

*Four seasons
on the Alaskan tundra,
from the ground up*

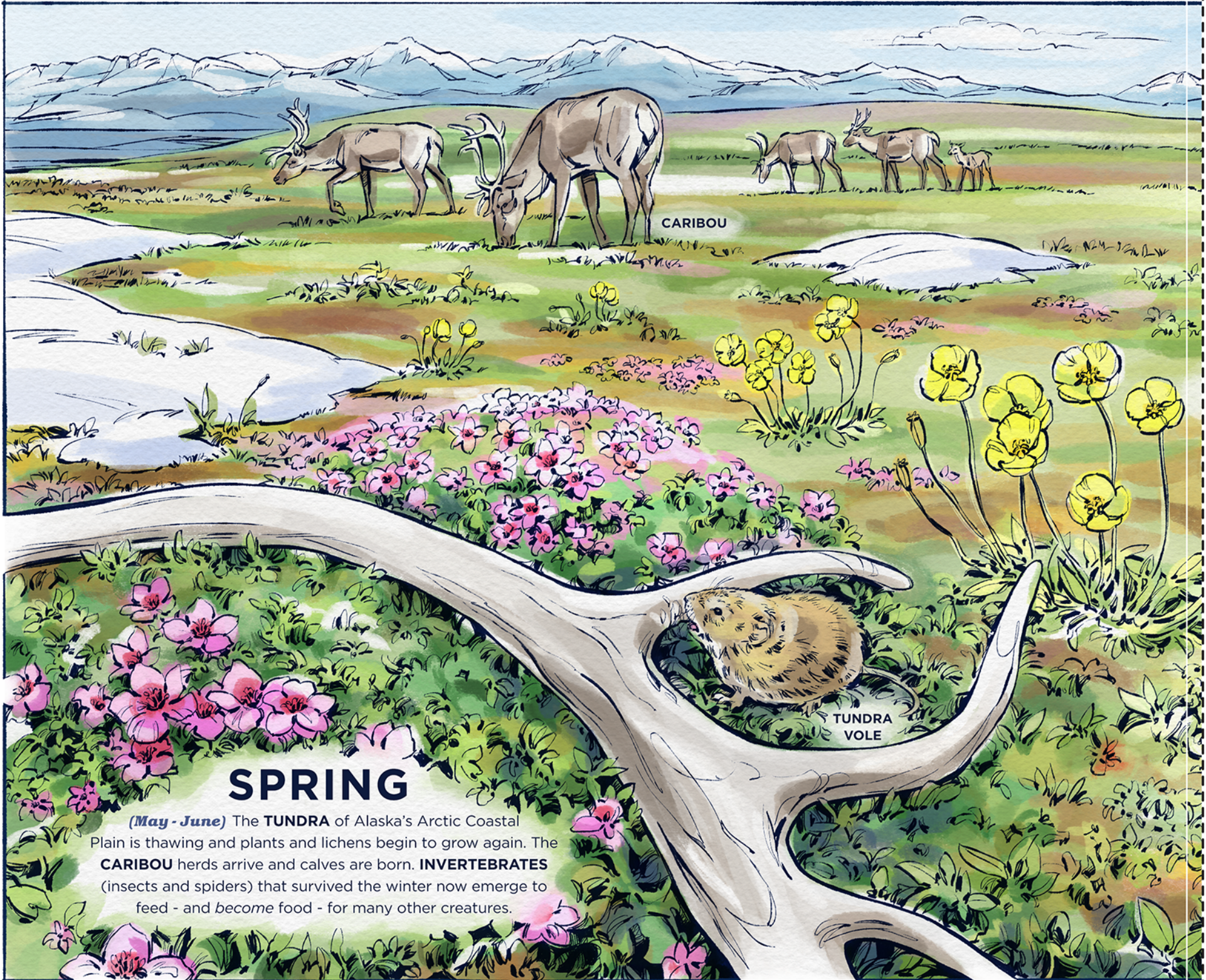
ARCTIC YEAR

Written & illustrated by **Natalya Zahn**

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SPRING

(May - June) The **TUNDRA** of Alaska's Arctic Coastal Plain is thawing and plants and lichens begin to grow again. The **CARIBOU** herds arrive and calves are born. **INVERTEBRATES** (insects and spiders) that survived the winter now emerge to feed - and *become food* - for many other creatures.

