

Sl. No	Behaviors	Sub-behaviors	Behavioral signs	Photo
1.	CONFLICT AGGRESSIVE	Threat Head-High	Standing or moving with head held well above shoulders, chin is tucked in, elephant gazes at an adversary with Eyes-Open and ears maximally forward or Ear-Spreading. The animal appears to increase in height and sometimes will deliberately stand upon an object such as a log or anthill in order to increase its height - a tactic often used by males when they are sizing one another up. Elephants normally stand or move about with their eyes cast down. A direct gaze with Eyes-Open is a component of many displays. (166) This posture is used primarily to threaten other elephants.	
		Threat Turn-Toward	Reorientation of body to look at an opponent in a threatening manner, for example with Head-High.	
		Threat Look-Back	Standing or walking away while looking back over the shoulder. As an elephant Looks-Back it may flatten an ear against its body in order to see what is behind it. This is primarily observed in a Retreat situation (see Conflict Defensive - Retreat) although depending upon the context and the facial expression it may also be a Threat, as in "Watch it - I can see you!" Look-Back may also be associated with the Waiting posture	
		Threat Advance-Toward	Purposeful, directed walking toward another with hostile intent that may result in avoidance behavior or counter threat. Sometimes all it takes is one step, in direction of the other, to cause a reaction. Advance-Toward may be associated with other aggressive postures such as Head-High, Ear-Spreading, or Ears-Folded etc. (3a) Advance-Toward with Ear-Spreading and Standing-Tall may be directed at predators	
		Threat Ear-Spreading	Facing an opponent or predator head on with ears fully spread (at 90 degrees from body) presumably for the purpose of appearing larger. Elephants may also spread their ears when they are excited, surprised or alarmed	
		Threat Ear-Folding	Forcing the lower half of ear under and back so that a prominent horizontal ridge or fold appears across the ear. This aggressive display may be used in	

			<p>combination with a variety of other threats such as Head-High, Looking-At, Advance-Toward, etc. to emphasize that an elephant "means business". (5a) Ear-Folding can be a persistent display indicating a "foul mood" or "testiness". (5b) Ear-Folding that is used in association with Head-Raising, Ears-Lifted and/or Rapid-Ear-Flapping is an affiliative display, not aggressive, and is a typical greeting posture</p>	
		Threat Head-Nod	<p>A rather jerky up/down movement of the head that at higher intensities may cause the trunk to flop about. Usually seen when walking.</p>	
		Threat Head-Jerk	<p>A small single rapid upward movement of the head that then returns down slowly. In a more pronounced version of the Head Jerk the head is first lowered and then pulled up sharply so that the tusks describe a wide arc. This display is often observed as elephants crash through bushes to make a dramatic display to an adversary or predator. This display is often seen during play when Bush-Bashing.</p>	
		Threat Head-Swing	<p>A sharp and sudden swinging or throwing down, up and sideways of the head and tusks to threaten an elephant by its side who is either too close or doing something that displeases the signaler. Often seen in competition over resources such as a salt lick or small water hole</p>	
		Threat Head-Shake	<p>An abrupt shaking of the head, which causes the ears to flap sharply and dust to fly and is a sign of an individual's annoyance with or disapproval of an individual or circumstance. The Head-Shake usually starts with the head twisted to one side and then is rapidly rotated from side to side. The ears slap against the side of the face or neck making a loud smacking sound. (8a) Can also be used in play to feign annoyance</p>	
		Threat Forward-Trunk-Swing	<p>A swinging or tossing of the trunk in the direction of an adversary typically while blowing forcefully out through the trunk. Elephants swing their trunks at other smaller animals (e.g. egrets; ground-hornbills; warthogs, people) to frighten them away or simply for amusement. (9a) A high-intensity version of the Forward-Trunk-Swing, the Aggressive-Whoosh is made by musth males, who toss or swing their</p>	

			trunk in an exaggerated manner in the direction of an adversary while blowing loudly through the trunk with a loud "whooshing".	
		Threat Parallel-Walk	Males pacing back and forth in parallel to one another in a lead up to or during an Escalated-Contest. The contestants typically place a road, log or other "barrier" between them. (11a) Sparring males sometimes use a lower intensity version of this behavior.	
		Threat Tusk-Ground	Bending or kneeling down and tusking the ground and uplifting vegetation as a demonstration of "look what I will do with you". It is usually seen during the maneuvering between two males during an Escalated-Contest, but may also be directed toward people especially by musth males. In some cases tusking the ground may be a form of redirected aggression. (12a) . A similar action is seen during play. In play, too, tusking the ground may be directed toward human observers. (12b) Elephants commonly use this position to kill people.	
		Threat Throw-Debris	Lifting or uprooting objects and using the trunk throwing them in the direction of an opponent. (13a) This display may also be observed in play (13b) . An elephant's aim can be very accurate even at some distance.	
		Threat Bush-Bash	Tossing the head and tusks back and forth through bushes or other vegetation creating noise and commotion and demonstrating strength; probably an expression of "look what I can do with you!" (14a) ; also used in play.	
		Threat Pursuit	A persistent, prolonged and aggressive follow at a fast walk by one individual (usually in musth) toward another (usually in musth). A pursuit often follows an escalated contest; when one male has signaled defeat by fleeing the victor initially Runs-After and then Pursues the defeated male for up to several kilometers.	
		Threat Coalition	Two or more individuals working together to threaten another individual or individuals. Most typically an older female, often the matriarch, comes to the aid of a younger family member.	

