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A Method for Catching Large Numbers of Birds: Audio Lures for Migrants and Their Use in Banding Stations

Imagine if you could catch thousands of birds of any species you chose. For many years such a method has been used widely in Europe for catching huge numbers of migrants of chosen species. This past fall I visited seven bird observatories in Europe and was struck by the almost ubiquitous method of using audio lures that has been relatively little used during migration in the US and Canada.

Probably the epitome was the station near the small English village of Icklesham in East Sussex (where the very well-made bands are manufactured by Porzana, Ltd). There, on a substantial farm property especially constructed for bird banding by a keen bander, Stephen Rumsey, three arrays totaling about 100 nets are set up along board walks and paths. Well before dawn, songs and calls of chosen species are played from many speakers over the property, continuing on well into the day. With great numbers of nets, audio lures remotely controlling species and volume, and a flock of banders and extractors, hundreds of birds could be captured on a "slow" day.

Closer to home, on the coast of Vera Cruz in the Americas, the irrepressible Manuel Grosselet has pursued the capture of tens of thousands of birds during the last few fall migrations as migrants pass over a wetland and are lured down by sounds of what he calls "happy species." Elsewhere in the Americas, Nicholas Bayly and Camila Gomez (2011 *Journal of Field Ornithology* 82:117-131) increased the capture of several migrating species by audio lures in Colombia.

In the US, Mike Lanzone reports to me that he has used audio lures during migration. In the west, he targeted certain warblers and found that it worked very well, "often catching a net-full of Red-faced, Townsends, Hermits, etc." He reported that some additional species seemed to be drawn in with the birds they were targeting. Apparently, audio lures have also been used at a banding station in the east to catch thrushes. I encourage these folks to publish their methods.

I can think of three objections one could raise to this method. First, species bias, i.e., you will catch those birds whose songs you play. This would reduce the usefulness of netting as a sampling technique for population size. As some have eagerly pointed out (e.g., van Remsen and Good 1996 *Auk* 113:381-398), mist nets do suffer from some biases in estimating population sizes. However, increasing evidence suggests that netting has some advantages over census as an index to abundance, as several accounts in Ralph and Dunn (2004 *Studies Avian Biology* 29) suggest. Finally, of course, we gain much more than density estimates from banding. Wade Leitner commented to me, "For molt studies, phenology studies or other longitudinal studies, the use of audio lures actually improves the quality of data by increasing probability of capture."

This raises a second, probably more worrisome concern: population bias, that age or sex ratios, and measurements such as weight and wing length, could be biased. In the winter at least, male Chiffchaffs in Europe respond at a higher rate to tape lures of songs, but there was no difference found in the important metrics of age ratio or body condition (Lecoq and Catry 2003 *Journal of Field Ornithology* 74:230-232). Indeed, a growing literature in Europe has indicated that many age and sex classes of birds are captured with audio lures in proportion to their availability. As Schaub et al. (1999 *Auk* 116:1047-1053) state, tape-luring may be the best technique to attract rarer species, or that part of the population of an otherwise relatively common species that normally flies over an area without stopping.

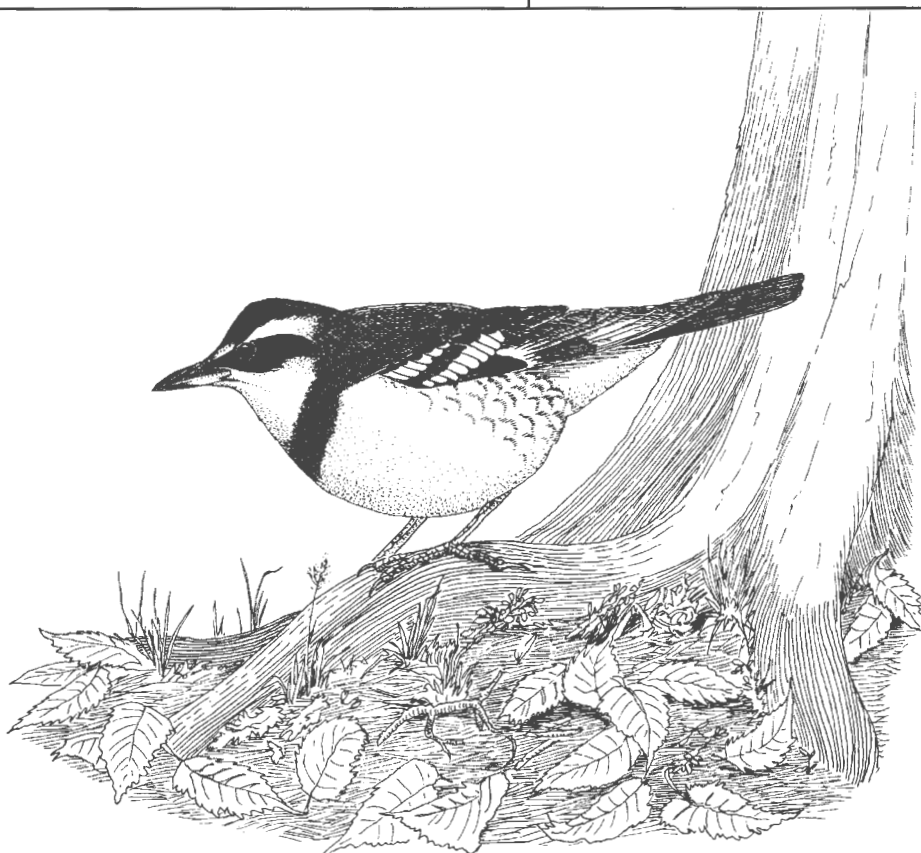
A third, more basic and current problem that Walter Sakai called to my attention, was catching too many birds. In part, this reflects the chronic and justifiable concern of the Banding Lab and Office to avoid banding just for the sake of banding. Most recently, we are also hearing about a concern involving using up the available supply of bands and stressing the resources of the Lab. Of course, Walter's and my argument will always be that any banded bird is a potential wealth of important knowledge from

measurements, condition, demography, and other vital rates and indices. An important consideration is that the method should be well tested at your site with a good supply of very experienced banders on hand. It is quite literally possible to have several hundred birds in just a few nets in a relatively short period of time.

Audio lures have the potential to increase the effectiveness of existing stations, as capture rates in a season often are relatively low, while capable and qualified banders are underutilized. I would suggest that present stations experiment with this method by installing a net array, perhaps 100 meters away from their primary station, and play tapes there to supplement their standard operations.

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Varied Thrush
by George West