



Tree Swallow Nest Monitoring Protocol

Supplies you will need: site map, a field notebook (*Rite in the Rain*, if possible), a pencil, and nest record data sheets (one for each active nest). Keep your nest record sheets in a binder or folder. Print them on waterproof paper (such as *Rite in the Rain*) if possible.

Each spring begin by checking all the boxes at your site. It is important to do this as soon as you can access the boxes, and BEFORE the first Tree Swallow arrives. Ensure all the nest boxes are: clean and clear of debris; in good condition; and weather-proof (all doors close, top is secure, and there are no leaks).

Record the date you see the first Tree Swallow at your site in your field notebook.

After the Tree Swallows have arrived, begin checking all the boxes at your site for nest building. Try to check your nest boxes at the same time of day throughout the season (in the morning if possible). Use your field notebook to note the date nest building begins and ends in each box. Sometimes swallows may build a nest in more than one box. A nest is considered “active” once the first egg appears. Make one nest record data sheet for each active nest.

There are a few key dates to catch and record for each active nest. Be sure to keep your nest record data sheets up to date and complete.

1. CLUTCH INITIATION DATE

Clutch initiation is the day the first egg is laid. Check active nests at least every third day. More often is ok, but be very cautious. Some birds will abandon their nest with too much disturbance. If you check less frequently or discover a clutch that is already in progress, follow the “1 egg per day rule” to count back to the clutch initiation date. (This means you can assume the female will lay one egg each day, usually in the morning hours.) Record the clutch initiation date and clutch size (total number of eggs). Most clutches will be 4-7 eggs.

2. CLUTCH COMPLETION DATE & INCUBATION DATE

Clutch completion is the last day that a new egg appears in the nest. Record this date.

Incubation date is the day the female starts to sit on the eggs to keep them at a constant temperature for development. Swallows usually begin to incubate the day before the last egg is laid, so you may assume ***the incubation date is one day before the clutch completion date.*** Record the incubation date.

After clutch completion, nest checks should be less frequent until the projected hatch date approaches. This is a sensitive time, and some birds may abandon if they are disturbed at this time. Once incubation has begun, do not check the nest for at least 7 days.

3. HATCH DATE

Tree Swallow's usually incubate for 14 days. Calculate the earliest predicted hatch date (day 14 of incubation, starting with the incubation date as DAY ONE). Record this date.

Check daily beginning on day 14 (the earliest predicted hatch date). Eggs hatch asynchronously. ***Record the hatch date as the date the first chick emerges from an egg.*** Return the next day to ensure all the eggs hatched. Record the total number of eggs hatched. ***The hatch date is considered day 0 when determining the age of chicks.***

Check each nest every 2-3 days until day 12. Count and record the number of nestlings you see. Nest boxes should NOT be opened after day 12.

4. **FLEDGE DATE**

This is the final important date to catch. *The fledge date is recorded as the first date that all the chicks have left the nest box.*

Beginning at day 16, check each nest for fledging. Find a spot to sit comfortably at a safe distance from the box. Watch carefully for at least 10 minutes. Look for signs of activity such as parents returning with food, or the chicks popping their heads out of the hole. If you see any signs of activity, you are done. The chicks have not fledged. Return to the box tomorrow and try again.

If you do not see activity after at least 10 minutes, approach the box carefully and listen for vocalizations. If you hear the chicks in the box, they have not fledged. Return to the box tomorrow and try again.

If you do not see or hear activity, carefully approach the box. Cover the hole, and carefully open the door as little as possible to peak inside. Work as quickly and safely as you can. If the chicks are gone, record that day as the fledge day. If they are still in the box, try again tomorrow.

Don't approach nestlings that are visible in the hole. You may startle them into fledging prematurely. Swallows that fledge before they are ready may not fly well and may become grounded, making them very vulnerable to predators and unlikely to survive. If you see chicks in the hole, continue to watch the box until you see the nestlings actually leave the box, or return later that day to verify that the chicks have left.

Nest Box Clearing Protocol

When you are sure all boxes have fledged, it is important to remove the old nests in preparation for next year. Remove the nest, and swipe out any loose material. Record the presence of any dead chicks remaining in the nest. Also be sure to record evidence of unusual food sources, parasites, or predation. Do not use any cleaners or bleach, simply remove the nest.