NEW YORK STATE
Conservationist
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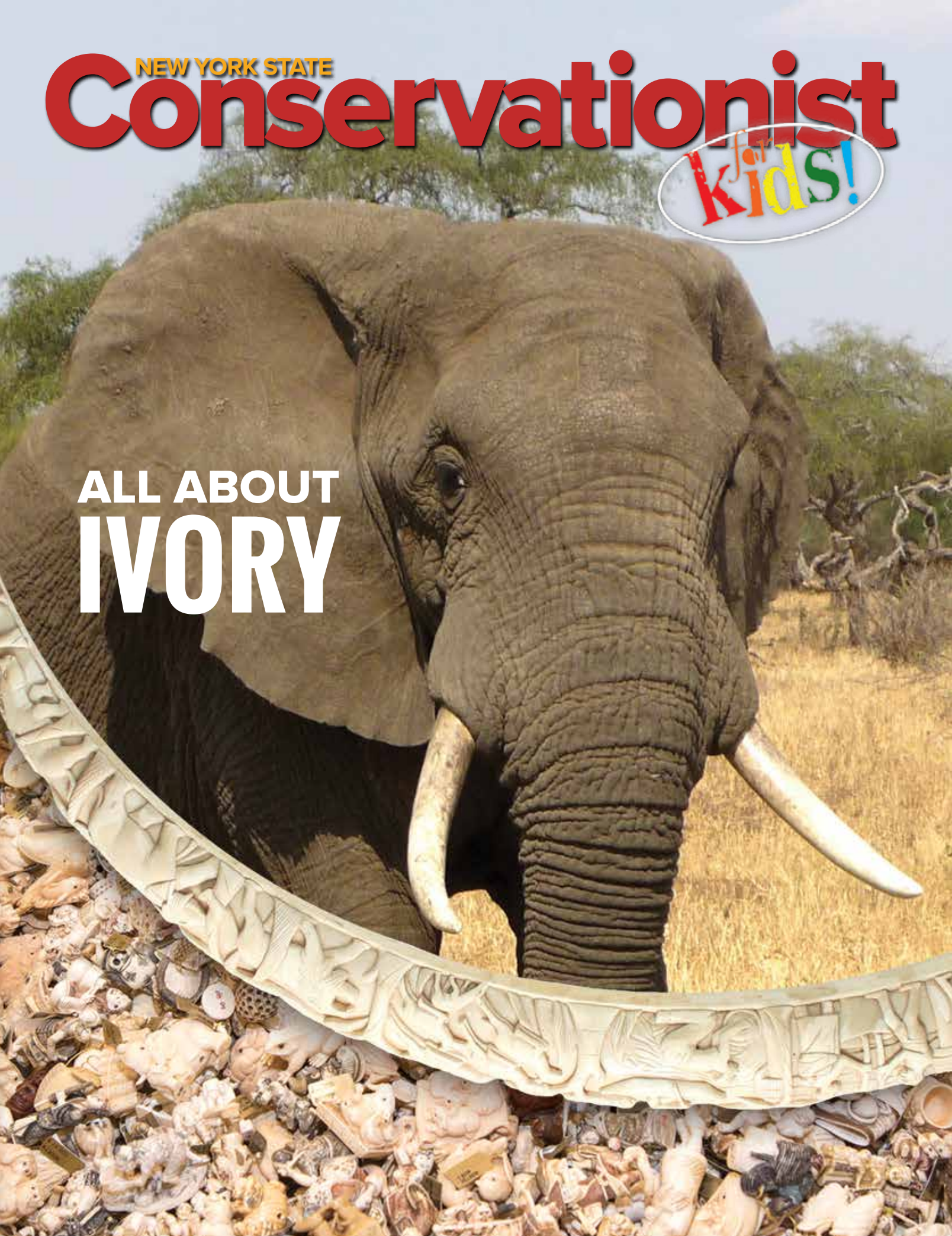

ALL ABOUT IVORY

NEW YORK STATE

Conservationist for Kids!

