WHAT READERS THINK

Something About Bullets and Hand-Reared Ducks

HOW BULLETS BEHAVE

As we hoped, Dr. Wheeler's little article in February is beginning to elicit opinions and observations on the behavior of the high-power, sharp-nosed bullet. It is only by collecting such evidence as Dr. Wheeler's and that contained in the letter which follows that we can finally arrive at the truth. Therefore, the more the merrier.

Editor OUTING:

In OUTING for February, Mr. David E. Wheeler makes several statements in regard to effects of hard, small caliber rifle bullets on the bodies of men and animals. Some of his conclusions are, I believe, erroneous.

The sharp-pointed bullet in present use, according to the testimony of many sportsmen who have used it on large game, is a deadly and destructive missile. In war it was first used on a large scale by the Turks against the Bulgarians. In this war, among the Bulgarians the ratio of killed to wounded in battle was higher than in any previous war. Major Fontleroy, U. S. A. Med. Corps, our observer in that conflict, stated that body wounds were so very fatal that few came under treatment in the base hospitals.

The reasons why, on the one hand, the pointed bullet is believed to be humane and, on the other, produces such severe injuries that accusations are made of the use of soft-nosed bullets are chiefly two.

1. Its small size and high velocity.
2. The fact that the center of gravity of the bullet is near the base, so that it is easily upset and has, moreover, a decided tendency to wobble during a part of its flight.

When the bullet strikes point foremost and encounters soft structures merely, it may and often does make a mere puncture, and so long as this remains clean the wound may heal quickly and the wounded suffer but slight inconvenience. In passing through the body the bullet has expended but little of its kinetic energy. If, however, the bullet encounters a blood vessel or a nerve, such structures are not pushed aside but are cleanly cut as with a knife.

Organs filled with fluid, stomach, bladder and soft organs, brain, liver, spleen offer much more resistance and at ordinary ranges are burst; at great ranges they may be only perforated.

When the bullet strikes hard bone, such as the shaft of a long bone, extensive comminuted fractures are produced, often with large wounds of exit. The bone fragments become secondary missiles and in wounds of the jaws, the teeth may act as such and greatly increase the laceration of the soft parts.

On spongy bones and spongy ends of long bones simple perforations without much lateral shattering effects are common.

The destructive effects of the bullet at ordinary ranges are directly proportionate to the resistance offered by the tissues and to the velocity of the projectile, other factors being the sectional area and deformation, that is, proportionate to the amount of energy of motion used up in overcoming such resistance.

Mr. Wheeler seeks to minimize the importance of the so-called explosive effects of these bullets, but, as a matter of fact, such effects are important, whether the body be living or dead, and very real. Such effects are seen most strikingly in hard bone and enclosed
cavities filled with fluid or semi-solid contents, brain and stomach for example.

With the former hard bullet with ogival point the explosive effects were marked at ranges up to 500 yards and diminished gradually to disappear at 1,000—1,200 yards. The pointed bullet has a higher initial velocity, though lighter in weight, but here the second important factor, i.e., the unstable equilibrium of the bullet, owing to the fact that its center of gravity is near the base, adds a new character to the wounds produced. The bullet in the early and late portions of its flight tends to wobble, and may be upset even by impact upon soft parts and quite commonly by bone. The shattering and lacerating effects are thereby much increased, by greater resistance, by rotation, and, last but not least, by greater area of striking surface.

In regard to the effects of these bullets in the present war, the reports are meager. The few observers who have written have had limited opportunities to report on the actual conditions of the wounded on the field of battle. Moreover, so large a proportion of the wounds are made by shrapnel bullets and fragments of case that it is hard to say just what the pointed bullet is doing. I believe that when the facts are known it will be found that the pointed bullet is much more destructive than its predecessor; that wounds of the brain, chest, and abdomen are very fatal, and that extensive comminuted fractures of the long bones will be frequent and severe. In these lodgment will he common.

