



IUCN SSC Global Tree Specialist Group



Conservation Success Stories

Integrated conservation
of the Arroyo Oak
(*Quercus brandegeei*)
in Baja California Sur, Mexico



Integrated conservation of the Arroyo Oak (*Quercus brandegeei*) in Baja California Sur, Mexico

IMPLEMENTED BY

Silvia Alvarez-Clare
CSS Trees - Morton Arboretum

TARGET

New role established for GTSG in expanded Global Trees Campaign partnership, facilitating tree conservation action by Group members. (T-007)

THREAT ADDRESSED

The Arroyo Oak is an endangered, narrowly endemic oak tree in Baja California Sur, Mexico. Climate change, habitat degradation, and overgrazing by livestock have resulted in population decline and a lack of regeneration of the species. Recent population surveys indicate zero individuals under 100 years of age.



1,500
oak trees
have been
planted
in Baja
California
Sur



SUCCESS LEVEL

Successful

Success category:

Increase in population viability



REASONS FOR SUCCESS

The project's success results from integrating rigorous scientific research with active community involvement. Dedicated ecologists and conservation geneticists produce studies that clarify species threats and guide conservation strategies. The 'Salvemos al Encino Arroyero' programme has been key in raising awareness and engaging communities to protect remaining populations and plant more trees in the wild.

The Morton Arboretum, in collaboration with an interdisciplinary team including Centro de Investigaciones Biológicas del Noroeste S.C. (CIBNOR) and other local partners, has been conducting an integrated conservation project for this culturally and ecologically important tree species following the One Plan Approach. In 2016, the team reassessed the species on the IUCN Red List, and in 2021 completed a Green Status assessment. These revealed the need for further research to better understand threats and population status. Since then, the team has collected genetic, phenological, and ecological data to identify conservation priorities and specific threats.

Research topics include intraspecific genetic variation, spatial distribution patterns, and exclusion and camera trap experiments to evaluate animal predation. Current work focuses on cataloguing and genetic sampling of selected *in situ* populations and *ex situ* individuals to assess past conservation efforts and guide future ones. Drone technology is being used to quantify remaining wild *Q. brandegeei* individuals and locate new populations in remote regions.

A conservation action plan, developed under CPSG methodology, was created following a 2021 workshop and symposium held in San Dionisio, which gathered 50 participants from local government, municipalities, ranchers, communities, and scientists. The resulting plan, to be published in 2025, outlines four primary goals for effective conservation over five years.

The action plan emphasises urgent *in situ* and *ex situ* conservation. Acorns have been collected across the native range, producing over 5,500 seedlings in local nurseries, with more than 1,500 trees planted *in situ* at 26 ranches across 12 Baja California Sur locations. Acorns and seedlings have also been shared with Mexican and international botanic gardens, with 10 institutions now maintaining collections.

Community involvement, education, and outreach have been vital to success. The team launched the "Salvemos al Encino Arroyero" campaign in 2021, including an "adopt a tree" program and the annual Festival Comunitario de Conservación del Encino Arroyero. These initiatives have raised significant awareness of this emblematic species. The festival features interactive workshops, cultural demonstrations, and children's environmental activities, growing from 50 participants in 2022 to 400 in 2024. Communication efforts include a mini-documentary, international media coverage (BBC and BBC Mundo), podcast features, and local news appearances. ■ MALIN RIVERS



Vulnerable Northern River Shark,
(*Glyphis garricki*)
Photo: Grant Johnson

Interviews about human wildlife
interactions with local inhabitants
Photo: Kiran Thapa Magar

Vicuña management by Cooperativa
Agroganadera de Santa Catalina and Comunidad
Aborígen Atu Shapi de Morritos.
Santa Catalina, Jujuy Province, Argentina
Photo: Yanina Arzamendia

Story photo credits

Arroyo Oak (*Quercus brandegeei*)
in Baja California Sur, Mexico
Photo: Jesus Rosas (CC BY-NC),
iNaturalist Mexico

Festival Comunitario de Conservación
del Encino Arroyero
Photo: Kate Good

Community songbird monitoring and
protection, Indonesia
Photo: Asian Songbird Trade SG archives

Cacti from genera *Copiapoa* and *Eriosyce*
confiscated in Italy and repatriated to Chile in 2021
Photo: Andrea Cattabriga