READING CLOSELY GRADES 6 UNIT TEXTS

AUTHOR	DATE	PUBLISHER	L	NOTES		
	Text #1: Representations of Wolves (Images)					
Various	NA	Various: Public Domain	NA	Wolves represented through art, illustration and photography.		
1	Гехt #2:	A Brief History of \	Nolves	in the United States (Informational Text)		
Cornelia N. Hutt	NA	Defenders of Wildlife	1230L	Overview of wolves in North America including how they have been seen and affected by various groups of humans.		
		Text	t #3: <i>T</i> ı	wo Wolves (Video)		
Dave Owens	Dave Owens 2008 Dave Owens NA A Cherokee story of wisdom; the words of a Cherokee grandfather talking to his grandson.					
	Text	#4: Living with Wo	lves an	d Lobos of the South West (Websites)		
NA	NA	Living With Wolves and Mexican Wolves.org	NA	Informational websites about wolvesone on the history of the Mexican Gray Wolf and one about wolves living on a preserve.		
	Te	xt #5: <i>All About W</i>	olves: I	Pack Behavior (Informational Text)		
John Vucetich and Rolf Peterson	2012	The Wolves and Moose of Isle Royale Project	1200L	Discussion of the social behavior of wolves.		
		Text #6: White F	ang. [P	Pt. II Ch. I] (Fictional Narrative)		
Jack London	1906	Macmillan	1020L	Excerpt focusing on the running of a wolf pack and the role of the dominant female wolf within the pack.		
	Text	t #7: All About Wol	ves : Hu	unting Behavior (Informational Text)		
John Vucetich and Rolf Peterson	2012	The Wolves and Moose of Isle Royale Project	990L	An overview of the Isle of Royal Project as well as a factual description of a wolf hunt.		
		Text #8: White Fo	ang. [P	t. II Ch. III] (Fictional Narrative)		
Jack London	1906	Macmillan	1020L	Excerpt describing the first sensory experiences of a wolf pup and the role of the wolf parents.		
Text #9: Alpha Status, Dominance, and Division of Labor in Wolf Packs (Scientific Study)						
David. L. Mech	1999	Northern Prairie Wildlife Research Center	1300L	Report discussing observations of wolves in the wild and the issues of studying wolves in their natural habitat.		
	Extended Reading: (Various)					
Various	NA	Various	NA	Links to extension texts exploring various aspects of wolves and human perception of them.		









http://www.a-gc.com/nature-animals-wolves-2-22233/-



Odin at Ragnarok Emil Doepler,1905

http://www.shmoop.com/odin/photo-odin-at-ragnarok.html





Mollies Pack Wolves Baiting a Bison **Doug Smith**

http://bohojo.files.wordpress.com/2012/10/wolf_pack_surrounding_bison_usps.jpg



Roping Gray Wolf

http://www.thepublicdomain.net/2008_01_01_archive.html





© Gustave Dore. Public Domain

Red Riding Hood meets old Father Wolf Gustave Dore

http://www.wikipaintings.org/en/gustave-dore/red-riding-hood-meets-old-father-wolf



A Brief History of Wolves in the United States Cornelia N. Hutt Defenders of Wildlife

http://kidsplanet.org/www/index.html

Wolves once roamed across most of North America. Over hundreds of thousands of years they developed side by side with their **prey** and filled an important role in the web of life. **Opportunistic** hunters, wolves preyed on deer, elk and beaver, killing and eating the young, the sick, the weak and the old and leaving the fittest to survive and reproduce.

5 Wolf kills provided a source of food for numerous other **species** such as bears, foxes, eagles and ravens. Wolves even contributed to forest health by keeping deer and elk populations in check, thus preventing overgrazing and soil erosion.

Not surprisingly, the cultures which inhabited North America before the time of

European exploration **revered** the wolf and its role in nature. Many **indigenous** groups

relied on hunting as their major source of food and goods and were keenly **attuned** to their environment. The elements of the natural world, including the wolf, were important to their everyday lives and spirituality.

Native Americans **attributed** an **array** of powers and miracles to wolves, from the

prey	opportunistic	species
an animal hunted for food	taking advantage of a situation	a biological classification belonging to the same group
revered	indigenous	attuned
honored, adored, respected	coming from a particular region or country	aware, in harmony
attributed	array	
assigned, associated	a large group or number	

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creation of tribes to healing powers. For example, the Kwakiutl of the Pacific Northwest

15 believed that before they became men or women, they had been wolves. The Arikara
believed that Wolf-Man made the Great Plains for them and the other animals. The Sioux
and Cheyenne of the Great Plains and many other tribes credited the wolf with teaching
them how to survive by hunting and by valuing family bonds.

In other Native American cultures, the wolf played an important role in the **spiritual**20 and **ceremonial** life of the tribe. Wolves were regarded as mysterious beings with powers they could **bestow** upon people. The Crow, for instance, believed that a wolf skin could save lives. Other Native American **lore** is full of stories of wolves and of wolf parts healing the sick and the **mortally** injured.

When Europeans arrived in the New World, roughly 250,000 wolves flourished in

what are now the lower 48 states. Many settlers, however, brought with them a **legacy** of

persecution dating back centuries. Mythology, legends and fables such as those

popularized by Aesop and the Brothers Grimm **intensified** people's fear of wolves. In

America, the killing of wolves came to symbolize the triumph of civilization over what was

considered to be a wilderness wasteland. In 1630, just ten years after the *Mayflower* landed

at Plymouth Rock, the Massachusetts Bay Colony began offering a reward (bounty) for

every wolf killed.

spiritual	ceremonial	bestow
beliefs and values	relating to rituals	to give as a gift
lore	mortally	legacy
traditional wise teachings or stories	ending in or causing death	something handed down from the past
persecution	intensified	
hurting or causing trouble to someone who is weaker or different	strengthened or deepened	

- Colonists relied heavily on the deer population for food for themselves and as an export item. When the deer population dropped as a result of over-hunting, wolves became a convenient **scapegoat**. They were also held accountable for livestock losses,
- **35** even when diseases and other causes were to blame. Few people seemed to question the belief that a safe home required the elimination of all the wolves.
 - In time, wolf killing became a profession. In the 19th century, the demand for **pelts**sent hundreds of hunters out to kill every wolf that they could. At the same time, ranchers
 moved into the western plains to take advantage of cheap and abundant grazing land. As
- 40 domestic livestock replaced the wolf's natural prey base of bison and deer, the threat of wolf predation on cattle led to a massive campaign to exterminate the wolf in the American west. Professional "wolfers" working for the livestock industry laid out strychnine -poisoned meat lines up to 150 miles long. When populations dropped to such low levels that wolves were difficult to find, states offered bounties with the goal of extirpating
- wolves altogether. Wolves were shot, poisoned, trapped, clubbed, set on fire and inoculated with mange, a painful and often fatal skin disease caused by mites. In a 25-year period at the turn of the century, more than 80,000 wolves were killed in Montana alone.
- Well into the 20th century, the belief that wolves posed a threat to human safety

 persisted despite documentation to the contrary. The persecution continued. By the
- 50 1970s, only 500 to 1,000 wolves remained in the lower 48 states, occupying less than three percent of their former range.

