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# florida Geology *forum*

A Newsletter from the Florida Geological Survey

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## The Florida Springs Initiative

### The Florida Geological Survey Role

*By Dr. Tom Scott*

Florida has more than 600 springs, representing what may be the largest concentration of freshwater springs on Earth. These springs have suffered from man's use and misuse of them and the recharge areas. In recognition of their impacts on Florida's springs, the Florida Springs Task Force (FSTF) was formed in mid 1999 at the direction of **David Struhs**, Secretary of the Florida Department of Environmental Protection (FDEP). The FSTF, which met monthly from September 1999 to September 2000, was composed of representatives from the FDEP, Water Management Districts, Florida University System, Florida Geological Survey (FGS), U. S. Geological Survey, private sector and other scientists, planners and concerned citizens. The FSTF was directed to recommend strategies for the protection and restoration of Florida's springs.

The 2001 Florida Legislature passed the Florida Springs Initiative, funding the Year One effort for first magnitude springs with \$2,535,000. Funding was included for research, monitoring, and education. The FGS was tasked with producing a new, revised Springs of Florida report to replace the out-of-print FGS Bulletin 31 (1977). For the Year one effort, the FGS will complete a Springs of Florida report on the 33 first order magnitude springs, spring groups and river rises. The report will include site descriptions, GPS, photos, historical data (if any), water chemistry, and discharge measurements.

The FGS has formed two springs

teams that will conduct the investigative field work on the first order magnitude springs. Field work will terminate in late November 2001 and an Open-file Report will be published documenting these springs. The OFR will be presented to the 2002 Florida Legislature along with a request for funding to investigate the second and lower order magnitude springs in the state.

For further information, contact **Dr. Tom Scott**, **Dr. Jon Arthur** or **Mr. Harley Means** at (850)488-9380.



*Photo taken by Tom Scott while investigating Alexander Springs in Ocala National Park.*





# Chief's Corner

by Walt Schmidt

In these difficult times.....

Recent events in the world cause us to pause in our daily and weekly routine and to reassess what is really important in life. Clearly, our personal priorities are reviewed as is our professional and spiritual activities. For most of us, a feeling of comradery with our fellow citizens is felt and a sense of purpose results in offering assistance to those in need and in supporting our nation and our President. There is much pain felt, and typically a feeling of being lost. Our families take on a renewed significance to us.

This kind of self assessment and reprioritization is also happening throughout Florida State government agencies as we have been implementing a workforce reduction and a budget reduction plan intended to cut the cost of government and associated state employees by 25% in five years. This review of our core mission and our fundamental services brings us back to the initial directives passed by the Legislature when our programs were originally (and often subsequently modified) instructed on our missions. During recent decades, the State of Florida has grown immensely in population and associated land development and supporting infrastructure. Many new State, regional, and local agencies have been created to oversee numerous environmental regulations, to implement land-use and zoning ordinances, to regulate various professions and permit many differing activities. With our State's development continuing, resource conservation is more important than ever. The Florida Geological Survey, however, has changed very little throughout its time, in that it continues to be the sole provider of geoscience data and associated interpretations to government agencies, industry, consultants, land and mineral owners, and the public. We continue to maintain our geologic data repository, our geoscience research library, and prepare and disseminate the results of our research to all users in need.

Nevertheless, we too, must determine which services we should cease providing as we conduct an internal self-assessment in compliance with the Governor's instructions. As much as it hurts us to eliminate programs, we must pare-down our efforts. After

