Mad Duck.org
November 9, 2004
The Alternative Voice
For Sportsmanship and
Waterfowl Conservation

THE HENS WE DON'T SHOOT

By James H. Phillips

It would be an understatement to say that I am troubled by a few waterfowl biologists who believe today's sport kill has little or no impact on our continental flocks. To my way of thinking, their belief defies logic. Their stated opinions frequently undermine the foundation of sportsmanship and conservation. Their actions threaten the future of waterfowl hunting.

Naturally, these biologists look askance at my beliefs. They assert that I, as well as my colleagues at Madduck, am biologically and scientifically obtuse. They declare we are biased, selectively touting only those scientific studies that agree with our preconceived opinions. They blame us for using "rhetoric" to bolster our points of view. They accuse us of needlessly seeking to restrict "hunting opportunities."

That two groups of individuals should be at loggerheads is not surprising. It reflects the human condition – the vastly different personal experience, accumulated knowledge and brainpower that each individual brings to a debate. And it should be noted waterfowl biologists themselves are not in complete agreement. There are heated disputes among various factions.

I mention this because of a recent conversation involving a biologist with whom I had never before spoken, a conversation so unique that it deserves to be called to your attention. The individual was Bobby Cox, a waterfowl biologist with the U.S. Geological Survey in Bismarck, N.D. He believes hunting today has minimal or no impact on the number of mallards that return north each spring to breed.

Cox eloquently described his point of view by stating in an e-mail, "Your heart is in the right place, too bad your head isn't."

This followed a rather lengthy conversation that for me hinged on Cox's answers to two key questions:

I first asked, "What is the probability a mallard hen I kill during the hunting season will survive to nest the following spring?"

Cox answered, "Zero." We were in full agreement.

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Then I asked the logical follow-up question: "What is the probability a mallard hen over the decoys that I wave off and do not kill will survive to nest the following spring?"

Cox thought a while and then replied, "Sixty percent."

His refreshingly candid answer proved astonishing. It told me that if I waved off 10 hen mallards, six would survive to return north to breed – six ducks that otherwise would have died.

"Doesn't this strongly argue the gun has an impact on breeding populations?" I asked.

Cox did not directly address my question. Instead, he shifted gears, seeking to regain the intellectual high ground by pointing out large-scale band data analyses found no correlation between the harvest rate and survival rate, that approximately 60 percent of all hen mallards survive and 40 percent die each year regardless of the number taken by hunters. He further added that we kill such a small percentage of the hens that any voluntary reduction in the harvest is meaningless.

His argument proved baffling, for it was inherently contradictory. He began by stating an *individual* hunter could have a positive impact and increase the number of hens that return to the breeding grounds, but concluded on the basis of band data that *all hunters acting together* cannot. What is true for the individual is not true for the whole, even though the whole is nothing more than the sum of individuals.

Is he right?

I sought a second opinion from a veteran biologist, a highly esteemed individual intimately familiar with band and harvest analyses.

He explained the 60 percent figure probably referred to annual survival, which includes significant breeding-ground mortality. For the interval between September and April, which includes the hunting season and the flight north, he suggested the survival rate of a hen I didn't shoot returning to the breeding grounds would "*be more like 75 percent*." In other words, if I waved off 10 hens, between seven and eight would return north in the spring. To me, this offered stronger mathematical proof the gun has an impact.

He did not dispute the likelihood that some of the hens I waved off would survive to nest the following spring. (He declined to cite a precise number.) But he noted that Cox's argument implicitly invoked compensatory mortality, a key element of those who cite band data to argue the annual hen mallard survival rate is always around 60 percent regardless of the number shot and killed.

Compensatory mortality involves a death exchange. Its proponents argue that each duck we kill allows another to live that otherwise would have died. The purported reason is that competition for "resources" is so intense that only a certain percentage of each year's fall flight can survive the autumn-winter period to return north. It is important to note that compensatory mortality theorists *never* identify what "resources" (such as food) are in such short supply as to cause the wholesale deaths of ducks left "unharvested." This is a critical – some would say *fatal* – omission for its proponents.

On a strictly theoretical level, my consulting biologist said, "if you took six drake mallards out of the population to compensate for the six surviving hens, your position would be very, very difficult to refute."

He also cautioned against accepting as immutable truth band return studies that suggest the annual sport kill of mallard hens is so low, from *four to six percent* of the migrant population, that any savings from not shooting hens would be essentially meaningless, as Cox argued. This ignores the "uncertainty in our data," he said.

The uncertainty can be illustrated by examining the numbers. They are fascinating as well as dubious. If we assume 25 percent of all mallard hens die from September to April, as band data suggests, and hunters bag a maximum of four percent, as some band data studies further suggest, then "natural mortality" kills five times as many hens as hunters, a multiple that stretches credulity. It further calls into question the belief that compensatory mortality is the primary regulator of the number of ducks in our breeding flocks.

I should add this veteran biologist, familiar with all the studies, is an avid waterfowler. He practices what he preaches. He avoids shooting hens.

So, who's "head" is in the right place?

Should we accept Cox's argument that hunting does not matter? Should we believe that one of us can increase the breeding population, but all of us cannot? Should we resume shooting hens?

Should we dismiss Cox's argument as fatally flawed? Should we reject the underlying assumption that natural mortality kills five times as many hens each autumn and winter as hunters? Should we continue to wave off hens?

I'll let you decide.

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