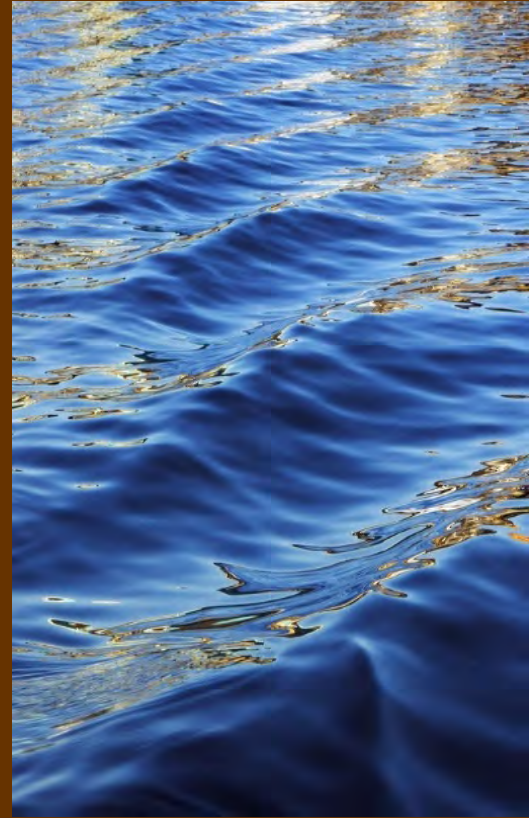




# Beyond the Links: Using Golf Courses for Education and Outreach

Joellen Lampman,  
School and Turfgrass IPM  
Extension Support  
Specialist Candidate



# Why Golf Courses?

Why do we have so many golf courses?

Why do we have so many golf courses?

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Why do we have so many golf courses?

Why do we have so many golf courses?

Why do we have so many golf courses?

# Why Golf Courses?

- This?



# Why Golf Courses?

- Or this?



The Golf Center of Palm Desert, CA

# Why Golf Courses?

- When carefully constructed and managed, golf courses can be successfully blended with the natural environment to preserve natural habitat and provide a community asset.



Harbor Links Golf Course, NY

# Why Golf Courses?

1. Golf has specific environmental issues and opportunities that are shared with other developed properties.
2. Many individuals look at golf courses as an ideal landscape.



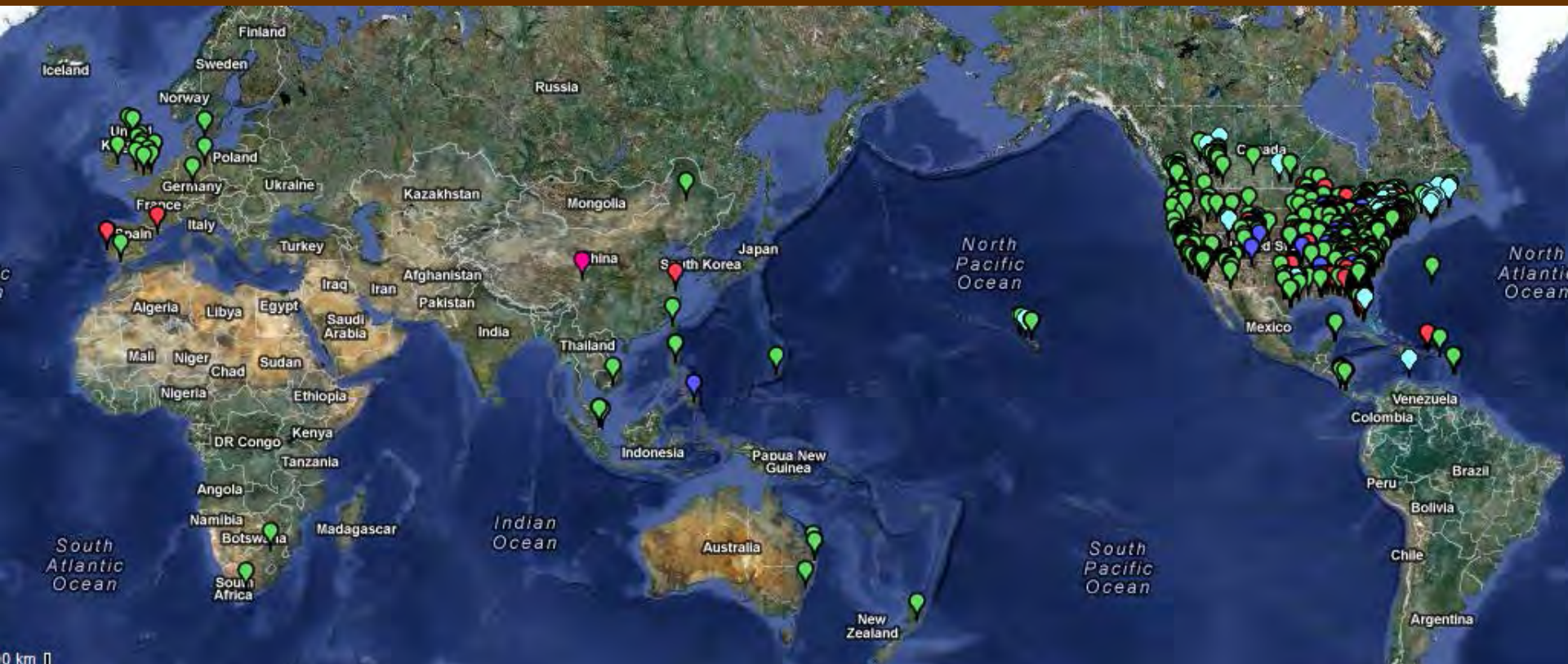
# Why Golf Courses?

- They are destinations.