			When initiating a coalition the helping individual may approach her companion rapidly coming along side her in parallel, they may vocalize in chorus, sometimes clicking tusks together (Tusk-Clicking), and then, in unison, they Advance-Toward the affronting individual with a low intensity Bow-Neck Display.	
		Pure Attack Run-After	"Running" after an opponent or predator. (16a) Elephants may also run after one another in play.	
		Pure Attack Bow-Neck	An aggressor lowers head by bowing neck downward and simultaneously tilting head upward so that tusks are approximately horizontal. The Bow-Neck may be associated with Ear-Flapping and/or Ear-Folding. This posture may be held at a fast walk or during a Mock-Charge and/or Real-Charge, especially when subject of charge is of smaller stature than the elephant. In a sense the aggressor brings head/tusks down to victim's level. It is one of the more common forms of high-level aggression between females of different families or toward young, pesky non-family males and may be seen as a component of a coalition. It may also be directed at predators. Is reminiscent of the "Forward Threat Display" of geese.	
		Pure Attack Coalition-Run-After	Family group rushing toward another elephant or group of elephants en masse in a highly coordinated manner. Most typically an older female, often the matriarch, comes to the aid of a younger family member. When initiating a coalition the helping individual may approach her companion rapidly coming along side her in parallel, they may vocalize in chorus ("Coalition-Rumble"), sometimes clicking tusks together (Tusk-Clicking), and then, in unison, they Run-After the affronting individual with a high intensity Bow-Neck Display.	
		Pure Attack Pushing	Aggressively pushing the head or base of trunk into the back, side, head or trunk of another. Pushing should lead to a supplant and may be different from a "herding push" which is of a more gentle nature.	
		Pure Attack Slapping	Slap Hitting another with the trunk, especially by older individuals towards calves. Uncommonly seen in Loxodonta;	

			apparently more common in Elephas.	
		Pure Attack Tusking	Tusk Poking an opponent with the tip of the tusks. This is a "less polite" form of Pushing another out of the way.	
		Pure Attack Ramming	Ram Rushing at another with head lowered and trunk curved under (to expose tusks) and goring or poking it with its tusks. This is a serious attack with intent to harm. (25a) Elephants may receive serious wounds. A female was seen with a broken off tusk sticking out of the side of its body	
		Pure Attack Dueling	Duel Two elephants rushing toward one another, head to head, attempting to gore, tusk, push or interlock tusks to leverage an opponent down to the ground or maneuver him into position where he can be gored. Dueling almost inevitably involves two contesting musth males. Dueling males exhibit Head-High, Tail-Raising, Ear-Spreading, Ear-Folding, and Trunk-Blocking (to reduce any blow).	
		Pure Attack Escalated-Contest	The term Escalated Contest covers all displays that may be seen within the context of a serious battle between two males; in other words in addition to Dueling the suite of displays that occur around and between Dueling bouts. These may include: Dueling, Tusk-Ground, Parallel-Walk, Ear-Folding, Ear-Waving, Musth-Rumbling, Throw-Debris, Bush-Bashing, Trunk-Blocking, Head-Toss, Trunk-Bounce (drag), Trunk-Curl, Run-After, Run-Away and others.	
		Triumph Exaggerated-Walk	Walking with an obvious bouncing swagger; head moves up and down and trunk swings from side to side more than in normal walk; front legs appear to bend more. A sign of bravado. May be seen when an elephant takes a sudden decision to do something - usually involving entering into an ongoing interaction. A similar walk (non-signal) is seen as any age/sex comes down a slope.	
		Triumph Reaching-High	At the end of a Run-After when the chaser gives up, the aggressor extends his trunk upward and outward toward his opponent. Apparently a sign of frustration, "last ditch effort" or perhaps triumph as in "I've seen him off!" (29a) A common display following a Run-After by a high-ranking male toward lower ranking male particularly in association with an estrous female; a	

			signal of triumph.	
		Triumph Kick-Dust	An individual Mock-Charging or taking a step in the direction of an offending object (elephant, other animal, human being) and at the end of the movement it appears to "stub its toe" and kicks up a cloud of dust in the direction of its antagonist. Usually Stands-Tall and towers over adversary.	
		Displacement Activity Redirected-Aggression	Aggression directed toward an individual that is irrelevant to current situation. When the tendency to attack is thwarted, for some reason (e.g. fear of opponent), the individual may redirect his/her aggression to some other animal or object, such as vegetation. This may involve trashing bushes, trees (Bush-Bashing) or throwing sticks, grass (Throw-Debris). Or attacking (Tusk/Turn-Toward/Advance-Toward/Mock-Charge, etc.) other, lesser elephants or smaller animals, humans--in the vicinity.	
2.	CONFLICT DEFENSIVE	Defensive Distant-Frontal-Attitude	In expectant or playful situations, pausing with the trunk up in a periscope or S-shape waiting for an adversary, dueling or play partner's next move. As two individuals approach one another with intent to Duel or Spar, one or both may raise its trunk above its head and curl the tip toward the other individual; except for context, this display appears very similar in form to Periscope-Sniff.	
		Defensive Trunk-Blocking	Stretching the trunk (upwards, outward or downwards) during Dueling as defensive block against the force and sharp tusks of a rival.	
		Defensive Bunching	Bunch Group of individuals clustering or bunching together (usually with young in the center) so that diameter of group decreases and exhibiting a combination of Fearful and/or Aggressive postures. Bunching may be observed in response to any situation that is frightening or potentially frightening whether caused by other elephants, predators (including people) or strange sounds, smells or events. Bunching may precede Retreat-From, Full-Retreat or Panic-Running or a Group-Charge.	
		Appeasement Head-Low	Lowering of the head so that the top is below the level of the shoulder blades. This posture makes an individual appear smaller and can be a persistent	

