

JOHN S. JACOB
Director, Texas Coastal Watershed Program
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PROFESSIONAL INTERESTS

Watershed Management, Sustainable Urban Development, Wetlands, Runoff Pollution,
Natural Resource Mapping and Assessment, Soil Science

EMPLOYMENT AND CONSULTING RECORD

- 1997-
prsnt **Director, Texas Coastal Watershed Program, Extension Environmental Quality Specialist and Coastal Community Development Specialist, Texas A&M Sea Grant and Texas Agrilife Extension Service (Dept. of Recreation, Parks, and Tourism Sciences).** Coastal Specialist for water quality, environmental issues, and coastal community development. Direct the Texas Coastal Watershed Program to provide education on the impacts of land use on water quality for local governments. Over \$3 million in grant funds to date. Direct Watersmart landscaping program for Texas Gulf Coast. Coordinate watershed partnerships. Application of geospatial technology for natural resource management and community development. Provide leadership statewide on soil and site evaluation issues for the on-site sewage industry. Direct a staff of 5-7 working on issues of urban sustainability with an annual budget exceeding \$400,000.
- 1996 **Senior Environmental Scientist, Fugro International, Inc. Houston, Texas.** Environmental impact assessments, oil and gas operations in South America. Performed base line assessments of tropical rainforest environments, including soils and land use, biological inventories, and water quality assessments. Impact evaluation and ranking, environmental management and mitigation plans. Major field work in Bolivia and Ecuador in Upper Amazon basin. Wetland Delineation and Permitting on Texas Gulf Coast and East Texas. Design of wetland mitigation projects.
- 1995 **Research Fellow, Environmental Institute of Houston, University of Houston-Clear Lake.** Taught graduate course in Wetland Geoecology. Environmental short courses in Wetlands and Environmental Site Assessment.
- 1994-
1995 **Assistant Training Specialist, Texas Engineering Extension Service.** Responsible for environmental short courses. Developed courses on wetland delineation and soil and

- groundwater remediation. Developed geology and soil modules for environmental site assessment courses. Taught chemistry and toxicology portions of hazardous materials courses. Development of environmental contacts in Mexico. Established working relationship with Instituto Tecnológico y de Estudios Superiores Monterrey ("Monterrey Tech").
- 1987- **Research Associate**, Texas A&M University. Supervisor, Soil Characterization
1994 Laboratory. Responsible for analyses in support of Texas soil survey and pedology research group. Supervision of graduate-student lab internships. Director, Cobweb Swamp Project (funded by National Geographic Society). Coordination of a multidisciplinary pedo-ecological reconstruction of a Maya wetland. **Teaching:** Introductory soil science laboratory.
- 1990- **Independent Consultant**. Gulf Coast wetlands and habitats. Extensive use of
prsnr geographic information systems and remotely sensed data. Preparation of soil maps and reports. Subcontracted to several consulting firms in the Houston area, working on at least 100 wetland projects, from a few acres to over 5,000 acres each.
- 1991- **Staff Geoarchaeologist**. New Rio Hondo Archaeology Project, northern Belize.
1993 Reconstruction of past environments (Holocene) and investigation of ancient Maya wetland agriculture.
- 1993- **Staff Geoarchaeologist**. Regional Archaeological Investigation of the Northern
Prsnr Peten, Guatemala (RAINPEG) Project. Investigation of past and present environments (Quaternary) in the central Maya lowlands. Investigation of Maya adaptations to wetland environments.
- 1992 **Independent Consultant**. Contracted by the International Union for the Conservation of Nature to evaluate soils and hydrology for a rehabilitation of indigenous agrotechnology (ancient raised fields in wetlands) in Peten, Guatemala.
- 1991 **Forensic Pedologist**. Evaluated soil samples on murder victim for District Attorney, San Diego, California. Identification of provenience of soil contributed to confession of accused.
- 1989 **Independent Consultant**. Soil resource investigation of Yalbac Ranch, Belize. Evaluation of soils and landscapes. Interpretations for citrus and vegetables.
- 1987- **Independent Consultant**. Soil archaeological investigations in conjunction with the
1992 Archeological Research Laboratory, Texas A&M University. Evaluation of site formation parameters and reconstruction of site evolution. Research of paleoclimatic signatures in soil organic matter and carbonates. Research of soil chemical signatures (e.g., phosphorous accumulations) of human influence.

