

TPCs rank among Audubon elite

JACKSONVILLE, Fla. — With the recent certification of the TPC at Sawgrass here and the TPC of Scottsdale, seven facilities within the PGA Tour's network of Tournament Players Clubs have been so designated through the New York Audubon Society's Cooperative Sanctuary Program.

The TPC of Scottsdale is only the second facility in Arizona to become fully certified; Sawgrass is the first in north Florida and only the eighth out of the more than 1,100 courses in the state. "We are extremely pleased that the TPC at Sawgrass and TPC of Scottsdale have joined the other five TPCs that have fulfilled the demanding environmental requirements to become one of the 63 fully certified U.S. courses in the Audubon Cooperative Sanctuary Program," said Pete Davison, vice president of PGA Tour Golf Course Properties, Inc.

Researchers investigating putting greens

Continued from previous page at North Carolina State University.

This research is designed to characterize the physical, chemical and biological changes that occur in a sand-based golf course green over the first five years. It proposes a novel two-phase root-zone mix as an alternative to existing sand:organic matter mixes and questions whether the incorporation of stabilized organic material (i.e., sphagnum peat) is war-

ranted over the long term.

The research also will address the question of the perched water table, specifically regarding changes over time, and possible deleterious effects by air injection and water evacuation.

• **Grow-in and Cultural Practice Inputs on USGA Putting Greens and Their Microbial Communities**, by Dr. Roch Gaussoin at University of Nebraska.

Beyond the questions dealing with the chemical and physical

properties of putting green root-zone mixes, how should they be grown in and made ready for play? Are the high rates of nitrogen used to accelerate growth a short-term solution to meet opening day, but a path to long-term failures? What are the criteria for allowing play on new greens?

This project will evaluate grow-in and post-grow-in cultural practices and procedures and readiness for play criteria.

The long-term effect of these parameters on putting-green performance, depth and extent of turfgrass rooting, and root-zone hydrological, physical and chemical characteristics will be determined.

The project also will assess the influence of these procedures on the microbes found in the root zone.

• **Organic Matter Dynamics in the Surface Zone of a USGA Green: Practices To Alleviate Problems**, by Dr. Robert Carrow at University of Georgia.

The primary objective of this project is to determine the effectiveness of selected fall/spring-applied cultivation practices on the enhancement of bentgrass root development, water infiltration, and soil oxygen.

It will examine the effectiveness of selected summer-applied cultivation, top dressing and wetting-agent practices on bentgrass root growth, water infiltration and soil oxygen status during the summer months when root decline occurs.

• **Non-target Effects of Turfgrass Fungicides on Microbial Communities in USGA Putting-Green Profiles**, by Drs. Gary Harmon and Eric Nelson at Cornell University.

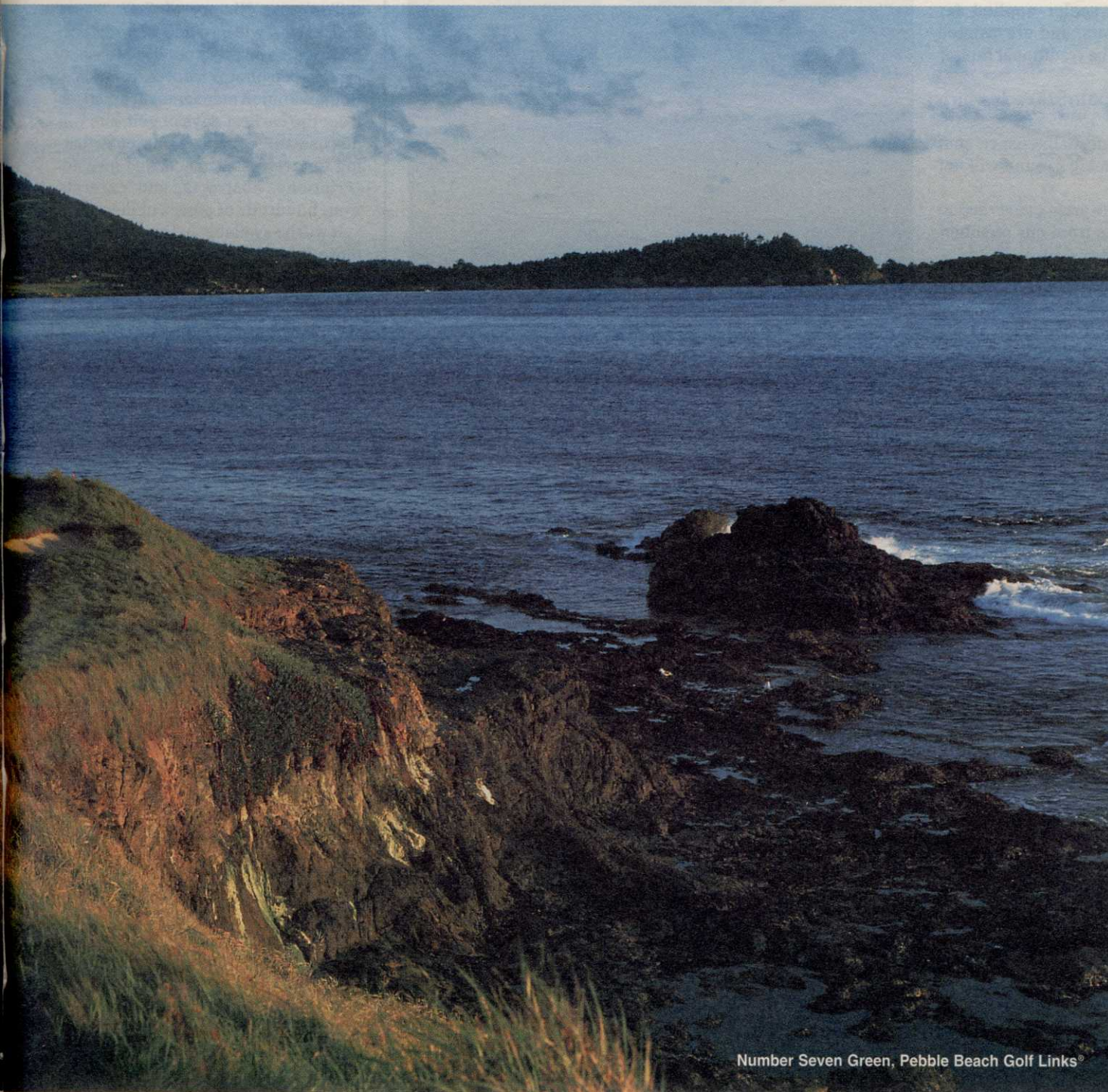
This research effort will investigate the non-target effects of fungicides used for disease control on golf course putting greens.

The non-target effects on greens treated with fungicides potentially include substantial changes in the soil ecosystem which may increase disease susceptibility and affect nitrogen cycling and the health of turf.

• **Bacterial Populations and Diversity within New USGA Putting Greens**, by Drs. Monica Elliott, Elizabeth Guertal and Howard Skipper at University of Florida, Auburn University and Clemson University.

What species of bacteria are found in new greens? Where do they come from? How do microbial populations change over time? This project will monitor the micro-organisms in newly constructed Bermudagrass and bentgrass greens on golf courses in South Carolina, Alabama and Florida.

Effects on bacterial populations will be examined based on differences among organic material, fumigation, nitrogen fertility and clay minerals.



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