IN THIS ISSUE,
we will learn all about ivory and the illegal ivory trade. You might be wondering why a New York publication would focus on ivory and elephants. That's because NYS plays a major part in the illegal ivory trade. This issue will teach you about elephants, what ivory is and where it comes from, what it is used for, and what we are doing about the illegal ivory trade in New York State.

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Sources of IVORY

What is ivory and where does it come from?

Ivory is a hard, white material that comes from the tusks or teeth of animals. When most people think of ivory, the first thing that usually comes to mind are elephants. The tusks of an elephant are very long incisors (front teeth). The tusks are made of a hard, bony substance called dentine, and covered with a layer of enamel. Elephants use their tusks for defense against predators and other elephants, to help them dig, to move things, to strip bark from trees, and to help get food. The tusks also help to protect the trunks of elephants. Tusks never stop growing, so the longer the tusks, typically the older the elephant. In African elephants, generally both males and females have tusks, while only some male Asian elephants do, and females normally do not. Extinct mastodons and mammoths also had ivory tusks.

Other animals have ivory tusks or teeth as well, although in most other animals the tusks are enlarged canine teeth, not front teeth like in elephants. Canine teeth are sharper teeth (like fangs) and are used primarily to grip and tear food. Other examples of ivory include hippopotamus teeth, some whale teeth, narwhal tusks, warthog tusks, and walrus tusks. Narwhal tusks are thought to help in communication, and are actually inside out compared to other tusks – the harder material is on the inside, and the softer material is on the outside!

Diagram of an elephant tusk

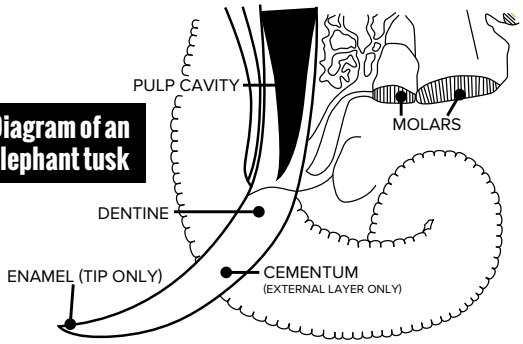


Image credit: U.S. Fish and Wildlife Service

Image credit: Merlynne6 (Wikimedia)

What is ivory used for?

Ivory has been used for many things over the years, but remember, in order for the ivory to be used, the animal that it came from must be dead. Many older piano keys are made from ivory (nowadays they are mostly made of plastic). Ivory can also be found in violin bows and on guitars as well as on some antique wood furniture. People have been using ivory for thousands of years. They make art with it, including carvings. Ivory has been used in everyday items such as combs, knife handles, pipes, buttons, and storage containers. Ivory, typically from elephants, played an important role in many Asian cultures, including to make jewelry and statues. Some religious objects are also carved from ivory. Other cultures have long associations with ivory as well. In the Arctic, some native peoples, such as Eskimos, carve walrus tusks into artwork and jewelry. Some whale teeth, such as those of sperm whales and orcas, were also used for scrimshaw, a type of elaborate carving once done by whalers and other sailors. Some examples of items made from ivory can be seen at the American Museum of Natural History in New York City.

All about elephants

To understand the ivory issue, it helps to know a bit about elephants. There are actually three different types of elephants: African bush or savanna elephants (*Loxodonta africana*), African forest elephants (*Loxodonta cyclotis*), and Asian elephants (*Elephas maximus*). All elephants are very large. In fact, African savanna elephants are the largest and heaviest land animals on Earth. They can be up to 13 feet tall, which is more than twice as tall as the average human, and weigh up to 11.5 tons (23,000 pounds). In addition to their size, all elephants are remarkable because they have long, highly mobile trunks which have about 40,000 muscles -- more than the whole human body! They also all have enormous ears to help keep them cool in their hot tropical countries.