scapegoat	pelts	domestic livestock
a person or group made to take the blame or to suffer in place of someone else	fur and skin	farm animals that are raised locally and are bred to be dependent on humans (eg. chickens and cows)
predation	extirpating	
the relationship between animals where one hunts and feeds on the other	removing or destroying totally	

Fortunately, America's understanding of the wolf has grown in the last 20 years. As scientists have discovered more about the **intricacies** of nature, our knowledge of the interdependence of all living things has increased significantly. People are now more aware of the importance of **predators** in maintaining healthy ecosystems. In addition, as our population has become increasingly **urbanized** and wilderness areas have been swallowed up by development, we have begun to treasure what we are losing. The wolf has become a symbol of our loss. The overwhelming number of wolf **advocacy** groups that now thrive in the United States attest to the degree to which these predators have captured our interest and our imagination.

Thanks to efforts by the U.S. Fish and Wildlife Service, zoos and wildlife advocacy groups, wolves have slowly begun to recover in areas where they have long been absent. In recent years, wolves have been successfully reintroduced to former **habitats** in central Idaho, Wyoming, Montana, North Carolina and Arizona. More than 5,000 wolves now inhabit the wild south of Canada. While many welcome this recovery, a vocal minority remains strongly opposed to the presence of any wolves at all in the wild.

intricacies	predators	urbanized
complex aspects	an animal that eats other animals	made part of a city
advocacy	habitats	
support	the natural environment; place that is natural for the life of an animal	



TWO WOLVES David Owens

http://www.youtube.com/watch?feature=player_embedded&v=E8CHjX8HauA#!

TEXT #4

Living With Wolves Jim and Jamie Dutcher Living With Wolves

http://www.livingwithwolves.org/index2.html

Lobos of the South West Mexican Wolves.org

http://www.mexicanwolves.org/index.php/about-wolves



All About Wolves John Vucetich and Rolf Peterson Wolves and Moose of Isle Royale Project, 2012

http://isleroyalewolf.org/overview/overview/wolves.html

PACK BEHAVIOR

About The Wolves and Moose of Isle Royale Project: Overview

Isle Royale is a remote wilderness island, **isolated** by the frigid waters of Lake

Superior, and home to populations of wolves and moose. As predator and prey, their lives and deaths are linked in a drama that is timeless and historic. Their lives are historic

5 because we have been documenting their lives for more than five decades. This research project is the longest continuous study of any predator-prey system in the world.

Observations of Pack Behavior

Wolves develop from pups at an incredible rate. Pups are born, in late April, after just a two-month pregnancy. They are born deaf, blind, and weigh no more than a can of soda pop. At this time, pups can do basically just one thing – **suckle** their mother's milk.

Within a month, pups can hear and see, weigh ten pounds, and explore and play

around the den site. The parents and sometimes one- or two- year old **siblings** bring food
back to the den site. The food is **regurgitated** for the pups to eat. By about two months of
age (late June), pups are fully weaned and eat only meat. By three months of age (late

isolated	suckle	regurgitated
separated from other persons or things	to suck at the breast or udder	undigested food that is vomited
siblings		
brothers or sisters		



- **15** July), pups travel as much as a few miles to **rendezvous** sites, where pups wait for adults to return from hunts.
- Pups surviving to six or seven months of age (late September) have adult teeth, are eighty percent their full size, and travel with the pack for many miles as they hunt and patrol their territory. When food is plentiful, most pups survive to their first birthday. As often, food is scarce and no pups survive.
- A wolf may **disperse** from its **natal** pack when it is as young as 12 months old. In some cases a wolf might disperse and breed when it is 22 months old the second February of its life. In any event, from 12 months of age onward, wolves look for a chance to disperse and mate with a wolf from another pack. In the meantime, they bide their time in the safety of their natal pack.
 - From birth until his or her last dying day, a wolf is **inextricably** linked to other wolves in a **complex** web of social relationships. The ultimate basis for these relationships is sharing food with some, depriving it from others, reproducing with another, and suppressing reproduction among others.
- 30 Most wolves live in packs, a community sharing daily life with three to eleven other wolves. Core pack members are an **alpha** pair and their pups. Other members commonly include **offspring** from previous years, and occasionally other less closely related wolves.

rendezvous	disperse	natal
a place that is popular to meet or gather	to separate, to move away	relating to birth
inextricably	complex	alpha
completely involved in something	a very complicated arrangement	an animal having the highest rank in its group
offspring		
children or young of a certain parent		

Pups depend on food from their parents. Relationships among older, physically mature offspring are fundamentally tense. These wolves want to **mate**, but alphas **repress**35 any attempts to mate. So, mating typically requires leaving the pack. However, **dispersal** is dangerous. While biding time for a good opportunity to disperse, these **subordinate** wolves want the safety and food that come from pack living. They are sometimes tolerated by the alpha wolves, to varying degrees. The degree of **tolerance** depends on the degree of obedience and submission to the will of alpha wolves. For a subordinate wolf, the

40 choice, typically, is to **acquiesce** or leave the pack.

Alphas lead travels and hunts. They feed first, and they **exclude** from feeding whom ever they choose. Maintaining alpha **status** requires controlling the behavior of pack mates. Occasionally a subordinate wolf is strong enough to take over the alpha position.

Wolf families have and know about their neighbors. Alphas exclude non-pack

members from their territory, and try to kill trespassers. Mature, subordinate pack

members are sometimes less hostile to outside wolves – they are **potential** mates.

Being an alpha wolf requires aggression, control, and leadership. Perhaps not surprisingly, alpha wolves typically possess higher levels of stress hormones than do subordinate wolves, who may not eat as much, but have, apparently, far less stress.

mate	repress	dispersal
to reproduce	to keep down, to stop	the act of dispersing, separating, moving away
subordinate	tolerance	acquiesce
belonging to a lower rank	acceptance, patient attitude	to accept something without any protest
exclude	status	potential
to keep out	the position of an individual in relation to other in the group	possible

- Pack members are usually, but not always friendly and cooperative. Wolves from other packs are usually, but not always enemies. Managing all of these relationships, in a way that minimizes the risk of injury and death to one's self, requires sophisticated communication. Accurately interpreting and judging these communications requires intelligence. Communication and intelligence are needed to know who my friends and enemies are, where they are, and what may be their intentions. These may be the reasons that most social animals, including humans, are intelligent and communicative.
- Like humans, wolves communicate with voices. Pack mates often separate

 temporarily. When they want to rejoin they often howl. They say: "Hey, where are you
 guys? I'm over here." Wolf packs also howl to tell other packs: "Hey, we are over here; stay
 away from us, or else."
 - There is so much more to wolf communication. Scientists recognize at least ten

 different categories of sound (e.g., howls, growls, barks, etc.). Each is believed to

 communicate a different, context-dependent message. Wolves also have an elaborate

 body language. As **subtle** as body language can be, even scientists recognize
- 65 communication to be taking place by the positions of about fifteen different body parts (e.g., ears, tail, teeth, etc.). Each body part can hold one of several positions (e.g., tail up, out, down, etc.). There could easily be hundreds to thousands of different messages communicated by different combinations of these body positions and vocal noises.
 Scientists apprehend (or misapprehend) just a fraction of what wolves are able to
- **70** communicate to each other.

sophisticated	intentions	subtle
complex or complicated	purposes or goals	not obvious, can be difficult to understand or see
apprehend		
to understand the meaning of something		

Wolves also communicate with scent. The most distinctive use of scent entails territorial scent marking.

