by the June shearing and is as defenceless as a kitten. Not only that, but the chances are that a cut of the shears here or there opens up a tempting display of raw, juicy flesh,—just a nice little tidbit to bait a meat-loving magpie. During that summer a number of magpies began bothering the newly shorn rams, *beginning*, as I believe is usually the case, contrary to the experience of Schorger's correspondent, on

those showing particularly bad shearing cuts. As soon as this was discovered the birds were driven away and I believe a few of them shot as a warning, but they soon returned to the attack, and before the seriousness of the situation was realized they had opened up ugly wounds on quite a number of the sheep, from which they would pick and tear the flesh whenever the least chance was allowed them. The sheep seem utterly helpless in such circumstances, merely lying or standing pitifully while their tormentors, alighting on their backs and clinging there, give the wounds no chance to heal. Blow-flies soon add their quota to the troubles of the poor quadrupeds and a wound of this sort cannot long go unattended before it becomes a writhing mass of maggots. What made matters worse during the year in question was that soon the magpies, or some of them, began, by dint of their own efforts, to open up entirely new wounds on the sheep. For some reason the kidneys are particularly favored tidbits, and the birds were quick to learn the location of these organs in the animal's body and the ease with which they could penetrate to them by drill-

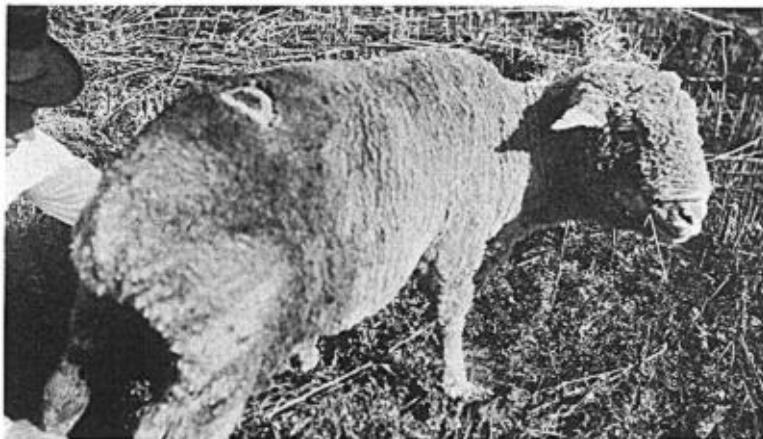


Fig. 11. A ROMNELLET RAM VICTIMIZED BY MAGPIES, SHOWING TYPICAL LESION IN RENAL REGION IN PROCESS OF HEALING. PHOTOGRAPH BY THE AUTHOR AT WINNECOOK, MONTANA, AUGUST 28, 1921.

ing a shallow hole just at the side of the spine in the lumbar region. Through this they would peck away piecemeal, first the overlying tissues, then the toothsome fatty layer, and then work into the kidney itself. The wretched sheep would become weaker and weaker, soon sink by the wayside, and in the absence of prompt human intervention the end was not long delayed. In fact if the magpies had gained very much headway before being discovered, even human help was of small avail. As mentioned by Schorger the Kea of New Zealand has long been known to prey at times upon living sheep. It is of interest to note that it, too, has been reported to have a particular predilection for the region of the kidneys, where its appetite is said to be for the fat surrounding these organs. So far as I could ascertain the magpies were not content with the fatty layer, but ate the true glandular tissue as well. Newton states in the *Encyclopaedia Britannica* (11th Edit.) that "The amount of injury the kea inflicts on flockmasters has doubtless been much exaggerated, for Dr. Menzies states that on one 'run', where the loss was unusually large, the proportion