# The Outreach Possibilities

- Over 2000 Golf Courses in Environmental Programs
- Over 900 Certified Golf Courses



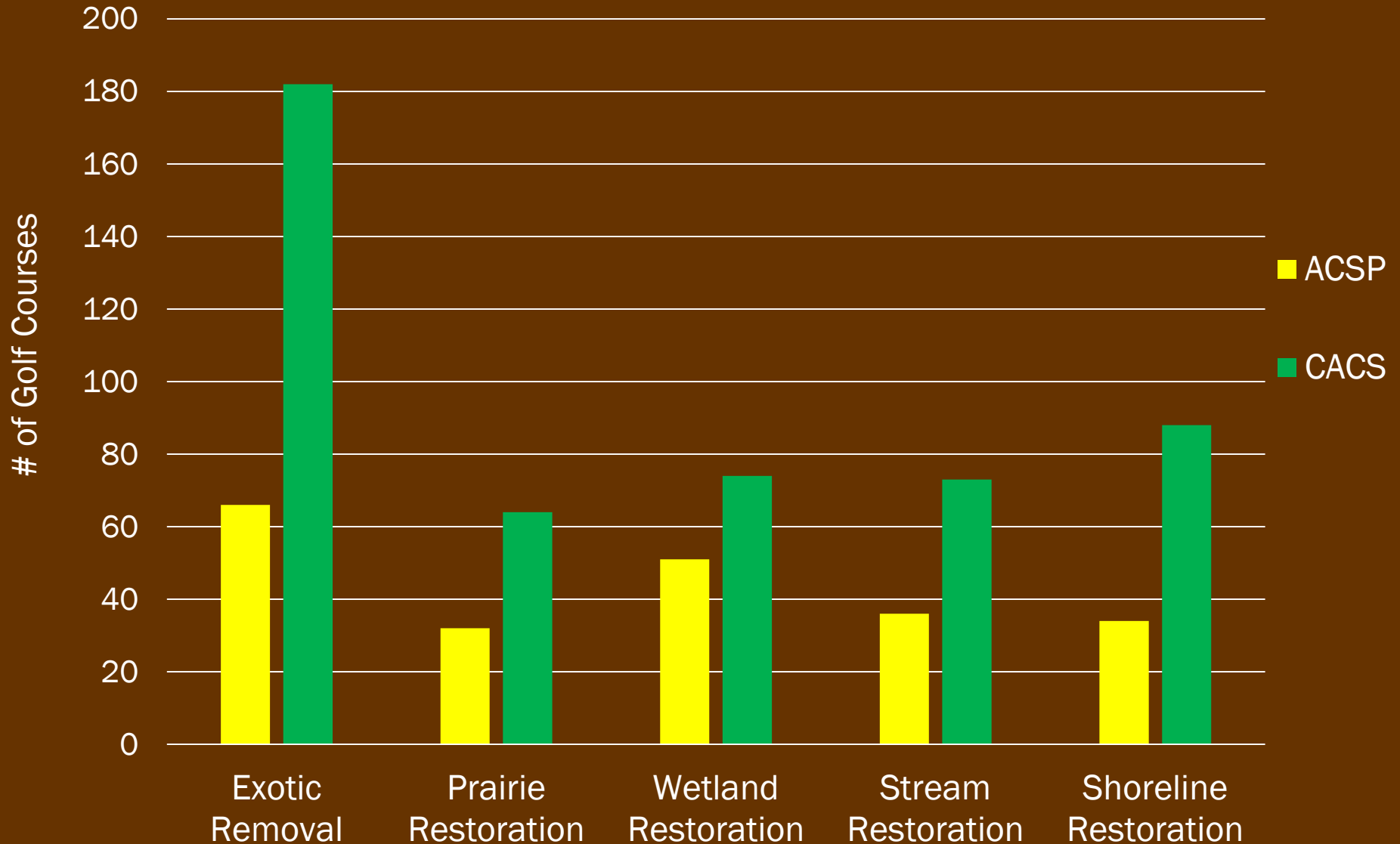
# Six Environmental Focus Areas

- Environmental Planning
- Wildlife and Habitat Management
- Chemical Use Reduction and Safety
- Water Conservation
- Water Quality Management
- Outreach and Education

