

Katmai National Park and Preserve

National Park Service  
U.S. Department of the Interior



# Bears of Brooks River

A Photographic Guide to the lives of Katmai's Brown Bears



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# How To Use This Book

This book is intended to present the basic life histories and identifying characteristics of some of the most frequently seen bears along Brooks River within Katmai National Park. It is not intended to be a complete check-list of bears at Brooks River, but rather a representative sample.

Bears are difficult to identify observationally, especially the first few times you see them. The information in this

book is drawn from thousands of hours of data collection, which was then used to document long term patterns of bear use along the river.

In this book the bears are arranged first by age classification and sex (adult males, adult females, subadults, and cubs) and then numerically by the number biologists have randomly assigned to them. Below is a sample page.

.....

Number and Nickname

Age Classification and Sex

Early and Mid-Summer Photos: Look for shed patterns, scars, and less body fat.

Late Summer and Fall Photos: Compare these with mid-summer photos noting the differences in fur color and overall size.

Photo Date

In the ID Marks and Hints section, read about a bear's body shape, size, color, scars and wounds, shed patterns, ear shape, and claw color.

The Life History section presents a bear's estimated age (if known), behavioral traits, preferred fishing spots, fishing techniques, and other information.

Number and Nickname	Age Classification and Sex	
<b>Bear 410 Four-Ton</b>	<b>Adult Female</b>	
		
		
<b>ID Marks and Hints</b>	<p>#410 is a large adult female. Her coat is medium brown with a grizzled appearance on her head and neck.</p> <p>She has a recognizable dish-shaped face and prominent muzzle. Her claws are dark, and she lacks distinctive scars.</p>	
<b>Life History</b>	<p>#410 is one of the largest females frequenting the Brooks River and fishes almost anywhere. She has been observed fishing in Naknek Lake, the lower Brooks River, and both above and below the falls.</p> <p>In 2007, she returned with two spring cubs, marking her third litter. She returned to the Brooks River Area in 2008 with the same two cubs, then yearlings, but lost one in early July.</p>	<p>She is arguably the most human habituated bear to be found using the Brooks River, even while caring for cubs.</p> <p>#410 has been observed with people and heavy equipment operating within 15 meters. She will sleep on the trail near the bridge and in front of or underneath the wildlife viewing platforms, even with many people standing directly above. She may tree her cubs near the viewing platforms while she fishes.</p>

# The Brooks River

Because it is one of the first streams in the region where bright, energetic, and pre-spawned salmon are available to bears, the Brooks River hosts one of the greatest seasonal concentrations of brown bears anywhere on earth.

The time of year along with salmon densities and spawning activity dictate when, where, and how bears feed along the river.

The cut bank provides a good fishing area for bears that are not tolerant of people.

In July, the riffles area below Brooks Falls is fished most often by less dominant bears and females with offspring.

Naknek Lake and river's outlet

Brooks Camp

Lake Brooks and river's start



Panorama of Brooks River

During late summer and fall, bears usually concentrate in the lower half of the Brooks River. At this time, bears are primarily fishing for dead and dying salmon.

Early in the salmon run, Brooks Falls creates a temporary barrier to migrating salmon resulting in a particularly successful fishing spot for bears.

At left, just beyond the photo is the Fish Ladder.

Less dominant bears often wait for their opportunity to fish the most preferred spots.

Downstream to Riffles and Naknek Lake

Lip

Jacuzzi

Far Pool



View of Brooks Falls from the Falls Platform

# Brooks River Bears Quick Facts

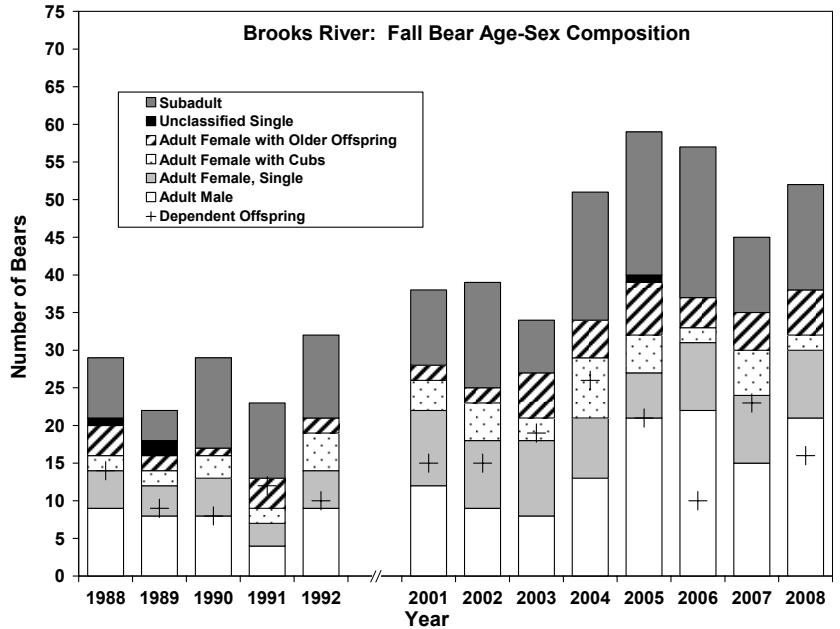
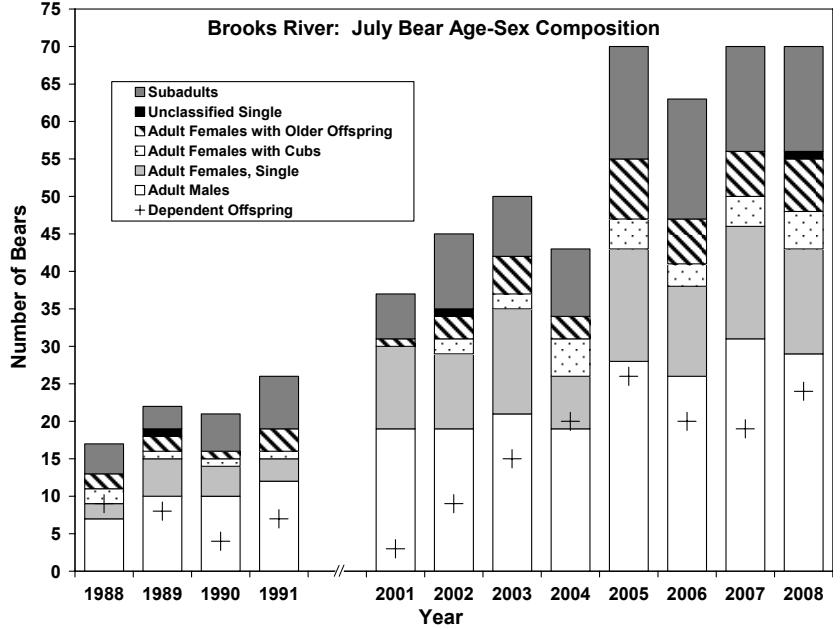
## How Many Bears Frequent Brooks River?

