



# SLED DOG SCIENCE



# Adaptation

- \* Tongue
- \* Feet
- \* Fur
- \* Blood-flow
- \* Tail





# Tongue

- \* Dogs only sweat through their paws
- \* Dogs cool down by panting
- \* Cold air goes through the warm lungs
- \* When a dog exhales it blows the air on its warm tongue and is evaporated





# Feet

- \* Their paw pads have two kinds of fat in them
- \* Saturated
- \* Unsaturated
- \* Saturated fat helps their feet stay stiff and sturdy
- \* The mixture of these two fats helps prevent the dog from getting frostbite





# Fur

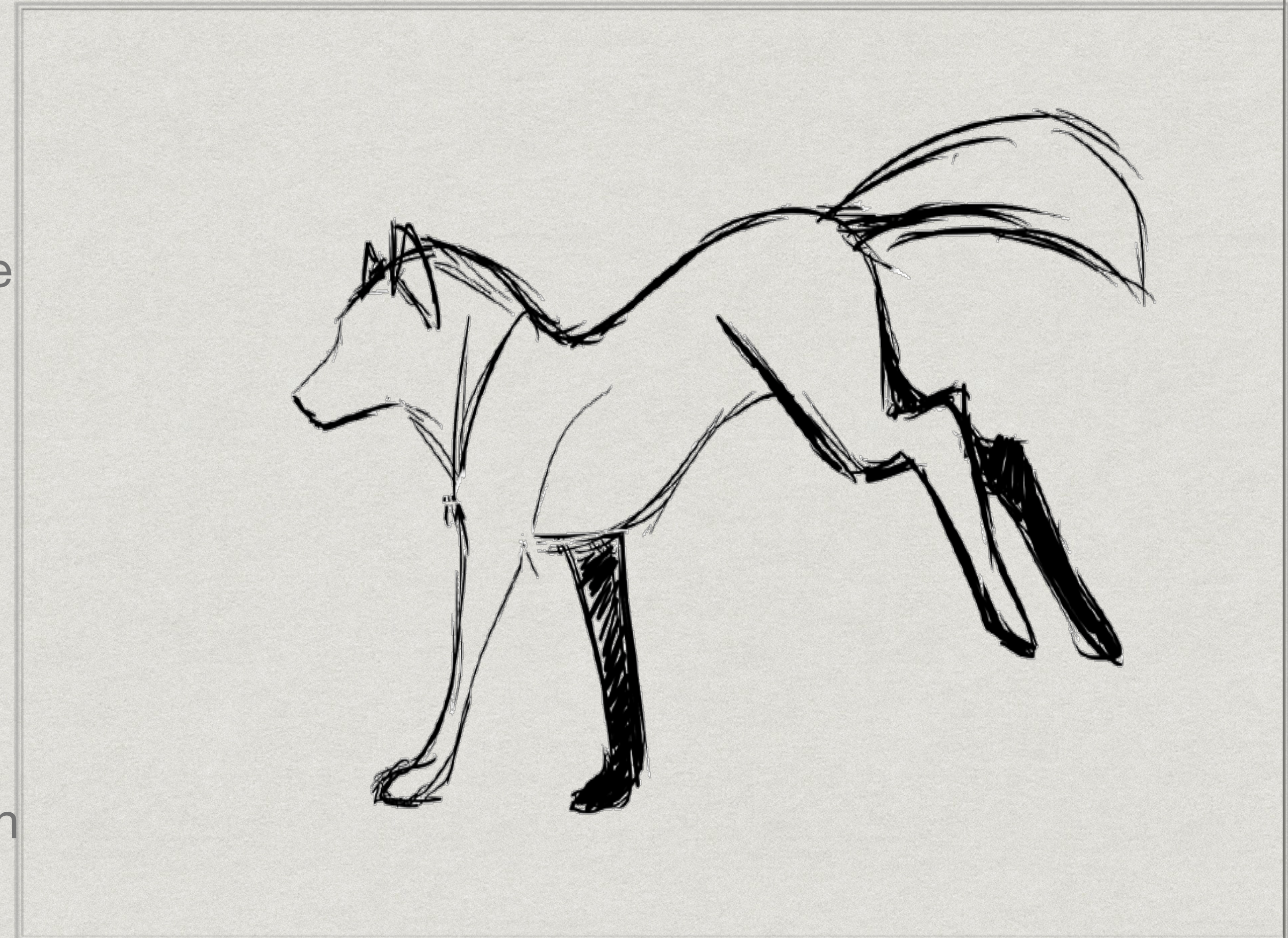
- \* Thick coats that have two kinds of hair
- \* Guard hair is the outer layer of fur that is water repellent, is than courser layer of fur, and acts as a raincoat for the dog
- \* Underfur is the dense soft fur under the guard fur that provides an insulation for the dog that keeps the dog warm
- \* Toe pad fur is the fur that is protecting their toes from snow building up uncomfortably on their toes and helps insulate their toes and keep them warm





