

Notes based on Joe Morlan's Ornithology class lecture March 18<sup>th</sup>, 2009.  
Joe Morlan is not responsible for these notes, any errors or omissions in them are mine.

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**Downy Woodpecker** is adapted to disturbed habitats, it does not need to have a big forest the way most of the other woodpeckers do.

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## Owls

Two families:

**Tytonidae**, the Barn Owls and Bay Owls

**Strigidae**, all other owls, called "typical owls"

Slight differences in their skeletons and in the pectinations on their claws (tooth-like projections similar to the teeth of a comb that Tytonidae have on their middle claw).

Essentially large headed birds with fixed, forward facing eyes. The eyes are cylindrical in shape, they cannot move the eyes in their sockets, they have to turn their heads to where they are looking. Owls have 16 cervical vertebrae (all mammals have 7, in birds the number is not fixed, swans have 26). They can turn their heads 270° around. The big eyes and the fact that they face in the same direction lets them capture more light, a brighter image is of advantage for these nocturnal animals.

All owls have a ridge of feathers that surrounds the face, the facial disc, its function is claimed to be focusing sound. Owls have very keen hearing and are able to triangulate on the sounds of prey that they cannot even see. Barn Owls can nail a mouse in their cage in pitch black. The Great Gray Owl can find rodents a foot or more underneath the snow by the sounds they make. The ears are asymmetric, often one larger than the other, shapes different. The greater asymmetries of their ears enable owls not just to determine the horizontal direction of a sound but also the vertical direction, how high it is. Owls have external ear flaps buried underneath their feathers.

Most owls are rodent eaters, most mammals are more active at night than during the daytime. Crows and ravens like to harass owls.

## Barn Owl

There is a new book on owls of the world which makes some taxonomic recommendations, one is to split the Barn Owl into nine separate species.

### OCCURRENCE

Widespread species, pretty much found throughout the world, including CA.

Declined in the east, in the Appalachians there is now hardly any place where Barn Owls occur. It is unclear why. In the west they are still reasonably common.

Not a common bird along the immediate coast but in the fall and winter large numbers sometimes show up in certain places like Pt Reyes. In other years there is hardly any. In SF the bird is quite scarce. One used to roost by Mallard Lake in Golden Gate Park, but it is long gone. There was an attempt by the park department to control rodents by introducing Barn Owls into GG Park. They put up a whole lot of nest boxes and released something like 10 Barn Owls, all of which flew away and have never been seen since. They are always pretty common in the Central Valley. Grizzly Island is a good place to see them, they nest right near the entrance station.

Right along the road at the front of the park entrance at the Pt Reyes National Seashore at Bear Valley. At about five trees to the north at the entrance row, if you look up there, there is this deep crevice where there has been a split up in the tree, often you can see Barn Owls in there. When they come to places like Pt Reyes they can fall prey to Great Horned Owls.

There is a lot of them in the Central Valley and the Great Basin region, they tend to avoid the higher elevations though, more in the lowlands.

### **SOME NATURAL HISTORY**

Gets its name because it nests in open barns. Also nests in caves and in rock crevices and in holes in trees.

Eat mostly rodents.

Mostly seen gliding around low over meadows at night. We don't see them flying too much during the daytime.

Eruptive species. Most owls are, they feed on voles and lemmings, rodents that have a boom-bust population cycle. In order to take advantage of temporary abundances of rodents they use asynchronous hatching. Start to incubate immediately after laying the first egg. Chicks hatch on different days. If food is abundant they can raise up to six, seven babies. If food is scarce the last hatched babies will not survive, but at least one or a few oldest might be able to survive. If the rodent population crashes after a lot of babies are raised successfully they wander and try to find food elsewhere and we get incursions.

Get killed at the freeways, especially at certain seasons when the trucks are carrying grains and vegetables up Hwy 5. The stuff is spilling out on the freeway. The rodents come at night and run out there and gather the spilled food. The owls sit by the side of the road and wait for the rodents to come out, it is much easier to catch them on the open road. They land on their prey. What a Barn Owl usually does when it catches prey is to stay in place and forage right where it caught the rodent, interstate 5 in the middle of the night is not the safest place to be. It's not just Barn Owls. A lot of what we know about the owls in CA is based on roadkill.

### **FIELD MARKS**

Dark eyes (most owls have light eyes).

Facial disc heart shaped, white.

Polymorphic, occurs in a dark and a light morph.

Females are much more likely to be dark morph and males are much more likely to be light morph. That more or less holds true with other owls as well.

Dark morph all tawny on the underparts with lots of little polka dots, browner on the face.

Light morph: similar, but all white on the underparts.

The light morph birds are pretty common and they can be misidentified as Snowy Owls.

uff coloration with quite a bit of gray on the back and parts of the upper wing coverts.

Seems to be particularly top heavy and rather torpedo shaped with a blunt face and a tapered rear end.

