

MARTI'S MONITORING TIPS

Your **safety** is the most important consideration. We recommend monitoring in pairs for safety and more thorough observations, but it's your choice if you are an experienced monitor. If you feel conditions are unsafe (potential storms, bears, mountain lions, whatever), wait and monitor another time. Also, do not confront dog owners or anybody else breaking rules. A pleasant reminder is OK if you feel comfortable, but leave it at that and report anything serious to Open Space.

Next in importance is **increasing our birds' chances of nesting success**, not hindering them. Here are some guidelines for that, gathered from monitoring guides and tempered with experience:

- **Watch for activity** as you approach the vicinity of the box. Assume there is a bird in the box, so that as you approach you speak to it. You might also tap lightly on the back of the box to give a bird a chance to fly out the front with nobody in sight.
- If you don't see the box occupants, try making yourself inconspicuous some distance away from the box and **hang out quietly** to watch for activity. Move away from the box promptly after closing it. The birds usually are anxious to return to see that all is OK.
- Sometimes, hens sitting on a clutch of eggs stay on the nest to protect their eggs. If you close the box quietly and walk away, then **look back**, you might see the hen leave, in which case you can return to count eggs. You would like to have a count if possible.
- **Don't try to handle the birds.** I still can't positively ID a female WEBL or MOBL sitting on eggs – I have to hang out and hope the male shows up, or the hen leaves, making ID easier.
- **Incubation starts the day after all eggs are laid**, usually one per day. You can estimate the start of incubation from the number of eggs you see when monitoring. For example, if no eggs last week and 5 today, then assume incubation started 1 day ago. Incubation lasts 14 days for bluebirds, 13-14 for tree swallows, 12-15 (13) for house wrens.
- **Computing the "Estimated hatch date"**: Add 15 days to the earliest date the last egg could have been laid, assuming incubation starts the day following the laying of the last egg and 14 days incubation. Record that on your monitoring sheet to refer to later. You may be able to determine the actual hatch date the first time you see chicks (compare age pictures).
- **Computing the "Don't open date"**: **Don't open boxes when there could be chicks more than 12 days old.** They might fledge prematurely. This is why we record "Don't open date", and why data sharing is important if someone else monitors your trail, or if you are a sub. Day 1 is the earliest date the chicks could have hatched, based on your observations from week to week. Add 12 days to that date, record it in the "Don't Open Date" column or box. Check that date, and don't open a box if it's on or after that date, to avoid possible premature fledging. **When we can't open boxes, it's useful to watch for parents feeding.** Wait until day 21-24 to open the box again. Then watch for a while to see if parents are feeding, or if you hear chicks inside, or see a chick looking out the entry hole. If all is quiet, they've likely fledged. Open the box and check for remaining eggs or dead chicks.
- **Don't open boxes when it is cold (below 50), wet, or too windy** (nest material blows out). You might need some flexibility in days and times you monitor.
- When egg-laying is possible, **wait until after 8 AM to open boxes.**
- **Leave unhatched eggs in boxes** until after fledging, assuming some hatch. We had an egg remain viable for weeks once – eventually more eggs were laid and at least one old egg hatched, as best we could determine.

Equipment/handling all the stuff (You'll find what works best for you):

I find it easiest to **carry a cloth bag over my shoulder with the monitoring kit** and clipboard (with map until I know the trail), with monitoring permit every time, and a multi-box/single visit form with the box numbers preprinted in our preferred order, and the previous few weeks' forms underneath to refresh my memory. I prefer a **daypack** for carrying water in an outside pocket and stuffing extra clothes when it warms

up. Don't do what I did and put your camera and a leaking water bottle in a fanny pack. Repairs for wet cameras are costly! Also don't drop your camera, lose your glasses in the grass, or leave your walking stick or tripod behind (other things various monitors have done...).

As the season progresses, your socks and boots will pick up large quantities of stickers from the dried grasses. Wearing **gaiters** helps a lot, but it's a tradeoff between hot gaiters and spending a long time pulling stuff out of your socks and boots later.

Data recording is your most important responsibility.

- **Enter data on your monitoring sheet for each box** as you are leaving that area. Check for completeness as you go around to every box. We've provided two field data sheet formats: one sheet per date and one sheet per box. I prefer to use a single-date sheet each visit and transfer the data to multiple spreadsheet pages. However the one-sheet-per-box forms are very similar to the spreadsheet format. It's your choice which you prefer. Both types of forms are available in PDF format on the monitoring website, www.bluebirds-BoCo.org. There is also a sheet with the activity codes on the website. Please do include the activity codes with your data recording, as Cornell wants them included in the database.
- **Download the initial spreadsheet** for your trail from the website (above) at the start of the season. It is empty apart from column headings and a box number on each page. The format is similar to the Cornell Nestwatch field data forms to facilitate end-of-season data entry into the database. Be sure to enter data the way it's set up in the spread sheet, one page per box with multiple visits listed. Use the codes provided on a separate sheet for Nest Status, Adult Activity, Young Status, and Management Activity. Enter the data after every one or two visits. You will send the current spread sheet to anyone who substitutes for you. One spreadsheet per trail. Or, **if you're uncomfortable with spreadsheets**, transfer data regularly to one-box-per-sheet paper forms to submit at the end of the season.
- At the end of the season, send the completed spread sheet to Susan and to Marti within 2 weeks.
- If you used paper forms rather than a spreadsheet, please send them to Marti within 2 weeks.
- Keep your weekly paper forms until autumn when all the data will have been sent to Cornell.
- If you are a substitute, your forms need to be sent to the monitor holding the rest of them.
- Record your volunteer hours each week however you like, to report the season total to Susan. Include driving, monitoring, data entry, any time spent on the project.

Conflicts over boxes.

Both Tree Swallows and Violet Green Swallows use some of our boxes. They tend to nest later than the bluebirds, but one year we had swallows entering a box with later-nesting WEBLs already there. So we added a box not far away where the swallows nested successfully, and the WEBLs were left to fledge their young.

Another year, bluebirds staked out a box where MOCHs nested the year before. When we saw the two pairs in conflict, we added a box nearby which the WEBLs then used, leaving the MOCHs to their original box.

Birch, Susan, and George and Marti usually have extra boxes. One of us will be happy to help add a box if it might resolve a conflict. Don't hesitate to contact one of us.

After fledging, what do I do with the soiled nest?

After fledging, a bluebird nest is usually matted and has fecal matter stuck on the sides. It's amazing how happy this sight can make a monitor feel, knowing that the birds fledged! If a pair decides to raise a second brood, they will add some material over the old nest. In 2008, we had many double clutches, but few in previous years, and hardly any in 2009. Swallows may also move in immediately, adding feathers to the nest. We tend to scrape out the fecal matter as best we can and leave the nest until the August cleanout, unless it was way beyond hope (which is rare) and there was no new activity, in which case we remove the soiled nest and scrape the box.

At end of season, remove the nest and either spread it well away from the box or take it along to discard elsewhere. Scrape out the box and clean with either dilute bleach or vinegar solution. Birds often take shelter in the boxes during the winter, leaving more droppings for spring cleanout.