

HANDBOOK OF BIRDS
OF THE
WESTERN UNITED STATES

INCLUDING
THE GREAT PLAINS, GREAT BASIN, PACIFIC SLOPE, AND
LOWER RIO GRANDE VALLEY

BY

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WITH THIRTY-THREE FULL-PAGE PLATES BY
LOUIS AGASSIZ FUERTES, AND OVER SIX
HUNDRED CUTS IN THE TEXT

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istribution.—Breeds from Hudson and Alaska south throughout the States and Mexico; migrates to West Indies and northern South America.

Habit.—On the ground, in trees, on telegraph poles, cliffs, or deserted buildings, made of large sticks, brush, and debris, such as weeds and cornstalks, or with softer materials like seaweed, bark, and corn leaves. *Eggs:* usually varying greatly in size, color, and shape. Ground color generally white, sometimes so evenly overlaid as to appear buff or vinaceous, and usually heavily marked with brown and wine red.

Food.—Fish.

With almost gull-like persistency the fish hawk follows the rivers and streams, circling on crooked wings above the surface of the water or perching on the shore on the top of some old tree overlooking the rippling stream.

When a fish is sighted below the long wings are folded and with a meteor-like plunge the bird sinks into the water, imbedded in the long hooked talons in the back of the fish. With a few powerful strokes of the wings it is up again, carrying the fish with the talons planted one ahead of the other in its back, to make it go head first instead of sidewise, so that it will cut the air. With its prey the fish hawk makes for its nest, or if it has no nest flies to a branch where it can devour its quarry at leisure.

Every spring the fish hawks add a new layer to the old nest, and disturbed will use the same structure as long as the sticks hold together. The nests are generally scattered and by no means common, but in places where suckers and other fish are abundant and easily caught, the ospreys sometimes live in large colonies, coming year after year to the same nests.

VERNON BAILEY.

FAMILY STRIGIDÆ BARN OWLS.

GENUS STRIX.

Strix pratincola Bonap. BARN OWL.

Wing long, pointed, folding beyond tail; tail short, about half as long as wing; tarsus nearly twice as long as middle toe and claw; middle toe and claw closely feathered above, slightly feathered and bristly below, as on toes; feathers of back of wing pointing upward; inner toe as long as middle toe; outer edge of middle claw pectinated.

Upper disk pure white to tawny; under parts pure



From Biological Survey, U. S. Dept. of Agriculture.

Fig. 238. Fish Hawk.



Fig. 239.

white to yellowish brown, dotted with triangular brown or blackish spots;



From Biological Survey, U. S. Dept. of Agriculture.

Fig. 240. Barn Owl.

upper parts yellowish brown, more or less overlaid with mottled gray, finely streaked with black and white; wings and tail with a few dusky bands. *Length:* 14.75-18.00, *wing* 12.50-14.00, *tail* 5.50-7.50, *bill* .90-1.00.

Distribution. — Breeds in Upper and Lower Sonoran zones of the United States, from about latitude 41° (Nebraska), and southward through Mexico. Migrates more or less in the northern part of its range.

Nest. — In hollow trees, holes in cliffs, barns, old houses, and bell towers.

Food. — In California, principally gophers and ground squirrels, together with rabbits, birds, and insects.

The barn owl, or more appropriately golden owl, spends its days in any dark crevice that it finds convenient, from the hollow branch of a tree to barn lofts, garrets, wells, windmill tanks, and mining shafts. When driven out of its hiding place in the daytime, an old owl will draw itself up, snap its bill, and hiss at one in a way that might well terrify a nervous enemy. At twilight it leaves its cover and with noiseless flight hurries to some low meadow or marsh to hunt.

In California it preys mainly on gophers and ground squirrels, both of which rank among the worst pests in the country. The ejected pellets found around the owls' nests often contain nothing but gopher hair and bones, and in a number of instances Mr. Clark P. Streater has found an accumulation of two or three cubic feet of pellets in the trees in which the owls lived. Wherever the owls are found they rank among the most beneficial of rapacious birds, for they not only live on gophers and ground squirrels in the west, but cotton rats in the south, and rats and mice in the north.

When hunting, the owl's 'peevish scream' may often be heard, and sometimes also a note that Major Bendire compares to the call of the nighthawk. But the hungry young make the most noise. When camped beside an oak containing a family, Dr. Palmer found them a great nuisance from the hissing and shrieking which they kept up all night.

In California in winter Mr. Evermann has found as many as fifty barn owls together in the oaks.

FAMILY BUBONIDÆ: HORNED OWLS, ETC.

KEY TO GENERA.

- 1 Small, wing 3.40-7.50.
- 2. With ear tufts (inconspicuous in young) . . . **Megascops**, p. 181.
- 2'. Without ear tufts.
- 3. Tarsus more than twice as long as middle toe. **Speotyto**, p. 189.
- 3'. Tarsus less than twice as long as middle toe.
- 4. Tarsus scantily haired **Micropallas**, p. 191.
- 4'. Tarsus densely feathered.



Fig. 241.

- 5. Ear openings very large, the two unlike. **Nyctala**, p. 179.

- 5'. Ear openings small, the two alike. **Glaucidium**, p. 190.

- 1'. Large, wing 11.50-19.00.



Fig. 242.

