EVALUATING EFFECTIVENESS OF TARGETED OUTREACH FOR INVASIVE REPTILES IN SOUTH FLORIDA

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Introduction

- The four largest lizard species currently breeding in Florida are invasive
- Nile monitors (Varanus niloticus) and Argentine black and white tegus (Salvator merianae) have broad diets, posing significant risks to many native wildlife
- Difficult to detect and largely localized to urban, suburban, and agricultural areas
- Impossible to survey everywhere, so we need help!

Methods and Study Area

**Nile monitor outreach**

- April 2018 – April 2019 deliver targeted outreach to neighborhoods, businesses, parks, workers, and natural areas in and around C-51 Basin in Palm Beach County.
- Select areas by UF survey routes, suitable habitat, previous reports, or potential threat to natural resources (high-risk areas = close to natural area, i.e. Lox NWR)
- Track in-person interactions from targeted outreach (Table 1.; Figures 1 & 2)
- When report is received, document which media type or method of communication

**Argentine black & white tegu outreach**

- Rapidly respond to reports on Early Detection & Distribution Mapping System
- Primarily target rural or agricultural areas of Miami-Dade County

Objectives

- Create widespread observational network as part of interagency effort to detect and remove Nile monitors and Argentine black and white tegus
- Deliver variety of targeted outreach with specific message for a specific audience (i.e. door hangers, flyers, social media, presentations)
- Evaluate effectiveness of each method for replication and enhancement
- Help fill in knowledge gaps about distribution, abundance, occupancy, nesting, and habitat use of large invasive lizards to improve detection and removal

Results

<table>
<thead>
<tr>
<th>Method</th>
<th>Total effort</th>
<th>In-person contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door hanger (Nile monitors)</td>
<td>2,042</td>
<td>144</td>
</tr>
<tr>
<td>Door hanger (Tegus)</td>
<td>274</td>
<td>9</td>
</tr>
<tr>
<td>Flyer (Nile monitors)</td>
<td>91</td>
<td>17</td>
</tr>
<tr>
<td>Flyer (Tegus)</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Presentation</td>
<td>236</td>
<td>236</td>
</tr>
</tbody>
</table>

Table 1. Total effort (# materials distributed) and contacts made from April 2018 to April 2019.

- 2 verified Nile monitor reports
- 8 verified Argentine black and white tegu reports

Conclusions and Effectiveness

- Several residents have seen Nile monitors or taken pictures, but did not know how to report
- One community shared Nile monitor door hanger through “Next Door” phone app
- Discovered potential new “hot spot” for tegus in Redlands – further investigating property
- Targeted outreach starts with focused audience, but word spreads from there (i.e. websites, community boards, social media, etc.)
- Challenging to quantify effectiveness – often leaving it up to the individual to say something

Acknowledgments

1. Florida Fish and Wildlife Conservation Commission
2. U.S. Fish and Wildlife Service
3. University of Florida biological technicians and volunteers

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