OUTDOORS

The trick to estimating distances



Tips from the Posse By Mark Rackay

I was on a fishing trip with my old man mentor, Mr. Caster, hiking up to some beaver ponds that were hopefully full of hungry brook trout. Mr. Caster knew everything there was to know about the outdoors and the woods. He was a master backwoodsman, even telling me so at every opportunity.

Mr. Caster taught me about the woods, building a fire, making shelter, finding food, Chesterfield cigarettes, whiskey, women, and a few other things that my grandmother would just as soon I not learn about. In other words, he was a perfect mentor for a boy. One thing he was truly superb at was guessing distances.

He would spot a herd of mule deer on a distant mountainside and guess their distance. "There is a half dozen mulies on that ridge up there, 450 yards I would say, and the last one is a nice buck," he would proclaim.

Estimating distances has never been my strong suit. The invention of the laser rangefinder, and having it in a pocket size, has saved me from not properly estimating yardage. Problem is, I don't carry it with me everywhere I go.

The easiest way of estimating a distance is to pace it off. Mr. Caster would tell me to pace off 100 yards and set up a box so we could shoot it with our .22 rifles. My pace, at age 9, was considerable shorter than Mr. Caster's pace. When I set the target box up, it was always easier to hit, but when he set it up, I could barely see it.

A pace is the distance of your natural step. I stress the word "natural." I have seen people who pace something off, and go into some kind of a duck walk or a goose step. They will proclaim "200 paces" at the end of their march and we still have absolutely no idea how far they actually walked. The normal pace for an average person is 30 inches. Since none of us are average, we need to measure our pace. Start out by finding something with a pre-measured distance, like a football field. You know the field is 100 yards or 300 feet, goal line to goal line. Walk the length of the football field in your normal walking stride. Do not take extra-long or short strides, just walk in your normal pace and count your footsteps. Divide the distance in inches, 3600, by the number of steps you have taken. If you have stopped growing, this is your pace for life. When pacing something off, count your right foot pace only and multiply by 2 when you reach 100 paces. It makes keeping track much easier over longer distances. If you are pacing off a very long distance, put pebbles in one pocket and transfer one to another pocket



Tanner Creel uses range finding binoculars made by Leica for estimating distances, but there are ways to guess distance without technology. (Photo by Mark Rackay)

every 100 paces. This method never works for me because I always have holes in my pockets, so the pebbles roll down my pant leg and into my shoes. Count pebbles in my shoe I guess.

Paces distances can change because of slopes and inclines. Pace distance increases on a downhill stretch, and increases when walking uphill. A rough terrain with mud, snow, or rocks can alter your pace. Other things such as, excess clothing, limited visibility and wind can also have an effect on your stride distance.

Another method of estimating distances involves a little understanding of human anatomy. First, measure the distance between the centers of the pupils of your eyes. With a pair of binoculars, measure the distance between the centers of the eyepieces when adjusted for your eyes. For the average person, this is about 2 inches. With this method, you will estimate distance by using only your extended thumb. Your extended arm, to the tip of your thumb is about 20 inches, or ten times longer than the distance between your eyes. Let's say you are standing on a ridge and want to estimate the distance to a parked truck you see on a distant road. You estimate that the truck is 25 feet long, bumper to bumper. • Hold your right arm out directly in front of you, elbow straight and thumb — upright, in the "thumbs up" position. • With one eye closed, align your upright thumb so that it covers the distant object, in this case the truck. • Without moving your head, extended arm, or upright thumb, switch eyes, so that your open eye is now closed and the other eye is open. Observe closely where the object (the truck) now appears with the other eye open. Your thumb should appear to

have moved to some other point away from the object.

• Estimate this displacement by equating it to the size of something you are familiar with, in this case it is the 25 foot long truck. You can use power poles, buildings, an animal, anything you can guess the length of.