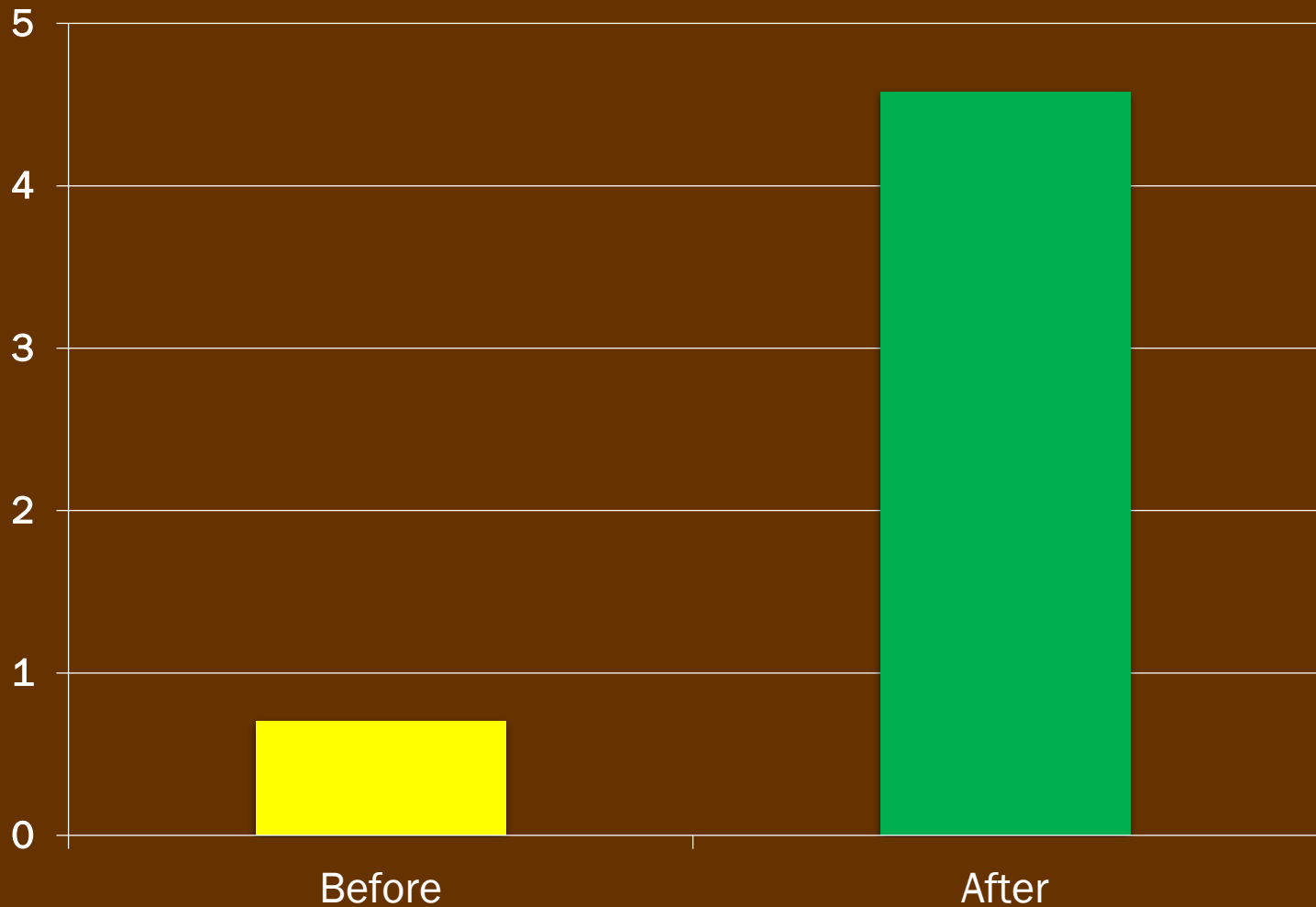


Congressional Country Club, MD

# Results: Enhanced Wildlife Habitat

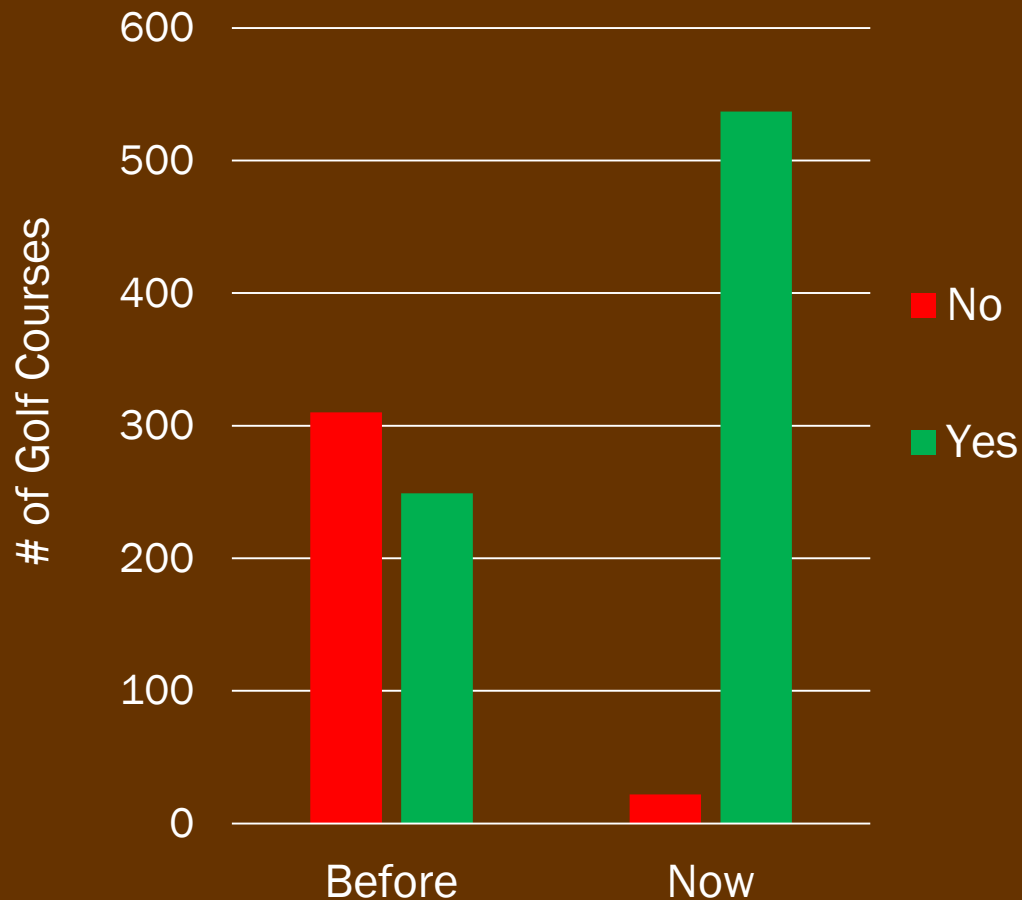


## Results: Environmental staff training sessions conducted per year



# Results: Improved IPM Implementation

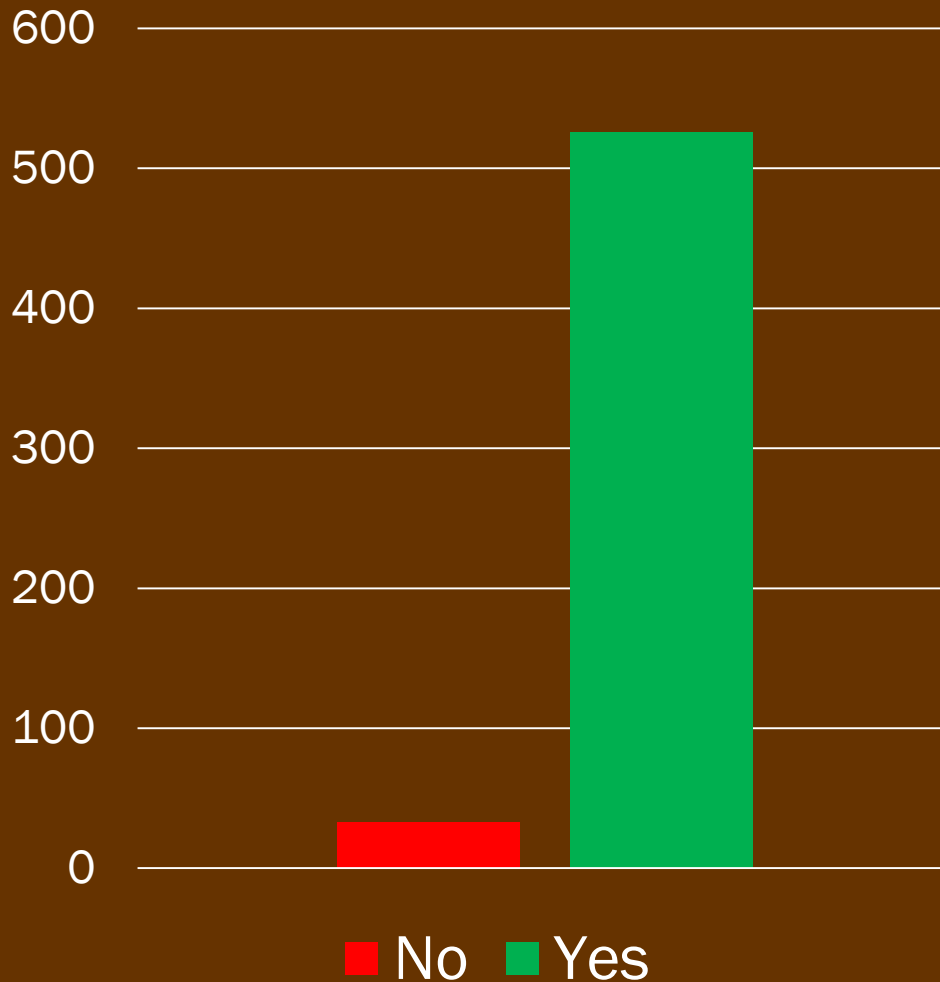
## Transitioning to Lower Toxicity Pesticides



