

Bluebuck | The Lost Blue Antelope Of Africa

Viewing Guide Handout: With Timecodes

Before The Episode

1. This video discusses African Megafauna. The term “megafauna” refers to any animal that is larger than 45 kilograms, or 99 pounds. How many different African animals can you name in one minute?

During the Episode

2. Today, there are around 90 different species of antelope. More than _____ can be found in Africa. (0:55)
3. Explain why Africa is called “*The Cradle of Humanity*”. This is discussed from 01:10 to 03:45.

4. As recently as _____ thousand years ago, every continent had giants of its own. (3:55)
5. After humans arrive, large animals tend to go extinct. Fill out the table below: (6:55)

Percentage of large mammals lost after humans arrive:	
North America	
South America	
Australia	

6. *Pause and Check: (8:22)*
As humans expanded across the planet, we quickly drove megafauna extinct. This didn't happen in Africa. Based on what is discussed in the video, why do you think the large

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animals in Africa survived while the large animals in Eurasia, Australia, North America, South America, and Madagascar experienced major extinctions?

7. The bluebuck lived across the grasslands of _____. (9:04)

8. Antelopes often have interesting horns.
As you watch, sketch the horns onto the bluebuck below.
Make sure you're paying attention to the video
and making the horns as scientifically
accurate as possible!



9. The pigment in a bluejay's feathers is not actually blue, but _____. (14:23)

10. By _____, the bluebuck was extinct. This officially makes it the first large African mammal to go extinct in recorded history. (18:54)

11. The two antelopes that are most closely related to the bluebuck today are the Roan Antelope and the _____ Antelope. (19:50)

12. What percentage of antelope species are currently listed as threatened? (22:14)

13. The _____ we build to bring the bluebuck back will help protect the antelope still here. (24:00)

Bluebuck | The Lost Blue Antelope Of Africa

Viewing Guide Handout

Before The Episode

15. This video discusses African Megafauna. The term “megafauna” refers to any animal that is larger than 45 kilograms, or 99 pounds. How many different African animals can you name in one minute?

During the Episode

16. Today, there are around 90 different species of antelope. More than _____ can be found in Africa.

17. Explain why Africa is called “*The Cradle of Humanity*”.

18. As recently as _____ thousand years ago, every continent had giants of its own.

19. After humans arrive, large animals tend to go extinct. Fill out the table below:

Percentage of large mammals lost after humans arrive:	
North America	
South America	
Australia	

20. Pause and Check: (8:22)

As humans expanded across the planet, we quickly drove megafauna extinct. This didn't happen in Africa. Based on what is discussed in the video, why do you think the large animals in Africa survived while the large animals in Eurasia, Australia, North America, South America, and Madagascar experienced major extinctions?

21. The bluebuck lived across the grasslands of _____.

22. Antelopes often have interesting horns.

As you watch, sketch the horns onto the bluebuck below.

Make sure you're paying attention to the video
and making the horns as scientifically
accurate as possible!

23. The pigment in a bluejay's feathers is not actually blue, but
_____.

24. By _____, the bluebuck was extinct. This officially makes it the
first large African mammal to go extinct in recorded history.

25. The two antelopes that are most closely related to the bluebuck
today are the Roan Antelope and the _____
Antelope.

26. What percentage of antelope species are currently listed as threatened?

27. The _____ we build to bring the bluebuck back will help protect the antelope still
here.



After the Episode

28. Animals play important roles in their ecosystem. What are three different ways the bluebuck
would have benefited the ecosystem they were a part of?

Bluebuck | The Lost Blue Antelope Of Africa

Viewing Guide Key

Before The Episode

29. This video discusses African Megafauna. The term “megafauna” refers to any animal that is larger than 45 kilograms, or 99 pounds. How many different African animals can you name in one minute?

I would have students compete with their shoulder partner and see who names more. Before you start the episode, bring attention to antelopes. Did many people list antelopes? Did they just say “antelope” or did they list specific species of antelopes? Taking note of the fact that we often overlook them, even though there are more than 70 species of antelope in Africa alone is a good way to get the students thinking about this topic before even pressing play.