During late June through July the annual cumulative total number of independent bears identified regularly using Brooks River during 2004-2008 has ranged from 43 to 70. During September through early October, the annual cumulative total has ranged from 45 to 59. Typically, another 5 to 10 transient bears have also been documented in each of the two monitoring periods annually. There are several factors that may be related to the increasing trend in bear numbers at Brooks, including:

- Over the past 20 years, increasing management emphasis has been placed on minimizing bear-human conflicts. Over their lives, the experience of cubs that accompanied their mothers to Brooks may consist largely of relatively benign contacts with people there. Thus, we would expect the number and proportion of adults tolerant of people to increase.

- Salmon runs have been generally strong throughout the region during the past 20 years. In the Naknek River watershed, which includes Brooks River, the Alaska Department of Fish and Game has reported a 20 year average escapement of 1.8 million fish (1989–2008). During this same period, weather conditions have been relatively mild. Bear survival and productivity may have increased as a result.

- Brooks River is one of the first streams in Katmai where migrating salmon become accessible to bears (and the caloric value of bright pre-spawned salmon is exceptionally high). In contrast, spawning and spawned-out salmon are available at several streams during fall. Differences in adult male representation between July and fall may in part reflect this seasonal distribution of resources.



Above: Trends in bear composition documented at Brooks River through observational sampling methods. Bears included in these figures were observed using the river during at least three separate sampling sessions.

# Do the same bears return to Brooks River each year?

Yes. Typically many of the bears that are observed each year are recognized from previous study years.

During 2008, 59 of the 70 independent bears identified regularly using Brooks River during July were bears recognized from previous years, as were 35 of the 52 independent bears identified regularly using the river during fall. The majority of bears not recognized during both July and the fall were subadults. Recognizing bears from year to year is difficult; therefore, these figures should be considered minimum estimates.

A number of bears are also typically recognized each year between the July and fall (late August into October) periods of bear use at Brooks. However, it should be noted that recognizing bears between these periods within a single year tends to be more difficult than recognizing animals across years within the July or the fall bear use periods. Our minimum estimate of independent bears that were seen at Brooks River during both July and the fall of 2008 is 36. Analysis of DNA samples collected from bears



Bear #435, a young adult female, in July (top) and Sept. (bottom) 2005.



Bear #410, an adult female, in July (top) and September (bottom) 2004.

at Brooks River during June–July and fall of 2005–2007 may provide additional insight regarding patterns of use by individual bears.

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## Monitoring Bear Use of Brooks River

Observational sampling methods are used to record data on bear and human use of Brooks River, so that the following parameters may be compared between seasons and among years: (1) bear numbers, (2) bear activity rates by age-sex class and individual, (3) age-sex and behavioral class composition of bears seen, (4) bear “arrival” dates, (5) bear fish capture rates, and (6) relative bear and human use of observation zones below Brooks Falls.

The river from Brooks Falls down to the river mouth on Naknek Lake is divided into several observation zones for data collection. Sampling is conducted from the public viewing platforms at the Falls and near the floating bridge, as well as from a tree-stand in the “Cutbank” area. Observation sessions are scheduled to produce balanced sampling by time of day and sample zone. Arrival

and departure times are recorded for each individual bear seen during an observation session, and counts of people and behavior of each bear in view are recorded at 10-minute intervals. In addition, fish caught and time spent fishing is recorded for a subsample of the bears seen.

Records of identifying characteristics of individual bears are maintained, and each bear identified is assigned a unique identification number. The age-sex class of each bear is also recorded. Age classification is a subjective determination, based primarily on size and behavior (and often on the documented identification history of the bear). Sex is determined by observation of urination posture, observation of genitalia, or presence of offspring. Photo records are maintained for as many different individuals as possible. The photo-records are an important aspect to

recognizing individual bears across seasons and years, particularly when several biologists are involved in data collection.

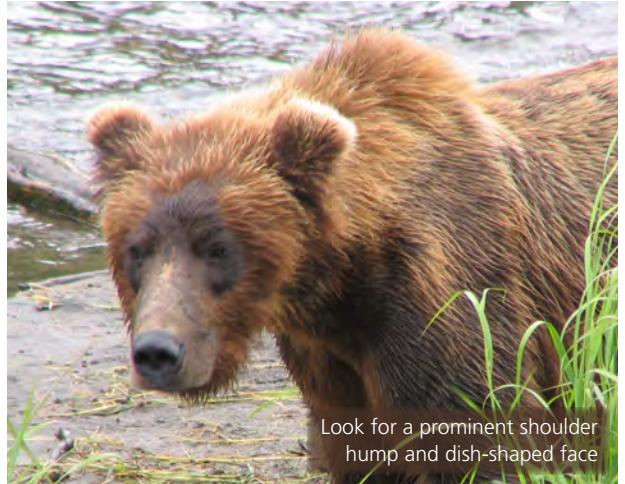


Biological Technician Katja Mocnik conducts a sampling session at Brooks River.

