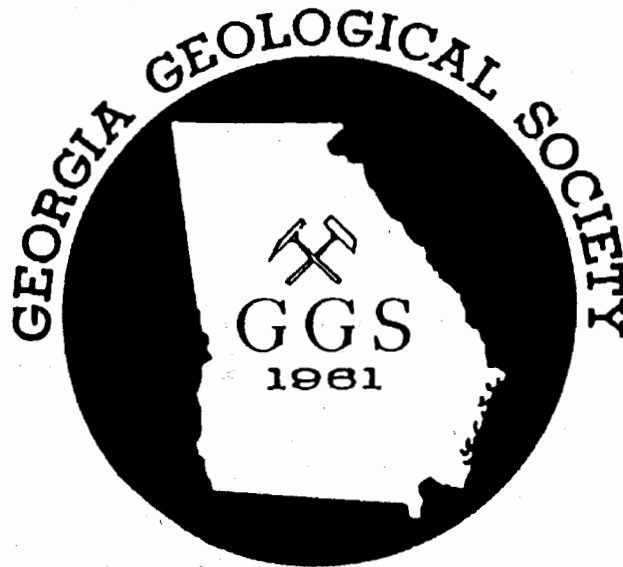


**GEOLOGY AND NATURAL
HISTORY OF THE OKEFENOKEE
SWAMP AND TRAIL RIDGE,
SOUTHEASTERN GEORGIA-
NORTHERN FLORIDA**

EDITED BY FREDRICK J. RICH & GALE A. BISHOP



**33RD ANNUAL FIELD TRIP
GEORGIA GEOLOGICAL SOCIETY
OCTOBER 9-11, 1998**

**GEORGIA GEOLOGICAL SOCIETY GUIDEBOOKS
VOLUME 18, NUMBER 1, OCTOBER 1998**

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The members of the Georgia Geological Society wish to thank E.I. DuPont de Nemours for their cooperation in arranging the visit to the Starke mine and for their generous financial support of the fieldtrip.

Also the Okefenokee National Wildlife Refuge for logistical support facilitating access to Chesser Prairie.

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GEOLOGY AND NATURAL HISTORY OF THE OKEFENOKEE SWAMP AND TRAIL RIDGE, SOUTHEASTERN GEORGIA-NORTHERN FLORIDA

Introduction

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The proposed mining of heavy mineral sands on Trail Ridge by E. I. DuPont de Nemours and Company has provided us with the framework to develop an assessment of the status of our knowledge of the origin and geological history of the Okefenokee Swamp and the origin, accumulation, distribution, and mining of heavy mineral deposits in Georgia.

We will use this trip to focus our attention on the accumulation of heavy mineral sands on the Atlantic Coastal Plain. We will follow heavy minerals through the rock cycle in a series of contributions detailing the provenance of heavy minerals (Contribution 2; Vance) from their initial source in the Piedmont of the Appalachian Mountains to their deposition on Georgia beaches presented as a model of deposition and accumulation on St. Catherines Island (Contribution 3; Bishop and Marsh). Then, this model is applied to the geologic history of the Okefenokee Swamp (Contribution 4; Rich) and a review of the origins of tree islands, called "houses," (Contribution 5; Rich) is then expanded to an overview of the Quaternary evolution of the Georgia Coastal Plain (Contribution 6; Booth and Rich). The mining of the Trail Ridge deposit is brought into the classroom by modeling the use of emerging electronic teaching technologies to engage students in the learning process through role playing over the Internet (Contribution 7; Marsh and Bishop). This information is be applied to ancient Coastal

Plain sediments in the Trail Ridge deposit, and its potential exploitation by wet dredge mining techniques and its beneficiation by the DuPont Starke, Florida, milling process (Contribution 8; Renner, Samborski, Reynolds, and Mogillo).

These contributions are offered as a starting point for discussion on our fieldtrip which will take us first to Dupont's Starke, Florida, heavy mineral sand mine to observe wet dredge mining and beneficiation processes first hand. The second day will take us into the Okefenokee Swamp where we will observe paludal processes first hand. The fieldtrip will place us squarely between the habitat potentially threatened by mining and the mining process itself.

The question of whether to mine or not to mine is being determined even as we explore the question ourselves on this trip. The process involves discussion of issues in a consensus-based, conflict mitigation process being managed by RESOLVE.

Recent developments in this conflict resolution process have led to the realization that we have but one Okefenokee Swamp. The uncertainties involved in mining on Trail Ridge in direct proximity to this unique habitat and the possible detrimental effects of unforeseen problems in mining seem to be leading to reevaluation of mining options, and the possible withdrawal of Trail Ridge from future mining consideration if the land is incorporated into the Okefenokee National Wildlife Refuge.

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Field Trip Itinerary

Friday, October 9	8:00 P.M. - Social Hour
	9:00 P.M. - Orientation Talk Jacksonville Airport Holiday Inn
Saturday, October 10	8:00 A.M. Load Busses and Vans for DuPont Mine and Wet and Dry Mill Tour Lunch courtesy of DuPont
Sunday, October 11	7:00 A.M. Load Busses and Vans for Okefenokee Swamp Tour from Camp Cornelia Lunch Ordered on Fieldtrip Form Return to Camp Cornelia by 2:00 P.M.