



PACUARE RESERVE

For more than 30 years, Ecology Project International and Pacuare Reserve in Costa Rica have provided hands-on science education, wildlife research, and conservation service opportunities to visitors.

Pacuare Reserve holds one of the most important nesting beaches in the world for the threatened leatherback sea turtle—and is home to more than 2,500 other species.

Among these are many rare, threatened, and endangered plants and animals, offering limitless potential for conservation research and work.

10,000+ STUDENTS AND TEACHERS SINCE 2000
30+ YEARS OF CONSERVATION
2,500+ PROTECTED SPECIES OF ANIMALS AND PLANTS

Prior to the closure of Costa Rica's borders due to COVID-19 this year, Pacuare Reserve staff provided scientific research and conservation service opportunities to 444 local and visiting students & teachers, volunteers, ecotourists, research assistants, and interns. Notably, a group of dedicated research assistants stayed on at the Reserve through closures to assure the safety of sea turtles, nests, and hatchlings—contributing to their protection in perpetuity.



RESEARCH ASSISTANT MARVIN SALAS CAREFULLY RELEASES HATCHERY-BORN HAWKSBILL SEA TURTLES

SEA TURTLE CONSERVATION ON THE CARIBBEAN COAST

Leadership in Leatherback Conservation

Ecology Project International's Pacuare Reserve safeguards an estimated 60% of nesting female leatherback sea turtles in Costa Rica. These females are part of the endangered Northwest Atlantic subpopulation of leatherbacks (*Dermochelys coriacea*). For more than 30 years, researchers, staff, and volunteers at Pacuare Reserve have monitored and protected them and their eggs from climate change, illegal harvest, and other threats. The Reserve is the only site in Costa Rica showing stability in the number of nesting females from year to year.

Conservation Statistics

In 2020, the Reserve monitored 515 sea turtle nests and successfully released 22,275 hatchlings this season—including endangered hawksbill and green sea turtle hatchlings in addition to leatherbacks.



Pacuare Reserve Research Coordinator Claudio Quesada Rodríguez has observed that *in situ* (natural) nests only hatch 23% of the time. As a result, the

Reserve began digging and preparing hatcheries in which to relocate, monitor, and protect threatened nests. Nests that were protected in the hatchery experienced a 73% success rate—more than triple that of *in situ* nests.

The data from Pacuare Reserve hatcheries illustrates the importance of a carefully monitored management plan, and highlights the need to do more research to understand the reasons for the difference in success rates between hatchery incubation and wild incubation.



5,400 RESEARCH ASSISTANT HOURS SPENT ON TURTLE CENSUSES
515 NESTS RECORDED
22,275 HATCHLINGS RELEASED



PACUARE RESERVE

RESEARCH & EDUCATION

Pacuare Reserve is a uniquely forested 2,000-acre tract of land amidst the fragmented landscape of Costa Rica's Caribbean coast. The Reserve is a haven for thousands of animal and plant species, including at least six Central American feline species and more than 200 bird species. The presence each of these species gives rise to new scientific partnerships and enrichment of global knowledge of restoration and conservation of tropical ecosystems.

As part of Ecology Project International, Pacuare Reserve is dedicated to using its rich biodiversity to inspire and empower local conservation leadership through educational programs, research assistantships, and internships.

RESEARCH OPPORTUNITIES

Jaguars and Prey Monitoring Program

Pacuare Reserve may represent a critical link in habitat connectivity for the dispersion, feeding, and reproduction of at least six Central American feline species. Panthera Costa Rica and Coastal Jaguar Conservation are collaborators for investigations of feline presence and activity at the Reserve.

Monkey Population Ethology Program



PHOTO BY MARVIN ARAYA

The white-faced capuchin (*Cebus imitator*), howler (*Alouatta palliata*), and endangered spider monkey (*Ateles geoffroyi*) are among the most abundant and visible mammals at Pacuare Reserve. Primate social learning is a complex cognitive phenomenon, and this program seeks to describe the behaviors and social learning exhibited by each species.

Agami Heron Breeding & Nesting Colony

EPI's Pacuare Reserve is seasonal home to the largest breeding and nesting colony of agami heron (*Agamia agami*) in Costa Rica. The Reserve has partnered with a working group spanning five countries to use IUCN protocols and share data from observations on the relatively unknown, and extremely rare, agami heron.

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Panthera Costa Rica

To partner with or
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Ecologyproject.org.



ECOLOGY PROJECT
INTERNATIONAL



STUDENTS FROM THE NEARBY COMMUNITY OF MATINA PARTICIPATED IN A TWO-DAY "LEADERS IN SUSTAINABILITY" PROGRAM

ENVIRONMENTAL EDUCATION

Pacuare Reserve could not understand, protect, and support its biodiversity without supporting the human communities who share the surrounding land.

Matina Youth Camp

Last fall, 100 young adults, all belonging to local organizations that promote social development for youth, participated in the Matina Youth Camp. The camp introduced Pacuare Reserve and provided opportunities for teambuilding across communities through conservation activities.

Leaders in Sustainability Program

Nine children from the Escuela de Atención Prioritaria de Matina, and their parents, joined Pacuare Reserve's first-ever "Leaders in Sustainability Program," designed around the objectives of the United Nation's 2030 Agenda for Sustainable Development.

COVID-19

Like so many in the global community, EPI faced uncharted waters with the outbreak of COVID-19. Due to the virus, EPI was forced to cancel most of our more than 100 planned field science courses for 2020. In April, we reduced staff and expenses by nearly 60%.

When Costa Rica shut its borders, local and international research assistants chose to stay on at Pacuare Reserve—and continued to provide protection for nesting sea turtles, eggs, and hatchlings. These research assistants often worked more than 80 hours per week, walked up to 8 miles each night, and saved more than 54,601 sea turtle eggs.

We are incredibly grateful to our research assistants, staff, and volunteers for their deep dedication to the wildlife at Pacuare Reserve. We are also grateful to our funders, most of whom have allowed funding to be unrestricted so that EPI can forge a path through and beyond this pandemic.