Newborn lion and tiger cubs are seen at Qingdao Zoo in China. Zoos have been at the center of debates about conservation and animal ethics. Photo: Feature China/Barcroft Media via Getty Images.

The Panamanian golden frog is critically endangered. Hundreds of them live at zoos across the United States. Though they have become a national symbol in Panama, seen everywhere from lottery tickets to T-shirts, it is uncertain whether there are any golden frogs left in Panama.

They have likely been extinct in the wild since 2007 after a fungal disease spread through their habitat.

Panamanian golden frogs may be extinct in the wild, but many still live in U.S. zoos. Photo: Wikimedia.

Zoos in the United States have been breeding the golden frogs for years. Breeders hope that by maintaining genetic diversity in the species, they might be able to reintroduce the frogs to their native forests in western Panama. But factors including rapid deforestation, big construction projects and the presence of toxic fungi leave little possibility that the golden frogs could survive. Should the zoos continue to breed them anyway?
This question is part of a larger debate about the role of zoos and aquariums, a debate that has gained attention in recent years. From the documentary “Blackfish” that exposed grim details about the lives of captive killer whales to the shooting of Harambe the gorilla after a boy fell into his exhibit, a new focus asks the question: Are zoos and aquariums a good thing? Should we still have them? Is it wrong to keep animals in captivity for our own enjoyment?

**What Is Conservation?**

The debate about zoos tends to center around issues of conservation and biodiversity. While conservation is about helping plants and animals stay alive, biodiversity is about maintaining a wide variety of plants and animals in order to keep entire ecosystems, like the Amazon rainforest or arctic tundra, healthy.

There are two types of conservation. In-situ conservation efforts are those that focus on protecting a species in its natural habitat, such as creating a protected area in Africa to help elephants thrive. Advocates of in-situ conservation believe that it is the best and most natural way to maintain biodiversity. That’s because species evolve and adapt based on their environments. Evolution is the process by which living things have developed over many, many years. Helping animals thrive in their own environment is the best way to maintain the natural progress of the species, the argument goes. Major changes such as droughts or other environmental disturbances will require the species to adapt or risk extinction.

The other type of conservation is called ex-situ conservation. The golden frog project is an example of ex-situ conservation. Its efforts focus on maintaining species survival somewhere outside the animal’s natural habitat. Those who support ex-situ conservation argue that it provides researchers opportunities, can help preserve the genetic diversity of a species and can raise awareness about the importance of biodiversity.

Zoos play a role in both types of conservation. Though housing the animals is a clear example of ex-situ conservation, many zoos have partnerships and funding structures that support in-situ conservation also. The Wildlife Conservation Society (WCS), for instance, is based at the Bronx Zoo in New York City and manages four other zoos. In addition to the zoos, WSC has programs in nearly 50 countries that work to protect some of the world’s most at-risk species and habitats. In Indonesia, for example, WCS has experts working to protect the Sumatran tiger. WCS has helped the Indonesian government come up with policies to increase the effectiveness of in-situ conservation efforts inside national parks.

**What Are The Main Arguments Supporting Zoos?**

Zoos' ability to merge in-situ and ex-situ conservation is not the only argument supporting them. Zoos promote conservation through educational programs. Many zoos devote resources to programs that inform the public about biodiversity and conservation. The San
Diego Zoo, for instance, offers tours, camps, art and photography courses and zoo sleepovers, according to its website. It even offers video conferencing so classrooms can chat with zookeepers and see animals up close.

The Association of Zoos and Aquariums (AZA) believes these efforts are critical to public understanding of conservation. "When they experience a stronger connection to nature, they are prompted to reconsider their role in environmental problems and conservation action and see themselves as part of the solution," the AZA says on its website. According to the AZA, more than 180 million visitors to its zoos participate in educational programs each year. That includes more than 50 million students.

