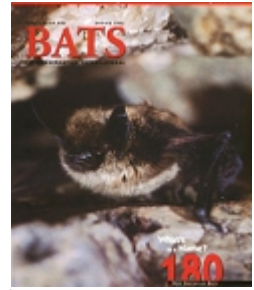


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Bats Lose an Old Friend

Jim Cope's Half-Century of Conservation

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When Jim Cope discovered the fascination of bats, researchers were chasing bats on the wing with butterfly nets, bat detectors weren't even a scientific daydream, and computers were the size of houses. It's no wonder no one knew very much about bats. A great deal has changed since 1948, and Cope played a part in many of the pioneering developments in research tools and results. Bats lost a stalwart friend when James B. Cope died last year at the age of 81. Born in Ithaca, New York, in 1920, and educated as an ornithologist, Cope in 1947 joined the faculty of Earlham College in Richmond, Indiana, where he spent his career and remained as a professor emeritus.

In a conversation not long before his death, Cope said he knew very little about bats when he was assigned to teach a course on mammalogy, so he decided to study them. In the summer of 1948, he visited Indiana caves where bats were known to hibernate and found almost no bats. Where did all the bats go? 'That is what really got my interest up and raised many questions in my mind.' He spent much of the rest of his life seeking the answers.

Things quickly got complicated, however. The media, which had rarely paid attention to bats, suddenly discovered them about 1953 – and the bats have never completely recovered. Researchers reported that bats could carry and transmit rabies without themselves being affected by the disease. (That report has long since been discounted; rabies quickly kills infected bats just as it does other mammals.) But in the 1950s, a media firestorm of misinformation erupted as bats were erroneously branded as the major reservoir of rabies infection.

While Cope and his students were busily trying to conduct a census of Indiana myotis (*Myotis sodalis*) in winter caves, others were frantically trying to kill the bats or drive them away. Cope persevered, however, banding thousands of bats and eventually becoming one of the first to experiment with radio transmitters and other methods of tracking bats along their nightly and seasonal journeys.

Capturing bats for tagging and study was a major problem. Disturbing hibernating bats in the winter was risky for the bats. Butterfly nets proved less than ideal for such a fast-flying, echolocating animal. A string pulled tight across a stream dropped bats as they came in for a drink, but then the researcher was required to splash into the water for retrieval.

Then, in the 1950s, Cope and a few colleagues tried mist nets – the gossamer nets Japanese soldiers used to catch birds for food during World War II – and their success rates improved dramatically.

By 1977, Cope had finally answered at least part of his early question about where Indiana bats went in the summertime: They were giving birth and raising their young under the bark of dead or dying trees.

For bat detectors capable of hearing high-pitched echolocation calls, Cope and other

researchers in the '50s and '60s turned to fairly simple, homemade devices and experimented with detectors used by industry to spot leaks in high-pressure steam lines. Sophisticated, tunable bat detectors had to await the revolution in solid-state electronics.

Around 1960, Cope and his students surveyed 190 nursery colonies in buildings scattered around Indiana. In 1989, Cope and colleague John Whitaker were able to revisit 128 of the sites – and they found an overall population decline of 75 percent, even among supposedly common bats.

“Many of the colonies were excluded [by needlessly frightened building owners], others were eliminated with pesticides, and still others were driven off with naphthalene mothballs and/or burned,” Cope said. “One person even attempted to asphyxiate the bats with automobile exhaust fumes.”

Others were also recording the frightful decline of the Indiana bat, mostly due to erroneous public fears. The Indiana bat was officially listed as endangered in 1967, and Cope was named to the first Indiana bat recovery team. The team’s recommendations, however, were virtually ignored by federal and state agencies, which seemed to reflect the public’s abhorrence of bats at the time. That initial recovery team disbanded soon after and was not replaced for years.

Cope lived long enough to see at least the beginnings of change. “It is most exciting to me to see such a turnabout of attitudes toward bats at all levels of society,” he said a few months before his death, “especially given the hostility ... we encountered in the late 1950s.”

The creation of Bat Conservation International, Cope said, “was the most important single act to start this country, and later the world, toward recognition of the ecological importance of bats and the need for conservation of their habitats.”

Jim Cope also made singular contributions to the public’s understanding and appreciation of bats. And bat biology today is richer for those who as students learned not just knowledge but commitment from this remarkable conservationist.

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