History of NMFS Activities Related to Estimates of Post-Release Mortality and Application of Estimates in Southeast U.S.

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NOAA FISHERIES SERVICE

November 2011
NMFS History


- Yeung et al. (2000) bycatch report applied marine mammal serious injury criteria to sea turtles

- Atlantic BiOp (6/2000) applied 29% to the total bycatch estimated by Yeung et al. to set lethal ITS
NMFS History

- Review by NMFS Office of Protected Resources recommended 50% mortality (1/4/2001)

- Review by the Directors of 3 HQ offices - guidance memo 2/16/2001:

  - 0% entangled only, disentangled completely; 27% external (includes “lip”), line left on animal, hook does not penetrate internal mouth structure; 42% mouth hooked (penetrates) or ingested (Atlantic HMS BiOp 6/2001)
NMFS History

- January 2004 Workshop:
  - Draft criteria (Jan. 22, 2004 memo from L. Allen)
  - Epperly and Boggs (2004)
  - Revised observer forms
  - Ryder et al. (2006)
Injury Category As Defined in Ryder et al. (with revisions noted in parentheses)

I. Hooked externally with or without entanglement. (note: this category now includes all rhamphotheca (beak) hooking locations)
Beak internal, beak internal upper, beak internal lower, beak external, beak external upper, beak external lower (n=100)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hook fell out or was easily removed (usually by hand)/no bleeding, lightly hooked</td>
<td>41</td>
</tr>
<tr>
<td>Hook removed with pliers or dehookers</td>
<td>18</td>
</tr>
<tr>
<td>Evidence of hole or damage</td>
<td>3</td>
</tr>
<tr>
<td>Some bleeding</td>
<td>6</td>
</tr>
<tr>
<td>Moderate bleeding</td>
<td>1</td>
</tr>
<tr>
<td>No details</td>
<td>31</td>
</tr>
</tbody>
</table>
Beak
II Hooked in upper or lower jaw with or without entanglement. Includes rhamphotheca, but not any other jaw/mouth tissue parts (see Category III). (note: this category no longer includes rhamphotheca; it does include mouth, lower, other and mouth, side, other tissue parts not categorized elsewhere)
Jaw Joint
Mouth, lower, other
Mouth, side, other
III Hooked in cervical esophagus, glottis, jaw joint, soft palate, tongue, and/or other jaw/mouth tissue parts not categorized elsewhere, with or without entanglement. (Includes all events where the hook is visible when viewed through the mouth. Note: no longer includes other jaw/mouth tissue parts not categorized elsewhere)
Category III
IV Hooked in esophagus at or below level of the heart with or without entanglement. (Includes all events where the hook is not visible when viewed through the mouth.)
WHERE WE (SE) ARE NOW

- Quarterly and annual bycatch reports for all hook and line fisheries include details on every turtle captured, including hooking location, gear removal, and capture and final dispositions.

- Those same tables categorize each turtle corresponding to the SEFSC post-release mortality protocols table (row and column).

- All reports are provided to SERO and posted on our public website.
SEFSC Sea Turtle Life History Form

HOOK LOCATION (See Appendix in manual for descriptive figures)
(circle specific location; check box if specifics are not known; annotate drawing on reverse to indicate location as needed):
[ ] Not Hooked  [ ] Not Known if Hooked  [ ] Hooked, but location totally Unknown

Internal:
[ ] Unknown, internal
[ ] Swallowed (Esophagus)  Hook visible? Visible to insertion point / Partial hook / Not visible
[ ] Beak/Mouth (Circle one)  Jaw Location (Check one) [ ] upper  [ ] lower  [ ] side (mouth only)
Check one for mouth: [ ] tongue  [ ] glottis  [ ] roof of mouth  [ ] jaw joint  [ ] other (describe)

External:
[ ] Unknown, external  [ ] Beak/Head/Neck  [ ] Carapace/Plastron
[ ] Front Flipper/Shoulder/Armpit  [ ] Rear Flipper/Groin/Tail

Was hook removed from this animal?  Y / N / Unknown / Not Applicable

Was animal entangled in gear? At capture? Y / N / Unknown  At Release? Y / N / Unknown
How much gear (linear feet) was left on turtle when released? [ ] [ ] [ ] ft. (estimated/measured)
Questions?