			display. Often given together with a Turn-Away and followed by a Retreat-From. (33) Often used by young males in presence of musth male. May be an appeasement gesture, which "turns off" aggression in the other individual.	
		Appeasement Back-Towards	Turning to present posterior and backing in toward another, usually higher-ranking elephant. This display is typically seen in the context of a greeting ceremony or when joining a resting group. It may be used to avoid triggering an aggressive response by a larger elephant, as an appeasement gesture or, within families, as a sign of respect. (41a) Strangely this behavior is also seen when elephants are approaching dead elephants, perhaps also as a sign of respect.	
		Submissive Ear-Flattening	Holding or flattening the ears against the neck or body. This posture is most often seen when an elephant is running away or avoiding another; may also be adopting the Head-Low posture. An elephant normally holds its ears in a relaxed position such that they rest approximately 10-30cm from the side of the body. In this relaxed position the ears do not appear stiff or tense, lifted, spread, or pressed against the body.	
		Submissive Skirt-Around	In the presence of high-ranking individuals (at a fallen tree, or in company of an estrous female), lower ranking individuals (most often young males) may often be seen making a small arc or "skirting around" the group to try to establish a better/safer position.	
		Submissive Queue-Up	Around a scarce resource or object of interest such as a drinking place, mud-wallow, fallen tree, or a "toy" lower ranking individuals may be seen standing on the side-lines or "pretending" to be otherwise occupied as they await their turn.	
		Retreat Look-Back	Standing or walking away while looking back over the shoulder. As an elephant Looks-Back it turns its head to one side and may flatten an ear against its body in order to see what is behind it. This is primarily observed in a Retreat situation (see also Antipredator Full-Retreat) although depending upon the context and the facial expression it may also be a Threat, as in "Watch it - I can see you!" (See Conflict Aggressive -	

			Threat). Look-Back may also be associated with the Waiting posture (see Social Integration - Departure Signal).	
		Retreat Turn-Away	Orienting away from a threatening elephant. The elephant may stand with its Head-Low.	
		Retreat Retreat-From	Walking away from a threatening elephant. The individual may adopt a Head-Low posture and Look-Back warily. An individual may also Retreat-From by Backing-Away.	
		Retreat Run-Away	"Running" away from a threatening individual. This display is typically seen in response to a Run-After.	
	GO EITHER WAY (Ambivalent Indecision)	Indecision Trunk-Twisting	Twisting the tip of the trunk back and forth in situations where an elephant is apprehensive or unsure of what action to take.	
		Indecision Foot-Swinging	Raising and holding or tentatively swinging the foreleg intermittently when unsure of what action to take. Swinging of the hindfoot may also be observed although this is less common than the forefoot.	
		Displacement Grooming	Self-grooming when grooming is inappropriate. May include throwing dust/grass/etc. onto self. Given in conflict situations (e.g. a fight in which individual shows incompatible tendencies, such as fleeing vs. fighting). (45a) But also very often displayed by young males near an estrous female who are "pretending" to do something else so as not to provoke aggression by the guarding male.	
		Displacement-Feeding	Plucking at vegetation, as if foraging, but may not actually ingest any of the material and is obviously Monitoring. If it does eat, it does so in a desultory or distracted fashion; may slap vegetation against foot or other part of own body. Performed in conflict situations (e.g. during fighting or Sparring when an individual shows incompatible tendencies, such as fleeing vs. fighting). Can also be "defensive" or "despondent" (46a) Also very often displayed by young males near an estrous female who are "pretending" to do something else so as not to provoke aggression by the guarding male.	
		Displacement Touch-Face	Self-directed touching of the face apparently for reassurance, very often in context of interaction with another	

			elephant but may be seen in any context where an elephant feels uneasy. Touch-Face includes self-touching of mouth, face, ear, trunk, tusk or temporal gland.	
	APPREHENSIVE	Uneasy Trunk-Curved-Under	Standing with the trunk slightly, moderately or extremely curved toward the body (with the trunk tip facing toward the elephant's posterior). The individual may also show Ear-Cocking and Chin-Raising, often turning the face from side to side; (49) note that this posture is quite distinct from the trunk curved tightly under seen during a ramming or serious charge.	
		Uneasy Ear-Cocking	Slightly cocking the ears so that the tops are above the top of the head, but ears are only half extended forward. An elephant's ears are usually relaxed and naturally lie such that the tops of the ears are basically in line with the forehead. An alerted elephant holds its ears cocked so that the tops of the ears appear higher than the forehead. An uneasy elephant may slightly spread and cock its ears while at the same time raising its chin (Chin-Raising) (163). An elephant that is highly socially excited may lift and flap its ears with its head held perpendicular to the ground (See Ear-Lifting under Bonding).	
		Uneasy Apprehensive	Standing or moving and exhibiting a constellation of displays that may be a combination of several of the following: Touch-Face, Trunk-Curved-Under, Trunk-Twisting, Foot-Swinging, Chin-Raising, Ear-Spreading and Ear-Cocking may be termed Apprehensive.	
		Fearful Ear-Spreading	Facing an opponent or predator head on with ears fully spread (at 90 degrees from body) presumably for the purpose of appearing larger (see Conflict Aggression - Threat). Elephants also spread their ears when they are excited, surprised or alarmed	
		Fearful Chin-Raising	Standing with the chin/jaw tilted upwards (so that tusks become more parallel rather than perpendicular to the ground) and, if walking away, the chin is both raised and turned slightly to the side while Looking-Back; Ears are slightly spread and lifted; this posture is unlike an aggressive elephant Head-High who looks squarely at its adversary with ears and tusks held more perpendicular to the ground.	