lengthy discussion, we have determined our *Coastal Research Group* will be phased out over the next four years. During the last decade this program has cooperatively partnered with the U.S. Minerals Management Service, the U.S. EPA, the U.S.G.S., other state geological surveys, several universities, selected water management districts and counties to leverage our resources and to produce the most applied products possible. Our staff have secured numerous resources to carry out said research including six research boats/vessels, lab equipment, and various field equipment including water quality meters. Our primary emphasis has been on geologic – geophysical mapping and characterizations of offshore submerged lands to assist with the need for beach renourishment sands and to respond to bottom type inquiries related to various offshore activities (such as pipeline corridors, quartz sand needs, carbonate sand needs, live bottom, etc.). We have also pursued studies assessing coastal estuaries and wetlands to develop environmental trends responding to uplands land-use changes and sea-level changes; and we have studied near-shore dynamics of surface / groundwater interactions. Planned activities, included an inventory and assessment of offshore freshwater springs to contribute to Florida's water budget quantification and to assist policy and decision makers as they address the continuing needs of coastal and inland communities to identify future fresh water resources. At this time I expect seven additional full-time positions to be eliminated.

We hope to maintain our basic geologic / lithostratigraphic mapping and data acquisition components, our recently expanded hydrogeology program, and our various geologic databases. I continue to argue the need for an economic geology program to be created within the Survey to document and track economic minerals use in Florida, and to work with industry to better define and map potential deposits for the future needs of our citizens. Economically prudent and informed land-use decisions demand such information, or our infrastructure of the future will become too costly or simply not available due to the lack of affordable raw materials.

# News from the FGS Oil and Gas Section

On June 30, 2001 the state's cumulative production totals reached approximately 580 million barrels of oil and 610 billion cubic feet of gas. In 1978 Florida's annual petroleum production rate peaked at 48 million barrels of oil and 52 billion cubic feet of gas, which ranked Florida 8<sup>th</sup> among oil producing states. Since 1946 the state has received approximately 1400 drilling permit applications, of which 249 wells were never drilled, 715 were dry holes, and 346 became producers. The state currently has 72 producing wells operating within 10 active oil and gas fields. Eleven formerly producing fields have been permanently plugged and abandoned.

During the last 6 months one drilling permit has been approved. ExxonMobil is currently drilling Jay Field's first horizontal well. If this well is successful, ExxonMobil intends to drill additional horizontal wells in hopes of enhancing the field's already spectacular production record. Jay Field has produced approximately 408 million barrels of oil and continues to dominate Florida's production rates with approximately 71% of the oil and 90% of the gas.

No geophysical permits were applied for or issued during the last 6 months, but Collier Resources Company, the major mineral rights owner in southwest Florida, has submitted to the National Park Service 24 applications for 3-D seismic surveys in the Big Cypress Swamp. If the park service does not object to these proposed surveys, Collier Resources will apply to the Oil & Gas Section for seismic permits. Overseeing these permitting and monitoring efforts will be **Dave Taylor**, who joined the Oil & Gas Section staff in June 2001. Mr. Taylor has been a seismic field operations inspector and supervisor since 1987.

Chevron's plan for gas production in federal waters south of Pensacola awaits a final decision by the U.S. Department of Commerce and the Environmental Protection Agency. The decision to issue a production permit has experienced numerous procedural delays since 1997 when Chevron proposed producing up to 300 million cubic feet per day of Norphlet gas from 21 wells operating from 15 platforms. In July 2000 Chevron along with its partners, Conoco Inc. and Murphy Exploration & Production Company, filed a lawsuit against the US government for breach of drilling lease contracts. The De-

partment of Energy has estimated reserves of 2.6 trillion cubic feet within this gas field, an amount equal to more than four times Florida's cumulative onshore gas production to date.

During June 2000 plans for an upcoming sale of 5.9 million acres of federal offshore leases south of Alabama and the Florida panhandle, Lease Sale 181, were scaled back to auction off a smaller 1.5 million acre area south of Alabama only. This modification was a compromise between the competing interests of Alabama, Florida, and various federal agencies.

Williams, an Oklahoma energy and communications company, and Duke Energy are preparing to lay the \$1.6 billion Gulfstream Pipeline, which will transport natural gas from Mobile to Tampa. The companies have begun to receive permits and have manufactured \$800 million worth of pipe. The 36-inch diameter pipeline will travel directly across the Gulf of Mexico along a 450-mile path.



