One Health messaging about bats and rabies: how framing of risks, benefits and attributions can support public health and wildlife conservation goals

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Leaflets

Risk-benefit, human blame message

**Bats, Rabies, and You**

Bats live near this area of the park. Our health is linked to the health of all species and the environment, so please read the following message to protect yourself and bats.

Bats play an important part of ecosystems, consuming large quantities of insects like mosquitoes and insects that can damage crops or forests. They also pollinate plants and disperse seeds.

A small percentage of bats have rabies, which they can transmit to people, usually by exposing people to saliva through a bite or scratch. Rabies can be prevented in humans if you seek medical care, but rabies is fatal if left untreated. Rabies is often fatal to bats, too.

Human activities and expansion of urban areas can disturb bats and encroach on bat habitats. This can increase the risk of human encounters with a rabid bat.

Because bats live near this area of the park, if you see a bat that is behaving strangely, such as being aggressive, lying on the ground, flying near, or making contact with people, tell a park ranger right away. The bat may need to be tested for rabies, and if you had contact with the bat, you may need medical attention to prevent you from getting sick with rabies.

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For More Information:

Dr. Danielle Buttle, one Health Coordinator, 970-267-2118

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Risk-benefit, bat blame message

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Bats are responsible for the majority of human rabies cases in the United States. Rabies can circulate among bats because of their biology and behaviors.

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Risk-only, human blame message

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Survey

1. How likely are you to engage in the following actions related to bats in the next year?

<table>
<thead>
<tr>
<th>Action</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct homes for bats at my residence.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Allow bats to use the outside of my residence.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Join or support a bat conservation group.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

2. How likely are you to engage in the following behavior if you encountered a bat behaving strangely in the park, such as lying on the ground or flying in the middle of the day?

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell a park ranger</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

3. Do you agree or disagree that bats are:

<table>
<thead>
<tr>
<th>Trait</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractive</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Vulnerable</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worthless</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Harmless</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Native</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Frightening</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

4. Prior to this visit, were you aware that some bats carry rabies?
- ○ Not aware
- ○ Somewhat aware
- ○ Very aware

5. Have you ever seen a rabid bat?
- ○ Yes
- ○ No
- ○ I’m not sure
6. What did you think about the message you read at the beginning of the survey?

<table>
<thead>
<tr>
<th>Message</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The message I read was clear.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The message I read was informative.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>This message I read was persuasive.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

7. Are you male or female?

- [ ] Male
- [ ] Female

8. What is your age (in years)?

9. What is the highest level of school you have completed?

- [ ] Grade 8 or lower
- [ ] Some high school, no diploma
- [ ] High school diploma or equivalent
- [ ] Some college, no degree
- [ ] Associate degree
- [ ] Bachelor’s degree
- [ ] Master’s degree
- [ ] Professional degree
- [ ] Doctorate degree

10. Which category best represents your annual household income? Please mark only one.

- [ ] Less than $24,999
- [ ] $25,000 to $34,999
- [ ] $35,000 to $49,999
- [ ] $50,000 to $74,999
- [ ] $75,000 to $99,999
- [ ] $100,000 to $149,999
- [ ] $150,000 to $199,999
- [ ] $200,000 or more

11. Are you Hispanic or Latino?

- [ ] No
- [ ] Yes

12. What race do you consider yourself?

- [ ] American Indian or Alaska Native
- [ ] Asian
- [ ] Black or African-American
- [ ] Native Hawaiian or other Pacific Islander
- [ ] White
- [ ] Other

13. Have you visited an NPS site before today?

- [ ] Yes
- [ ] No

14. If yes, how many times have you visited an NPS site in the past year?
○ Once
○ 2-5 times
○ 6-10 times
○ More than 10 times

15. How likely are you to visit an NPS site in the future?
○ Very unlikely
○ Unlikely
○ Neutral
○ Likely
○ Very likely