

# Breeding Codes

The Massachusetts Breeding Bird Atlas 2 will use the following codes for describing bird behavior. It is worthwhile to study the codes and know them well – this is what you are looking for in the field. Breeding birds are often short on time, and careful observation of an actively nesting bird will usually uncover one of these behaviors. Remember to try to upgrade a species' code, and pay attention to the Safe Dates.

## **OBSERVED: (all observations must be within Safe Dates)**

- O** The Observed code is used during Safe Dates for species known to breed in Massachusetts, but only seen “passing through” your block. For example you would use this for vultures or gulls seen in transit through your block. You also use Observed when you find colonial species using the block (e.g. Great Blue Heron feeding) but you never find a colony in the block. You also use Observed when you find a late migrant or a bird in unsuitable nesting habitat (e.g. a Blackpoll Warbler in Cape Cod after Safe Dates begin). Only use this code when no further evidence of breeding is uncovered. Work to upgrade these species if you suspect they are breeding in the block!

## **POSSIBLE: (all observations must be within Safe Dates)**

- X** Only use during Safe Dates. This is the code you will start with for most species. It simply means you have had a male or female seen or heard in suitable nesting habitat but that no further evidence of breeding was uncovered. This includes drumming woodpeckers, although be sure you know the differences between drumming rates to ID the woodpecker. The Possible code is usually upgraded quickly if the bird is breeding nearby, and if you have a chance to watch for a few minutes.

## **PROBABLE: (all observations must be within Safe Dates, except “C” Code which can be used any time)**

- P** A pair (male and female together) seen in suitable nesting habitat. For species where the male and female have identical plumage (e.g. Blue Jays) use this code after watching the birds. A pair will act like a mated pair – they will be tolerant, sometimes even attentive, to one another. Most birds will not tolerate a bird another bird of the same species, other than their mate, near them while nesting. Watch closely and they may reveal courtship (C) or nest building (NM).
- S** Permanent territory presumed through song, heard at same location on at least two occasions, 7 days (or more) apart. Record as “X/S” the first time you hear them, and upgrade to “S” on the second visit. This code can be used for drumming woodpeckers –ID the drumming woodpecker carefully. Both observations must be within Safe Dates.
- T** Permanent territory presumed through defense of territory, often one male chasing another. Should not be used for disputes over food (e.g. hummingbirds at feeders). In general, birds are quite aggressive when breeding, and some territory squabbles can be intense.
- A** Agitated behavior or anxiety calls from adult. These calls are frequently directed at cats or snakes. Don't use this code if the bird is responding to human pishing. If the agitated call is directed at you, you may be too close to a nest and you should back off. Much like "T" code, use carefully and watch for better evidence.
- C** **(NEW: OK to use outside of the Safe Dates, except for ducks)** Courtship and/or reproductive behavior seen. Some species have courtship feeding rituals (e.g. cuckoos, Cedar Waxwing), and some raptors have spectacular courtship displays (Cooper's, Broad-winged and Red-tailed Hawks, falcons). This is one of the best codes to use for hummingbirds. Consult *The Birder's Handbook* or *Birds of North America* for succinct display descriptions. An example of some common uses of this code prior to Safe Dates would be recording courting hawks and woodcock on singing grounds.
- N** Visiting probable nest site. Some nests are too high (e.g. the tops of trees) or enclosed (e.g. chimneys) for the contents to be seen. Listen for calls of begging young and watch for food deliveries to upgrade to Confirmed. If neither is seen or heard, the birds may still be on eggs – return a few days later if you can. **Do not approach nests to check contents!**
- B** Building a nest by a wren, or excavation of holes by woodpeckers. Wrens often build “dummy” nests – a series of nests of which none may be used for raising young. Don't despair - finding a wren nest means you are very close

to a Confirmation. It is usually easy to Confirm wrens with CF. Woodpeckers will excavate roost holes as well as nest holes – but roost holes are usually excavated by one sex – nest holes usually worked on by the pair. Woodpeckers are often upgraded with CF or NY.

**CONFIRMED:** (can be used outside of Safe Dates)

- ON** Occupied nest: adult seen sitting on nest and likely incubating eggs or brooding hatchlings. No eggs or young seen. **Do not approach nests to check contents!**
- CN** Carrying nesting material, such as hair, sticks, grass, bark, etc. Don't use for wrens, crows, Monk Parakeet, or for colonial species for which you never find a colony (e.g. Great Blue Heron). OK for woodpeckers.
- NB** Nest building at the actual nest-site. Don't use for wrens - attempt to upgrade wrens with CF or by the noisy NY. Don't use for Monk Parakeet. **Do not approach nests to check contents!**
- PE** Physiologic evidence of breeding (e.g. highly vascularized brood patch or egg in oviduct, based on bird in hand.). To be used by bird banders.
- DD** Distraction display or injury feigning. Look for this in Killdeer and in many other species - other shorebirds, rails, some ducks, some warblers. If you are causing the display, please back away.
- UN** Used nest or eggshells found. Caution: these must be carefully identified if they are to be accepted.
- PY** Precocial young. Flightless precocial young, restricted to the natal area by dependence on adults or limited mobility. Precocial young are able to move about within hours of hatching - think “fuzzy”, but walking – think young ducks or shorebirds. (This is the opposite of altricial young – think young American Robin – fairly helpless and restricted to the nest for many days before fledging. For nest-dependent altricial young use NY.)
- FL** Recently fledged young (either precocial or altricial) incapable of sustained flight, restricted to natal area by dependence on adults or limited mobility.
- CF** Carrying food: adult carrying food for the young. Don't use for hawks, crows, Common Raven, raptors, gulls or terns – hawks carry food all of the time, and crows conceal food on the way to the nest .
- FY** Adult feeding recently fledged young. An adult bird feeding Brown-headed Cowbird young confirms both the host species and the cowbird. Gulls and terns will feed fledged young for extended periods, often far from the breeding colony and should be excluded if they are no longer in a colony.
- FS** Adult carrying fecal sac. Fecal sacs, white membranous pellets excreted by the young, are usually carried from the nest then dropped. Occasionally birds drop them in the same place, and they form a spattered whitewash on cars, pavement, decks etc. Watching that “drop spot” for a few minutes may reveal a Confirmation. Sometimes they take them and “wash” them in pools (honest!).
- NE** Nest with egg(s). **Do not approach nests to check contents!** If you have the time to watch a bird through binoculars or with a scope, watch as the incubating bird turns the eggs in the nest. Many birds remove eggshells, and you'll find them on the ground sometimes - they can be difficult to identify! A nest containing Brown-headed Cowbird eggs confirms both the host species and the cowbird.
- NY** Nest with young seen or heard. A frequently used code - young are usually noisy when parents return with food. Learn the sounds of begging young birds, and let that direct you to the general area of the nest where you can identify the parents. These young are altricial young – think young American Robin – fairly helpless and restricted to the nest for many days or weeks after hatching. For those species where the young can walk soon after hatching (e.g. grouse, shorebirds, turkeys) use PY if you see young.