Elephants are very social. Female elephants and their young tend to form groups or herds that move around together. The groups are led by a matriarch, usually an older female that is the mother of many in the herd.

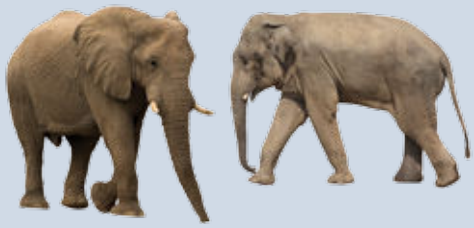
Female elephants have a close bond with their young. They carry their offspring for an average of almost two years before giving birth, the longest of any land mammal. Once the young are born, they stick close to their mother for several years while they learn to fend for themselves, including how to select the right plants to eat (elephants are herbivores, meaning they only eat plants), how to navigate across great distances to find food and water, how to use their trunk to eat and drink, and the best places to find different things to eat, including salt! These places can be many miles apart and females show their young where to find them all, and the best paths to take to get there.

Elephants are very smart. They recognize themselves in a mirror and they recognize old friends even if they haven't seen them in a while. When groups of elephants that know each other reunite after time apart, they rumble and trumpet, entwine their trunks, and flap their ears with enthusiasm. Researchers believe that elephants also show sadness for those that have died. They may stay by the bodies of slain group members for hours or even days. They also remember pathways to rare foods during droughts or other tough times, sometimes over many years.

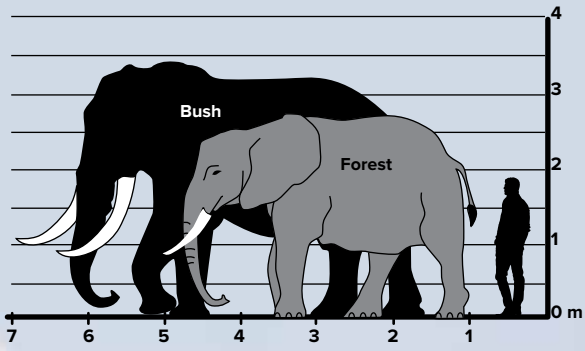
The number of elephants in the wild has decreased dramatically in recent years. Biologists believe that there were about 27 million elephants 200 years ago. There are now around 400,000 (of which forest elephants number only about 80,000). Asian elephants, found throughout East and Southeast Asia, are also endangered with both habitat loss and poaching as the causes. Today, elephants are becoming rarer because they are hunted for their ivory.

