



Trail Cameras

What Happens When You Aren't There

Photo Courtesy of George Shiras III

Alger County - Few people know that the “father” of trail camera photography, George Shiras III, did his early inventing in Alger County in the Upper Peninsula of Michigan. He first experimented with trip wire cameras at his family’s retreat on Laughing Whitefish Lake in the eastern portion of the county. Little known, even today, is the lake that went down in photographic history as the location for Shiras' innovative and pioneering wildlife photography.

A New Technique for Wildlife Photography

At the time, the late 1890s, wildlife photography barely existed. Other photographers of the day had captured breathtaking scenes of landscapes and wars, portraits of people and individuals, but wildlife was unexplored territory (Classen, 2016). Cameras were cumbersome and primitive; wildlife was elusive and difficult to film. But Shiras’ inventive genius contrived methods and devices that resulted in, among other things, the first flash photographs and the first trip-wire photography of animals at night.

Shiras devised several methods of capturing wildlife on film. He would float quietly in a canoe on Laughing Whitefish Lake after dark, his camera mounted on the front, intently listening until he heard noise or movement, then take a picture toward the source of the sound. He set up bait attached to trip wires so any animal taking the bait would also take its own picture. Shiras developed another rather explosive – but ingenious – trap with trip wires and an automatic flash bulb to set off the camera.

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This beautiful photography displayed wildlife in never before seen images of their habits and routines. The mysteries of wildlife were presented to the world. Shiras' pictures were breathtakingly dynamic and utterly unique for the times. Enlargements of some of them, the famous "Midnight Series" of deer at night, photographed entirely around Laughing Whitefish Lake, won the gold medal in the forestry division at the Paris Exposition of 1900 and then won top prize in the photographic division as well.

The series also received the grand prize at the St. Louis World's Fair in 1904. Gilbert H. Grosvenor, the Editor of *National Geographic*, published wildlife photographs by Shiras in July, 1906. The *National Geographic* printed 74 of Shiras' photographs, accompanied by only a brief text, setting a standard for the Geographic's photographic reputation.



Cameras are now small and blend in very well into the background. *Photo Courtesy of The Nature Conservancy.*

Today's Trail Cameras

Trail cameras, or trail cams as they are often referred to, have come a long way since George Shiras' day. Digital photography with Secure Digital (SD) cards have revolutionized outdoor photography. An SD card is an ultra-small memory card designed to provide high-capacity storage of data in a small size. SD cards are used in many small portable devices besides trail cams such as digital video camcorders, digital cameras, handheld computers, audio players and mobile phones.

With a digital trail cam, the average landowner can now set-up a camera and program it to take pictures at certain times, in any weather and any time of year, then come back and collect the many photos of what's happening on their property when they are not there.

Trail Cameras come in a big variety of choices, prices, and configurations. The basic cameras take a photo when motion is detected within a certain distance of the camera. Some can be adjusted to take video. Other cameras can do both at the same time. There are also many flash options – very different from the huge, explosive hand held flash powder of George Shiras' day.

Flash options include incandescent, white LED, red glow infrared, low glow infrared and the completely invisible no glow infrared. These different configurations make it more difficult to see the camera at night and allow the flash to disturb the wildlife as little as possible. There are both standard and wireless trail cameras. Wireless trail cameras can additionally be segmented into Wi-Fi trail cameras and cellular trail cameras. The Wi-Fi cameras (given you have internet at the site) will email photos to a user. Prices for trail cameras range from less than \$100 to over \$700. The website www.trailcameraexpert.com has a good list of what to consider when purchasing your camera.

Ask yourself these questions to help determine your needs before you start looking for a trail camera:

- Are you simply looking to monitor wild game or are trespassers a concern as well?
- How large of an area do you need to monitor? Do you need a detection range of 100 feet or is a range of 50 feet sufficient?
- How important is it that the camera stays covert? Either from game, other people, or both?
- How important is the camera's resolution? High resolution, crystal-clear photographs come with a matching price tag. Additionally, even cameras with high resolutions generally take photos in black and white at night. If a large portion of the camera's use will come after dark, a high photo resolution may not be necessary.
- Will photos alone suffice or do you need a camera that records video as well? If you need video, consider whether the video needs to be high definition and if sound matters.
- How often will you check on your camera to see the images it has captured? If your trail cam is only able to use smaller capacity SD cards, it will fill up faster than a camera that uses higher capacity SD cards. This is especially true if your camera is taking high resolution pictures and videos. If you are checking on your game camera often and viewing, copying, transferring and deleting the images regularly, this may not be a problem. If you plan on leaving your trail cam for long periods of time between checking on it,

however, you may find your memory card is full and has not captured any images recently.

- Do you want your game camera to have a strobe flash or an infrared LED flash? There are pros and cons as discussed below to both of these.

Cameras can be set up to take more sophisticated population counts of animals on your property. Mississippi State University (MSU) has several good articles about how to do this. https://www.mdwfp.com/media/238206/new_camera_pub_msu.pdf

The Basics of Wildlife Photography

A best practice recommended if a landowner desires to obtain accurate counts of wildlife is to create specific grids on a property, draw the animals in (using bait for deer) and make sure a camera is set up to have something in the background – a row of trees or other things. MSU staff specifically recommends that to correctly identify individual animals, place a camera in color flash mode. Flash model game cameras are currently the best tools available for surveying deer population characteristics. Flash cameras record color images at night, providing more detail and making it easier to identify individual antlered bucks. In addition, flash cameras take clearer images, even if animals are moving when the image is captured.



Trail Cam Examples from Luce County
Photos Courtesy of The Nature Conservancy



While infrared (IR) cameras are great for preseason scouting or monitoring scrape activity, they are not ideal for camera surveys. Yes, they have a stealth component (they operate without a flash), but there is little evidence to suggest that flash cameras are a deterrent to deer. Pictures taken at night with IR cameras are black and white, which often makes it difficult to distinguish between individual forked bucks and spikes of similar antler sizes. Also, nighttime black and white images are darker, so some deer in the background of photos either go undetected or are unidentifiable as bucks or does. Lastly, IR cameras do not respond well to movement, often resulting in images that are blurred because deer were moving when the camera was triggered.

How Michigan Department of Natural Resources Uses Trail Cams

The Michigan Department of Natural Resources (DNR) is currently using trail cams for a predator/prey study in the western Upper Peninsula of Michigan. This long-term study will tell them the food that predators prefer. Trail cams used by the agency and private citizens help to increase credibility and confirm use of deer and other animals in a certain area. However, they also note that trail cams can put adverse pressure on trophy animals. If a trophy animal is viewed in a trail cam, it may be hunted relentlessly until killed. The DNR would like to be contacted if the following animals are seen in your trail cam:

- Feral hogs – DNR wants to track the location of these habitat damaging animals
- Cougar or Lynx
- Sickly Deer – deer who are obviously in bad shape
- Moose, elk, or other animals who are in unusual places or outside their known range. For instance, moose showing up on a trail cam in Delta or Alger County.

More Information

Classen, M. 2016. http://www.mikelclassen.com/George_Shiras_III.php

Hamrick, B., B. Strickland, S. Demarais, W. McKinley, and B. Griffin. 2013. Conducting Camera Surveys to Estimate Population Characteristics of White-Tailed Deer. Mississippi State University Extension Service Publication 2788.

Shiras, 3d. G.. 1936. *Hunting wild life with camera and flashlight, a record of sixty-five years' visits to the woods and waters of North America*. 2 volumes. National Geographic Society, Washington, D.C.

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