Finding breeding evidence for the various bird species in Essex County, Mass.

(Handout for 3/28/09 meeting of Atlas 2 volunteers)

First, some goals for this year and for the project. These are based on goals set in the Franklin/Hampshire Counties region, and are not definitive, but reasonable for Essex:

1. Aim for at least 70 species in each block you are working in. They don't all have to be from your own efforts, but from the combined efforts of all volunteers working the block. (The "block results" are cumulative totals from all contributors.)

2. Aim for either 50% of them confirmed, or, alternatively, 70% probable (PR) and confirmed (CO) combined. In other words, don't be satisfied with possible (PO). Several PR codes can be relatively easy to obtain with a modicum of observation.

3. To meet these goals, don't keep going back to the same places all the time. Sample all habitats in the block. The more habitats, the more species.

Species tips:

Waterfowl, chickens: Always look for broods, the easiest way to confirm. A hen calling softly is likely calling to young, so be patient. With **wood ducks** and **hooded mergs**, a hen may be calling to the young to jump out of the cavity nest.

P-b grebes, bitterns, rails, moorhens: CO is tough unless you see broods in the marshes. The best way to find them is by canoe or kayak if you have one. I have gotten absurdly close to Va. rails in my kayak; they don't seem to pay any attention to me. VIRAs will nest in salt marsh as well as fresh and *will feed their young*, precocial or not. A rail carrying food may be taking it to a chick. For hearing rails, Joan reminds us that the half-hour just before sunrise and after sunset are the best times to hear rails.

Cormorants, gulls, eiders, and herons: They nest ONLY on offshore islands except for great blue and green herons and, possibly, BCNHs. Except for those species they should be no more than OB in your block (and only within safe dates).

Great blue heron: It's either PO or CO, nothing in between. For all we know there could be colonies in half our blocks by now. Check every beaver swamp, because that's where most of them are. Some "colonies" are only one or two nests, so look carefully. Also use a scope if possible and scan every single nest for horned owls, February-May.

Green heron: Secretive solo nesters; no colonies. Watch where pairs fly and try to figure out where they're going. Nest will be in some copse, even a small one, as in birch thickets in the dunes or around a pond. It is all sticks and tiny for the size of the bird; eggs can be seen through the bottom, as with MODO nests.

Turkey vulture: One of the hardest species to confirm. They favor small caves, or crevices among boulders in ledge habitat. That's where I found one in Boxford. Also check hollow trees (standing or fallen) and the ruins of deserted old buildings. TVs coming to the ground in the dense forest may be approaching the nest, which they do very carefully. Short a CO we have to be content with PO, since PR is not very realistic unless you see them go to the ground in one place repeatedly over time, in which case N would be appropriate.

Osprey: Since there is a housing (platform) shortage, look on every duck blind, since they are now using them. They also use channel markers and power poles.

Northern harrier, short-eared owl: Chances are slim, but watch for them in wet meadows, marshes, and fields within safe dates. Both nest on the ground, so staking out a place they frequent may pay off; harriers nested at the drier north end of the North Pool on Plum Island in 01-02, possibly since. Harriers engage in food transfers from male to female in flight; not sure about SEOWs. Food transfers are virtual proof of nesting (CF), but watch where the female goes with it even if you can't get to the spot (which is just as well).

Other hawks and owls: Look for nests before leaf-out and check every stick nest for a sitting hawk or owl. The latter (**horned and long-eared owls**) use old hawk or crow nests, while **barred, screech, and saw-wet** prefer cavities; barred will also use the exposed tops of broken-off snags, so check those too. Keep checking all large woodpecker holes and rapping on those hollow trees; maybe a small owl will pop out to see who's knocking. **Sharpshins and coops** are getting more used to humans and are now often nesting near houses. Learn their alarm notes, which are the best clues to nesting. For all 3 **Accipiters** it's some form of kek-kek-kek, though blue jays imitate these calls often. Female **goshawks** will attack you if you're near the nest, so it's a matter of them finding you. **Sharpshins** prefer conifer groves; the other two are less picky but often use white pines. **Redtails** always nest on the edge between forest and field or marsh; **red-shoulders and broadwings** are woodland nesters, less common and very hard to find in this county. Vocalizations are the best clues to their presence. **Kestrels** are crashing but easier to find since they use boxes or cavities, sometimes in buildings, in open places. Just finding and watching a pair should lead to a nest or young. **Peregrines** use cliffs (Saugus) or ledges on buildings (downtown Lawrence and maybe Gloucester this year). **Merlins** have now nested in Massachusetts (on the Vineyard!), so be alert for them if the area is coniferous. Confirm merlins and you go to heaven.