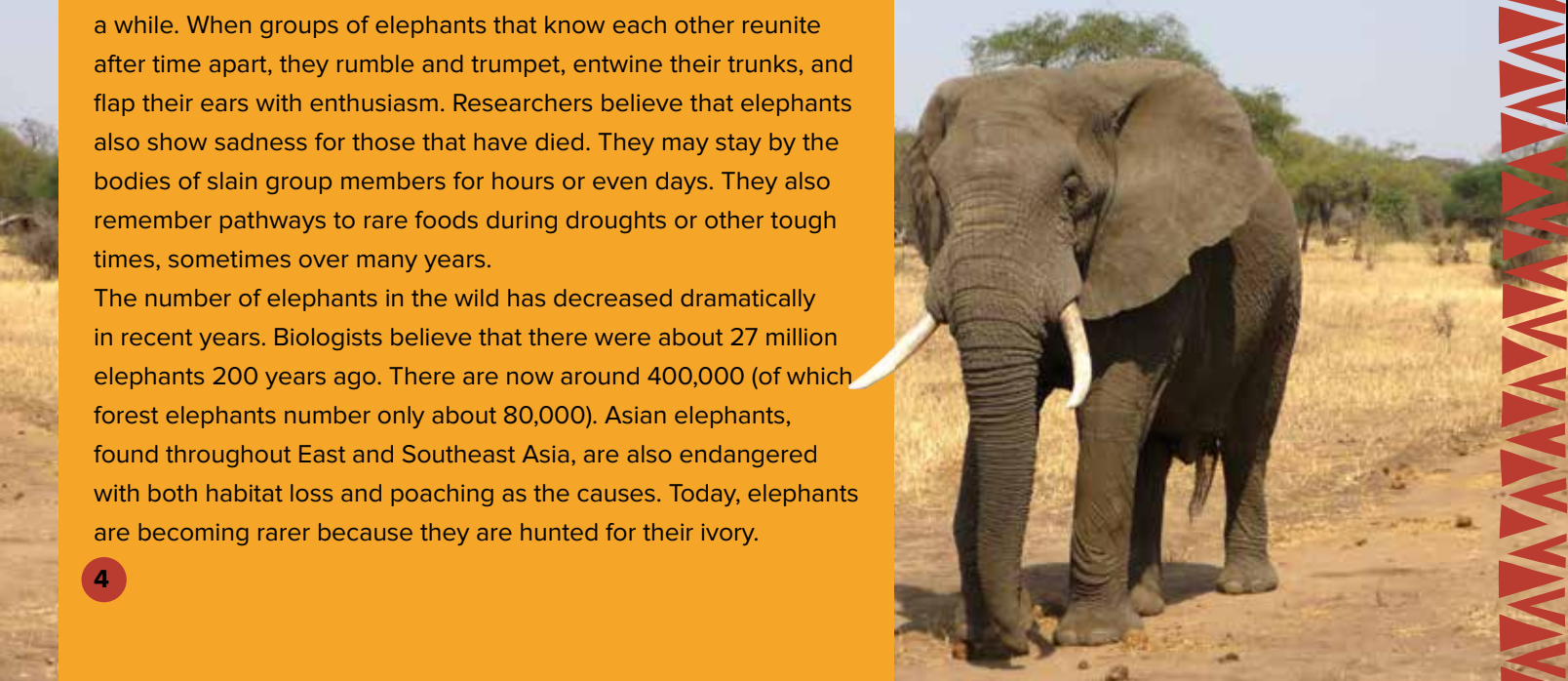
The difference between

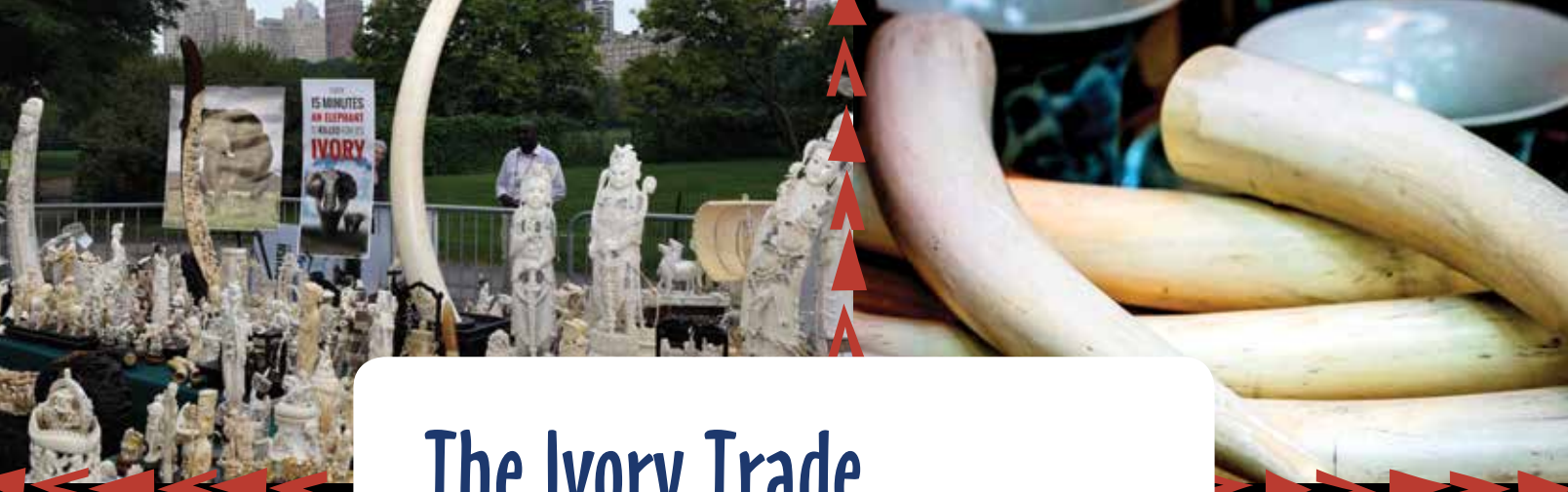
AFRICAN Elephant	**ASIAN** Elephant
Ears: Large, "Africa-shaped" ear	**Ears:** Small, rounded ear
Trunk Tip: Two "fingers" for grasping	**Trunk Tip:** One "finger" for grasping
Head: Single dome	**Head:** Twin dome
Height (tallest at shoulder): 9 – 13'	**Height (tallest at back):** 6.5 – 9'
Weight: 8.800 – 15.400 lbs.	**Weight:** 6,600 – 13,200 lbs.