During the Episode

30. Today, there are around 90 different species of antelope. More than **70** can be found in Africa.

31. Explain why Africa is called “The Cradle of Humanity”.

Evidence suggests that humans evolved within Africa, meaning the same grasslands that helped shape the antelope also play a special part in our history.

32. As recently as **50** thousand years ago, every continent had giants of its own.

33. After humans arrive, large animals tend to go extinct. Fill out the table below:

Percentage of large mammals lost after humans arrive:	
North America	>70%
South America	>80%
Australia	~90%

34. *Pause and Check: (8:22)*

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As humans expanded across the planet, we quickly drove megafauna extinct. This didn't happen in Africa. Based on what is discussed in the video, why do you think the large animals in Africa survived while the large animals in Eurasia, Australia, North America, South America, and Madagascar experienced major extinctions?

Large animals in Africa evolved alongside humans and were better able to avoid humans. Large animals outside of Africa suddenly encountered humans after they had left Africa and were already much better hunters than the human ancestors of millions of years ago.

35. The bluebuck lived across the grasslands of **South Africa**.

36. Antelopes often have interesting horns.

As you watch, sketch the horns onto the bluebuck below.
Make sure you're paying attention to the video
and making the horns as scientifically
accurate as possible!



37. The pigment in a bluejay's feathers is not actually blue, but **brown**.

38. By **1800**, the bluebuck was extinct. This officially makes it the first large African mammal to go extinct in recorded history.

39. The two antelopes that are most closely related to the bluebuck today are the Roan Antelope and the **Sable** Antelope.

40. What percentage of antelope species are currently listed as threatened?
25%

41. The **tools** we build to bring the bluebuck back will help protect the antelope still here.

After the Episode

42. Animals play important roles in their ecosystem. What are three different ways the bluebuck would have benefited the ecosystem they were a part of?

- 1. They graze on the grasses, helping keep the ecosystem in balance.*
- 2. They cycle nutrients back into the soil.*
- 3. They are a key food source for predators.*

Guided Reading

Guardians of the Grassland: Understanding Antelope Ecology

The Continent of Antelopes

Lions get the movies. Cheetahs get the hunting montages. Crocodiles get the slow motion scenes as they grab the wildebeest crossing the river. Antelopes get to be the reason it all happens in the first place. Never the star of the show, but always essential.

There are over 90 species of antelope and most of those can be found in Africa, where they make up the bulk of the food supply that Africa's famous predators rely on.

This reading is their turn in the spotlight: what makes an antelope an antelope, why they matter more than most people realize, and why so many of them are quietly running out of time.



What Is An Antelope?

Every antelope species belongs to the family Bovidae, a group of hoofed, plant-eating mammals that includes cattle, sheep, goats, buffalo and bison. Scientists who study mammals call any member of this family a bovid.

All bovids share two specific traits. First, true horns: a bony core, permanently attached to the skull, covered by a sheath made of keratin (the same protein in your fingernails). Unlike deer antlers, which are made of solid bone, branch, and get shed and regrown every year, bovid horns are unbranched and permanent. Second, all bovids are ruminants, meaning they have a specialized four-chambered stomach that lets them digest tough, fibrous grasses that most other animals can't break down.

Part of what made the bovid group so successful across time and allowed them to evolve and diversify into so many different species is the fact that they could rely on grasses, an abundant food source that was becoming more common as grassland ecosystems began evolving and taking shape. In a poetic way, the evolution of grasslands led to the evolution of the antelope groups we see today... and we will talk later about how that harmony is in danger.

The roan and sable antelope, along with their extinct cousin the bluebuck, belong to a more specific group within bovidae called hippotraginae, sometimes nicknamed the "horse antelopes" for their sturdy, muscular build and long faces. This subgroup also includes other species like the oryx and the addax, all are hardy grazers adapted to open, often dry grassland.