- 1983- **Soil Scientist**, USDA-Soil Conservation Service. Soil survey in Victoria and
1987 Brazos counties, Texas. Competent in all phases of mapping, classification, and correlation. Identification of geomorphic surfaces and geologic framework. Identification of major vegetative communities. Quantification of map unit composition: transects and statistical analysis. Establishment of several new soil series.
- 1979- **Student Worker and Graduate Research Assistant**. Texas Tech University,
1983 Lubbock, Texas. Advanced chemical and mineralogical analyses of soils. Research towards completion of Masters degree. Research of mineral stability in volcanic soils of the Texas Trans-Pecos.
- 1973- **Staff Sergeant**, United States Air Force, Reese AFB, Lubbock, Texas. Managerial
1979 and supply experience in dental clinic. Coordination of preventive dentistry programs for public. Supervised up to 5 subordinates.
- 1971- **Field Promoter**, Alma de Centroamerica, Guatemala City, Guatemala. Principal
1973 field promoter in highland strawberry project. Provided technical assistance on cultivation and irrigation. Formation of producer cooperatives. Development of market strategies.

EDUCATION

- 1992 **Ph.D.** Pedology, Texas A&M University. Dissertation: "The Agroecological Evolution of Cobweb Swamp, Belize."
1984 **M.S.** Soil Science (Pedology and Mineralogy), Texas Tech University. Thesis: "Persistence of a Zeolite in Tuffaceous Soils of the Texas Trans-Pecos."
1981 **B.S.** Soil Science, Texas Tech University.

TEACHING EXPERIENCE

- Watershed Management Short Course*. 1 week. Taught twice in Villahermosa, Tabasco, Mexico. 2006 and 2007.
- Basic Introduction to Watersheds*. Short course for highland campesinos in Guatemala. November, 2007. 2-day course.
- Wetlands: Processes and Functions*. Lecture for Texas Master Naturalists.
- Urban Growth: Environmental and Quality of Life Issues*. Lecture for Texas Master Naturalists, local citizens, and local officials.
- Web-Based Soil and Site Evaluation Basic Introduction*. 8-hr CEU credit course for the Texas On-site Sewage Facility program (TCEQ).
- Soil and Site Evaluation*: One-day course, taught at least 10 times, 1997-2001.
- The Geoecology of Wetlands*: 3-hour graduate course, taught 3 semesters (University of Houston - Clear Lake, 1995 to present).
- Introductory Soil Science*: 1-hour laboratory undergraduate course, taught 1 semester (Texas A&M University).
- Wetland Delineation Certification Course*: 40-hour short course, taught 9 times (Texas Engineering Extension Service, University of Houston - Clear Lake, and Texas

Cooperative Extension).

Environmental Site Assessment, Phase I (Investigation): 30-hour short course, taught 3 times (Texas Engineering Extension Service) 1993-1995.

Environmental Site Assessment, Phase II (Sampling): 30-hour short course, taught 5 times (Texas Engineering Extension Service) 1993-1995.

PERSONAL

Born April 14, 1953, Utah. Married. Bilingual (Spanish-English). High school in Guatemala (Liceo Javier).

PROFESSIONAL LICENSES AND AFFILIATIONS

Professional Geoscientist, State of Texas License No. 1423; Professional Wetland Scientist, No. 176, Society of Wetland Scientists. Member: Society of Wetland Scientists, American Planning Association, American Water Resources Association, Congress for the New Urbanism, Urban Land Institute.