Many zoos have educational programs for children and adults. Some think that zoos help foster an appreciation for wildlife and the environment. Photo: Anthony DeRosa/Public Domain

Advocates of zoos say that they are an affordable way for people to learn about different ecosystems and that the experience provides a sense of wonder. Seeing a lion or elephant up close could inspire someone to take action to save the species. This is not the same, zoo supporters argue, as watching a video or seeing a picture of these animals.

A second major argument in favor of zoos is that they preserve genetic diversity of species. Zoos also have specialized breeding programs that are managed by the AZA. For threatened or endangered species such as chimpanzees, the AZA maintains species survival plans. The plans involve breeding and transferring animals within the network of AZA-accredited zoos. Each plan identifies population goals and recommendations to ensure a healthy population that varies in genetics and demographics, according to the AZA. There are more than 500 species survival plans currently in place.

Animals born in captivity are rarely re-released to their natural habitats. There have been a few successful cases, though. One was the reintroduction of the red wolf in the southeastern United States after it had nearly gone extinct. A species survival plan was used to bring the wolf back, and its breeding program started with only 14 individuals.

Releasing captive animals into the wild involves challenges aside from having a large enough population and transporting it back to its native habitat. It involves working with government agencies and in some cases international bodies like the International Union for the Conservation of Nature (IUCN). The IUCN is the group that classifies species as threatened, endangered or critically endangered. The AZA oversees only zoos and aquariums in the United States. The reintroduction of a species with a breeding program in the U.S. to a habitat in another country would have additional challenges. It has been done, but the cases are exceedingly rare.

Another reason people support zoos is because they think animals there are treated well. Many zoos now emphasize creating habitats that look and feel more natural for the animals, which advocates of zoos point out. Humans have kept wild animals in captivity since ancient times, and that isn’t going to change, they say. If animals are going to be
kept, a well-managed zoo is the best place for them. Over the last 20 years, many zoos have transformed drab concrete and metal enclosures into exhibits with more enrichment for the animals. Their homes mirror their natural habitat, with trees, ropes for climbing and artificial "natural" features like caves.

Lastly, many zoos are able to rescue animals from abuse or mishandling. In 2002, U.S. authorities seized six polar bears from a Mexican circus that was touring Puerto Rico. The Suarez Brothers circus had abandoned them in sweltering heat when they realized they could not bring polar bears to the next country on their tour. The bears had been abused and were severely malnourished. After being moved to zoos in the U.S., the bears, Alaska, Royal, Willy, Masha, Boris and Kenny, recovered and had access to large water tanks and open spaces. Had they not been rescued and sent to the zoos, they might have lived more years in terrible conditions.

**What Are The Main Arguments Against Zoos?**

Many people believe that zoos use animals only for human enjoyment. They think this is a form of exploitation. Opponents argue that the entire history of zoos is full of instances of animals and even humans used for entertainment purposes. In the 19th century, when zoological parks first gained popularity, many had "cultural exhibits," which displayed not just animals from a certain region but people as well. They were displayed alongside the animals against their will as people from another part of the world and treated very poorly. In the U.S., a man from Africa was put on display in the Bronx Zoo in 1906. That was after the United States had abolished slavery.

Ota Benga, a Congolese man, was on display at the Bronx Zoo’s monkey house in 1906. An argument against zoos is that regardless of what they are like today, their history raises numerous ethical concerns. Photo: Wikimedia

Opponents of zoos also believe zoo animals suffer. According to the Captive Animals’ Protection Society (CAPS), a United Kingdom-based organization, “wild animals in zoos suffer physically and mentally as their social, behavioral and physical needs cannot be met in unnatural man-made environments." Although conditions in zoos have improved immensely, zoos around the world differ widely in quality and standards of care for their animals. While the U.S. has the AZA, many countries have no such organization that ensures the quality of zoos.

Even places that have strict regulations on keeping wild animals in captivity may not enforce them well. Liz Tyson, director of CAPS, said laws to protect zoo animals have not been effective. “Our ongoing monitoring work over the years has uncovered numerous examples of non-compliance with legal standards but we were shocked to discover the extent of the failings across the industry,” she said. She added that the current situation "is wholly unacceptable."
Even with more natural enclosures, many believe it is wrong to keep a wild animal in captivity regardless of what its home looks like. Some activists say that all living things should have personhood, meaning they are entitled to rights just as people are. Holding wild animals violates their rights, they say.

