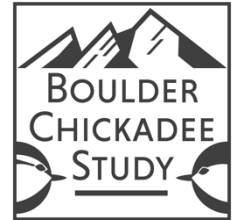


Boulder Chickadee Study Nest Monitoring Protocol



Welcome to the Boulder Chickadee Study! We're excited to monitor breeding black-capped and mountain chickadees with you in sunny Boulder, CO!

Goals: Record chickadee laying dates, collect genetic material from all nestlings and parents, and record the number of eggs laid, eggs hatched, and young fledged. As community scientists, you will help us record when chickadees nests are started in Boulder, how many eggs are laid, and when eggs hatch. We will collect additional information, such as genetic material from chickadees.

Overview: You (the observer) check your boxes every 3 days beginning April 15th, record what you see, and submit your data *that same day* to the Boulder Chickadee Study research team. When chicks are ~ 1 week old, researchers will come to band the adults and nestlings, take measurements, and collect small blood samples.



Mountain chickadee
*Most identifiable by
their white eyebrow*

Spring has sprung: Chickadees are some of the first birds to start nest building, and pairs start building nests as early as April. The male and female will excavate together, anytime in March, April or May. Afterwards, the female builds the nest alone--quickly bringing moss and animal fur to make her nest. The male will follow her closely, often singing constantly.



Black-capped chickadee
Sport an all-black cap

How to monitor nest boxes

Keep visits brief, quick, and very quiet.

Starting on **April 15th**, check your box every 3 days (e.g., Mon., Thurs., Sun., etc.) & submit your data, including negative data, *that same day*.

1. Watch box from afar. Before checking the nest box, watch briefly (~5 minutes) for the female visiting the nest with nest building material (moss, fur, etc.). Try and check nest immediately after she has left. Approach the box in a random path to avoid leaving a well-worn trail for predators to follow. Knock on the side of the box. Wait 3 seconds and lift the lid. This gives the female time to leave if she is in the box incubating eggs.

2. Check nest & record data. In a notebook, record the nest box ID number (written in large black numbers on side of box), the date, species of chickadee, nest stage, and the number of eggs, live young, or dead young you observe in the nest. Note the condition of the nest and whether you see any activity from the adults. *You will enter this data online immediately afterwards.* Be sure you are counting the number of eggs and nestlings accurately but avoid touching them. If contents are hard to see in the box, use a small mirror to get a better view. You may take photos, but don't use flash! Cavity nesting birds, such as chickadees, aren't accustomed to bright lights.

If possible, always check the nests when adults are away. *Make visits brief, quick, and very quiet.* Use different routes for approaching and leaving the nest site. If you 'flush' the female off the nest, don't worry. Complete your check quickly, close the box and then leave the area. She will return shortly after you are gone, likely when you're not looking.

3. Enter data online or on phone. Enter your data online at

<https://www.colorado.edu/lab/taylor/research/boulder-chickadee-study> *that same day* so that we are aware that there is an active nest in your area! This is especially important so we can time our visits to the nest when nestlings are ~1 week old. If for any reason you cannot check a chickadee nest (vacations, etc.), please let us know as soon as possible by emailing Boulderchickadeestudy@gmail.com, and we will schedule someone to come and collect data.

4. Visit the nest one last time. We will band nestlings when they are ~1 week old. After our visit, STOP all nest checks until after you are certain the young have fledged to determine if any unhatched eggs or young remain. Count and report unhatched eggs and any dead young on the online nest monitoring form. Unfortunately, in wild birds, not all eggs will hatch and not all nestlings will survive. If you disturb nests when the chicks are close to fledging, they will leave the nest before they are ready which will reduce their chances of surviving. You may watch from afar, but please stop physical nest box checks after we have banded the chicks until you are certain the young have left the nest.

Do:

- Check your nest boxes every 3 days
- Take good notes on number of eggs & nestlings
- Submit your data online that same day

Do not:

- Visit nests when chicks are close to fledging
- Handle birds, eggs, or nestlings (it's illegal)
- Approach nest box using same path every time (predators may follow path to the nest)

Oops, I entered in my data wrong. It's okay, it happens. Email us at Boulderchickadeestudy@gmail.com to let us know and re-enter your data correctly.

Chickadee nest building

- 1) Remove wood shavings from box
- 2) Little bit of moss around the edges (Days 1-3)
- 3) Full layer of Moss, starting to get thick! (Days 4-6)
- 4) Large, thick layer of moss and the beginnings of forming a shallow cup (days 6-8+)
- 5) Line the inside of the cup with soft material like dry grass and animal fur. (Days 8+)
- 6) Female begins laying eggs, and will cover her early eggs with a layer of fur before she incubates the eggs. This helps them all hatch within 24 hrs of each other.

Black-capped chickadee

Nesting period: Early April – Late June
Clutch size: 1- 13 eggs
Incubation period: 12-13 days
Nestling period: 12-16 days
Eggs: white with fine reddish-brown dots

Mountain chickadee

Nesting period: May – August
Clutch size: 5-9 eggs
Incubation period: 12-15 days
Nestling period: 17-23 days
Eggs: Flat white, sometimes speckled red

Additional information

https://www.allaboutbirds.org/guide/Black-capped_Chickadee/overview

https://www.allaboutbirds.org/guide/Mountain_Chickadee/overview