



# Local, Regional and International Conservation at the ABQ BioPark



*Guam kingfisher,  
BioPark resident, extinct in the wild*





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## The Role of Zoos and Aquariums in Species Conservation

Association of Zoos and Aquariums (AZA)-accredited institutions serve more than 200 million visitors annually, positioning them as a powerful tool for conservation education. The ABQ BioPark is the largest attraction in New Mexico, and it is one of the only community resources where visitors can learn about threatened species and what they can do to help prevent their extinction. Zoos and aquariums have the expertise and resources necessary to maintain sustainable populations, design effective species reintroduction programs, provide field support for local wildlife agencies, and participate in habitat protection and remediation. They remain one of our best options to fight biodiversity decline in our state and around the globe.

## AZA Accreditation

Fewer than 10 percent of the approximately 2,800 animal exhibitors licensed by the USDA are also accredited by the AZA. AZA's rigorous, scientifically based, and publicly-available standards examine a facility's entire operations including animal welfare, veterinary care, conservation, education, guest services, physical facilities, safety, staffing, finance and governing body. AZA-accredited zoos and aquariums are constantly evolving, and standards are continuously being raised. Each zoo or aquarium must keep up with these changes to remain AZA-accredited. To maintain accreditation the ABQ BioPark must go through the entire process every five years. The ABQ BioPark has been accredited by the AZA since March 1981. The ABQ BioPark's most recent AZA accreditation inspection was in June 2021. A team of AZA professionals, including a veterinarian, was onsite for 3.5 days, ensuring that the ABQ BioPark meets all AZA standards. Accreditation was awarded for another five years in September 2021.



## AZA Conservation Programs: ARCS, SAFE, and SSPs

### Annual Report on Conservation and Science

Each year, AZA tracks the collective conservation efforts of accredited zoos and aquariums. ARCS reporting is mandatory for accredited facilities and is used to evaluate the conservation impact of a facility for accreditation. In 2021, AZA conservation programs operated across 117 countries, contributing more than \$216 million to field conservation projects that benefitted 954 species, 225 of which are listed under the U.S. Fish and Wildlife Service's Endangered Species Act. **In the same year, the ABQ BioPark directly authored 337 peer-reviewed publications focused on species conservation, which made up 46.9% of all publications generated by the AZA.**



### Saving Animals From Extinction (SAFE)

SAFE is a conservation framework that protects priority threatened animals by encouraging collaboration across AZA member institutions, implements strategic conservation activities and measures progress on species conservation. There are 30 SAFE species. In 2021, members contributed more than \$25 million in funding to save these critically threatened species from extinction. The ABQ BioPark is actively involved in several SAFE initiatives, including the Asian Elephant SAFE Program; also initiatives for Lions, African Painted Dogs, African Vultures, Cheetahs, Jaguars, Chimpanzees, Gorillas, Orangutans, Giraffes, Sea Turtles, Sharks and Rays, and Corals.



### AZA Species Survival Plans (SSPs)

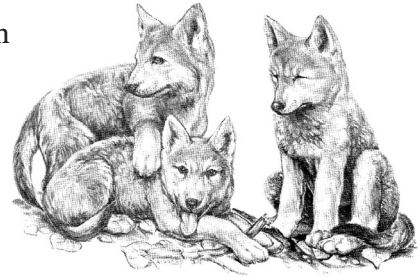
AZA SSPs are led by expert advisors to manage genetically diverse, demographically varied and biologically sound animal populations across AZA-accredited zoos and aquariums, Certified Related Facilities and Sustainability Partners. There are approximately 500 SSPs, each responsible for developing a comprehensive population management plan, including a Breeding and Transfer Plan, to ensure the sustainability of each species population. **The ABQ BioPark participates in 111 SSPs, just over 22% of all SSPs across the AZA.** The BioPark's dedicated staff serve as program leaders for the Asian Elephant, Ocelot, Abyssinian Ground Hornbill, Penguin and Greater Roadrunner SSPs, in addition to the IUCN Ground Hornbill Specialist Group.