*Visiting ExxonMobil's new well in September: (l to r) State Geologist Walt Schmidt, Shane Mobly (representing ExxonMobil), Mark Collins and Ed Conklin (Division of Resource Assessment and Management).*

## *The FGS Drilling Program*

The FGS operates two drill rigs in its scientific drilling program. These rigs are equipped to wire line core both unconsolidated sediments and rock. The Failing 1500 is operated by a full time crew and has a depth capability of 1500 feet. An extensive overhaul/adjustment of many of the rig systems is nearing completion. The other rig is a Mobile Drill auger/core rig (pictured below) with a hollow stem auger depth capability of approximately 100 ft which is operated on a part time basis with a primarily OPS crew.

Two cooperative drilling projects have been recently concluded. The FGS and the SJRWMD drilled a 347-foot corehole in Volusia County. The FGS drilled 11 coreholes ranging from 48.5-225 feet deep in support of the FGS Statemap Geologic Mapping project (Southern part of the Crestview 1:100,000 Quadrangle). The majority of this year's mapping area fell within Eglin Air Force Base. Upcoming projects include cooperative projects with Collier County, with the Department of Health, with the DEP Watershed Monitoring Section in the Division of Water Resource Management and the ongoing Statemap Geologic Mapping effort.



### **New Staff:**

**Craig Berninger:** Craig is our new core driller. He has previously worked with the FGS as an OPS research assistant doing both core drilling and geologic analysis work. He has also worked as a licensed driller for Jim Stidham and Associates.

**Tom Keister** was with the FGS as a driller's assistant for several months before resigning due to health reasons. Tom proved himself to be exceptionally valuable during the drill rig overhaul.

**Davis "Lee" Booth** has signed on as our new driller's assistant. He has approximately 30 years drilling experience, including 10 years with the DEP Site Investigations Section. He brings a wealth of knowledge and experience to the FGS.

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## *Education and Outreach*

### **Earth Science Week**

The Florida Geological Survey celebrated Earth Science Week on October 6, 2001 in cooperation with Florida Caverns State Park at Marianna, FL. Staff geologists accompanied cave tours and answered earth science questions. In keeping with the geologic setting of the caverns an emphasis was on karst and the environment. We also featured interactive activities for children.

### **American Geological Institute Summer Curriculum Leadership Institute**

This summer FGS geologist Paulette Bond was chosen to attend the American Geological Institute (AGI) Summer Curriculum Leadership Institute in Columbia, Maryland. The Curriculum Institute introduced middle school and high school teachers as well as geologists from the New Hampshire and Florida State Geological Surveys to newly developed inquiry-based earth science curricula. Earth Comm was developed by the American Geological Institute and funded by the National Science Foundation to provide a comprehensive high school program in the earth sciences. Graduates of Leadership Institutes become certified to conduct workshops for teachers and lead awareness presentations on an AGI curriculum program.

### **Florida Standards**

There are earth science standards in place for both middle school and high school in Florida. They are found at the Department of Education website: <http://www.firn.edu/doe/curric/prek12/frame2.htm>

# *News from the FGS Coastal Research Group*

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## **Florida Gulf Coast Marsh Study**

Wetland studies utilizing a Sediment Elevation Table (SET) were continued at selected marsh sites along Florida's Big Bend Coast. An analysis of monitoring data indicates a continuing overall loss of marsh elevation in relation to sea level rise. Florida Big Bend marshes lack sufficient mineral sediment influx from the area's rivers to maintain elevation/accretion levels required to sustain healthy marshes. As local sea level rises, Florida will continue to lose marshes and contiguous upland areas to encroaching seas.

## **East Coast Offshore Sand Search Study**

The Florida Geological Survey/Minerals Management Service Cooperative agreement, is a multi-year endeavor by the FGS Coastal Group designed to locate offshore sands suitable for beach restoration off of the central east coast of Florida. This area is severely affected by eroding shorelines. As upland/nearshore sources of sand suitable for beach restoration near depletion, local governments are forced to search further offshore for suitable sand deposits. This report will summarize the locations of offshore sand deposits which may prove suitable for beach restoration.