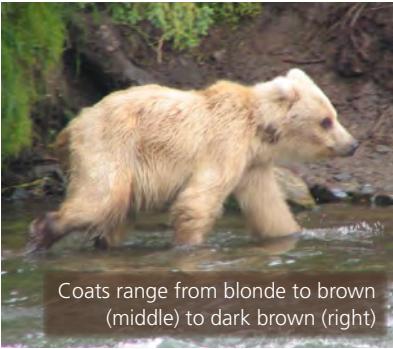
# An Introduction to Brown Bears



Brown bears have access to coastal food sources like salmon



Look for a prominent shoulder hump and dish-shaped face



Coats range from blonde to brown (middle) to dark brown (right)



## ID Marks and Hints

When visually identifying brown bears, there are several key things to look for. Brown bears usually have a rounded and dish-shaped face, unlike the faces of black or polar bears that usually have a more “roman” nose profile.

The fur of brown bears range from blonde to dark brown. As a general rule, their coats tend to darken with age and the season.

Polar bears and black bears also lack the prominent shoulder hump found on brown bears. This hump is a mass of muscle thought to be useful while the bear digs for roots and other food sources.

There are also distinct differences in the footprints of brown, polar, and black bears. Consult a good field guide for an explanation of this.

## Life History

The only bears to inhabit Katmai National Park and Preserve are brown bears.

Taxonomists currently consider brown bears and grizzly bears to be the same species and the difference between the two is somewhat arbitrary. In North America, brown bears are distinguished by their access to coastal food sources such as runs of salmon, while grizzlies reside further inland.

Bears are eating machines, and their survival is dependent on attaining enough calories over

the course of the spring, summer, and fall to sustain them through their denning period.

Hearing and vision is estimated to be equivalent to humans, but a bear's sense of smell, which is many times better than a dog's, sets them apart. Bears use scent to communicate everything from dominance to their presence in an area to receptivity to mating.

A wild brown bear's average life span is 20 years, although bears over thirty years of age have been documented.

# Adult Males



## ID Marks and Hints

The largest bears frequenting the Brooks River area are adult males, or boars. Like full-grown adult females, their bodies appear filled in, their heads appear smaller in proportion to their bodies, and their ears are generally wide-set.

Looking for genitalia is the easiest way to identify male bears, but you can also sex adult bears by watching them urinate. Adult males will urinate forward between their hind legs.

When male bears are shedding in the early summer, numerous scars are often visible.

## Life History

Due to their large size and strength, no other class of brown bear is able to compete physically with a large adult male.

They can stand 3-5 feet at the shoulder and measure 7-10 feet in length. The largest of adult males can weigh well over 1000 lbs, but most typically weigh between 600-900 lbs.

The best fishing spots at Brooks Falls are dominated by adult males. Hierarchy and dominance play important roles in preventing these animals from entering into violent battles.

Wounds, and their associated scars, are often received during fights with other males. These fights can be the result of competition for food resources (access or appropriation) or for the opportunity to mate with females.



July 2009



Sept. 2007



July 1988



July 2008



Oct. 2002

## ID Marks and Hints

#6 has an orangish-blond coat, his left ear is flopped over, and has a dog-like muzzle. He also has a thin lower lip and dark claws. Overall, he has an old appearance.

He can be confused with #211 who also has a droopy lip and ear, but #211 is darker, stockier, lower to the ground, and has a more barrel shaped torso.

## Life History

Bear #6 is one of the oldest and most recognizable bears in Katmai due to his preferred fishing spot at the top lip of the falls. He was classified as an adult in 1988 and is believed to be one of the oldest bears frequenting the Brooks River.

Despite his old age he often displaces younger males at the top of the falls. In July, he fishes the lip but will also fish in the far pool and the jacuzzi, and he will occasionally steal fish. He is often seen fishing in, or sleeping on the banks of, the lower river late in the season.

When fishing at the top lip of the falls, #6 typically stands in one spot waiting for fish to jump within range rather than shifting locations. He can sometimes be observed holding his head out with his neck extended, then raising (bobbing) his head upward once or twice in quick succession as if sniffing the air.

He was not seen in 2010. This is the first time in more than 20 years he has not been seen at Brooks River.



## ID Marks and Hints

#16 has a cinnamon-brown coat with blonder ears, a drooping lower lip, white claws, and an old face.

This bear has no large distinctive scars, but he does have scars on the side of his head and shoulders. In recent years, he has appeared thinner than most adult bears.

## Life History

Bear #16 is a regular at the Brooks Falls in July. In September, he is seen only sporadically.

Like bear #6, he is one of the oldest bears, if not the oldest, known in this area. Bear biologist classified him as an adult male in 1988 and he has returned to the Brooks River every year since.

He regularly fishes the lip of the falls, but is not a dominant presence. As a result of his lower position in the hierarchy, #16 is not aggressive towards other bears. Instead, he readily yields space to more dominant bears. Most recently, he scavenges salmon carcasses more often than he catches live fish.

He is showing signs of aging and appears to be getting thinner with each passing summer.



**ID Marks and Hints**

#24 is a large, long-legged, tall, and dark bear with white claws.

He has a narrow, straight "Roman" nose giving his face a black bear-like profile.

His coat is dark brown with hints of blonde around neck. Large areas of his hind quarters are usually bare when shedding.

He is missing a chunk of flesh from his nostrils and numerous scars can be visible, but none are distinctive.

**Life History**

During the past 10 years, #24 has been one of the largest, most dominant bears seen along the Brooks River. He has only been observed at Brooks from late June through July.

He was displaced as the dominant Brooks bear in 2006 and 2007 by #864 . He is less aggressive towards other bears than before his encounters with #864, but is still one of the most dominant bear visitors may see.

He is patient when fishing, preferring to catch fish at the pool and cascades on the north side of the falls.

However, he was not observed along the Brooks River in 2008 or in 2010. In 2009, he was seen only once in early summer.

Bear #24 has a reputation of being hyper-dominant and has been observed killing other bears.

DNA analysis has confirmed that he is the father of #790 and #854.



## ID Marks and Hints

#211 is large and dark with a uniformly colored coat.

He has a distinctive muzzle and profile. His head is wide with a thin muzzle and a slightly drooping lower lip. His claws are dark and his right ear droops.

This bear lacks a prominent shoulder hump. He has numerous scars on back, face and head, but none are distinctive.

