

Radio Telemetry

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Radio Telemetry Latest News

Radio telemetry data helped conservationists repeatedly protect the radio-tagged **White-rumped vulture** Z25, but the bird was ultimately killed in a collision with a power transmission line.

About Radio Telemetry

- Radio telemetry involves **using radio waves** to **automatically transmit data** from remote or **inaccessible sources to a receiving station** for monitoring and analysis.
- It is commonly used in **wildlife tracking, weather monitoring**, industrial process control, and **medical monitoring** to **gather data without needing physical access to the source**.

Radio Telemetry in Wildlife Tracking

- **Since the 1960s**, scientists have been using radio telemetry to **track wildlife, studying their migration patterns, behaviors, and habits**.

- Radio telemetry **uses radio signals**, which are made up of invisible and silent electromagnetic waves, **to determine location**.
- A radio telemetry system is made up of **three parts: a radio transmitter, a radio antenna, and a radio receiver**.
- The **transmitter** can be **attached or tagged to the subject using a collar, an ear tag, or a wing tag for birds** in particular. It is the part that **transmits**, or sends, the **radio signal**.
- The **operator uses an antenna, attached to a receiver**, which is programmed to the transmitter's frequency, **to pick up the radio signals** given off by the transmitter affixed to the target animal.
 - **Receiver antennas may be hand-held, mounted on an object**, or affixed to towers to avoid interference from buildings and trees.
 - They may **also be fixed to a vehicle**, boat, or aircraft to allow the operator to exploit larger areas.
- The **radio signals** are then **transformed into a beeping sound** by the receiver.
- **As the receiver gets closer** to the transmitter, the **beeps get louder**, meaning the animal wearing the transmitter is close by.
- The researcher can **use this audible clue to locate and follow the animal** wearing the transmitter.
- **Limitations:**
 - However, unlike GPS satellite tracking, radio telemetry **requires researchers to remain within the signal range of the transmitter** to locate the tagged animal.
 - The other limitation is the **size and lifespan of the battery** required to power the transmitter.

News: TH

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