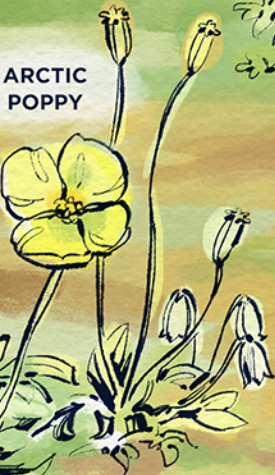
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What might this **SHORT-EARED OWL** be hunting for?



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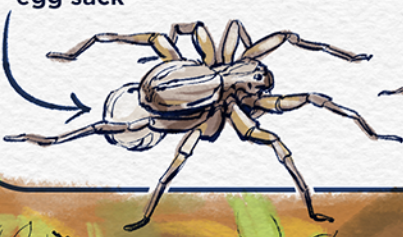
ARCTIC POPPY



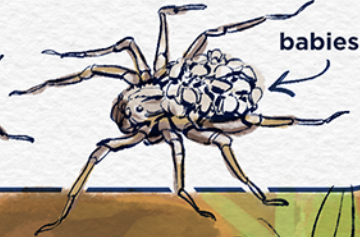
What made this hole?

WOLF SPIDERS build themselves dugouts from where they hide and surprise their prey. A mother wolf spider will carry her egg sack - and later all her spiderlings - on her abdomen!

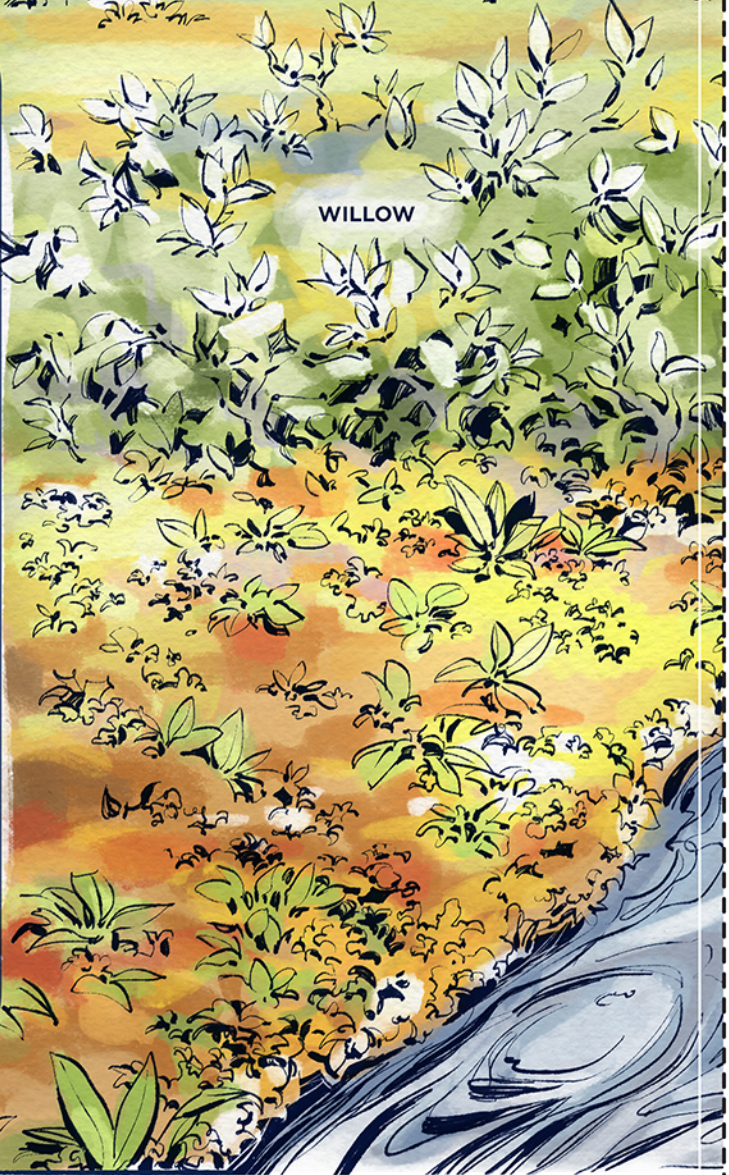
egg sack



babies!

