The Hunting-Season Toll of Hen Pheasants

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We hear talk that hens are killed illegally. Well, how many? Biologists have come up with an ingenious method of making reasonably close estimates.

"Don't shoot pheasant hens!" . . . "Save the hens!" . . .

Around pheasant-hunting time we hear these sentiments expressed by both sportsmen and game men. And they are certainly right. The hens are our capital investment from which we reap interest each hunting season.

But have you ever wondered just *how many* pheasant hens actually are shot at and killed in the fall? Research biologists have wondered too, and not long ago came up with a way to find out.

THE TECHNIQUE involves an examination during winter and spring of car-killed pheasants under a fluoroscope to see how many are carrying lead shot in their bodies. Birds carrying lead shot are ones that were fired at by hunters—and not quite missed! Pellets lodge in the bones or muscles without killing the bird. (This is a different situation, incidentally, from lead poisoning, where lead shot are eaten by a bird, ground up in the gizzard, passed through the digestive tract and absorbed by the blood, producing weakness, paralysis and finally death.) Then, by comparing the percentage of hens and cocks with body shot to the number of cocks actually bagged by hunters, they can come up with an estimate of the proportion of hens killed.

Professor William Elder of the University of Missouri originated this technique of fluoroscoping birds for incidence of body shot. He has worked primarily with waterfowl in various parts of the United States, Europe, and Canada, measuring variations in hunting pressure and kill by comparing the incidence of body shot in waterfowl in different areas. In order to get an idea of the pheasant hen kill in Wisconsin, game biologists Fred H. Wagner and C. D. Besadny, with the help of Professor Elder and Dr. O. A. Mortensen of the University of Wisconsin medical school, have examined pheasants for body shot for the past three years in this state.

In the months following the hunting season each of these years, Conservation Department personnel picked up hen and cock pheasants which have been killed by automobiles, predators or winter weather—but *not* birds which had been killed by hunters. These pheasants were then examined for the presence of lead shot. Each bird was passed into a fluoroscope machine where its transparent image was cast on a screen. Since X-rays will not pass through lead, shot appeared as round black dots on the screen, and their location in the bird could be easily seen.

THE RESULTS of the fluoroscope readings showed that out of 71 pheasant cocks examined, 39 per cent carried body shot; out of 237 pheasant hens examined, 7 per cent carried body shot. Most of the birds carried only one or two shot, but a few had more, and one cock had as many as eight pellets.

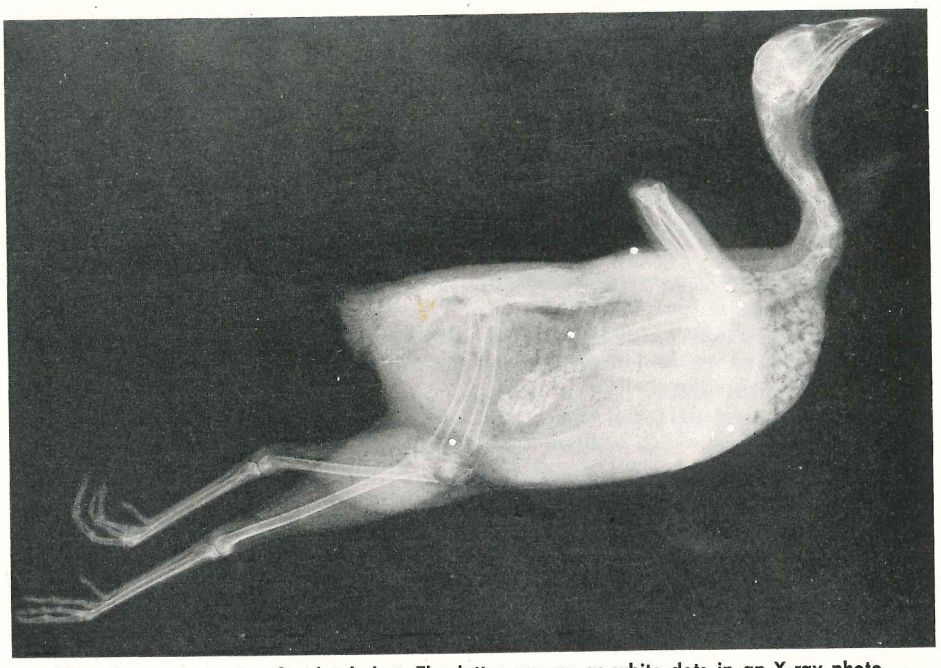
In order to obtain an estimate of the illegal and accidental hen kill from these findings, we need one more piece of information: the percentage of pheasant cocks that are legally harvested. It is

possible to get a pretty good estimate of the cock harvest from observations on the number of hens and cocks in winter following the hunting season, since the sexes are readily distinguishable in the field and only cocks are legally shot. Cocks and hens are present in approximately equal numbers before the hunting season, so any differences in the proportion of hens to cocks in winter provides an indication of the percentage of cocks shot.