#211 can be confused with #6, especially in September and October, but #211's barrel-shape, medium dark fur, and lack of a prominent shoulder hump set him apart.

## Life History

Bear #211 was first described as an adult male in 1996. He is another July regular at Brooks Falls and also returns to the Brooks River in September.

When fishing, he prefers to sit in the "jacuzzi" below the falls and will often sit in the water to eat his fish instead of losing his fishing spot.

He can also be observed napping in the water above Brooks Falls after fishing for salmon.



## ID Marks and Hints

#218 is a medium large bear with a dark blonde coat that is lighter towards his head. When shedding, his coat will be patchy with dark, bare spots. He has blonde, wide-set ears.

His dark eyes contrast with his coat and #218 has a short blocky nose. He lacks distinctive scars, but can have numerous small ones. His claws are dark.

In late September 2010, he was seen with a large wound on his left rear leg. This wound should result in a distinctive scar.

## Life History

#218 uses some of the most efficient fishing techniques at Brooks Falls. He has been observed fishing successfully almost anywhere, but seems to prefer fishing the lip and in the jacuzzi.

After catching many fish, he will often eat only the fattiest, most calorie rich parts of the fish (brains, roe, skin) and leave the carcass for scavenging bears and other animals. When first described as a young adult male in 2001, he fished anywhere he could fit in, but was easily displaced by larger bears. More recently he

has become one of the more dominant bears at Brooks Falls.

This bear seems to be entering into the prime of his life. In 2009, he arrived at the Brooks River with numerous, small wounds that were presumably received while fighting with other males, and very few bears fishing at Brooks Falls could displace him.



July 2007



Oct. 2006



July 2006



July 2008



Oct. 2007

## ID Marks and Hints

#219 is distinctive and easily identified in mid-summer. He has numerous, large scars on head, face, neck, body.

His claws are white and he is missing the outermost claw on left front foot, hence the name.

His coat in early summer is reddish-brown. In the fall, his coat is dark brown and most of his scars are not visible.

## Life History

In October 2008, during an event rarely seen, bear biologists observed #219 dying in the Brooks River from unknown but apparently natural causes. His body eventually washed into Naknek Lake and disappeared.

#219 is another bear that apparently never habituated to humans and rarely approached the Falls Platform when people were present. Late summer and fall, he was sometimes seen in the lower river.

He fished the riffles downstream of the Brooks Falls and regularly stole fish from other bears. Some of his scarring reflected this behavior.

DNA analysis confirmed that he is the father of #608.



## ID Marks and Hints

This bear is tall and thin with tan claws and a short, blocky muzzle. However, the key to recognizing #234 is by looking at his ears. He is missing his left ear.

Also, look for his light brown to blonde coat which is sometimes ragged in appearance.

## Life History

Bear #234 is one of the easiest bears to recognize along the Brooks River due his missing left ear and prominent fishing location on the lip of the falls. He lost his left ear late in 2001 or in the spring of 2002.

He is predictable in his fishing activities, almost always fishing the lip of the falls and less frequently in the far pool.

Like #6 and #16, he appears to be one of the oldest bears that frequent the Brooks River area. In 2009 and 2010, he showed visible signs

of aging. In 2009, he arrived looking very thin with a swollen front paw. Visitors with binoculars could often see that his teeth were worn to the gums.

In the past, most bears that fished the lip of the falls yielded space to #234 when he approached, but this appears to no longer be the case as #234 more readily yields to younger, more dominant males.



## ID Marks and Hints

#247's most identifying characteristic is his distinctive, protruding lower-left canine tooth.

Overall, he is a medium-sized bear with a rectangular muzzle, tan-tipped claws, a brown coat and wide set ears.

He is sometimes confused with #420. However, #420 is much larger and has several protruding teeth on the right side of his lower jaw.

## Life History

Bear #247 is distinctive because of his large, protruding canine tooth. As early as 2000 observers at Brooks River reported that his namesake tooth had "been this way for many years" and it does not seem to affect his ability to fish.

He fishes the far pool against the cliff and never seems to approach the platform side of the river. #247 is not seen in areas of high human use.

Although it can never be known for sure, his distinctive tooth is probably the result of a fight with another bear.

Video footage taken of this bear in October 2009 showed him looking thin and slow moving. Unseen injuries and illness can often prevent bears from feeding properly during the critical autumn months. Thin bears in the fall, like #247, may even starve to death in their den.

He was not observed along the Brooks River in 2010.



## ID Marks and Hints

This bear has a compact, medium-large body and a brown coat that becomes lighter towards the front of his body.

#418's claws are dark. He also has a small, but distinctive, scar above his right eye and a short, stocky and dog-like muzzle.

## Life History

Bear #418 was first recognized as an adult in 2001.

While fishing, #418 often plunges quickly into the river. He usually fishes the jacuzzi and far pool.

Even though he regularly fishes Brooks Falls in July, #418 had not been observed in the Brooks area during the autumn months. However, this pattern was broken in October 2009 and October 2010 when he was briefly seen along the Brooks River.



## ID Marks and Hints

#420 is easy to identify due to his protruding teeth on his lower-right jaw.

He can be confused with Bear #247, but that bear is smaller and only has one protruding canine tooth on his left jaw.

His is a long, large bodied bear with a blocky muzzle, rusty brown coat, tan-brown claws, and a floppy left ear.

## Life History

#420 is aggressive around other bears and regularly steals fish.

The jaw injury appeared to affect his ability to chew and swallow fish that he caught. However, he showed signs of rapid healing, both from the jaw injury and the wounds on his body. In 2009 and 2010, he was one of the most dominant bears fishing at Brooks Falls.

In 2005, he was seen with a very large, open wound on the left front leg that has since healed and scarred over.

In 2007, he returned to the Brooks River with a broken lower jaw and large, open wounds on both sides of his body.

Even though #420 is aggressive around other bears, he does not appear to be habituated to humans and rarely approaches the Falls Platform side of the river.



## ID Marks and Hints

#480 has a dark blonde coat, tan tipped claws, and some scars on both sides of his neck. His ears are wide set. His muzzle is long, straight, and narrow.

In the fall months, he has a walrus-like body and a relatively thick, wrinkled neck.

