

# Wolf to Woof: The Story of Dogs

## Education Trunk Overview

### Introduction

The following information will serve as a basic overview for the objects housed in the **Wolf to Wolf: The Story of Dogs** Education Trunk and includes suggestions on how these objects can be used to enhance the visitor experience within the exhibition. Additional information about these specimens and objects can be found within the exhibit label copy.

### 1. Skull Comparisons

All four (4) replica skulls provided are from canines—one species (the dire wolf) is extinct and the other three are still living (extant). Canines are in the order Carnivora and belong to the family Canidae. Like other members of Carnivora, canines have a pair of bade-like teeth called carnassials in their upper and lower jaws. The teeth work like scissors to slice through muscle and skin.

#### 1-a) Dire Wolf Skull

The Dire Wolf (*Canis dirus*) is the largest canid known to have ever existed. It lived in North America during the Pleistocene Epoch. Although it was closely related to the Gray Wolf, it was not, as commonly assumed, the direct ancestor of any species known today. The Dire Wolf co-existed with the Gray Wolf in North America for about 100,000 years. They were one of the abundant Pleistocene megafauna, a wide variety of very large mammals that lived during the Pleistocene. About 10,000 years ago the Dire Wolf became extinct along with most other North American megafauna.

Remains of the Dire Wolf are widespread in North America, but the greatest concentrations are found in California and Florida (because these states had appropriate conditions for the preservation of Pleistocene animal remains). The first specimen of a Dire Wolf was found by Francis Lick on the banks of the Ohio River near Evansville, Indiana in 1854, but the vast majority of fossils recovered have been from the La Brea Tar Pits in California.

The common misconception of the Dire Wolf is that it was much larger than the Gray Wolf; in fact it was similar in overall size and appearance. On average it was a little larger at about 1.5 meters (5 feet) in length and about 50 kilograms (110 pounds). Despite superficial similarities, there were significant differences between the two species. The legs of the Dire Wolf were proportionally shorter and sturdier than those of the Gray Wolf, which suggests that the Dire Wolf was a poorer runner, and that like the hyenas, the Dire Wolf may have scavenged for food or hunted large, slower-moving prey.

The Dire Wolf had a larger, broader head and smaller brain-case than that of a similarly-sized Gray Wolf, and had teeth that were quite massive. Many paleontologists think that the Dire Wolf may have used its relatively large teeth to crush bone, an idea that is supported by the frequency of large amounts of wear on the crowns of fossilized Dire Wolf teeth.

### **1-b) Domestic Dog Skull, *Canis Familiaris***

### **1-c) Gray Wolf Skull, *Canis Lupus***

Fossil and genetic evidence confirm that all dogs are the descendants of wolves. Because of this close relationship, skeletons of dogs and their wild cousins, wolves can be difficult to tell apart. Have visitors compare these two skulls, looking for these key differences:

- Dogs skull often have a more prominent “stop” (the break in the downward slope from the forehead to the tip of the nose) than the wolf skull do.
- Dogs’ teeth are squatter (shorter in height) than those of similar-sized wolves.

### **1-d) Bat-eared Fox, *Otocyn megalotis***

The Bat-eared fox has teeth that are slightly different from other canines. Its teeth are more slender and pointed, better suited for its diet of fruit and insects. It also has more teeth than other canines- 45 to 50. Have visitors compare the fox skull with that of the other three canines. Do they notice the differences in the number and shape of the teeth?

## **2. Canine Adaptations**

As with other animals, some canines rely on their coats to assist them with survival. With most mammals, fur helps to insulate them from their environment, both to retain heat and to protect them from the elements. The three canine pelts in the cart are good examples of some additional ways that canine coats can be helpful.

### **2-a) Artic Fox, *Alopex lagopus* (Winter color phase)**

The Artic Fox is 10-12 inches high at the shoulders (25-30 cm) and weights about 6 to 12 pounds. The Artic Fox has the warmest fur of any mammal, even warmer than the polar bear or artic wolf. They even have fur on the bottom of their feet to protect from the cold and keep frost out of their feet while digging. The fur of the artic fox is an excellent example of how canines are well adapted to survive in many different environments. The fur is exceptionally thick, perfect for sub-zero weather. The white color assists with camouflage against the white snow, allowing the artic fox to sneak up on its prey or to escape the eye of larger predators such as the polar bear. During the summer months when melting snow allows brown dirt to show, the artic fox will shed and develop a coat that is browner in color, to better match the changing landscape.