of sheep attacked was about one in three hundred, and that those pasturing below the elevation of 2000 ft. are seldom disturbed." When once fairly started a flock of pies is capable of doing much worse damage than this. I still have a photograph of the 1912 hospital band at Winnecook which shows about 15 rams all suffering simultaneously from injuries of this nature. As the total number of rams on this ranch at that time was certainly under 350, this gives a percentage of animals attacked of better than 4 percent. As a result several valuable rams were lost entirely in spite of all that could be done by means of remedial measures applied directly to the wounds, and protection from further magpie attacks, together with an active war of destruction against the birds. The latter failed to diminish the total number of pies very much, but must have been successful in eliminating most of the more guilty ones, for I have no record of much trouble of such virulent nature during the seasons following. There have been, however, a few scattered instances, now and then, for which I believe there is some reason to think that certain individual birds were chiefly responsible. One bad case of a ram victimized by magpies occurred at Winnecook during the past summer, and was made the subject of the accompanying photograph. The attack took place in the buck pasture as usual, and a serious wound had been opened over the right kidney before the animal's condition was discovered. In this instance it was not too late to effect complete cure, however.

Whether in earlier times magpies ever made a practice of preying in this manner upon wild quadrupeds is doubtful. No such case has ever come to the notice of the present writer and as none of the "old timers" with whom the matter has been discussed seem to recall anything definite about stock losses from magpies in the early days, it seems reasonable to suppose that attacks on living ungulates have been undertaken only quite recently. This perhaps constitutes an explanation why this habit is still more or less a sporadic one, and why some magpie individuals or colonies are so much more prone to practice it than others seem to be. The individual experience of any given bird is evidently an important consideration or even the ruling one, but there seems little doubt that the addiction is one easily acquired by almost any of them when circumstances favor it.

The manner in which such a habit might be formed is not difficult to imagine. In fact it might take place in any one of several readily occurring ways. As has already been mentioned magpies are commonly observed to frequent the vicinity of many of the larger domestic animals, frequently alighting on their backs and pecking about there. Also we have frequently noticed that they will gather about a weak sheep or young lamb unable to defend itself and peck at its eyes. Or, when there are cuts or sore places on the backs of animals (in our local experience principally cows), a magpie is almost sure to alight on the victim and peck away at the exposed flesh. So it is all too easy to pass from this discovery to that of the shearers' cuts on the sheep as already noted, or the tender brands on newly branded cattle. But from whatever point of vantage the signpost pointing the final descent down the path of depravity is all too plain, and the birds find the transition to making the initial wound themselves an easy one.

On this same ranch not long since the cowboys reported two cases where the magpies in attacking freshly branded cattle penetrated well into the body

cavity. One of these animals was nearly dead when found, and my recollection is that the other case had a fatal termination also.

Another instance of magpie depredation occurred in the winter of 1919 when a half dozen hogs caught in a blizzard at some distance from the farmyard gave up fighting the storm, and lay down together as such animals so frequently will. In that situation they were set upon by magpies and when found the birds had picked through the skin of the back and eaten into the flesh of every one of the six, though some were in much worse condition than others.

Mr. Schorger's correspondent in Utah (*op. cit.*, p. 276) reported that in his experience "the wounds were always in the back, the magpie sitting there and pecking until it had opened up a small hole in the flesh." This position is of course the natural and convenient one for the bird to assume, but much depends upon the presence on the sheep or other animal of previous wounds and their location. The cattle brands referred to as sometimes subject to molestation happen to be on the sides of the animals.

From the foregoing it may readily be seen that it would not require a very great extension of the habit for magpies to become a truly serious menace to livestock and the industry founded thereon. At any rate the possibility of this is worthy of consideration—*before* the event, rather than *after*. But as indications on the hopeful side of the situation may properly be emphasized,

(1) The possibility that the habit is one acquired only occasionally and by certain birds, so that the destruction of these particular individuals will suffice for protection on the part of the stockman until such time as another colony may take a notion to start the same thing over again.

(2) The chance that in any case the habit will always remain, as it would seem to be at present, sporadic.

In conclusion the writer ventures to add that he is not an ornithologist or well acquainted with the ornithological literature. Consequently it is wholly possible that magpie misbehaviour of the nature noted may already have received attention in print somewhere in addition to the note by Schorger, the only one on the subject which he has chanced to see. Any information respecting the existence of earlier records, or in the way of new field observations by others, would be greatly appreciated by him.

*Redlands, California, November 21, 1921.*