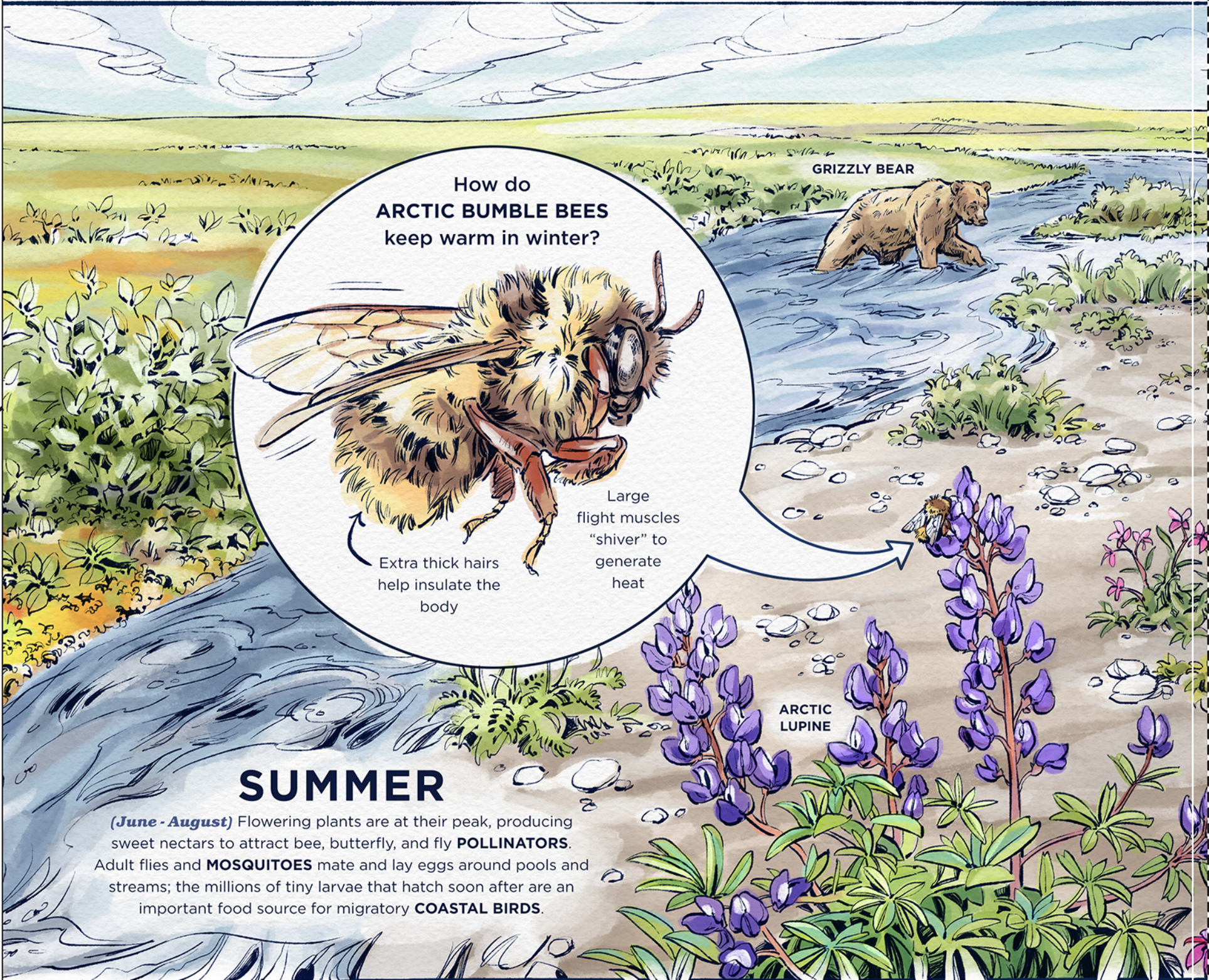


WILLOW



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How do
ARCTIC BUMBLE BEES
keep warm in winter?