Wings shorter than in Short-eared Owl, no buff patch on primaries, which are evenly barred like the secondaries and tail feathers.

## Short-eared Owl

### OCCURRENCE

Distributed over the northern hemisphere.

One of the more migratory of the owls.

The birds from Alaska all the way through northern Canada and the Maritime Provinces migrate during the winter months down into the US where they are fairly widespread.

In the Bay Area the Short-eared Owl is primarily a winter visitor and migrant. It is generally uncommon and has declined.

Have reportedly nested in the Livermore area, probably not every year, they are very marginal there. Most of the Short-eared Owls breeding in CA are in the Great Basin.

Wavecrest in Half Moon Bay has been a good area, mostly in the winter.

The entire situation is depending on rodent outbreaks, particularly outbreaks of the California Vole, *Microtus californicus*. That is a boom-bust rodent. Numerous raptors in the daytime feed on it, too, like Harriers and other kind of hawks, then they give way to Short-eared Owls and Barn Owls in the evening.

They have pretty much been decimated by the creation of park land. (Less rodents than e.g. on dumps.)

Favor marshes and wet meadows, particularly open areas without much in the way of trees. Although they will use trees they frequently will sit on the ground or on a low fence. They also nest on the ground unlike most other owls which nest up in trees.

A bird you are more likely to see in the daytime than most other owls. There are three owls which are somewhat diurnal: Short-eared, Burrowing, Pygmy. Burrowing most likely to be seen during the daytime. Short-eared is nocturnal and crepuscular (active at dawn and dusk). May be active during the middle of the day as well.

There can be a dozen of them out there and they are all sitting on the ground during the daytime, you are not going to see them, they just look like a lump in the grass. You see them when they fly.

### FIELD MARKS

Pretty big, about the same size as a Barn Owl.

Long wings in relation to its body size.

Large buff patch at the bases of the primaries.

Underside of wing: buff patch shows through, it is kind of whitish on the underwing.

Underwing coverts and body light buff colored.

Dark area in the wrist, looks like a black crescent on the underwing.

Usually two dark bands at the tips of the primaries.

Face largely white.

Eyes yellow in color unlike a Barn Owl, which has dark eyes.

Eyes surrounded by black feathers.

Underparts streaked on the chest, no barring at all, the only large owl that has that pattern of just plain linear streaking down the chest. Noticeably unstreaked on the belly.

Little teeny ear tufts give them the name. If you see the ear tufts at all chances are good it is not a Short-eared Owl. Individual variation in size, also, any of those owls with ear tufts has the ability to flatten them down and they frequently do so, particularly when they are relaxed.

Very distinctive flight, identifiable by the flight style. The wings go up quickly and then down slowly, very strange erratic sort of butterfly like flight. One time when Joe watched his impression was that the bird's body was moving up and down and the wings were staying still.

#### **DISTINGUISHING THEM FROM LONG-EARED OWLS**

Long-eared Owl looks a lot like a Short-eared Owl when it is flying around, people get them confused, for a number of reasons. Most of our experience with these birds is that if it is flying around it's a Short-eared Owl. If it is sitting in the middle of a willow thicket trying not to be seen it's a Long-eared Owl. People are not used to thinking that Long-eared Owls fly, particularly that they might be flying during the daytime. It is rare, but it does happen. When it happens the Long-eared Owls in flight are frequently thought to be Short-eared Owls. Long-eared Owl has shorter wings. But they both have this buffy patch on the upper surface of the wing. Long-eared Owl has multiple and narrower dark bars on the outer primaries and they are a little bit more blended. More important and easier to see is the pattern on the underparts. The Long-eared Owl is not only streaked on the underparts but it is also barred, so the entire underparts are essentially densely checkered, including all the way down to the belly. (Short-eared streaks only and the streaks confined to the breast, you see a dark chest becoming paler on the belly.) You should not identify these owls by the color of their facial disc, unless it's pale, because a Long-eared Owl will always have an orange face. On Long-eared Owls the dark around the eyes tends to go above and below the eye, giving the bird a very long faced look. Short-eared Owls have the dark sort of surrounding the eyes.

#### **VOCALIZATIONS**

Have a barking call. Also do a wing clap when they are flying over their territories.

## **Long-eared Owl**

#### **OCCURRENCE**

Status in CA a bit of an enigma. They used to be much more common than they are now. Grinnell's and Miller's surveys that go back to the 1930s and 40s had a lot of nest sites and specimens collected both in the mountains and along the coastal mountains. It appears that most of Grinnell's and Miller's nesting sites for Long-eared Owl now have Great Horned Owls in them, they seem to have displaced Long-eared Owls in CA over the last half century. There are still a few sites, mostly winter roosting sites. Easiest and most reliable place is Mercy Hot Springs on Little Panoche Road between interstate 5 and Panoche Valley. Small little run down motel and resort, they charge 5\$ a person to see the owls. A few Barn Owls and Great Horned Owls have been seen in the area as well. Another place is Anza Borrega State Park in San Diego county, a camp ground there used to have Long-eared Owls. Also when you start to get into the Great Basin you might encounter Long-eared Owls. When Long-eared Owls are around a lot of times they are in places that are relatively inaccessible.