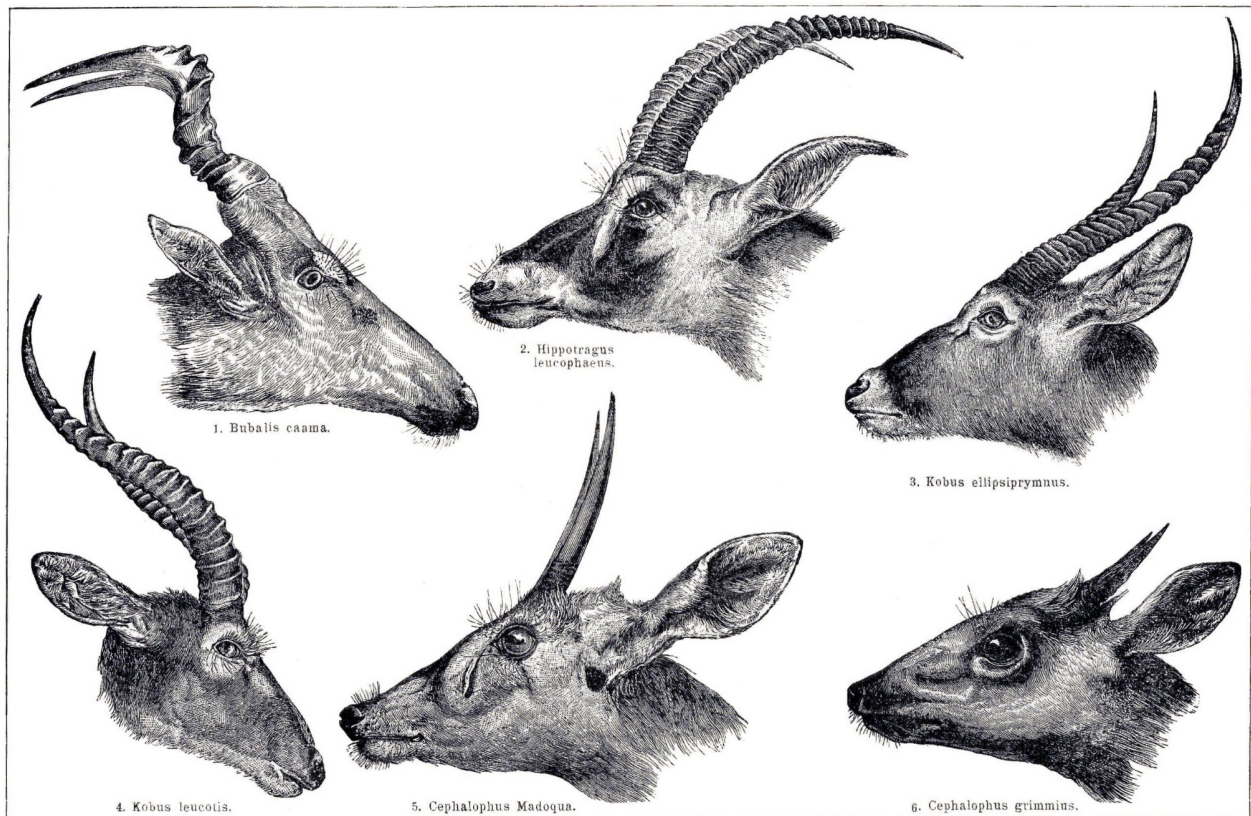


The roan and sable antelope aren't just interesting because of their bluebuck connection, though. They're a good case study in what bovids actually do for an ecosystem. As grazers, they crop grass down to specific heights, which keeps fast-growing grasses from crowding out other plant species and helps prevent woody shrubs from taking over open grassland entirely.

They are also seed dispersers, as their digestive systems only partially break down the seeds they eat along with the grass, so a portion of those seeds pass through undamaged and get deposited, along with a supply of fertilizer, wherever the herd happens to be grazing that day.

Their waste also cycles nutrients like nitrogen back into the soil, often concentrated in high amounts around the specific spots where herds regularly rest. And as we mentioned in the beginning...

