Outdoors

Judging range is tricky business

John Wootters photo

Wootters' favorite predator-calling target is the stealthy bobcat, much more common than most people believe.

Faulty range estimation may cause more misses by experienced riflemen at big game than any other single factor.

There are many reasons, the most common being that nobody alive is really good at judging range.

A brightly front-lit animal looks closer than he really is, and a back-lit one more distant. One that contrasts with his background looks closer and one that blends in looks farther away. An animal seen from a low angle looks closer, and a high angle makes him seem smaller and farther away.

Basically, the better you can see the critter, the closer he appears. Even a cloud passing across the face of the sun can cause misses on game that was not as far as you thought. The human two-eyed optical system was simply not evolved to produce precise range data much beyond about 20 feet.

Beyond that, we rely on other clues — known size of familiar objects, perspective, overlapping of objects, etc. With practice, these methods can give decent results out to maybe 200 yards.

It's ironic, therefore, that most modern cartridges shoot so flat that we really don't need precise range estimates for 200 yards. One reason for the popularity of the new generation of short-short magnum cartridges – and such oldsters as the .270 and 7mm Remington Magnum – is that they make hitting at long range easier. But this advantage begins to run out of steam somewhere between 250 and 300 yards.

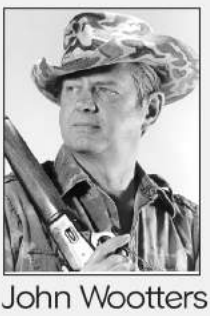
Designers of telescopic sights have risen to the challenge in a dozen different ways, building into their scopes a variety of range-finding and trajectory-compensating elements. Some of these work fairly well, and some don't. Almost all display cluttered fields of view.

One that was sent to me for testing had so much junk in the field that it reminded me of debris from a three-car freeway crash.Some work best for shooters who happen to have three hands. All are slow to get into action.

As a sidelight, the now-ancient "duplex" reticle crosshairs pattern introduced by Leupold back in nineteen-ought-whenever remains about as good a ranging reticle as there is, if you learn how to use it.

All this brings us to the subject of handheld range-finders. So many of these have appeared on the market that I've lost count, but I've used or tested those from Ranging, Inc., Bushnell, Leica, Canon, Nikon, Burris, Leupold and other makers of sporting optics.

Currently Outdoors



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Ranging, Inc. builds split-image range-finders, similar in principle to the focusing of early 35mm cameras. These work by merging two images of the same scene, and the farther away the subject is, the more critical the coincidence of the images becomes.

Split-image range-finders tend to be bulky and delicate, requiring frequent recalibration, and at really long distance give only a good guess. Ranging, Inc's current models are greatly improved. They're also fairly inexpensive (up to about $125) compared to the new generation of laser range-finders.

The latter constitute one of the major breakthroughs in field shooting since the introduction of smokeless powder. The first laser range-finders were heavy or bulky, or both. They were costly but they fulfilled their makers' claims.

But capitalistic competition did its subtle work. Controls were simplified, instruments were downsized (in some cases pocket-sized), and prices came down. These days, I'm using a Bushnell "Scout" range-finder that costs less than $300, is easy and fast to operate one-handed, and slips into a shirt pocket. I recently noted a similar Nikon model on sale for under $200.

All of these instruments will measure ranges accurately to two yards or less. All operate on the same principle, bouncing an infrared laser beam off the target and measuring the return time.

Besides ranging an actual animal's body, range-finders are useful in several ways. One is pre-ranging several points around your stand so that you know how far away a buck is when he first appears. Another is establishing radius markers around the stand beyond which you will not shoot at an unwounded animal. A third is honing your own powers of range estimation by guessing the distances to various objects and then using the range-finder to check your estimates.

Most important of all is the confidence a rifleman gets from knowing – not guessing — the exact range. Then all he has to do is remember his load's trajectory, hold and sque-e-e-eze.

John Wootters is a semi-retired outdoors writer with more than 30 years experience. He was editor of Peterson's "Hunting" magazine and author of the monthly column "Buck Sense" and has written the all-time best selling book on deer hunting, "Hunting Trophy Deer." He has served on the Board of Directors of the National Rifle Association, and written for "Shooting Times," "Rifle," "Handloader," "Guns & Ammo" and Peterson's "Hunting."