## Life History

#480, along with #218, uses some of the most efficient fishing techniques at the falls. He prefers the jacuzzi, but unlike many other bears, he is often tolerant of numerous other bears around him while he eats. These bears wait patiently for him to finish and eat any leftover scraps.

In September, he is one of the few bears that can successfully fish at Brooks Falls. Late in the season, he is often seen fishing the far pool.



## ID Marks and Hints

#489 is easily recognizable because of his large, distinctive scar on left hip.

This is a medium-large bear. His coat is light brown and often patchy when shedding, but is darker in September. He has a slightly drooping lower lip, dark eye rings, and dark claws.

His ears are large, upright and triangle shaped. His nickname, Ted, is short for "triangle-eared."

## Life History

Bear #489 was classified as a subadult when first identified in 2001 and has grown into a mature adult since then.

In 2007, he received a wound on his left hip during a brief altercation with #218. While the wound he received looked vicious, it has since healed and scarred over, and is this bear's most identifiable mark. This is yet another example of a bear's remarkable ability to heal.

During the summers of 2008-2010, he was one of the very few bears that was regularly seen fishing in the river in mid-August.



## ID Marks and Hints

In July 2007, #604 had a large open wound on his right hind leg. He is a medium-sized bear with wide set ears and a straight “Roman” nose.

#604 has a brown coat with a darker head and dark claws. He has longer fur under his chin resembling a beard.

## Life History

First classified as a 2.5 year old subadult in 2002, #604 was easily recognized in 2007 because of the large, deep wound on his right hind leg. The wound was deep enough that muscle tissue was visible through the skin and fatty layers.

After receiving this injury his behavior changed and he became a more passive bear, often begging for scraps.

According to observations by bear biologists and DNA analysis, he is the offspring of #236 and sibling of #608.

This bear fished lip of the falls and scavenged for scraps below falls. Before receiving his large wound in 2007, he was infrequently seen at Brooks during the autumn months. He has not been observed along the Brooks River since 2007.



## ID Marks and Hints

This bear has a medium large body with large (furry) and dark forearms. His coat is brown, grizzled, and generally uniform with blondish ears.

#634's muzzle is short and upturned. He lacks distinctive scars

## Life History

Bear #634 was classified as a subadult in 2002 and then as an adult in 2003.

He fishes the far pool and the lip of the falls. #634 will aggressively steal fish from smaller bears, especially early in the salmon run.

He occasionally wanders through the lower Brooks River area, including through camp. This is one bear that may be seen near Brooks Camp in May and early June.



## ID Marks and Hints

#747 has a medium-brown coat with reddish shoulders. His coat regularly sheds out in an erratic pattern and during the fall months it is a full dark brown. Early in the summer, he often has a noticeable shed patch on his forehead.

His ears are round and peg-like. He has dark claws, short muzzle, and a medium-small, stocky, and squat body.

## Life History

First classified as a subadult in 2004, #747 is now considered an adult bear.

He is successful at fishing and is a regular visitor to Brooks Falls in July. He also fished the falls in September 2008-2010.

#747 does not appear to be wary of people on the viewing platforms near Brooks Falls, but is rarely seen in other areas with high numbers of people.

Since 2007, he has noticeably grown in size and as a result is not easily displaced from his favorite fishing spots below Brooks Falls.



## ID Marks and Hints

#755 is a medium-small bear with a light golden brown coat, darker head, and a tapering muzzle. His dark eye rings can be a distinctive feature early in the summer.

In the fall, his coat is a uniform brown with contrasting, light colored ears.

## Life History

#755 was classified as a subadult when first observed in 2004. Even though he fishes at Brooks Falls regularly, he has never become habituated to humans or other bears.

He seems to be wary of humans and usually will not approach the platform side of the river when people are present. He has been observed running away from the riffles area when people approach.

#755 will fish at the falls during daylight hours when the platform is full of people, but rarely

leaves the far side of the river at those times. If he does approach the falls platform, he moves quickly behind it, never in front. Sometimes, however, he will fish the lip of the falls when only one or two people are on the platform.

In 2010, he seemed less willing to yield space to other adult bears. This may indicate that he is becoming more habituated towards other bears and/or more dominant as he matures.



## ID Marks and Hints

#814 is a medium-large adult with a flopped over or cropped right ear, and a distinctive scar above his right eye.

In June and July, his back has a pronounced saddle and is sometimes noticeably shed out. Late in the summer, his new coat is a uniform dark brown, and his scars might not be visible.

## Life History

#814 was described as a young adult male when he was first identified in 2005. In 2008 and 2009, this bear has shown increasing signs of dominance by stealing fish and displacing other bears from fishing spots.

He was observed killing #435's spring cub in June 2009. It is unclear why adult males will sometimes kill cubs as the cub is not always eaten. Certainly in some situations hunger plays a role, but at other times a cub may be killed and not eaten.

Motivation to mate with the cub's mother is another theory as to why some males perform infanticide. During the situation in 2009, #814 took the cub into the woods away from the river so it is unknown whether or not he ate the cub.



## ID Marks and Hints

#856 is medium-large adult. He has a uniform brown and grizzled coat. His ears are blonde and wide-set.

His forehead is wide and furred and #856 can have numerous small scars on his face and front legs.

Unlike most bears, #856 is often seen repeatedly licking his lips while he fishes the lip and walks around Brooks Falls.

## Life History

#856 was first classified as a young adult male in 2006 and has recently become one of the more dominant bears at Brooks Falls.

He was seen courting two female bears in 2010, #402 and #744. In Katmai, most male bears do not have the opportunity to mate with females until they reach their early to mid teens when they are large enough to outcompete other adult bears for access to females.

#856 seems to have followed this pattern. This bear may now be in the prime of his life where

he can successfully fend off challenges from most other adult males along the Brooks River. However, the hierarchy can change quickly, even within the same season. Therefore, most bears, like #856, are adapted to take advantage of their position in the hierarchy.

He prefers to fish the jacuzzi, but he will occasionally fish the lip of Brooks Falls. This bear has not been positively identified in the fall, but he could be the same bear as #888, who is only seen in September and October.



