

Wednesday, October 9, 2002

HGS Environmental and Engineering Geology Dinner Meeting

Rudy Lechner's, 2503 S. Gessner (1/2 block north of Westheimer)
Social 5:30 p.m., Dinner 6:30 p.m.

Cost: \$25 Preregistered members; \$30 Nonmembers & Walk-ups

Make your reservations now by calling 713-463-9476 or by e-mail to Joan@hgs.org (include your name, meeting you are attending, phone number, and membership ID#).

by John S. Jacob

Texas A&M Sea Grant Program and
Texas Agricultural Extension Service

Soil Features Common to the Houston Area (As Seen by a Soil Scientist)

Soil science focuses on a very thin layer of the earth's surface where biologic and physico-chemical processes join to form perhaps the most complex environment on the earth. To many field geologists, this zone that so occupies soil scientists is just a distraction before getting down to the "real" business. Yet the morphology and processes of this thin layer very much control what travels from the surface to deeper layers and what kind of transformations might occur during the trip.

In this presentation, I focus on common features that geologists might encounter during fieldwork in the Quaternary formations on the Upper Gulf Coast of Texas. We will examine features associated with our expansive soils, including gilgai and slickensides. We will also examine accumulations that occur in the soil, such as redoximorphic concentrations of iron (aka "mottles"), calcium carbonate or caliche, gypsum, and manganese. We will discuss what these pedogenic (soil-formed) concentrations tell us about the environment of their formation.

Biographical Sketch

JOHN S. JACOB holds a joint appointment with the Texas A&M Sea Grant Program and the Texas Agricultural Extension Service (Department of Soil and Crop Sciences). He has coast-wide responsibility for inland environmental problems that have a direct impact on the quality of our bays, estuaries, and coastal waters. Pre-eminent among these issues are the mitigation and abatement of runoff pollution from both rural and urban sources and the preservation and restoration of valuable natural habitats such as wetlands.

Dr. Jacob is trained as a soil scientist with a BS and a MS in soil sciences from Texas Tech University, and a PhD from Texas A&M University. He worked several years for the National Cooperative Soil Survey program in Texas, mainly in the coastal plain area. Dr. Jacob has been actively involved in the evolution of soil and site evaluation for on-site septic systems for several years. He teaches several short courses around the state on soil and site evaluation.

He is co-author of the *Texas Coastal Wetlands Guidebook*. He is recognized as a Professional Wetland Scientist by the Society of Wetland Scientists and a Certified Soil Scientist by the American Society of Agronomy.

Don't miss out on great food, great discussion, networking, and employment possibilities. Make your reservations now by calling: 713-463-9476 or by e-mail to joan@hgs.org (include your name, meeting you are attending, phone number, and membership ID#) or by fax at 713-463-9160. ■

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