### **2-b) Gray Fox, *Urocyon cinereoargenteus***

The gray fox scampers through the underbrush of forests, sometimes even climbing trees to hunt prey. Have the visitors compare the thickness of the gray fox's fur with that of the arctic fox-can they guess which animal would live in the colder environment?

### **2-c) Coyote, *Canis Latrans***

The coyote is a generalist and survives in nearly every habitat except the extreme arctic. Its brown-tan-gray coat might be of great assistance when trying to camouflage in the desert and grassland areas where it may make its home, but this coloration might be less helpful in snowy areas of forests or alpine zones-also coyote habitats. Thus, the coyote has to rely on other adaptations as well. The thickness of the coyote's fur might vary depending on the environment it lives in-thicker fur in colder areas and thinner fur in warmer areas. Comparing the thickness of fur on the coyote pelt to the gray fox and arctic fox, can visitors guess what type of environment this coyote might have lived in?

## **3. Proper Pet Care**

Being a good dog owner requires patience, kindness, and other proper equipment. Visitors can talk with an interpreter about how these different pet care items are important to a healthy dog. Younger visitors may want to role-play with these items, putting the collar on the dog, the dog in the carrier, or giving the dog a quick brush to demonstrate how a caring owner would behave. These objects match nicely with Responsible Pet Care Kiosk and puzzle in section 4 of the exhibit.

### **3-a) Plush Beagle**

This plush puppy can be at the center of the discussion as young visitors decide how to keep it healthy and happy.

### **3-b) Pet Carrier**

A healthy dog needs regular trips to the vet. A pet carrier like this one can insure that a puppy reaches the veterinarian's office safe and sound.

### **3-c) Collar, Leash and Tag**

A healthy dog needs regular exercise-walks around the block are usually a favorite. While walking a dog, it's important to keep it on a leash-safe from busy streets or being

separated from its owner. A collar and tag can help identify the owner of a lost dog and insure that the dog gets home safely.

### **3-d) Collapsible Water Bowl**

Many dogs and their owners are always on the go, but it's important to provide a dog with fresh water no matter where you are. A portable water that bowl can fold up and fit into a small space is especially helpful.

### **3-e) Dog Toy**

Dogs need play time to stay happy and psychologically healthy. A sturdy toy like this is sure to keep any dog busy.

### **3-f) Dog Brush**

Grooming and bathing are important steps to keeping a dog healthy. Different types of dogs may have different grooming needs-sometimes depending on the length and type of fur.

## **4. Assistance and Therapy Dogs**

Some dogs are specially trained to help people with special needs. We call them assistance dogs or therapy dogs depending on the job they do. Assistance dogs are specially trained to help people who are blind, deaf, or physically disabled. There are three basic types of assistance dogs: guide dogs, hearing dogs and service dogs. Assistance dogs serve about 20,000 people in the United States. More than 60 non-profit programs train and place these dogs nationwide.

### **Types of Assistance Dogs:**

**Guide Dogs:** Guide dogs help people who are blind or visually impaired navigate along busy city streets, on public transportation, or through crowded aisles at the grocery store. In 1929, the Seeing Eye became the first U.S. organization to breed and train guide dogs and match them with human handlers.

**Hearing Dogs:** Hearing dogs alert a person who is deaf or hearing-impaired to sounds like doorbells, smoke alarms and baby cries. The dogs can even be trained to alert to the name of their owner, making communication with others easier.

**Service dogs:** Service dogs help people who have physical disabilities. They can pull wheelchairs, retrieve dropped items or provide stability for someone who can't balance

very well. Service dogs can also be trained to help people with seizure disorders or other medical problems. (encourage visitors to look for the harness used by a service dog in section 3 of the exhibit)

### **Therapy Dogs:**

Therapy dogs are different from assistance dogs. These dogs provide unconditional affection, and bring a much-needed boost in morale for someone who may be seriously ill, struggling through painful physical therapy or recovering from a person loss. Therapy dogs are different from assistance dogs because they must learn to be affectionate to many different people in a variety of settings. Working with a handler, therapy dogs visit hospitals, disaster sites or even child service centers.

### **Objects in Trunk:**

#### **4-a) Guide Dog Harness**

Guide dogs wear a special harness like this one. A stiff, sturdy harness allows human and dog to walk as a team. Encourage visitors to hold the stiff handle of the harness.

#### **4-b) Hearing Dog Vest**

Some people are not familiar with the job of an assistance dog. Vests and patches let people know these dogs have a special job to do and assure a warm welcome wherever they go. They can also remind people that these dogs have a job to do and petting them or offering food treats might be distracting.