		Fearful Body-Jolt	Sudden jolting or jerking of the body away from a frightening sound or movement.	
		Fearful Surprise	Sudden lifting up and back of the front portion of the body and sharp raising of the ears as the elephant jerks her body up and away from something frightening or surprising	
		Fearful Tail-Raising	Raising the tail. Fearful, highly playful or intensely excited elephants may be observed to raise their tails. When extremely excited the tail may be raised in an almost vertical position, while at low-intensities the tail may be raised to near horizontal and wrapped around the hip to one side or the other	
		Fearful Bow-Back	Standing or walking while Chin-Raising or Head-Raising and Tail-Raising causes an elephant's back to appear bowed (54a). This posture is most often exhibited by fearful or highly socially excited elephants but it also a component of the Estrous-Walk.	
		Fearful Eye-Widening	Opening the eyes wide so that the whites show. An elephant normally casts its eyes down. An alarmed, frightened or highly excited elephant opens its eyes wide. Eye-Widening may also be seen during intense social interactions and excited play.	
		Fearful Fearful	Standing or moving and exhibiting a constellation of displays including Tail-Raising, Ear-Cocking, Eye-Widening, Chin-Raising, Trunk-Curved-Under and Bow-Back may be termed fearful; an extreme form of this constellation of displays can also be seen when an elephant is highly excited during play where it is referred to as Exaggerated-Fear.	
	Anti-predator	Inspect Predator Freezing	A sudden cessation of all movement by an individual or group of individuals; holding stock-still, apparently listening or perhaps feeling distant vibrations. When concerned about predators they may hold motionless for a period of 5-60 seconds when they are presumably using all of their senses to locate the source of disturbance.	
		Inspect-Predator	Standing facing or moving in direction of predator while Eye-Opening and Ear-Cocking with Trunk-Curved-Under or Sniffing-Toward the predator	
		Warn Conspecific Warning	Orienting body and gazing at a predator while displaying Trunk-Curved-Under, Ear-Cocking and possibly Chin-Raising.	

			May give a warning rumble to alert others of predator (126)	
		Threaten Predator Standing-Tall	Standing or moving with head held well above shoulders, chin is raised and the elephant looks down at her adversary over her tusks with Eyes-Open, and her ears maximally forward. The animal appears to increase in height and sometimes will deliberately stand upon an object such as a log or anthill in order to increase its height. Elephants normally stand or move about with their eyes cast down. A direct gaze with Eyes-Open is a component of many displays. (1) This posture, with the chin raised as opposed to tucked in (see Head-High), looking down over the tusks, is primarily used by females in threats toward non-elephant objects as in "I've got you in my sights, so watch it".	
		Threaten Predator Advance-Toward	Purposeful, directed walking toward a predator with hostile intent. Advance-Toward a predator may be associated with aggressive postures such as Ear-Spreading and Standing-Tall. (3b) Advance-Toward is most usually directed toward other elephants (see Conflict Aggressive – Threat	
		Threaten Predator Reckon-With-Me	Walking past an individual in parallel, at unnecessarily close range and, while eyeing its adversary, swinging the tusks, trunk and head, dramatically past the object of its aggression. Elephant may curl its trunk up and then release it. Associated with Ear-Spreading.	
		Threaten Predator Bunching	Bunch Group of individuals clustering or bunching together with young in the center while adults face outwards toward the source of threat. Elephant may exhibit a combination of Fearful and/or Aggressive postures such as Standing-Tall, Chin-Raising, Tail-Raising, Trunk-Curved-Under. Temporin is secreted profusely. Bunching may be observed in response to any situation that is frightening or potentially dangerous whether caused by other elephants, predators (including people) or strange sounds, smells or events. Bunching is usually associated with rumbling (presumably related to a plan of action, reassurance and cementing bonds), the holding of heads high (Standing-Tall), and the swinging of	

			bodies and trunks towards and away from nearest neighbors. Bunching may precede Retreat-From, Panic-Running or a Group-Charge.	
		Threaten Predator Lean-Touch	Sway Swinging of the body and trunk from side to side while Standing-Tall and sometimes while Bunching. When standing alone an elephant may swing when unsure of its next move. When elephants swing while Bunching, they reach out and touch one another with their trunks, secrete temporin and rumble loudly. It appears to be during this stage that they collectively "decide" a course of action (Group-Attack versus Full-Retreat or Panic-Running). The vocalizing to and reaching out to others and swinging could simply be a sign of extreme stress, but it may more likely indicate a powerful and intricate group decision making process in which the swinging, reaching out to and "talking" involves other team members in planning a course of action. (151a) The fact that swinging of body and trunk is also seen in Bonding Ceremonies is suggestive that it has more to do with stating the importance of group members than it is related to mere stress.	
		Attack Predator Mock-Charge	A rushing toward an adversary or predator Standing-Tall and Ear-Spreading that stops short of its target; an elephant may Forward-Trunk-Swing or aggressively Kick-Dust as it abruptly stops. (17a) A Mock-Charge is often associated with a shrill Trumpet-Blast.	
		Attack Predator Real-Charge	Rushing toward a predator or other adversary while Ear-Spreading, head raised or lowered with the apparent intention of following through. The trunk may be tightly curved under so that tusks can make contact first. A Real-Charge is usually silent.	
		Attack Predator Bow-Neck	An aggressor lowers head by bowing neck downward and simultaneously tilting head upward so that tusks are approximately horizontal. The Bow-Neck may be associated with Ear-Flapping and/or Ear-Folding. This posture may be held at a fast walk or during a Mock-Charge and/or Real-Charge, especially when subject of charge is of smaller stature than the attacker. In a sense the aggressor brings head/tusks down to victim's level. It is	