Quite closely related to the Short-eared Owl. Habits quite different. Generally a bird of dense woodlands and forests but may be seen foraging over open meadows, often occurs in woodlots along the edges of fields. Forages almost strictly nocturnal. When perched in a tree they can compress their body (feathers) so they look really narrow and then the ear tufts make them look like a broken off branch. As you approach the owls often get thinner and longer.

#### **FIELD MARKS**

About the same size as a Short-eared Owl.

Ear tufts tend to stick up much longer than on Short-eared Owl.

The black around the eye is more on the inside and it often looks like it extends up and below, a long dark extension above the eye and below the eye gives it a long faced look.

Eyes more likely to be orange than in other owls.

Rather round or square looking head with an orange facial disc.

Underparts with bars, little anchor shaped markings that kind of cross the vertical streaks and form a blotchy or checkered pattern all through the underparts.

Same buffy wing patch as Short-eared shows in flight.

#### **JUVENILE**

Very dark facial disc, pale gray down, underparts can look barred, face kind of narrow across (juv Great Horned wider face, orange face, white bib).

#### **DISTINGUISHING THEM FROM GREAT HORNED OWLS**

The real confusion is between Long-eared and Great Horned. Great Horned is much more common throughout CA. Face of Long-eared from top to bottom about the same size as across through the eyes, almost square. On Great Horned Owl the face is substantially wider than it is high. Many people say the ear tufts are wider apart in Great Horned than in Long-eared, but that is not reliable, you can see Great Horned with the ear tufts pretty close together. Great Horned Owl has a white bib which is just below the face, missing on Long-eared. Below the chest, on the belly Great Horned Owls are barred only with no streaks across.

#### **VOCALIZATIONS**

Vocalization a very low pitched hooting. Some times Band-tailed Pigeons calling at dusk are confused with this.

## **Great Horned Owl**

#### **OCCURRENCE**

Much more common everywhere than Long-eared Owl.

Not found in Eurasia, there replaced by the Eagle Owl.

SF Bay Area probably has the densest population in the country, Oakland CBC frequently top in the nation with the number of Great Horned Owls.

They are all through residential areas, they are well adapted to changes in the environment.

Found at Pt Reyes quite regularly.

Sometimes when you are driving around early in the morning you can see them even in residential areas. Especially when they have been unsuccessful in hunting that night, they continue to hunt through the early morning.

### **SOME NATURAL HISTORY**

Forage on rodents. Also eat sea birds. One of the nests at the Fish Docks at Pt Reyes had a Common Murre that had fallen out of the nest of a Great Horned Owl and was hanging down by its neck from a branch underneath the nest. In general they will eat anything that is meat, especially skunks which they love.

Solitary creatures except during the nesting season when they occur in pairs.

Nesting season starts in November, they are frequently on the nest in December and have young by March. They are completely fearless around their nests and if you climb up there they will attack you. That is true of many owls, especially the larger owls.

Do not build their own nests but frequently use old nests of hawks and ravens, especially Red-tailed Hawk nests, also nest on cliff ledges. Never builds anything in terms of a nest. Lay their eggs opportunistically in the crotch of a tree.

Sexual size dimorphism with the female being bigger than the male.

Females sit on the nest all day and all night while incubating and are fed by the males. It is to their advantage to be large and fat. Another hypothesis says that by being different in size they may be partitioning the environment by eating different food and not directly competing with each other. The problem is that there is no evidence whatsoever that female hawks or owls take any substantially different prey from males.

When they are fledged they are still downy with the downs attached to the tips of the body feathers as they push the down out and then wearing off. You can sort of see through the down on the pattern that is underneath.

### **FIELD MARKS**

Face twice as wide as it is high

Belly barred without streaks

White bib

Ear tufts tend to be a little further apart, but when the bird gets excited they can be raised pretty steep and that can lead to confusion, when they are very alert the ear tufts point straight up and they are much closer to each other than you usually see.

In flight you are never going to see ear tufts on any owl, they are flattened back on the head.

Kind of a messed up blotchy chest and then just bars, no cross hatching on the belly

### **JUVENILE**

Juvenile wider face than Long-eared, orange face which can look fairly dark though so be careful about using face color, white bib

### **VOCALIZATIONS**

Males and females have slightly different vocalizations. Female higher pitched sound than male, the reverse of what you would suppose just due to body size. Peterson got it wrong and that got repeated in a lot of books. Vocalizations reasonably easy to imitate. If you are owling this is the owl you are most likely to hear and also the one you are most likely to be able to strike up a conversation with.