#### **4-c) Therapy Dog Vest**

A vest with patches like this one lets people know the important job a therapy dog is there to do and encourages people to interact with the dog.

## **5. Studying Wild Canines**

It's important for a researcher to study canines in the wild in order to better understand how we can protect them and their habitats. Sometimes canines can be tough to spot so researchers rely on other clues such as droppings or tracks to determine what species of canine is in the area and to learn more about that individual.

### **5-a) Mounted Scat Replicas**

Scat, or droppings, can provide researchers with a wealth of information. From studying scat researchers can tell what that animal had been eating and sometimes which species left the scat from its shape and size. Studying the DNA extracted from the scat can accurately identify the species that left it, the gender of that animal, as well as the relationships between different individuals such as how they might be related. Share the mounted scat replicas with visitors and point out the differences in shapes and sizes between species. Also point out how scat from the same species can look different based on diet.

### **5-b) Mounted Casts of Canine Tracks**

Researchers observing canines in the wild will look for tracks as clues that a canine makes its home in the area. These mounted casts of canine tracks show visitors both the similarities and differences between several species of canines. If a visitor was hiking in the mountains, could he/she distinguish between these four species? What similarities and differences does he/she notice? The cast of the dog and the wolf are actually quite similar-a big dog must have made the track!

## **6. Canines to the Rescue**

Search-and-rescue dogs are trained to find people in danger or following a disaster. When human abilities aren't enough, these dogs go to work, using their keen noses to locate the scent of the distressed person. They cover more ground faster and better than human searchers can. Search-and-rescue dogs work in many different environments. They may search through the rubble of a collapsed building, walk for miles in the snow or swim tirelessly to someone who's drowning.

### **6-a) Search and Rescue Dog Vest**

In times of disaster, there can be a lot of activity and confusion. It's important that everyone know a rescue dog is there to do a job and provide all the support the dog and its human handler need to help locate people in trouble. A vest like this identifies a search and rescue dog as a professional-ready to work. Encourage visitors to consider what it would be like to be rescued by a search dog. Direct them to the avalanche scene in section 3 of the exhibit where they can crawl up a snowy tunnel and be "rescued" by an avalanche dog.

## Cart Object Inventory

- 1-a) Dire Wolf Skull, *Canis dirus* (replica)
  - 1-b) Domestic Dog skull, *Canis familiaris* (replica)
  - 1-c) Gray Wolf Skull, *Canis lupus* (replica)
  - 1-d) Bat-eared fox, *Otocyon* (replica)
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- 2-a) Artic Fox Pelt (Winter color phase), *Vulpes alopex lagopus*
  - 2-b) Gray Fox Pelt, *Urocyon cinereoargenteus*
  - 2-c) Coyote Pelt, *Cans latrans*
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- 3-a) Plush Beagle
  - 3-b) Pet Carrier
  - 3-c) Collar, Leash and Tag
  - 3-d) Collapsible Water Bowl
  - 3-e) Dog Toy
  - 3-f) Dog Brush
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- 4-a) Guide Dog Harness
  - 4-b) Hearing Dog Vest
  - 4-c) Therapy Dog Vest
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- 5-a) Mounted Scat Replicas
  - 5-b) Mounted Casts of Canine Tracks
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- 6-a) Search and Rescue Dog Vest
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- 7-a) "How Willy Got His Wheels"
  - 7-b) "Rosie: A visiting Dog's Story"
  - 7-c) "Rugby and Rosie"
  - 7-d) "Looking out for Sarah"
  - 7-e) "Is My Dog a Wolf?"
  - 7-f) "Zookbooks: Wolves"
  - 7-g) "The Right Dog for the Job"
  - 7-h) "AKC: The Complete Dog Book"
  - 7-i) "Three Little Wolves and the Big Bad Pig"

- 7-j) "Scholastic: Wolves"
- 7-k) "Little Red Ridding Hood"
- 7-l) "Chewy Louie"
- 7-m) "ASPCA: Puppy"
- 7-n) "Sammy the Detective Dog"
- 7-o) "Kingfisher: Dogs"
- 7-p) "Stickeeen"
- 7-q) "Eyewitness: Dogs"
- 7-r) "Lon Po Po"
- 7-s) "Dogs with Jobs"
- 7-t) "Dog Heroes of Sept. 11<sup>th</sup>"

- 8-a) AKC "Best Friends" DVD
- 8-b) AKC "Safety Around Dogs" DVD
- 8-c) "War Dogs" VHS tape

- 9-a) AKC "Dog Breed" poster