## ID Marks and Hints

This is a very large male, but his body does not appear to be filled out.

#864's coat is dark brown, his muzzle is blocky and scarring is usually visible on his forehead.

The whites of his eyes are often visible giving him a distinctive look.

## Life History

Bear #864 was identified in July 2006, but was certainly a large, mature adult at that time.

When present, he is arguably the most dominant bear along the Brooks River in July, even fighting and displacing #24. Bear #864 doesn't acknowledge other bears while fishing.

Visitors should not expect to see this bear. In 2007, he was only observed by bear biologists on overnight surveys, and was not observed at all during 2008-2010.

# Adult Females



## ID Marks and Hints

Like adult males, the bodies of adult females look filled in, their heads appear smaller in proportion to their bodies, and their ears are generally wide-set.

Genitalia is usually difficult to see on female bears, but you can still sex adult females by watching them urinate. Female will urinate backward from their hind legs.

Occasionally, scarring can be an identifier of females. During spring and early summer, scarring is sometimes present on the back of a female's neck. These scars can be the result of male bears biting them during copulation.

The presence of cubs is an absolute indicator that you are looking at a female. Male bears play no role in raising young.

## Life History

Adult females, or sows, generally weigh one-half to three-quarters as much as males, but can still grow to weigh between 400-700 lbs. at maturity.

In the Katmai region, female bears generally reach sexual maturity between six and eight years of age, but they may not produce their first litter until several years later. Mating takes place in late spring and early summer. However, fertilized embryos will not implant in the uterus until a female dens for the winter.

This “delayed implantation” may allow the female's body to determine the size of the litter. A female may have no offspring at all if her body didn't receive the nutrition it needs over the course of the summer and fall.

In the Katmai region, females typically keep their cubs through two summers, and less commonly through three summers.



## ID Marks and Hints

#216 is a medium-sized adult female. She has a prominent shoulder hump, a shaggy and dark blonde coat, and blonde ears.

Her muzzle is straight and the long hairs on her chin gives it a bearded appearance.

## Life History

With the exceptions of 2008, 2009, and 2010, #216 has been observed along the Brooks River every year since 1996. She fishes at the falls and the lower river area, and appears habituated to humans.

She can be aggressive towards other bears and has been observed bluff charging bears beneath the Falls Platform.

She is suspected to be the mother of females #790 and #854.

Beginning in 1998, #216 has raised several litters of cubs, but only keeps them through two summer seasons. She has not been observed caring for cubs into their third summer.

In 2005, she arrived at Brooks with four spring cubs. By the end of the summer season in 2006, she had only two left from this litter. She was pursued and courted by several males in 2007.



## ID Marks and Hints

#236 is a large adult female. She has a relatively large shoulder hump and round, filled in body. Her coat is medium-blond. Her ears are lighter and wide-set.

She has the classic grizzly/brown bear dished-shaped face. Her muzzle is rectangular and her large teats are usually easy to see, especially when she is raising cubs.

## Life History

Bear #236 is one of the older adult females to frequent the Brooks River area. She was first identified in 1997 with two spring cubs.

She will fish the lower river and the lip of the falls. When more dominant bears are fishing the lip, she will often sit below the viewing platform waiting for her turn.

Records from the past 20 years indicate that she is one of the most fertile and successful female bears that regularly uses the Brooks River area. In 2003, #236 was observed with four spring

cubs, which is unusual for any sow. Remarkably, she returned to the Brooks River in 2010 with four more spring cubs. This was her fifth known litter.

DNA analysis has confirmed that she is the mother of #604 and #608.



## ID Marks and Hints

A medium-sized adult, #402 has a short, dark blonde coat of fur. Her face is crescent shaped with a straight profile.

## Life History

#402 has had three known litters, one of which she raised into their third summer.

In 2007, she arrived at Brooks River with a single spring cub but soon lost it. She then went back into estrus and was pursued by several males, most prominently #218. In 2008, she was observed caring for three spring cubs.

She can be seen fishing the lip of the falls and in the lower river. #402 is one of the few females that will fish at Brooks Falls with spring cubs.

DNA analysis has confirmed that #402 is the sibling of #403. These two bears share not only a mother and physical features, but also some behavioral characteristics. Both of these bears will dive for fish.



## ID Marks and Hints

A large female, Bear #403 has a blonde coat that darkens to reddish-brown in the fall.

Her facial profile reveals a straight “roman” nose resembling a polar bear rather than the classic dish-shaped face of a brown/grizzly bear. She resembles #402.

## Life History

Bear #403 was first identified as a 2.5 year old in 2000. As a subadult and young female, she became successful with multiple fishing styles, most uniquely diving.

Along with submerging herself completely underwater to find salmon and roe, #403 fishes the lip of the falls.

She will also steal fish. #403 has intimidated sub-adults and smaller adult bears into giving up their fish, and has obtained fish from the lines of anglers.

#402 and #403 are siblings, and while #402 frequently uses the Brooks River area, #403 has not been seen at all since 2008.



**ID Marks and Hints**

This is a medium-small adult female with a dark blonde to blonde coat.

She can easily be confused with #409 who also has light blonde ears and a similar body and shape.

#408 has light blonde ears and a long and slightly upturned muzzle. She will fish the riffles below Brooks Falls and in the lower river area. She has a crooked claw on her left front foot, hence her nickname.

**Life History**

#408 was first identified as a young adult female in 2001. Her behavior that year hinted at subadult, but she was observed being pursued by male bears and had scars on the back of her neck, possibly from mating.

She fishes the lower river and riffles areas.

Both #408 and #409 are remarkably similar in appearance, especially late in the season. It is suspected that these two bears are siblings.

She was first observed with cubs in 2005. She was very attentive to these three cubs and occasionally charged other bears that were simply walking by. She raised this litter into their third summer.



## ID Marks and Hints

#409 has a long, straight muzzle with a slightly upturned nose and a medium-large body.

She has a light to medium-brown coat with wide-set, blonde ears.

She is often confused with bear #408, especially in September and October.

## Life History

#409 was classified as a subadult in 1999 and is frequently seen along Brooks River in July and September.

