

PACUARE RESERVE

On the Caribbean coast of Costa Rica, an ecosystem thrives under the stewardship of Pacuare Reserve and Ecology Project International (EPI). In addition to safeguarding one of the most important nesting sites for endangered leatherback sea turtles in the world, Pacuare Reserve is an international research and education hub for youth, teachers, ecotourists, and scientists with an interest in wildlife conservation and habitat restoration.

In 2023, the Reserve hosted...

31 RESEARCH ASSISTANTS & INTERNS

210 VOLUNTEERS

375 LOCAL STUDENTS AND TEACHERS

Despite the remote location of Pacuare Reserve, which can only be accessed via canal, the research and lessons learned off-the-grid reach curious minds all over the world. In 2023, Pacuare Reserve staff members shared knowledge on NPR's Here and Now program, presented at the International Sea Turtle Symposium in Colombia, and received one star in the Costa Rican Bandera Azul Ecológica recognition program.



**ECOLOGY PROJECT
INTERNATIONAL**

A GREEN SEA TURTLE HATCHLING MAKES IT'S WAY FROM PACUARE RESERVE'S HATCHERY TO THE WORLD BEYOND.

A YEAR OF FIRSTS FOR SEA TURTLE RESEARCH & CONSERVATION

Extraordinary Encounters

Leatherback sea turtles are at the forefront of Pacuare Reserve's research and conservation efforts. Nesting females, eggs, and hatchlings face numerous predation threats that Research Assistants, staff, and volunteers mitigate with protected hatcheries and nightly beach censuses. With 3.7 miles of coastline monitored every night during nesting season, it is no surprise that making a once-in-a-lifetime discovery is possible. For the first time ever recorded at The Reserve, the 2023 team registered live hybrid hatchlings from three different species, including green, loggerhead, and

hawksbill sea turtles. The hybrid DNA is currently being analyzed in a lab in Mexico and the hatchlings have been released to the sea. In addition to the thrill of discovering hybrid hatchlings, a two-headed leatherback embryo was also recorded at The Reserve in 2023! More than 100 malformed sea turtle embryos were transferred to a partner veterinary clinic for further analysis, as pictured above.



531 LEATHERBACK, GREEN, & HAWKSBILL NESTS MONITORED
32,000 HATCHLINGS RELEASED
106,508 MILES WALKED TO MONITOR NESTING FEMALES

A First Worth Celebrating

Volunteers constructed a hatchery at the beginning of the year to provide safe, controlled environments for sea turtle nests that are otherwise at-risk on the beach. Rising temperatures, erosion, and predation are just a few of the threats facing nests outside the hatchery.

For the first time in the history of Conservation and Research at Pacuare Reserve, researchers recorded a 0% illegal nest harvesting rate. 2023's success indicates that the modifications made each year are not just worthwhile...they are working.



PACUARE RESERVE

RESEARCH & EDUCATION

While the massive, ancient, and endangered leatherback sea turtles have a tendency to steal the species spotlight at Pacuare Reserve, they are not the only ones being monitored, protected, or researched. Beyond the coast, The Reserve encompasses 1,700 acres of recovering rainforest, nearly unrecognizable from its days as barren agricultural land. The biodiverse rainforest is home to thousands of species, with felines, primates, and agami herons at the center of EPI and Pacuare Reserve's research and conservation efforts. Local and international visitors engage with this real-world classroom through educational programs, ecotourism, research assistantships, and internships.

NOTABLE RESEARCH



PHOTO BY JUAN JOSÉ PUCCI

Agami Herons

Pacuare Reserve is the only known reproduction area in Central America for the endangered agami heron (*agami agami*). While The Reserve's list of conservation successes is long, it does not come without challenges. In 2023, The Reserve recorded the lowest number of nests ever due to a significant decrease in rainfall. Climate change has also contributed to the spread of an invasive fern that threatens water access at the agamis' nesting site. Continued habitat management and nest protection at Pacuare Reserve are essential in ensuring the agamis continue to have a safe and viable habitat to lay their eggs and grow their population.

Primate Ethology

Staff and visitors engage in observational studies to understand primate behavior, social structures, and ecological interactions. This involves long-term monitoring of monkey groups, noting feeding habits, mating behaviors, and responses to environmental changes.

Feline Footage

Strategically placed camera traps capture images of elusive wildcats without causing disturbance. This non-invasive method provides valuable information on species presence, population density, and behavior.



ECOLOGY PROJECT
INTERNATIONAL

LOCAL PARTICIPANTS IN THE LEADERS IN SUSTAINABILITY PROGRAM EXPLORE THEMES OF COMMUNITY, SUSTAINABILITY, AND LEADERSHIP.

LOCAL EDUCATION & OUTREACH

Leaders in Sustainability

Líderes de la Sostenibilidad, or Leaders in Sustainability, is an environmental education program for local 5th and 6th grade students and teachers. In 2023, a total of 36 students from two schools districts joined EPI's unique classroom and field-based program.

At school, students participated in an interactive workshop where they explored their current understanding of neighborhood, community, quality of life, and sustainability. With the help of EPI staff, they brainstormed the actions necessary to meet the UN's Sustainable Development Goals (SDGs) for their respective communities.

After the classroom workshops, the students visited Pacuare Reserve, inspiring project ideas on how to build a sustainable community. Once the students selected their project idea, they brought it back to the classroom to receive guidance on designing their project proposals. where they applied their leadership skills in sustainability. Finally, the students applied their leadership skills and presented their proposal to the school's community, project sponsors, and Pacuare Reserve staff.

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