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- **Elusiveness** makes wolves mysterious. This is true and fine. However, true love cannot survive mystery due to ignorance. Mature love requires knowledge. In some
- **75** basic ways the life of a wolf is very ordinary, even **mundane**, and its comprehension is fully within our grasp if we just focus.

The life of a wolf is largely occupied with walking. Wolves are tremendous walkers.

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Day after day, wolves commonly walk for eight hours a day, averaging five miles per hour.

They commonly travel thirty miles a day, and may walk 4,000 miles a year.

- 80 Wolves living in packs walk for two basic reasons to capture food and to defend their territories. Isle Royale wolf territories average about 75 square miles. This is small compared to some wolf populations, where territories can be as large as 500 square miles. To patrol and defend even a small territory, involves a never-ending amount of walking. Week after week, wolves cover the same trails. It must seem very ordinary.
- 85 The average North American human walks two to three miles per day. A fit human walks at least five miles/day. If you want to know more about the life of a wolf, spend more time just walking, and while walking, know that you are walking. What do wolves think about much while walking?

elusiveness	mundane	
the quality of being difficult to see	dull	



Wolves defend territories. About once a week, wolves patrol most of their territorial P20 boundary. About every two to three hundred yards along the territorial boundary an alpha wolf will scent mark, that is, urinate or defecate in a conspicuous location. The odor from this mark is detectable, even to a human nose, a week or two after being deposited. The mark communicates to potential trespassing wolves that this area is defended. Territorial defense is a matter of life and death. Intruding wolves, if detected, are chased off or killed,
95 if possible.

Wolves are like humans for having such complex family relationships. Wolves are
also like some humans in that they wage complete warfare toward their neighbors.

An alpha wolf typically kills one to three wolves in his or her lifetime.



White Fang Jack London Macmillan, 1906

http://www.gutenberg.org/files/910/910-h/910-h.htm

Excerpt: Pt. II, C.h. I THE BATTLE OF THE FANGS

It was the she-wolf who had first caught the sound of men's voices and the whining of the sled-dogs; and it was the she-wolf who was first to spring away from the cornered man in his circle of dying flame. The pack had been **loath** to **forego** the kill it had hunted down, and it lingered for several minutes, making sure of the sounds, and then it, too, sprang away on the trail made by the she-wolf.

Running at the forefront of the pack was a large grey wolf—one of its several leaders. It was he who directed the pack's course on the heels of the she-wolf. It was he who snarled warningly at the younger members of the pack or slashed at them with his fangs when they **ambitiously** tried to pass him. And it was he who increased the pace when he sighted the she-wolf, now trotting slowly across the snow.

She dropped in alongside by him, as though it were her **appointed** position, and took the pace of the pack. He did not snarl at her, nor show his teeth, when any leap of hers chanced to put her in advance of him. On the contrary, he seemed kindly **disposed**

loath	forego	ambitiously
reluctant	to leave without finishing	eagerly, with effort
appointed	disposed	
nominated, selected, given	willing, showing good temper	



toward her—too kindly to suit her, for he was prone to run near to her, and when he ran

15 too near it was she who snarled and showed her teeth. Nor was she above slashing his
shoulder sharply on occasion. At such times he betrayed no anger. He merely sprang to
the side and ran stiffly ahead for several awkward leaps, in carriage and conduct
resembling an abashed country swain.

This was his one trouble in the running of the pack; but she had other troubles. On

20 her other side ran a gaunt old wolf, grizzled and marked with the scars of many
battles. He ran always on her right side. The fact that he had but one eye, and that the left
eye, might account for this. He, also, was addicted to crowding her, to veering toward her
till his scarred muzzle touched her body, or shoulder, or neck. As with the running mate
on the left, she repelled these attentions with her teeth; but when both bestowed their
attentions at the same time she was roughly jostled, being compelled, with quick snaps to
either side, to drive both lovers away and at the same time to maintain her forward leap
with the pack and see the way of her feet before her. At such times her running mates
flashed their teeth and growled threateningly across at each other. They might have
fought, but even wooing and its rivalry waited upon the more pressing hunger-need of

After each **repulse**, when the old wolf sheered abruptly away from the sharptoothed object of his desire, he shouldered against a young three-year-old that ran
on his blind right side. This young wolf had attained his full size; and, considering the

abashed	swain	gaunt
humble, lower in rank	a male admirer or lover	underweight and bony from lack of food
veering	repelled	jostled
changing direction or course	driven or forced backwards	shoved roughly
wooing	repulse	
trying to win or see the affection or love of someone	repel, force away	



weak and **famished** condition of the pack, he possessed more than the average **vigour**35 and spirit. Nevertheless, he ran with his head even with the shoulder of his one-eyed elder. When he ventured to run abreast of the older wolf (which was seldom), a snarl and a snap sent him back even with the shoulder again. Sometimes, however, he dropped cautiously and slowly behind and edged in between the old leader and the she-wolf. This was doubly resented, even triply resented. When she snarled her displeasure, the old leader would whirl on the three-year-old. Sometimes she whirled with him. And sometimes the young leader on the left whirled, too.

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precipitately, throwing himself back on his haunches, with fore-legs stiff, mouth menacing, and mane bristling. This confusion in the front of the moving pack always

45 caused confusion in the rear. The wolves behind collided with the young wolf and expressed their displeasure by administering sharp nips on his hind-legs and flanks. He was laying up trouble for himself, for lack of food and short tempers went together; but with the boundless faith of youth he persisted in repeating the maneuver every little while, though it never succeeded in gaining anything for him but discomfiture.

Formation would have been broken up. But the situation of the pack was desperate. It was lean with long-standing hunger. It ran below its ordinary speed. At the rear limped the weak members, the very young and the very old. At the front were the strongest. Yet all were more like skeletons than full-bodied wolves. Nevertheless, with the exception of the ones that limped, the movements of the animals were effortless and tireless. Their

famished	vigour	precipitately
extremely hungry	energy	quickly
haunches	flanks	discomfiture
hindquarter of an animal	the side of an animal	frustration of hopes or plans



stringy muscles seemed founts of **inexhaustible** energy. Behind every steel-like contraction of a muscle, lay another steel-like contraction, and another, and another, apparently without end.