They're a critical food source: lions, hyenas, and wild dogs all rely on antelope populations as prey,



which means a healthy antelope population is a key component of a healthy ecosystem.

The Struggle | Grasslands and the Modern World

Antelope, as a group, evolved over millions of years to thrive in wide-open, connected grasslands. The stereotypical landscape from the Lion King with grasses as far as the light touches. The kind of landscape that was large enough to support herds moving seasonally across huge distances in search of fresh grass and water... and that strategy proved to be an extremely effective way of living for millennia.

It is working less well today, and the reason has a specific name: Habitat Fragmentation.

It's worth being precise about what the term actually means, because it's easy to confuse with simple habitat loss. Habitat loss simply means less total habitat exists. Fragmentation is a related but distinct problem: it's what happens when the remaining habitat gets cut into smaller, disconnected patches by roads, farmland, fences, and towns... even if the total amount of habitat left isn't dramatically smaller than before.

With habitat fragmentation, patches of habitat can eventually trap herds in isolation, cutting them off from other populations of their own species. When this happens, a population can only breed within its own small, isolated group... which shrinks what biologists call the effective population size. Over enough generations, that isolation leads to reduced genetic diversity and a higher risk of inbreeding.

This isn't just a hypothetical concern. It's already measurable. In West Africa, roan antelope once followed seasonal migration loops stretching across four countries, alongside herds of kob antelope. Conflict zones, agricultural expansion, and fencing have broken that migration into disconnected fragments. In East Africa's Serengeti-Mara ecosystem, researchers have already documented herds that have been cut off from the larger migratory population.

When you zoom out and look at the bigger picture, that pattern becomes clear... in the most recent comprehensive assessment of the world's antelope species, populations were found to be declining in nearly two out of every three species.

Our Labels

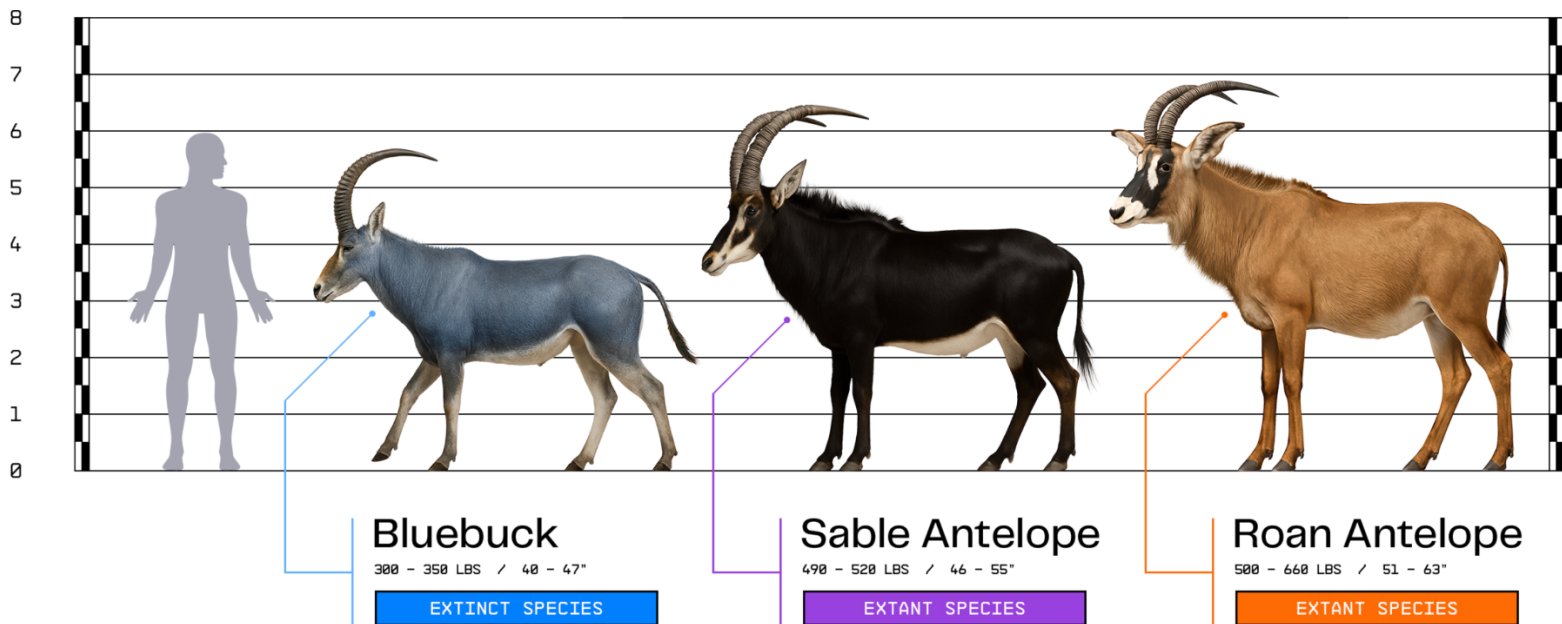
This is also one reason a species' formal conservation status can be misleading if you only look at the label. The roan antelope, for example, is officially classified as a species of "Least Concern"... a label that is based off of a total global population of around 76,000 animals. But that number masks what is happening at a finer scale: many individual roan populations, especially at the edges of their historical range, have already been reduced to isolated, fragmented patches... and some have disappeared from areas entirely. A healthy-sounding global number can still hide a species that is quietly unraveling, population by population... which is exactly the kind of "quiet collapse" that Colossal's scientists working on the bluebuck de-extinction project are working to stop before it becomes irreversible.

