



## Clear The Way For Birds

BY JEAN MACKAY

**F**light is a magnificent means of transportation, but not without its dangers. For many birds, a journey across the skies ends with a deadly collision with windows, vehicles, cell towers, or high-tension wires. According to the National Fish and Wildlife Foundation and U.S. Fish and Wildlife Service, the number of birds killed as a result of aerial collisions each year in the U.S. alone is estimated to be *in the billions*.

Have you ever been startled by the dull *thud* as a bird smacks the glass? If you have, you're not alone... and therein lies the significance of the problem. Millions of us all over the world are hearing that fateful sound and it will take the involvement of millions of us to reduce the number of collisions. Fortunately, greater awareness of the problem and improved solutions can help to reduce the number of bird deaths that occur each year.

### The problem with windows

Bird collisions with windows occur both day and night, in all seasons, and in cities, suburbs, and rural areas. The problem occurs when birds don't see the glass, generally because it mirrors trees, shrubs, or sky, but sometimes when transparent panes appear to offer a passageway through a building.

"Observations and experiments over more than 30 years have revealed that birds act as if clear and reflective panes are invisible. They attempt to fly to habitat seen through a clear glass corridor or to vegetation or sky mirrored in reflective panes," says Daniel Klem, Ph.D., Professor of



**Clear the Way for Birds** is the theme for this year's International Migratory Bird Day on May 14. IMBD is drawing attention to the obstacles birds may encounter in flight and the many ways we may minimize their impacts.

Ornithology and Conservation Biology at Muhlenberg College in Pennsylvania. "The result is that there is no time of day, season, location, window orientation, or weather condition in which birds are able to elude the hazard."

Among Klem's conclusions from years of research is that *bird density in the vicinity of windows* is the best predictor of the number of fatalities at any one site. That spells trouble for birds at feeders, where food is abundant and reflective windows are usually nearby.

There are several options for reducing or eliminating bird strikes. According to Klem, none are universally applicable or readily acceptable for all structures. The solution must fit the problem.

### Collision Course

#### Windows

Window glass kills more birds than any other human related factor.

#### Communication Towers

Lighting on communications towers often confuses birds migrating at night, resulting in collisions with towers or the guy wires that support them. Solutions include co-locating new towers with existing structures, keeping towers unguyed and under 200 feet, and using white flashing strobes, instead of solid red or blinking red lights on towers that require lights.

#### Power Cables

Power cables may not be very visible to birds in flight. Markers, such as metal triangles, help to significantly reduce collisions when placed on the cables.

#### Wind Turbines

Raptors often perch on wind turbine towers and blades, which may lead to collisions. Turbine blades that are easily visible and that discourage perching help to reduce bird collisions.

#### Cars and Trucks

An estimated 50 to 100 million birds are killed by cars and trucks on U.S. highways each year.

Much of the information in this article is reprinted with permission from International Migratory Bird Day, coordinated by the National Fish and Wildlife Foundation and U.S. Fish and Wildlife Service.

## Dear Members and Supporters,

If you're reading *Stewardship News*, you are either a program member or someone who works closely with or supports Audubon International already. We certainly appreciate it, but now we want to ask you a favor.

Our mission reads: "to educate, assist, and inspire millions of people from all walks of life to protect and sustain the land, water, wildlife, and natural resources around them." A critical word in that statement is millions. Our goal is for the sheer weight of your collective environmental actions to lead to a better world. What you're doing through our programs or in support of our mission is terrific...heroic in many cases. But we want millions of others like you, in your community, in your neighborhood, in your line of business, to join in the good work.

So, for the rest of 2005 we have a challenge for you—our Matching Members Challenge. Get other businesses, schools, golf courses, hotels, homes, universities, new developments, neighborhoods, and communities involved with Audubon International. Sign them up! Get them involved! Imagine nearly everyone making every-day decisions that consider water, wildlife, and natural resources. Imagine the positive results that we could achieve. If you want to get involved and join our Matching Member Challenge, contact us. We'll give you materials and support to grow environmental stewardship where you live.

Yours,



**Kevin Fletcher**  
Director of Programs and Administration

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Kapalua Bay Course in Hawaii was the first course to achieve ACSP certification



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## Supporters Help Us Spread the Word

Many thanks are due to numerous colleagues for helping us spread the word about environmental stewardship and our programs.

- We gratefully acknowledge ***Golfdom Magazine*** for generously donating full page advertisement space in issues of the magazine throughout the coming year! Also, we thank ***Golf Business Magazine*** for providing free advertisement space for its May "environment" issue. We thank the staff of EPIC Communications, too, for their creative talents in the development of the advertising copy. Please also note that free copies of our **Greatest Hits of Golf and the Environment CD-ROM** (funded through The Toro Foundation) are available for use and distribution. Contact Jennifer Batza at [jbata@auduboninternational.org](mailto:jbata@auduboninternational.org) or call her at (518)767-9051, extension 12, for more information.
- Collaboration with **GCSAA's Environmental Institute for Golf** will continue for a second year, as Audubon International President Ron Dodson serves on the Environmental Programs committee

and Program Manager Joellen Zeh sits on the Wildlife and Habitat Management Task Group. Thanks again to GCSAA for generously donating booth space on the trade show floor and inviting staff to deliver a number of presentations during the **Golf Industry Show** in Orlando in February.

