

TOP 10 NOMINATION FORM

2020 Topic: Illegal wildlife (plants and animals) trafficking and unsustainable trade

Species must meet these qualifications:

- Must be native U.S. species or international species with significant U.S. demand
- Must be experiencing substantial decline (do not have to be threatened/endangered listed)
- Must be directly or indirectly impacted
 - Direct: exploited as trophies, pets, medicines, etc.
 - Indirect: impacted by imported exotics or imported disease vectors (e.g., chytrid)

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Nominated Species (Common Name & Scientific Name):

Saguaro cactus (*Carnegiea gigantea*) as representative of cactus family

Question 1: Threat to the Species

How is the species and/or its habitat threatened by illegal wildlife trafficking and/or unsustainable trade? Note the extent of the threat and whether it is direct or indirect. Include references to relevant scientific studies. Does the species face any associated political threats?

Poaching and trafficking of wild cacti has increased greatly in recent years, partly due to their [growing trendiness](#) coupled with the fact that they are very slow growing so that mature specimens can be extremely time consuming to grow and therefore expensive. Worse, the internet has made it simple for dealers and customers in trafficked species to find one another. According to [the Guardian](#) In 2014, more than 2,600 stolen cacti were seized at US borders – up from 411 just a year before. Further, U.S. Customs and Border Protection’s agriculture specialists have [intercepted more than 100 illegal cactus shipments since 2017](#). But law enforcement officials and field scientists say that data represents only a tiny fraction of cactus actually being stolen.

A [2015 species assessment](#) for the International Union for Conservation of Nature (IUCN) Red List Categories and Criteria showed that cacti were among the most threatened taxonomic groups, with 31% of the 1,478 evaluated species threatened. [The entire cactus family](#), including

all cacti native to the United States and its territories, is listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Most of the family is listed in Appendix II, so that exports require a CITES permit. Several species are listed in the more restrictive Appendix I; this means that all imports and exports must be accompanied by a CITES permit.

Saguaro cacti are particularly at risk because of they are visible icons of the southwestern U.S. and so large examples are coveted by landscapers and home decorators. The Guardian has reported that [Saguaros can command up to \\$100/foot](#) on the booming black market. Poachers can make thousands of dollars off a large stolen plant, which are usually taken from national parks and other public lands. Cutting down a cactus is a crime punishable with up to 25 years in prison and a fine. A permit is required to cut a saguaro down even if it's on private property. However, the problem has become so extreme that national park service officials have planted tracking microchips in more than 700 Saguaros in Saguaro National Park. Publicity of this program has greatly reduced Saguaro theft in the Park. Elsewhere, however, the problem remains.

Stolen plants can be marketed anywhere and have shown up on eBay and Craigslist and stolen plants are shipped all over the world. The International Union for Conservation of Nature lists the Saguaro population as in decline.

[Buffelgrass, *Cenchrus setaceus*](#), a nonnative invasive species in the region, has been making problems worse for Saguaros. Buffelgrass, introduced to the desert to improve cattle grazing, quickly turns low valley deserts and desert uplands into grasslands by filling in the spaces between native plants. This results in grass fires. These desert habitats are not fire evolved communities. Fires kill established cactus of all ages and grass invasion suppresses new cactus seedlings.

Saguaro and saguaro habitat is unique in that it has evolve around two rainy season a year. This makes the Sonoran Desert more lush and diverse than any other desert. And as such, climate change, resulting in hotter and drier extremes with stronger storm systems, threatens the existence of Saguaros and many other species, especially in their seedling stages.

Question 2: Role of the Species

What is the ecological and/or scientific importance of the species? Note if it is a keystone species and describe its role in its environment. Include references to relevant scientific studies.

[Saguaro is a keystone species](#), providing food and shelter for numerous other species. Saguaros are iconic and Arizona's state flower. It is an important plant in the Sonoran Desert at all phases of its life cycle. A saguaro starts blooming and producing seed at around 50 years. An average reproductive saguaro may live another 100 years after that. Each fruit produced may have 2,000 seeds within. A yearly average of 50 fruit is not an unreasonable number. That equates to 100,000 seed produced per year, and 10 million seed produced in one saguaro's lifetime. If the population of saguaros is stable, then only 1 of those 10 million seed will grow to maturity.

What happens to the rest is a huge part of the saguaro's place in the environment. Most of the seed are consumed right away. Many bird species, ants, rodents, javelina, coyotes, etc. depend on this feast during the driest time of the year. Those seeds that are not consumed may germinate. Most of these seedlings will be consumed by rodents. Those few that grow larger support more species: moth larva burrow within, woodpeckers and flickers dig them out. Those same birds make nest cavities within saguaros. Other bird species (sparrow, owls, etc.) utilize abandoned cavities for their nests. Yet other birds (doves, hawks, bald eagles, etc.) make nests in the crooks of the saguaro's arms. The flowers are visited by many species of native bees and birds. Nectar-feeding bats time their migration to coincide with the blooming. That leads to pollination, fruit, and seeds.

Even in death, the saguaro supports desert life. The [rotting flesh is utilized by many insects](#). Once dried out, the bark and ribs make a shady microhabitat for scorpions, spiders, insects, lizards, etc.

References: Ecology of the Saguaro: [I](#), [II](#), and [III](#), published by the National Park Service and [in the journal Ecology](#).

Question 3: Message

What is the most important message about this species for decision-makers and the public?

No species of plant stands alone. Every species has multiple interactions with others in its habitat, food web and ecosystem. The loss of that species will not go unnoticed in the web of interconnections. The saguaro, because of its size and prominence is an "In-your-face" plant. Because of its slow reproduction and growth, it may be particularly vulnerable to poaching and habitat impact. It can be a good, easily-seen indicator of the general health of the Sonoran Desert.

Political decisions that allow urban sprawl, and prioritize natural resource exploitation over natural resource conservation, result in a decline of Saguaro habitat through the blading-off of lands and through road building. Non-native plants often thrive in the disturbed soil. The act of putting in roads/developing land/building walls not only destroys that particular saguaro habitat, but makes great habitat for invasive exotic plants, leading to new hot-spot infestations that spread into untouched desert. Roads also give plant thieves easy access to saguaros.

The decision to limit immigration by building walls along the border has resulted in the loss of Saguaro habitat, increased road building, and the creation of new migration routes where none previously existed, in turn making more roads necessary for law enforcement. These same walls cut off migratory species, threatening those species existence, and seriously impacting associated species who are dependent on their them for pollination and seed dispersal.

Cacti that are grown in nurseries can help to satisfy the international demand for these versatile plants while reducing collection pressure on wild populations.

Experts offer advice for ethical cactus shopping

- Avoid buying cactus from international sellers without a permit from the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Cites), especially from countries where the plant is not native.
- If buying online, seek out domestic sellers that advertise their cacti as being grown from seed.
- When you are in a nursery and there is no source information for a cactus, ask where it came from.
- Is the cactus scrappy looking? Then it may be stolen from the wild. Nursery-grown plants are typically symmetrical and robust in color.

Final Selections

If my nomination is selected for inclusion in the report, I would like the first draft of the species profile for the report to be written by (choose one):

You (ESC), and then my NGO will edit the profile and approve the final draft.

Me (my NGO). I understand that I (and other participating writers) will need to adhere to ESC's writing guidelines.

Deadline: May 8, 2020

Send to: top10@endangered.org