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*Wildlife Research*

### Supplementary Material

#### **'It's a people problem, not a goat problem.' Mitigating human–mountain goat interactions in a Canadian Provincial Park**

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# Supplementary Information- 2020 Survey Form

## Dimensions of Human-Mountain Goat Interactions in Cathedral Provincial Park

Recorder Name: \_\_\_\_\_

Date of Record: \_\_\_\_\_

### Demographics

Age:  18-30  31-65  65 +

Gender:  Female  Male  Non-binary

Role in Park:

Camper  Day Hiker  Lodge Guest

Park Staff/ Campground Manager  Other \_\_\_\_\_

How many times have you been here, over how many years? \_\_\_\_\_

What is the average length of your stay? \_\_\_\_\_

### Encounter Information

1. Have you encountered goats in the park? Yes  No

2. Number of people in group: \_\_\_\_\_

3. Observation Date: \_\_\_\_\_ Time of day: \_\_\_\_\_

4. Location of Observation (please be specific, i.e., Campsite # and campground): \_\_\_\_\_

\_\_\_\_\_

5. Duration of Observation (minutes, hours) \_\_\_\_\_

6. Closest distance to goats: \_\_\_\_\_

7. Markings on goat(s) (tags, natural markings or characteristics): \_\_\_\_\_

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\_\_\_\_\_

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8. Total Number of goats:

Number of Kids: \_\_\_\_\_ Number of Adults: \_ \_

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Number of Sub-adults: \_\_\_\_\_ M F Unk

9.

10. Activity of person(s) when observation made (i.e., hiking, resting, camping)

\_\_\_\_\_

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11. Activity of goat when first seen (i.e., feeding, bedded, walking)

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12. Response of goat to person(s) once seen (see behaviour information sheet for aggressive behaviours):

no change in activity                       alert, observe in place                       Other \_\_\_\_\_

approached person/group                       stood ground / stare                       horn swipe

horn threat (head down prominently showing horns)                       present threat

move away from person/people                       walk/trot toward person/people with horn threat

Additional Comments? \_\_\_\_\_

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13. Did you do anything to try to get the goats out of the area? Yes  No

If so, what? \_\_\_\_\_

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How did goats respond? \_\_\_\_\_

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If not, how did you respond? \_\_\_\_\_

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14. What do you think is attracting goats into the campground/park visitor areas? And/or why do you think the goats are coming into the campground/park visitor areas? \_\_\_\_\_

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15. Was human salt available (i.e., sweaty gear, urine)? Yes  No

Did goat(s) consume it? Yes  No

16. If you have been here multiple times over two or more years, have you noticed any changes relative to goats (i.e., have you seen them more often over time, have they come closer to the camp/visitor area over time, have they stayed away from camp/visitor area more over time)?

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### Perceptions, knowledge, and responsibility

17. Do you feel threatened by goats in the campground? Yes  No

18. Do you think it's peculiar or 'wrong' that goats are so apparently comfortable with people?  
Yes  No

Please explain your response: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

19. Do you feel any responsibility for protecting goats by managing attractants? Yes  No

If not, why not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. How would you feel/react if a goat had to be destroyed or moved as a result of being in contact with park users or in campgrounds? \_\_\_\_\_

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21. Do you feel any sense of responsibility for protecting the park? Yes  No

The goats? Yes  No

Wildlife in the park? Yes  No

Please explain your response: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Messaging

22. Have you seen or been given any information about mountain goats since entering the park?

Yes  No

If so, what type? (mark all that apply)

- Main sign boards on trails
- Brochures on viewing mountain goats in the park
- Signs located throughout the campground
- Signs located in the bathrooms of the campground

- Online information on the park's website
- Information given by campground or lodge staff
- Other \_\_\_\_\_

23. What was the main message you understood from the information about goats and/or what do you remember? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

24. Are you aware of the importance of using the outhouses and proper storage/disposal of attractants?

Yes  No

25. Have you used the outhouses every time you've gone to the bathroom, even in the middle of the night?

Yes  No

If no, what prevented you from using the outhouse? (Or what would make it easier?)\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

26. What else, if anything, have you done to alter your behaviour in relation to the goats?

- Have not done anything differently
- Kept all attractants in my tent or in sealed containers
- Only used designated washrooms
- Other \_\_\_\_\_

27. What do you think would be the most effective method to create awareness of the goats and how to reduce human-goat interaction? (Check all that apply)

- More signage/messaging
- Clear instruction upon arrival to the park
- Pamphlets/Brochures
- Other \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Additional comments? \_\_\_\_\_



How did you get to the core area (campground)?:  Walked in  Took the shuttle  Other

\_\_\_\_\_

### Encounter Information

1. Have you encountered mountain goats in the park? Yes  No

2. Have you ever encountered mountain goats before this trip?

Yes, I've seen them in Cathedral before

Yes, I've seen them elsewhere (please specify where \_\_\_\_\_)