- On March 9, Sustainable Communities Program Coordinator Peter Bronski traveled to ACSP-Certified **Brookside Country Club** in Pottstown, PA, to conduct a seminar on environmental risk management for area superintendents. The annual seminar, hosted by the **Philadelphia Water Department**, is part of the department's commitment to working cooperatively with golf courses to protect water quality in the Schuylkill River watershed, which supplies drinking water to millions of people in eastern Pennsylvania, including the city of Philadelphia.
- Audubon International President and CEO, Ron Dodson, and Sustainable Communities Program Coordinator Peter Bronski spent the fourth week of March in San Francisco, CA, at the national

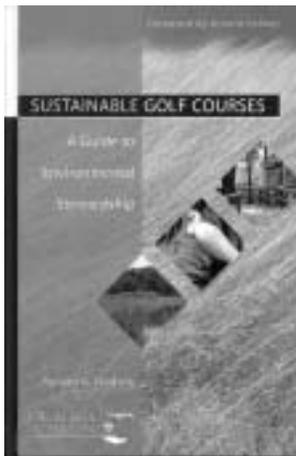
conference of the **American Planning Association**, an international organization of town, city and regional planners and other community planning professionals. Dodson and Bronski co-presented a session focused on Eufaula, AL, and the Sustainable Communities Program.

- Staff Ecologist, Shawn Williams spoke on the ACSP and green maintenance facilities as an honorary speaker at the **5th Annual Atlantic Golf Symposium** in Charlottetown, PEI, Canada. Holland College's Professional Golf Management Program presents the annual event that serves as a practical learning tool for students, local professionals, general managers, superintendents and owners. ●

## Environmental Services Offered in Great Lakes Region

After thirty years as a golf course superintendent and landscape management expert, Peter Leuzinger is now offering a set of fee-based educational and technical services as a field representative for Audubon International in the Great Lakes Region. Services include: on site consultation and advice for ACSP members, consultation on general golf course and landscape management, and public relations assistance in the area of environmental management. To find out more contact: Peter Leuzinger Consulting, Inc., phone: (847)494 2992, or [pleuzinger@auduboninternational.org](mailto:pleuzinger@auduboninternational.org). ●

## Sustainable Golf Courses, A Guide to Environmental Stewardship



**Sustainable Golf Courses, A Guide to Environmental Stewardship**, by Audubon International President Ronald Dodson has been published recently by John Wiley & Sons, Inc. The book is an excellent reference for all those who are involved in planning, developing, and constructing new golf courses, as well as for those who are involved in the management of golf courses once they are built. In his signature style, Dodson covers both the philosophy and practice of sustainable golf course development in easily understood terms, and includes plenty of photos, case studies, and reference materials. The book is available from Audubon International at [www.auduboninternational.org/store](http://www.auduboninternational.org/store). ●

## Clear The Way For Birds

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### Reducing Collisions

#### 1. Investigate.

If you've found dead birds, heard the thud of a bird hitting glass, or noticed a faint white impression of feathers on a window, take a closer look. Go outside for a bird's eye view of your windows and evaluate the situation. Is the glass reflective? Is it transparent, but offering birds a false impression of a passageway through a building? Are feeders too close?

#### 2. Choose a solution.

- ❑ Place bird feeders either very close to (within 3 feet) or far away from buildings (a minimum of 33 feet). Birds cannot build up enough momentum to injure themselves when flying to and from feeders that are very close to buildings. Conversely, when birds take flight quickly from feeders that are further from buildings, they are less likely to collide with windows.
- ❑ Alter the window's appearance.
  - Try hanging a mobile, wind sock, or strips of fabric to the outside of the window.
- Use an attractive window film, such as one that gives the appearance of glass etching or sandblasting to reduce reflections.
- Paint or stencil the window with soap or wax.
- Cover the window with garden protection netting or a screen.
- Hang multiple bird silhouettes on the outside of the window to break up the reflection.

- ❑ Replace standard windows with non-reflective glass, such as stained or frosted glass.
- ❑ Abstain from nighttime lighting, especially in taller office buildings that are not used at night. During peak spring and fall migration, dim or extinguish rooftop display lighting and lobby lights after 11:00 pm.

- ❑ Draw drapes and close blinds, when possible, when window transparency is a problem.

#### 3. Check your success.

Periodically look for dead birds. You may need to try multiple solutions before finding the best one for your situation.

Birds will sometimes appear stunned after striking a window, but will eventually recover and be able to fly again. If you find a bird that has hit a window, gently place it in a cardboard box or paper bag and keep it in a quiet, undisturbed area indoors. Check the bird every 20 minutes or so to see whether it appears to have regained strength and may be ready for release. Once the bird has recovered, release it outside. If the bird is unable to fly, contact a local wildlife rehabilitator for assistance. ●



Songbirds, like the wood thrush, may collide with taller buildings during migration, or strike windows while chasing mates or defending territories during the spring.

When startled by intruders or noise, feeder birds, such as cardinals, finches, and sparrows, take off quickly and may collide with nearby reflective windows.



### Bird Strike vs. "Intentional" Hit...

Each spring, we get many phone calls from people who report that birds are intentionally and repeatedly flying into their windows. This type of bird strike rarely results in death, but it can be annoying and puzzling. This type of intentional strike occurs predominately during spring mating season, when birds are establishing a breeding territory. Birds may attempt to drive off intruders of their own species—even if the intruder is mere reflection of themselves—to keep the invader out of their turf. A reflective window is always to blame for this behavior. Try one of the solutions above for reducing the reflection. The situation generally improves after nesting is underway.