That simple wounds of the soft parts, if clean, will be quickly recovered from with but little shock.

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"IKE" WALTON—AND WILD DUCKS

The letter which follows was not written originally for OUTING. It was sent us by a good friend in Chicago who judged from his own interest that other people would be interested also. We think that his judgment is good. At any rate here is the letter—a brief transcript from life.

MY DEAR MR. AND MRS. B.:

On a day in early June, last year, while sitting on an old log that sticks out in Dam Lake, up Eagle River way, I was trying my best to convince a certain (large?) black bass that wooden minnows, pickled "shiners," pork rind, etc., were good to eat; and at the same time I was watching out of the corner of my eye nine little wild mallard ducks, that hadn't yet discovered me and were taking a bath in a pool near by. Suddenly I had a thought (some people call them "ideas"). It ran along the line of what at the time seemed least resistance; and it brought up with a bump when I tried to capture those young ducklings.

They couldn't fly, but they could swim, and they were perfectly at home under water or, in fact, under anything. The water wasn't very warm, and was quite deep in spots, and there positively wasn't a solid foundation. Until that time I had no accurate knowledge of how very little shelter wild ducks need to make themselves invisible. In a few hours, however, I was really surprised that it was still daylight, I had every last one of them in my hunting-coat pockets.

Right then, as I am now convinced, I should have had counsel. I had some later, when covered with mud and wet to the neck I greeted Mrs. W. And, looking back to that time, I have often wondered why it was that I had never discovered in the fifteen years we had been married that Mrs. W. had such a disagreeable disposition. And even then I didn't discover it all at once; but in the days and weeks following that event I—or was it she?—surely exercised great patience!

In two days I had built a fence, that projected out into the lake and back into the woods, and made a shelter. There I set these ducks down; and for three months that was positively the only time when all nine of them were inside that
inclosure at the same time. I "waited" on them in the morning before I went fishing or shooting, and it was Mrs. W.'s duty to care for them until I came home (usually late) in the evening.

At first we conversed about them; I would ask how many were out, and she would answer me, and I would ask what particular place they got out at. But later on, if it was light enough for her to see me coming up the path through the woods, she would simply hold up her fingers, indicating thereby the number of ducks that were inside my inclosure. Mostly I had to catch those that were out at night.

She had found that her rubber boots were not high enough; and though she never exactly told me so, I have every reason to believe that she got stuck in the mud and lost one of the boots the second or third time she tried to capture them. Wild ducks aren't the easiest thing in the world to catch at night, even with a landing net, a flash-light, a boat, hip boots, and everything needed. But I will say, to my credit, that I never left in the morning without first seeing that all those ducks were inside that corral.

They had more ways of getting out than one can imagine. I never saw them using a spade, or trying to dig their way out; but a dog, digging after a squirrel, dug under the fence, and they used that path on one occasion. After their wings got big enough they usually went out over the top while they were being fed, or under the fence when the wind would blow from the east and lower the water, or through any part of it where it wasn't covered with mosquito netting.

I realize now that when I captured them I spoiled some good shooting and some perfectly good wild ducks. In December last I brought them home, and proceeded to fatten them. They lived happily enough in Morton Park, but they would wake up in the night; and when they woke up they woke every one else up, palavering.

They never did get tame in all these seven months; but they did grow to their full dimensions, and ate so greedily that they nearly spoiled themselves for being eaten. I am handing you here-with a pair. If you are disappointed in them, it won't be any more than Mrs. W. and I were when we had one for dinner last night. They taste more like tame ducks than wild ones. I don't think they will stand pressing, and suggest that you cook them about an hour and ten minutes in a very hot oven.

I shall never again try to improve on nature's method of bringing up a wild duck!

Sincerely yours,

E. J. W.

NOTE: The ducks were really better eating than the letter indicates. The "tame taste" was due to the fattening, which the wild duck rarely gets, and the hour and ten minutes was too long by at least ten minutes. Then they were tender and delicious.

B.