Killdeer: Fields or marshes of any kind, preferably with a gravelly substrate. One of the easiest birds to confirm, since their broken-wing act means you are near eggs or young.

Willet, terns: Willets are all over the salt marshes now, a few even nesting in the Crane Beach dunes. They often nest with common terns on salt-marsh islands to take advantage of the tern security system of loud alarms and attacks on predators. They will bring their

young to salt pans to feed. (Common terns are formally surveyed by boat every year and least terns are managed and protected, so no need to spend time on them.)

Spotted sandpiper: Another tough one. The one nest I found was in a flat part of an active gravel pit that was just starting to grow vegetation; the sitting male flushed from it. They can also hide the nest in vegetation. The easier way is to see chicks, but it takes some effort. Beware of full-grown juveniles, which can fly well and may have come from another block (or state).

Woodcock: Courtship is a given as soon as you see the sky dance, and C should be obtained in almost every block. Finding nests is very hard; again, the best way to confirm is to see young, which should be looked for when an adult flushes but flies only a few yards. It may be a mother trying to protect her tiny young, which freeze where they are, like turkeys, and are wicked hard to find. Be careful where you step! The best habitat is moist ground in cut-over areas with small stands of birch or aspen with a floor of dead leaves. Very disturbed land can harbor nesting woodcocks!

Pigeons, starlings, and house sparrows: Just keep looking at barns and other likely buildings until you have all three confirmed. All three like secluded areas like cavities and protected ledges or eaves. **Starlings** will nest behind boarded-up windows; **house sparrows** sometimes use red-cedars and build huge grassy nests in them. The nests of all three species can't often be seen, so look for birds carrying nest material or food (except pigeons, which regurgitate food). **Pigeons** are actually the hardest of the three to confirm, but you don't graduate until you confirm them.

Mourning dove: Fairly easy to find nests, but CN will be easier. Oddly, I don't often see obvious fledglings, since they mature quickly. They will nest in or on anything, including ledges of buildings, usually under 20 feet. If you find a nest the sitting bird will sit there and look at you if you don't get too close.

Cuckoos: I have never found a cuckoo nest in my life, so I'm not much help here. I know they like thickets and don't nest very high, so at least they aren't in treetops. One of the toughest birds to confirm, especially as there aren't very many of them. If you find one of these nests, you graduate cum laude even if you don't find anything else. It's no doubt easier, as with many birds, to confirm with CN, CF, FY, or FL.

Nightjars: I've never seen nests of these two either. **Whips**, which have seriously declined, nest on the ground in the forest, but good luck since you'd have to practically step on one for it to flush (like woodcock). The last known **nighthawk** nests were on flat gravel rooftops, which seem to be disappearing. We may not confirm any in this county.

Chimney Swift: To quote from Joan: "3 swifts together doing a rocking, wing-held-up flight = courtship. (They do not nest communally, but in pairs in separate chimneys or hollows.)" To confirm, watch chimneys where swifts are flying. If they go into a given chimney multiple times, it's ON. Best is to see them take a stick in (NB); you won't ever see food in their mouths and will probably never be able to tell young from adults. If you

ever get a chance to go onto a roof where they are nesting and look down the chimney, prepare to be deafened by the begging cries of the nestlings, which are amplified by the tunnel effect and are incredibly loud.

R-t hummingbird: Not easy. The female works alone for the whole cycle and it's either watch where she goes or get lucky and find a nest in or near your yard. The lichen-based nest looks like a bump on the branch and will be well out from the trunk at any height from low to high. The best chance to confirm is to see a female go to the same spot multiple times when she is feeding young, which should reveal the nest. She will be feeding them insects, so food may be visible in her bill.