- 2. With ear tufts.
- 3. Ear openings small **Bubo**, p. 185.
- 3'. Ear openings large, reaching almost to top of skull. **Asio**, p. 175.
- 2'. Without ear tufts.
- 3. Wing 9 inches **Surnia**, p. 188.
- 3'. Wing 12 to 19.
- 4. Ear openings small, the two ears not distinctly different **Nyctea**, p. 187.
- 4'. Ear openings very large, the two strikingly different.
- 5. Toes feathered to claws. **Scotiaptex**, p. 179.
- 5'. Tips of toes exposed **Syrnium**, p. 177.

GENUS ASIO.

General Characters. — Ear openings immense, almost equal to height of skull; ear tufts more or less developed; wings about twice as long as tail; feet closely feathered to ends of toes.

KEY TO ADULTS.

- 1. Ear tufts short **accipitrinus**, p. 177.
- 1'. Ear tufts long **wilsonianus**, p. 175.

366. Asio wilsonianus (Less). LONG-EARED OWL.

Ear tufts dark brown, conspicuous; face mainly yellowish brown; under parts whitish and yellowish, with dark brown shaft streaks and horizontal bars on belly; flanks yellowish brown, unspotted; upper parts

1'. Head and neck spotted.

2. Wing broadly tipped with whitish *occidentale*, p. 178.

2'. Wing with white tips almost obsolete *caurinum*, p. 179.

368. *Syrnium nebulosum* (Forst.). BARRED OWL.

Adults.— Head, neck, and breast widely barred with dark brown and white or buffy, belly streaked with dark brown on whitish or buffy ground; upper parts mixed dark brown, irregularly barred and spotted with buffy, whitish, and yellowish brown; wings and tail banded. *Young:* entire plumage barred except tail and wing quills, which are as in adult; back and wing coverts broadly barred, the end of each feather white, giving a spotted effect. Length: 19.75-24.00, wing about 13-14, tail about 9.

Distribution.— Breeds in Transition and Upper Sonoran zones from Nova Scotia south to Georgia and northern Texas, and west to Colorado.

Nest.— In hollows of trees, or that of hawk or crow. *Eggs:* 2 to 4, white.

Food.— Mainly mice and other small mammals; also crawfish and insects.



From Biological Survey, U.
S. Dept. of Agriculture.

Fig. 245.

“In the central and southern parts of its range it is quite common, frequenting mostly the heavy timbered and, preferably, swampy

tracts near watercourses, and spending the days generally in natural hollows of trees or in dense shrubbery. Like most of the birds of this family, it is nocturnal in its habits, but nevertheless sees well enough, and even occasionally hunts in the daytime, especially during cloudy weather. . . .

“The flight of the barred owl . . . is easy, and though quite swift at times, it is perfectly noiseless. A rapidly passing shadow distinctly cast on the snow-covered ground is often the sole cause of its presence being betrayed as it glides silently by the hunter's camp-fire in the still hours of a moonlight night. Far oftener, however, it announces itself by the unearthly weird call-notes peculiar to this species, which surpass in startling effect those of all other owls with which I am familiar.” (Bendire.)

368b. *S. n. helveolum* Bangs. TEXAS BARRED OWL.

Pallid, back, wings, and tail pale yellowish brown or cinnamon, light bars and spots on wings large and white; light bars on tail wider and paler than in *S. nebulosum*; under parts paler, dark striping and barring browner, ground color whiter; feathers of tarsus buffy, without dusky markings. *Type:* female: wing 13, tail 8.32. *Topotype:* male adult: wing 13.64, tail 8.40.

Distribution.— Southern Texas (and northern Tamaulipas, Mexico?).

369. *Syrnium occidentale* Xantus. SPOTTED OWL.

Upper parts brown, head and neck coarsely spotted (instead of barred) with round white spots; wing quills spotted with pale brown and whitish.

and broadly tipped with whitish; tail banded; under parts whitish, barred and spotted with brown. Length: 19, wing 12.00-13.50, tail 8.50-9.00, bill .90. Distribution. — From southern Colorado and New Mexico to California and south to Lower California and northwestern Mexico.

The spotted owl is the western representative of the barred owl, and is so closely confined to the thinly settled mountain regions of the west that little is known of its habits. Mr. Lyman Belding compares its call to the barking of a dog.

369a. S. o. caurinum Merriam. NORTHERN SPOTTED OWL.

Similar to the spotted owl, but darker, with white spots and markings restricted, especially on head and back; wing quills darker, the broad white tip almost obsolete. Wing: 12.10; tail (middle feathers) 8.06. Distribution. — Coast region of Washington and British Columbia.

GENUS SCOTIAPTEX.

370. Scotiaptex cinerea (Gmel.). GREAT GRAY OWL.

Ear tufts wanting; ear openings large, with conspicuous anterior flap, the two ears strikingly different; bill and feet small, bill inconspicuous among facial feathers; toes entirely covered with feathers; eyes yellow, eye ring black; face with concentric rings of gray and dark brown; upper parts sooty, mottled with gray and blackish; wing quills and tail banded; under parts mixed sooty and whitish, with irregular sooty streaking; flanks and legs barred. Length: 25-30, extent 54-60, wing about 16-18, tail 11.00-12.50.