Colonial Acres Golf Course,  
Glenmont

# Results: Improved IPM Implementation

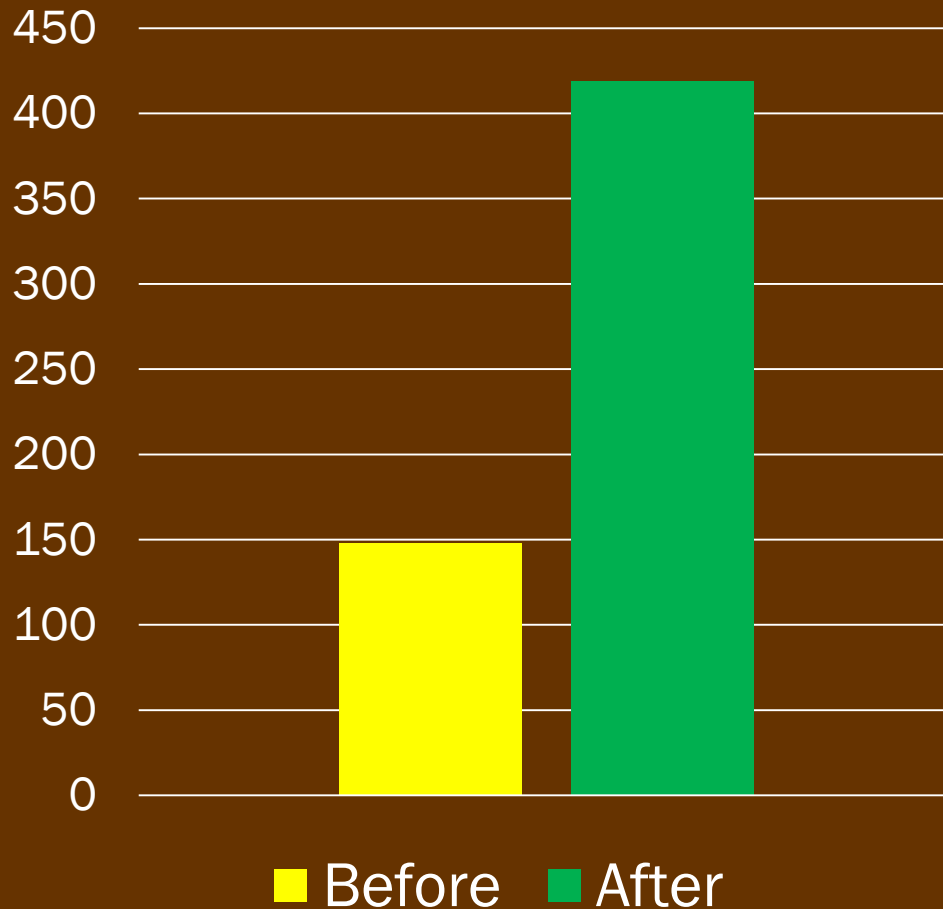
## Reduced Pesticide Use



Manually removing crabgrass at Colonial Acres Golf Course, NY

# Results: Improved Best Management Practices

Shoreline Turfgrass Mowed  
at 3" or more



Grand Harbor Golf Club, FL

## Results: Environmental Outcomes

- 69% decreased water usage (average savings: 1.9 million gallons/year/course)
- 75% reduced pesticide costs
- 86% increased efforts to monitor water quality
- 89% emphasize native plants when landscaping as a result of ACSP participation



Butterflyweed and yarrow at  
Bethpage State Park, NY

# Outreach and Education

- Communicate Environmental Commitment
- Educate Others
- Provide Volunteer Opportunities
- Use Community Resources



Rockland Country Club, NY

# Outreach and Education

- Communicate Environmental Commitment
- Educate Others
- Provide Volunteer Opportunities
- **Use Community Resources**



Rockland Country Club, NY

# Community Resources

## Resource Advisory Group

- Provide expert advice
- Assist with projects
- Recruit volunteers
- Drum up support and publicity
- Solicit sponsorships and donations



# Outreach and Education

- 500+ Conservation Organizations
- Site Visits and Tours



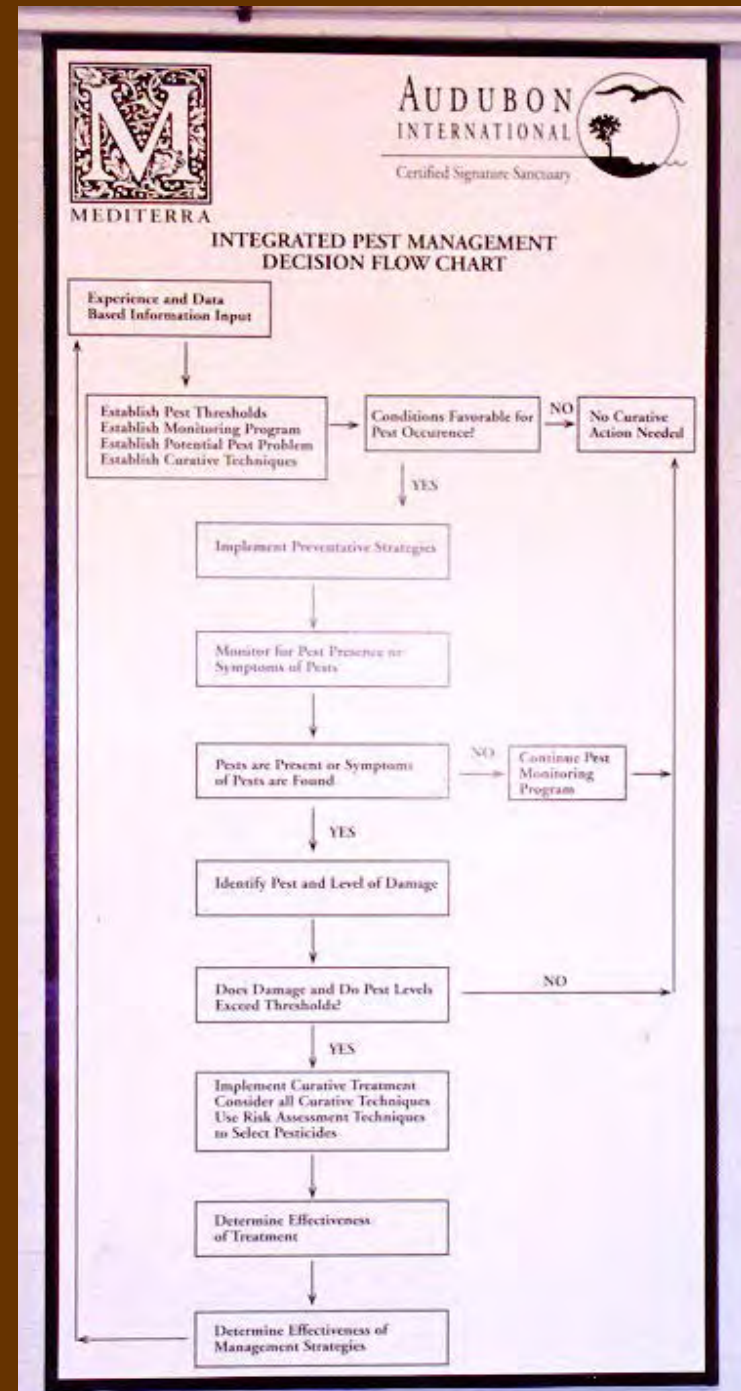
Sports Turf Research Institute Visit,  
Westchester Country Club, NY



