

Earth Sanctuary

Breeding Bird Survey May 5-July 19, 2003

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Birds Identified as Breeding (using criteria established by the Audubon Society)

Canada Goose
Wood Duck
Green-winged Teal
Mallard
Cinnamon Teal
Gadwall
Hooded Merganser
Osprey
Band-tailed Pigeon
Great Horned Owl
Barred Owl
Rufous Hummingbird
Downy Woodpecker
Hairy Woodpecker
Northern Flicker
Olive-sided Flycatcher
Western Wood Pewee
Willow flycatcher
Pacific Slope Flycatcher
Stellars Jay
Tree Swallow
Violet Green Swallow
Barn Swallow
Black-capped Chickadee
Chestnut-backed Chickadee
Brown Creeper
Red-breasted Nuthatch
Bewick's Wren
Winter Wren
Golden-crowned Kinglet
Swainson's Thrush
American Robin
European Starling
Cedar Waxwing
Orange-crowned Warbler
Yellow Warbler

Yellow-rumped Warbler
Common Yellowthroat
Wilson's Warbler
Western Tanager
Spotted Towhee
Song Sparrow
White-crowned Sparrow
Dark-eyed Junco
Black-headed Grosbeak
Red-winged Blackbird
Brown-headed Cowbird
House Finch
Pine Siskin
American Goldfinch

Birds Probably Breeding (we'll look for these next year)

Pied-billed Grebe
Virginia Rail
Sora
Mourning Dove
Red-breasted Sapsucker
Pileated Woodpecker
Hutton's Vireo
Warbling Vireo
Bushtit
Red Crossbill

Birds Seen on the Property but Nesting Elsewhere

Great Blue Heron
Bald Eagle
Belted Kingfisher
American Crow
Common Raven
Rough-winged Swallow

Breeding Activity on the Ponds

We focused a lot of our attention to the activity on the ponds themselves since this is the unique part of Earth Sanctuary's habitat and the part that makes it a "habitat of local importance". The ponds, particularly the Central pond, is extremely rich habitat for breeding ducks. It is quite secluded and the surrounding forest is prime nesting territory for wood ducks and hooded mergansers and the vegetation on the shore and in the islands is home to Mallards, Green-winged Teals, Cinnamon Teals and Gadwalls. We saw many courting pairs of all of these species on the West and Central ponds in early May.

Incubation time for most of the duck species averages around 28 days. Babies began appearing at the beginning of May (Mallards) and continued to appear as late as July 19th (Cinnamon Teal). The following is a table of each species and the dates and numbers of broods and young at hatching.

Duck Species	Number of Broods	Dates Hatched	Approx. # Young Hatched
Mallard	2	May 5 th , June 10 th	14
Hooded Merganser*	3-4	May 21 st , June 27 th	14
Wood Duck	3	May 21 st , June 9 th , June 27 th	21
Green-winged Teal	1	June 28 th	5
Cinnamon Teal	1	July 19 th	4

*Hooded Mergansers tend to group their babies in creches with several females watching over the whole group so it's difficult to tell exactly how many were hatched when).

At the high point of baby ducks in mid to late June there were approximately 35 baby ducks feeding and swimming on the central and west ponds. It looked and felt like a big playground for ducklings with attentive mamas swimming close by! Attrition from predators took its toll (predators on baby ducks include eagles, owls, large mouth bass, bullfrogs, raccoons, and river otters). It's difficult to count juvenile birds once they get larger and are more independent (like teenagers!) but there seemed to be a good survival rate. At the end of the summer we were still seeing juveniles of all of the nesting species. Young ducks generally fledge 6-8 weeks after hatching so this means that juveniles are present on the ponds from the beginning of May (Mallards) until mid to late August (Teals and others). And even after fledging they still will be hanging around home (again like teenagers!).

The ponds, particularly the Central pond, are wonderful habitat for a variety of bird species. For the breeding ducks they offer lots of good feeding as well as

islands for the ground nesting species. The many logs offer perches for the ducks to get out of the water and preen and warm up and still be safe from ground predators. This is very important for ducklings in particular. Many other birds feed on the ponds. During May and June large numbers of Swallows (all four species) and Cedar Waxwings are catching insects over the water. Kingfishers are successfully fishing and Herons are feeding as well. Tree Swallows are nesting in the dead trees standing in the pond (they require nesting cavities in trees over water). And undoubtedly many bats are catching insects over the water at night.