# Blood flow

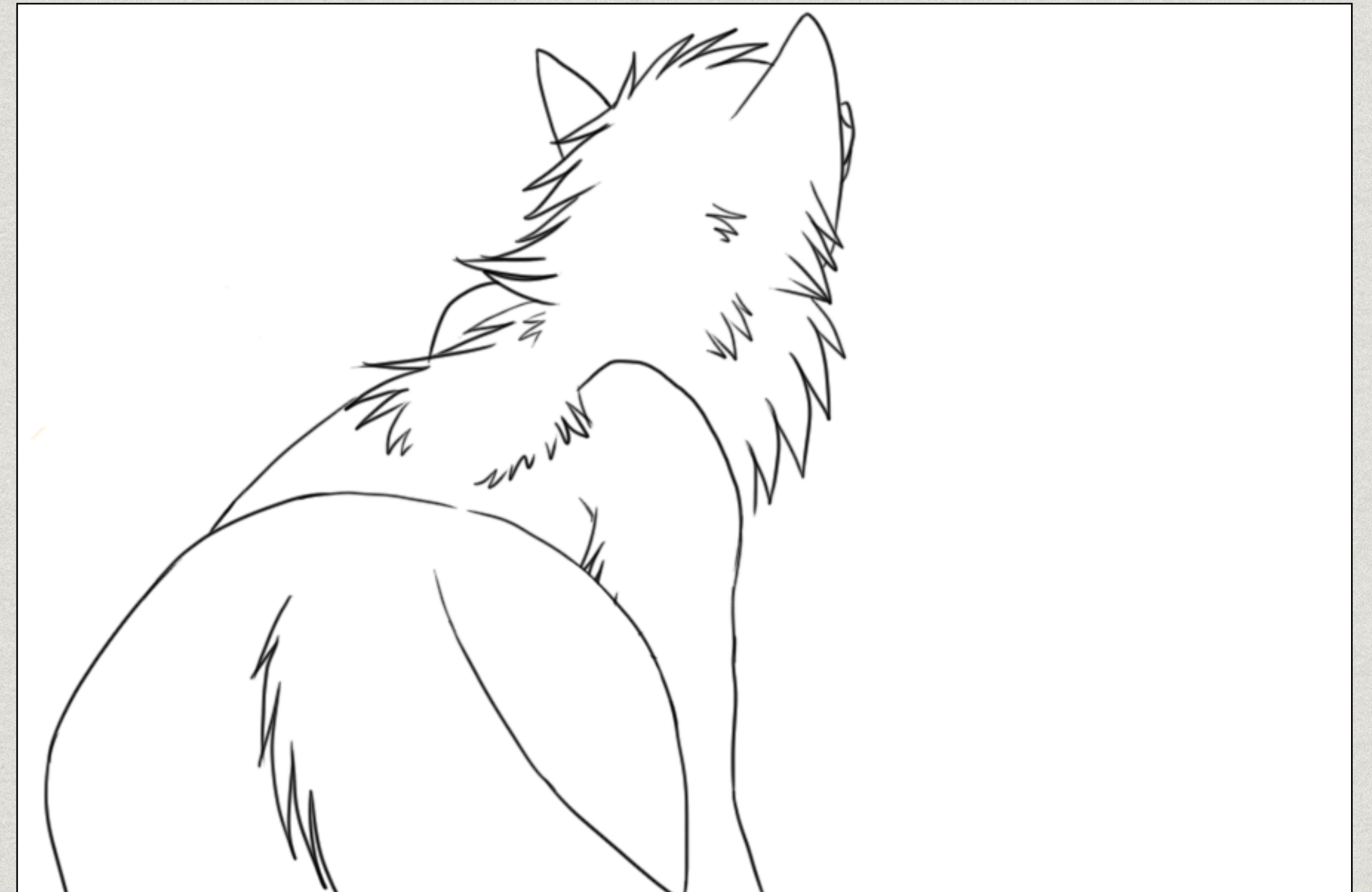
- \* They have a specially-adapted system of blood flow that is called countercurrent
- \* This kind of blood flow helps dogs conserve heat carried by blood
- \* The blood flowing to the back and toes is colder than the blood in the body core
- \* The Sled dog keeps warm by storing warm blood in the head and body core
- \* Countercurrent circulation allows dogs to use their energy on pulling a sled rather than using all of their energy on staying warm





