THE OTHER BYCATCH

Recreational Fishing Gear and Non-Target Wildlife

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Recreational Fishing

55 billion
12%

Study Aims

preliminary investigation
range of species affected
species at high risk
survival versus mortality
inform mitigation efforts
APPROACH

Wildlife Rescue/Rehabilitation Centers

professional contacts

social media

NWRA website
DATA COLLECTED

case volume

species
gear (line, hook, both)

final disposition
Participating facilities

N = 29
15 states
2004 - 2014
Participating facilities

Alaska
Hawaii
CASE VOLUME

2,544 cases

1,913 species identity provided
SPECIES (110)

- BIRDS (92, 84%)
- REPTILES (14, 13%)
- MAMMALS (3)
- AMPHIBIANS (1)

N = 1,918
CASES

N = 1,918

- BIRDS: 1,796 (94%)
- REPTILES: 117 (6%)
- MAMMALS (3)
- AMPHIBIANS (2)
## TOP TEN

<table>
<thead>
<tr>
<th>Species</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown Pelican</td>
<td>631</td>
<td>35%</td>
</tr>
<tr>
<td>Muscovy Duck</td>
<td>144</td>
<td>8%</td>
</tr>
<tr>
<td>Royal Tern</td>
<td>143</td>
<td>8%</td>
</tr>
<tr>
<td>Northern Gannet</td>
<td>100</td>
<td>6%</td>
</tr>
<tr>
<td>Great Blue Heron</td>
<td>96</td>
<td>5%</td>
</tr>
<tr>
<td>Double-crested Cormorant</td>
<td>95</td>
<td>5%</td>
</tr>
<tr>
<td>Common Loon</td>
<td>67</td>
<td>4%</td>
</tr>
<tr>
<td>Canada Goose</td>
<td>58</td>
<td>3%</td>
</tr>
<tr>
<td>Laughing Gull</td>
<td>50</td>
<td>3%</td>
</tr>
<tr>
<td>Red-eared Slider</td>
<td>50</td>
<td>3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,434</td>
<td>80%</td>
</tr>
</tbody>
</table>
57 Raptors (7 spp.)

45 Ducks (14 spp.)

35 Passerines (12 spp.)
N = 1,522
1,483 (58%)

511 (20%)

477 (19%)

N = 2,544
CONCLUSIONS

Aquatic birds most vulnerable
Aquatic turtles often affected
Hooks > line but both important
Rescue and treatment often effective (58%)
MITIGATION

Adult female mallard with fishing hook embedded in lower mandible.

Improperly discarded fishing gear poses a serious risk of injury, infection and death to native wildlife.

Don’t leave fishing gear behind.

Radiograph on admission to Tri-State Bird Rescue.

Release following surgery and antibiotics.

Photographs courtesy of Marian Quinn.
MITIGATION

“Green fishing” equipment:
Biodegradable fishing line
Tungsten sinkers
Circle hooks

→ Fishing license applications?
“Barbless hooks were expelled 3.9 times faster when located deep in the oral cavity compared to barbed hooks...”

Stein et al. 2012. *Fisheries Research* 113:147-152
Courtesy of Greg Golgowski, Harmony Devel. Co.)
Study limitations

Small scale of study

Uneven case loads:
most were coastal
>50% from SFWC

Skewed recovery rates?
(rescued animals)
RECOMMENDATIONS

expanded mitigation efforts:

• all public fishing areas
• fishing license applications

abstension