## **Offshore Springs Investigation**

During this period, the CRG initiated a comprehensive study of offshore springs. The goals of this multi-year study, which utilizes satellite imagery, includes an inventory of offshore springs and a characterization of water quality and flow.

## **Gulf of Mexico State Geological Surveys Consortium**

A consortium comprised of Florida, Alabama, Mississippi, Louisiana, and Texas was established as a collaborative effort to address common coastal issues. This formal agreement permits the sharing of coastal expertise and resources to efficiently address coastal concerns and problems common to the gulf states.

## **Memorandum of Agreement between the Navy Coastal Systems Station, Panama City and Florida Geological Survey, Coastal Research Group**

This MOA provides a mechanism whereby a working relationship between the Navy and the CRG facilitates cooperative efforts, and leverages mutual expertise in the broad areas of coastal geology, engineering and technology. This MOA also permits the transfer of technology to the CRG.

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## *New Staff Members*

•The Administrative and Geological Data Management Section welcomes **Cara Gowan**. Cara joined the administrative team in September as the administrative assistant to **Walt Schmidt**. She has worked previously with DEP and has already proven to be an asset to the Survey with her extensive knowledge of contracts and grants.

•In February 2001, **Carol Armstrong** joined the FGS staff as Librarian. With a Master of Library Science degree from Florida State University, Carol's wide range of interests is reflected in her undergraduate degrees: Bachelor of Arts in art, and Bachelor of Arts in history. Her experience as Director of the Thomas College Library and Technical Services Librarian At Southwest Georgia Technical College Library, both in Thomasville, Georgia, serves her well in her role as FGS Librarian. She enjoys her work at the FGS and it shows in the results that she has already achieved in the few months that she has been here.

•The newest member of the FGS administrative team is Susan Trombley. Susan and her family returned to Tallahassee in October after spending three years in Michigan, where her husband was attending law school. She is looking forward to a warm Florida winter with no snow and lots of sunshine! With Susan's administrative skills and experience she is a welcomed addition to the Survey.

•See "The FGS Drilling Program" and "News from the FGS Oil and Gas Section" for a description of other new staff members. Craig Berninger, Lee Booth, and Dave Taylor.

## Industrial Minerals in Florida



In 2000, the U.S. Geological Survey (USGS) ranked Florida fifth in the country in industrial mineral production with a preliminary estimated value of \$1.92 billion. This is down approximately 5 percent from 1999 according to the USGS. Florida is first in production of heavy mineral concentrates, first in masonry cement and peat, third in crushed stone and fuller's earth, and eighth in kaolin.

Florida continues to produce approximately three-quarters of the nation's phosphate rock. In terms of value it was the most important industrial mineral commodity produced in the state even though 2000 saw a drop in its value. Phosphate is followed in value by crushed stone, portland cement, and sand and gravel. Commodities that increased in value according to the USGS were portland and masonry cement, construction sand and gravel, and fuller's earth. Com-

modities showing decreases in value included rutile, magnesium compounds, peat, kaolin, and common clays.

The Mine Safety and Health Administration (MSHA) reported that there were 3,808 persons employed in Florida's surface mining operations, and another 2,334 persons employed in associated mills and preparation plants during 2000. The limestone industry employs over 3000 and the phosphate industry is second with nearly 2300 workers. The remainder of the work force is from sand and gravel companies, cement operations, the heavy mineral sands industry, and clay mines operations. (Source: MSHA's Mine Injury and Work Time Quarterly, and MSHA report MN5310)

### ..... *USGS Reports Sevenfold Increase on U. S. Reliance on Mineral Imports* .....

According to U.S. Geological Survey (USGS) data, U. S. dependence on mineral imports, as measured by value, has increased more than sevenfold since 1993.