Distribution. — Northern North America, south in winter to the northern border of the United States.

Nest. — In evergreens, made of sticks, feathers, and sometimes mosses. Eggs: 2 to 4, white.

Food. — Mainly rabbits, mice, and other small mammals, together with birds.

“Its great predilection for thick woods, in which it dwells doubtless to the very limit of trees, prevents it from being an inhabitant of the barren grounds or other open country in the north. It is crepuscular or slightly nocturnal in the southern parts of its range, but in the high north it pursues its prey in the daytime. In the latter region, where the sun never passes below the horizon in summer, it is undoubtedly necessary and not choice that prompts it to be abroad in the daylight. . . . The note of this owl is said to be a tremulous, vibrating sound, somewhat resembling that of the screech owl.” (Fisher.)

GENUS NYCTALA.

General Characters. — Wing 5 25-7.40; ear tufts wanting; ear openings nearly equal to height of skull, with anterior flap, the two ears conspicuously different; feet thickly feathered to claws.

KEY TO SPECIES.

- 1. Wing 6.50 or more richardsoni, p. 180.
- 1'. Wing less than 6.

2. Lighter *acadica*, p. 180.
 2'. Darker *scotæa*, p. 181.

371. *Nyctala tengmalmi richardsoni* (Bonap.). RICHARDSON OWL.

Adults. — Eye ring black, face whitish; under parts gray, heavily blotched with dark brown across breast and streaked with dark brown on belly; upper parts dark brown, spotted with white; flanks and feet usually buffy, more or less spotted with brown; under tail coverts striped with brown. *Young*: face blackish, eyebrows and malar streak white in sharp contrast; wings and tail like adult; body plain seal brown except for yellowish brown on belly and flanks; flanks more or less spotted with brown. *Length*: 9-12, wing 6.60-7.40, tail 4.10-4.70.

Distribution. — Northern North America from the limit of trees south in winter to Oregon and Colorado.

Nest. — Probably in holes in trees and, in absence of trees, in bushes. *Eggs*: probably 3 to 7, white.

Food. — Mice, small birds, and insects.

“Richardson’s owl is a boreal species inhabiting North America from the limit of trees south to the northern tier of states. . . . It is common throughout northern Alaska, wherever trees or large bushes occur to afford it shelter. . . . It is nocturnal in its habits, remaining quiet during the day in the thick foliage of the trees or bushes. In fact, its vision is apparently so affected by bright light that many specimens have been captured alive by persons walking up and taking them in their hands. On this account the Eskimo in Alaska have given it the name of ‘blind one.’” (Fisher.)

372. *Nyctala acadica* (Gmel.). SAW-WHET OWL.

Adults. — Eye ring whitish, face streaked with dark brown; under parts white, streaked vertically with reddish brown, most thickly on breast; upper parts olive brown, marked with white, finely streaked on head, and coarsely streaked or spotted on back, wings, and tail; feet plain white or buffy. *Young*: face blackish, in sharp contrast to white eyebrows and white malar streak; upper parts and breast plain dark seal brown; wings and tail as in adult; belly yellowish brown. *Length*: 7.25-8.50, wing 5.25-5.90, tail 2.80-3.25.



Fig. 246.

Distribution. — From about latitude 50° to southern United States, breeding south to Pennsylvania, New Mexico, and California.

Nest. — A deserted woodpecker hole, hollow of a tree, or old squirrel’s nest. *Eggs*: 3 to 7, white.

Food. — Almost wholly mice, but also other small mammals and insects.

The deeper and darker the forest the better it suits this little

gray-coated night woodsman. In the daytime he snuggles up to some gray trunk under the thick branches of a dark spruce, or hides in the leafy canopy of a forest tree. At night he floats on noiseless wings along the edges of the open parks and meadows, passing from tree to tree and bush to bush, dropping on unsuspecting mice that rustle the grass or venture into the open spaces under the trees, finding an abundance of food even when the snow is deep and the nights crisp and cold.

With the first thaws of early spring his love-song is heard, — a soft scraping note repeated monotonously in quick succession for half an hour at a time. It usually comes first from the woodpecker hole where he has been spending the day, but later in the evening is repeated from the branches in different parts of the woods. Before the snow has all gone the eggs are laid, sometimes in the woodpecker hole where his voice was first heard, sometimes in another near by. By the time the first really warm spring weather has come the young have hatched. Then the old birds are too busy catching mice for their large family to give much time to music, and they are not heard again regularly until the next spring. But they have many soft little talking notes that you can hear by sleeping in their woods on still summer nights.

VERNON BAILEY.

372a. *N. a. scotæa* Osgood. NORTHWEST SAW-WHET OWL.

Similar to *N. acadica*, but darker, dark markings everywhere heavier; flanks, legs, and feet more rufescent. *Wing*: 3.33, *tail* 2.66, *tarsus* 1.03.

Distribution. — Puget Sound region, north to Queen Charlotte Islands, B. C.

GENUS MEGASCOPS.

General Characters. — *Wing*: 5.40–7.80; ear tufts more or less conspicuous; ear openings small, the two ears alike; wings rounded, about twice the length of the short rounded tail; tarsus feathered.

KEY TO SPECIES.