## ***Local and Regional Conservation Highlights***

### **Mexican Wolf**

The ABQ BioPark has a long history of Mexican gray wolf conservation. Since 1983, it has worked with the AZA's Mexican Gray Wolf Species Survival Plan and the USFWS to ensure the persistence of this species in the Southwest. To date, it has welcomed more than 70 wolf pups. These breeding efforts are essential in supplementing wild wolf populations in the United States and Mexico. BioPark veterinarians are also regularly called upon to treat, rehabilitate, and re-release wild wolves that are impacted by human-wildlife conflict.

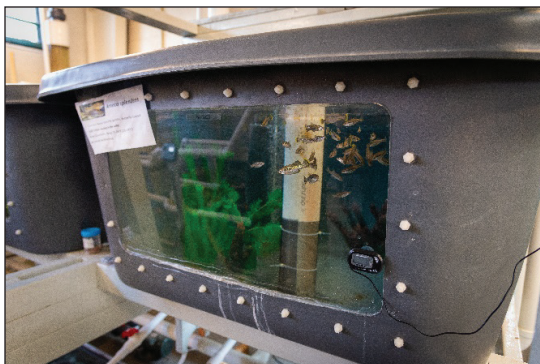


### **Aquatic Conservation Facility**

For more than two decades, the ABQ BioPark has worked with the USFWS to recover the Rio Grande silvery minnow, which lives in the Middle Rio Grande. BioPark staff at the Aquatic Conservation Facility (ACF) participate in monitoring and research, egg collections and spawning, and raise silvery minnows to supplement wild populations. On average, the BioPark releases 50,000 minnows annually.

The ACF is critical for species conservation in the Middle Rio Grande. It also houses a refuge population of the Socorro isopod, a small crustacean that was only found in Sedillo Spring until 1988 when it became extinct in the wild as a result of habitat modification.

The ACF also supports locally and regionally threatened freshwater fishes. Several species of critically endangered and extinct in the wild splitfins are housed at the BioPark. These fish occur in isolated habitat patches throughout Mexico. The BioPark is part of ongoing efforts to reintroduce these species into their former ranges.



## Sacramento Mountain Checkerspot Butterfly

The Sacramento Mountain checkerspot butterfly is a subspecies that only occurs in New Mexico's Sacramento Mountains. Recent declines and fear of extinction have led to their recent petition under the Endangered Species Act.

The ABQ BioPark partnered with USFWS to build an insurance population as a safeguard against extinction. After visiting the last remaining habitat patches this year, the BioPark secured four adult butterflies that have yielded about 150 caterpillars. The caterpillars are being raised and maintained at the BioPark until enough suitable habitat is available for a wild release.

The BioPark is also working to improve habitat conditions in the Sacramento Mountains by installing exclosures. These protect important host and nectar plants from feral horses and livestock trampling.



## New Mexico Butterfly Monitoring Network

In 2020, the ABQ BioPark started the New Mexico Butterfly Monitoring Network, a community science initiative aimed at understanding butterfly abundance and diversity in New Mexico. This program has grown from a small group of volunteers into a community science initiative with more than 40 monitoring routes throughout the state. Community science initiatives are greatly strengthened by the involvement of zoos and aquariums that have access to a broad audience. They allow zoos and aquariums to contribute to species conservation by building baseline data that help scientists understand butterfly declines across and what actions to take to reduce these declines.

## Valles Caldera Zoo-Parks Partnership

In 2021, the ABQ BioPark entered a species conservation partnership with the National Park Service at Valles Caldera. This area harbors a diversity of bats and other invertebrate pollinators. It is also critical habitat for two endemic species, the Jemez Mountain salamander and the New Mexico meadow jumping mouse, both of which are at risk of extinction due to habitat loss and increasing wildfires. The BioPark intends to use staff expertise to assist with habitat remediation, deploy bat boxes, and improve ex-situ breeding efforts for endemic species.