"The difference in the value of mineral imports and exports, which was \$4 billion in 1993, has increased to \$29 billion in 2000," according to a July 10 USGS news release. "By 2000, the United States had become reliant for some portion of its supply of a number of mineral commodities that it had previously exported, including aluminum, copper, lithium, magnesium metal, rare earths and even cement."

In addition, the U. S. remains more than 50 percent import reliant for at least 29 mineral commodities, including bauxite and alumina, chromium, cobalt, iodine, manganese, nickel, platinum-group metals, potash, tantalum, tin, titanium

metal, tungsten and zinc, USGS said.

The July 2001 issue of *Mining Engineering*, the journal of the Society for Mining, Metallurgy, and Exploration, also featured an article in which USGS country specialists David B. Doan and W. David Menzie said globalization has required the mining industry "to adapt to new social conditions." after formerly making exploration and mine development investments in areas perceived as low risk, such as the U. S., Canada, and Australia, since the early 1980's there has been a move into higher risk environments in Latin America, Southeast Asia, and Africa, according to the article . According to Doan and Menzie, many developing countries instituted legal reforms to increase their attractiveness as places for mineral investment

## State Geologic Map

The Florida Geological Survey has published the new state geologic map. This map is the culmination of over 36 years of new geological data collection. Data from the STATEMAP project funded under the National Geological Mapping Act, a statewide radon assessment project and other research efforts, was utilized in the construction of this map. STATEMAP provided some of the most current and detailed data available in the state on surficial geology. The new geologic map includes a set of cross-sections and a generalized stratigraphic column. An open-file report (OFR 80 by Thomas M. Scott) describing each lithostratigraphic unit and other relevant aspects of Florida geology accompanies the map. The map and text can be ordered from the FGS for ten dollars. You can also download this map from our web site <http://www.dep.state.fl.us/geology/gisdatamaps/index.htm>



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### ..... *National Cooperative Geologic Mapping Program - Mentoring Program* .....

The Florida Geological Survey completed mapping the southern portion of the USGS 1:100,000 Crestview quadrangle in September of 2001. The completed maps and geologic cross sections will be available through the FGS Open-File Map Series (OFMS-90). This was part of an ongoing geologic mapping cooperative effort through a program entitled STATEMAP. This program, which is cooperatively funded by the U.S. Congress through the United States Geological Survey (USGS) and the Florida Geological Survey, has produced geologic maps, geologic cross sections, and surficial sediments maps for four 1:100,000 quadrangles in Florida during the last eight years. Currently, geologists from the FGS are working on geologic mapping of the western portion of the USGS 1:100,000 Marianna quadrangle.

Beginning in 1999, the FGS entered into a cooperative agreement with the Association of American State Geologists (AASG) designed to provide mentored field training for students interested in learning geologic mapping techniques. This student mentorship program, which provides funding for the students in the form of a \$2,500 award, is utilized by the FGS to hire students for several weeks while they are being trained in various aspects of geologic mapping in the state. Training typically includes several days of "hands on" field work in the STATEMAP field area, training and use of several computer programs, and laboratory description of cores and well cuttings throughout the study area.

# Florida Aquifer Vulnerability Assessment

The purpose of the Florida Aquifer Vulnerability Assessment (FAVA) project is to develop a model using existing geographic information system (GIS) data, that will predict the vulnerability of Florida's major aquifer systems to contamination. Model development is underway with a focus on small-scale pilot mapping projects (Alachua, Hillsborough and Polk counties). The overall mission of the FAVA project is to develop a tool that can be used by environmental, regulatory and planning professionals to facilitate protection of Florida's ground-water resources, and thus the health and safety of Florida's residents.

