

12.1 recent technology being used to track wildlife.

[Environment](#), [Climate Change](#)



12. 1 – Population Characteristics (Part 2: Pages 590-591)Up till the late 1950's, we had extremely limited equipment and knowledge that prevented further advancements concerning the research of wildlife. The only methods we had for tracing animals was to either physically trail them in order to observe their movements, or to capture an animal, tag it, and then release it in the hopes that we would be able to capture it again later on. These two methods were not very effective or reliable. Fortunately, our current technology allows us to make use of many new tools that help track and study animals' movements. Tracking populations provides essential information regarding the distribution, population density, and home range size of diversified species. They also give us the means of gathering data about their migration habits, breeding practices, and diet choices.

Using this data, we can recognize how animals travel in a local environment, across large regions, and evolve over time. Tracking allows us to confront urgent environmental issues such as invasive species, biodiversity loss, and climate change. Modern technology has introduced numerous ways to track animals.

The earliest known method widely used is VHF radio tracking, beginning use in the 1950's. Usually, the study animal is sedated in order for general details about the health of the animal to be collected. A radio transmitter collar is placed on the animal. Once the radio transmitter is fastened to the individual, it begins transmitting a radio signal.

The signal allows the animal to be physically located through an antenna and receiver. Scientists are able to pick up the signal by honing into it. VHF transmitters are reliable, straightforward, and inexpensive.

They also have a long battery life of maximum three years. Another method of animal tracking is satellite tracking. This slightly newer method, introduced in the 1970's, is comparable to VHF radio tracking, the only difference being that a radio signal is sent to a satellite instead of a radio receiver. Satellite tracking also has a longer range, and like VHF tracking, it is easy to use and reliable. Global Positioning System (GPS) tracking, invented in the 1990's, is the most recent technology being used to track wildlife. In this method, a radio receiver is placed on the animal instead of a radio transmitter that is typically used.

Signals from special satellites are detected by the receiver. A computer is used to determine the location and current movement of the study animal. Another set of satellites receives the data collected by the radio receiver, which sends the data to a lab for analysis. The locations can be downloaded in several ways. Through GSM cellular phone signals from GSM collars, handheld portable devices from store-on-board GPS collars, and global satellites from SAT collars, data is able to be stored from any location at any time. It is a very convenient and accessible method.

GPS collars are also created with the same capabilities as VHF collars, so animals can still be tracked and observed close by.