For example, if after the hunting season the sex ratio is four hens for each cock, this indicates that three out of every four cocks have been shot, or a kill of three-fourths (75 per cent) of the roosters. Based on the sex ratios before and after the hunting season for the past three years, the harvest of pheasant cocks has been about 80 per cent of the state-wide cock population.

Now, we know that for every cock carrying body shot after the hunting season, a certain number have been killed during the season. We can assume the same holds true for the hens. Since we know the per cent of cocks and hens with body shot, and the per cent of cocks legally harvested, we can compute by simple mathematics the per cent of hens killed. Thus *we have an estimated 14 per cent of the hen pheasant population shot during the fall hunting season.* Biologists in South Dakota also used this technique to obtain estimate of their hen kill, and figured that about 8 to 10 per cent of the total hen population was killed.

What does this mean? Well, it provides us with a rough estimate of the proportion of hens killed (mostly during the hunting season), which before came largely from guesswork. It is not, however, a hard-and-fast figure. It may underestimate the hen kill slightly, because the hen is a smaller target and would probably pick up fewer shot than the cocks. On the other hand, it seems likely that hens are often shot at more extreme



Hen pheasant carrying five lead shot. The latter appear as white dots in an X-ray photo. Seven per cent of hens were found to carry body shot, compared with 39 per cent of the cocks.

ranges where they are confused with cocks, which might result in fewer mortal wounds in the hens.

The incidence of body shot in both hens and cocks is higher in those areas where there are many hunters out in the field. Among the birds collected in Wisconsin, most of those with body shot came from the southeastern and east-central counties where pheasant populations are highest and hunting pressure heaviest.

With the relatively short natural life of adult pheasants, a kill of a minimum of 14 per cent of the hens could be very important. The basic key to the increase or even the maintenance of any pheasant population is of course the hens and their production of young. A lot can and does happen to a hen in her efforts to nest and raise young and to the brood itself. The accidental or willful killing of hens during the hunting season places still another drain on the supply of hens, and takes a chunk out of next year's potential pheasant crop.

The need to "save the hens," then, becomes even more meaningful. Hunters can take an active hand in "producing" more pheasants by holding their fire until they are sure they are looking down the gun barrel at a cock.

Deer-Hunting Diary—1956

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Here are this year's major dates and places for Wisconsin deer hunters, along with some inkling of prospects. We have more legal deer than last year.

SEPTEMBER 22

The "early" bow-and-arrow hunting season opened today, to run until Armistice Day. The bag limit is one deer of either sex and any age. All 71 counties are open. The Necedah national wildlife refuge is open, but the Horicon marsh national wildlife refuge is closed, although bow-hunting is legal in the state-owned end of the marsh. Deer populations are still high in the old favorite areas of bow hunters in Juneau and Vilas counties. However, there are also plenty of deer in other counties that bow hunters can reach easily.

NOVEMBER 10

The Conservation Department's pre-gun-season checks of deer populations will be completed. Preliminary observations (in late August) by game managers indicated there are more deer than last year in nearly all areas. Another good fawn crop has been noted, despite somewhat heavier deer losses last winter than in the previous four winters. Even if deer numbers were the same or slightly less than last year, there would be more deer to shoot in 1956 because of the legalization of spike bucks for the first time since 1951.

NOVEMBER 11

Last day of bow hunting. No more deer hunting for five days.

NOVEMBER 17

The seasons for gun hunters get under way today for nine days. Part or all of 65 counties will be open to hunting. Only Green, Kenosha, Milwaukee, Racine, Rock, and Walworth counties will be completely closed. Incidentally, Lafayette county will have its first open season for gun hunting since 1906.

In all counties the bag limit will be one antlered buck. The minimum legal antler size is a spike 3 inches long. This