EPA Environmental Performance  
Track Site Visit, Colonial Acres  
Golf Course, NY

# Ways to Tell Your Story

- Passive Storytelling
  - Signs
  - Displays
  - Newsletter Articles
  - Press Releases
  - Marketing Materials
- Active Storytelling
  - Tours
  - Presentations
  - Events



# Communication - Signs



The hedge to your left is composed of honeysuckle.

Honeysuckle is an "alien" or invasive plant species in Iowa.

An invasive species is a plant or animal that is not native to a particular area (it ain't from around these parts). Invasive species can out-compete native species for resources. In the end, only the invasive species may remain (native species may get ran out of town!). Invasive species are usually less valuable to wildlife.

**WANTED**  
**"HONEYSUCKLE"**



**DEAD OR ALIVE**

## FAIRWAY FACTS

Conservation staff, with the help of volunteers, are currently battling honeysuckle and other invasive plants in our parks. If you would like to get involved with this effort and join our posse, contact  
Polk County  
Conservation.



**JESTER PARK**  
GOLF COURSE

[www.jesterparkgolf.com](http://www.jesterparkgolf.com)

POLK COUNTY CONSERVATION  
(515) 323-5300

# Communication - Displays



Schuyler Meadows Club, NY

# Communication - Displays



# Displays – Bring the Outdoors In



# Cart Signs

Creature  
Feature:

## Yellow Trumpet Pitcher Plant



Yellow trumpet pitcher plants (*Sarracenia flava*) feed on insects that are attracted by the sweet smell of nectar. The inside surface of the plant is slippery, and insects fall in and drown. The plant then uses its digestive juices in a rainwater mixture to break down and absorb the insect.

Cheraw State Park conducts prescribed burns to protect this plant's rare shoreline habitat. Look for this plant's bright yellow/green color along Lake Cherokee (holes 13 & 14).

# Digital Cart Signs



# Nature Trail

## Nature Trail

The purpose of this trail is to afford our members and their guests the opportunity to enjoy the beauty of Club woods and meadows.

Golfers' rights-of-way carry at all times.

Bikes, carts & dogs are prohibited.

Enjoy the beauty of our wildlife and wild flowers.

Maps of the 1½ mile trail are available at the Main Club House, the Pro Shop and the Fitness Center.

# Nature Trails



## A Self-Guided Nature Trail



1-800-327-3353



RESORT AT SQUAW CREEK  
Squaw Valley USA • CA

No place like it.

# Newsletter Articles



## Maintaining Nature's Course

John Kopack, Golf Course Superintendent



Back on December 16, 2000, I once again hosted The Annual Wekiva River Basin Christmas Bird Count. I've hosted this bird count for six years running now, going back to my previous years working next door at Alaqua CC. This is my second annual count at The Legacy Club as part of Audubon International Signature Program,

and I'm happy to report that during this count, we spotted a record 438 birds made up of 41 different species ranging from majestic red shouldered hawks to the beautiful yellow breasted warbler. With the help of some local bird watchers (see photos), we had a very successful and enjoyable morning of birding. It really is amazing what you see on our beautiful golf course if you just take a second and take in the sights. All you have to do is stop, listen, and observe.



Our very own hole number eighteen is world famous now.

It made the "Hole of the Month" in Golf Course Management's and Golfdom issues respectively. The articles both feature our unique "Pit" located up the of the fairway. If anyone off the street ever asks you if you've hit a ball into the Famous Pit", you can now answer with pride. I'm sure if you've ever had to go "The Pit" you have your own unique story to tell, and if you've ever made a hole there, we just might have to get your picture up on our Wall of Fame!

Keep it in the short green stuff.  
See you on the course!

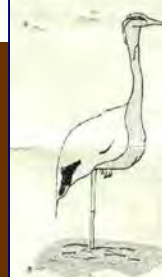
## AUDUBON

### Swallow-Tailed Kite Visits Indian River Club

Our volunteers from the Audubon Society have been conducting "bird surveys" for more than five years and finally had the thrill of seeing a **Swallow-tailed Kite** soaring over the eastern edge of the property on June 10. If you've never seen this bird, check it out in your Field Guide. Absolutely beautiful!

We had planned to feature the 29 **Mourning Doves**, 35 **Northern Mockingbirds** and 22 **Common Grackles** as highlights of the morning, then along came the **Kite**. These are really unusually high numbers for so small a habitat. Indian River Club seems to be doing everything right towards maintaining a "bird friendly" environment.

Jack Taylor said, "We're still coming across abandoned bird feeders. Please take them down and store when you leave for other climates."



No one signed up for the June 3 Bird Expedition resulting in a cancellation. We're prepared to conduct another Expedition on July 1. See Sandy for the sign up roster.

Our regular survey on June 1 produced 37 species (higher than one year ago) including a single male **Wood Duck** swimming in the North canal. We're hoping that he might possibly have a mate, or nest, in the vicinity.

All species of **Heron** and **Egret** (excepting Night Herons) were counted. One **Great Blue Heron**, 8 **Great Egret**, 3 **Snowy Egret**, 2 **Little Blue Heron**, 2 **Tri-colored Heron**, 10 **Cattle Egret** and 1 elusive **Green Heron**, 10 **Mottled Duck**, 5 **Common Moorhen**, 3 **Wood Stork** and an unusual 21 **White Ibis** were all part of the count. We were very pleased to find 8 **Brown Thrashers** against zero last year. **Northern Cardinals** continue to prosper with a total of fourteen.