African Bush or Savanna Elephant Compared to African Forest Elephant and to a Human Being



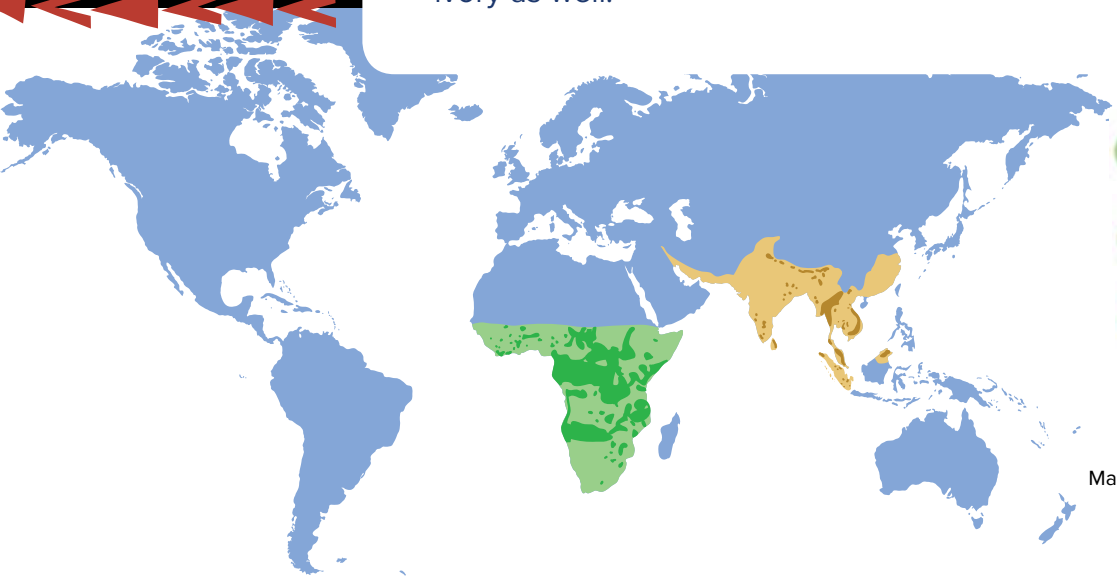




The Ivory Trade

Over the years, the demand for ivory has increased dramatically, leading to declines in the populations of many different animals, especially elephants. Tens of thousands of elephants are poached (hunted illegally) every year for their tusks, which are then illegally sold for carving and other purposes. Many of the carved items are then sold as symbols of status or wealth.