Antelopes In a Modern World

Genetic rescue is the practice of restoring lost genetic diversity to a struggling population before that population collapses entirely, often by introducing new genetic material from elsewhere. It is deeply intertwined with Colossal's work, as projects like the bluebuck de-extinction force scientists to think outside of the box and create new tools and techniques, which can then be applied to other modern animals.

But genetic rescue treats a symptom, not the cause. Fragmentation is a problem of geography, not just genetics, and solving it means reconnecting the land itself... through corridors, protected areas, and partnerships with the communities who live alongside it. Pairing both is the closest thing conservation has to a full answer. The bluebuck ran out of time before anyone understood what was happening to it. The roan, the sable, and dozens of other antelope species that are currently threatened still have time.

Will we notice the antelope in time?



Guardians of the Grassland: Understanding Antelope Ecology

Guided Reading Questions

1. The passage begins by describing the antelope as “never the star, always essential.” Explain why the author describes them that way.
2. Antelope belong to the bovidae family. What are two other types of animals in the bovidae family?
3. All bovids share two specific traits. What are they?
4. Describe how bovid horns are different from deer antlers.
5. Butterflies evolved alongside flowers. Antelope evolved alongside _____.
6. Hyenas evolved strong molars to crush bone. Antelope evolved a _____-chambered stomach to survive on tough, fibrous _____.
7. Identify and describe three different ways that antelope benefit their ecosystems:

-
- +
8. Antelopes have evolved to migrate across great distances, following food and water across seemingly endless grasslands. The strategy was extremely successful for millions of years... leading to over 90 current antelope species. That strategy no longer works as well. Identify the reason and explain why it impacts antelope so negatively.
 9. What are two negative impacts of habitat fragmentation that scientists have already observed in some roan antelope populations in West Africa?
 10. The roan antelope is officially categorized as a species of "Least Concern". While technically true, this label can be misleading. Explain why.
 11. The reading argues that genetic rescue "treats a symptom, not the cause." Explain what this means. What is the actual "cause" of habitat fragmentation, and what would it take to truly solve it?
 12. Do you think we will notice the antelope in time? Explain your answer.

Antelope Spotlight

Grassland ecosystems haven't always existed. In fact, grasslands as we know them really only evolved over the last 10 million years or so. As the ecosystems spread, some animals, like the extinct cousins of giraffes that were more reliant on trees, went extinct.