Happy Birding, *Jack Taylor and Jane Brooks, P.I.A.S.*

# Seasonal Newsletters

## Seasons at the SANCTUARY



**Dogwood** (Cornus florida)

**Habitat:** Understory tree in open woods  
**In bloom:** March- April  
**Side notes:** State flower of North Carolina. Flowers become berries that are eaten by squirrels & birds.



**Redbud** (Cercis canadensis)

**Habitat:** Understory tree in many forest types (especially forest edge)  
**In bloom:** March-April  
**Side notes:** Heart shaped flower and long seed pods in fall. Flowers are important in the production of honey by bees.  
Dates back to biblical times and is often called the Judas tree.

*While the red maples and the redbud may be the first trees in bloom, the very first sign of spring is actually a sound. You don't even have to listen closely to hear the rising trills of the Chorus frog. While the Chorus frog will be nearly impossible to see, keep a close look out for the other animals on this list.*



**Chorus Frog** (Pseudacris feriarum)

**Habitat:** Variety of habitats, particularly around temporary wetlands.  
**Side notes:** One of the earliest, smallest, and loudest amphibians to emerge. Sit in large groups to call for mates in the spring. Call is similar to the sound produced when running fingers down the teeth of a comb.



*The temperatures are warming and the days are getting longer, so lace up those sneakers and hit the trails at the Sanctuary. You'll notice a wide array of activity along these trails, as nature begins to come alive.*

**Black Cherry or "Wild Cherry"** (Prunus serotina)

**Habitat:** Lowland and upland woods, especially along streams  
**In bloom:** April-May, followed by drooping clusters of red berries which are quickly eaten and spread by birds  
**Side notes:** One of the largest cherries can reach 125 ft. Fruits are used to flavor liquors such as brandy and whiskey.



**Red Maple** (Acer rubrum)

**Habitat:** Large maturing tree in mixed hardwood forests  
**In bloom:** Bright red flowers in late winter or early spring before foliage appears. Male and female flowers in separate clusters.  
**Side notes:** Greatest north-south distribution of all tree species along east coast. Excellent fall color.



**Eastern Box Turtle** (Terrapene carolina)

**Habitat:** Wide variety from wooded swamps to dry, grassy fields  
**Side notes:** Only land turtle in North Carolina and is the state reptile. Key characteristics are their hinged plastron (bottom of shell) that can be completely shut to exclude predators and their high domed shell. Should not be removed from the wild as box turtles have a homing device that causes them to return to the place of their birth.



*Keep a close look out for our next reptile as its bite can be very painful and require medical attention. However, if given the opportunity, this snake will always choose escape and only when escape is not possible will a copperhead hold its ground and defend itself. Their initial threat display is to strike, as a warning and not as an attempt to kill. Because it is a warning, the snake injects very little venom.*



**Copperhead** (Agkistrodon contortrix)

**Habitat:** Wooded areas near rocks, streams or ponds  
**How to identify:** Hourglass shaped crossbands on a brown or gray background, broad triangular shaped head, 24-36 inches in length.

**MOST BITES OCCUR WHEN PEOPLE TRY TO HANDLE OR KILL THE SNAKE! WHEN LEFT ALONE THE SNAKE WILL CHOOSE ESCAPE AS THE FIRST OPTION!**

*Our next group can be seen at every turn at the Sanctuary, whether it's foraging on the ground for insects and acorns, gathering berries throughout shrubs and understory trees, or flying high over head hunting for prey. Birds have found a home here at the Sanctuary, so keep track and you'll be surprised by the number of different species that you'll see.*



**Great Blue Heron** (Ardea herodias)

**Habitat:** River, lakes, swamps, coastal wetland environments  
**Side Notes:** Close to 4 ft. tall the Great Blue Heron is the largest heron in North America and the largest wading bird in NC.  
Easy to ID by size, 6 ft. wing span, grayish body and white body with dark stripes above the eyes  
**Nesting habits:** GRI nest in colonies and adults gather at colony sites in NC March-August. Build large platform nests in the tops of trees.



**Barred Owl** (Strix varia)

**Habitat:** Common, permanent residents of swamps, river bottoms, and moist wetlands.  
**Side notes:** Owls have soft, fluffy plumage that allows them to fly silently after their prey. Have long necks that allow them to twist their head a 180 degrees to the right or left.  
**Nesting habits:** Build little to no nests, but prefer to lay eggs in late February in vacant nest of other species or in a natural cavity. Eggs are pure white and spherical, and may take 10 weeks before young take flight.



**Red Tailed Hawk** (Buteo jamaicensis)

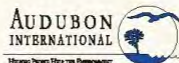
**Habitat:** Large bodied, broad winged, red tailed birds of prey that can be found perched on tall snags or poles waiting to swoop down on prey.  
**Side notes:** Extremely beneficial to man as they consume huge quantities of rats, mice, and other rodents. Permanent residents of NC  
**Nesting habits:** Lays 2-4 dull white eggs in April in big, bulky nests placed 30-60 ft. above ground in a large tree near woods edge.



**Carolina Chickadee** (Parus carolinensis)

**Habitat:** Permanent resident of woodlands throughout the Carolinas  
**Side notes:** Tiny gray bird with black cap and black bib framing that performs amazing acrobatics when foraging for seeds, insects, or berries. The name represents its song, a hurried chick a dee dee dee.  
**Nesting habits:** Sometimes take over boxes put up for bluebirds, but often dig holes for nests in decaying stumps, dead stubs on trees, or in soft wood of fence posts. Usually lays 4-8 white eggs in April.

# Handouts



## A NATURAL PARTNERSHIP

### What makes *the Sanctuary* so green?

First, there is the community's unique land plan that minimizes disturbance to the natural ecosystem. Then, the large size of the Private Preserves (homesites) and limited clearing of those Preserves protects the mature hardwood forest.

Conservation Corridors, which are naturally vegetated buffers that protect water quality and wildlife habitats, are a big part of the plan. The Conservation Corridor along streams is 100 feet wide, and along Lake Wylie it is 200 feet wide.

With 215 acres set aside for parks, meditation areas and other common green space, *the Sanctuary's* human inhabitants have plenty of room to roam.

### What's the connection with Audubon International?

Audubon International's (AI) programs promote sustainable resource management, which means using natural resources without depleting them. A

permanent natural resource manager is on-site at *the Sanctuary* to promote sustainability. Residents will benefit from her on-site conservation assistance, environmental educational programs, and management of aquatic and terrestrial resources. In addition, she will plan nature hikes, bird watching, organic gardening seminars and other programming for residents.