## Bird Strike Resources

**Chicago Bird Collision Monitors (CGCM)**, [www.birdmonitors.net/intro.html](http://www.birdmonitors.net/intro.html), rescues migratory birds injured from striking buildings and works to mitigate the risk of bird-building collisions by educating the public and working with building managers and architects to find solutions.

**Cornell Lab of Ornithology**, [www.birds.cornell.edu/programs/AllAboutBirds/](http://www.birds.cornell.edu/programs/AllAboutBirds/)  
All About Birds is an excellent online resource for identifying and attracting birds. Visit the section "Attracting Birds" and click on "window collisions" for Cornell's tips for reducing bird collisions.

**The Fatal Light Awareness Program (FLAP)**, [www.flap.org](http://www.flap.org), is working to inform Canadians and Americans about the dangers of buildings to migratory birds. Information on its Bird-Friendly Building Program is online. To reduce window reflections, FLAP recommends a window treatment from 3M: *3M™ Scotchcal™ Perforated Window Marking Film 8171, a 4-5 mil vinyl film that adheres to the exterior surface of a window. Thousands of small perforations in this covering allow ample light to pass through the window to the interior, while substantially reducing the window's exterior reflectivity and transparency, the two characteristics that cause birds to collide with windows.* For details, visit the FLAP website.

**International Migratory Bird Day—Saturday, May 14, 2005**, [www.birdday.org/](http://www.birdday.org/), celebrates the incredible journeys of migratory birds between their breeding grounds in North America and their wintering grounds in Mexico, Central, and South America. The Web site offers information about numerous events and provides educational information.

**Daniel Klem, Ph.D., Professor of Ornithology and Conservation Biology at Muhlenberg College in Pennsylvania**, [www.birdscreen.com/KlemCollisions1989.pdf](http://www.birdscreen.com/KlemCollisions1989.pdf), presents research results on bird strikes.

**U.S. Fish and Wildlife Service**, [http://library.fws.gov/Bird\\_Publications/prob.html](http://library.fws.gov/Bird_Publications/prob.html), provides a number of fact sheets on Backyard Bird Problems.

## Florida Sustainable Communities Summit Explores Resource Efficiency in the Built Environment

BY KEVIN FLETCHER

**A**udubon International and the University of Florida Program for Resource Efficient Communities co-hosted the Florida Sustainable Communities Summit at Walt Disney World on February 8, 2005. The event brought together a variety of stakeholders—including more than 100 municipal planners, developers, architects, builders, natural resource managers, and representatives from regulatory agencies, universities, and conservation organizations—to strengthen efforts to foster resource efficient development in Florida.

"Florida's explosive growth is putting pressure not only on the environment, but on community services, such as transportation, schools, and affordable housing," says Ron Dodson, Audubon International President and CEO. "The summit gave us the opportunity to network with each other and explore ways to build upon successful efforts to build better in Florida."

The day-long summit provided opportunities to discuss critical resource efficiency issues associated with site considerations, design strategies, construction practices, and long-term management of new development projects in Florida. Four panel discussions also showcased a number of success stories in these four topic areas. Results from the Summit will be posted for public review on both the Audubon International and University of Florida Program for Resource Efficient Communities websites and distributed to other leaders throughout the state.

"Though the idea of sustainability has become widely known, many important stakeholders in the creation of Florida's built environment still aren't sure how to successfully integrate its principles into their business plans," says Hal Knowles,



The summit provided a platform for some of Florida's forward-thinking leaders to share their experiences in pushing the envelope of resource efficiency in the built environment.

Coordinator, Program for Resource Efficient Communities. "The summit panelists offered a picture of how Florida's leaders can begin to shift the sustainability paradigm from theoretical to practical and profitable."

The summit was held at Walt Disney World's Osprey Ridge and Eagle Pines Golf Courses, which generously donated meeting space. Photographs of wildlife and natural areas on the golf courses taken by Superintendent Bob Karnes graced the walls and provided the perfect back drop for the meeting. All five of Disney's golf courses are Certified Audubon Cooperative Sanctuaries. The event was generously sponsored by WCI Communities, Inc., Harmony, FL (Birchwood Acres, LLC), and Pulte Homes, with additional support from The Bonita Bay Group and The Old Collier Golf Club.

For more information or to request summit proceedings directly, contact Jean Mackay at Audubon International at [jmackay@audubon-intl.org](mailto:jmackay@audubon-intl.org). ●

# Still on Top

BY JEAN MACKAY AND  
SHAWN WILLIAMS

Shortly after the first golf courses enrolled in the Audubon Cooperative Sanctuary Program for Golf Courses (ACSP) in 1991, a number of them began vying to be the first to achieve certification. In 1993, Kapalua Bay Course in Hawaii was honored with that distinction after sending us binders full of photographic and written documentation of its environmental efforts. Kapalua was quickly followed by courses from around the country whose superintendents had likewise set their sights on being among the cream of the crop.

Now, more than a decade later, we asked our first 10 certified courses to share their insights about participating in the program, achieving certification, and staying on course with good environmental stewardship. Their responses shed light on the extraordinary contributions they have made to golf and the environment.

## A Catalyst for Change

Certification was a laudable accomplishment for our first 10, yet, in many ways, it was also only a starting point for environmental change. That was part of the motivation for getting certified for P. Stan George, CGCS of Prairie Dunes Country Club. “I felt it was important to pursue certification so that members and others would recognize and appreciate the unique prairie environment that has existed here for eons,” recalls George.