They ran many miles that day. They ran through the night. And the next day found

60 them still running. They were running over the surface of a world frozen and dead. No life stirred. They alone moved through the vast **inertness**. They alone were alive, and they sought for other things that were alive in order that they might **devour** them and continue to live.

They crossed low divides and ranged a dozen small streams in a lower-lying country

before their quest was rewarded. Then they came upon moose. It was a big bull they first found. Here was meat and life, and it was guarded by no mysterious fires nor flying missiles of flame. Splay hoofs and **palmated** antlers they knew, and they flung their customary patience and caution to the wind. It was a brief fight and fierce. The big bull was beset on every side. He ripped them open or split their skulls with shrewdly driven

50 blows of his great hoofs. He crushed them and broke them on his large horns. He stamped them into the snow under him in the wallowing struggle. But he was foredoomed, and he went down with the she-wolf tearing savagely at his throat, and with other teeth fixed everywhere upon him, devouring him alive, before ever his last struggles ceased or his last damage had been wrought.

inexhaustible	inertness	devour
can not be tired	lifelessness	to swallow or eat with hunger
palmated	foredoomed	
shaped like an open palm	doomed or condemned beforehand	

There was food in plenty. The bull weighed over eight hundred pounds—fully twenty pounds of meat per mouth for the forty-odd wolves of the pack. But if they could fast **prodigiously**, they could feed prodigiously, and soon a few scattered bones were all that remained of the splendid live brute that had faced the pack a few hours before.

There was now much resting and sleeping. With full stomachs, bickering and P11 quarrelling began among the younger males, and this continued through the few days that followed before the breaking-up of the pack. The **famine** was over. The wolves were now in the country of game, and though they still hunted in pack, they hunted more cautiously, cutting out heavy cows or crippled old bulls from the small moose-herds they ran across.

- different directions. The she-wolf, the young leader on her left, and the one-eyed elder on her right, led their half of the pack down to the Mackenzie River and across into the lake country to the east. Each day this **remnant** of the pack **dwindled**. Two by two, male and female, the wolves were deserting. Occasionally a solitary male was driven out by the sharp teeth of his rivals. In the end there remained only four: the she-wolf, the young leader, the one-eyed one, and the ambitious three-year-old.
- The she-wolf had by now developed a ferocious temper. Her three suitors all bore
 the marks of her teeth. Yet they never replied in kind, never defended themselves against
 her. They turned their shoulders to her most savage slashes, and with wagging tails and
 mincing steps strove to placate her wrath. But if they were all mildness toward her, they
 were all fierceness toward one another. The three-year-old grew too ambitious in his

prodigiously	famine	remnant
enormously	extreme hunger or starvation	small part of something leftover
dwindled	mincing	placate
became less or fewer	acting dainty, nice, or elegant	calm or quiet



fierceness. He caught the one-eyed elder on his blind side and ripped his ear into ribbons. Though the grizzled old fellow could see only on one side, against the youth and vigor of the other he brought into play the wisdom of long years of experience. His lost eye and his scarred muzzle bore evidence to the nature of his experience. He had survived too many battles to be in doubt for a moment about what to do.

The battle began fairly, but it did not end fairly. There was no telling what the
outcome would have been, for the third wolf joined the elder, and together, old leader
and young leader, they attacked the ambitious three-year-old and proceeded to destroy
him. He was **beset** on either side by the merciless fangs of his **erstwhile**comrades. Forgotten were the days they had hunted together, the game they had pulled
down, the famine they had suffered. That business was a thing of the past. The business
of love was at hand—ever a sterner and crueler business than that of food-getting.

And in the meanwhile, the she-wolf, the cause of it all, sat down contentedly on her

115 haunches and watched. She was even pleased. This was her day—and it came not often

—when manes bristled, and fang smote fang or ripped and tore the yielding flesh, all for
the possession of her.

And in the business of love the three-year-old, who had made this his first adventure upon it, yielded up his life. On either side of his body stood his two rivals. They were gazing at the she-wolf, who sat smiling in the snow. But the elder leader was wise, very wise, in love even as in battle. The younger leader turned his head to lick a wound on his

beset	erstwhile	
to hem in or surround	previous	



shoulder. The curve of his neck was turned toward his rival. With his one eye the elder saw the opportunity. He darted in low and closed with his fangs. It was a long, ripping slash, and deep as well. His teeth, in passing, burst the wall of the great vein of the throat. Then he leaped clear.

The young leader snarled terribly, but his snarl broke midmost into a tickling

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cough. Bleeding and coughing, already stricken, he sprang at the elder and fought while
life faded from him, his legs going weak beneath him, the light of day dulling on his eyes,
his blows and springs falling shorter and shorter.

130 And all the while the she-wolf sat on her haunches and smiled. She was made glad
in **vague** ways by the battle, for this was the mating of the Wild, the tragedy of the natural
world that was tragedy only to those that died. To those that survived it was not tragedy,
but realization and achievement.

When the young leader lay in the snow and moved no more, One Eye stalked over to P19

135 the she-wolf. His carriage was one of mingled triumph and caution. He was plainly expectant of a rebuff, and he was just as plainly surprised when her teeth did not flash out at him in anger. For the first time she met him with a kindly manner. She sniffed noses with him, and even condescended to leap about and frisk and play with him in quite puppyish fashion. And he, for all his grey years and sage experience, behaved quite as puppyishly and even a little more foolishly.

vague	carriage	rebuff
not clear or definite	appearance, look	snub or rejection
condescended	sage	
did something that she thought was below her dignity	wise	

Forgotten already were the **vanquished** rivals and the love-tale red-written on the snow. Forgotten, save once, when old One Eye stopped for a moment to lick his stiffening wounds. Then it was that his lips half **writhed** into a snarl, and the hair of his neck and shoulders involuntarily bristled, while he half crouched for a spring, his claws **145 spasmodically** clutching into the snow-surface for firmer footing. But it was all forgotten the next moment, as he sprang after the she-wolf, who was **coyly** leading him a chase through the woods.

vanquished	writhed	spasmodically
beaten, overcome	twisted or bent out of shape	with bursts of excitement
coyly		
timidly		



All About Wolves John Vucetich and Rolf Peterson Wolves and Moose of Isle Royale Project, 2012

http://isleroyalewolf.org/overview/overview/wolves.html

HUNTING BEHAVIOR

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5 because we have been documenting their lives for more than five decades. This research project is the longest continuous study of any predator-prey system in the world.