Belted kingfisher: Another tough one, in this case because they may catch fish a mile or more from the nest, and crossing block lines is always an issue. But one carrying a fish is on its way to feed young either in or out of the nest, so note which direction it flies and check the map to see if it's flying toward a nearby block line. But don't let the doubt keep you from confirming it in one block or the other—it's nesting in one of them! To find a nest, check any banks or dirt piles for large holes the size of knotholes. I've found two nests at my local DPW, where dirt piles abound. They don't have to be abandoned, overgrown piles to harbor kingfishers, though that helps. The nest won't necessarily be near water, either. The main criterion for nesting is a proper bank or dirt pile.

Woodpeckers and other cavity nesters: Among the easiest birds to confirm because they use cavities. Nests in the woods can be hard to find, but those in **beaver swamps** are much easier because they're in the open, and the birds generally fly directly to them without pausing once they have enough food to deliver. The smaller species can be confirmed with CF, but flickers and pileateds regurgitate food and you probably won't see it in their bills. Be careful with NB because they excavate roost holes as well as nest holes, but in safe dates there is less doubt. Spend a lot of time watching beaver swamps—in an hour or two you might confirm several woodpeckers, **crested flycatchers**, **bluebirds, tree swallows, titmice, white nuts, and chickadees** without even moving, not to mention duck broods you may see by remaining still. That's about as much fun as it gets. **Eastern kingbirds** often nest in the open in beaver swamps as well, and **brown creepers** nest behind loose bark on dead trees, of which there is an abundance at such places. **Warbling vireos** and **gnatcatchers** are two more species likely to nest in beaver swamps.

Flycatchers: See under woodpeckers for **crested flycatcher**, the only cavity nester among them. **Pewees** are tough, nesting at some height in deep woods, but always way out on a branch, often a dead branch, where the small nest will be visible if you see the bird fly to it with food. (Then again, seeing a bird carrying food is all you need with most species.) **Alders and willows** nest in shrubs in swamps or wet meadows, but the nests are hard to find because the adults are so wary. (Both nests have material hanging from the bottom.) Again, CN or CF are the ways to get them. **Least flys** nest in wooded areas near water but are drastically down in this county. (Learning Empid vocalizations is very important!) **Phoebes** are easy to confirm around buildings and need no explanation. For **kingbird** see under woodpeckers. This is another easy species to

confirm, though the nests can be as low as a couple feet in shrubs by streams or as high as the very top of a white pine. They also nest on power poles in the open. Versatile birds!

Vireos: See under woodpeckers for **warbling vireo**; these are streamside birds. Know that most if not all male vireos will *sing from the nest* while incubating (both sexes incubate), so following a song may reveal the nest and has worked for me often. **Red-eyed** is the other common nesting vireo but it takes work to find. It is always easier to simply see them carry nest material or food, or feeding young. The other three nesting species are much less common and take more work. **Yellow-throateds** nest at varying heights; the raspy song is your best clue to finding them. **Blue-headed** nests consistently under 20 feet and most nests are near eye-level. Again the song is your clue—learn how to distinguish this sweeter, slower song from the Red-eye's. **White-eyes** are rare this far north and nest in thick shrubs near the ground. They tend to be coastal here, but a few have been found inland. The song is unique—nothing like the others.

Blue jay: Very secretive nesters. Most nests I have found have been on a crotch beside the trunk of a skinny pine. Key in on such trees for this species and look up and down the trunk. If you see a stick nest, it's almost certainly a jay's—nothing like a robin's. But they don't often go to the nest if you are around. *Notes after 3/28/09 workshop*. I would be careful using CF for jays. I'm not convinced they don't carry food any time of year like crows do. I would watch where the jay goes with the food. if it appears to go to a likely nest site, like a skinny white pine near the trunk, you're probably ok using CF (unless you see it actually land on a nest, which would make it either ON or NY). If it lands somewhere and eats the food, forget it.

Crows: Remember that CF doesn't work for these three species either because they carry food all year. American crows hide their nests well near the top of the tree, usually a conifer like white pine. They are wary of going to the nest with humans around, and tend to carry food in the crop when taking it to young, so CF almost means they are NOT taking food to young. CN and FY are the best ways to confirm, because once the young are fledged you can see the parents feeding them on the ground all over the place. **Fish crows** are rarer here and much harder to confirm—they also build high in conifers and you have the additional problem of having to hear them to be sure they're fish crows. **Ravens** are on the march and prefer cliffs (as in quarries), tall structures like cell towers, and large white pines in the absence of something better. CN is the way to go unless you get lucky and find a family.