*the Sanctuary* is the first community in the world to receive the Triple Diamond designation from AI. The Triple Diamond designation is AI's highest level of certification within its Gold Signature Program and indicates a superlative project based on protection of wildlife, water quality, and native flora and fauna, as well as green building practices and site design.



## ASSET TO THE COMMUNITY

Because our existence as a golf course has already had a tremendous impact on this new community, our mission is to make our coexistence harmonious. Homeowners, club members and employees will share in the pride that our club and community provide a quality sanctuary for wildlife.

## WHAT WE DO :

### Public Involvement

The Ivanhoe Club considers environmental quality and the needs of native wildlife with each management decision. In addition, we try to educate the surrounding community by providing informational sessions for school children and by writing articles in our club newsletter. By doing this, we constantly remind them that our golf course is a wildlife sanctuary.



### Habitat Enhancement

The 250 acre golf course is situated on rolling terrain covered by woodlands, marsh, and fields of prairie. There are everyday sightings of wildlife, and intermittent surprises found among the reintroduced native plant materials. Whether one plays the game of golf or simply enjoys the scenery from the neighborhood, Ivanhoe Club is an asset to the community.

The symbol for the Ivanhoe Club's Audubon Cooperative Sanctuary Program (ASCP) is the purple martin house. Each year many pairs of acrobatic swallows have found refuge for nesting and feeding near our ponds and lakes. Eastern bluebirds, as well as Bobolinks and Meadowlarks are making a comeback at the Ivanhoe Club as many nesting pairs are fledging their young on our golf course.



### Environmental Planning

The Ivanhoe Club has incorporated an environmental plan as part of its long term commitment to managing the grounds. We will maintain this commitment to the environment and stewardship of this land.



## COME AND SEE:

Members and guests of The Ivanhoe Club are encouraged to come and see the on-going work at our Environmental Award Winning golf course. This work is aimed at highlighting wildlife at The Ivanhoe Club, right here in Lake County. We have over 80 nesting boxes that are monitored throughout the season by volunteer staff members of the Audubon Resource Advisory Committee.

Participate in our wildlife inventory by reporting your sighting to members of the resource committee after playing golf.

# Brochures

## A LEADER IN ENVIRONMENTAL STEWARDSHIP

On a warm, sunny, summer day, golfers enjoy the rush of wind through native prairie flowers as birds whistle and chirp overhead. Nearby, hand-carved wildlife sculptures delight those visiting for the first time.

Sound exotic? Not to those who enjoy the ongoing improvements at Smock Golf Course.

Smock continues to work to create this idyllic world, incorporating environmentally sound, wildlife-friendly management practices. As a member of the Audubon Cooperative Sanctuary System, Smock believes resources should be handled carefully, balancing the interests of man and those of wildlife.

The USGA-sponsored Sanctuary System encourages members to incorporate sound environmental practices such as energy and water conservation, recycling and waste reduction. Smock takes this approach even further, reviving grasses, wildflowers and wildlife native to Indiana.

Rejuvenating native vegetation will not only aid wildlife, but will make the course more attractive and interesting to those who play.

With its ongoing efforts, Smock hopes to raise the environmental consciousness of

## ENVIRONMENTAL PROJECTS AT SMOCK

### Completed thus far:

- 52 Birdcreek bridges
- 5 acres of natural area, non-play areas
- 6 wood duck decoys
- Hummingbird and butterfly garden
- Naturalized pest management
- Water monitoring and conservation program
- Specialized fish for improved pond habitat
- Viewing areas with benches and informational signs
- Wildlife carvings throughout course

### Future projects include:

- Bar booms for natural pest management
- Additional trees and shrubs for avian food sources
- Wildlife and habitat management
- Improved water management systems
- Ongoing public involvement with golfers and public education programs
- Integrated pest management
- Water quality stewardship
- Improved aquatic habitat



The FFA Mission: FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

The Agricultural Education Mission: Agricultural Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems.

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National FFA Organization 6060 FFA Drive PO Box 68960 Indianapolis, IN 46268 [www.ffa.org](http://www.ffa.org)

NATIONAL FFA ORGANIZATION



## Garden and Wildlife Habitat

# Wildlife Guides

POCKET NATURALIST™

## WILDLIFE OF COLLIER'S RESERVE NAPLES, FLORIDA

AN INTRODUCTION  
TO FAMILIAR SPECIES



AN AUDUBON INTERNATIONAL CERTIFIED  
COOPERATIVE SIGNATURE SANCTUARY

### REPTILES & AMPHIBIANS



### MAMMALS



### LARGE POND BIRDS



### SMALLER POND BIRDS



### OTHER SOUTHERN FLORIDA BIRDS



Most species featured are year-round residents. Symbols used to denote non-residents are: (S) = summer only; (W) = winter only; (M) = spring/fall migrant. Most illustrations show the adult male in breeding coloration. Colors and markings may be duller or absent during different seasons. The measurements refer to the length from nose/bill to tail tip unless otherwise indicated. Illustrations are not to scale.

This guide is provided by:



birding.com

Thayer Birding Software

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The premier birding web site. Click and visit us at [www.birding.com](http://www.birding.com).

See the #1 rated birding CD-ROMs at [www.thayerbirding.com](http://www.thayerbirding.com).

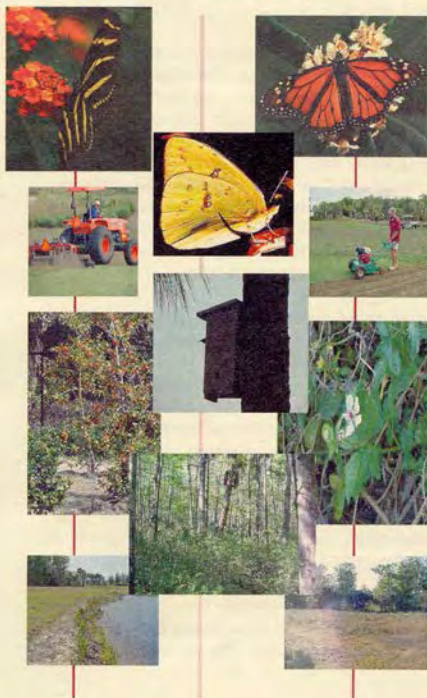
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# Booklets



## The Club At TwinEagles Audubon Signature Sanctuary XXXIII

March 2003



Page 10

## Animals, Reptiles

Coyote, Wolves, Bob Cats, Panther (not documented) Black Bear, Rabbits,  
White Tail Deer and sub specie not identified yet.

