

Utilising naïve observers in animal behaviour and welfare research_Fenn Bell

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Thank you very much for agreeing to participate in this survey. Global biodiversity losses are at an all-time high and conservation science is now a priority discipline. Citizen science is a powerful tool for tackling conservation issues, and engagement with the public (including zoo visitors) via education is vital for successful conservation. Understanding and empathy for animals is important in pro-conservation behaviour. Research has shown that zoo visitors think more positively about conservation the more they interact with animals. We believe that opportunities to engage in citizen science initiatives in zoos may have positive impacts for zoo visitors and their longer-term attitudes towards conservation. The aim of this study is to develop methodologies to enable opportunities for zoo visitors to engage in citizen science research, specifically opportunities to capture animal behaviour data. You are being invited to undertake a short period of behavioural observations, during which time you will be coding animal behaviour, and then you will be asked a few additional questions. I am aware that: The information I provide will be used to understand the way in which citizen science opportunities can best be used within a zoological collection No personal data is being collected during this questionnaire During the data collection the researcher will be collecting information on how many people engage with the research and the time spent at enclosures, no identifying details will be recorded during this process The information I provide during this questionnaire will be stored securely and will be accessible only by the research team for the purposes of this study and any future reports or presentations arising from this study All information I provide during this questionnaire will be anonymised before production of reports or presentations I can withdraw my input into this study by not completing/returning the questionnaire but after that point I cannot withdraw my consent due to the anonymous nature of data collected If you have any questions about the research then please contact Dr Ellen Williams on ewilliams@harper-adams.ac.uk. By completing this questionnaire, I am confirming that I have read and understood the above information and agree for the information I provide to be used in the manner as outlined. I further confirm that I am over the age of 18.

I confirm I have understood this information and I am happy to participate in this research. Please note, if you do not wish to participate in this survey you can just close the browser. *

☐ Yes

Part 1: Behaviour Observations Recording Sheet

Species:

☐ Otter

Number of individuals visible at the start of the observation:

☐ 0

☐ 1

☐ 2

Area of enclosure being used by any animals at start of observation (tick all that apply):

☐ Grass/bark

☐ Stream

☐ Pond

☐ Bed

☐ Out of View

What is the time? Please use a 24 hour clock.

Watch all animals in the enclosure for 2 minutes. If any animal in the enclosure engages in one of the behaviours below, put a mark in the box.

Which behaviours have you observed during the 2 minutes (tick all that apply)

☐ Walking/Running

☐ Swimming

☐ Engaging with stream

☐ Resting alone

☐ Nesting (e.g. moving bedding)

☐ Foraging (e.g. searching for food)

☐ Vocalising

☐ Eating/Drinking

☐ Playing alone

- ☐ Grooming self
- ☐ Positive Social Behaviours (e.g. grooming other, playing together, resting together)
- ☐ Negative Social Behaviours (e.g. fighting)
- ☐ Abnormal Repetitive Behaviours (Animal is performing repetitive behaviours for more than 3 seconds, may include pacing back and forth rapidly in a small space, head rolling, etc.)
- ☐ Mounting (animal is mounting the other)
- ☐ Looking at observer/visitors
- ☐ Looking at staff
- ☐ Other
- ☐ Out of sight of the observer

Number of individuals visible at the end of the observation:

- ☐ 0
- ☐ 1
- ☐ 2

Area of enclosure being used by any animals at end of observation (tick all that apply):

- ☐ Grass/bark
- ☐ Stream
- ☐ Pond
- ☐ Bed
- ☐ Out of View

Assessment of animal feelings

We would love to gather your thoughts on how our animals were feeling at the time of your observation. Are you happy to answer a further 10 questions to help us capture this data today?

☐ Yes

☐ No

Part 2: Qualitative Behavioural Assessment

Following your two-minute observation period, please complete this short assessment on how you think the animals seemed during your observation. To help you interpret these in terms of welfare state of the animals a (+) or (-) has been added next to each term. Terms with a (+) mean this is considered to be a good welfare state, and the higher the animals are scoring on this term the better the welfare state is. Terms with a (-) mean this is considered to be a poor welfare state and the higher the animals are scoring on this term the poorer their welfare state is.

