
The Bander's Forum

Thobaben *et al.* in commenting about group research project participation, as a part of their Ohio fall passerine study (*No. American Bird Bander*, 12(2): 47-53, 1987), address some issues relating to net hours. Participants in their study raised objection to using net hours to represent capture effort because they appeared not to be able to deal with how to calculate net hours for a series of nets when the last net goes up or comes down 15 to 30 minutes before or after the first net.

There is a very simple mathematical procedure for handling this matter. I have used it over 1100 times in the past 23 years at Vischer Ferry, NY, where I have operated three sets of nets during spring and fall weekend banding. I have used it elsewhere as well hundreds of times.

My net set-up procedure consists of three steps: 1) I walk the net lane in one direction dropping net poles at paced off intervals corresponding to a net length; 2) I walk the net lane in the opposite direction placing those poles in the ground and stretching furred nets between the poles as I go; and 3) I walk again the net lane unfurling the nets.

Since the first two steps do not involve any capture effort because the nets are not open and functional, whatever length of time it takes to accomplish these steps is immaterial to the calculation of net hours. Beginning, however, with the unfurling or opening of the nets in Step 3, I note the starting time when the first net is open and the finishing time when the last net is open, and determine the midpoint to the nearest five minutes to start the counting of net hours. The definition of a net-hour that most banders use is one 12-m net in place for a period of one hour. A six-m net in place for one hour equals $\frac{1}{2}$ net-hour, and an 18-m net in place for one hour represents $1\frac{1}{2}$ net hours.

All calculations are based accordingly. Usually if I am setting a string of 12 12-m nets, it can take me 10-20 minutes to do Step 3, depending on weather, terrain, occasional complications with the equipment, etc. I count net hours to a point near darkness when bird activity ceases, usually 15 to 20 minutes after sundown depending on particular circumstances. As an example, if I set 12 nets and the first net is opened at 1700 and the last at 1720 per Step 3 above, and I use them until cessation of activity at 2030, my nets have been in use from 1710 to 2030 or $3\frac{1}{3}$ hours which when multiplied by 12 nets gives 40 net hours. I repeat the same steps and same calculations for the second and third strings of nets to derive total net hours.

During the take down of the nets, I reverse the process and mark the time of furling the first and last net, determine the midpoint and calculate accordingly from the start time. The time I spend gathering the furred nets and collecting poles, etc. does not represent capture time and does not enter the net-hour calculation.

I realize much has been said by many banders by way of complaining about the uselessness of net hours. I attribute much of it to simple laziness on the part of some individuals, because it is another data gathering step. I encourage banders to record and use net hours in banding analyses. While care must be used in the interpretation of capture rates expressed as birds per net hour or per 100 net hours, it is better to have the data and debate their use than to be the poorer for having no data at all. The argument that net hours may not be comparable from location to location may be a valid argument under some circumstances when the data are in hand, but it is not a valid reason for a bander at one location not to collect data at his location for the purpose of comparing his own effort from day to day, year to year, species to species, or by any other preferred measure. Net hour data are valuable if used with care and understanding.

These same authors raise the issue of encountering difficulty recording age and sex data on a field data sheet. I use an $8\frac{1}{2} \times 11$ " sheet in a three-ring binder. Every sheet has 55 lines running horizontally and every line accounts for one bird. There are 11 vertical columns that allow entry of band number, species, age, sex, date, time, wing chord, fat class, weight, net lane and comments for each bird. It works very conveniently either in the notebook or on a clipboard; and anyone wanting a specimen copy may have one by sending me a stamped, self-addressed, 4×9 " envelope. With a typewriter and modern copying, it is very easy to style one's own form for any particular project and run off copies.

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Dealing With Wet Captive Birds

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There are times when birds are trapped during or after a rain when the trap wire holds drops of water. As these captives move about in the trap during the removal process, they usually soak their flight plumage, thereby impairing their flight ability. In severe cases, they can soak their body plumage and risk exposure to hypothermia. While I do not advocate banding in rain, which causes this kind of soaking of a bird's plumage, there are times when such experiences are unavoidable. When they occur, a bander has an obligation to correct such a situation by restoring a captive bird's plumage to its normal condition prior to release.

One corrective measure is simply to let the bird dry out while holding it in a gathering case. This can be too time consuming, and time may be critical if hypothermia is involved. At times, this may also involve having to bring birds to indoor warmth away from a cooler banding area. In either location, relative humidity may be high and may delay or complicate the drying process. Potentially many intervening factors can make this solution an unsatisfactory remedy.

Another solution exists. An inexpensive hair dryer can prove invaluable in dealing with restoring the condition of a bird's plumage. Just as a drier blow dries hair,

it can blow dry the plumage of an individual bird in the hand or groups of birds in a ventilated gathering case. However, a drier needs to be selected with special use criteria in mind.

Since the amount of the plumage to be dried and the amount of water to be removed from it are relatively little compared to the amount of hair and moisture for which some driers are designed, the smaller capacity, travel-kit driers are preferred. Those of 500 watts or less and with lower blower speeds are best. They are usually the least expensive models available. The high-capacity units of higher wattage (1000-1500 watts) tend to produce either too much heat or too much air flow, not to mention noise. If only this type of drier is available, it should be used at the low blower and heat settings.

I keep an old, low-capacity, 440-watt drier handy at my banding table on my porch. Despite the relative humidity or the coolness of the temperature in my banding area, I can dry the plumage of a dampened bird in 1 to 3 minutes, thereby restoring its flight ability and the insulative quality of its plumage. Bander who occasionally have to deal with this problem may find this solution helpful.

Correction

M.K. Klimkiewicz of the Bird Banding Laboratory (whom I thank) has called to my attention an error in my definition of the "How-obtained" Code 99, as used in my paper on multiple recapture encounters (*No. American Bird Bander*, 12(2): 60-63, Properly defined, a Code 99 encounter is the recapture and release of a bird within the same 10-minute block where banded (Code 89 is outside the block of banding) and does not signify a recovery or terminal encounter as I indicated. I apologize for this inadvertent error and any resultant possible confusion. I had mistakenly connected the number 99 with the term recovery in another part of the Code section of the Banding Manual, and thereby associated a Code 99 encounter with a terminal recovery.

My analysis remains the same, but with the understanding that by using Code 89 encounter data, only those reencounters outside of the immediate block of banding are included. This is consistent with the actual en-

counter data I used. Excluded from the analysis are nearby encounters within the same block (Code 99); and all other encounters, most of which are terminal (per Kathy Klimkiewicz) and which per my earlier explanation rightly were excluded.

I should like to point out that since submitting the paper, I located another reference on two more multiple encounters (K.S. Anderson and E.A. Sabin, 1970, *EBBA News* 33(3): 122), covering an Evening Grosbeak and American Goldfinch. These encounters were of a type different from the kind I reported in that each bird was captured three times, each time at a different geographical location. Their existence does not alter the analysis I conducted.

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