



Colorado Breeding Bird Atlas II: Suggestions for Atlasing for Owls

In the following table, I provide general information on each owl species known to breed in Colorado, including “safe dates”, habitat associations, courtship behavior, and nest type. While safe dates are meant to be encompassing across the state, I have also provided an approximate “peak calling” window (i.e., the best chance to hear owls calling during the territorial/courtship phases of their nesting cycles). Here are some other helpful suggestions to prepare you for productive owling.

Things to do before Owling

- 1) Scout Your Blocks — Scout your blocks to determine which habitat types are present and which owl species are most likely to occur (use the table to cross-reference habitats). While scouting, note areas with the best potential nesting substrates.
- 2) Study Owl Vocalizations — If you are not familiar with or need to brush up on the songs, calls, and other vocalizations of Colorado’s owls, use birding CDs or computer software to study or refresh your memory.
- 3) Plan your surveys — Use the table below to determine the best time to conduct owl surveys in your blocks. Determine ahead-of-time which areas in your block you will visit and use your topo maps to plan access to those areas (e.g., roads, trails).

Suggestions for Owling

- 1) What time of night is best for hearing owls? Some official owl survey protocols recommend listening for owls from about dusk to midnight, but early mornings can be productive as well. In spring, the first hour after dusk can be ideal, as owls may begin calling at or near their roosts or nest sites.
- 2) How do I survey for owls? Owling is as simple as listening. If owling along a road, I recommend spacing listening points about ¼-mile apart. Stop the car, get out, and listen for 10–15 minutes at each point, then drive to the next point. If walking roads or trails in your block, stop periodically to listen for owl calls.
- 3) Can I use playbacks to survey for owls? Some official protocols for surveying owls include the use of playbacks to elicit responses from territorial owls. While playbacks have their place in research and monitoring projects, they can negatively impact owls by eliciting stress and disrupting their normal activities. During the breeding period, owls need to conserve their energy to support the high demands of territory defense and rearing young. Thus, I recommend passive owling techniques only for the atlas to eliminate unnecessary stress to the birds. If playbacks are used, please use them sparingly and responsibly.

| Species | Safe Dates | Peak Calling Period | Habitat | Courtship Behavior | Nest Substrate |
|---------------------|---------------|---------------------|---|---|---|
| Barn Owl | 1 Apr–31 Jul | ??? | Open habitats (grasslands, agricultural areas, deserts) at low elevations | Display flights and hovering (males), chasing, advertising calls (screeches) | Cavities in cliffs and dirt banks, nest boxes, and human structures |
| Flammulated Owl | 11 May–10 Aug | May–early Jun | Open ponderosa pine, mixed conifer, and aspen forests (often w/ oak) | Calling (by males) | Natural tree cavities or old woodpecker cavities |
| Western Screech Owl | 10 Feb–31 Aug | Feb–Apr | Cottonwood forests at low elev. (West Slope, Arkansas R. drainage); tall piñon-juniper in Las Animas and Huerfano co. | Food carries (by male), trill calls, allopreening | Natural tree cavities or old woodpecker cavities |
| Eastern Screech Owl | 10 Feb–31 Aug | Feb–Apr | Cottonwood forests and urban areas in S. Platte R. and eastern Arkansas R. drainages; a few breeding records from Kiowa and Cheyenne counties | Crouching, trills (males), rasps (females), male delivers food to female | Natural tree cavities, old woodpecker cavities, nest boxes |
| Great Horned Owl | 15 Jan–31 Jul | Jan–Apr | Found in a variety of wooded habitats, such as coniferous forest, urban, riparian, agricultural | Paired calling, bowing, wing-drooping, puffed neck feather display | Trees, caves, alcoves, cliffs; often old Red-tailed Hawk nests |
| Northern Pygmy Owl | 15 Feb–31 Jul | Mar–May | Variety of coniferous forests up to ~9,800 ft | Paired calling, pursuit flights, nest showing | Tree cavities (woodpecker holes) |
| Burrowing Owl | 1 Apr–10 Aug | Apr–May | Open grasslands and deserts; associated w/ burrowing mammals | Singing, bowing, throat display; generally crepuscular during breeding season | Mammal burrows (often prairie dogs) |

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| Mexican Spotted Owl* | 10 Mar–31 Jul | Mar–Apr | Rare; shady canyons on S. Front Range and closed canopy, mixed conifer forest in sw CO | 4-note call (males); whistles (females) | Cliffs in canyon habitats; tree cavities or platforms in forest habitats |
| Long-eared Owl | 10 Feb–15 Jul | ??? | Wide variety of habitats and elevations, from low elev. riparian woodlands up to spruce-fir forests near tree line | Flight displays, wing-clapping | Trees; uses old crow, magpie, raven, Accipiter, or Buteo nests |
| Short-eared Owl | 15 Mar–10 Aug | Mar–??? | Rare in CO; breeds in open grasslands and marshes; rel. common in San Luis Valley near Monte Vista NWR | Aerial displays and song (by male), can occur day or night | Nests on ground |
| Boreal Owl | 10 Feb–10Aug | Mar–Apr | High elevation, spruce-fir and aspen forests | Flights, prolonged song, and food carries (by males) | Tree cavities (Northern Flicker holes) and nest boxes |
| Northern Saw-whet Owl | 10 Feb–15Aug | Late Mar–Apr | Widespread; found in coniferous forests, aspen, and wooded riparian areas | Paired calling, food carries (by male) | Tree cavities (Northern Flicker holes) and nest boxes |

* Mexican Spotted Owl is a federally threatened species and thus protected under the Endangered Species Act. Playback surveys for Mexican Spotted Owl should **NOT** be conducted for COBBAIL. Only biologists holding a permit issued by the U.S. Fish and Wildlife Service (FWS) may conduct surveys for Mexican Spotted Owl using playbacks or calling, and only for projects approved by the FWS.