

HOW BIRDS USE COWS AS HUNTING DOGS

BY AUSTIN L. RAND
CURATOR OF BIRDS

THE SPORTSMAN out for quail or woodcock uses dogs to drive out the birds for him. Starlings and cowbirds around Chicago use the same principle in hunting grasshoppers. Instead of dogs they use cows, though of course the cows are intent on something else and presumably unconscious of the fact they're helping the birds.

As the cow grazes slowly across a meadow, it scares up grasshoppers close in front of it. The cowbirds and starlings take advantage of this. Instead of covering the meadow on foot, constantly alert to pounce on a sitting grasshopper or to chase one they flush, the birds tag along with a grazing cow. They take up a position by the head or a foot and catch the insects the cow disturbs. The cow is so much larger than the bird that it is likely to flush more insects. Grasshoppers on the wing are much easier to see than those at rest in the concealing grass, and some fly directly toward the bird. Too, the grasshoppers fleeing a cow are less likely to be alert to other dangers.

CONFIRMED BY OBSERVATION

The advantages of this to the bird are obvious—at least, we've assumed they were. But until recently we had no data on the relative efficiency of the two methods of hunting. Recently, however, while in El Salvador, I was able to get quantitative data that proved that using a cow as a beater was as advantageous as we had suspected and showed how much more effective it was, something we did not know.

The bird concerned was not the starling, which does not occur there, nor a cowbird, which occurs but consorts little with cows, but was the grooved-billed ani, a tropical American black cuckoo about 12 inches long. Like our starling and our cowbird, it kept with cows, catching grasshoppers and other insects that flew up. Both anis and cows were common in the grassy fields about our headquarters in San Salvador. My son Stanley and I decided to watch anis with cows for a few hours, and then without cows for a few hours, thus getting the average rate for each type of feeding. We quickly found it wasn't as easy as that. Something always happened; even on the levellest and most open fields the birds were constantly disappearing behind a tuft of grass, or in a hollow, or if nothing else, behind the cow's head or feet. Then, too, the ani wouldn't pay attention to the job in hand. It would wander off, or go to sleep. And sometimes, when we were about to discontinue watching a somnolent bird, it would snap up an insect. Perhaps it had been watching all the time. Finally we found we had to record many short periods, from three to fourteen minutes each, and add them together.

By dint of much patient watching we got our data. In the dry season when insects were scarce and the grass short, it took an ani, hunting alone, two minutes on the average to find an insect. In the same length of time hunting with a cow, the catch averaged three insects. Thus hunting with a cow as a beater was three times as effective as hunting alone.



The effect of the change of the season in abundance of food for the ani was very striking. In the wet season the grass began to grow fast, and insects became common. Then the anis had an easy time. Without a cow, an ani averaged between three and four insects a minute, more than six times as many as in dry times. There was less incentive to use a cow as a beater, with food so abundant, but when the ani did so, its rate of finding insects was still higher: between four and five insects per minute. In a table it looks like this:

	Average Number of Insects per Minute Found by Ani Feeding	
	Without Cow	With Cow
Dry Season	.5	1.5
Wet Season	3.4	4.7

But the three times greater results in a given time in the dry season do not tell the whole story as to the effectiveness of using a beater. When an ani was hunting by itself it walked about covering a surprisingly large amount of ground. When using a cow as a beater, not only did it catch more insects in a given length of time, but it also walked about much less, saving a great deal of energy.

This is not true co-operation between cow and bird, for they're not working together toward a common end. It's not exploitation of the cow by the birds, for the cows lose nothing. It is closer to a form of harmless parasitism, for the ani profits from the activities of the cow without either harming or helping the cow. It also illustrates how sharp birds are—ready to take advantage of any factor in their environment that will help them get their food.

DALLWIG LECTURES SCORE ANOTHER RECORD

A new record for attendance was chalked up in the 1952-53 season of Sunday afternoon "Layman Lectures" at the Museum by Paul G. Dallwig. Mr. Dallwig lectured each Sunday in November, December, January, March, and April, and his audiences in this, his thirteenth season, totaled 4,504 or an average of 205 for each lecture. These figures compare with a total of 4,229 and an average per Sunday of 186 in the 1951-52 season, which was the largest of the twelve previous seasons in which Mr. Dallwig has lectured. The number of requests for reservations exceeded 15,000 in both of the last two seasons. The lectures are presented partly in a lecture room and partly in exhibition halls containing material illustrating the subjects and therefore audiences necessarily are limited in size. Various innovations, such as "turnabout chairs" and temporary chairs in exhibition halls, have been tried in an effort to accommodate an audience of the maximum size practicable.

Mr. Dallwig, a Chicago businessman with an avid interest in science that inspires his studies and the resulting dramatized lectures he gives, engages in this work without compensation purely as a service to the public and to the Museum and as a contribution to the cause of adult education. The Museum administration congratulates him on his continued success and offers its gratitude for the time and effort he puts into this task.

Subjects presented by Mr. Dallwig in the season just closed were: "Mysterious 'Night-Riders' of the Sky," "Money Does Grow on Trees," "Life—What Is It," "A Museum Zoo is Exciting Too," and "Living Races and Their Way of Life."

A new series of lectures will be presented by Mr. Dallwig beginning with the first Sunday in November. Reservations for these will be accepted from October 1. Members of the Museum do not require reservations. They are welcome to attend upon presentation of membership cards.

Daily Guide-Lectures

Free afternoon guide-lecture tours are offered daily except Sundays under the title "Highlights of the Exhibits." These tours are designed to give a general idea of the entire Museum and its scope of activities. They begin at 2 P.M. on Monday through Friday and at 2:30 P.M. on Saturday.

Special tours on subjects within the range of the Museum exhibits are available at other hours, morning or afternoon, Mondays through Fridays, for parties of ten or more persons. Requests for such service must be made at least one week in advance.

Although there are no tours on Sundays, the Museum is open to visitors as usual from 9 A.M. to 6 P.M.



Rand, Austin Loomer. 1953. "How Birds Use Cows as Hunting Dogs." *Bulletin* 24(6), 6–6.

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