

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 a wildebeest crossing the river. Antelope 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 them live in Africa. There, they make up most of the food supply that Africa's famous predators depend on.

This reading is their turn in the spotlight. We'll look at 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 belongs to the family Bovidae, a group of hoofed, plant-eating mammals that also includes cattle, sheep, goats, and buffalo. Scientists call any member of this family a **bovid**.

All bovids share two important traits. First, they have **true horns**: a bony core attached to the skull, covered by a hard outer layer made of keratin, the same material in your fingernails. Unlike deer antlers, which are solid bone, branch out, and fall off and regrow every year, bovid horns are simple, unbranched, and permanent. An animal keeps the same horns for life. Second, all bovids are **ruminants**. That means they have a special four-chambered stomach that lets them digest tough, fibrous grass, something most other animals can't do.

Grass helped make bovids so successful. As grasslands spread and became more common, bovids had a huge, reliable food source to rely on, which let them evolve into dozens of different species. In a way, the spread of grasslands is the reason we have so many kinds of antelope today.

The roan and sable antelope, along with their extinct cousin, the bluebuck, belong to a smaller group within Bovidae called Hippotraginae, nicknamed the "horse antelopes" for their



sturdy build and long faces. This group also includes the oryx and the addax, all tough grazers built for open, dry grassland.

Roan and Sable aren't just interesting because of their bluebuck connection, though. They're a great example of what bovids actually do for an ecosystem:

- **They shape the grass.** By grazing, they keep fast-growing grasses from taking over and stop woody shrubs from spreading into open grassland.
- **They spread seeds.** Some of the seeds they eat pass through their bodies undigested and get dropped somewhere new, along with a bit of natural fertilizer.
- **They recycle nutrients.** Their waste puts nutrients like nitrogen back into the soil.
- **They feed other animals.** Lions, hyenas, and wild dogs all depend on antelope as prey. A healthy antelope population usually means a healthy ecosystem around it.

The Struggle | Grasslands and the Modern World

Antelope evolved over millions of years to live in wide-open, connected grassland, the kind of landscape you might picture from *The Lion King*, with grass stretching as far as you can see. That kind of space let herds travel long distances each year, following fresh grass and water. For millions of years, this was a winning strategy.

It's not working as well today. The reason has a name: **habitat fragmentation**.

It's worth understanding exactly what that means, because it's easy to mix up with something else: habitat *loss*. Habitat loss just means there's less total habitat. Fragmentation is different. It's what happens when the habitat that's left gets cut into smaller, disconnected pieces by roads, farms, fences, and towns. This can happen even if the total amount of habitat isn't that much smaller than before.

Fragmentation can trap herds in small, isolated patches, cutting them off from other groups of their own species. When that happens, animals can only find mates within their own small group. Over time, this leads to less genetic variety and a higher chance of health problems from inbreeding.

This isn't just a guess. Scientists have already seen it happen. In West Africa, roan antelope used to migrate in loops across four countries, alongside kob antelope. Wars, farmland, and fences have broken that migration into disconnected pieces. In East Africa's Serengeti-Mara region, scientists have found herds cut off from the larger population that are already showing early warning signs, like inbreeding.

Zoom out, and the pattern is clear: in the most recent full study of the world's antelope species, nearly two out of every three species were found to be declining.

Our Labels

Here's why a species' official label can be misleading if that's all you look at. The roan antelope is officially listed as a species of "Least Concern," a label based on a total global population of around 76,000 animals. But that number hides what's happening in smaller areas. Many individual roan populations, especially at the edges of their range, have already shrunk down to small, isolated patches, and some have disappeared completely.

A healthy-sounding global number can still hide a species that's quietly falling apart, population by population. That's exactly the kind of "quiet collapse" that Colossal's scientists are trying to catch and stop before it's too late.