In many countries, bringing in (importing) or selling ivory is either very restricted or totally illegal. But that hasn't stopped the ivory trade completely. In 1989, a worldwide ban on the international trade of elephant ivory was put in place. Scientists estimate that before the ban, as many as 700,000 African elephants were hunted primarily for their ivory. After the ban, ivory trade declined (went down) and elephant populations started to recover. Unfortunately, in the past ten years, demand for ivory has greatly increased again, and there is a large illegal or "black" market for elephant ivory. Much of the illegal ivory goes to Asian countries, although New York City had a large market for illegal ivory as well.



Map modified from Nataraja (Wikimedia).

In 2017, New York State held its second ivory crush. Seized ivory items (top photo) were fed into a giant crusher (middle 2 photos), which turned them into pieces of ivory too small to be of any value (bottom photo).

Photo Credit: Eric Januszkiewicz/WCS

Photo Credit: Julie Larsen Maher/WCS

In some countries like Kenya, seized ivory is burned instead of crushed.

What are we doing about the ivory trade?

Even today, elephants continue to be killed by poachers for their ivory tusks. In response, many countries are looking for ways to better protect these animals. Rangers, or armed guards, patrol large reserves where elephants live, often using modern technology such as GPS trackers, to protect the elephants from poachers.

People are also trying to make it harder for poachers and traffickers to make money selling elephant ivory. If these people can't make money off of ivory, they will be less likely to kill elephants for it. It became illegal to sell ivory internationally in 1989, but some countries continued to allow the trade within their borders at that time. Traffickers would smuggle ivory into those places and sell it. In recent years, though, that has begun to change.

The Wildlife Conservation Society (WCS), a conservation organization, estimated in 2013 that nearly 35,000 elephants were being poached each year, or approximately 96 per day. This amounts to one elephant killed every 15 minutes. In response to this devastating loss, WCS founded the 96 Elephants Campaign, which has inspired millions of actions (emails, letters, drawings) by people who want to stop the killing of elephants.

This increased awareness has helped lead to more laws protecting these animals, both in the U.S. and abroad. China is one of the main markets for selling elephant ivory, but it recently announced that it would move to close ivory carving factories and markets, putting a near total ban on the sale of ivory in that country. The illegal market for ivory in Asia is huge, but by cutting out the legal production of ivory products in China, there will be fewer places where it can legally be sold. And that is big for elephants.

In New York State, Governor Cuomo led the way by signing an ivory trade ban into law in 2014, which is even stricter than the laws in many other states, and the U.S. ivory trade ban law. Under the NYS law, which is enforced by NYS Department of Environmental Conservation (DEC), it is now illegal to sell nearly all elephant ivory in the state, as well as mammoth ivory and rhinoceros horn. While mammoths are extinct, their ivory was made illegal to sell in NYS because it can be hard to tell from elephant ivory, and some people illegally sold elephant ivory by calling it mammoth ivory.

In July 2016, the U.S. banned almost all trade in African elephant ivory. This did not make it illegal for individuals to keep ivory that they already owned, or to pass it down to their children, but it made the sale of almost all elephant ivory illegal. Now, elephant ivory must meet a list of strict requirements.

Although stricter laws are now in place, there is still a large illegal market for ivory. That means traffickers can still make money from elephants. In New York State, multiple investigations uncovering the illegal ivory trade have been successfully concluded by DEC's Environmental Conservation Police Officers and Investigators. They have been assisted in their efforts to stop the illegal ivory trade and help save elephants from extinction by local District Attorney's offices, in particular the Manhattan District Attorney's office, and the U.S. Fish and Wildlife Service. When a store is suspected of selling illegal ivory, plainclothes (undercover) DEC police investigators buy suspected ivory items from the store. The items the officers buy are tested to make sure they are ivory. If they are, and the store does not have the proper permits or other documentation, the ivory products are seized, and the store owners are usually arrested and fined, sometimes even sent to jail.