Horned lark: One of the real prizes in this county. They nest on open ground, but there aren't many around here and most nesters are probably along the coast. Their flight song is a clue, and they start as early as March. I have had no luck with them in many years.

Swallows: Purple martins are almost gone; the Plum Island colonies are confirmed and if you find any other colonies in the county let us all know! See under woodpeckers for **tree swallows**, easy to confirm in their cavities in beaver swamps or in the many boxes set out for them. **Barn swallows** are also easy to confirm since they nest on buildings everywhere, especially barns and sheds. Don't come back without 'em. The other three

are more of a test. **Rough-wings** nest in holes in dirt banks or in dry drainpipes sticking out of masonry walls, or even in crevices in seaside rock retaining walls. Downtown water courses are good places to look for them, especially if abandoned pipes protrude from the rock walls lining the river. Their holes in dirt banks are small like those of bank swallows, but the birds nest singly, not in colonies. **Bank swallows** nest in colonies in sand banks. Crane Beach is a good place to study them; inland sand pits are less common now and get disturbed often enough to discourage the swallows. **Cliff swallows** are also colonial, but much decreased here from the old days. In New England they mostly use eaves of buildings; out west they nest under most of the highway bridges, and do so here at Rocks Bridge from W. Newbury to Haverhill and under either or both of the bridges over the Parker River (Rts. 1 and 1A). News of new colonies is highly sought after!

Parids, sittids, and creepers: See under woodpeckers. All cavity nesters (creepers behind loose bark) and rather easy to find except **red-breasted nuthatches**, which are irregular nesters in this county. Beaver swamps are the best bet, but they will use small cavities anywhere in conifer groves such as red pines. Hearing them is your best clue—then just watch where they go, though it is a challenge just to keep them in sight.

Wrens: Carolina and house wrens will nest in anything, natural or artificial. They can often be confirmed in your yard or garage or shed, and house wrens especially like nest boxes. **Marsh wrens** are cattail nesters, males building many dummy nests and females lining the chosen nest and using it. From a canoe or kayak look for masses of dead grass woven into globular nests among cattails 3 or 4 feet off the water, or look for them from the shore.

Winter wrens, both waterthrushes, and phoebes: These four species have in common a propensity to nest in upturned tree roots. Make a habit of keying in on these root systems in swamps and beaver ponds, and if any of these birds enter more than once, they are probably nesting. The nest may be hidden inside the roots or camouflaged on the face of the vertical wall, as winter wren nests at Crooked Pond and Lynnfield last year. Again, seeing them carrying something or feeding young is easier than finding a nest.

Golden-crowned kinglet: This is a rare nester in Essex County but does sometimes nest in Norway spruces at any height. One pair in 1990 nested in the lowest branch of one, right behind the backstop of a softball field! The birds are tough to find in spring, however, and unless you know the high-pitched song you won't know they're there. (See under woodpeckers for **b-g gnatcatcher**, which will nest sometimes in dead trees.)

Thrushes and ovenbirds: Veeries and hermit thrushes nest on the ground, often right beside the trail, and that is how I have found their nests. A brown bird flushing from ground cover beside a trail will be a veery, hermit thrush, or **ovenbird**. Forget the bird; look at the spot it flushed from and you may find the nest, but don't tramp around off the trail because you will leave a scent that may attract predators (chipmunks or squirrels) to the nest. You can always retreat and wait at some distance for the bird to return so you can know which species flushed. Wait long enough and you may see it carry food unless it is still incubating. **Wood thrushes** nest in saplings from 10-25 feet or so off the

ground. The nests are similar to **robin** nests but somewhat smaller and with less mud in the walls. Either can have much material dangling from the bottom, wood thrush nests showing this sloppiness routinely. The birds are very shy around the nest; look for other signs such as CN, CF, or FY. Robins, on the other hand, would nest on your head if you stood still long enough; otherwise they're nesting in your yard.

