Stereotypic Behavior Ethogram for the Giant Panda
Study Guide

Stereotypy definition criteria require the rigid performance of the same behaviour form three or more times in a row and/or is embedded in a routine in which it is repeated at least three times. For example, pirouettes and head-tosses may occur repeatedly while locomoting, but separated by bouts of locomotion.

How to use Ethogram:
> Gray rows indicate recordable behavior on the ethogram, white rows give more definition and description about the subtypes of behavior that can be observed.

General Definitions:
> **Bout**: The duration of a behavior that gets recorded with a tally mark.
> **Events:** Behaviors that only last a short duration (<5s), and are counted by their frequency (e.g. vocalizations, pirouettes). Each short (<5s) bout gets a tally.
> **States:** Behaviors that last a long duration (>5s), and are counted with one tally mark per bout (e.g. locomote & feeding). A new bout starts once the bear changes behavior for >5s.

Behavior	Definition
Normal Behaviors	
Feeding	Mark a tally if you see the bear eating. Includes both consumption (chewing) and handling of food (e.g. bamboo, carrots, panda bread, enrichment food items), for example, peeling bamboo stalks, stripping leaves, or any other manipulation of bamboo to prepare it for consumption.
Resting/Inactive	Mark a tally if the bear is lying or sitting down, either awake or asleep. Includes when the bear is alert, standing quadrupedally, sitting or lying quietly, but remaining attentive, moving head from side to side and/or sniffing air, perhaps attending to external stimuli. If the bear does any other behavior for more than 5 seconds end the bout.
Locomote	The bear shows directional travel between points, or sustained locomotion in a non-stereotyped manner for longer than 5 seconds. If a pattern of 3 or more is established, start scoring "Stereotype Locomote" defined below. Always score locomote when the bear starts moving even if another stereotype or behavior is happening within locomote. For example, a bear can tongue flick while locomoting.
Social Interaction	Any interaction with another panda and animals are less than two body lengths apart and/or touching. Examples include social play (in cub kindergarten), interacting with

	another panda at the mesh barriers between enclosures, mother-cub interactions such as nursing, etc.
Not Visible	Score once if the bear moves temporarily out of view defined as not being able to see the bear's head at any time and/or 60% or more of the bear is obscured from view.
Vocalize	Score once for any sound produced by the bear. Can include bleat (twittering, goat-like call), chirp (short, tonal, high-pitched call), bark, moan (best described as a "wookie call" as exemplified by Chewbacca of Star Wars fame), honk (Short < 0.5s, tonal, low-pitched, nasal call), growl, roar, chomp, huff, snort, whimper/whine
Scent Mark	Urinating, defecating, and any scent marking behavior. Scent marking behavior can include rubbing the anogenital region (tail up) against object or substrate in squatting or standing posture, leg cock (often with urination), handstand marking (often with urination), body rubbing with scent anointing behavior (similar to cats), or scraping feet against the ground (often seen in close proximity to other pandas).
Other Normal	Anything else that doesn't fall under the above behaviors or stereotypic behavior. Examples include sniffing, exploring, playing (non-social), drinking, etc. Tally a bout when the bear starts a given behavior and end it when the bear changes behavior for at least 5 seconds even if it is into another "Other Normal" behavior. For example, if a bear is sniffing a toy tally "Other" once, if it then moves to grooming itself for more than 5 seconds give another tally to "Other", if it moves back to playing with the toy for more than 5 seconds give another tally to "Other".

Locomote Stereotypes	*Tally a bout once the bear hits the 3rd occurrence and end when it changes behavior for at least 5 seconds.*
Stereotypic pacing	Back and forth, or perimeter travel in a repetitive, sustained, locomotor pattern.
Quasi-stereotypic pacing	Same as stereotypic pacing above, except animal need not take the same path 3 or more times in a row. Any pacing in which a predictable pattern emerges. There may be variations in the routine or the animal may alternate between a limited number of travel paths.

Dancing Stereotypes	*Tally each individual occurrence. A bout ends when the bear touches its forepaws back to the ground.*
Pirouette	Stands on hind legs and spins at least 90 degrees (hindquarters may not leave ground in some cases).

Cage climb	Animal stands bipedally and sways or makes climbing motions, as if attempting to escape.

Stereotypic Head Movements	*Tally each individual occurrence. A bout ends when the bear changes behavior for at least 5 seconds.*
Head-toss	Animal abruptly lifts head upward and/or to the side in a swinging movement.
Weave	Animal undulates the front portion of the body back and forth repetitively, somewhat reminiscent of a fish's swimming movements.
Sway	Animal swings only the head back and forth but does not have undulating movements associated with weaving.

Oral Stereotypes	*Tally a bout once the bear hits the 3rd occurrence and end when it changes behavior for at least 5 seconds. Oral stereotypes can occur while the bear is active such as during locomote and feeding.*
Tongue flick	Animal sticks tongue out <u>repetitively</u> in a licking movement; not associated with feeding or grooming the area around the mouth after feeding.
Stereotypic licking of food item	Animal interrupts feeding bout with a long bout of licking of food item in which consumption of food does not occur.
Paw suck	Repetitive, sustained sucking of the toes/paw, not associated with grooming.
Stereotypic regurgitation	Animal vomits and re-ingests/licks vomit repeatedly.

Gymnastic Stereotypes	*Tally each individual occurrence. A bout ends when the bear changes behavior for at least 5 seconds.*
Stereotypic roll	Rolls from side to side on the ground repetitively.
Stereotypic somersault	Full or truncated somersault. Full somersault involves placing head on ground and pushing hindquarters over the head in a complete revolution. Truncated somersault involves placing head to ground as if to do a somersault and touching shoulders to the ground but does not complete action.
Sit-Ups	Animal sits down, lies on back (moving the head away from the toes) then sits upright (moving head toward the toes) repetitively.

Stereotypic Grooming	*Tally a bout once the bear hits the 3rd occurrence and end when it changes behavior for at least 5 seconds.*
Self-biting	Animal bites itself repeatedly.
Stereotypic scratching	Animal scratches itself repeatedly; form is rigid and scratch directed to same location on body (not grooming).

Other Stereotypes	*Tally a bout once the bear hits the 3rd occurrence and end when it changes behavior for at least 5 seconds.*
Paw tap	Animal taps paw repeatedly while limbs are relaxed and animal is stationary.