In New York, much of the seized ivory has been crushed in public displays. In 2017, nearly two tons of elephant and mammoth ivory products worth around 10 million dollars were destroyed in Central Park. This public event, and similar displays around the world, make a powerful statement that the illegal trade won't be tolerated, and that ivory should remain on live elephants and never sold in a store.

Anyone with information about the sale of illegal wildlife including elephant ivory can contact the DEC's Environmental Conservation Police at 1-844-332-3267 or 1-844-DEC-ECOS or report an environmental violation on the DEC website at www.dec.ny.gov/regulations/67751.html.

To learn more about DEC's Environmental Conservation Police Officers visit the DEC website at www.dec.ny.gov/regulations/2437.html.

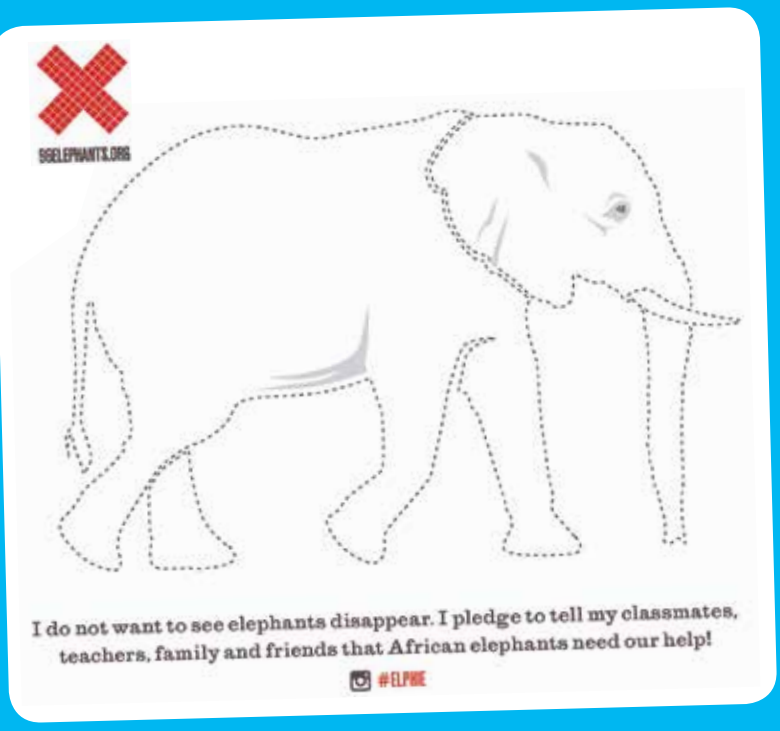
Where to see elephants in New York State

Did you know that you can see live elephants in New York State? If you are interested in seeing living elephants in NYS, there are a few different choices available. The Rosamond Gifford Zoo (Syracuse), Buffalo Zoo, and Bronx Zoo all have Asian elephants, and the Seneca Park Zoo in Rochester has African elephants. It would be a good idea to have your parents check ahead and make sure they are on exhibit before you go, just to be sure!

#ELPHIE Campaign

Objective: Encourage people to take photos of themselves engaging in elephant conservation actions, thereby spreading the campaign's reach by tapping into the power of social media.

Directions: Join the campaign by taking a picture of yourself holding up an elephant plush, holding the #Elphie graphic, in front of an elephant photo or statue, or even in front of a real elephant at a zoo. With your teacher or parents' permission, post your "elphie" to Facebook, Twitter, or Instagram using #elphie or #partoftheherd.



(A full page version of the above image can be downloaded from the Conservationist for Kids section of DEC's website, www.dec.ny.gov/education/40248.html).

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Conservationist for Kids

Supplement for Classroom Teachers – All About Ivory

February 2018

Why Ivory?