Mimic thrushes: Catbirds and mockingbirds like thick shrubs, especially multiflora rose where the nest is protected. These yard birds are fairly easy to confirm. **Brown thrashers** are another story. The are declining, especially inland, and are much harder to confirm. They nest on or near the ground in thick cover; the nest I found in 07 was in the middle of the emerging stems of a barberry next to a fence along a dirt road. Good luck unless you see one carrying something.

Cedar waxwing: One of the commonest and easiest to confirm of our songbirds. They nest in any tree or shrub at any height, and build big nests for the size of the bird. Watch pairs in June when they get started and you will soon see them carrying nest material.

Warblers nesting on the ground: These are **blue- and golden-winged, Nashville, black-and-white, worm-eating** (no county nest records), **ovenbird, northern and Louisiana waterthrushes, common yellowthroat, and Canada**. All are tough because ground-nesting birds are super-secretive around the nest for obvious reasons. Ovenbirds will give distraction displays and are covered above for nesting beside trails. The only other common one is COYE; black & white and blue-winged are less common and the others all rare. Your best chance with any of these is the usual carrying of something or seeing fledglings.

Warblers nesting in low vegetation: These are **yellow, chestnut-sided, black-throated blue** (no county nest records), **prairie, redstart, and chat** (extirpated as a breeding bird in most of New England). Redstarts will nest at varying heights to about 20 feet in saplings, while the rest nest in low shrubs. The yellow warbler is the only common one in this group; CSWAs and prairies have declined in the county and redstarts are rather rare inland now. Look for any of them along powerlines, the last holdout for prairie warblers around here. CSWAs like thorny blackberry shrubs. Yellow warbler nests are often right beside the trail (or road!) at knee or waist height and are silvery for all the silky material in them. This bird is not hard to confirm, but the others will be difficult. As usual, look for CN, CF, or FY.

Warblers nesting in trees: These are **yellow-rumped, black-throated green, Blackburnian, and pine**. The first and third are rare nesters in this county but might be found in areas of hemlocks or mixed conifers. I have once or twice seen Blackburnians carrying nest material at Crooked Pond, but nest records of yellow-rumps are very rare here. BTGWs are declining but still regular in mixed forests; they and the dramatically increasing pine warblers usually nest high in pines, or hemlocks in the case of BTGs. Thus nests are absurdly hard to find and your chances lie with the other CO codes. One of these warblers on the ground may be collecting nest material, so watch the females very carefully; both sexes feed the young.

*** N.B.** Joan offers another good clue to nesting warblers and songbirds in general: the first birds back are often the breeders, the migrants to parts farther north usually passing through later. So start looking for nesting evidence as soon as the first birds arrive. *

Scarlet tanager: They prefer oaks but will nest in conifers too. They are fairly common in mixed forests (i.e., both conifers and deciduous trees, which is most of the county), and when you see pairs you may see copulation or nest-building. Nests are at medium heights, say 20-50 feet. Learn the robin-like song well, because you will hear many of them and have many chances to confirm, though it will take patience.

Eastern towhee: Another ground-nester, declining. Use the same techniques as for the other ground-nesters. Seeing young is the easiest way to confirm, because the young vocalize as much as the parents and are spotted, making them stand out from the adults.

Sparrows: The only species nesting here are **chipping, field, savannah, saltmarsh sharp-tailed, seaside, song, swamp**, and possibly **white-throated**. Anything else would be extremely rare (vesper, grasshopper, Henslow's, junco). The two salt-marsh species are of course only in salt marshes and need special effort; we've done well with sharp-tailed but not yet with seaside. **Chipping sparrows** will nest in your yard or in the middle of the deepest woods, usually in white pines but sometimes in saplings around buildings such as power or water-treatment plants. Watch for them on the ground gathering nest material or carrying it into trees. Field and savannah sparrows are grassland nesters, **savannahs** on the ground in hayfields, **field sparrows** in shrubby fields or along powerlines, on the ground under thick cover or in low vegetation. I have found the latter nesting in or under ground-juniper, a common plant along powerlines. **Song and swamp sparrows** nest in or on the edges of swamps and marshes, the song sparrow being more versatile and not always depending on wetlands. Both nest on the ground or close to it. Nests of all these sparrows are tough to find, so look for the other clues. **White-throats** are very rare nesters in this county; they would be in the woods or on the edge of it, with the nest on the ground.

