

Supplemental Information/Index

Table S1. Ethogram of elephant behavior. Behaviors have been grouped into 7 categories.

Category	Behavior	Description
ACTIVE		
	Digging	Individual uses trunk, tusk, foot to dig in the dirt, mud, clay, or grass
	Dust Bathing	Individual throws dust/dirt onto their body
	Manipulating Enrichment	Individual is interacting with enrichment item
	Making Mud	Individual uses trunk or foot to mix water and dirt/clay
	Exploring Environment	Individual is alert with trunk lifted to smell the air
	Mudding	Individual is laying down in the mud and moving around
	Scratching	Individual is using trunk, foot, tusk, or habitat feature to scratch themselves
	Splashing/Spraying	Individual is standing in a pool splashing or spraying water with their trunk
	Keeper Interaction	Individual is interacting with a keeper
SOCIAL INTERACTION		
	Trunk Wrestling/Sparring	Individual is engaging in play with a conspecific by inter-wrapping trunks and pushing
	Face Touch	Individual is using their trunk, ear, or head to touch the face of a conspecific
	Food Sharing	Individual is sharing food with conspecific
	Trunk in Mouth	Individual places trunk within or touches around the mouth of conspecific
	Trunk Over	Individual places trunk over the body of conspecific
	Trunk Reach	Individual reaches trunk out towards conspecific to smell and/or touch
	Tail Grab	Individual grabs tail of conspecific
	Displace	Individual moves towards conspecific to take their place
	Displaced	Individual is moved by conspecific approaching
	Push	Individual using trunk, tusks, or head to push conspecific
	Tusk	Individual uses tusks to strike conspecific
	Threat	Individual flares ears, lifts trunk, and vocalizes at conspecific

	Chase	Individual pursues conspecific
	Trunk Strike	Individual swings trunk and strikes conspecific
	Testing – vulva	Individual uses trunk to touch and smell the vulva of a conspecific
	Testing – urine/feces	Individual uses trunk to touch and smell the urine and/or feces of a conspecific
	Breeding/Mounting	Individual is mounting and/or breeding with conspecific
	Belly Tap	Individual is masturbating by tapping penis to belly
	Affiliative Recipient	Individual is investigating conspecific's trunk while receiving affiliative behavior from conspecific (i.e., face touch, trunk over, trunk in mouth)
MAINTENANCE		
	Urinating/Defecating	Individual is urinating or defecating
STEREOTYPIC		
	Swaying	Individual is rocking back and forth in place, often with ears flared out
	Pacing	Individual is walking in a repeated pattern A-B-A; may occur with trunk periscoping above head
	Spinning	Individual is remaining in one place and turning in circles
	Chortle	Individual is blowing air through nose/throat to produce an oral stereotypy
	Contorting	Individual is standing in place and twisting legs in an unnatural stance
	Barn Pushing	Individual is using trunk, tusks, or head to push against a barn structure repeatedly
RESTING		
	Laying Down	Individual is laying on side with eyes open or closed
	Inactive – Alert	Individual is standing with head and trunk relaxed but remains alert to surroundings
	Inactive – Rest	Individual is standing with head lowered and trunk fully relaxed on ground; not alert to surroundings
FORAGING		
	Foraging	Individual is eating/drinking or reaching trunk towards food items
NOT VISIBLE		
	Not visible	Individual is not visible to the observer and behavior cannot be determined