The Road to Recovery: the Case for Species at Risk Reptiles in Ontario

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Outline

- SARA & ESA
- Recovery in Ontario
- SAR Reptiles and Road Impacts
- Special case for SAR?
- Concluding Remarks
Federal SARA

- One of three pillars to Canada’s Strategy for the Protection of Species at Risk
- Royal Assent in December 2002
- Came into force on June 5th, 2003
- Two competent ministers
  - Environment
  - Fisheries and Oceans
- Specific recovery objectives prescribed
- Protect individuals and habitats

- SARA Public Registry, Mar 2007
Ontario ESA

- Came into effect in 1971
- provisions to protect listed species and their habitats
- May 9, 2006 - announced the Species at Risk Legislative Review
- proposes broader protection for species at risk and their habitats.
- Lead/participate in recovery effort

- Ontario Ministry of Natural Resources, Species at Risk Website, Mar 2007
Recovery in Ontario

- Planning (RSs, APs) & implementation
- Recovery teams
- Scientists, governments, stakeholders, ENGOs, industry, Aboriginal
- Species description, target pop objectives, threats, broad strategies, critical and/or significant habitat
- Cooperation and consultation
- Millions of dollars
Reptile Efforts

- 18 reptiles at risk federally in Ontario
- 10 recovery teams covering 14 spp.
- Avg. 12 people/team = 120 people
- Just for reptiles!
- Search for efficiencies - most impact
  - Multi-SAR
  - Cross cutting threats
Eastern Massasauga

- Team in place well before SARA
- Extensive planning and implementation efforts
- **Goal:**
  - (1) achieve viable populations of Massasaugas in tallgrass and peatland ecosystems
  - (2) retain the current distribution, structure, and connectivity among local (sub)populations throughout the Bruce Peninsula and Georgian Bay population regions
- **International Symposia (3rd - Oct 2005)**
- Impacts of roads discussed as threat to EMR recovery
Road Impacts

- It’s happening
- Several studies on mortality rates
- Other effects
  - Habitat loss
  - Lack of access to resources
  - Population subdivision
- Is it impacting recovery in its own right?
- Cumulative?
Massasauga RT

- Road kill significant in some areas where roadways intersect snake movement paths
- Observations of individuals dead on the road make up relatively large prop. of encounters during field studies in some regions
- The frequency of road mortality tends to vary seasonally and is + correlated with traffic volume

- Draft Recovery Strategy, 2005

- Massasauga RT Website, Mar 2007
Multi-Turtle RT

- Blanding’s - √√√
- Map - √
- Spotted - √√-√√√
- Spiny Soft Shell - √
- Stinkpot - √
- Wood - √√-√√√

- Draft Recovery Strategy, 2007

√√√ - threat that will lead to sig. decline & is present &/or chronic
√√ - threat that will cause decline but is irregular, local
√ - threat is rarely or not encountered
E. Hog-nosed Snake RT

- It is **unclear** how significant a threat traffic mortality is
- Have been found to exhibit **road avoidance**
- Road construction can destroy, degrade, fragment habitat

- Draft Recovery Strategy, 2007
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>COSEWIC STATUS</th>
<th>ROADS AS THREAT</th>
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<td>Wood Turtle</td>
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</tbody>
</table>

Of 18, 11 list road mortality as threat

Of 7 left, 5 are more aquatic and one is extirpated
What is it about SAR Reptiles?

- Long-lived
- Late age at maturity
- Low recruitment rates
- Slow moving
- Use different habitats for different life stages
- Occur in warmer climates (i.e. S. Ontario)
- Overlapping with area of greatest population & development
Special Case for SAR?

- Populations already in decline
- Sense of urgency given their status
- Are roads having a greater impact?
- Difficult to study (e.g. long-lived species)
- Data often lacking

"One day son, all of this will be yours"
Given special circumstances, how to deal with SAR?

Often no scientific evidence to prove unequivocally that roads impact recovery goals (potential)

Interim measures to deal with urgency - precautionary?

Long-term measures for sustainability?

Are they different?
The Need for a Forum

- 3rd Massasauga Symposium
- RTs recognition of roads as a threat
- Urgency for SAR
- Rapid development in Ontario
  - S. Ontario - the primary road network increased from approx. 7000 km to 35 000 km from 1935-1995 (Fenech et al. 2001).
- We need solutions!
'Species at Risk – Act Today so They Have Tomorrow'

- Ontario Ministry of Natural Resources, Species at Risk Website, March 2007