1. Toes feathered or bristly.
2. Size large, wing averaging about 7 or more.
3. Plumage dark and heavily mottled.
 4. Dichromatic; brown form with back deep sooty brown. Oregon to Sitka *kennicottii*, p. 183.
 - 4'. Monochromatic; back grayish brown. East of Cascades. *macfarlanei*, p. 184.
- 3'. Plumage pale ashy gray, lightly streaked. Rocky Mountains. *maxwelliæ*, p. 183.
- 2'. Size smaller, wing averaging 6.60 or less.
 3. Wing averaging less than 6; plumage dichromatic.
 4. Throat without fulvous collar. Southwestern Texas and Mexico. *mccalli*, p. 183.
 - 4'. Throat with partial collar of mottled fulvous in gray phase. Mexico and southern Arizona *trichopsis*, p. 184.

- 3'. Wing averaging over 6.40.
 4. Dichromatic, red or brownish gray. Eastern United States.
 asio, p. 182.
- 4'. Not dichromatic, always gray.
 5. Back brownish gray. Coast region of California.
 bendirei, p. 183.
- 5'. Back clearer gray.
 * Plumage light gray, narrowly and sharply streaked below
 with black. Mexico to southern Arizona and New Mexico.
 cineraceus, p. 183.
- 6'. Plumage dark gray, heavily streaked with black. South-
 ern Colorado, northern Arizona, and New Mexico.
 aikeni, p. 184.
- 1'. Toes entirely naked to base.
 2. Throat with conspicuous band of ochraceous, lower parts lightly
 mottled idahoensis, p. 185.
 2'. Throat without distinct band of ochraceous, lower parts more heavily
 mottled flammeola, p. 184.

373. *Megascops asio* (Linn.). SCREECH OWL.

Dichromatic; gray or reddish brown, without regard to age, sex, or season; ear tufts conspicuous; toes thinly feathered or bristly on top. *Adults: gray phase:* upper parts dull brownish gray, with shaft streaks and fine mottlings of dusky; edge of scapulars and row of spots on edge of wing white or creamy; lower parts grayish white, with heavy shaft streaks and light cross-lines of black. *Red phase:* upper parts clear rich rufous, with a trace of black shaft lines and with white scapular streaks and spots on edge of wing; lower parts streaked and mottled with rufous and white, and with faint black shaft streaks. *Young:* plumage barred or banded with grayish or whitish, without longitudinal markings. *Length:* 7.50-10.00, wing 6.00-7.10, tail 3.05-3.50.



From Biological Survey, U. S. Dept. of Agriculture.

Fig. 247.

Food.—Mammals, birds, reptiles, batrachians, fish, crustaceans, and insects.

“The common screech owl is distributed throughout the whole of the United States and the southern portions of the British Provinces. It is separable into several geographic races as is usual in species having such an extensive distribution. . . . Their food consists of a great variety of animal life. . . . At nightfall they begin their rounds, inspecting the vicinity of farmhouses, barns, and corner-ribs, making trips through the orchards and nurseries, gliding silently

across the meadows, or encircling the stacks of grain in search of mice and insects. Thousands upon thousands of mice of different kinds thus fall victims to their industry. Their economic relations, therefore, are of the greatest importance, particularly on account of the abundance of the species in many farming districts; and whoever destroys them through ignorance or prejudice should be severely condemned." (Fisher.)

373b. *M. a. mcalli* (Cass.). TEXAS SCREECH OWL.

Dichromatic; gray or rufous. *Gray phase*: smaller and darker than *asio*, with more conspicuous dusky shaft streaks above and heavier shaft streaks and cross-lines of black below. *Rufous phase*: much as in *asio*, the rufous predominating on lower parts. *Young*: whole plumage, except wing quills and tail feathers, barred or banded with grayish or whitish; the black streaks wholly wanting. *Length*: 6.50-9.00, wing 5.60-6.30, tail 3.10-3.40.

Distribution. — From western and southern Texas across eastern border of tablelands of Mexico.

Nest. — In cavities of trees. *Eggs*: 2 to 5.

373c. *M. a. bendirei* (Brewst.). CALIFORNIA SCREECH OWL.

Not dichromatic; gray only. Slightly larger than *asio*, with heavier, more marked shaft streaks of black both above and below, and less conspicuous cross-lining below. Smaller and lighter than *kennicottii* to the north.

Distribution. — California.

Nest. — Usually in oaks or cottonwoods.

373d. *M. a. kennicottii* (Elliot). KENNICOTT SCREECH OWL.

Conspicuously larger and darker colored than *asio* or *bendirei*; upper parts dark sooty brown, mottled and streaked with black; scapular streaks and spots on edge of wings rich buff; lower parts heavily mottled, lined, and cross-lined with black; legs and feet rich buffy brown, finely mottled with buffy. Specimens from the southern and eastern part of the range lighter and grayer.

Distribution. — Northwest coast region from Oregon to Sitka.

373e. *M. a. maxwelliæ* (Ridgw.). ROCKY MOUNTAIN SCREECH OWL.

Large and very pale; white predominating on lower parts; upper parts light ashy or buffy gray, with narrow streaks and faint mottlings of blackish; white streaks on scapulars and on edge of wings, large; lower parts white, with narrow shaft streaks of black, and fine cross-lines of brown.