Content/relaxed (+): Appears at ease/relaxed, tranquil, seems satisfied and free from tension (1 = Not Content/relaxed, 10 = Content/relaxed)



Agitated (-): A state of uncertainty which can be accompanied by physical restlessness and over-reaction to stimuli. Scanning environment in a tense and anxious fashion. (1 = Not agitated, 10 = Agitated)



Frustrated (-): Reacting to seeking a goal without success; can be violent towards others or objects. Angry body posture. (1 = Not Frustrated, 10 = Frustrated)



Comfortable (+): Relaxed body posture, animal appears at ease in the environment, relaxed responses to stimuli (1 = Uncomfortable, 10 = Comfortable)



Wary (-): Sometimes nervous, paused reaction to some stimuli, unwilling to move in or out of an area, may be accompanied by listening and smelling. It is a slow and calm behaviour. (1 = Not Wary, 10 = Wary)



Confident/not fearful (+): Animal is behaving in a positive, assured manner. Not particularly showing signs of fleeing, or otherwise fearful of the environment. (1 = Not confident/fearful, 10 = Confident/not fearful)



Distressed (upset) (-): Animals seem to be suffering from a loss, may search the environment restlessly or without apparent purpose. (1 = Not Distressed, 10 = Distressed)



Lively/engaged with the environment (+): Appears interested in the environment and/or engaged with objects or individuals, has a generally positive demeanour. (1 = Not lively/engaged with the environment, 10 = Lively/engaged with the environment)



Part 3: Animal welfare

How would you describe or define animal welfare?

Where do you think you learned this definition of welfare from? Please select all that apply.

- ☐ At this zoo
- ☐ At another zoo
- ☐ At an educational facility
- ☐ From the tv/a tv documentary
- ☐ Not applicable
- ☐ Other

If you selected Other, please specify:

On a scale of 1-10 (from one being worst imaginable and 10 being best imaginable), how would you describe the welfare of the animals you have just observed?

Why do you think that?

Part 4: The citizen science process

How easy did you find data collection and the corresponding questionnaires?

- ☐ Very difficult
- ☐ Somewhat difficult
- ☐ Neither easy nor difficult
- ☐ Somewhat easy
- ☐ Really easy

Was there anything in particular you found difficult or confusing?

Was the observation period long enough for you to record behaviours?

- ☐ Yes
- ☐ No

Did you feel confident that you could identify all of the behaviours listed?

- ☐ Yes
- ☐ No

Why did you not feel confident?

Did you find this process rewarding?

- ☐ Yes
- ☐ No

☐ Unsure

Do you have any ideas on how to improve the process?

Would you engage in this sort of process again?

☐ Yes

☐ No

☐ Unsure

Part 5: Zoo visits

How often do you usually visit this zoo?

- ☐ Once a week
- ☐ Once a month
- ☐ Once every 1 – 3 months
- ☐ Once every 3 – 6 months
- ☐ Once every 6 months to one year
- ☐ Less than once a year

Utilising naïve observers in animal behaviour and welfare research_Twycross

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☐ Yes

Part 1: Behaviour Observations Recording Sheet

Species:

☐ Giraffe

Number of individuals visible at the start of the observation:

☐ 0

☐ 1

☐ 2

Area of enclosure being used by any animals at start of observation (tick all that apply):

☐ Inside

☐ Outside (concrete areas)

☐ Outside (grass/sand area)

What is the time? Please use a 24 hour clock.

Watch all animals in the enclosure for 2 minutes. If any animal in the enclosure engages in one of the behaviours below, put a mark in the box.

Which behaviours have you observed during the 2 minutes (tick all that apply)

☐ Walking/Running

☐ Standing still

☐ Eating/Drinking

☐ Chewing the cud (Animal is chewing and swallowing a ball of already ingested food)

☐ Grooming Self

☐ Positive Social Behaviours (e.g. grooming other, playing)

☐ Negative Social Behaviours (e.g. sparring)

☐ Abnormal Repetitive Behaviours (Animal is performing repetitive behaviours for more than 3 seconds, may include route tracing, head rolling or licking bars)

☐ Mounting (Animal is mounting another giraffe)

☐ Looking at observer/visitors

- ☐ Looking at staff
- ☐ Other
- ☐ Out of sight of the observer

Number of individuals visible at the end of the observation:

- ☐ 0
- ☐ 1
- ☐ 2

Area of enclosure being used by any animals at end of observation (tick all that apply):

- ☐ Inside
- ☐ Outside (concrete area)
- ☐ Outside (grass/sand area)

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Would you engage in this sort of process again?

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