Observations about Hunting Behavior

For most North American and European humans, eating a meal is a pretty simple

affair: get some food from the cupboard, heat it up, and eat. What if every meal required

exerting yourself to the point of exhaustion, holding nothing back? What if every meal

meant risking serious injury or death? Under these circumstances, you might be happy to

eat only once a week or so – like Isle Royale wolves.

Isle Royale wolves capture and kill, with their teeth, moose that are ten times their size. Think about it for a moment – it is difficult to comprehend. A successful alpha wolf will have done this more than one hundred times in its life.

exerting	
using effort or force	

Wolves **minimize** the risk of severe injury and death by attacking the most **P4 vulnerable** moose. Somehow wolves are incredible judges of what they can handle.
Wolves encounter and chase down many moose. Chases typically continue for less than ½ a mile.

- 20 During chase and confrontation wolves test their prey. Wolves attack only about 1 P5 out of every ten moose that they chase down. They kill 8 or 9 of every ten moose that they decide to attack. The decision to attack or not is a vicious tension between intense hunger and wanting not to be killed by your food.
- Wolves typically attack moose at the rump and nose. The strategy is to inflict injury

 25 by making large gashes in the muscle, and to slow the moose by staying attached,
 thereby allowing other wolves to do the same. Eventually the moose is stopped and
 brought to the ground by the weight and strength of the wolves. The cause of death may
 be shock or loss of blood. Feeding often begins before the moose is dead.
- A moose, with a wolf clamped to its rump is still **formidable**. They can easily swing

 around, lifting the wolf into the air, and hurl the wolf into a tree. Most experienced wolves have broken (and healed) their ribs on several occasions. Moose deliver powerful kicks with their hooves. Wolves occasionally die from attacking moose.
 - After a chase, wolves may kill and begin feeding within 10 or 15 minutes. Or they may wound and wait several days for the moose to die.

minimize	vulnerable	confrontation
to reduce in size or quantity	that can be easily hurt or attacked	encounter, argument
formidable		
impressive, strong, difficult to overcome		

To some, wolves are evil for killing without cause and without eating much of what they kill. This is more a poor **rationalization** to **justify** killing wolves, than an observation rooted in fact.

Typically, wolves **consume** impressive portions of their prey, eating all but the **rumen** contents, larger bones, and some hair. They routinely eat what you and I would not dream of eating – the stomach muscles, tendons, marrow, bones, hair and hide. They typically consume 80 to 100% of all that is edible. By wolf standards, every American deer hunter is wasteful. A wolf's gut is not so different from ours that we can't appreciate what it means to resort to eating such parts.

These eating habits make sense: starvation is a very common cause of death for wolves; killing prey requires a tremendous amount of energy and is a life-threatening prospect for a wolf.

Two circumstances give false impressions. First, it may take several days for a pack
to consume a **carcass**, or they may **cache** it and consume it later. The ultimate **utilization**of what may appear to be a poorly utilized carcass is routinely **verified** by merely
revisiting the site of a moose carcass at a later date.

Occasionally prey are unusually abundant, **prone** to starvation, and easy to capture. P13
Under such conditions wolves may eat relatively small portions – only the most nutritious parts – of a carcass.

rationalization	justify	consume
expressed reason for doing something	to give a satisfactory reason or excuse for doing something	to eat or drink something entirely
rumen	carcass	cache
the first compartment of the stomach in which food is partly digested	dead body of an animal	conceal; hide
utilization	verified	prone
use	proven to be true	doing something often, having a habit

These are examples of an **inviolable** law of nature – utilization decreases as

P15

availability increases. The average American throws away about 15% of all the **edible**food that they purchase. Ten percent of our landfills are food that was once edible.

Finally, waste is a matter of perspective. What wolves leave behind, **scavengers**invariably utilize. Foxes, eagles, and ravens are among the most important scavengers on Isle Royale. However, even smaller scavengers may benefit greatly. To a chickadee, for example, a moose carcass is the world's largest suet ball. Scavengers make waste an impossibility.

After feeding for a few hours on a fresh kill, wolves sprawl out or curl up in the snow
and sleep. To eat a large meal with one's family, and then to rest. To stretch out and just
rest. When we observe wolves during the winter, about 30% of the time they are just
sleeping or resting near a recent kill. Wolves have plenty of reason to rest.

When wolves are active, they are really active. On a daily basis, wolves burn about 70% more calories compared to typical animals of similar size.

prey	inviolable	edible
an animal that is hunted for food by another animal	unbreakable	that can be eaten as food
scavengers	invariably	
an animal that feeds on dead animals	unchanging; constantly	

While chasing and attacking a moose, a wolf may burn calories at ten to twenty
times the rate they do while resting. Its heart beats at five times its resting rate. For
context, a world class athlete can burn calories at no more than about five times the
calories they burn at rest. The intensity at which wolves work while hunting is far beyond
the **capabilities** of a human.

While spending all this energy, wolves may eat only once every five to ten days.

P20

During the time between kills a wolf may lose as much as 8-10% of its body weight.

80 However, a wolf can regain all of this lost weight in just two days of **ad libitum** eating and resting.

When food is plentiful, wolves spend a substantial amount of time simply resting,

because they can. When food is scarce, wolves spend much time resting because they
need to.

85 Wolves work tremendously hard, but they also take resting very seriously.

In some important ways, wolves and humans are alike. We are both social,
intelligent, and communicative. In other ways, we differ. With thoughtful **reflection**,
however, we can understand or imagine some of these aspects of a wolf's life – their
endless walking and their feast or famine lifestyle.

90 However, in a fundamental way wolves **perceive** a world that is simply beyond our comprehension and imagination. Through their noses, wolves sense and know things that we could never know.

capabilities	ad libitum	reflection
abilities	a time of pleasure	attention, scrutiny
perceive		
observe, realize, understand		

We can build tools to help us visualize things we can't see directly, like x-ray

telescopes and electron microscopes. However, it is difficult to imagine a tool that would

allow us to sense or experience the **olfactory** world experienced by the everyday life of a wolf.

Wolves have 280 million olfactory receptors in their nasal passages – more than the number of visual receptors in their **retinas**. Wolves can detect odors that are hundreds to millions of times fainter than what humans can detect.

100 A wolf often walks with its head down, nose close to the ground. Wolves rely on their noses for two of the most basic activities – hunting and communicating with other wolves. Smells, more than sights or sounds, determine where a wolf will travel next.

While hunting, moose are most often detected first by smell. Wolves commonly hunt into the wind, and by doing so can smell moose from 300 yards away.

105 A moose with jaw **necrosis** is vulnerable, and wolves can almost certainly smell that a moose has jaw necrosis before even seeing it.

The life of a wolf is difficult and typically, short. The chances of pup survival are highly variable. In some years, for some packs, most or all pups die. In other years, most or all survive.

