



Citizen Science guide to the GREAT BLUE HERON Survey Protocol



This survey is designed to determine occupancy and distribution of Great Blue Heron rookeries in Montana by visiting historic and active rookeries, and estimating both nest occupancy and adult heron numbers. Once you are set to survey an active rookery survey takes 1 hour while an inactive rookery survey takes 15 minutes. Surveys take place from May 1 through June 10. Monitoring early in May will help us avoid visibility issues due to dense leaf foliage, and reduce our disturbance to birds during the early nesting and egg-laying phases in April.

- Before heading into the field look over the 'Survey 123 guide for Heritage Obsv Collector', download app, and become comfortable with the app. You can find it on Montanabirdsurveys.com/gbhe-survey-123
- Give yourself adequate time to find an observation point with good visibility. Some rookeries are accessed via a dirt road or may have multiple vantage points of variable quality. Be careful to avoid private property. Pay attention to deep or big nests as there may be incubating herons, and scan for nests or herons hidden by dense foliage
- Minimize rookery disturbance: stay at least 300 meters from the rookery when on foot, and at least 200m when surveying from the road-side. Herons are very sensitive to human disturbance. Watch the bird's behavior – if they act disturbed (alarm calling, adults flushing or moving around when incubating or feeding) move further away.
- Bring binoculars, and a scope if possible. Though large, it can be hard to count nests high in the canopy.
- Be sure to submit data for your survey whether or not birds or nests were observed. If you can not confidently confirm there is no rookery or nests, do not submit a survey. Contact the project coordinator for further instruction.
- If you come across a potentially new rookery, do a survey, and submit information following the steps below.

Protocol

1. Record the **Observer name**. The **date and time** are automatically recorded. Start and End date are the same. If submitting at a later date ensure the date and time coincides with the date of the actual survey.
2. Use the Survey 123 map to record the **Location of organisms**, i.e. the rookery. If you have high confidence in the rookery location, record **Spatial precision of observation as '50 meters'**. ****NOTE:** If you cannot map the rookery location, record your location as the **Location of organisms**; Record **Spatial precision** as the estimated distance to the rookery. **Spatial precision** from your location should be greater than 200 or 300m.
3. Record **Habitat notes**. Indicate the dominant tree species in the rookery (e.g cottonwoods, ponderosa, Russian olive, etc.), keeping in mind nests can be in standing dead timber. Describe the vegetative structure in detail.
4. Add a **Location description** for where you are observing from (e.g a road pullout on I-90, near mile marker 138). Make this detailed enough for a future observer to find the observation location.
5. For submitting data into Heritage Obsv Collector be sure you're in the correct data entry section.
6. **When you get to the 'species observed' section, scroll and tap on 'STRUCTURED SURVEY' a new box will appear below, scroll and tap on 'BIRD', another new box appear below, scroll and tap on 'B-GREAT BLUE HERON ROOKERY'**
7. Indicate your **Mapped location type** as an **exact** or **approximate** rookery or survey location.
8. Record the **Total heron nests** that can be seen in the colony, regardless of activity level. ****NOTE** – if no nests are present record a 'zero' value for steps 7 and 8. Continue with the survey, completing just the first 15-minute survey increment, being sure to include survey comments and photos. Scan at least 200m in each direction, to see if the rookery moved within the area or to observe any herons active/ present in the area.
9. Record **Active heron nests**. A nest is considered active when: there is fresh white-wash on the edge of the nest, adults are on or directly next to the nest, an adult is incubating, or nestlings or juveniles are present.
10. At this point, the 1-hour survey begins. Set a 15- minute timer and restart the timer for the 4 increments.
11. Record the **Highest # of adults** seen each 15-minute increment of the survey under each of four boxes labeled **Highest # of adults 0-15**, etc. Then record the **Maximum adult heron count** for the 1-hour survey.
12. If juveniles are present, record **Number of juveniles** for the entire 1- hour survey.
13. Record any **Survey Comments** (e.g interesting behaviors such as pair-bonding or mating, nest building, a nest exchange of incubating adults, young fighting or exercising their wings, etc.).
14. Collect a **Photo of survey location**, including habitat features, for each rookery. This can be done directly with your phone or uploaded later. More than one photo can be included.
15. **Add another record** feature to record other species present using the rookery (e.g Double-crested Cormorants).