

SECTION 5 - TAGGING MARINE TURTLES

Summary

This section is specifically intended for those persons whose permit authorizes them to:

- **tag turtles using external flipper tags**
- **tag turtles using PIT tags**

Personnel are not authorized to conduct the following activities unless specifically stated on the permit:

- **hold or capture turtles**
- **transfer or transport turtles into or out of Florida**

ACTIVITY DESCRIPTION

Tags are available from the Cooperative Marine Turtle Tagging Program (CMTTP), a centralized tagging program developed to distribute tags, manage tagging data, and facilitate exchange of tag information managed by the Archie Carr Center for Sea Turtle Research (ACCSTR) at the University of Florida. This program is funded by the National Marine Fisheries Service Southeast Fisheries Science Center (NMFS/SEFSC) (<http://accstr.ufl.edu/cmtp.html>).

HANDLING AND FLIPPER TAGGING TURTLES

1. Handling and tagging turtles can result in introduction or transmission of disease among turtles. Use appropriate techniques and disinfectants to avoid harming the turtles. Identify the area where the tag will be applied and swab this area with antiseptic. All tagging equipment must be sterilized prior to use.
2. When tagging turtles on nesting beaches, wait until the turtle has completed egg-laying before tagging or measuring the turtle.
3. Tags should be cleaned of the oily residue from manufacturing in hot soapy water, rinsed or soaked in alcohol, and stored in sealed plastic bags until used.
4. Due to tag loss, double tagging (one tag on each of two flippers) is now standard procedure. Place the tag within the molded surface of the applicator, and attach the tag to the trailing edge of the flipper. Attach the tag on the flipper so that it extends slightly from the edge of the flipper. On front flippers, the tagging site is the first or second large scale on the posterior edge of the flipper. Some researchers use the site proximal to and adjacent to the first large scale or between the two large scales. On hind flippers, the tagging site is the first large scale. Some researchers use the site proximal to and adjacent to the first large scale.

5. Once the tag has been attached, check the tip to be sure it has properly cinched. The tag tip should overlap the edge of the hole by at least 3 mm. If the overlap is insufficient, carefully fit the tag back into the applicator and apply greater pressure. If this is still unsatisfactory, remove and apply another tag. This is important; improperly cinched Inconel tags are shed quickly.
6. Fill out the appropriate tagging data form (see sample form in Appendix A; electronically generated copies are acceptable) and submit all completed forms as required with copies to FWC.
7. Do not tag stranded carcasses on the beach.
8. Maintain the tag applicators so they continue to function properly. They should be cleaned with a bleach-water solution after each use. The salt environment is very corrosive and frequent application of a light lubricant (e.g., WD40) to the spring and pivotal surface is necessary, particularly when storing for long periods between seasons. Be careful not to contaminate the tags with lubricant.

MEASURING MARINE TURTLES

1. Accurate and precise measurements are critical. Because a number of different measurements have been used in studies of sea turtles, it is essential to note specifically which measurements are recorded on the data sheets and which units are used (cm or inches; cm is the preferred unit).
2. Using calipers, measure the *straight carapace length notch to tip* (SCLn-t) from the anterior point at midline (nuchal scute) to the posterior tip of the supracaudals. Because the posterior tips of the supracaudals are frequently broken in juveniles or worn away in adults, *minimum straight carapace length* (SCLmin; also referred to as SCLnotch-notch) is measured from the anterior point at midline (nuchal scute) to the posterior notch at midline between the supracaudals.
3. In addition to the straight length, curved carapace length should also be measured with a flexible tape. Measure the *curved carapace length notch to tip* (CCLn-t) from the anterior point at midline (nuchal scute) to the posterior tip of the supracaudals. *Minimum curved carapace length* (CCLmin; also referred to as CCLnotch-notch) is measured from the anterior point at midline (nuchal scute) to the posterior notch at midline between the supracaudals. The CCLmin measurement should be obtained because the posterior tips of the supracaudals are frequently broken in juveniles or worn away in adults and because there is greater variability in CCLn-t as a result of the unpredictable way that the tape measure deviates from the midline.
4. Be sure to specify on the data form the method (straight or curved) and the measurement taken (SCLn-t or SCLmin or CCLn-t or CCLmin).

PIT TAGGING

Applying PIT tags is more invasive than applying flipper tags and should be done only under the guidance of workers experienced with the technique. The following procedure has been found to be safe and effective.

1. Prepare the sterile PIT tag needle with tag, plunger-applicator, PIT tag reader, and sterile gauze/cotton soaked with an antiseptic solution such as Betadine.
2. Identify the area where the tag will be applied and swab this area with antiseptic. One ideal application point is within the soft, fleshy area dorsal to the wrist bones of the front flipper.
3. Prepare to insert the needle at a seam between scales, at an acute angle (nearly parallel with the skin of the flipper), and with the needle directed proximally (toward the turtle). The point of the needle should be closest to the skin (the terminal opening of the needle should face upward).
4. Hold the flipper firmly (with assistance if necessary) so that the flipper cannot move and insert the tagging needle approximately $\frac{3}{4}$ inch and just beneath the skin. Use the plunger to insert the tag through the needle, place the cotton or gauze with antiseptic over the needle entry point, and withdraw the needle. Keep pressure on the needle entry point with the cotton or gauze for approximately one minute, or longer if bleeding occurs.
5. Swipe the PIT tag reader over the tagged flipper, record the tag number, swipe again, and verify the recorded number.

REPORTING REQUIREMENTS

Fill out the appropriate tagging data form (see sample form in Appendix A; electronically generated copies are acceptable) and submit all completed forms as required with copies to FWC (as mentioned above). A sticker with the PIT tag number accompanies the PIT tag; this sticker may be adhered to the tagging data form rather than handwriting the tag number.