Extra thick hairs help insulate the body

Large flight muscles "shiver" to generate heat

GRIZZLY BEAR

ARCTIC LUPINE

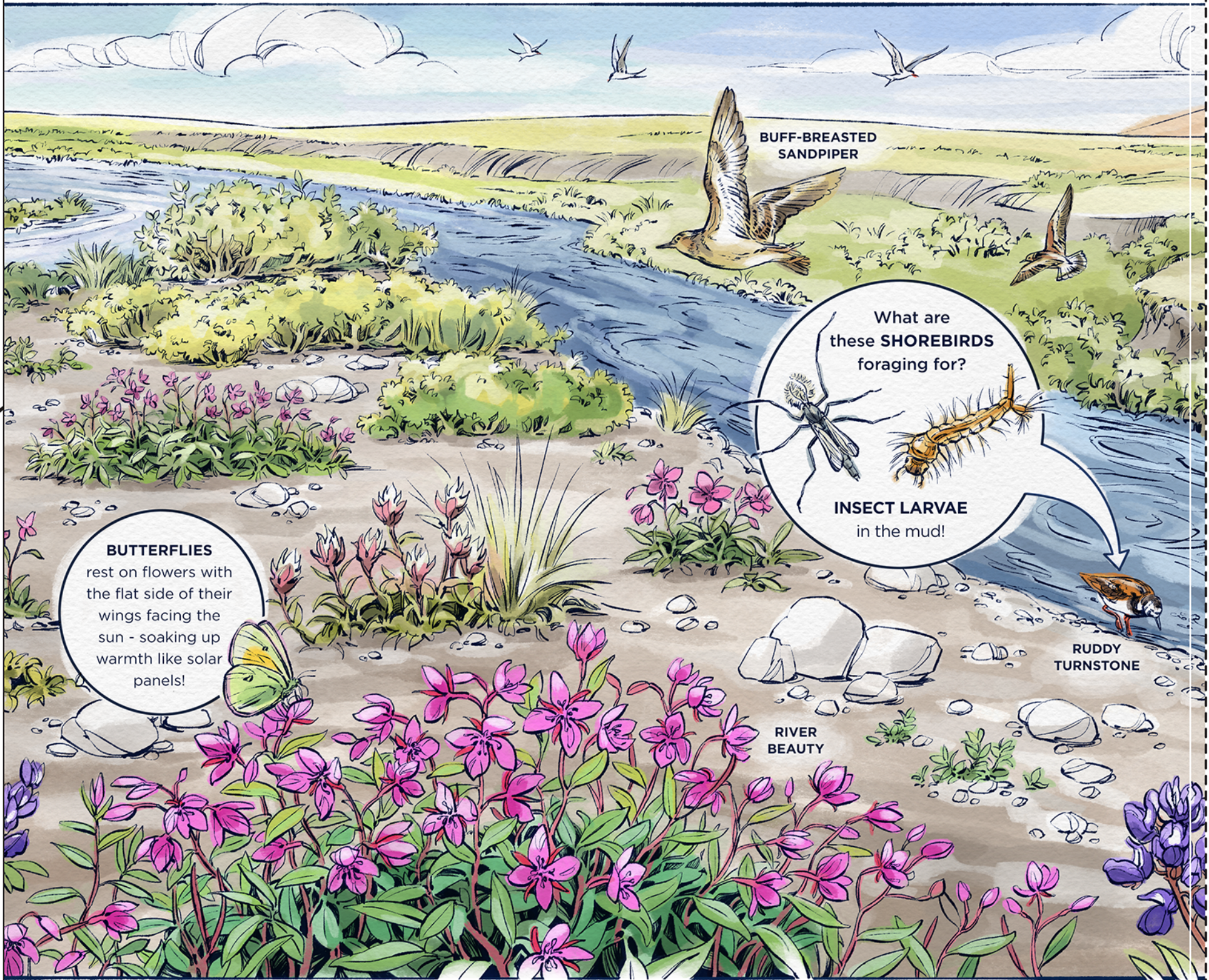
SUMMER

(June - August) Flowering plants are at their peak, producing sweet nectars to attract bee, butterfly, and fly **POLLINATORS**. Adult flies and **MOSQUITOES** mate and lay eggs around pools and streams; the millions of tiny larvae that hatch soon after are an important food source for migratory **COASTAL BIRDS**.

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BUFF-BREADED SANDPIPER

What are these **SHOREBIRDS** foraging for?

INSECT LARVAE in the mud!

RUDDY TURNSTONE

RIVER BEAUTY

BUTTERFLIES rest on flowers with the flat side of their wings facing the sun - soaking up warmth like solar panels!

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KING EIDER

ROCK PTARMIGAN
 fill up on the tundra's seed & berry harvest while their feathers begin to turn white, to match the coming snow!

FALL

(September - October) The **CARIBOU** herds begin their migration southward, toward mountains and sheltered valleys. Most of the tundra's bird species also take off for warmer wintering grounds; the **BUFF-BREASTED SANDPIPER** flies all the way to southern South America - over 8,000 miles away!

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What is this
ARCTIC FOX
listening for
under the
snow?

LEMMINGS
are a favorite food
source for **SNOWY OWLS** - an adult bird
can consume over
1,500 lemmings
a year!

In autumn,
caterpillars of the
BANDED ALPINE BUTTERFLY
dig into the ground
and **PUPATE**...

...building a shell
called a **CHRYSLIS**
around themselves. They
will spend the long winter
under the snow, slowly
transforming...