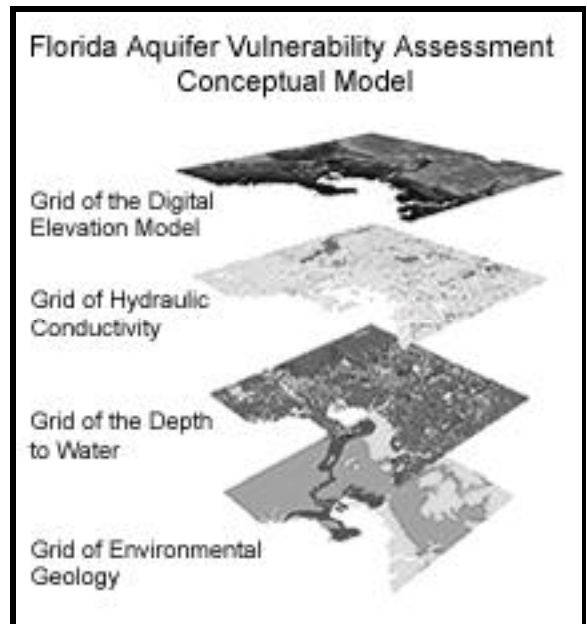
The FAVA project officially kicked off at the FGS in early June 2001. **Jim Cichon** and **Alan Baker**, both FGS Hydrogeologists (also working at the Northwest Florida Water Management District), began the process of accumulating, managing and attributing data layers for the FAVA project. OPS Research Assistants hired to work on the FAVA project include **Andrew Rudin**, **Shaun Ferguson** and **Jeffery Thelen**. The latter two are graduate students from the FSU Department of Urban and Regional Planning and were hired to assist in the development of data layers.

Several of the GIS data layers under current development will be useful beyond the scope of this project. These layers include: a continuous topographic coverage for the state of Florida, FGS Special Publication 32 map sheets that will be edge-matched for all five Water Management Districts, and a statewide karst/topographic-depression data layer. The topographic coverage is based on contour lines digitized from US Geological Survey 1:24,000 quadrangle maps.

In September **Jim Cichon** and **Alan Baker** participated in the Florida Chapter of the American Planners Association conference in Orlando, Florida, where they presented an exhibit to inform the state's planning community about the FAVA project. At the conference, a "FAVA Questionnaire" was completed by more than 40 attendees. The goal of the questionnaire was to assess what, if any, digital products are utilized by planners and how FAVA could be designed to be more useful to the planning

community. Results of the questionnaire will be compiled and analyzed for future use.

In late October the FAVA Technical Advisory Committee (TAC) reconvenes in Tallahassee. In addition to FGS staff, the TAC membership includes representatives from the state's five Water Management Districts, the Florida Department of Environmental Protection (FDEP), the US Geological Survey and one FDEP consultant. Primary agenda items includes familiarizing new TAC members with the project, providing a progress report, and soliciting input regarding data acquisition, model development and model verification. For more information, contact **Dr. Jon Arthur** (FDEP/FGS), FAVA Project Manager.



For more information on this project log on to <http://www.dep.state.fl.us/geology/programssections/hydrogeology.htm>

..... *FGS Hydrogeology Program* .....

A recent addition to the FGS, the Hydrogeology Program includes many cooperative projects with DEP and other state agencies. The *Southwest Florida Hydrogeologic Mapping Project*, a cooperative project with the Southwest Florida Water Management District (SWFWMD), has completed draft copies of 19 structure contour and isopach maps of lithostratigraphic and hydrostratigraphic units for the southern two-thirds of the SWFWMD region. Research funded by the FDEP Underground Injection Control Program continues on the *Aquifer Storage and Recovery (ASR) Geochemical Project*, which focuses on water-rock interactions during activities. The *Florida Aquifer Vulnerability Assessment Project* (see facing page) is underway, including assembly of the technical advisory committee and compilation of statewide databases and GIS coverages for use on the FAVA model. Hydrogeology Program staff are involved in several other projects and committees, such as the *Florida Springs Initiative*, ASR Project Delivery Teams for

the Comprehensive Everglades Restoration Plan, and the Northwest Florida Legislative Natural Resource Advisory Committee.