Over the years, Prairie Dunes had been gradually invaded by woody plants and was on a path to becoming *Honeylocust Dunes*, explains George. He used the ACSP as a springboard to launch a major prairie restoration project involving the use of fire as a management tool.

“Education, proceeding slowly, garnering results, and acting with political acumen were essential to the success of the program,” says George. “Our greatest accomplishment has been garnering recognition from the membership regarding the special



Like all of the first ten certified courses, Semiahmoo Golf and Country Club has seen its efforts grow and mature over the years.

property we have here. More than half of the course is in a native prairie state now, with much of it undergoing prairie restoration. Since getting certified in 1993, our stewardship efforts have grown to include club-owned native areas outside the golf course proper, and significantly increased removal of woody vegetation in our tall grass prairie environment.”

Vance Much, superintendent at Semiahmoo Golf and Country Club, shared a similar experience: “Our efforts have grown in many ways since becoming certified. Not only have we continued to maintain and even add to our wildlife areas, we have also involved many of our members with homes on the golf course. Many have consulted with me about fertilizer and chemical use, mowing heights, moss control, and other landscaping concerns. They have also established feeding stations and birdbaths in their yards. It has been truly encouraging to see people take such an active part in our program.”

## Environmental Champions

Certification often takes a champion—someone who says *we can do it* and then follows through. The people who led our first 10 certified courses proved to be nothing short of champions of the environment, as well as staunch advocates for the ACSP.

Over the years, several of the superintendents moved on to other golf courses, where they promptly began working toward another certification. Tony Radzki (Cantigny, IL) brought the ACSP to two subsequent golf courses and helped to spearhead

the program at a local school. Peter Leuzinger (St. Charles, IL) championed certification at the Ivanhoe Club in Illinois, pioneered the course’s participation in the Audubon Signature Program during a major course renovation, and currently staffs Audubon International’s Midwest Field Office. And Greg Plotner (Tampa Palms, FL) carried his Audubon expertise into a management position at IGM/MGGI, where he has been instrumental in helping the company’s courses adopt the ACSP.

Other superintendents have stayed on and kept the ball rolling at the same course for more than a decade. Since achieving certification in 1993 for the Village Links of Glen Ellyn, Assistant Superintendent Chris Pekarek has specialized in community outreach. “Initially public outreach served as a way to let people know how the golf course was operated, but later it expanded to involve residents in similar stewardship activities,” says Pekarek. Pekarek spearheaded a local environmental program styled after the ACSP and today a remarkable 385 residents have registered. In addition, the golf course has adopted six elementary schools and helped raise funds to benefit their conservation efforts.

Likewise, consistent involvement has paid environmental dividends for Hole-in-the-Wall Golf Club, organized by ACSP Chair and club member Fred Yarrington. “We have changed the environment of the Hole-in-the-Wall golf course dramatically since joining the ACSP,” shares Yarrington. “By steady effort, we have eliminated

## The First 10 Golf Courses to Achieve ACSP Certification

1. Kapalua Land Company, Lahaina, HI
2. St. Charles Country Club, St. Charles, IL
3. Prairie Dunes Country Club, Hutchinson, KS
4. Aurora Country Club, Aurora, IL
5. Tampa Palms Golf & Country Club, Tampa, FL
6. Applewood Golf Course, Golden, CO
7. Village Links of Glen Ellyn, Glen Ellyn, IL
8. Cantigny Golf Club, Wheaton, IL
9. Semiahmoo Golf & Country Club, Blaine, WA
10. Hole-in-the-Wall Golf Club, Naples, FL

most of the original turf areas which were not in play, as well as reduced approximately 10 percent of the maintained turf area which formerly was treated as in play. This resulted in a substantial reduction in materials, labor, and irrigation water formerly used to maintain the course...and made the property much friendlier to wildlife.”

### Dynamic and Lasting Stewardship

A lot has changed since the ACSP began in 1991—the program itself has undergone several revisions, the golf industry has made significant strides in its commitment to addressing environmental concerns, and, of course, the leadership at these courses has shifted as board members and staff have come and gone. Yet each course has remained committed to

good environmental management.

“What we have tried to accomplish since becoming certified is maintaining and enhancing what we have already done, while continuing to promote the program both internally amongst our membership and externally throughout our community,” shares John Gurke, CGCS, who has been involved in the ACSP at Aurora Country Club since the beginning. The program’s emphasis on continuous improvement helps superintendents focus their efforts where they are needed most each year.

“One of the best features of the ACSP is that you can choose your level of participation,” acknowledges Village Links’ Pekarek. “You may only have an interest in setting up a few nesting boxes or creating a few native perennial landscape beds to add beauty to your course. Whatever



ACSP projects fit each course’s budget, interests, staffing, and conservation priorities. This nest box is a natural addition to taller grasses and wildflowers at Aurora Country Club in Illinois.

you decide to do, you do it the way you want it done and on your timetable.”

“Participation in the ACSP is really an educational process,” says Yarrington, “and certification is a technique to enable those responsible for care and maintenance of their golf course to insure they perform their task in the most effective way to protect and improve the environment for their property.” Audubon International salutes its first ten Certified Audubon Cooperative Sanctuary golf courses and the 525 courses that have followed them for doing just that. We hope the program continues to provide guidance for a growing and lasting stewardship of the environment. ●

Superintendents from certified ACSP courses sow the seeds of good environmental stewardship through their generous and varied outreach efforts. Ben Franklin Elementary School in Illinois installed a butterfly garden, thanks to support from Village Links of Glen Ellyn staff.