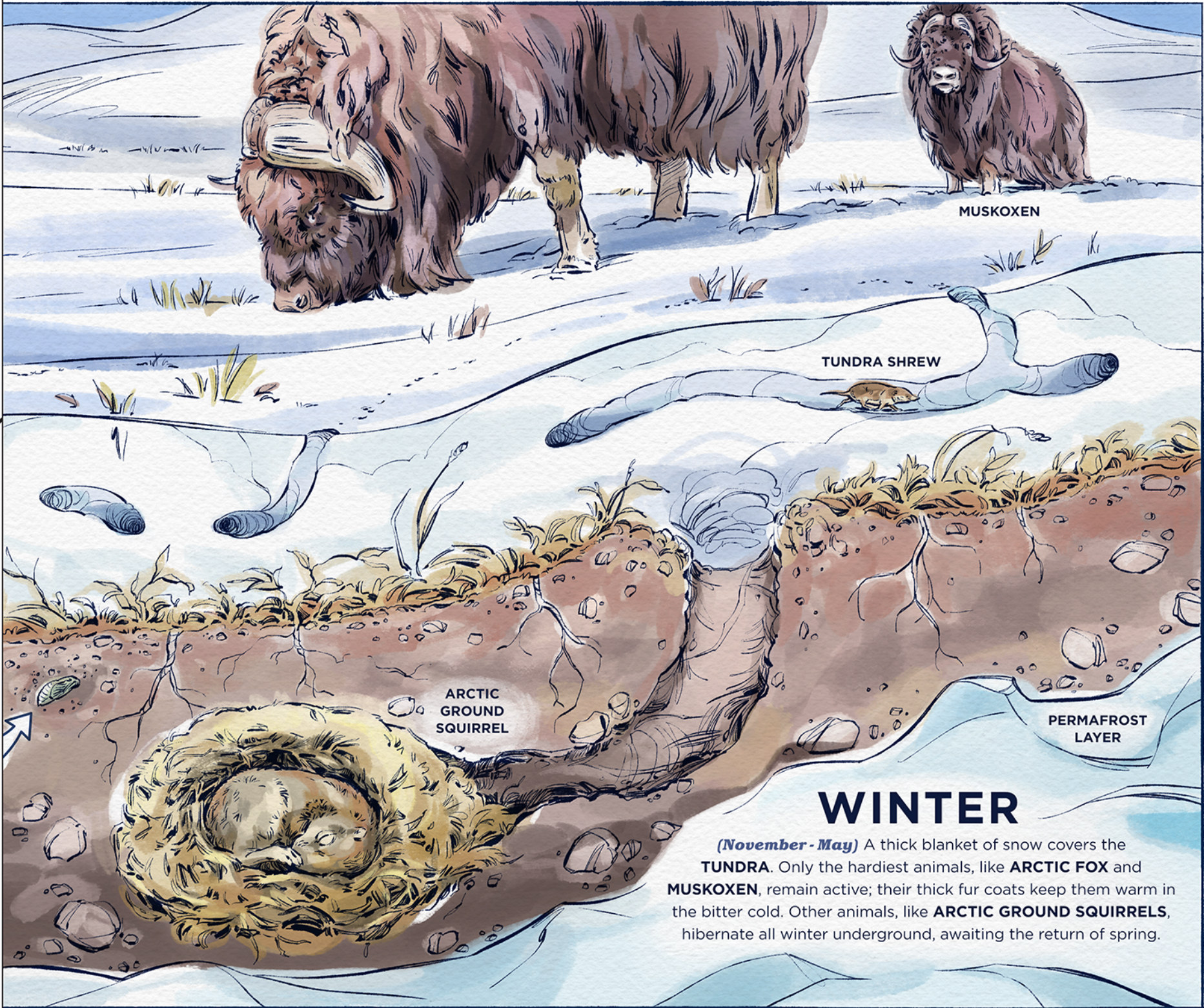
...into **BUTTERFLIES!** In the
spring, adults emerge to mate
and lay eggs on their favorite
plants, starting the cycle again.



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MUSKOXEN

TUNDRA SHREW

ARCTIC
GROUND
SQUIRREL

PERMAFROST
LAYER

WINTER

(November - May) A thick blanket of snow covers the **TUNDRA**. Only the hardest animals, like **ARCTIC FOX** and **MUSKOXEN**, remain active; their thick fur coats keep them warm in the bitter cold. Other animals, like **ARCTIC GROUND SQUIRRELS**, hibernate all winter underground, awaiting the return of spring.

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About This Book

In the summer of 2016 illustrator Natalya Zahn accompanied a group of USFWS biologists on a field work expedition to **Alaska's Arctic National Wildlife Refuge**. The group spent a week camping at a site along the Jago River, located on the Coastal Plain between the Brooks Mountain Range and the Arctic Ocean. During that week, the biologists worked to collect data from preestablished sample plots, while Natalya recorded the landscape and organisms of the tundra through sketchbook drawings and paintings. The mosquitoes were thick, the sky was light round the clock, and the quietude of this expansive and untouched wilderness allowed for complete disconnection from the complicated urgency of civilization. This artist book is a reflection on that transcendent week in the wild, and an exploration of the creatures that inhabit the unique and extreme environment of the arctic tundra.

This project was produced in partnership with the **US FISH & WILDLIFE SERVICE**, and in conjunction with the **VOICES OF THE WILDERNESS** artist residency program. Gracious thanks to program coordinator Allyssa Morris, and to my hosts in the arctic: field scientists Janet and Torre Jorgenson, Steve Arthur, Katie Orndahl & Michelle Moffa.

For more information, please visit:

US FISH & WILDLIFE SERVICE

www.fws.gov/alaska

VOICES OF THE WILDERNESS

www.voicesofthewilderness.blogspot.com

NATALYA ZAHN

Alaska journal: www.peregrinationz.xyz

Artist portfolio: www.natalya.com

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