• In this case, the distant truck is 25 feet long. It appears that five trucks could fit in the displacement, or 125 feet. Multiply that figure by 10 (the ratio of the length of your arm to the distance between your eyes), and you have the estimated distance to the distant truck, or 1,250 feet.

When you hold out your thumb and view it with one eye open, then with the other eye open, your finger shifts relative to the object background, moving from side-to-side. This is called parallax, and the parallax of a distant object is the angle between its directions of view from the two ends of a baseline. Like all other outdoor skills, you are going to want to practice this estimation of distances. I was outside, in the front vard, pointing at the single lady's car up the street, estimating the distance. She caught me, and now thinks I was pointing at her and winking. Now I am in trouble with the wife because she would never understand the truth. Guess I should practice in the backyard from now on. Mark Rackay is a columnist for the Montrose Daily Press and avid hunter who travels across North and South America in search of adventure and serves as a director for the Montrose County Sheriff's Posse. For information about the posse call 970-252-4033 (leave a message) or email info@mcspi.org

Pandora's parasite

For every human on Earth, there are 200 million insects. Current estimates on the human population this year put us at 7.9 billion. I'll let you do the math. While some biologists refer to our time in various terms, the Age of Mammals or the Anthropocene (pointing out human dominance of the world), some would argue that we are really in an Age of Insects.

It could be that some of these creatures embody many of the difficulties in our world. In Greek mythology, Pandora is presented a box by the god Zeus and told to never open it. Her curiosity gets the best of her and upon opening it, troubles of all sorts escape: greed, pain, disease, hatred, poverty, and so on.

I was thinking on this aspect of biology when one of the more disagreeable insects flew into our house.

One warm spring day, not long ago, a door was open for a short time. A low buzzing sound came inside, rather like a B-52 Stratofortress that the Air Force uses, except that there was a slightly higher, tinny pitch to it. This buzzy-bug was an enormous fly that decimated the quiet with a change in tone as it banked around corners or bounced off windows.

My wife eventually corralled the beast, pinning it against the glass with a repurposed pickle jar. We got a close look at this enormous fly, and she found that it was a bot fly. As it turns out, bot flies are parasites, primarily on mammals.

Their life cycle comes in four stages (insects vary between three and five stages) starting with an egg, then larva, pupa, and adult. Being a parasite, the bot fly needs a host for the larval stage. The adult fly buzzes around looking for a mate that might be resting on brush. After love is found, the female looks for a host.

Most bot flies in North America are looking for our furry friends like rabbits, rodents, horses and other livestock.

Depending on the species



Outdoors By Paul Zaenger

cas that seeks human hosts) the egg is successful at attaching, hatching, and as a larva embedding itself below the skin. In the larval stage it looks like a maggot, which gives the fly its common name (bot is the old world term).

It lives off of the host for two to several weeks. Pictures of the swollen tissues can only make one wonder at the amount of pain in the affected area. When it has gained all the needed nutrition from its victim (mouse, wood rat, bunny), it bursts through the skin and onto the ground where it goes from larva to pupa to adult.

I take a close look at our specimen in the jar. They have no mouth parts as adults, so they don't eat.

They live only a short number of days and have only one purpose – to mate. Unlike house fly eyes, these are blocky; very large and bulging out from the head. The gray and black coloring, some of it from hair that spikes outward, gives it a menacing appearance.

In the pantheon of parasites, the bot fly appears to be among the most grotesque.

That's a human perspective, but digging through Pandora's Box of misery, it can leave any of us wondering why these insects persist. Some researchers have put forward a Parasite-Stress Theory that, at least for humans, parasites stress the biology enough that the species becomes stronger.

Paul Zaenger has been a supervisory park ranger at Black Canyon of the Gunnison National Park since 1993. Other park assignments include Mount Rushmore National Memorial and Glen Canyon

For outdoors or survival related questions or comments, feel free to contact him directly at his email elkhunter77@icloud.com (there is only one in the Ameri-

National Recreation Area.



The outdoors are full of interesting insects. (Photo by Paul Zaeger)

