

Supplemental Table 1: Cavy ethogram of observed behaviors and corresponding behavioral categories.

Behavioral Category	Behavior	Description
Active	Dig	Use of forepaws to move sand.
	Running	Quick locomotion throughout exhibit.
	Sniffing	Movement of nose near an object or another individual.
	Vigilant	Attentive sitting or standing in an upright rigid posture with a stretched-out head.
	Walking	Slow locomotion throughout exhibit.
Forage	Chewing	Consumption of hay. Used during both food patch and traditional food presentations.
	Food patch	Investigation and interaction with a food patch, including removal and consumption of pellets. Only used when food patches were available.
	Normal food	Investigation and interaction with traditional food tray, including consumption of food pellets. Only used when food was presented in traditional manner.
	Produce	Consumption of fruits and vegetables. Used during both food patch and traditional food presentations.
Inactive	Inactive	Upright posture, but no other movement occurs. Ears are not fixed in a particular direction.
	Resting	Lying down on ground or rock with all parts of body (apart from head) in contact with the ground. No other movement occurs.
	Sitting	Rear end is in contact with the ground with no other movement.
Maintenance	Defecation/urination	Waste excretion.
	Dust bathing	Animal repeatedly rolls on back in sand.
	Self-grooming	Care of own body. May include licking, scratching, etc.
Social	Affiliative Contact	Physical contact is made with a conspecific, but recipient does not move away.
	Courtship	Male rapidly moves throughout exhibit in circles or “figure eights” around female.
	Displacement	Quick approach toward conspecific, and receiver moves away quickly. No physical contact is made.
	Scent marking	Rubbing of rear on ground or object such as tree limb, rock, etc.
Other	Not Visible	Animal is not visible to the observer.

Supplemental Table 2: Wallaby ethogram of observed behaviors and corresponding behavioral categories.

Behavioral Category	Behavior	Description
Active	Alert	Sudden orientation of head and ears in a direction with cessation of other movement.
	Hopping	Locomotion using hind limbs only.
	Licking	Touching of tongue to an object. Does not include interaction with a conspecific.
	Sniffing	Movement of nose near an object or another individual.
	Walking	Locomotion using all four limbs.
Forage	Chewing	Consumption of hay. Used during both food patch and traditional food presentations.
	Food patch	Investigation and interaction with a food patch, including removal and consumption of pellets. Only used when food patches were available.
	Normal Food	Investigation and interaction with traditional food tray, including consumption of food pellets. Only used when food was presented in traditional manner.
Inactive	Inactive	Upright posture, but no other movement occurs. Ears are not fixed in a particular direction.
	Resting	Lying down with no other movement.
	Sitting	Resting on rear with no other movement.
Maintenance	Defecation/urination	Waste excretion.
	Drinking	Consumption of water.
	Ruminating	Forward and backward movement of neck followed by chewing.
	Self-grooming	Interaction with own body. May include licking, scratching, etc.
Social	Displacement	Quick approach toward conspecific (usually hopping), and receiver moves away quickly. No physical contact is made.
	Ear Twitch	Head is orientated toward a conspecific while ears rapidly shake/twitch.
Other	Not Visible	Animal is not visible to the observer.