

### SUMMARY

In order for animals to thrive within captive scenarios, their lifetime experiences must be considered. The 24/7 framework proposes a tool for care staff to determine how well they are providing habitats that meet their animals' needs. This framework is based on the 12-point welfare assessment criteria framework by Welfare Quality®. This involved four key principles: good feeding, good housing, good health and appropriate behaviour. We have adapted these 12 welfare assessment criteria to be more relevant to zoo animal welfare and propose two additional criteria to determine whether welfare needs are met.

# **Paper Highlights:**

The animal welfare 24/7 across the lifespan concept provides a holistic framework to map features of the animal's life cycle, taking into account their natural history, in relation to variations in the captive environment, across day and night, weekdays, weekends, and seasons.

The framework (Fig. 1) requires consideration and integration of life stages, in relation to species and individual differences, and the roles animals play, variations, and other factors affecting animal welfare.

Understanding how to assess and promote captive wild animal welfare from a 24/7 approach is one of major challenges and responsibilities of modern zoos and sanctuaries today. Animal welfare assessment decisions and their implementation is informed and based on science, considering both resource (input) and animal-based (outcome) parameters.

Those caring for zoo animals should therefore aspire to promote optimal animal welfare, 24/7 across their entire lifespan using the criteria proposed.



## The 14 Welfare Assessment Criteria

# **Good feeding:**

Are the animals properly fed and supplied with water?



1. Absence of prolonged hunger (i.e. mimic natural feeding intervals). Other end of the spectrum should also be considered, i.e. obesity.

#### Example:

Foraging Orange-winged Amazon parrots



2. Access to appropriate food and species-typical foraging opportunities (i.e. they should have a nutritionally suitable and appropriate diet & delivery).

### Example:

**Enrichment Orange-winged Amazon** 



3. Absence of prolonged thirst (i.e. they should have a sufficient and accessible water supply).

### Example:

Recognition of an important water quality

# **Good housing:**

Are the animals properly housed?



4. Animals should have comfort when they are (socially) resting, i.e. physically comfortable and relaxed (e.g. not always vigilant) when resting and sleeping.

### Examples:

<u>Animal activities</u> <u>Enriching the lives of bears in zoos</u>



5. Animals should have thermal comfort, i.e. they should neither be too hot nor too cold and have thermal zones to choose from.

#### Example:

Andean Bear Cub Helps Mom Build a Nest



6. Animals should have enough space to be able to move around freely in relation to natural locomotion (e.g. leap distance, orientation of substrates etc.), and in context of indoor-outdoor space restrictions.

#### Example:

Gibbon at Denver Zoo



7. Animals should have perceived control (i.e. complex enclosure giving them choice over what and when they do things).

#### Examples:

Preference assessments to allow animals to choose enrichment items

The importance of choice in animal training

### **Good health:**

# Are the animals healthy?



8. Animals should be free of major injuries, e.g. skin damage and locomotory disorders.

### Examples:

<u>Denver Zoo</u> <u>San Diego Zoo</u>



9. Animals should be free from disease i.e. appropriate standards of hygiene and care.

Example:

Wellington veterinary centre



10. Animals should not suffer pain induced by inappropriate management, handling, catching, or transport.

Examples:

<u>Crate training at Denver Zoo</u> <u>Oregon Zoo</u>



11. Animals should be treated well in all situations (i.e. care staff should promote good human-animal relationships, with the animal's perspective as the focus).

Example:

**Human-animal bonds** 

# **Appropriate behaviour:**

Does the behaviour of the animals reflect optimized emotional states?



12. Animals should be able to express normal, non-harmful, social behaviours (e.g. grooming).

Example:

Barbary macaques (Macaca sylvanus)



13. Animals should be able to express other normal behaviours, i.e. it should be possible to express species-specific natural behaviours, e.g. burrowing, exploring, scent-marking.

Example: Otterly Engaging



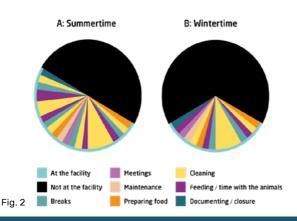
14. Negative emotions such as fear, distress, frustration or boredom/ apathy should be avoided where- as positive emotions such as security or contentment should be promoted.

Example:

Andean bear wobble tree enrichment

# Why is this relevant to animal welfare?

Care activities within zoos and other captive scenarios are scheduled for the convenience of staff rather than considering the biological and psychological requirements of the animals themselves. It is necessary to integrate a fully-functional approach for assessing and evaluating whether the animals we are working with are actually experiencing a positive animal welfare situation, 24/7, including the hours staff is absent (Fig. 2).



# Why is this relevant to the practical care for animals?

As animal care providers, there is an ethical responsibility to provide animals with an environment that is tailored to its needs and requirements. Making animal welfare assessment part of the routine will not only make the experience better for the staff but also for the animal which will lead to a higher possibility of good mental and physical health.

The 24/7 approach to promoting optimal welfare for captive wild animals. Behavioural Processes, Volume 156, November 2018, Pages 83-95.

Full length at: bit.ly/2Ju88WE













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