Distribution. — Foothills and adjacent plains of the eastern Rocky Mountains from Colorado north to Montana.

373f. *M. a. cineraceus* Ridgw. MEXICAN SCREECH OWL.

Small and very gray; upper parts clear ashy gray, with numerous blackish shaft streaks; lower parts with narrow black shaft streaks and fine vermiculations and cross-lines of black, without clear white interspaces; feet and legs finely and thickly mottled with dusky; little trace of brown anywhere in plumage. *Length*: 6.50-8.00, wing 6.10-7.00, tail 3.44.

Distribution.—Resident in Transition zone of New Mexico, Arizona, Lower California, and northwestern Mexico.

373g. *M. a. aikeni* Brewst. AIKEN SCREECH OWL.

About the size of the California screech owl but more ashy, the dark markings coarser and more numerous both above and below. *Wing*: 6.56, tail 3.80, bill from nostril .47.

Distribution.—Colorado and southwesterly to central New Mexico and northeastern Arizona.

373h. *M. a. macfarlanei* Brewst. MACFARLANE SCREECH OWL.

Size large and colors dark, but lighter than *kennicottii*; upper parts brownish or sooty gray with black shaft streaks and creamy stripes on scapulars and edge of wing; lower parts with heavy shaft streaks and numerous fine cross-lines of black; legs and feet buffy, slightly mottled with dusky. *Male*: wing 6.96, tail 3.80, bill from nostril .53. *Female*: wing 7.23, tail 3.85, bill from nostril .57.

Remarks.—*Macfarlanei* is the size of *kennicottii* but with color and markings more as in *bendirei*.

Distribution.—Eastern Washington and Oregon to western Montana, and probably intermediate region, and north to the interior of British Columbia.

373.1. *M. trichopsis* (Wagl.). SPOTTED SCREECH OWL.

A small dichromatic species. *Gray phase*: upper parts brownish gray, heavily lined with dusky; lower parts grayish white, with broad shaft streaks and cross-lines of blackish; a partial collar of mottled fulvous across throat and sides of neck. *Red phase*: mainly light rufous, obscurely streaked and barred with dusky. *Length*: 7.50, wing 5.66, tail 2.89, tarsus 1.17.

Distribution.—From southern Arizona to Guatemala.

374. *Megascops flammeola* (Kaup). FLAMMULATED SCREECH OWL.

Adults.—*Toes entirely naked to extreme base*; ear tufts small; upper parts grayish, finely mottled and marked with blackish; stripes on sides of back yellowish brown or orange, white beneath the surface; under parts whitish, marked with broad mesial streaks and narrow cross-bars; face, throat, and upper parts sometimes washed with orange brown. *Young*: upper parts mottled transversely with gray and white, but without black streaking; under parts similarly but coarsely and regularly barred. *Wing*: 5.10–5.60, tail 2.60–3.00.

Distribution.—From northern California and Colorado south to the highlands of Guatemala.

Nest.—In old woodpecker holes. *Eggs*: 3 or 4, white.

Food.—Small mammals, scorpions, and beetles, and other insects.

“From what we know of the habits of the flammulated owl they seem to vary but little from the other races of the screech owl family. They are apparently strictly nocturnal, and their food consists of the smaller mammals, as well as beetles and other insects.” (*Bendire*.)

374a. *M. f. idahoensis* Merriam. DWARF SCREECH OWL.

Similar to the flammulated but smaller and paler, especially on under parts in which the ground is white, and the markings restricted; facial ring bright tawny brown. *Wing*: 4.86, *tail* 2.42.

Distribution. — Idaho and eastern Washington.

GENUS BUBO.

General Characters. — *Length*: 18-23; ear tufts conspicuous; ear openings small, without anterior flap, the two ears not distinctly different; wing with 2 or 3 quills cut out; toes covered with short but dense feathers; claws wholly exposed.



From Biological Survey, U. S. Dept. of Agriculture.

Fig. 248. Dwarf Screech Owl.

KEY TO SPECIES.

- 1. Upper parts dark colored.
 - 2. Feet barred with black and buffy *pacificus*, p. 186.
 - 2'. Feet barred with black and rusty brown *saturatus*, p. 186.
- 1'. Upper parts light colored.
 - 2. Upper parts largely gray and buffy *pallescens*, p. 185.
 - 2'. Upper parts largely white *arcticus*, p. 186.

375a. *Bubo virginianus pallescens* Stone. WESTERN HORNED OWL.

Adults. — Ear tufts blackish; iris bright yellow; ring around face black; throat white; rest of under parts white or buffy, mottled and barred with brownish; flanks buffy; upper parts mottled dark brown, light grayish, and buffy, *lighter colors prevailing*; wing quills and tail banded with dull brown; whole plumage irregularly varied with buffy, tawny, whitish, and dusky. *Young:* wing quills and tail feathers as in adult, rest of plumage dull buffy or ochraceous, everywhere barred with dusky. *Male:* length 18-23, extent about 49-52, wing about 14.50-15.25, tail 8.25. *Female:* length 22-25, extent about 57, wing 16, tail 9.

Distribution. — Western United States, east through the Plains, casually to Wisconsin and Illinois; and from British Columbia and Manitoba south over the Mexican tablelands.