But what is bad for one group can be beneficial for another... and the antelopes are the perfect example of that. As the grasslands would expand and contract, antelope ranges would follow. The contractions of the grasslands would leave some populations in smaller patches, and those smaller patches of antelope would continue evolving into new species. Eventually, the grassland ranges would expand again and the new antelope species would begin co-existing again. This dance has played out time and time again, and it is the reason that Africa... a continent full of grasslands, has so many unique species of antelope today.

However, that dance has been interrupted, and now Africa's antelopes are at risk of losing the space that is so important for them. Today, around 25% of Africa's 70+ antelope species are threatened... but you never hear about them. Lions, elephants, and rhinos get all of the attention, while antelope like the ones on this list quietly disappear from their ranges with almost no one noticing.

For this activity, you will research a threatened African antelope, gather real facts about what's happening to it and why, and use that research to create an awareness poster that could genuinely teach someone something they didn't know. Before creating your poster, you need to gather your information on the back of this paper.

Giant Sable Antelope	Hiroia	Addax
Scimitar-horned Oryx	Mountain Nyala	Jentink's Duiker
Abbott's Duiker	Slender-horned Gazelle	Speke's Gazelle
Nile Lechwe	Mountain Reedbuck	Mountain Bongo
Beira	Zebra Duiker	Dibatag

Part 1 | My Species

Species Name (Common):

Scientific Name:

IUCN Conservation Status:

Part 2 | Where It Lives

What countries / regions does this species live in?

What type of habitat does it need? (Don't just say grassland, be more specific.)

Part 3 | Population

Current estimated population:

Has this population been increasing, decreasing, or stable in recent years?

Part 4 | Threats

List the main threats this species faces. Be specific to your species, don't just list generic threats.

- 1.
- 2.
- 3.

Part 5 | What's Being Done

What conservation efforts, organizations, or protections currently exist for this species?

Part 6 | Why It Matters

Why should someone care about this species specifically? Consider its role in its ecosystem, anything unique about it, or its cultural/historical significance.

PRIMARY THREATS

HABITAT FRAGMENTATION
POACHING FOR HORNS
DISEASE OUTBREAKS

POPULATION TREND:

NT

CURRENT POPULATION: 4,000,000
EARLY 2000S POPULATION: 48,000

SAIGA ANTELOPE

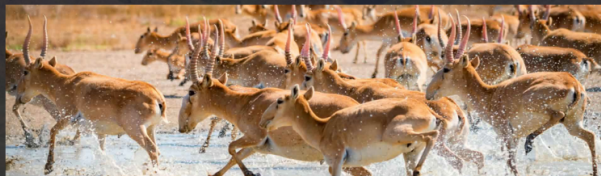
Saiga tatarica

WHAT'S BEING DONE?

KAZAKHSTAN CREATED PROTECTED AREAS SPECIFICALLY FOR SAIGA RECOVERY. TO HELP WITH HABITAT FRAGMENTATION, THEY TRACKED THE MIGRATION PATTERNS OF SAIGA AND THEN CREATED A PROTECTED CORRIDOR FOR THEM TO MIGRATE SAFELY THROUGH.

THEY HAVE INCREASED MONITORING FOR POACHERS AND DO REGULAR AERIAL SURVEYS TO STUDY THE POPULATIONS.

COORDINATED VACCINATION EFFORTS AFTER DISEASE OUTBREAKS.



ECOSYSTEM: THE EURASIAN STEPPE

HARSH, EXPOSED LANDSCAPE.