## Socorro Dove Project



In 2008 the Zoo received 12 Socorro doves (roughly 10% of the world population) from the United Kingdom for the Socorro Dove Project. The project is an international endeavor to return the rare bird to its native home on Socorro Island, the largest of four islands in the Revillagigedo Archipelago off the Pacific coast of the Mexican state of Colima. The Socorro dove was extirpated (locally eliminated) by feral cats that were introduced in the early 1970s, high levels of sheep grazing and hunting. Several Socorro doves were taken during an expedition to the islands in 1920s and subsequently bred in the USA and later in Europe. These captive populations are breeding prolifically at the Zoo, which will help ensure this species' survival.

## Conservation Seed Banking

In 2021, the ABQ BioPark established one of the only conservation seed banks for rare and threatened New Mexico-native plants. Seed banks provide long-term storage of genetic material for some of the most narrowly distributed plants. These efforts provide a safeguard against extinction in the event of large wildfires, floods, emerging pathogens and disease, and changes in local climatic conditions. The BioPark will continue to expand its seed banking capabilities, and will soon become the only repository in the world for a number of plant species found only within the state.

## Tribal Partnerships

In 2019, the ABQ BioPark entered a formal partnership with the Ute Mountain Ute Tribe (UMUT), encompassing lands along the western flank of the Rocky Mountains in the states of New Mexico, Colorado, Arizona and Utah. This area has high plant and animal diversity. The BioPark works annually with tribal wildlife managers to monitor, save seeds, and protect the UMUT's threatened plants.



## Other Programs and Partnerships

The BioPark also participates in a number of other conservation initiatives including Nature’s Notebook, a national citizen science initiative through the US Geological Survey and The National Phenology Network that lets people observe nature and send valuable data about plants and animals.

The BioPark is also involved with UNM’s Bosque Ecosystem Monitoring Program (BEMP), tree monitoring projects at UNM, the conservation of the Sacramento prickly poppy at Heritage Farm, and Earth Day partnerships with City of Albuquerque Open Space.



## International Conservation Highlights

In 2018, the ABQ BioPark and New Mexico BioPark Society entered a formal partnership with the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC). The IUCN is the largest conservation organization in the world, encompassing tens of thousands of expert members from all over the world. The IUCN is the only conservation organization that has observer status at the United Nations (UN), and advises on the creation of Sustainable Development Goals, a universal call to action adopted by the UN in 2015. The IUCN’s flagship knowledge product, the IUCN Red List of Threatened Species, is the world’s leading resource on the conservation status of plants, animals and fungi around the world.

The BioPark established the first Center for Species Survival in the United States and the third in the world, with the aim of catalyzing species conservation internationally through extinction risk assessment, conservation planning, and conservation action. The BioPark is one of two zoological facilities globally that is an official Red List Partner, integrating its conservation work closely with the Red List of Threatened Species.







The BioPark's partnership with the IUCN SSC has contributed significantly to our understanding of extinction risk for freshwater fishes, plants and invertebrates. The BioPark has led extinction risk assessment analyses for freshwater fishes throughout Mesoamerica and the Caribbean, for rare plants in the Southwestern United States and throughout North America, and for fireflies throughout North America, among many others. Some notable accomplishments include the Migratory Monarch assessed as endangered, all 26 species of extant sturgeon assessed as threatened, and nag chhatri, a commercially important medicinal herb native to the Himalayas assessed as endangered. To date, staff at the New Mexico BioPark Society have authored or contributed to approximately 2,500 peer-reviewed publications on the Red List of Threatened Species. These assessments provide critical information that conservationists can use to design effective plans to mitigate species decline, and they are also used by governmental entities around the world to inform national legislative frameworks and designation of protected areas.

