

## Greener Tropics

Garra de Leon Golf Course at Melia Playa Conchal and Audubon International Partner to Bring Environmental Stewardship to Central American Golf

By Peter Bronski, Staff Ecologist 2004

Few people could have guessed that what was once abandoned agricultural land would become one of the most environmentally acclaimed golf courses in Central America. Yet, in the five short years since its establishment in June 1997, Garra de Leon Golf Course at Melia Playa Conchal in Guanacaste, Costa Rica has successfully achieved such a transformation. Working in partnership with Audubon International's Cooperative Sanctuary Program for Golf Courses, Garra de Leon recently received designation as the first Certified Audubon Cooperative Sanctuary in Latin America.

Audubon International promotes environmental stewardship and sustainability through education and conservation assistance programs. In particular, the Audubon Cooperative Sanctuary Program (ACSP) for Golf Courses encourages golf course superintendents and other managers to take action to enhance wildlife habitat, protect water quality, and conserve natural resources on the golf course property.

Described as "environmentally sensitive golf at its best" by Robert Trent Jones Jr., Garra de Leon Golf Course promotes its own special brand of eco-golf – the opportunity for the golfer to play in an ecologically unique environment with the knowledge that environmental impact and preservation have been major considerations in the design and operation of the course. "We do everything possible to protect and improve the environment that surrounds and is part of the golf course," notes Don Johnson, Golf Course Superintendent.

### <Nurturing Nature>

Environmental concerns were taken into consideration from the very beginning, when the course was under construction. "I made sure that out-of-play areas were left natural," says Johnson, "and that corridors were available for wildlife." Clearly, there is no shortage of wildlife at Garra de Leon Golf Course. Their wildlife inventory boasts more than 100 species of birds alone, in addition to resident howler monkeys, coatimundi (pizote), blue iguanas, and jaguars, among others.

Native trees like the majestic Guanacaste, Zandal, Madero, Panama, and Cenicero are found throughout the course, and understory vegetation has been left in place, providing valuable corridors for wildlife to move throughout the course property. Even dead trees (snags) are left standing, which have become a favorite of the parrots and parakeets at Garra de Leon Golf Course.

As a Certified Audubon Cooperative Sanctuary, Garra de Leon had to demonstrate environmental stewardship in six areas: Environmental Planning, Wildlife and Habitat Management, Water Conservation, Water Quality Management, Chemical Use Reduction and Safety, and Outreach and Education. A Resource Advisory Group helped to plan and implement

stewardship projects in the six areas. Members of the group included golf course staff, consultants, educators, environmental professionals, and representatives from the local community.

“Our certification would not have been possible without the help and expertise of the Resource Advisory Group members,” notes Johnson, “And especially Kay T. Dodge Ph.D. She contributed many long hours to make this possible, and pushed me along to achieve this very important certification.” Dr. Dodge, having worked with the Michigan Audubon Society and as an environmental educator, brought valuable experience and expertise to Garra de Leon Golf Course to complement Johnson’s motivation and dedication. “I see an enthusiasm and commitment to the concept of a golf course sanctuary at Garra de Leon,” reflects Dodge. “So of course I was pleased to act as an advisor and member of the Resource Advisory Group.”

#### <Water Wise>

Located in Guanacaste, Costa Rica, Garra de Leon Golf Course sits nestled among the dry tropical forests common to the northern Pacific coast of the country. The region experiences the dramatic contrast of a six month wet season followed by a six month dry season. With a scarcity of water for half the year, water conservation was naturally a serious concern for Johnson.

Garra de Leon Golf Course staff implemented a variety of projects to ensure that water was being applied to the course in the most efficient and responsible way possible – the amount of irrigated turf areas was reduced, weather data and evapotranspiration rates were incorporated into irrigation scheduling, and a percentage of course runoff was drained back to the irrigation pond to be re-used. As a result of these measures, Johnson and his staff saved more than 100,000 gallons of water per day during the first five months of 2000, even though they experienced a dry season more severe than the year before.

Johnson took steps not just to conserve water, but to protect water quality as well. “We wanted to provide a safe, healthy habitat for wildlife that inhabit or visit our water resources,” recalls Johnson. The shorelines of water features were naturalized with tall vegetation to provide cover for wildlife, and emergent and floating vegetation provide a valuable food source. Local birds, iguanas, and coati mundi help control insect and grub problems, allowing Johnson to reduce the amount of pesticides applied to his course. And the water features are tested once a year to ensure that quality standards are being maintained. Problematic algae blooms have been noticeably absent, and golfers are remarking at abundance of fish, birds, and other aquatic activity.

#### <Stewardship, Sustainability, and Partnerships>

The various stewardship activities at Garra de Leon were tied together with a comprehensive outreach and education program. Building on the theme of “Stewardship, Sustainability, and Partnerships,” Johnson, his staff, and the Resource Advisory Group started a campaign to promote an understanding of the natural and cultural heritage of Guanacaste through environmental stewardship and conservation projects on the golf course.

In an effort to educate golfers, resort guests, and the local community, Dr. Dodge published an article, “Audubon at Melia Conchal: Can golf courses be good environmental neighbors?” in *The Howler*, Guanacaste’s English-language magazine.

Johnson spearheaded an effort to partner Garra de Leon Golf Course with local schools, making the course resources available for teachers and students to use as a living, learning laboratory. One such partnership is with Brasilito’s Country Day School, located just minutes from the course. “We are excited about the many wonderful opportunities for local students of all ages to use the course as a natural laboratory for water, wildlife, and natural history studies,” notes Ruth Lizotte, Principal at the Country Day School.

And now, Garra de Leon will play host to not only golfers and students, but to resort guests and local community residents as well. The newly constructed Garra de Leon Nature Trail offers an opportunity for everyone to share in the natural heritage of Guanacaste. The self-guided trail includes twenty stations throughout the course that highlight the natural history, ecology, wildlife and plants, and management practices at Garra de Leon. Each station will be accompanied by educational plaques, and a written guide is currently available. There are also plans to develop a second nature trail that will take visitors through a mangrove wetland that borders the southern edge of the course.

By any measure, Garra de Leon’s outreach and education efforts can be termed a huge success. “Through the outreach and education program the local community has become more aware that Garra de Leon offers more than just golf,” says Dodge, “But also a sanctuary for wildlife and a living laboratory surrounding one the most beautiful courses in the Americas.”

Johnson credits Audubon International with helping to make his environmental stewardship efforts such a success. “We had ideas about how to build our golf course to be as environmentally sensitive as possible,” notes Johnson, “But it was the Audubon Cooperative Sanctuary Program that brought it all together.” Now that Garra de Leon Golf Course is fully certified as an Audubon Cooperative Sanctuary, they are encouraging other golf courses in Costa Rica to register in the ACSP. “Our goal is to have 100% participation in Costa Rica,” concludes Johnson. “We live in paradise, and we have a responsibility to protect and preserve the environment that brought us here.”

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*Audubon International, a non-profit organization, is dedicated to educating, assisting and inspiring millions of people from all walks of life to protect and sustain the land, water, wildlife, and natural resources around them. Together in partnership with TGM, an Argentina-based Spanish-language magazine, Audubon International is working to bring environmental management information in Spanish to golf course and turfgrass managers, as well as others working in the green industry.*

For more information:

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