Otter, raccoons, opossums, wild pigs, Box Turtle, Snapping Turtle, Soft Shelled, Gopher Turtles, Bats,  
Banded Grey Squirrel, Rats, Mice, Black Racer, Rattlesnake, Cotton Mouth Snake, Black Snake, Skunks,  
Armadillo, Coral Snakes, Variety of Frogs, and lizards. Rats, mice, alligators,

### Soft-Shelled Turtle



Size:	Males 12 " Females 24"
Appearance:	Leathery Shells with brown/ Green skin splotches—long necks
Habitat:	In water, like to sun on banks
Nesting:	Lay eggs on ground
Food:	Snails, crayfish, baby ducks, frogs, fish

### Bob Cat



Size:	15-20 Lb Average
Appearance:	Rust Colored Tones to Grey
Habitat:	Heavy Brush Areas, Woods
Nesting:	Rock crevice or burrow
Food:	Rabbits, squirrels, deer, mice, rats

### Rhinoceros Beetle



Size:	0.4 mm to 12"
Appearance:	Male/Female have horns,
Habitat:	Under rocks, logs, wet areas-Any
Nesting:	Decaying wood
Food:	Decayed plants, molds, fungi

# Communication – Events



# Communication – Events



Stonebridge G&CC, ON – Fall Fun Day

# Communication



## Links as Labs

- Links as Labs brings high-school students to golf courses to test ground water, take soil samples, view wildlife and learn about their ecological surroundings.



**Removing Japanese knotweed at Glendale Country Club, WA**

# Links as Labs



**Local school group measuring water flow**

# Links as Labs



# FedEx Fore!Ever Campaign/Live Green!



Mosholu Golf Course, Bronx

# Variety of Projects



- A** Driving Range Tree Enhancement
- C** Expand Flower Beds around Practice Learning Facilities
- E** Plant Shrubs

- B** Environmental Activity
- D** Golfer Responsibility & Superintendent Discussion

# Turfgrass Projects

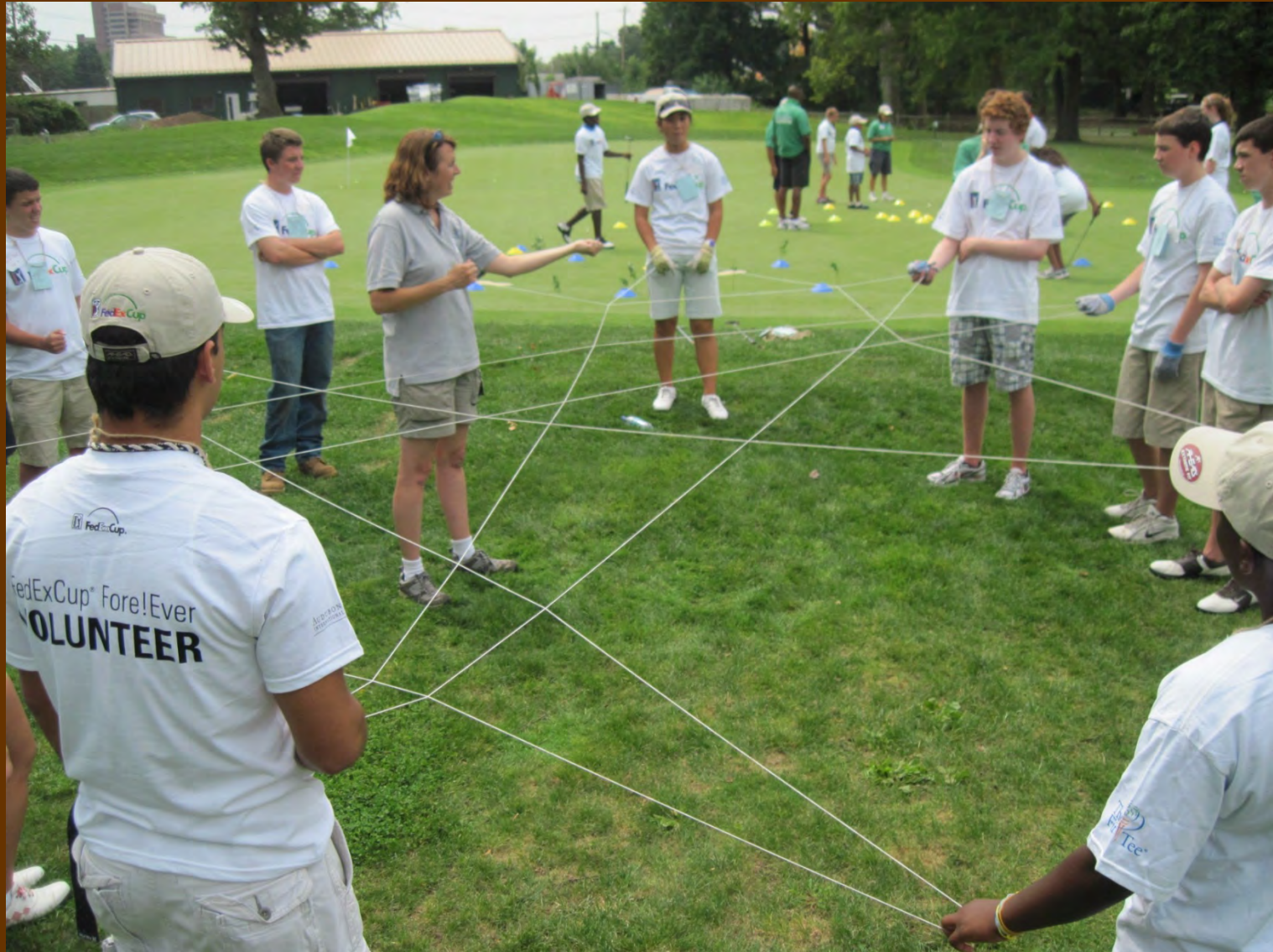


Resodding



Learning about aeration

# Tying it all together



# Covered K – 12 Age Groups



and more...



Hank Haney, PGA Professional



Mayor of Fort Worth



Corporate Sponsor Volunteers

# Atlanta Course Improvement Day

- During the wrap-up session, several children expressed a feeling of liberating joy to learn that they could “plant something”. They are eagerly watching the growth process.



# Why Golf Courses?

- Golf courses can provide both the canvas and the model for environmental stewardship.



**Mosholu Golf Course, Bronx**

**What project do you have that can be conducted on and promoted through golf courses?**