It may seem a bit unusual for a publication focused on conservation and environmental issues in New York State to do an issue on ivory and elephants, but there is a very good reason for this. New York City is a significant hub in the illegal elephant ivory trade, and New York State is leading the way in fighting this illegal trade. Not only will this issue teach your students about what ivory is, where it comes from, what it is used for, and what is being done to stop the illegal trade, it will also teach them some of the basics about elephants. You can use this issue to start a conversation with your students about endangered species and biodiversity, as well as the role of law enforcement in helping to protect endangered species. To learn more about biodiversity and endangered species, see the Fall 2013 issue of *Conservationist for Kids*, "The Wonderful Diversity of Life." The issue can be downloaded in PDF form from our website, and a limited supply of printed copies is still available (information on both can be found in the box at the bottom of page 2).

This Issue's "Outside Page"

The "Outside Page" in this issue of *Conservationist for Kids* gives students information about where in New York State they can see living African and Asian elephants. There are also instructions for how students, their classmates, and their families can take part in Wildlife Conservation Society's #ELPHIE campaign to raise awareness of the plight of elephants, and the role poachers and the illegal ivory trade are playing in the decline of their numbers.

Supplemental Activities for the Classroom

Elephant Migration Game

As part of their 96Elephants campaign, the Wildlife Conservation Society has developed an elephant migration game that helps players learn more about elephant migrations and the challenges they can face in the wild. *A full-color template of the cards can be downloaded from the Conservationist for Kids website: look for a link called Ivory Issue Resources on the left side of the page.*

Objective: To identify a safe migration route for your herd to reach the water source, avoiding obstacles along the way.

Directions: The first player, the "matriarch" (a matriarch is the female leader of an elephant herd) will start on the bottom row of cards. The matriarch will turn over one card at a time and identify which stations are potential avenues for migration (the vegetation cards), and which are barriers (the mountains and villages). You may move up or down, but not diagonally. Players will proceed card to card, eventually reaching the ultimate goal: the water source (the lake card).

Once the correct path is identified, the matriarch must remember it and convey directions to the next player. The second player should be able to find their way to the water source much quicker than in the first round by following the matriarch's instructions, and should also be able to avoid potential threats like human conflict in the villages along the way.

Follow up questions: What role do you think each individual plays in the herd?
How do you think elephants communicate information to one another?
How would the herd be affected if the matriarch was no longer around?

Migration Facts:
Elephant herds in the wild follow well-defined migration routes. It is the task of the eldest to remember and follow the traditional migration routes from year to year. Elephants migrate largely by sight, and the oldest female elephant, or matriarch, learns to use fixed landmarks such as rivers and mountain ranges to lead the other members of the herd to food, water, and safety. When human farms are found in these old routes there is often considerable damage made to crops and it is common for elephants to be killed in the ensuing conflicts.

Project WILD

For teachers who have taken part in Project WILD training, a number of resources are available. Suitable lessons include: Here Today, Gone Tomorrow; Ethi-Thinking; Rare Bird Eggs for Sale; Changing Attitudes; Back from the Brink; Enviro-Ethics. Learn more about Project WILD on DEC's website at www.dec.ny.gov/education/1900.html

Online Resources*

- **NYS Ivory Law** www.dec.ny.gov/docs/wildlife_pdf/ivoryfaqs.pdf (PDF download)
- **96Elephants website** www.96elephants.org
- **National Education Association's The African Elephant And The Ivory Trade webpage** (includes links to curriculum resources) www.nea.org/tools/lessons/63734.htm
- **National Geographic Society's Battle for the Elephants webpage** www.nationalgeographic.org/education/battle-for-elephants
- **U.S. Fish and Wildlife Service's Ivory Crush webpage** www.fws.gov/le/elephant-ivory-crush.html
- **Wildlife Conservation Society's Elephants webpage** www.wcs.org/our-work/wildlife/elephants

**Please note, the listing of websites is not to be considered an endorsement, as not all have been reviewed by the editor.*

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