

Is It Time to Halt Bird Banding?

By Marlene A. Condon



Courtesy of Marlene A. Condon

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About 10 years ago, I read a letter to the editor in *Birder's World* magazine, which suggested that bird bands could be deadly to migrating species (Ruiz 2000). The letter writer, Henry Ruiz, felt that a Blackburnian warbler (*Dendroica fusca*) that he had seen land exhausted on a beach near the Gulf of Mexico would not have survived the journey if it had any excess weight to carry. Yet the magazine published a response from two well-known hummingbird banders who considered “the weight of the band [as] truly a non-factor in the lives of these birds.”

Clearly, banded birds have provided scientists with a wealth of information. However, it's worth noting that the number of recovered bands can be extremely low. According to biologist Paul Kerlinger, approximately 6 percent of the 1.1 million birds banded annually in the U.S. are recovered each year (Kerlinger 2005), with rates varying by species. In songbirds, the recovery rate is less than 1 percent, while in game birds the rate can go up to 12 percent (Bird Banding, Colorado Division of Wildlife).

Is a 1 to 12 percent return worth the potential risk? Concerns about banding are not uncommon, and some studies reveal consequences that are worth considering.

Wear and Tear. A study published in *The North American Bird Bander* in 1976 found that conventional metal leg bands on black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) caused skin lesions and foot deformities because of excrement build-up beneath the band (Henckle 1976). As a result, U.S. and Canadian banding offices prohibited the use of leg bands on vultures, and researchers began using commercially available cattle ear tags to mark birds in field studies. Those tags also proved problematic. In 1998, a study published in the *Journal of Field Ornithology* found that cattle tags on vultures became illegible, which impacted long-term studies (Buckley 1998). Band damage is a particular concern for those studying long-lived birds such as sea birds, whose bands can deteriorate from sand or saltwater corrosion (Hatch and Nisbet 1983).

Exhaustion. Fifty percent of the bird species that nest in the eastern and midwestern U.S. then winter

in the Caribbean or Latin America cross the Gulf of Mexico, flying nonstop across 600 miles of water. To prepare for the journey, birds such as the ruby-throated hummingbird (*Archilochus colubris*) or the rose-breasted grosbeak (*Pheucticus ludovicianus*) must put on fat to provide the necessary energy. Kerlinger notes that most of these birds burn 0.6 percent of their body weight per hour, and that if they do not find land within about two and a half days of nonstop flight, they will likely die (Kerlinger 1999). Thus, if tailwinds shift, lengthening the trip, even the 0.005-gram weight of a hummingbird band could speed depletion of the hummer's fat supply. Even without added band weight, this migration can prove deadly. “Biologists routinely discover thousands of dead birds that have washed ashore,” writes Kerlinger.

Banding Stress. Research shows that most birds tend to lose weight during the banding process (Refsnider 2003). House sparrows, for example, may lose an average of 4.2 percent of their body mass, and possibly as much as 7.4 percent (Refsnider 2003). Although banding a bird typically takes a few minutes, researchers sometimes net large numbers of birds at one time. To minimize avian stress, most researchers try to release birds within an hour.

Penguin Deaths. Early in 2011, scientists published a study in *Nature* that highlighted the long-term impact of banding king penguins (*Aptenodytes patagonicus*). The researchers found that bands attached to the birds' flippers seemed to lower their survival rate by 44 percent and reduce their chances of reproducing (Le Maho 2011). A similar study published in 2004 revealed that the metal ID bands fitted on to penguins' flippers hinder the penguins in water, adversely affecting their fishing and swimming abilities (Gauthier-Clerk 2004). Although the impacts of flipper tags on penguins is not necessarily relevant to North American migratory birds, it does highlight some additional risks of banding.

At a time when nearly a third of the 800 bird species in the United States are threatened or in serious decline (The State of the Birds 2009), scientists should ask themselves: Is banding worth the stress it places on birds? ■