# Going the Extra Mile

## WCI's Hammock Bay Golf & Country Club Meets Audubon's Highest Standards

BY NANCY RICHARDSON

A trip to Florida is not complete without traveling to the Ten Thousand Islands area south of Marco Island and Naples along the Gulf Coast. Here, the land gradually merges into the sea and fresh and salt waters mingle in hundreds of small bays and estuaries, dominated by mangrove swamps. Here, you'll find Florida's latest Certified Gold Audubon Signature Sanctuary: WCI's Hammock Bay Golf & Country Club.

Located southwest of the last exit from I-75 before entering the Big Cypress National Preserve, Hammock Bay Golf & Country Club now occupies the site of the former Marco Shores Golf Club. The 237-acre project lies on a filled and developed island, bordered by mangrove preserves and McIlvane Bay, and proximate to the Rookery Bay National Estuarine Research Reserve.

With so much salt water surrounding the property, it's no surprise that conserving and protecting fresh water are chief priorities for Hammock Bay. The Peter Jacobsen/Jim Hardy-designed 18-hole golf course is the first in Florida to use SeaDwarf Seashore Paspalum on greens, tees, and fairways. The new variety of turfgrass performs well with fresh or

brackish irrigation water. The course uses both effluent wastewater and salt water for irrigation. The salt-tolerant SeaDwarf also requires 50 percent less water and 75 percent less nitrogen than traditional Bermuda grasses.

An additional priority for the development team at Hammock Bay was to design the project's landscaping to fit the ecology of the region. Golf course plantings are 100 percent native vegetation and include seagrape, beach sunflower, railroad vine, sea oats, and *Spartina* grasses. The design added 23 acres of new lakes and wetlands, the majority of which are



Sensitive habitats are protected throughout Hammock Bay Golf & Country Club.

designed to treat storm water runoff from the golf course, as well as from a portion of the new residential areas. WCI also transplanted approximately 800 sabal palms from its Venetian community in Venice, Florida, to enhance the landscaping.

Hammock Bay is the fifth WCI project to be certified through the Audubon Gold Signature Program. We salute their continued commitment to championing green building in Florida. ●

### RECERTIFICATION CORNER

## Shark's Tooth Golf Club, Panama City, FL

Certified 2002, Recertified 2004

Shark's Tooth Golf Club is a Greg Norman-designed 18 hole private golf course located within a 734-acre gated community called Wild Heron, located west of Panama City Beach. The southern boundary of the property is Lake Powell, a 737-acre *Outstanding Florida Water* recognized as the largest coastal dune lake in the state. Since achieving certification, Shark's Tooth has continued to augment native plantings and naturalized areas that help to preserve natural beauty and wildlife habitats along the lake.

Maintenance staff harvest seeds from mature native plants, and transplant both seeds and seedlings into naturalized areas. To facilitate this effort, the crew created a 10,000 square foot nursery to store and care for native plants for future use. The results are apparent in the lush natives at nearly every golf hole and the long list of birds, mammals, reptiles, and amphibians that have been observed on-site. ●

An abundance of wetlands, naturalized areas, and corridors on the Shark's Tooth golf course help to protect water quality and provide wildlife habitat along Lake Powell.



Eel grass, salt marsh cordgrass, and black needle rush are among the few salt-tolerant plant species that were appropriate for use along the edge of Hammock Bay's brackish lakes, where salinity levels are relatively high.



# Cadiz, Spain

BY RONALD DODSON

President and CEO Ron Dodson travels extensively on behalf of Audubon International and its programs. His reports from the field inspired our first newsletter, *Field Notes*, and will now resume as an occasional column in *Stewardship News*.

Along the southern coast of Spain in a region called Andalucia, you will find what is thought by some to be the oldest city in Europe. Cadiz dates back to 1100 BC and stands on a peninsula jutting out into a bay, almost entirely surrounded by water. From the port of Cadiz, the Phoenicians traded Baltic amber and British tin, as well as Spanish silver, and Cadiz subsequently became a naval base for the Romans before fading into obscurity until 1262, when it was taken from the Muslims by Alfonso X. Christopher Columbus sailed from the port of Cadiz on his second and fourth voyages, precipitating a “renaissance” for Cadiz that coincided with the discovery of America. Over the years Cadiz has grown into one of the wealthiest and most cosmopolitan cities in Spain.

In recent years, golf has played a key role in the region and the area is now known as the “Golden Triangle of Golf.” Most notably, Valderrama Golf Club, which is the number one rated golf course in Europe, host to many European PGA Tour events and the 1997 Ryder Cup event, as well as a certified member of the ACSP for Golf Courses, catapulted the area to the pinnacle of golf destinations. Behind that success is Jamie Ortiz Patiño, owner of Valderrama, who was an early supporter of merging the needs of golf and environment.

In 1999, Mr. Patiño hosted the first golf and environment summit held in Europe, out of which came The Valderrama Declaration. The Declaration sets forth golf’s tremen-

dous opportunity and responsibility to “play a positive role in molding the attitudes and goals of the world in which we live and to set an example in environmental stewardship.” It was signed by the United States Golf Association, European Golf Association, Royal & Ancient Golf Club of St. Andrews, International Olympic Committee, World Wide Fund for Nature, United Nations Environment Program, and the European Commission.