#409 had her first known litter of one cub in 2004, and she could be seen with the cub latched onto her back as she swam across the river. She kept this cub for two summers.

She returned in June 2007 with three spring cubs, but was soon observed with only two cubs. The two surviving cubs were raised through 2008. In 2009 and 2010, #409 was single again.

Like #410, she appears habituated to the presence of humans and will use areas near people to rest, travel and feed. She often fishes the lower river and will not normally hesitate to use the area near the bridge or Lower River Platform.



## ID Marks and Hints

#410 is a large adult female. Her coat is medium brown with a grizzled appearance on her head and neck.

She has a recognizable dished-shaped face and prominent muzzle. Her claws are dark, and she lacks distinctive scars.

## Life History

#410 is one of the largest females frequenting the Brooks River and fishes almost anywhere. She has been observed fishing in Naknek Lake, the lower Brooks River, and both above and below the falls.

In 2007, she returned with two spring cubs, marking her third litter. She returned to the Brooks River Area in 2008 with the same two cubs, then yearlings, but lost one in early July.

She is arguably the most human habituated bear to be found using the Brooks River, even while caring for cubs.

#410 has been observed with people and heavy equipment operating within 15 meters. She will sleep on the trail near the bridge and in front of or underneath the wildlife viewing platforms, even with many people standing directly above. She may tree her cubs near the viewing platforms while she fishes.



## ID Marks and Hints

A medium-small adult female, #415 has a brown, uniform coat and a short straight muzzle. She has no distinctive scars.

She almost continuously bobbles her head when fishing the lip of the falls.

## Life History

#415 isn't easy to identify by appearances alone. Pay close attention to her behavior.

She is very aggressive with other bears when fishing the lip of the falls. Even with her small stature, she will often back down larger male bears to retain her preferred fishing spot.



## ID Marks and Hints

#435 has a medium-small body with a distinctive light blonde coat.

Her ears are large and lighter than her coat. She has a dished face and short muzzle. Her dark eye rings are distinctive early in the summer.

## Life History

#435 was identified as a young adult female in 2001. She can be a nervous mother around other bears. During the summer of 2006, she repeatedly treed herself and her cub in the middle of Brooks Camp in response to other bears. This cub is now recognizable as subadult #89.

In 2009, she returned to Brooks River with one spring cub. In late June, this cub was killed by #814.



## ID Marks and Hints

#438 is a medium-small female with a light brown or blondish coat. She has wide-set and large blonde ears.

Her muzzle is grooved and she has distinctive-white claws.

## Life History

#438 was first classified as an adult female in 1999, but older records suggest she was likely raising yearling cubs in 1997.

She raised her first confirmed litter into their third summer. In 2010, she kept her most recent litter into their fourth summer. It is rare for bears in Katmai to care for cubs for this long.

In 2004, #438 and her cubs directly approached an angler with a fish on his line. Within 30 minutes, the family group moved downstream and they obtained a bagged fish from an angler

who had dumped it on the beach as the family rapidly approached.

In 2009, she and her two cubs obtained garbage from the incinerator building at Brooks Camp. After receiving this reward, they frequently investigated the buildings near camp and were difficult to haze away.

Help keep bears from learning these behaviors. Store all food and garbage securely. Stay alert at all times and stop fishing well before a bear approaches within 50 yards.



## ID Marks and Hints

This is a medium-sized and sometimes fat adult female. #468 has a brown, uniformly colored coat. Her wide-set ears appear lighter in color by September.

Her facial features can be easy to recognize. She has a drooping lower lip, long muzzle, and a prominent brow ridge.

## Life History

#468 was first observed and classified as an adult female with one spring cub in 1999. In 2007, she returned to the Brooks River with one spring cub marking her third litter. She is the mother of #708.

#468 will fish the oxbow, lower river area, and far pool at falls. She was seen only infrequently in 2009 and wasn't seen at all in 2010.



## ID Marks and Hints

#608 has a medium-small body and a dark blonde coat with lighter head. The fur around her neck often gives her mane and forehead a fluffy appearance.

She has dark claws and a long muzzle.

## Life History

#608 is a young female and was first seen independent as a 2.5 year old bear in 2002.

DNA analysis indicates that she is the offspring of #236 and #219 and the sibling of #604. Along with #604, #608 was raised in the Brooks River area.

She frequently fishes the lower river and uses the area around camp. However, she is a defensive mother around bears and people.

She and her first litter of cubs obtained play rewards in the form of unattended property on the lodge porch, cabin porches, and from boats. There is good evidence that she obtained play rewards from humans as a cub.

While #608 is not a “problem” bear, her past behavior, especially with cubs, highlights the importance of maintaining appropriate distances as well as storing all equipment properly so that bears don’t learn to associate our possessions with toys.



## ID Marks and Hints

#700 is a small adult female with a short brown coat. The fur on her face and legs is usually longer than her body.

She has a sharp muzzle and dark claws. Her triangular ears sometimes appear very large, especially early in the summer.

## Life History

#700 is a young female who was first identified as a subadult in 2003.

She is apparently wary around other bears (but relatively habituated to people) and kept cubs underneath the falls platform or treed them nearby while she fished. She acts very skittish around the falls in response to other bears.

She raised her first litter into their third summer. In 2008, this family was more often heard than seen as her cubs were particularly vocal when begging for salmon.



## ID Marks and Hints

This bear has a small, rotund body. She has a light brown coat, dark claws, and a straight and short muzzle that resembles #468.

Her ears are perched high on her head. During the fall months, she often has longer and more reddish fur on her neck and shoulders.

## Life History

#708 is an adult female and was first identified as an independent 2.5 year old bear in 2003.

She is another female that appears to be habituated to the presence of people and the activity around camp, often passing directly through camp if not discouraged.

She can be seen fishing from the falls downstream to the lower river and often stands on her hind legs for prolonged periods to scan the river.

In 2008, she arrived in the Brooks River area with one spring cub. During the fall months while caring for this cub during the fall months she fished the head of Brooks River, possibly to avoid other bears. This is a marked behavioral change from years past.

#708 is believed to be the offspring of #468.