			one of the more common forms of high-level aggression between females of different families or toward young, pesky non-family males and may be seen as a component of a Coalition. It may also be directed at predators. Is reminiscent of the "Forward Threat Display" of geese.	
		Mobbing Group-Advance	Family group advancing toward a predator en masse in a highly coordinated manner and with hostile intent. Loud rumbling by the matriarch and others, Bunching together and Standing-Tall usually precedes a Group-Advance. Group-Advance is usually also associated with continued signs of predator inspection including Periscope-Sniffing.	
		Mobbing Group-Charge	Family group rushing toward an adversary or predator (including humans) en masse in a highly coordinated manner. Usually preceded by loud rumbling initiated by the matriarch and others and Bunching together and Standing-Tall in a pyramidal formation. Rumbling may reach a crescendo prior to attack.	
		Defensive Assembling	A fast moving walking or running by members of a family or bond-group toward one another following a frightening sound, sight or event. After assessing the situation by Freezing elephants may either relax again or secrete temporin profusely and move rapidly first toward their nearest relatives, friends and supporters and then collectively toward the matriarch. During the fast moving Assembling the elephants behavior and movement is highly coordinated.	
		Defensive Bunching	Bunch Group of individuals clustering or bunching together with young in the center while adults face outwards toward the source of threat. Elephant may exhibit a combination of Fearful and/or Aggressive postures such as Standing-Tall, Chin-Raising, Tail-Raising, Trunk-Curved-Under. Temporin is secreted profusely. Bunching may be observed in response to any situation that is frightening or potentially dangerous whether caused by other elephants, predators (including people) or strange sounds, smells or events. Bunching is usually associated with rumbling (presumably related to a plan	

			of action, reassurance and cementing bonds), the holding of heads high (Standing-Tall), and the swinging of bodies and trunks towards and away from nearest neighbors. Bunching may precede Retreat-From, Panic-Running or a Group-Charge.	
		Defensive Lean-Touch		
		Defensive Full-Retreat	Following a threat to a predator (Standing-Tall or Charging) turning and retreating from the offending animal with the head is held high with chin raised (Chin-Raising), back bowed (BowB) and tail raised (Tail-Raising).	
		Defensive Rear-Guard	A female placing herself at the back of a Bunched group of elephants in Full-Retreat. The Rear-Guard female carries her head high and chin raised and trunk curved under while simultaneously Looking-Back over her shoulders. While this posture indicates an alarmed elephant, the wrong move may provoke an attack.	
		Defensive Panic-Running	A very fast, quiet, smooth running while Tail-Raising and with Ear-Flattening. If elephants are in a group they bunch closely together. Technically elephants cannot run (running is defined as having all feet in the air simultaneously), but they are able to move up to 40 km/h in a shuffling gate.	
	Social Integration	Bonding Caressing	Using the trunk to touch or "caress" another in a reassuring or comforting manner. While adult females or juvenile females most often direct Caresses towards infants and calves, adults and juveniles may also Caress one another. Caresses come in many forms: wrapping a trunk over the back and around the belly of a calf (Belly-Caress) or over calf's shoulder and under its neck often touching its mouth (Neck-Caress); reaching out to touch the genitals (Genital-Caress), temporal glands (Temporal-Gland-Caress), face (Facial-Caress), legs (Leg-Caress), mouth (Mouth-Caress), trunk (Trunk-Caress) of another individual. (87) There may be some confusion over the definitions of Caressing, Sheparding and Test-Mouth, Test-Genitals etc. To a large extent the differences are subtle and have to do with both the behavioral context and the relationship between the interacting individuals. Caressing is	

			<p>behavior within a family or bond group that is related to reinforcing bonds between individuals and may be associated with Ear-Lifting, Head-raising, or Social-Rubbing and is usually done while the partners are standing in parallel. Test-Mouth, Test-Temporal-Glands is meant to refer primarily casual meetings between male-male, female-male or female-female pairs. In these cases the pairs typically stand facing one another. These are casual acquaintances and may have more to do with individual identification or assessment. To distinguish between Caressing and Sheparding, the former is behavior related to greeting, reassuring or cooing over an infant or calf and the later related to protective, guiding or gathering motions.</p>	
		Bonding Social-Rubbing	<p>Approaching a stationary individual from behind and rubbing the head, ear, shoulder or flank against the standing individual. This behavior is used in an affiliative context and occurs most often between closely related individuals. The stationary elephant is sometimes used like a tree stump to rub vigorously.</p>	
		Bonding - Ceremony	<p>Elephants engage in numerous exuberant displays of social excitement that function to reinforce bonds between family and bond-group members. These displays involve vocal, chemical, tactile and visual communication and may occur during a greeting (Greeting Ceremony), a birth, a kidnapping, a rescue or a mating (Mating Pandemonium). During a Greeting-Ceremony members of a family or bond group may run to meet one another while emitting loud, modulated, throaty rumbles, trumpets, roars and screams (Greeting-Rumble; Social-Trumpet; Social-Roar). The elephants raise their heads, lift and spread their ears, secreting temporin profusely. As they meet they flap their lifted ears rapidly, while rumbling, trumpeting, screaming and roaring. Rubbing together they may stand in parallel and while holding heads high, click their tusks together and entwine trunks. As the greeting continues they will back into one another, spin around,</p>	