Now, Mr. Patiño has taken another step forward by registering several hundred acres of farm and pasture land in the Audubon International Gold Signature Program. With guidance from Audubon International, Patiño and Golf Course Architect Roger Rulewich plan to design, construct, and manage Valderrama Valley Golf and Spa as an environmental “state of the art” facility. The proposed project is still in the permitting phase, but planning is well underway not only to create another outstanding golf course, but also to preserve some significant ecological and historic features of the area.

The property includes a diversity of habitat types and evidence of past human uses. To me, however, one location on the property was best of all. I parked the rental car and headed directly to an intriguing grove of trees that I saw in the distance. The trees were olives that were many hundreds of years old and their twisted and dark nature cast somewhat of a spell on the area. Jimmy Patino explained that this particular area was a central gathering place for the now long gone agricultural activities on the property.

Just beyond the grove I spotted a large stone wall and a gate and decided to investigate. I pushed through the gate to discover a circular ring, concrete wall, and what appeared to be a group of broken down bleachers: A bull fighting rink gone silent long ago. Jimmy and I agreed that this area must be protected and restored to become a central interpretive area for the property. With the habitat areas, golf, ancient olive trees, and bull fighting rink all in close proximity to each other, a



(Left to right) Roger Rulewich (golf course architect), Bud Smart (Director, Audubon International Environmental Planning Department), and David Fleury (Design Associate) check routing plans for Valderrama Valley Golf and Spa in Spain.

person could literally walk through a living natural and human history of the entire region. When and if the project moves forward this little spot will be a very special place indeed.

In the words of the Valderrama Declaration, “By using science as a foundation for research and education programmes in the areas of turfgrass management, sustainable development and environmental protection, it has been possible to develop initiatives and partnerships for the benefit of golf, the environment, and people.” Pending permitting, this project will become a showcase and laboratory to document Best Management Practices and will demonstrate that degraded land can be developed in a manner that will help to restore a functioning system for use by people and wildlife. ●

# Pedal Power

BY PETER BRONSKI

## *Four miles.*

In today's jet-setting, automobile-dominated world, it doesn't sound like much. But as I've discovered, big things can come from small distances.

Several times per week, I travel from Audubon International's Rocky Mountain Field Office to the U.S. Post Office in downtown Boulder to check the P.O. Box and process outgoing mail. The trip—almost exactly four miles each way—has become a regular part of my mid-day routine. A few months ago, however, I made a conscious decision to alter that routine: instead of driving to the post office, I'd ride my bicycle.

We get in our cars by default, without even thinking. But there's a whole other world out there—one that is better for the environment, your quality of life, and your wallet. I know it's been that way for me. The simple decision to bike instead of drive has had a profoundly positive impact in all three areas of my life.

By my conservative estimation, I bike the eight miles roundtrip four days per week, four weeks per month, six months out of the year. That translates to 768 miles that I don't drive my Jeep Cherokee each year. The Jeep averages twenty miles to the gallon, so I've reduced my fossil fuel consumption by more than 38 gallons, saving more than \$74 in gas and reducing my carbon dioxide emissions by more than 800 pounds—almost half a ton.

And as I said, my quality of life has also improved. I spend less time on the roads in stressful traffic, and more time bicycling on greenways, admiring views of the Rocky Mountains. You'd be right to wonder how much traffic I could actually sit in during the four miles each way, and how much time it really takes. In fact, by the shortest driving distance, I pass through no fewer than eleven traffic lights, and depending on traffic and the timing of the lights, it takes me anywhere from ten to

fifteen minutes to drive each way. But not only do I spend less time in traffic; I'm also one less car on the road causing traffic and congestion for others.

My health has improved, too. I've lost weight—nearly ten pounds since I started—lowered my blood pressure, and improved my overall fitness and cardiovascular health. And I'm not alone. According to *Bicycling Magazine*, new bicycle commuters can expect to lose thirteen pounds during their first year of bicycle commuting.

Admittedly, I'm fortunate: I have the luxury of living in a community that is extremely pedestrian and bike friendly, and I'm young and healthy. Friends and colleagues have pointed out a number of significant obstacles to trading four wheels for two: health restrictions, dropping off kids on the way to and from work; concerns about safety in areas that don't have trails but do have busy roads; the added time it may take to ride; the need for shower facilities; the sheer mileage that might be involved. But even if you face one or more of these road blocks there still may be opportunities to take advantage of biking.

**Consider this:** According to the League of American Bicyclists and U.S. Census statistics, 22% of all motor vehicle trips are less than one mile, and 50% of the working population commutes less than five miles each way. Are there times when you could make some of your shorter trips by bike?

If you're a superintendent who lives near your golf course, why not leave the pick-up truck at the maintenance shop and ride to and from the course? If you're a parent, can you designate one day per week to bike to school with your children? If you live farther from the office, are there opportunities to ride to a local Park-and-Ride public transportation hub, and ride the bus or train from there? When running local errands, visiting a friend in the neighborhood, or heading out to the post office, drug store, or to pick up a few small groceries, ask yourself: is driving the only way? And if you live some-



where that is not especially pedestrian and bike friendly, why not get active with one of the numerous organizations working to make communities better for bicyclists and pedestrians?