The Hydrogeology Program includes seven full-time staff, 10 part-time staff, and the program continues to expand. **Dr. Rick Copeland** recently joined the program as a senior hydrogeologist. Rick will work with Drs. Jon Arthur and Rodney Dehan on various advisory committees and projects, and will coordinate an assessment of FDEP's hydrogeology research needs in order to identify and prioritize outsourced research. **Mr. Tom Greenhalgh** has also accepted a position in the Hydrogeology Program. We look forward to working with both of these staff, who are licensed Professional Geologists (State of Florida). Readers of the *FGS Forum* are invited to learn more about our new staff in the next issue.

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..... *Recent Activities of the Hydrogeology Consortium* .....

The Consortium invited **Dr. Timothy Hazlett** of Hazlett-Kincaid Inc. for a sabbatical at the Geophysical Fluid Dynamics Institute (GFDI) of Florida State University. **Dr. Hazlett** is working with **Dr. Loper**, director of the GFDI, to develop new approaches to modeling ground water flow and transport in karstic settings.

waste load allocation to surface waters (TMDL).

Under the auspices of the Consortium and the GFDI, a series of seminars will be presented during the upcoming weeks to the Hydrogeology Group for input and comments on the modeling effort. These seminars will be held in the "reading Room" of the GFDI in the basement of the FSU's Keen (physics) Building.

The Consortium will be holding its annual technical workshop on November 8-9-2001 in Orlando. The workshop was partially funded by the FI. DEP's Hazardous Waste Regulation Section and is entitled "*New Approaches to Modeling Flow, Fate and Transport in Karst Settings*". Those interested in learning more about the Consortium or in participating in the workshop may visit <http://hydrogeologyconsortium.org/> or contact **Dr. Rodney DeHan** of the FGS at [rodney.dehan@dep.state.fl.us](mailto:rodney.dehan@dep.state.fl.us), or call him at (850) 488-9380.

In association with the Consortium, the GFDI and the FSU's Department of Geology, a hydrogeology colloquium series will be offered featuring experts in modeling, site characterization and ground water interaction with surface water. These colloquia will be held in the Department of Geology beginning September 24 and ending on November 19, 2001. Information on speakers and topics will be posted on the Consortium's Web page provided at left.

Progress made, to date, in developing modeling approaches for ground water flow and fate in karstic settings will be a major topic and a panel discussion at the workshop. Another topic of interest will be the interaction between surface and groundwater and the significance of such interaction in modeling

The Consortium's current chair, **Mr. John Vecchioli** will be moving to Tampa to enjoy full retirement with his grandchildren. As the Consortium's vice chair, **Dr. DeHan** will be the acting chair until the spring of 2002 when new officers will be elected.

## *New Publications of the Florida Geological Survey:*

### *Map Series 146*

*Geologic Map of the State of Florida*, by T.M. Scott, K.M. Campbell, F.R. Rupert, J.D. Arthur, T.M. Missimer, J.M., Lloyd, J.W. Yon, J.G. Duncan, 2001. Scale: 1:750,000.

### *Open File Report 80*

*Text to accompany the Geologic Map of Florida*, by T.M. Scott, 2001, 29 p.

### *Open File Report 81*

*Lithostratigraphic and Hydrostratigraphic Cross Sections Through Levy-Marion to Pasco Counties, Southwest Florida*, by J.D. Arthur, R.A. Lee and L. Li, 2001, 31 p.

### *Open File Report 83*

*Florida Aquifer Storage and Recovery Geochemical Study: Three year Progress Report*, by J. D. Arthur, J.B. Cowart, and A.D. Dabous, 2001, 46 p.

### *Special Publication 47*

*The Spring Creek Submarine Springs Group, Wakulla County, Florida*, by Ed Lane, 34 p.

### *Special Publication 48*

*Annotated and Illustrated Bibliography of Marine Subaqueous Sand Resources of Florida's Gulf of Mexico, 1942 - 1997*, by J. H. Balsillie and R. R. Clark, 2001, 253 p.