110 Of the wolves that survive their first six to nine months, most are dead by three or four years of age. Every year, one in four or five adult wolves dies in a healthy wolf population.

olfactory	retinas	necrosis
realating to the sense of smell	the most inner part of the eyeball that receives the image through the lens	rot or gangrene; dead tissue

Alpha wolves tend to be the longest lived. They commonly live for between six and nine years. Of the pups that survive their first year, only about one or two of every ten rise to the level of alpha. Most die without ever reproducing, and few wolves ever live long enough to grow old.

These rates of **mortality** are normal, even when humans are not involved in the death of wolves.

Wolves are **intensely social**. They are born into a family, and spend most of their

P34

time with other wolves. Wolves know each other and they know each other well. Imagine a world where it is common for one out of every four or five of the people you know to die.

The causes of wolf death are primarily lack of food and being killed by other
wolves in conflict over food. This fact denies all **credibility** to **perceiving** wolves as
wasteful **gluttons**, as they are often portrayed.

Most wolves die in the process of dispersing. Dispersal is a tremendous risk, but
one worth taking. Ultimately, the only thing that matters is reproducing. Reproduction is
very unlikely within the pack to which a wolf is born. It is better to risk death for some
chance of finding a mate and a territory, than to live safely, but have virtually no chance of
reproduction.

mortality	intensely	social
death	greatly	seeking or enjoying the companionship of others
credibility	perceiving	gluttons
having the ability to be believed or trusted	observing, understanding	someone who eats and drinks more than they need, in excess



White Fang Jack London Macmillan, 1906

http://www.gutenberg.org/files/910/910-h/910-h.htm

Excerpt: Ch. III THE GREY CUB

He was different from his brothers and sisters. Their hair already **betrayed** the reddish hue inherited from their mother, the she-wolf; while he alone, in this particular, took after his father. He was the one little grey cub of the litter. He had bred true to the straight wolf-stock—in fact, he had bred true to old One Eye himself, physically, with but a single exception, and that was he had two eyes to his father's one.

The grey cub's eyes had not been open long, yet already he could see with steady clearness. And while his eyes were still closed, he had felt, tasted, and smelled. He knew his two brothers and his two sisters very well. He had begun to **romp** with them in a **feeble**, awkward way, and even to squabble, his little throat vibrating with a queer

10 rasping noise (the forerunner of the growl), as he worked himself into a passion. And long before his eyes had opened he had learned by touch, taste, and smell to know his mother—a fount of warmth and liquid food and tenderness. She possessed a gentle, caressing tongue that soothed him when it passed over his soft little body, and that impelled him to snuggle close against her and to doze off to sleep.

betrayed	romp	feeble
revealed, exposed, gave away	to run without force or effort	physically weak, without strength
rasping	forerunner	passion
a harsh grating sound	predecessor, something or someone to follow	strong emotions

- 15 Most of the first month of his life had been passed thus in sleeping; but now he could see quite well, and he stayed awake for longer periods of time, and he was coming to learn his world quite well. His world was gloomy; but he did not know that, for he knew no other world. It was dim-lighted; but his eyes had never had to adjust themselves to any other light. His world was very small. Its limits were the walls of the lair; but as he had no knowledge of the wide world outside, he was never oppressed by the narrow confines of his existence.
- P4
 rest. This was the mouth of the cave and the source of light. He had discovered that it was different from the other walls long before he had any thoughts of his own, any conscious
 volitions. It had been an irresistible attraction before ever his eyes opened and looked upon it. The light from it had beat upon his sealed lids, and the eyes and the optic nerves had pulsated to little, sparklike flashes, warm-coloured and strangely pleasing. The life of his body, and of every fibre of his body, the life that was the very substance of his body and that was apart from his own personal life, had yearned toward this light and urged his body toward it in the same way that the cunning chemistry of a plant urges it toward the sun.
- Always, in the beginning, before his conscious life dawned, he had crawled toward
 the mouth of the cave. And in this his brothers and sisters were one with him. Never, in
 that period, did any of them crawl toward the dark corners of the back-wall. The light drew
 them as if they were plants; the chemistry of the life that composed them demanded the

 light as a necessity of being; and their little puppet-bodies crawled blindly and chemically,

lair	oppressed	conscious
den or sleeping area of a wild animal	tormented, frustrated	aware
volitions	yearned	cunning
a choice or decision made by the will	desired, wanted	skillful, crafty
confines		
limits and boarders		



like the tendrils of a vine. Later on, when each developed individuality and became personally conscious of **impulsions** and desires, the attraction of the light increased. They were always crawling and sprawling toward it, and being driven back from it by their mother.

- 40 It was in this way that the grey cub learned other **attributes** of his mother than the soft, soothing, tongue. In his insistent crawling toward the light, he discovered in her a nose that with a sharp nudge administered **rebuke**, and later, a paw, that crushed him down and rolled him over and over with swift, **calculating** stroke. Thus he learned hurt; and on top of it he learned to avoid hurt, first, by not **incurring** the risk of it; and second,
- when he had incurred the risk, by dodging and by retreating. These were conscious actions, and were the results of his first generalisations upon the world. Before that he had **recoiled** automatically from hurt, as he had crawled automatically toward the light. After that he recoiled from hurt because he *knew* that it was hurt.
- He was a fierce little cub. So were his brothers and sisters. It was to be expected. He possible was a carnivorous animal. He came of a breed of meat-killers and meat-eaters. His father and mother lived wholly upon meat. The milk he had sucked with his first flickering life, was milk transformed directly from meat, and now, at a month old, when his eyes had been open for but a week, he was beginning himself to eat meat—meat half-digested by the she-wolf and **disgorged** for the five growing cubs that already made too great demand upon her breast.

impulsions	attributes	rebuke
inner compulsions, urges	qualities or characteristics	stern dissaproval
calculating	incurring	recoiled
selfishly scheming or planning	provoking	drawn back; started back as caused by alarm or disgust
disgorged		
vomited		

But he was, further, the fiercest of the **litter**. He could make a louder rasping growl than any of them. His tiny **rages** were much more terrible than theirs. It was he that first learned the trick of rolling a fellow-cub over with a **cunning** paw-stroke. And it was he that first gripped another cub by the ear and pulled and tugged and growled through jaws tight-clenched. And certainly it was he that caused the mother the most trouble in keeping her litter from the mouth of the cave.

P9
perpetually departing on yard-long adventures toward the cave's entrance, and as perpetually being driven back. Only he did not know it for an entrance. He did not know anything about entrances—passages whereby one goes from one place to another place. He did not know any other place, much less of a way to get there. So to him the entrance of the cave was a wall—a wall of light. As the sun was to the outside dweller, this wall was to him the sun of his world. It attracted him as a candle attracts a moth. He was always striving to attain it. The life that was so swiftly expanding within him, urged him continually toward the wall of light. The life that was within him knew that it was the one way out, the way he was **predestined** to **tread**. But he himself did not know anything about it. He did not know there was any outside at all.