Grosbeaks and buntings: Cardinals are yard birds and should be easy to confirm as they nest in shrubs, often outside windows. **Rose-breasted grosbeaks** are less common and harder to confirm, but they nest at medium heights in open woodlands, often in orchards or disturbed areas where the woods are coming back. The most common way I have confirmed them is by seeing them carrying material or building the nest. The latter is just a matter of watching where they go with the material. **Indigo buntings** are not as hard to confirm as they may seem, since they nest in low shrubs or stems like spiraea, blackberry, or goldenrod. Another case of watching where they go when in pairs, but they are wary and it will take patience.

Blackbirds: If you haven't confirmed **red-wings and grackles** yet, you aren't paying attention. They carry nest material and food all over the marshes in plain sight. Their nests are often visible from a distance, as they are large and out in the open in cattails and low shrubs. Failing that, you can't miss them feeding their noisy young. **Cowbirds** are

easy too, since so many birds are feeding their adopted young. **Eastern meadowlarks** have a different lifestyle, nesting on the ground in hayfields. Best bet here is to find a singing male (if any are left) and watch for CN or CF. Don't forget the airport if there is one in your block. **Bobolinks** may be there too, and are much more numerous than meadowlarks. They try to nest in many of the county's hayfields and are rather easily seen carrying food to young. **Baltimore oriole** nests are absurdly easy to recognize and UN is a good way to confirm these common birds. **Orchard orioles** are increasing in New England, especially in the coastal towns. Their nests are balls of grass, rounder than the Baltimore's pendulous nest. It's helpful to learn their complex song to be alerted to their presence, as they are less easy to confirm.

Finches: Purple finches are declining and seem more numerous on the barrier islands, where they can nest anywhere. My experience with them is limited to nests in conifers: an arborvitae in Ipswich and a pine in Georgetown. **House finches** nest on or around buildings, often in blue spruces. They should not present a problem where they are present. The songs of both species are essential to know. **Goldfinches** nest quite late, unlike other finches. They often use saplings in open areas (sometimes low shrubs), but finding the nests is easier in winter when the leaves are gone. This is another good UN species, but watching pairs in summer should pay off with patience. They will eventually show you the nest if you are motionless. You may see one from your house.

Pine siskins should be nesting in many towns as we speak, probably in conifers, as the result of their impressive numbers this winter. Look for them courting and building *now*.

Notes from 3/28/09 workshop. We talked about siskins quite a bit, as folks around the state are seeing courtship and in a few cases nest-buiding. Many of us may end up seeing NB, but meanwhile i'm pinching the brief courtship narrative from the BNA account (William Dawson, author):

Pair Bond
Courtship Displays. Pair bonds appear established in prebreeding flocks. Courting male circles above treetops, singing and rapidly fluttering wings; produces spectacular effect on sunny days as spread wings and tail turn brilliant gold (Messineo 1985). This display is presumably the "butterfly flight" (Newton 1973) As female constructs nest, both members of pair call frequently; male accompanies her during construction process and sings (Simpson 1912). Close association of male during nest-building may represent mate-guarding, as suggested for American Goldfinch (Middleton 1993).

Copulation. Copulation completes a sequence of events that includes singing (and display flights) by male, followed by pursuit of female, courtship feeding, contests with other males, and, finally, female's construction of nest (Harlow 1951). Pursuit also may immediately precede copulation. Copulation solicited by female's uttering soft calls while crouching and fluttering tail and wings in begging posture. One male hovered over female in kestrel-like fashion as she crouched on branch. This behavior may

represent the "moth flight" displayed by other carduelines (Newton 1973). Before contact, female left branch and flew toward male, then departed with him in pursuit (Weaver and West 1943).

Don't worry about the citations, since you can't know what they are without being on the BNA site, but at least you now have an idea what courtship activity to look for. CN/NB is of course more desirable, but we'll be happy with C where we can't confirm. We may not get the chance the next two years.

Jim Berry, Atlas Coordinator for Essex County