			while urinating and defecating. The Greeting-Ceremony, as with other Bonding-Ceremonies, is a constellation of displays including Head-Raising, Mouth-Opening, Ear-Spreading, Ear-Lifting, Ear-Folding, Rapid-Ear-Flapping, Tusk-Clicking, Trunk-Twining, Backing-Toward, Spinning, Temporin secretion, Tail-Raising, Urination and Defecation.	
		Bonding Head-Raising	Raising the head during an excited, affiliative interaction such as greeting. This posture is different from Head-High in that the elephant's neck appears to be extended upwards and outwards so that the head appears separate from the rest of the body. In the Head-High posture the elephant's neck is extended upward but not outward.	
		Bonding Mouth-Opening	Opening the mouth. Covered by the trunk the mouths of elephants are not very obvious sources of visual displays, but during excited vocal interactions elephants open their mouth wide, often holding their trunks in a curved posture, which exposes the mouth. During many social interactions elephants become highly aroused and excited, rumbling, roaring and screaming at extremely high sound pressure levels, and many of these calls travel long distances. It is not clear, however, that open mouths always indicate calling.	
		Bonding Rapid-Ear-Flapping	Flapping the ears vigorously and rapidly in a raised position. Rapid-Ear-Flapping is usually observed in association with Head-Raising and, often, brief Ear-Folding. This posture is almost always seen in the context of greeting or bonding interactions and during other excited, social and chorused calling. (63) Elephants may also flap their ears hard against the body in aggressive circumstances in association with Ear-Folding and/or Bow-Neck.	
		Bonding Ear-Lifting	Lifting the ears so that the tops are well above the top of the head. An elephant's ears are usually relaxed and naturally lie such that the tops of the ears are basically in line with the forehead. During interactions in which elephants are socially excited (e.g. when greeting, reaffirming bonds, expressing solidarity, and following any	

			exciting event - mating, birth, kidnapping) elephants lift their ears so that a gap appears between the lower flaps and the neck, and ear tops are lifted above the level of the forehead. This posture is most clearly seen when elephants greet infants ("Hello-Baby") or one another ("Little-Greeting").	
		Bonding Tail-Raising	Raising the tail. Fearful, highly playful or intensely excited elephants may be observed to raise their tails.	
		Bonding Bow-Back	Standing or walking while Chin-Raising or Head-Raising and Tail-Raising causes an elephant's back to appear bowed (54a). This posture is most often exhibited by fearful or highly socially excited elephants but it also a component of the Estrous-Walk.	
		Bonding Lean-Touch	Sway Swinging of the body and trunk from side to side while Head-Raising, Ear-Lifting and Rapid-Ear-Flapping during intense social excitement. While swinging elephants touch one another with their trunks, rumble loudly, and secrete temporin profusely. It appears that the vocalizing to and reaching out to others reinforces bonds between team members. (152b) This cementing of bonds is then possibly recalled during other instances of swinging (such as anti-predator behavior) where it evokes team spirit in uneasy elephants and facilitates the planning of a course of action.	
		Bonding Spinning	Spinning or circling around, a socially excited group of elephants turn rapidly toward and away from each other. Spinning is an extreme form of Lean-Touch where elephants may turn rapidly 180 degrees to reach out to different friends. It is most often seen during interactions of extreme social excitement, particularly during intense Greeting-Ceremonies, when relatives come together in a close cluster Head-Raising, Ear-Lifting and Rapid-Ear-Flapping, vocalizing, Urinating and Defecating.	
		Bonding Eye-Widening	Opening the eyes wide. An elephant normally casts is eyes down. An alarmed, frightened or highly excited elephant opens it eyes wide. This may also be seen during intense social interaction and excited play.	
		Bonding Trunk-Twining	Mutual entwining of trunks may occur during both low and high intensity	

			greetings. (66) As seen between greeting and sparring males the entwining of trunks is slow and sensual; whereas between female relatives during a bonding or greeting ceremony the action is more sudden and dramatic, like a sudden clasping of another during a human greeting.	
		Bonding Tusk-Clicking	Standing in parallel Head-Raising and Ear-Lifting two closely allied elephants may (apparently purposefully) click their tusks together. Elephants may click their tusks together during intense social interactions such as a Greeting-Ceremony or during interactions in which an elephant wishes to express solidarity with a friend or family member (see Coalition). (67)	
		Bonding Temporin	Sudden streaming of secretion from the temporal glands during socially exciting interactions. Many socially stimulating interactions between family members are associated with the sudden onset of Temporin that may stream down the side of the face within seconds of the onset of the interaction. In these cases the onset of Temporin often appears to be associated with vocalizing. This type of temporal gland secretion usually dries up within approximately 10-15 minutes. TGS may also be secreted when elephants are alone, separated from their families or when they are disturbed (69)	
		Bonding Ear-Secretion	Sudden squirting or streaming of secretion from the ear during events that cause extreme excitement, such as the birth of a baby, or extreme unease, such as the sudden sounds of predators nearby (171) . It is not clear at this stage whether elephant make use of this secretion as a signal.	
		Bonding Urinating	During moments of extreme social excitement such as Bonding Ceremonies, females urinate as they rub against one another and spin around. (139)	
		Bonding Defecating	During moments of extreme social excitement such as Bonding Ceremonies, females defecate as they rub against one another and spin around. (140)	
	Affiliative	Affiliative Body-Touch	Standing or resting with body touching another. Closely related individuals often rest while touching one another or resting against one another. (138)	