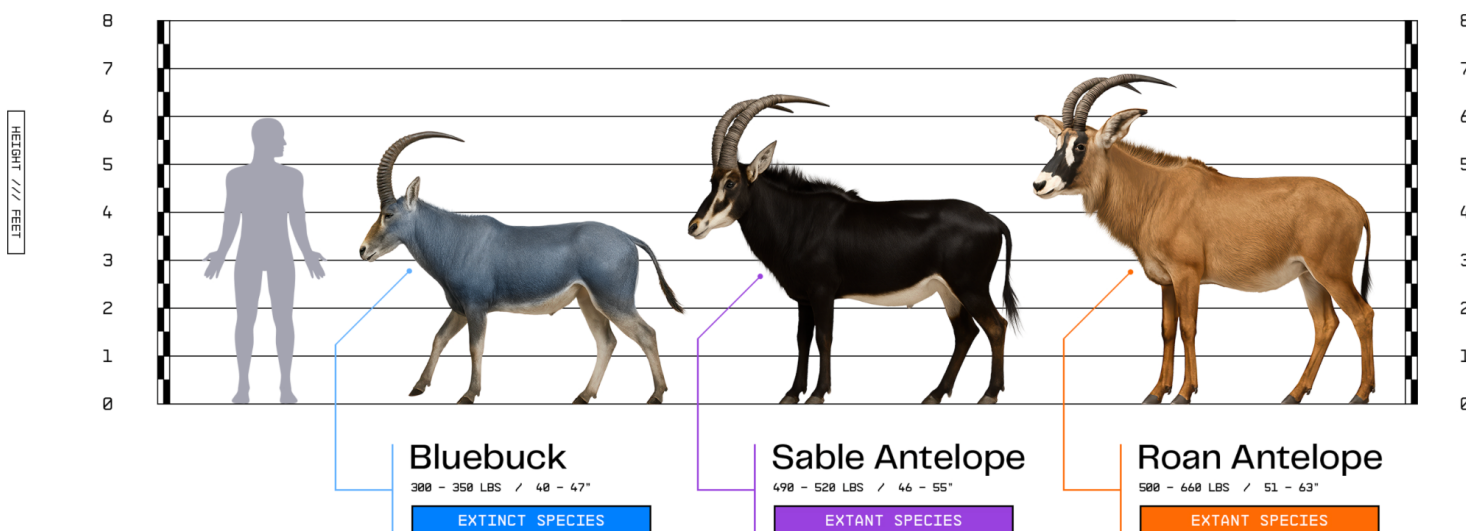
Antelopes In a Modern World

Genetic rescue is the practice of restoring lost genetic diversity to a struggling population before it collapses completely, often by bringing in new genetic material from somewhere else. This idea is closely connected to Colossal's work. Projects like the bluebuck de-extinction force scientists to think in new ways and build new tools, tools that can then be used to help animals that are still alive today.

But genetic rescue only treats a symptom, not the cause. Fragmentation is a problem about geography, not just genetics, and solving it means reconnecting the land itself, through wildlife corridors, protected areas, and partnerships with the people who live on that land. Pairing both of these approaches 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 threatened antelope species 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	Hirola	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



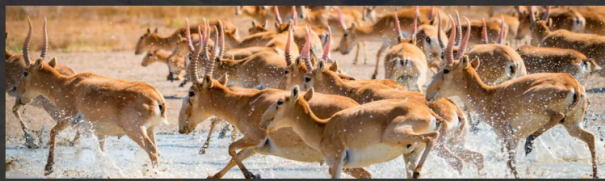
SAIGA ANTELOPE
Saiga tatarica

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

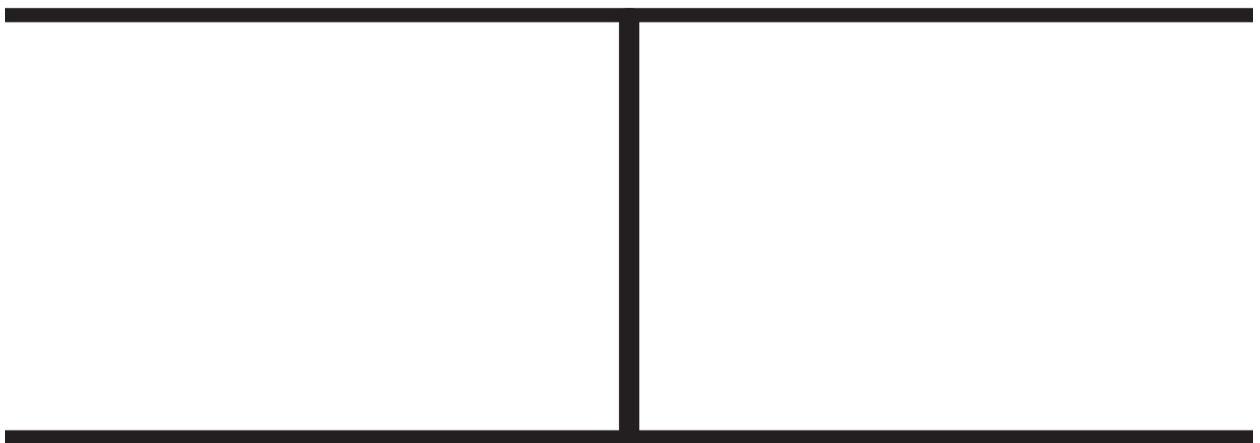
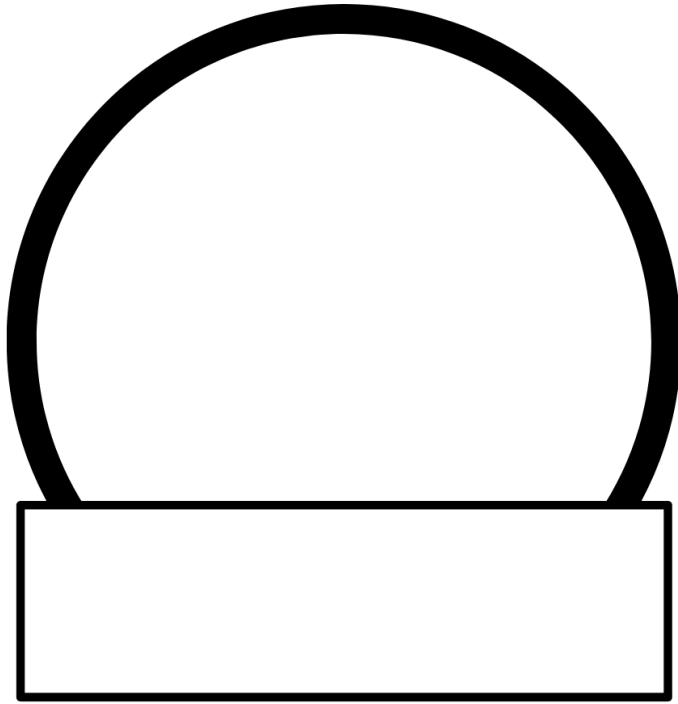


WHY IT MATTERS

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.

TODAY, THERE ARE 3 POPULATIONS OF SAIGA LEFT IN KAZAKHSTAN AND ONE SMALL POPULATION IN MONGOLIA. DURING THE ICE AGE THEY HAD A MUCH LARGER RANGE.





<https://canva.link/antelopespotlight>



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