Recommendations

We have a number of recommendations for guidelines for human activity at Earth Sanctuary. They focus primarily around numbers of people, times of year and signage.

Time of Year:

Clearly spring is the time when breeding activity is occurring and the birds are most sensitive to human intrusion. The onset of breeding activity varies with the species. For example, owls will start nesting in February, the resident song birds (e.g. Song Sparrows, Chickadees, Juncos, etc.) will begin breeding activity in April, and the migratory song birds (e.g. Warblers, Tanagers, Flycatchers, Swainsons Thrush) will be arriving back in mid May (May 21st is Migratory Bird Day) and be nesting in June. Since there is ample forest habitat these birds are not likely to be adversely affected by people walking the trails, working, etc.

The ducks on the ponds are most sensitive to disruptive human activity. They will begin laying eggs in late March (Mallards) and continue through June (Teals). Ducklings will on the ponds from May through August. Disturbance during these times causes the birds to expend energy in the fight or flight response which is then not available for breeding activity. Disturbance during egg laying may cause the clutch to be abandoned or more vulnerable to predators.

Time of Year and Numbers of People and Signage:

Mid April through June

1. Limit groups of people touring Earth Sanctuary to 10 people or less.
2. Post guidelines at the entrance to the Dolmen and Labyrinth trails asking people to talk quietly and in whispers, and move gently and slowly in small groups.
3. Identify the entry to these trails in some way (perhaps with a ribbon that people have to step over) so that people are sure to notice the sign with the guidelines.
4. Close off (with a ribbon or rope) the viewpoint onto the Central pond by the Labyrinth with a sign saying why we're asking people not to go there.
5. Make sure the access road stays closed.

6. Have group leaders who will model this behavior.

March to mid April and July and August

1. Larger groups of people (20-30) in the Cottonwood Stone Circle would be fine but again there should be only small groups walking down the trails to the Dolmen or the Labyrinth since these areas are exposed.
2. Keep the guidelines and signage in place during these times as well.
3. If there is a scheduled tour it should be limited to 10 people during this period as well since they will want to visit the Dolmen and Labyrinth.

For the rest of the year (**September through February**) larger groups could be accommodated. There are many ducks who winter on the ponds (e.g. Ring-necked Ducks and Buffleheads) and this winter we are going to try to get a more accurate picture of wintering bird activity so that we can make some recommendations for this period in the future.

In general the more screening vegetation that is left along the shore the better it will be for the birds. There seems to be a natural human tendency to want to go out onto viewpoints or to clear away brush and weeds (to “park it out”) but this takes away habitat for birds and makes them more vulnerable. This might be something to think about along the dolmen trail and other places where it has been heavily mulched almost to the waters edge.

If maintenance work needs to happen during the spring breeding season workers should take care to work quietly and be aware of their impact on the birds.

Osprey trail

The osprey trail should be closed from April through July. This year the juvenile osprey did not fledge until late July and it was clear that any groups of people (even small groups) did disturb the birds when we walked underneath. It would be good to keep the blackberry screen as thick as possible along this portion of the trail to discourage human activity on the shore at this point. A good place to close the Fen trail would be at the Fen viewing spot. There should be good signage (with a map) at the Fen viewing spot and also at the beginning of the Fen trail telling people that the trail will be closed and how they can walk to the Cottonwood Stone Circle if they wish to.

Miscellaneous:

The open area behind the house by Emil Road is great habitat for some of the small birds (Flycatchers, Tanagers, Towhees, Siskins, Finches, Kinglets, etc.). We probably would have seen California Quail except for the semi-feral cats that seem to live at or close to the Emil Road house. They will keep the quail away. We did find a juvenile robin with a damaged wing that was unable to fly which was most likely the result of a cat. Perhaps the cats could be taken to WAIF?

Conclusions:

We really enjoyed doing this survey. It's the beginning of a story of life on the ponds and we look forward to researching the next chapters!