		Affiliative Back-Towards	Turning to present posterior and backing in toward another, usually higher-ranking elephant. This display is typically seen in the context of a greeting ceremony or when joining a resting group. It may be used to avoid triggering an aggressive response by a larger elephant, as an appeasement gesture or, within families, as a sign of respect. (41a) Strangely this behavior is also seen when elephants are approaching dead elephants, perhaps also as a sign of respect. (41b)	
	Identification	Identification Test-Mouth	Reaching the trunk toward or into mouth of another; between non-relatives esp. males in context of greeting; between family members in context of greeting, feeding & reassuring calves - see also Caress & Parental-Offspring. Frequently the smaller animal reaches it trunk first to the larger and this behavior may have originated from the food sampling by calves. (68a)	
		Identification Test-Temporal-Gland	Reaching out with the trunk to smell another elephant's temporal glands. This display is most often observed following meeting of two individuals in association with greeting and is probably related to assessment and/or individual recognition. (100)	
		Identification Test-Urine	Touching the tip of the trunk over, on, or in urine or a urine spot for the purpose of assessing reproductive state (either estrus or musth) (102a) and/or individual identification (102b) . Testing of urine may be Male-Female, Male-Male, Female-Male or Female-Female.	
		Identification Ear-Slap	Slapping the ears once loudly and sharply against the neck and shoulders. Typically this display is made by a dominant female who appears to use it to call attention to her location and activity; possibly also used by dominant females to announce her "status" in slightly aggressive situations or to initiate a coalition. (78)	
	Greeting	Greeting Trunk-Twining	Mutual entwining of trunks may occur during both low and high intensity greetings. (66) As seen between greeting and sparring males the entwining of trunks is slow and sensual; whereas between female relatives during a bonding or greeting ceremony the action is more sudden and dramatic, like a sudden clasping of	

			another during a human greeting.	
		Greeting Test-Mouth	Reaching the trunk toward or into mouth of another; between non-relatives esp. males in context of greeting; between family members in context of greeting, feeding & reassuring calves - see also Caress & Parental-Offspring. Frequently the smaller animal reaches its trunk first to the larger and this behavior may have originated from the food sampling by calves. (68a)	
		Greeting Kissing	Raising the head and standing face-to-face with mouths open and touching. This posture is occasionally observed during gentle greetings or playful sparring especially between youngsters. (168)	
		Greeting Test-Temporal-Gland	Reaching out with the trunk to smell another elephant's temporal glands. This display is most often observed following meeting of two individuals in association with greeting and is probably related to assessment and/or individual recognition. (100)	
	Distant Contact	Distant Contact Signal Listening	An individual rarely stands stock still except when listening or resting; usually some part of the body, ears, trunk, tail is in motion. When resting an elephant relaxes its head and ears allowing its head to hang below its shoulders and its ears to flop forward. A listening elephant stands with its head raised and its ears lifted and slightly extended at an angle of at least 45 degrees. The body and extremities of a listening elephant suddenly cease moving, as it simultaneously raises its head and stiffens its ears. Sometimes an elephant may turn its head from side to side to localize a sound. (70)	
	Adjust Spacing	Adjust Spacing Herding-Push	Pushing of another while a group of elephants is moving together with the apparent purpose of keeping the group together. (71)	
		Adjust Spacing Tail-Swat	Using the tail to forcefully swat an elephant behind it to indicate that it should back off or using the tail to gently feel what is behind it. (72)	
		Adjust Spacing Kick-Back	Kicking back with the hind legs to push another individual (especially a calf) out of the way. (73a) This action may also been seen during play when elephants kicks back at objects they are playing with (see under Play 73b). It may also be seen during mounting when a	

			female tries to dislodge a male.	
	Departure Signal	Departure Signal Lets-Go-Stance	Standing on the periphery of a group, purposefully facing in the directions she wishes to travel, a female (usually) waits and rumbles "Let's go" every minute or so while attempting to influence the other members of her family to move in the direction she proposes. Males may also emit this call though it appears to be rather unusual (74)	
		Departure Signal Waiting	Standing idly while waiting for other family members to either catch up or to initiate a procession again; contextually this posture is obvious as the waiting individual is attentive (Monitoring rather than resting), often glancing back over her shoulder, and/or checking the others' activity by J-Sniffing with her trunk, but otherwise showing a lack of activity. (75)	
		Departure Signal Ear-Flap-Slide	Flapping the ears moderately loudly against the neck and shoulders as the elephant tilts its head upwards and sometimes to one side, causing the ears to make a rasping sound as they rub downward against the shoulders. Signal used especially by adult females, but sometimes also by males and juveniles, of intention to move or to change activity. (76)	
	Attentive	Attentive Freezing	A sudden cessation of all movement by an individual or group of individuals; holding stock-still, apparently listening or feeling distant vibrations. (79)	
		Attentive Eye-Opening	An obvious opening of the eyes to look attentively in the direction of interest. An elephant's eyes are normally cast downwards. (80)	
		Attentive Eye-Blinking	Opening and closing of the eyes by an attentive elephant (shown by moving tip of trunk and lifted ears). This behavior is perhaps most noticeable during suckling (See Suckle-Face), but may also be observed when an elephant is in deep contemplation. Both Moss and Poole note that elephants Eye-Blink when spoken to in a gentle conversational voice. An elephant's eyes are normally cast downwards. (81)	
		Attentive Monitoring	An individual who is monitoring an event, situation or interaction or contemplating a sound, smell or object exhibits a constellation of displays including: Listening, Eye-Opening or Eye-Blinking, and J-Sniffing. The very tip	