No, I've never seen them before

3. Number of people in group during encounter: \_\_\_\_\_

4. Observation Date: \_\_\_\_\_

5. Time of day:  5am-10am  10am-2pm  2pm-5pm  5pm-7pm  7pm-10pm

6. Location of Observation (please be specific, ie. Campsite # and campground): \_\_\_\_\_

\_\_\_\_\_

7. Duration of Observation  0-5 minutes  6-10 minutes  11-15 minutes

15-20 minutes  >20 minutes

8. Closest distance to goats:  0-5 metres  6-10 metres  11-20 metres  21-50 metres  >50 metres

9. Markings on goat(s) (tags, natural markings or characteristics): \_\_\_\_\_

\_\_\_\_\_

10. Total Number of goats:

Number of Kids: \_\_\_\_\_

Number of Adults: \_\_\_ \_\_\_

Number of Sub-adults: \_\_\_\_\_

M F Unknown

11. Activity of person(s) when observation made (i.e. hiking, resting, camping)

\_\_\_\_\_

12. Activity of goat when first seen (i.e. feeding, bedded, walking)

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13. Response of goat to person(s) once seen:

- no change in activity                       alert, observe in place                       Other \_\_\_\_\_
- 
- approached person/group                       stood ground / stare                       horn swipe
- horn threat (head down prominently showing horns)                       present threat
- move away from person/people                       walk/trot toward person/people with horn threat

Additional Comments?

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14. Did you do anything to try to get the goats out of the area? Yes  No

If so, what? \_\_\_\_\_  
\_\_\_\_\_

How did goats respond? \_\_\_\_\_  
\_\_\_\_\_

If not, how did you respond? \_\_\_\_\_  
\_\_\_\_\_

15. What do you think is attracting goats into the campground/park visitor areas? And/Or why do you think the goats are coming into the campground/park visitor areas? \_\_\_\_\_

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16. Was human salt available (i.e. sweaty gear, urine)? Yes  No   
Did goat(s) consume it? Yes  No

17. If you have been here multiple times over two or more years, have you noticed any changes relative to goats (i.e. have you seen them more often over time, have they come closer to the camp/visitor area over time, have they stayed away from camp/visitor area more over time)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Perceptions, knowledge, and responsibility

18. Do you feel threatened by mountain goats in the campground? Yes  No

19. Do you think it's peculiar or 'wrong' that goats are so apparently comfortable with people? Yes   
No   
Please explain your response: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. Do you feel any responsibility for protecting goats by managing attractants? Yes  No   
If not, why not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. How would you feel/react if a goat had to be destroyed or moved as a result of being in contact with park users or in campgrounds? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

22. Do you feel any sense of responsibility for protecting the park? Yes  No   
The goats? Yes  No   
Wildlife in the park? Yes  No   
Please explain your response: \_\_\_\_\_

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## Messaging

23. Have you seen or been given any information about mountain goats since entering the park? Yes  No

If so, what type? (mark all that apply)

- Main sign boards on trails
- Brochures on viewing mountain goats in the park
- Signs located throughout the campground
- Signs located in the bathrooms of the campground
- Online information on the park's website
- Information given by campground or lodge staff
- Other \_\_\_\_\_

24. What was the main message you understood from the information about goats and/or what do you remember? \_\_\_\_\_

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25. Are you aware of the importance of using the outhouses and proper storage/disposal of attractants?

Yes  No

26. Have you used the outhouses every time you've gone to the bathroom, even in the middle of the night?

Yes  No

If no, what prevented you from using the outhouse? (Or what would make it easier?) \_\_\_\_\_

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27. What, if anything, have you done to reduce your interactions with or avoid mountain goats?



1) What is your position and or experience in the park? For how long have you held this position and/or had a presence in the park?

2) Have you encountered goats in the park?

Can you describe a typical goat encounter, or an encounter that stood out, that you have experienced?

a. Did you have any direct interaction with the goats? What did the goats do, how did they behave? Did they notice you?

b. What did you do, how did you behave?

3) Why do you think the goats are attracted to the lodge, camping, and visitor areas?

4) Have you noticed any changes in goat presence and behaviour over your time (working) in the park?

a. If yes, what is different between now and previous years? What has this change looked like over the time that you've been here?

5) Do you think the current messaging is effective in creating awareness of the goats and reducing human-goat interactions or encounters?

For example: Main sign boards on trails, Brochures on viewing mountain goats in the park, Signs located throughout the campground, Signs located in the bathrooms of the campground, Online information on the park's website, Information given by campground or lodge staff.

6) What do you think is/could be the most effective method to create awareness of the goats and to reduce human-goat interaction? E.g., More signage/messaging, clear instruction upon arrival to the park, pamphlets/brochures

7) Have you noticed changes in numbers and types of park users over time? I.e., rural, lower mainland, interior, international, backcountry experience)

8) Are you aware of land uses in this area? What are some of the industries in this area? (e.g., resource extraction, tourism, forestry, etc.).

9) Have there been changes in the management of land over your time in the park? Have you seen any effects based on these uses or changes?

10) Are you aware of environmental events or changes in this area? These could be related to climate, fires, or floods, for example. Can you describe what you've noticed and how this has impacted the area.

11) Do you think any of these broader land uses or environmental factors influence goats' presence in the park?