FLAT AND TREELESS FOR
MILES IN EVERY DIRECTION

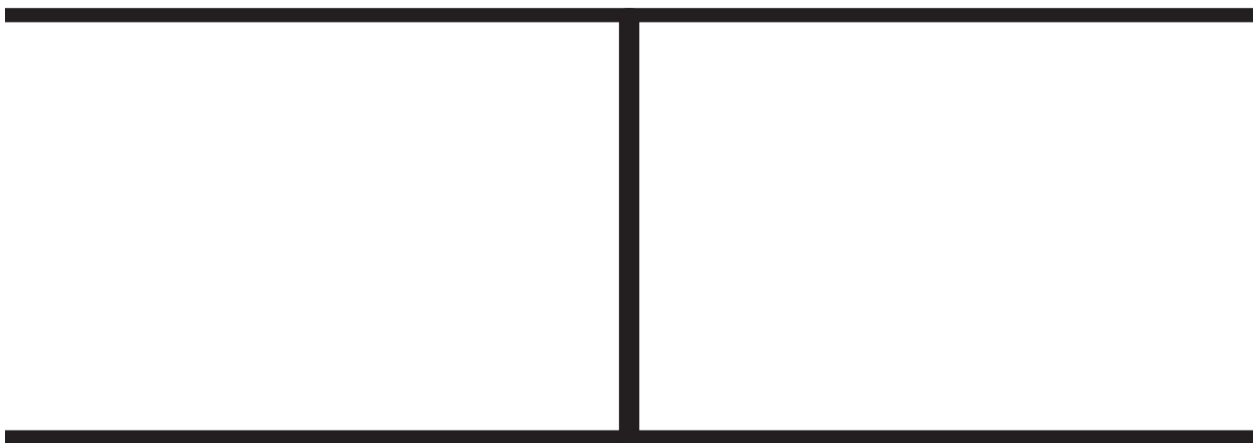
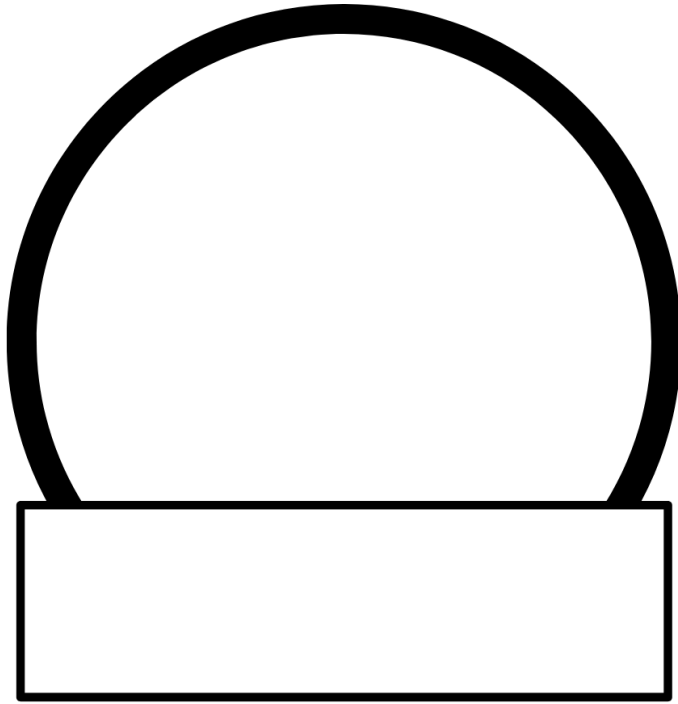
SCORCHING HOT, DRY
SUMMERS & BRUTALLY COLD,
WINDY WINTERS



WHY IT MATTERS

THE SAIGA IS A FOUNDATIONAL SPECIES ON THE EURASIAN STEPPE THAT HELPS SHAPE THE GRASSLAND ITSELF BY GRAZING AND DISPERSING SEEDS AS THEY MIGRATE VAST DISTANCES. THE SAIGA IS ONE OF THE LAST OF THE MAMMOTH STEPPE FAUNA... AN ECOSYSTEM THAT WENT EXTINCT ALONG WITH THE MAMMOTHS AROUND 10,000 YEARS AGO. THE MAMMOTH STEPPE, AND THE RANGE OF THE SAIGA, ONCE STRETCHED FROM WESTERN EUROPE INTO NORTH AMERICA. WE HAVE ALREADY LOST SO MUCH FROM THAT ECOSYSTEM, AND THOSE THAT REMAIN ARE KEY TO KEEPING THE EURASIAN STEPPE AROUND.





<https://canva.link/antelopespotlight>



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