Nest. — A hole in a hollow tree, cliff, bank, or cave, or an old nest of a crow or hawk. *Eggs:* usually 2 or 3, white.

Food. — Largely mammals such as rabbits, prairie dogs, ground squirrels, skunks, and wood rats, game birds, waterfowl, smaller land birds, and, in settled regions, poultry.

The eyesight of the horned owls seems to be better than that of most owls, and Dr. Fisher thinks that in the breeding season they hunt indifferently night or day. In disposition, he says, they are "ferce and untamable, and in point of strength and courage inferior to none of our rapacious birds." Speaking of their food habits, the doctor says that "a bird so powerful and voracious may at times be a source of great benefit, while at other times it may be the cause



Fig. 249. Western Horned Owl.

of great damage. Now, the serious inroads it makes on the tenants of the poultry yard, as well as the destruction of many game and song birds, would seem to call for the total suppression of the species. Again, when engaged chiefly in the capture of injurious rodents, which threaten the very existence of the crops, it is the farmer's most valuable ally, and consequently should be most carefully protected."

The horned owl is one of the earliest breeders of the birds of prey. In the southern part of its range, eggs are laid

in December and January, and in Alaska they have been found in April when it was so cold that they froze on being taken from the nest.

375b. *B. v. arcticus* (Swains.). ARCTIC HORNED OWL.

Similar to the western horned owl, but ground color white and dark markings usually much restricted; under parts pure white, or only slightly barred.

Distribution. — Arctic America, south in winter to Nebraska, and from Dakota to Idaho.

Nest. — In trees, often a deserted hawk's or crow's nest. *Eggs:* 2 or 3, white.

Food. — Largely waterfowl, ptarmigan, and arctic hares.

375c. *B. v. saturatus* Ridgw. DUSKY HORNED OWL.

Like *B. v. pallescens*, but plumage extremely dark, face generally sooty brownish mixed with grayish white; plumage usually without excess of yellowish brown, sometimes with none.

Distribution. — West coast region from Monterey County, California, to Alaska, and eastward to northern Rocky Mountains.

Nest. — As described by Kennicott, in the top of a spruce, made of dry branches, lined with feathers. *Eggs:* probably 2 to 4, white.

375d. *B. v. pacificus* Cassin. PACIFIC HORNED OWL.

Small, strongly mottled, upper parts grayish, with more or less buff admixture; dark markings of under parts distinct; tarsus strongly mottled. *Wing:* 13.

Distribution. — Valleys and southern coast of California, and east to San Francisco Mountain, Arizona.

Eggs. — Usually 3.

GENUS NYCTEA.

376. *Nyctea nyctea* (Linn.). SNOWY OWL.

Ear tufts rudimentary; ear openings small, without anterior flap, the two ears not distinctly different; tail not reaching beyond tips of longest under coverts; four outer quills emarginate; toes covered with long



From *The Osprey*.

Fig. 250.

hair-like feathers, partly or wholly concealing the claws; bill nearly concealed by loreal feathers. *Adult male*: body pure white, sometimes almost unspotted, but usually marked more or less with transverse spots or bars of slaty brown. *Adult female*: much darker, pure white only on face, throat, middle of breast and feet, the head spotted, and the rest of the body barred with dark brown. *Male*: length 20-23, wing 15.50-17.30, tail 9.00-9.70, bill 1. *Female*: length 23-27, wing 17.30-18.70, tail 9.70-10.30, bill 1.10.

Distribution. — Breeds in arctic portions of the northern hemisphere, migrating south in North America almost across the United States and even reaching, accidentally, the Bermudas.

Nest. — In a slight depression of the ground, on a knoll, made of a few feathers, lichens, or moss. *Eggs:* usually 5 to 7, white.

Food. — In summer, lemmings and meadow mice; in winter, fish, hares, muskrats, squirrels, rats, ptarmigans, ducks, and even offal.

The snowy owl is a circumpolar species, breeding in the arctic parts of the northern hemisphere and coming south in winter.

Mr. Nelson, while traveling south of the Yukon in December, shot an owl whose nearly immaculate milky white plumage was suffused with 'a rich and extremely beautiful shade of clear lemon yellow, exactly as the rose blush clothes the entire plumage of some gulls in spring. The morning after the bird was killed the color was gone, the plumage being dead white.'

GENUS SURNIA.

377a. *Surnia ulula caparoch* (Müll.). AMERICAN HAWK OWL.

Head without ear tufts; ear openings small like *Bubo* and *Nyctea*; tail long, more than two thirds length of wing, graduated; tarsus scarcely or not longer than middle toe; feet thickly feathered to claws. *Adults:* face grayish white, encircled by heavy black ring; patches on throat, sides of head, and back of neck black; chest band whitish; rest



Fig. 251.

of under parts closely and regularly barred with brown and white; top of head and hind neck blackish or brownish, dotted with white; rest of upper parts dark brown, mainly spotted or barred with white. *Young:* upper parts dark brown, feathers of top of head and hind neck tipped with grayish buff, those of back with indistinctly lighter tips; lores and ear coverts brownish black; rest of face whitish; under parts whitish, washed with sooty on chest, barred below. *Length:* 14.75-17.50, wing about 9, tail 6.80-7.00.

