

Anecdotal Bear Study Massachusetts 2021

by
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I wanted more from camera trapping than just setting out trail cameras capturing pictures of random wildlife. Bears fascinate me! I enjoy researching, reading and learning all I can about black bears. To further expand on learning, I came up with this idea of coordinating my own 2021 anecdotal bear project with an expectation it might provide me firsthand information about bears. I must say, what a lesson!

My time spent out in nature is more than the average bear! Hiking, photographing wildlife and setting out camera traps (trail cameras) is a passionate pastime. During 2021 my ole' hiking boots covered four hundred miles in Worcester County searching for bear sign and learning about bears and their habitat. Read along as I share some of the things I experienced and learned during this study.

The first bear to trigger a 2021 trail camera was in April (below). It had a blue ear tag indicating it was a MassWildlife study bear.



First bear videoed on trail camera April 2021

What I now call “bushwhacking for bears” has helped me learn about the life history of black bears. One day while following a stream, I stumbled upon a bear babysitting tree. How did I know that? Well, I didn’t at first. But finding seventeen piles of bear scat in an area 20’ x20’ got my attention. Why would bears keep dropping scat in this one spot? The answer stood right in the middle of the scat piles. A mature hemlock tree with lots of thick branches, claw marks and wear on the trunk told the story. The sow would send her cubs up the tree while she foraged the forest.

That sow had four yearling cubs that were captured on video in April in a nearby swamp. This was the first time my cameras had caught some video of a family of five bears with a trail camera, a thrill to say the least!



Sow with four yearling cubs (fourth yearling top left)

One early morning I was hiking to swap out SD cards in the cameras. Approaching an open area, I could see a bear milling around in the distance. There was a slight breeze hitting the back of my neck, so I knew it wouldn't take long before the bear would catch my scent. In only a few seconds the bear was standing on its hind legs turning in circles, trying to determine what direction the human scent was originating from. It didn't take very long before the bear was down on all four legs, and it disappeared into the woods like a ghost.

As the summer went on, I had the opportunity to see an additional three bears while hiking. Seeing a bear in the wild is always a bonus for me.

Method

Fifteen trail cameras were deployed in north central Massachusetts in an area six-miles square from March – December 2021. (See *Trail Cameras* below) Cameras were typically checked weekly, especially in areas of high bear activity and frequent image captures. Several cameras were checked biweekly.

In the initial review of all video and photographs, I documented 168 bears that triggered all fifteen cameras. After I reviewed the images and removed any bear that triggered a camera within fifteen minutes of the prior trigger, (since I considered it to be the same bear) I counted 120 triggers over the ten-month study period. Approximately 80% of the triggers were yearling cubs that were on their own for the first time.

Videos of thirteen different bears were captured on my trail cameras over a 10-month period. Seven were lone individuals. Of those seven, four were recorded in June and July, the mating season for Massachusetts black bears.

Assumptions about the bears documented on my cameras are as follows:

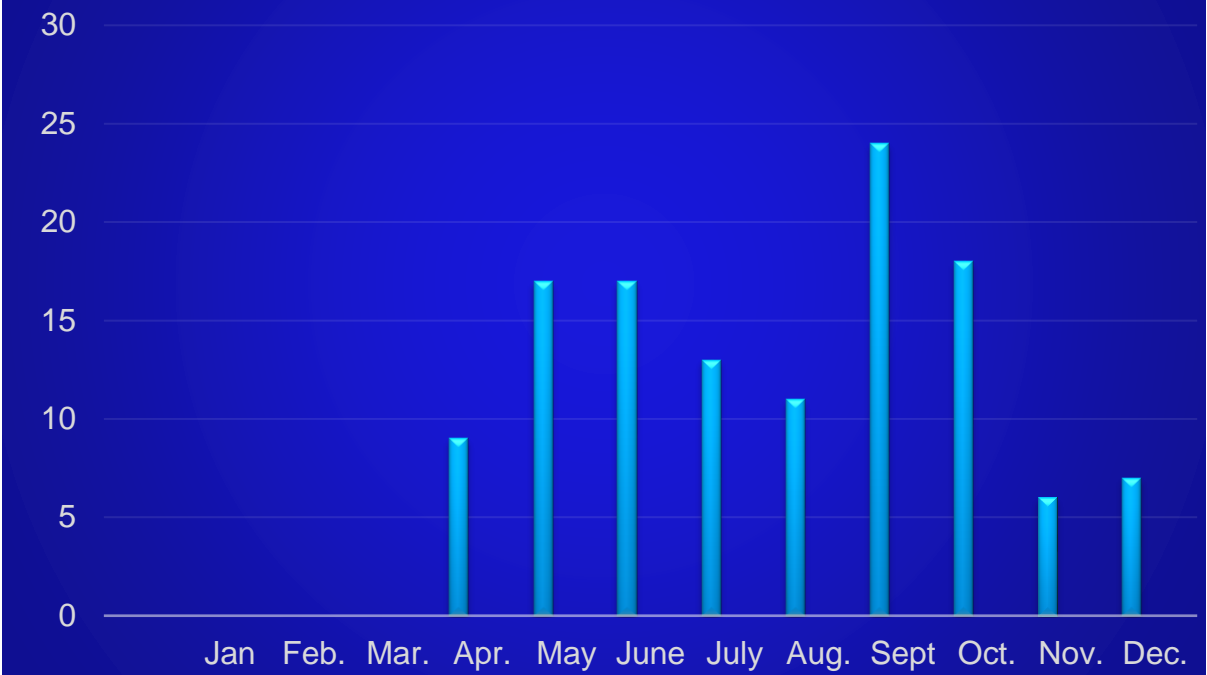
- A yearling or yearlings--determined by size—with a blue ear tag were presumed offspring of the study bear known to use this area.
- Identifying individual bears can be difficult. Unless I viewed a bear with unique markings, noticeable size variation, visible injury, or scar that would differentiate it from the main subject bear, I would assume I was viewing the same bear and count it as one individual.
- Trail camera video time durations were set on ten seconds, thirty seconds, or two-minute intervals, depending on brand and model used. If a sow with young was viewed, it was assumed that the camera videoed the entire bear family within those time frames. In almost all cases bear families were videoed a second time from a second trail camera in the area, helping to validate how many offspring a sow had with her.

Bear Inventory

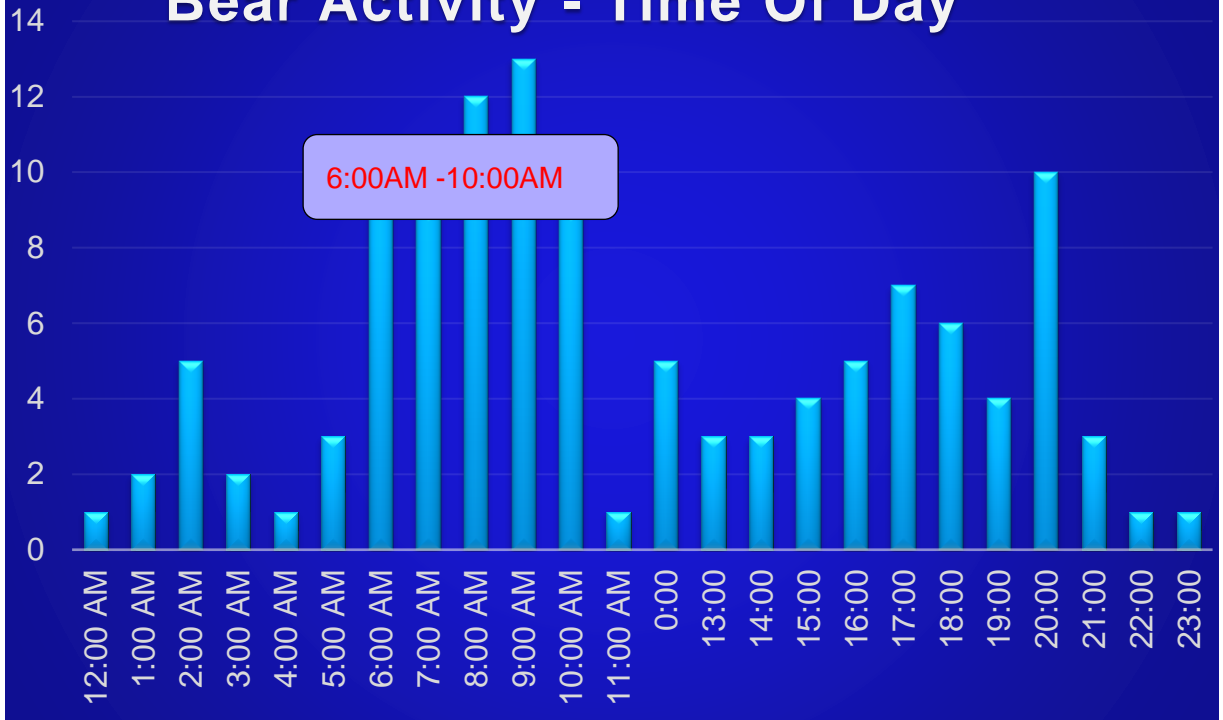
Total number of bears documented:

- 7 lone individuals
- 1 sow with 4 collared yearlings; cubs dispersed approximately June 2021
- 1 sow with 4 yearlings not tagged or collared; expected to den winter 2021-22
- 1 sow with 3 yearlings not tagged or collared; expected to den winter 2021-22
- 1 sow with 3 cubs of year (COY) not tagged or collared; expected to den 2021-22
- 1 sow with 2 COY
- 1 sow with 1 COY

Bear Activity By Month



Bear Activity - Time Of Day



Highlights

- One video showed a bear scent-marking a tree with its back, then using stomping behavior as it walked away, another way of scent-marking.
- Another video captured a collared yearling swimming a beaver pond.
- I was surprised to document so many sows with cubs using this one area. Was the study area the home range of one and overlap area of the others? Did the high volume of nuts and fruits in this mast year minimize territorial conflicts?
- I was able to learn the core area of one study bear.
- Two yearlings, after being dispersed by their mother prior to the June/July mating season (as is typical), were on their own for the first time. Instead of parting ways, for whatever reason they decided to team up and spend their first independent summer and fall roaming and foraging together. I captured early fall videos showing them still together.

Trail Cameras

- Three trail camera brands were used: *Browning*, *Bushnell* & *Reconyx*.
- Browning Recon Force Advantage performed the best with the clearest, sharpest videos. A two-minute video recording option and eight-picture rapid fire settings made this the ideal camera.
- Reconyx Ultra Fire XR6 was second with acceptable video /picture quality. This camera was not used in high bear-travel areas.
- Bushnell Aggressor: Video and picture quality were inconsistent. Thirty-second video capability worked out well.
- Batteries: *Energizer Ultimate* lithium batteries were used with each camera.
- Five cameras were damaged by bears. Protective metal cases were not used. See tip # 5 below.

10 Study Lessons Learned = Tips for Others

1. Be prepared for a time-consuming commitment.
2. Tick awareness can't be emphasized enough!
3. To protect equipment and minimize impact on wildlife, be vague when sharing camera locations.
4. Watch for other cameras in area before setting yours up.
5. Bears are curious by nature and are attracted to trail cameras. I highly recommend that any trail cameras deployed in areas with active bear populations be equipped with a metal case.
6. Record GPS locations and make journal entries for each location throughout the study period.
7. With each SD card change, check camera settings and re-format SD cards.
8. Always carry extra batteries
9. While reviewing footage, make notes about changes or adjustments needed at next SD change.
10. For meaningful results, organize and file your data.

What's in store for 2022? I plan to coordinate a similar study in the same area. It will be interesting to compare data from both years. I'll be bushwhacking over the winter, looking for new spots to place cameras. Later in 2022 I'll put together some picture / video compilations sharing the results. Stay tuned!

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