Start by making a commitment, however small, to bike instead of drive. If only for one trip per week or one day per month, take advantage of bicycling's incredible pedal power. May, as National Bike Month, is the perfect time to start. May 16-20 is National Bike to Work Week, and Friday May 20 is National Bike to Work Day. Get active today! ●

## Resources

- Bike to Work 2005 ([www.bike-to-work.com](http://www.bike-to-work.com))
- National Bike to Work Month ([www.bikemonth.com](http://www.bikemonth.com))
- League of American Bicyclists ([www.bikeleague.org](http://www.bikeleague.org))
- National Center for Bicycling and Walking ([www.bikewalk.org](http://www.bikewalk.org))
- BikeTown, USA ([www.bicycling.com/biketown](http://www.bicycling.com/biketown))
- Yahoo Groups Discussion Forum (<http://sports.groups.yahoo.com/group/bicyclecommuting/>)
- Environmental Defense's Tailpipe Tally ([www.environmentaldefense.org/tailpipetally](http://www.environmentaldefense.org/tailpipetally)): Instead of inputting your annual mileage, plug in how many miles you biked instead of drove to compute your reduction in carbon dioxide emissions.

## AUDUBON COOPERATIVE SANCTUARY PROGRAM

### NEW MEMBERS Golf Program

#### International—Canada

Gorge Vale Golf Club, Victoria, BC  
Chedoke Municipal Golf Course,  
Hamilton, Ontario  
Dundas Valley Golf and Curling Club,  
Dundas, Ontario  
Kawartha Golf and Country Club,  
Peterborough, Ontario  
Rock Chapel Golf Centre, Dundas, Ontario

#### California

Baywood Golf & Country Club, Arcata  
Furnace Creek, Death Valley  
Mountain Springs Golf Course, Sonora  
Wildhorse Golf Club, Davis

#### Florida

Bay Palms Golf Complex, Mac Dill AFB  
Heron Creek Golf & Country Club,  
North Port  
Isleworth, Windemere  
Palmetto Pines Country Club, Cape Coral

#### Idaho

Tamarack Resort, Donnelly

#### Illinois

Onwentsia Club, Lake Forest  
Stone Creek Golf Club, Camargo

#### Maine

Highland Green Golf Club, Topsham  
Val Halla Golf and Recreation Center,  
Cumberland

#### Massachusetts

Essex County Club, Manchester  
Waverly Oaks Golf Course, Plymouth

#### Minnesota

Somerby Golf Club, Byron

#### New Jersey

Cranbury Golf Club, West Windsor  
Neshanic Valley Golf Course, Neshanic Station  
Riverton Country Club, Cinnaminson

#### New York

Garden City Country Club, Garden City  
Green Lakes State Park Golf Course, Fayetteville

#### Ohio

Piqua Country Club, Piqua  
Red Hawk Run Golf Course, Findlay

#### Oklahoma

Mohawk Golf Course, Tulsa  
Page Belcher Golf, Tulsa

#### Pennsylvania

Golf Club at Felicita, Harrisburg  
Makefield Highlands Golf Club, Yardley  
Westwood Golf Club, West Mifflin

#### Tennessee

Ridges Golf and Country Club,  
Jonesborough  
Swan Lake Golf Course—City of Clarksville,  
Clarksville  
T.O. Fuller Golf Course, Memphis

#### Texas

Rawls Golf Course—Texas Tech University,  
Lubbock

#### Virginia

Pohick Bay Golf Course, Lorton

#### Washington

Interbay Golf, Seattle

#### Wisconsin

Big Foot Country Club, Fontana

### Business Program

#### International

Rotary Park, Aylmer, Ontario, Canada

#### South Carolina

The Sanctuary at Kiawah Island, Kiawah  
Island

#### Texas

Houstonian Hotel, Club and Spa, Houston

#### Virginia

Virginia Wesleyan College, Norfolk

### School Program

#### Florida

Bay Meadows Elementary, Orlando

#### Michigan

Brandywine Elementary, Niles

### RECENTLY CERTIFIED AUDUBON COOPERATIVE SANCTUARIES

Alta Sierra Golf & Country Club, Grass  
Valley, CA

Card Sound Golf Club, Key Largo, FL

Cordova Bay Golf Course, Victoria, BC

Country Club of Ithaca, Ithaca, NY

Dairy Creek Golf Course, San Luis Obispo, CA

Green Valley Ranch Golf Club, Denver, CO

Jones Park Golf Course, Cedar Rapids, IA

Lake Hickory Country Club, Hickory, NC

Little River Inn Golf & Tennis, Little River, CA

Meadow Club, Fairfax, CA

Metropolitan Golf Links, Oakland, CA

Out Door Resort Orlando, Howey-In-

The-Hills, FL

Sonnenalp Golf Club, Edwards, CO

The Homestead, Lakewood, CO

Warner Springs Ranch, Warner Springs, CO

### RECERTIFIED AUDUBON COOPERATIVE SANCTUARIES

#### Certified for 10 Years or More

Chester Valley Golf Club, Malvern, PA

Fowler's Mill Golf Course, Chesterland, OH

Oakdale Golf and Country Club,  
Downsview, Ontario, Canada

Oregon Golf Club, West Linn, OR

Salishan Spa and Golf Resort, Gleneden  
Beach, OR

TPC at Southwind, Memphis, TN

#### Certified for Five Years or More

Amelia Island Plantation, Amelia Island, FL

Blue Heron Pines Golf Club, Cologne, NJ

Blue Hills Country Club, Kansas City, MO

Chenal Country Club, Little Rock, AR

Fawn Lake Country Club, Spotsylvania, VA

Founders Club at St. James Plantation,  
Southport, NC

Glen Annie Golf Club, Santa Barbara, CA

The Greenbrier Resort, White Sulphur  
Springs, WV

Greenwood Hills Country Club, Wausau, WI

Griffin Industries (Butler), Butler, KY

Griffin Industries (Cold Spring Corporate  
Office), Cold Spring, KY

Griffin Industries (Ellenwood), Ellenwood, GA  
Griffin Industries (Hampton), Hampton, FL  
Griffin Industries (Holden), Holden, LA  
Griffin Industries (Russellville), Russellville, KY  
Griffin Industries (Tampa), Tampa, FL  
Griffin Industries (Union City), Union City, TN  
Harbour Ridge Yacht & Country Club,  
Palm City, FL

