



# Karst Studies in West Central Florida: USF Seminar in Karst Environments 2003

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Southwest Florida Water Management District

Edited by: Lee J. Florea  
H. L. Vacher  
Eric A. Oches

**Karst Research Group, USF**

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Proceedings of the 2003 Seminar in Karst Environments course  
at the University of South Florida Department of Geology

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Cover design and photo: Map is a GIS representation of cave levels in Briar Cave, Marion County. Photo is of Ocala Limestone in Haile Quarry, Alachua County.

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## Introduction

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### INTRODUCTION

This volume consists of two parts. The first comprises six of the nine project reports completed by students in “Seminar in Karst Environments” offered at USF during Spring semester 2003. The course, which was offered in both the Department of Geology (GLY 6730) and the Department of Environmental Science and Policy (EVR 6936), met 6-9 pm, Wednesday evenings. The course drew 36 students, equally divided between GLY graduate students, ESP graduate students, and non-degree-seeking professionals. Len Vacher (GLY) and Rick Oches (GLY and ESP) put together the course. Lee Florea, one of the PhD candidates in the USF karst group (see GLY Website), assisted in the logistics of the course and put together this volume.

The team project assignment constituted 50% of each student’s grade. During Weeks 2 and 3 of the semester, Vacher and Oches met with the dozen or so Professional Geologists and PhD candidates who were enrolled in the course to brainstorm about possible topics for team projects. These PGs and PhD candidates volunteered to be project leaders. They briefed the full class during Week 4 on the purpose and methods of their respective proposed projects. Students in the class voted their individual preferences. From these lists, Vacher and Oches appointed heterogeneous teams that included not only a PG or PhD

candidate but also at least one GLY graduate student and at least one ESP graduate student. The teams presented their findings to the class during the last two weeks of the semester. They submitted a complete, written draft two weeks before the final exam. Vacher, Oches and Florea edited the drafts, and the teams submitted their final draft the night of the final exam. This volume collects most of those papers.

The other 50% of the course consisted of lecture sessions and exams. Vacher and Oches opened the course with three weeks on general topics of karst geomorphology and hydrogeology, Florida geology, and evolution of carbonate porosity. From then on, until the team presentations, the weekly sessions consisted of presentations by professionals in the community. In order these were:

1. Overview of Florida karst – Sam Upchurch (SDII-Global Inc)
2. Florida Sinkholes – Ann Tihansky (USGS, Tampa) and Mike Wightman (Geoview Inc)
3. Conduits and habitats – Michael Garman (Subsurface Evaluations Inc)
4. Florida Springs – Gregg Jones (SWFWMD, Brooksville) and Meg Andronaco (Perrier Group, Zephyrhills)
5. Karst and the Human Habitat – Peter Schreuder (Schreuder, Inc)
6. Flow in Karst Aquifers – Ron Green (Southwest Research Institute, San Antonio, Texas) and Mark Barcelo (SWFWMD, Brooksville)

7. Karst and Engineering – Nick Albergo, Dave Tarbox, John Marquardt, and Andres Alberdi (HSA Engineers and Scientists, Inc) and James Hossin (Hayward-Baker, Inc)

8. Perspectives: Environment, Water and Florida, A Panel Discussion with Mark Stewart (USF Geology), Bob Brinkmann (USF Environmental Science and Policy), and Tom Scott (Florida Geological Survey)

The second part of this volume collects information to encourage students (and others) to visit the karst in the vicinity of USF. The information includes a field guide and road log prepared by Lee Florea, and descriptions of three sites prepared by geologists who know them well — a nearby cave (Bob Brinkmann), the famous Sulfur Spring system (Peter Schreuder), and an extensively researched

plot of undeveloped ground on campus that displays the sinkhole landscape typical of the area (Mark Stewart). This study site is now the USF Geological Alumni Society GeoPark.

Our course, the enthusiastic enrollment, and the wonderful in-kind support provided by professionals in the community reflect the importance of karst issues in this part of Florida. This community interest also lies behind and motivates the new karst group which is forming at the University. We greatly appreciate everyone in the community who has contributed to the course and, more generally, to the development of our karst group. In particular, we wish to acknowledge SWFWMD specifically; their support and encouragement has been crucial during these formative years.