Critics also point to how expensive zoos are. They believe that zoos are a massive misuse of resources, if not a total waste. Spending the money to create a natural-looking elephant enclosure in the United States is less effective for overall conservation efforts, they say. That same money could be better spent in a community-based conservation project in Africa.

Some zoos spend upwards of $1 million a year just to maintain a single exhibit. The San Diego Zoo, in 2014, spent more than $10,000 just on advertising, according to its public financial statement. The cost of a one-day pass to the zoo, $50 for an adult, could feed a family of four in Kenya for a month, based on World Food Program estimates. That could be one fewer person who decides to become a poacher, or someone who hunts animals illegally. And with about 165 million people visiting accredited zoos in the U.S. each year, that money could go a long way in meeting needs in conservation hotspots.

Conclusion

Though it doesn’t seem as if zoos are going away any time soon, the debate about them will surely continue. Changes have happened in many zoos because of this debate. Also, there has been an increased focus on wildlife reserves and parks where animals are protected in-situ and people can visit to see them. Accessibility is an issue, though. To see a wild gorilla in the African country of Rwanda, for instance, you’d have to pay $750 to enter the park, with no guarantee that you’ll see one.

Each side of the debate has strong points. There’s no denying the joy and awe one can experience when encountering an animal up close. But there is also something sad about a wild animal living somewhere it doesn’t quite belong. Perhaps Pulitzer Prize-winning writer Thomas French put it best: “What’s the reality of being inside a zoo, for the animals and for the people who love and care for those animals? There’s a lot of joy, and there’s a lot of loss.”
Quiz

1 Which answer choice BEST explains the author’s purpose in this article?

(A) to provide an overview of the zoo debate while showing that modern zoos are succeeding in converting critics

(B) to demonstrate that while there are valid arguments on both sides of the debate, the pro-zoo side is definitively stronger

(C) to show that there are valid points on both sides of the zoo debate and the debate itself has contributed to progress

(D) to argue that there will never be an answer to the zoo debate, so rather than arguing with each other, both sides should work together

2 Read the following selection from the section "What Are The Main Arguments Supporting Zoos?"

Humans have kept wild animals in captivity since ancient times, and that isn’t going to change, they say. If animals are going to be kept, a well-managed zoo is the best place for them.

What is the MAIN purpose of this pro-zoo argument?

(A) to appeal to the reader’s sense of logic and practicality

(B) to appeal to the reader’s sense of emotionality and empathy

(C) to appeal to the reader’s sense of concrete moral principles

(D) to appeal to the reader’s sense of connection with history
Liz Tyson, director of CAPS, said laws to protect zoo animals have not been effective. “Our ongoing monitoring work over the years has uncovered numerous examples of non-compliance with legal standards but we were shocked to discover the extent of the failings across the industry,” she said.

Why does Tyson include the phrase “the extent of the failings”?
(A) to show that the zoo industry occasionally fails to take care of animals adequately
(B) to show that the zoo industry’s failure to take care of animals is very widespread
(C) to show that some zoos in the industry are much worse than others at taking care of animals
(D) to show that some zoos in the industry have failed so completely at taking care of animals that they have been shut down

Even with more natural enclosures, many believe it is wrong to keep a wild animal in captivity regardless of what its home looks like. Some activists say that all living things should have personhood, meaning they are entitled to rights just as people are. Holding wild animals violates their rights, they say.

Which of the following uses the word “violate” in the MOST similar way to how it is used above?
(A) It is never OK to violate another person, no matter what.
(B) Our privacy and freedoms are violated by this new law.
(C) They have violated the terms of our peace agreement.
(D) After writing her name on the tomb’s wall, she was accused of violating a historical landmark.