Holly Hills Country Club, Ijamsville, MD

IGM-Willow Run Golf Course, Pewaukee, WI

Ironwood Golf Course, Gainesville, FL

Leatherstocking Golf Course,  
Cooperstown, NY

Legacy Golf Course, Springfield, TN

Members Club at St. James Plantation,  
Southport, NC

Mesquite Grove Golf Course, Dyess AFB, TX

Old Baldy Club, Saratoga, NY

Old Brockway Golf Course, Kings Beach, CA

Olympia Fields Country Club, Olympia  
Fields, IL

Players Club at St. James Plantation,  
Southport, NC

Port Ludlow Golf Club, Port Ludlow, WA

Roselawn Cemetery Association, Pueblo, CO

Sandy Hollow Golf Course, Rockford, IL

Silver Lake Country Club, Orland Park, IL

St. Thomas Golf and Country Club, St.  
Thomas, Ontario, Canada

Tiara Rado Golf Course, Grand Junction, CO

The Timbers at Troy Golf Club, Elkridge, MD

TPC at Eagle Trace, Coral Springs, FL

TPC at Snoqualmie Ridge, Snoqualmie, WA

TPC of Tampa Bay, Lutz, FL

White Haven Memorial Park, Pittsford, NY

Winding River Golf Course, Indianapolis, IN

Windstar Country Club, Naples, FL

**Certified for Two Years or More**

Commonwealth National Golf Club,  
Horsham, PA

Crystal Lake Golf Club, Lakeville, MN

Griffin Industries (Newberry), Newberry, IN

Heritage Bluffs Public Golf Club,  
Channahon, IL

IGM-Widow's Walk Golf Course,  
Scituate, MA

Itasca Country Club, Itasca, IL

Jackson Park Golf Course, Chicago, IL

Jester Park Golf Course, Granger, IA

Kingwood Country Club, Kingwood, TX

Lethbridge Country Club, Lethbridge,  
Alberta, CAN

The Moorings Country Club, Naples, FL

Pasatiempo Golf Club, Santa Cruz, CA

Tan Tara Golf Club, North Tonawanda, NY

Twin Pines Municipal Golf Course, Cedar  
Rapids, IA

Valley Country Club, Aurora, CO

**AUDUBON SIGNATURE PROGRAM**

### RECERTIFIED SIGNATURE SANCTUARIES

The Club at TwinEagles, Naples, FL

*certified since 2002*

Collier's Reserve, Naples, FL

*certified since 1994*

WCI Evergrene, Bonita Springs, FL

*certified since 2003*

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## AUDUBON GREEN LEAF ECO-RATING PROGRAM FOR HOTELS

### NEW MEMBERS

Ainsworth Hot Springs Resort, Ainsworth Hot Springs, BC  
 Canad Inns–Brandon, Brandon, MB  
 Canad Inns Portage la Prairie, Portage la Prairie, MB  
 Chimo Hotel, Ottawa, ON  
 Clarion Hotel & Conference Centre, Gatineau, QC  
 Couples Resort Inc., Whitney, ON  
 Hotel Sofitel Miami, Miami, FL  
 Hotel Sofitel San Francisco, San Francisco, CA  
 Inn on the Cove & Spa, Saint John, NB  
 Inn at the Forks, Winnipeg, MB  
 The Intercontinental Toronto Centre, Toronto, ON  
 Poets Cove Resort & Spa, South Pender Island, BC  
 Ramada Plaza, Moncton, NB  
 Sheraton Suites Calgary Eau Clair, Calgary, AB  
 Silver Dart Lodge, Baddeck, NS  
 Silver Fox Inn, Summerside, PEI  
 The Tundra Inn, Churchill, MB  
 Walper Terrace Hotel, Kitchener, ON

### NEWLY ECO-RATED HOTELS

Hotel Novotel New York, New York, NY ●●●●●  
 Hotel Sofitel Houston, Houston, TX ●●●●●  
 Hotel Sofitel Lafayette Square, Washington DC ●●●●●  
 Hotel Sofitel Los Angeles, Los Angeles, CA ●●●●●  
 Hotel Sofitel Minneapolis, Minneapolis, MN ●●●●●  
 Hotel Sofitel New York, New York, NY ●●●●●  
 Hotel Sofitel Philadelphia, Philadelphia, PA ●●●●●  
 Mount Engadine Lodge Ltd., Calgary, AB ●●●●●

## Stewardship News

Audubon International publishes *Stewardship News* six times a year. Inquiries, contributions, or letters to the editor should be addressed to:

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**Layout and Design:** 2k Design, Clifton Park, NY

**Printing:** Benchmark Printing, Schenectady, NY

Audubon International is a non-profit environmental organization dedicated to fostering more sustainable human and natural communities through research, education, and conservation assistance. Programs seek to educate, assist, and inspire millions of people from all walks of life to protect and sustain the land, water, wildlife, and natural resources around them. Funding is provided by memberships, donations, and program sponsorship. The ACSS Golf Program is sponsored by The United States Golf Association.

*The newsletter is printed on recycled paper.*

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