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## *Lake Jackson Celebration and Rededication*

The Lake Jackson Celebration and Rededication was held October 11, 2001 to thank the numerous individuals and organizations responsible for the restoration of the lake and educating the public. Many FGS staff members were involved in educating the public on the karst and hydrogeologic processes involved in the development and cyclic nature of Lake Jackson. The FGS received a plaque expressing Leon County's appreciation ~~for the Survey's efforts at the lake.~~ Dr. Tom Scott, Assistant State Geologist for Geological Investigations, was presented a Certificate of Accomplishment for his efforts in educating the public and scientific investigation of the Lake Jackson basin.



*Tom Scott descending into Porter Sink, one of the sinkholes at Lake Jackson.*

## News from the FSU Dept. of Geological Sciences



• **Dr. Neil Lundberg** takes over as Department Chair. **Dr. Lundberg** is a graduate from the University of California, Santa Cruz. He has been teaching Stratigraphy with the department since 1991. He is also involved with ongoing work on the Taiwan collision as well as work with the Himalayan-Bengal System.

• The “*Center for Earth Surface Processes Research*” was formed as the result of winning last year’s Cornerstone Centers of Excellence program funded by the Florida State University Research Foundation. The mission of the center is to pursue basic theoretical, experimental and field-based research necessary to elucidate and quantify surface processes at fundamental levels, and assimilate this information into next-generation numerical modeling capabilities that rival similar efforts in the ocean and atmospheric sciences.

• This past year marked the 50<sup>th</sup> Anniversary of the Department of Geological Sciences at FSU. The Carraway Building was rededicated by FSU President **Sandy D’Alemberte** to continue the fine tradition of geological research and education after major renovations were recently completed.

• FSU participates in the EDMAP component of the National Cooperative Geologic Mapping Program. The EDMAP program is designed by Congress to support geologic mapping education with matching funds from Universities. FSU has been funded by the program since 1998 and has supported sixteen independent, one-year graduate student quadrangle projects. Quadrangles mapped have included six from Alabama and fifteen from Georgia.

### ..... *Southwest Florida Water Management District*

### *dedicates a memorial site to Dr. Garald Parker* .....

by

Robert E. "Bob" Bretnall, Jr., PG  
Immediate Past President  
USF Geology Alumni Society

On Thursday, June 21, 2001, the Southwest Florida Water Management District dedicated a memorial site to **Dr. Garald "Jerry" Parker** who passed away in January 2000 at the age of 94.

**Dr. Parker** was a pioneer in the study of the hydrogeology of Florida, beginning at the United States Geological Survey (USGS) in Miami in 1940 and continuing at the District between 1969 and 1975. While at the USGS, Dr. Parker identified and named the Biscayne Aquifer, the Floridan aquifer, and defined the geologic structure of southern Florida. While at the District, Dr. Parker helped with the transition of the District's function from flood control to water management. From 1975 through the 1990s, Dr. Parker worked as a consultant, both in Florida and internationally.

Dr. Parker and his wife were active contributors to USF and a portion of his geologic documents are housed in the Special Collections Department at the USF library. Additional historical information about Dr. Parker's career is available at the following USGS and District web pages: <http://sofia.usgs.gov/memorials/parker/> and dedication of the memorial will be at its location on District owned property in the Green Swamp. This site was chosen because a portion of that property is also leased to the Lowry Park Zoo as an educational facility and as an endangered species preserve. In that way, young people will learn of one of our State's geologic pioneers.

Tony Gilboy at the District coordinated the dedication ceremony for the District.

## *Upcoming Geoscience Meetings*

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• *AAPG Annual Convention and Exhibition,*  
Houston, Texas, March 10-13, 2002

• *SEPM Research Conference - Aquifer  
Heterogeneity and Environmental Implications,*

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

JEB BUSH, GOVERNOR

DAVID B. STRUHS, SECRETARY

FLORIDA GEOLOGICAL SURVEY

WALTER SCHMIDT, STATE GEOLOGIST

FLORIDA GEOLOGY FORUM

EDITOR, PAULA POLSON AND FRANK RUPERT

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