## ID Marks and Hints

#744 has a small, thin body. Her summer coat is blonde to light brown in color. She often sheds most of her coat by the end of July.

She has large, triangular ears, dark claws with lighter tips, and her head and feet appear large in proportion to her body.

## Life History

Bear #744 is a small adult female regularly seen along the Brooks River. She was first identified as a subadult in 2004.

She appears to tolerate other bears, even large males. She will approach large males at the falls in hopes of picking up any fish scraps they leave behind.

She has not been observed with cubs, but has showed signs of estrus.

#744 seems habituated to people and is often seen on the beach in front of camp and near the bridge.



## ID Marks and Hints

This is a medium-small, young adult female with skinny legs.

#790 has a long, shaggy light brown coat, a straight facial profile, and small ears in proportion to her head.

Resembles #216 and is often confused with #854.

## Life History

When first identified in 2005, #790 was classified as a subadult and estimated to be 3.5 years old at that time.

She can often be seen fishing in the lower river.

DNA analysis has identified #216 and #24 as her parents. #854 is her sibling. She was not seen in 2010.



## ID Marks and Hints

#854 is another small, young adult female. She has a golden blonde coat in July which darkens by late August.

Her muzzle is short and straight. She has scars on both hips. In July, #854 often has a noticeable shed patch on her forehead.

## Life History

Bear #854 shares a similar life history as her sibling #790. Her mother is #216 and #24 is her father. She was classified as a subadult in 2004.

She is still young, but like #790, she has showed signs of estrus during the past several years. This is one bear that is occasionally seen near Brooks Camp in May and early June.

#854 has learned to associated people with fish. In the lower Brooks River, she will often sit or lie on the shore while people fish nearby. She often looks like she is resting and not paying at-

ention to the water, but when someone hooks a fish, she quickly enters the water in pursuit of an easy meal.

Anglers should be especially careful around bears and remember that the sound of a splashing fish is the sound of food to a bear. Each time a bear takes a fish from someone's fishing line it reinforces that behavior. The bear is then more likely to approach people in the future with the idea of obtaining food.

# Subadults



## ID Marks and Hints

Subadults are small to medium sized bears that often appear skinny or gangly. Like adolescent humans, subadults appear to have not yet grown into their body, which sometimes gives them the impression of having a big head and ears.

Behaviorally, they can be recognized by their playful and inquisitive nature. You might see a subadult play-fighting, chasing a duck, or awkwardly attempting to fish.

They are sometimes skittish around larger adult bears. Young adult females, due to their smaller size, can sometimes be confused with subadults but are less lanky and more filled-out. They will also behave more confidently than a subadult.

## Life History

Subadults, young brown bears typically between 2.5 and 5.5 years old, are independent of their mothers but have not yet matured into an adult bear.

The distinction between a subadult and an adult bear is somewhat arbitrary and is defined by reaching sexual maturity. Like in humans, there is no set age that this happens, but it generally occurs around the bear's sixth or seventh year. Until they reach maturity, subadults spend their time learning how to fit into the complex world of bears.

Because of their relatively small size and low position in the bear hierarchy, the subadult years are a difficult time in a bear's life.

As the lowest members of the bear hierarchy, they are forced to yield space and food resources to larger adults. Subadults are relegated to the less than desirable fishing spots, and sometimes face predation by other bears.



July 2010



Sept. 2010



June 2009



#435

#89 as a yearling cub in Sept. 2007.



Sept. 2008

## ID Marks and Hints

#89 is a medium-small subadult. He has a distinctive face with dark, round eye-rings and a straight muzzle.

His coat is usually very blonde, but it does darken in the fall.

## Life History

As a cub, #89 was very recognizable and as a result he is one of the few bears whose mother is known. He is the offspring of #435 and was first observed as an independent 2.5 year old bear in 2008.

For a young bear, he seems tolerant of other bears, even at Brooks Falls. He will come to Brooks Falls in July, but is not yet able to compete with other bears for fishing spots. Instead, #89 will scavenge fish from older bears.

As a yearling cub in 2007, his front leg appeared broken and he limped noticeably throughout the summer. By the early fall, his leg appeared to be healed. The injury was not noticeable in 2008, which was his first summer as an independent bear.



## ID Marks and Hints

#130 is a small subadult with a medium-blond coat and round ears of the same color. She has dark brown claws that are lighter on the tips and slight eye rings.

Her most distinctive feature is a scar above the left eye.

## Life History

#130 was classified as a 2.5 year-old subadult female in 2009. She fishes the cut bank and lower Brooks River, but like many subadults she has a low success rate.

This young bear shows signs of habituation towards people, especially around Brooks Camp, but she usually avoids other bears and people when surprised.

She is the offspring of #409. While #130 was still being raised by her mother, she received a bloody wound above her left eye that resulted in her recognizable scar.

# Cubs



## ID Marks and Hints

Cubs are small, young bears dependent on an adult female.

Cubs in their first year, called spring cubs or cubs-of-the-year, are generally very small with dark fur. They can sometimes have a collar of lighter fur around their neck.

Cubs in their second summer are considered yearlings. Their coats are generally lighter than spring cubs, especially early in the summer.

Relative size can help differentiate between spring, yearling, and 2.5 year-old cubs. Overall, spring cubs are very small compared to their mothers, while 2.5 year old bears can be so large as to be hard to distinguish from their mother.

The top row of photos follows the growth of one litter through two summers. The bottom row of photos follows the growth of one litter through three summers.

## Life History

Cubs are born in the den in mid winter. At this time they are hairless and weigh about one pound. After birth, they will nurse until the mother emerges from the den in mid-spring.

Upon emerging from the den, they normally weigh between 15-25 lbs. By the end of their first summer, they may double in weight.

In the Katmai region females will generally keep their cubs through two summers, and less frequently through three summers. Cubs form strong, albeit temporary, social bonds with their siblings and mother.

Their playful demeanors often mask the risk cubs face. Mortality is very high within the Katmai region, as many as 2/3 of cubs will not survive their first year. Infanticide, drowning, falling, and becoming lost are just some of the obstacles these young bears must overcome.