# Tail

- \* In the summer the tail's job is to wag to keep them cool but in the winter it serves a different purpose
- \* On winter patrols the Sled dogs sleep outside in the snow, so they tuck their head and feet under their fluffy tails so that when they breathe out the thick fur on their tail traps that warmth between their legs and feet
- \* The dogs tail acts as a scarf



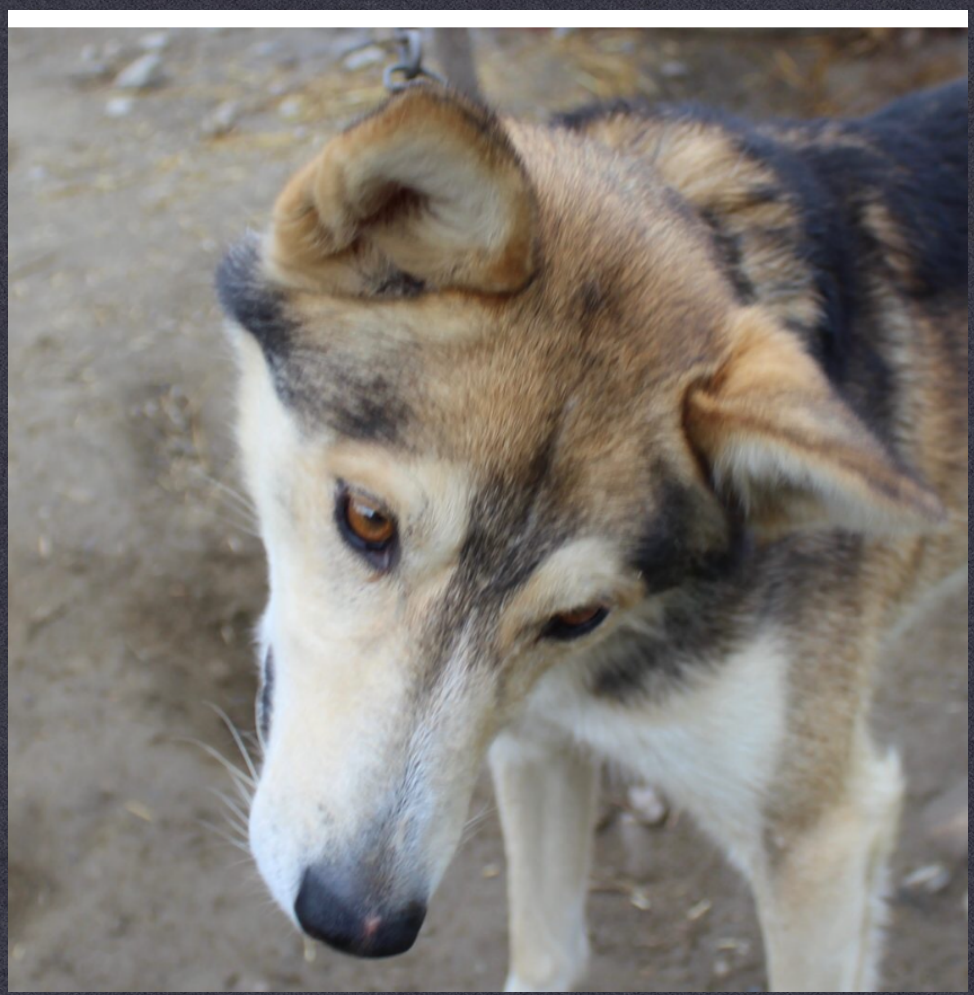


# MY FANTASY SLED DOG TEAM



**LEAD DOGS**





**KODIAK**





**JUNIOR**

**JUNIOR**





**SWING DOGS**





**BANJO**





**COMMANDO**



**TEAM DOGS**





**LOKI**





**ODIN**





***Sponsored by Don Martin***

**ACE**





**CHAMP**





**MISMO**





**DRIVER**





**GINGER**





**TINDER**





**CLYDE**





**CAYENNE**



**WHEEL DOGS**





**FIVE**





**RODNEY**



**THE END!**  
**(YOU ARE CLAPPING NOW.)**





*We had a bonding moment.  
I cradled you in my arms!*

**THE END**