

Species: Eastern Coyote, *Canis latrans* var. (*Canis latrans* x *Canis lupus* x *Canis Lycaon*)

Conditions: Observations were made in person at the Maine Wildlife Park in Gray, Maine. It was partly cloudy and temperatures were in the mid 60's for my approx. 1 hour and 15 minutes of observation.

Ethogram: Catalog of Behaviors -

Behavior

Definition

Locomotion

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|---------------------------|--|
| ~ <i>Brisk Walk</i> | -- Forward motion at a walk at a brisk pace |
| ~ <i>Slow Walk</i> | -- Forward motion at a walk with a slow and relaxed pace |
| ~ <i>Slow Trot</i> | -- Forward motion at a trot with a slow and relaxed pace |
| ~ <i>Brisk Trot</i> | -- Forward motion at a trot at a brisk pace |
| ~ <i>Walk & Smell</i> | -- Forward motion at a walk with a relaxed pace while lowering head to the ground and hovering nose above ground |
| ~ <i>Trot and Smell</i> | -- Forward motion at a trot with a brisk pace while lowering head to the ground and hovering nose above ground |

Muzzle Actions

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|-------------------------------|---|
| ~ <i>Rump Chew</i> | -- Reach head around either to the left or right to reach hind end with muzzle. Raise top lip and use teeth to scrape against skin and also bring teeth apart and together in a biting motion against skin. |
| ~ <i>Air Sniff (Standing)</i> | -- While standing still, raised head slightly and tip muzzle upwards while moving nostrils and slightly moving head up and down |

~ *Air Sniff (Laying Down)*

-- While laying down, raise head slightly and tip muzzle upwards while moving nostrils and slightly moving head up and down

~ *Leg Chew*

-- While standing, reach head down towards chest and move muzzle to the front left or right leg and scrape teeth against skin and/or bring teeth apart and together in a biting motion against the skin

~ *Object Sniff*

-- After coming to a stop from walking or trotting, bring head downwards to bring muzzle towards an object such as a rock or tree stump, while moving muzzle around the object and moving nostrils

~ *Yawn*

-- While laying down on the ground, raise head upwards and open muzzle wide, showing teeth and tongue. Eyes also pin shut and ears flex backwards towards side of head

Head Movements

~ *Head Turn (Standing)*

-- Turn head to either the left or the right while standing still

~ *Head Turn (Laying Down)*

-- Turn head to either the left or the right while laying down on the ground

~ *Ear Pin*

-- Swiftly bring ears flush to the side of the head

~ *Ear Swivel*

-- Rotate ears forward and back at varying speeds and angles

~ *Head Shake*

-- Rotating neck to the left and right in alternating and rapid succession

~ *Head Tuck*

-- While laying down, turn neck to the right or left to place head inwards towards stomach

~ *Ear Flick*

-- Swiftly flick one ear backwards and then return to normal relaxed position on head

Fully Body Actions

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|---------------------|---|
| ~ <i>Scent Mark</i> | -- Drop rump to ground and extend out tail while briefly urinating. |
| ~ <i>Lay down</i> | -- Shift back legs under rump while bringing front end towards the ground, while shifting front legs out in front of the chest. |
| ~ <i>Body Shift</i> | -- While laying down, extend front legs and use them to drag body slightly to the right or left. |

Summary -

When I first arrived at the Maine Wildlife Park in the town of Gray, I was originally planning on observing one of their black bears. I had called ahead to the park and let them know I was coming and inquired about what animal they thought would be most active in the early evening. They mentioned the bears might be, and they even offered to hold off feeding them since I needed at least an hour and fifteen minutes of observation time that was free of human interaction. However, when I arrived and made it to the bear enclosure, they were not active. They were sitting calmly, staring up at where I assumed the keeper feeds them from which certainly shows their habitation to their feeding routine. So, I switched gears and took a brisk walk past enclosures near the bears to find an active observational subject. Most animals were sleeping, but when I came to the Eastern Coyote enclosure, he was up and walking around so I decided he was my individual I would study. Overall, it was a perfect night to be outside observing (captive) wildlife. There were no bugs, it was cool, in the mid 60s and partly cloudy. The enclosure allowed the individual to be in clear view about 99% of the time (some dense vegetation brought him out of view briefly while he moved around his enclosure). There were three main broad actions I observed. He was either standing still and watching/listening, laying down and resting or observing, or he was on the move (walking or trotting). There were some behaviors that I observed only once or a couple times such as a yawn or head shake, but many

behaviors were repeated many times throughout the one hour and fifteen-minute time period. The most prevalent behavior I observed was listening or smelling. He was very alert and was either smelling or listening to his surroundings a lot of the time I watched him. Once it reached the time for me to make my fifteen-minute behavior sample observations, I knew that the behavior of smelling or listening to things around him would be the behavior I wanted to hypothesize about.