			of the trunk is usually curled under and around to face the object of interest. The elephant may consider by looking at, listening to or sniffing, the object or subject of interest. Elephants often Monitor or contemplate an experience already ended almost as if reliving the sensations. (82) (Monitoring may be observed when an elephant contemplates its own game, the actions of elephants nearby, human conversation or considering elephant bones. (82)	
	Parental-Offspring	Offspring Begging Begging	An infant or calf walking parallel to its mother, either pushing against her legs or touching its trunk to or near to her breast, or hooking trunk around back leg; sometimes calling with a suckle rumble or other begging call. (84)	
		Offspring Begging Test-Mouth	Reaching the trunk into mouth of another, often the mother, during feeding. Since feeding usually follows this behavior it seems that the calf is sampling what the mother is eating. Sometimes the calf will pull food out of the mother's mouth and, after chewing, swallow it. (68b) It may be that the behavior between mother and calf should have a different name than the greeting behavior of casual acquaintances.	
		Offspring Begging Reject-Nurse	An adult female rejecting the begging advances by her calf by ignoring its vocal and physical begging, by walking away or by physically locking a calf out of the breast by moving her foreleg backwards. (85)	
		Feeding Offspring Suckle-Stance	An adult or juvenile female standing with a forefoot placed in a forward position allowing an infant or calf access to her breast. (141)	
		Feeding Offspring Suckling	An infant or calf standing at the mother's breast with its trunk lifted back over its head (to allow the mouth access to the breast). (142)	
		Feeding Offspring Suckle-Face	A female when suckling an infant, or a juvenile female "pretending" to suckle an infant holding very still with Ears-Lifted in an attentive posture and Eyes-Blinking. (86)	
		Reassurance Caressing	Using the trunk to touch or "caress" another in a reassuring or comforting manner. While adult females or juvenile females most often direct Caresses towards infants and calves, adults and juveniles may also Caress one another.	

			<p>Caresses come in many forms: wrapping a trunk over the back and around the belly of a calf (Belly-Caress) or over calf's shoulder and under its neck often touching its mouth (Neck-Caress); reaching out to touch the genitals (Genital-Caress), temporal glands (Temporal-Gland-Caress), face (Facial-Caress), legs (Leg-Caress), mouth (Mouth-Caress), trunk (Trunk-Caress) of another individual. (87) There may be some confusion over the definitions of Caressing, Sheparding and Test-Mouth, Test-Genitals etc. To a large extent the differences are subtle and have to do with both the behavioral context and the relationship between the interacting individuals. Caressing is behavior within a family or bond group that is related to reinforcing bonds between individuals and may be associated with Ear-Lifting, Head-raising, or Social-Rubbing and is usually done while the partners are standing in parallel. Test-Mouth, Test-Temporal-Glands is meant to refer primarily casual meetings between male-male, female-male or female-female pairs. In these cases the pairs typically stand facing one another. These are casual acquaintances and may have more to do with individual identification or assessment. To distinguish between Caressing and Sheparding, the former is behavior related to greeting, reassuring or cooing over an infant or calf and the later related to protective, guiding or gathering motions.</p>	
		<p>Protection Trample-Ground Trample</p>	<p>A vigorous scraping or trampling of the ground following the birth of a baby. The mother uses her forefeet to scrape the ground clear of vegetation, perhaps to help remove the smell that may attract predators. She may also use her tusk to plough the ground. (145a) This behavior has also been seen when an elephant kills another elephant or a person. (145b). In either case it is not clear whether this is a typical or idiosyncratic response.</p>	
		<p>Protection Sheltering</p>	<p>An infant seeking shelter or security by standing or sleeping under the front legs of its mother or other caregiver. (146)</p>	
		<p>Protection Shepherding</p>	<p>The word to Shepherd means to gather, guard, herd, lead, or drive as a</p>	

shepherd. In reference to elephants Shepherding covers a variety of actions typically by juvenile or adult female that assist, protect, lift, guide, lead a baby. These actions may be accomplished with the body, feet, trunk, tusks or tail. It may also include waiting for or watching over or stepping in time with a baby. One may wish to further define Sheparding as, for example, Tail-Sheparding: using the tails to check for the presence/proximity of an elephant behind, or Trunk-Sheparding: an action by the trunk that gathers, assists or guides and infant or Body-Sheparding: an action that "herds" a calf back to safety. Attempting to lift a newborn or sleeping infant or calf to its feet by using the tusks, trunk or legs also falls under Sheparding. Note that just as a female may use her tusks to lift a sleeping baby or remove the birth sack of a newborn so may an elephant use its tusks to lift a sick, injured or dead elephant (88) There may be some confusion over the definitions of Caressing, Sheparding and Test-Mouth, Test-Genitals etc. To a large extent the differences are subtle and have to do with both the behavioral context and the relationship between the interacting individuals. Caressing is behavior within a family or bond group that is related to reinforcing bonds between individuals and may be associated with Ear-Lifting, Head-raising, or Social-Rubbing and is usually done while the partners are standing in parallel. Test-Mouth, Test-Temporal-Glands is meant to refer primarily casual meetings between male-male, female-male or female-female pairs. In these cases the pairs typically stand facing one another. These are casual acquaintances and may have more to do with individual identification or assessment. To distinguish between Caressing and Sheparding, the former is behavior related to greeting, reassuring or cooing over an infant or calf and the later related to protective, guiding or gathering motions.