There was one strange thing about this wall of light. His father (he had already come to recognise his father as the one other dweller in the world, a creature like his mother, who slept near the light and was a bringer of meat)—his father had a way of walking right into the white far wall and disappearing. The grey cub could not understand this. Though never permitted by his mother to approach that wall, he had approached the

litter	rages	cunning
the name given to multiple young of an animal born at the same time	fits of violent anger	skillful
predestined	tread	
determined beforehand	to walk or stride - to put the foot down	



other walls, and encountered hard obstruction on the end of his tender nose. This hurt. And after several such adventures, he left the walls alone. Without thinking about it, he accepted this disappearing into the wall as a **peculiarity** of his father, as milk and half-digested meat were peculiarities of his mother.

In fact, the grey cub was not given to thinking—at least, to the kind of thinking customary of men. His brain worked in dim ways. Yet his conclusions were as sharp and distinct as those achieved by men. He had a method of accepting things, without questioning P11 the why and wherefore. In reality, this was the act of classification. He was never disturbed over why a thing happened. How it happened was sufficient for him. Thus, when he had bumped his nose on the back-wall a few times, he accepted that he would not disappear into walls. In the same way he accepted that his father could disappear into walls. But he was not in the least disturbed by desire to find out the reason for the

Like most creatures of the Wild, he early experienced famine. There came a time when not only did the meat-supply cease, but the milk no longer came from his mother's breast. At first, the cubs whimpered and cried, but for the most part they slept. It was not P12 long before they were reduced to a coma of hunger. There were no more spats and squabbles, no more tiny rages nor attempts at growling; while the adventures toward the far white wall **ceased** altogether. The cubs slept, while the life that was in them flickered and died down.

make-up.

peculiarity	logic	physics
a habit or characteristic	a valid way of reasoning	science that studies matter and energy and seeks answers by experimenting and observing
ceased		
stopped, finished		



One Eye was desperate. He ranged far and wide, and slept but little in the lair that P13

100 had now become cheerless and miserable. The she-wolf, too, left her litter and went out in search of meat. In the first days after the birth of the cubs, One Eye had journeyed several times back to the Indian camp and robbed the rabbit snares; but, with the melting of the snow and the opening of the streams, the Indian camp had moved away, and that source of supply was closed to him.

When the grey cub came back to life and again took interest in the far white wall, he found that the population of his world had been reduced. Only one sister remained to him. The rest were gone. As he grew stronger, he found himself compelled to play alone, for the sister no longer lifted her head nor moved about. His little body rounded out with the meat he now ate; but the food had come too late for her. She slept continuously, a tiny skeleton flung round with skin in which the flame flickered lower and lower and at last went out.

Then there came a time when the grey cub no longer saw his father appearing and disappearing in the wall nor lying down asleep in the entrance. This had happened at the end of a second and less severe famine. The she-wolf knew why One Eye never came

the end of the trail. There were many signs of the battle that had been fought, and of the lynx's withdrawal to her lair after having won the victory. Before she went away, the she-

120 wolf had found this lair, but the signs told her that the lynx was inside, and she had not dared to venture in.

After that, the she-wolf in her hunting avoided the left fork. For she knew that in
the lynx's lair was a litter of kittens, and she knew the lynx for a fierce, bad-tempered
creature and a terrible fighter. It was all very well for half a dozen wolves to drive a lynx,

spitting and bristling, up a tree; but it was quite a different matter for a lone wolf to encounter a lynx—especially when the lynx was known to have a litter of hungry kittens at her back.

But the Wild is the Wild, and motherhood is motherhood, at all times fiercely protective whether in the Wild or out of it; and the time was to come when the she-wolf, for her grey cub's sake, would venture the left fork, and the lair in the rocks, and the lynx's wrath.

wrath	
fierce anger	



Alpha Status, Dominance, and Division of Labor in Wolf Packs David L. Mech

In Canadian Journal of Zoology Published by Northern Prairie Wildlife Research Center Online, 1999

http://www.npwrc.usgs.gov/resource/mammals/alstat/index.htm

Introduction

Wolf (*Canis lupus*) packs have long been used as examples in descriptions of behavioral relationships among members of social groups. The subject of social dominance and alpha status has gained considerable prominence, and the prevailing
view of a wolf pack is that of a group of individuals ever vying for dominance but held in check by the "alpha" pair, the alpha male and the alpha female.

Most research on the social **dynamics** of wolf packs, however, has been conducted on wolves in captivity. These captive packs were usually composed of an assortment of wolves from various sources placed together and allowed to breed at will. This approach

10 apparently reflected the view that in the wild, "pack formation starts with the beginning of winter", **implying** some sort of annual assembling of independent wolves.

dominance	status	prominence
superiority, supremacy, authority	the position of an individual within a group	being well known or recognized
vying	dynamics	implying
competing	behaviors, patterns	suggesting something without actually saying it

In captive packs, the **unacquainted** wolves formed **dominance hierarchies**featuring alpha, beta, omega animals, etc. With such **assemblages**, these dominance
labels were probably appropriate, for most species thrown together in captivity would
usually so arrange themselves.

In nature, however, the wolf pack is not such an assemblage. Rather, it is usually a family including a breeding pair and their offspring of the previous 1-3 years, or sometimes two or three such families (Murie 1944; Haber 1977; Mech et al. 1998).

Occasionally an unrelated wolf is adopted into a pack, or a relative of one of the breeders is included, or a dead parent is replaced by an outside wolf and an offspring of opposite sex from the newcomer may then replace its parent and breed with the stepparent.

Nevertheless, these variations are exceptions, and the pack, even in these situations, consists of a pair of breeders and their young **offspring**. The pack functions as a unit year-round (Mech 1970, 1988, 1995b).

As offspring begin to mature, they **disperse** from the pack as young as 9 months of age. Most disperse when 1-2 years old, and few remain beyond 3 years (Mech et al. 1998). Thus, young members constitute a temporary portion of most packs, and the only long-term members are the breeding pair. In contrast, captive packs often include members forced to remain together for many years.

unacquainted	dominance hierarchies	assemblages
ignorant, unaccustomed	a way an animal group is organized, based on specific ranks	gatherings, groups
offspring	disperse	
children or young of a certain parent	to separate, to move away, to scatter	

- Attempting to apply information about the behavior of assemblages of unrelated captive wolves to the **familial** structure of natural packs has resulted in considerable confusion. Such an approach is **analogous** to trying to draw inferences about human family dynamics by studying humans in refugee camps. The concept of the alpha wolf as a "top dog" ruling a group of similar-aged **compatriots** is particularly misleading.
- 35 Because wolves have been persecuted for so long, they have been difficult to study in the wild (Mech 1974) and therefore information about the social **interactions** among free-living wolf pack members has accumulated slowly. Little is known about the interactions between breeding males and breeding females under natural conditions, and about the role of each in the pack and how dominance relates to these relationships.
- A few people have observed the social behavior of wild wolves around dens, but