One thing I noticed was that at first, he seemed to warily watch me as I was a new individual in his environment, but he quickly seemed to get comfortable with my presence and focus on other stimulus in his environment. There were no other individuals that I could observe. I didn't get a chance to ask any of the keepers if there were multiple individuals in the enclosure, but the only individual I saw during my time there was the coyote I took behavior notes on so I was not able to make observations about him interacting with conspecifics which would have been interesting. The den inside the main enclosure had three separate dens/caves, but I could not see if there were individuals inside the dens. There were individuals of other species in his environment, just not directly in his enclosure and I will get into more details regarding specific species and their effect (if any) on the observation individual's reactions in my hypothesis explanation.

One aspect of my results seen in my behavioral budget is that the average duration of many of the locomotion behaviors could not be calculated or is missing times for average duration because I found it difficult to take sufficient time duration notes of each instance the individual walked or trotted as he switched quickly and frequently between the two gaits. Locomotion behaviors where durations were not observed and noted for each and every occurrence is indicated by saying approximate before the average duration number in the third column. N/A means that it was a behavior observed a single time that I was not able to get a duration reading for.

Hypothesis:

Whether the coyote picks up its head and smells the air, picks up its head and listens, or is non-reactive, depends on what it smells or hears in the environment around it and what it means to the individual.

Hypothesis Conclusions:

After watching the coyote for fifteen minutes while focusing on its behaviors related to awareness of its surroundings while laying down, I think I observed enough behaviors and reactions in order to make a few general conclusions regarding my hypothesis. My overall take away/conclusion from my fifteen-minute behavior sampling was that this coyote was exhibiting habituation. Even though he is still a wild animal, one that was taken from the wild due to an injury and is now cared for in captivity, he seems to be showing signs of habituation to his surroundings. After observing him at rest, I noticed that not all noises caused him to lift his head to listen. His enclosure was close to the duck pond. I heard ducks many times during the fifteen-minute observation period and he didn't move at all, let alone lift his head when they would quack or splash in the pond. This leads me to conclude that he has gotten used to this noise and it isn't of interest to him because he is unable to get to them. If this was a coyote in the wild that could reach the duck and possibly hunt it as prey, it might be a different scenario. Another similar example is chipmunks. Just in my short time in the park, I noticed that the chipmunks were everywhere! I couldn't count on my hands the number of chipmunks I saw or heard crashing through the leaves and underbrush. During the fifteen-minute observation period, there were several times where a chipmunk was running through the leaves and the coyote did not move to either listen or smell the air. This seems to be another case of habituation as this must be a common sound and smell for the coyote and is once again something out of his reach, so it is not important to him.

On the other hand, the sounds that caused him to pick up his head and listen by perking his ears or swiveling his ears will moving his head were sounds that he was also habituated to but was of interest to him. Several times a keeper drove behind his enclosure in a golf cart and this

caused the coyote to lift his head and listen. This leads me to conclude that he was also habituated to the keeper in the golf cart, but unlike the chipmunks and ducks, this sound was of interest to him because the keeper was his source of food. As far as scent goes, and lifting up his head to smell the air, as a human I can't really make conclusions about this aspect of the behaviors. I simply don't have the strong sense of smell that the coyote possesses and each time he lifted his head to smell the air, I couldn't detect a new smell that might cause him to react that way. However, I think that perhaps it might be a similar situation to the sounds, in that the smells that cause him to perk up his head and smell the air are either smells he is habituated to that are of interest to him, or they might be new smells that he isn't habituated to which causes him to become interested in order to investigate whether it should be of interest. However, I think that if it was a new smell, it might cause him to get up from his resting position on the ground rather than stay in his vulnerable resting position. Cognition at its core is the process of acquiring knowledge and understanding through experiences and senses. Therefore, the observations of the coyote sensing smells and sounds in its environment based on the conclusions I drew certainly pertains to cognition. The coyote is using its senses to acquire and use information about its surroundings which shows the process of cognition taking place.