Distribution. — Northern North America, south in winter to the northern United States, casually to Massachusetts, and rarely to the British Isles. Recorded from northern Montana and Newfoundland in the breeding season.

Nest. — Old woodpecker holes, natural cavities in trees, and old nests of other species relined with moss and feathers. *Eggs:* 3 to 7, white.

Food. — Small mammals, such as mice, lemmings, and ground squirrels; also ptarmigans and insects.

"The hawk owl is strictly diurnal, as much so as any of the hawks, and like some of them often selects a tall stub or dead-topped tree in a comparatively open place for a perch, where it sits in the bright sunlight watching for its prey. Although the flight is swift and hawk-like, it has nevertheless the soft, noiseless character common to the other owls. When starting from any high place, such as the top of a tree, it usually pitches down nearly to the ground, and flies off rapidly above the tops of the bushes or high grass, abruptly ris-

ing again as it seeks another perch. The note is a shrill cry which is uttered generally while the bird is on the wing." (Fisher.)

GENUS SPEOTYTO.

378. Speotyto cunicularia hypogæa (Bonap.). BURROWING OWL.

Tail only about half as long as wing; tarsus more than twice as long as middle toe, scantily feathered in front, bare behind; toes bristly.

Adults.—Upper parts dull earth brown, spotted and barred with white and buffy; under parts mainly buffy barred with brown.

Young: under parts mainly buffy, unmarked; upper parts plain brown except wings and tail, which are as in adults. Length: 9-11, wing 5.80-7.20, tail 3.15-3.50, bill .55-.60

Distribution.—Plains region from the Pacific east to Dakota and Texas, and from British Columbia and eastern slope of Rocky Mountains south to Guatemala.

Nest.—At the end of an old burrow of prairie dog, badger, or ground squirrel, or in a similar cavity. *Eggs:* 6 to 11, white.

Food.—Ground squirrels, young prairie dogs, mice, gophers, small birds, frogs, lizards, horned toads, and even fish, together with crickets, grasshoppers, beetles, scorpions, and centipeds.



From Biological Survey, U. S. Dept. of Agriculture.

Fig. 252.

When you are living in the owls' country, they, like the ground squirrels and prairie dogs, come to seem a part of the landscape, and as you ride over the great brown stretches you find yourself looking for the quaint little 'Billy owls' for life and interest on the monotonous way. In a region where there are only scattered holes suitable for their nests, solitary owls or families are most often seen, and sometimes there will be as many as nine around one burrow. But where a ground squirrel colony or prairie dog town offers good nest holes the little owls gather in companies.

In dog towns they often find spacious old badger holes to occupy. As you walk about one of the towns and the dogs lope off to their holes shaking their little yellow tails as they disappear, the owls stand statue-like around their burrows with their eyes upon you. If you are bent on getting within good photographing range the young ones will go backing down their holes, their solemn round yellow eyes fixed on yours till they drop below the earth line. Their elders will probably fly before you get your focus, though it is only a low short flight to a neighboring mound. It rarely seems to occur to them to leave the town.

The association of owls, dogs, badgers, and rattlesnakes is far from being that of the happy family circle it was formerly supposed. The

rattlesnakes are evidently attracted to the towns by the supply of tender spring dogs, and it has been suspected that the badgers relish a young owl for breakfast. The owls have been accused of joining in the neighborly round-robin feast and partaking of the young dogs, but, although they eat squirrels and mice in spring and fall, they live for the most part on grasshoppers and crickets. They hunt mainly in the evening and at night, but are often seen catching grasshoppers in the daytime.

GENUS GLAUCIDIUM.

General Characters. — Wing 3.50–4.40; head without ear tufts; ear openings small, without anterior flap, the two ears alike; nostril small, circular, opening near the middle of the inflated cere; tarsus not longer than middle toe, densely feathered; tail more than half as long as wing, rounded.

KEY TO SPECIES.

1. Sides plain brown, unspotted **phalæncoides**, p. 191.
 1'. Sides more or less spotted.
 2. Back grayer **gnoma**, p. 190.
 2'. Back browner **californicum**, p. 191.

379. *Glaucidium gnoma* Wagl. PYGMY OWL.

Adults. — Very small, under parts white, thickly streaked with dark brown; sides brownish, indistinctly spotted with lighter; *upper parts dark slaty gray, olive brown, or dark rusty brown*; head specked with white; tail blackish or brownish, *barred with white*. *Young:* like adult, but top of head plain gray. *Length:* 6.50–7.50, wing 3.40–4.00, tail 2.40–2.80.



Fig. 253.

Distribution. — Timbered mountain regions of western North America from British Columbia south through Sierra Madre of Mexico, except along the humid Pacific coast region.

Nest. — As far as known, in old woodpecker holes and hollow stubs from 8 to 20 feet from the ground. *Eggs:* usually 4, white.

Food. — Mainly insects, especially grasshoppers; but also mice and lizards.

“This little owl is diurnal in its habits, feeding and flying about in the bright sunshine, though it is more common in the early dusk and morning. Mr. Henshaw says it is fond of taking its station early in the morning on the top of an old stub, that it may enjoy the warmth of the sun’s rays. In most places it is more or less solitary, though in New Mexico Mr. Henshaw found it extremely social, and in the fall it was usually met with in companies.