 Murie (1944) gave an **anecdotal** account, Clark (1971), in an unpublished **thesis**,

 presented only a **quantified** summary of the pack's hierarchical relationships, and Haber

 (1977) described his interpretation of a pack's social hierarchy but gave no supporting

 evidence. Thus, no one has yet quantified the hierarchical relationships in a wild wolf pack.
- 45 Here I attempt to clarify the natural wolf-pack social order and to advance our knowledge of wolf-pack social dynamics by discussing the alpha concept and social dominance and by presenting information on the dominance relationships among members in free-living packs.

familial	analogous	compatriots
relating to the family	similar or alike	a native or inhabitant of one's own country; fellow countryman
interactions	anecdotal	quantified
actions, effects, or influences among individuals	an account based on observation or study	to give a measurement of quantity or amount
alpha concept	social dominance	
the idea that there is a most dominant or powerful individual in a particular group	a theory that studies how groups relate and are organized based on hierarchical relations	

Methods

This study was conducted during the summers of 1986-1998 on Ellesmere Island,
Northwest Territories, Canada (80° N, 86° W). There, wolves prey on **arctic hares**(*Lepus arcticus*), muskoxen (*Ovibos moschatus*), and Peary caribou (*Rangifer tarandus pearyi*), and live far enough from **exploitation and persecution** by humans that they are relatively unafraid of people. During 1986, I **habituated** a pack of wolves there to my

presence and reinforced the habituation each summer. The pack frequented the same area each summer and usually used the same den or nearby dens. The habituation allowed me and an assistant to remain with the wolves daily, to recognize them individually, and to watch them regularly from as close as 1 m.

We noted each time a wolf **submitted posturally** to another wolf. Usually this **deference** was characterized by "licking up" to the mouth of the dominant animal in the
"active submission" posture, similar to that described by Darwin (1877) for domestic dogs.

Often this behavior took place as an animal returned to the den area after **foraging**, and sometimes the returning individual disgorged food to the **soliciting** wolf. Other behavior noted included "pinning," or **passive submission**, in which the dominant wolf threatened

another, which then groveled, and "standing over," in which one wolf stands over another, which often lies nonchalantly but in a few cases sniffs the genitals of the other. I did not consider "standing over" a dominance behavior.

arctic hares	exploitation	persecution
a white hare that lives in cold or snowy conditions	act of taking advantage	hurting or causing trouble to someone who is weaker or different
habituated	submitted posturally	deference
make someone to become familiar with something	gave in to the authority of another, physically showed surrender	submissiveness, obedience
foraging	soliciting	passive submission
searching intently for something (eg. animals searching for food)	requesting or demanding something	giving in to the authority of another without argument or effort

70 Results and Discussion Alpha status

"Alpha" **connotes** top ranking in some kind of **hierarchy**, so an alpha wolf is by definition the top-ranking wolf. Because among wolves in captivity the hierarchies are gender-based, there are an alpha male and an alpha female.

- 75 The way in which alpha status has been viewed historically can be seen in studies
 in which an attempt is made to distinguish future alphas in litters of captive wolf pups. For example, it was **hypothesized** that "the emotional **reactivity** of the dominant cub, the *potential* alpha animal (emphasis mine) of the pack, might be measurably different from the **subordinate** individuals," and that "it might then be possible to pick out the
- **80 temperament** characteristics or emotional reactivity of *potential alpha or leader wolves* (emphasis mine), and of subordinates" (Fox 1971*b*, p.299). Furthermore, "Under normal field conditions, it seems improbable that timid, low ranking wolves would breed" (Fox 1971*a*, p.307). This view implies that rank is innate or formed early, and that some wolves are destined to rule the pack, while others are not.

connotes	hierarchy	hypothesized
means, implies	a system of ranking individuals in a group	supposed, presumed, speculated
reactivity	subordinate	temperament
the rate at which something reacts	of lower rank	personality

- 85 Contrary to this view, I propose that all young wolves are potential breeders and that when they do breed they automatically become alphas. Even in captive packs, individuals gain or lose alpha status, so individual wolves do not have an inherent permanent social status, even though captive pups show physiological and behavioral differences related to current social rank. Secondly, wolves in captivity breed readily, and I
 90 know of no mature captive individuals that failed to breed when paired apart from a group, as would be the case if there were inherently low-ranking, nonbreeders.
 - Third, in the wild, most wolves disperse from their natal packs and attempt to pair with other dispersed wolves, produce pups, and start their own packs. I know of no permanent dispersers that failed to breed if they lived long enough.
- Wolves do show considerable variation in dispersal age, distance, direction, and other dispersal behavior, and conceivably these are related to the intralitter variation discussed above. However, unless a maturing pack member inherits a position that allows it to breed with a stepparent in its own pack, sooner or later it will disperse and attempt to breed elsewhere. Labeling a high-ranking wolf alpha emphasizes its rank in a dominance hierarchy. However, in natural wolf packs, the alpha male or female are merely the breeding animals, the parents of the pack, and dominance contests with other wolves are rare, if they exist at all. During my 13 summers observing the Ellesmere Island pack, I saw none.

propose	inherent	physiological
to suggest	built-in, characteristic	the way the body functions
variation	intralitter	

Thus, calling a wolf an alpha is usually no more appropriate than referring to a p19

105 human parent or a doe deer as an alpha. Any parent is dominant to its young offspring, so "alpha" adds no information. Why not refer to an alpha female as the female parent, the breeding female, the matriarch, or simply the mother? Such a designation emphasizes not the animal's dominant status, which is trivial information, but its role as pack progenitor, which is critical information.

- 110 The one use we may still want to reserve for "alpha" is in the relatively few large wolf packs comprised of multiple litters. Although the genetic relationships of the mothers in such packs remain unknown, probably the mothers include the original matriarch and one or more daughters, and the fathers are probably the **patriarch** and unrelated adoptees. In such cases the older breeders are probably dominant to the younger
- travels of the pack.

The point here is not so much the terminology but what the **terminology** falsely **P21 implies**: a **rigid**, force-based dominance hierarchy.

matriarch	designation	trivial
female head of a family	distinctive name or title	insignificant
progenitor	patriarch	contention
ancestor or parent	male head of the family	disagreement or debate
disposition	implies	terminology
distribution	suggests	language or vocabulary
rigid		
fixed, not flexible		



EXTENDED READING

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http://news.discovery.com/animals/pets/why-wolves-are-forever-wild-and-dogs-can-be-tamed-130122.htm

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Interview with Suzanne Stone (Wolf Expert for Defenders of Wildlife) Outdoor Idaho

http://idahoptv.org/outdoors/shows/wolvesinidaho/Sstone.cfm

About the Wolves of Isle Royale Project Wolves and Moose of Isle Royale Website

http://isleroyalewolf.org/overview/overview/wolves.html