“It is tame and unsuspecting and may be decoyed from a considerable distance by imitating its call-note, to which it responds at once. It is confined mostly to wooded districts, though occasionally it is found some distance from timber. It hides in the pines or

other thick foliage, where it sits upright near the trunk and is practically invisible to the observer.

"The flight is not very much like that of other owls, but resembles that of the sparrow hawk to some extent, and is not altogether noiseless. The love-notes, according to Captain Bendire, are somewhat musical, although they resemble to some extent those of the mourning dove." (Fisher.)

379a. *G. g. californicum* (Scl.). CALIFORNIA PYGMY OWL.

Similar to *G. gnoma* but browner, chest heavily washed with reddish brown. *Young*: much paler, ash gray on head and grayish brown on back, unspotted.

Distribution. — Humid coast region from southern British Columbia south to northern California.

Nest. — In deserted woodpecker holes. *Eggs*: usually 4, white.

Food. — Largely mammals and small birds.

380. *Glaucidium phalænoides* (Daud.). FERRUGINOUS PYGMY OWL.

Adults. — Similar to the pygmy owl, but sides of breast plain brown or rufous, upper parts varying from grayish brown to bright rufous; head finely streaked with whitish; tail banded, bars varying from white to rufous and interspaces from grayish brown to blackish. *Young*: top of head plain. *Length*: 6.50-7.00, wing 3.50-4.60, tail 2.20-3.50.

Distribution. — From Texas, New Mexico, and Arizona, south to southern Brazil.

Nest. — As far as known, in hollow trees, or woodpecker holes. *Eggs*: — taken by Sennett — 4, white.

The little ferruginous owl is diurnal like the other pygmies, flying about hunting in bright sunlight. His note, as given by Mr. F. Stephens, is a "loud *cuck* repeated several times, as rapidly as twice each second," given with a jerk of the tail and a toss of the head.

GENUS MICROPALLAS.

381. *Micropallas whitneyi* (Cooper). ELF OWL.

Head without ear tufts; ear openings small; nostril small, circular, opening near the middle of the inflated cere; tarsus longer than middle toe, scantily haired; claws small and weak; tail even, less than one half as long as wing; smallest United States owl. *Adults*: face with white eyebrows; lores and throat band white, encircled by brownish ring; under parts whitish, with vertical blotches of dark brown and rusty, *finely mottled with darker*; upper parts grayish or grayish brown, *finely mottled with darker and rusty, and indistinctly speckled with rusty*; tail brownish, crossed by 5 or 6 narrow pale brownish or rusty bands, usually interrupted on middle feathers. *Length*: 5.50-6.25, wing 4.00-4.40, tail 1.90-2.30.

Distribution. — From southern Texas to southern California, and south through Lower California and tablelands of Mexico.

Nest. — In old woodpecker holes in giant cacti or hollow trees. *Eggs*: 2 to 5, white.

Food. — As far as known, small mammals, grasshoppers, and beetles.



Fig. 254.

Unlike the pygmy owls the elf owls are nocturnal, spending the day either in thickets or old woodpecker holes. Major Bendire says they become active soon after sundown. He has had them come to his camp, attracted probably by the insects which gathered about the guard fire through the night.

When resting in the daytime the little owls are not too stupid to protect themselves, as is shown by a curious experience Mr. F. Stephens had with one. He startled the owl in a willow thicket, and when he found it in the dense tangle, as he says, it was "sitting on a branch with its face toward me and its wing held up, shield fashion, before its face. I could just see its eyes over the wing, and had it kept them shut I might have overlooked it, as they first attracted my attention. It had drawn itself into the smallest possible compass so that its head formed the widest part of its outline. I moved around a little to get a better chance to shoot, as the bush was very thick, but whichever way I went, the wing was always interposed, and when I retreated far enough for a fair shot, I could not tell the bird from the surrounding bunches of leaves. At length, losing patience, I fired at random and it fell. Upon going to pick it up I was surprised to find another which I had not seen before, and which must have been struck by a stray shot." (Quoted by Bendire.)

ORDER PSITTACI: PARROTS, MACAWS, PAROQUETS, ETC.

FAMILY PSITTACIDÆ: PARROTS AND PAROQUETS.

GENUS RHYNCHOPSITTA.

382.1. *Rhynchopsitta pachyrhyncha* (Swains.). THICK-BILLED PARROT.

Bill large, tip of lower mandible elongated, cut off, and flattened; tail graduated for about one third its length; cere densely feathered, concealing the nostrils. *Adults*: bill blackish, body green except for poppy red on forepart of head and wings, and lemon yellow under wing coverts. *Young*: similar, but bill mainly whitish and red restricted. *Length*: 16.00-16.75, wing 8.50-10.50, tail 6.30-7.00, graduated for 2.25-2.35.

Distribution. — Mountains bordering tablelands of Mexico; northward casually to the Chiricahua Mountains, Arizona.

A flock of nine or ten thick-billed parrots seen by Mr. Lusk in the Chiricahua Mountains came, as he says, scolding, chattering, and calling up a canyon to the edge of the piñon pine belt, where they devoted themselves to getting the piñones. "Investigation of their stomachs," he says, "showed nothing but a plentiful quantity of very immature piñones wrested from their cavities in the hearts of the hard, green cones by their powerful beaks."