GRANT HISTORY

- 2008 \$300,000. Texas Commission on Environmental Quality. **Watershed Strategies Implementation.**
- 2007 \$170,000. Galveston Bay Estuary Program. **Dickinson and Armand Bayous watershed protection plans.**
- 2006 \$180,000. Houston Endowment. **Watersmart Landscaping for Houston: the Habitat Highway.**
- 2006 \$45,000. Texas General Land Office. **Coastal CHARM (Community Health and Resource Management): Rockport/Aransas County Planning Charrettes.**
- 2006 \$15,000. USEPA/NOAA. **Smart Growth Implementation Grant: Houston Midtown Transit Oriented Development.**
- 2006 \$75,000. Texas General Land Office. **Wetlands Restoration Team.**
- 2006 \$90,000. Texas General Land Office. **Wetlands for Dickinson Bayou.**
- 2005 \$125,000. Galveston Bay Estuary Program. **Urban Watershed Education.**
- 2004 \$50,000. Texas General Land Office, Coastal Management Program. **Watersmart Landscaping Demonstrations for the Upper Gulf Coast.**
- 2004 \$80,000. Texas General Land Office. **La Cuenca Cuenta: Hispanic watershed outreach in the East End Barrio of Houston.**
- 2004 \$200,000. Texas Commission on Environmental Quality. **Arroyo Colorado Water Quality Restoration Plan**
- 2003 \$100,000. Galveston Bay Estuary Program. **Mapping of Wetland Loss in the Lower Galveston Bay Watershed.**
- 2002 \$80,000. Texas General Land Office. **"No La Riegues" water conservation campaign in Spanish.**

- 2002 \$60,000. Texas General Land Office. **Armand Bayou Watershed Working Group coordinator.**
- 2002 \$39,000. Galveston Bay Estuary Program. **Texas Coastal Wetlands Web Site.**
- 2002 \$118,000. Texas General Land Office. **Non-Point Education for Municipal Officials (NEMO) startup grant for Texas.**
- 2002 \$75,000. National Oceanic and Atmospheric Administration (NOAA). **Texas Coastal Watershed Program startup grant (companion to NEMO).**
- 2002 \$150,000. Houston Endowment. **Watersmart Landscaping for Houston.**
- 2001 \$120,000. Galveston Bay Estuary Program. **Urban Wetlands to Treat Stormwater Runoff.**
- 2000 \$83,000. Texas On-Site Wastewater Treatment Council. **Synoptic Maps of Shallow Groundwater in Montgomery County, TX.**
- 1998 \$34,000. Galveston Bay Estuary Program. **Neighborhood conservation landscaping.**
- 2000 \$44,000. Galveston Bay Estuary Program. **Wetland Conservation Map for Clear Creek Watershed.**
- 1999 \$15,000. Texas Natural Resource Conservation Commission. **A Synthetic Literature Review of Soil Water Tables as They relate to On-Site Sewage Systems.**
- 1998 \$25,000. Texas General Land Office. Coastal Management Program. **Guidebook for Texas Coastal Wetlands.**
- 1998 \$350,000. **Environmental Protection Agency and Texas State Soil and Water Conservation Board. Clean Water for Armand Bayou: Runoff Pollution Education and Abatement.**
- 1990 \$24,000. National Geographic Society #4274-90. **Agroecological Evolution of Cobweb Swamp, Belize.** (Principal Investigator).

PUBLICATIONS

Refereed Journal Articles

- Jacob, J.S., and R. Lopez. *In review.* **Is greener denser? A model for evaluating higher density development as an urban stormwater-quality best management practice.** Journal of the American Planning Association.
- Schuetz, M.A., J.S. Jacob, J. Lu, and L. Respess. *In review.* **Keeping our charm: Residents, growth, and quality of life issues in a small but growing Texas coastal community.** Journal of Extension.
- Hansen, R.D., S. Bozarth, J. Jacob, D. Wahl, T. Schreiner. 2002. **Climatic and Environmental Variability in the Rise of Maya Civilization: A Preliminary**

- Perspective from Northern Peten.** *Ancient Mesoamerica*, 13:273-295.
- Nordt, L.C., T.W. Boutton, J.S. Jacob, R.D. Mandel. 2002. **C₄ plant productivity and climate-CO₂ variations in South-Central Texas during the Late Quaternary.** *Quaternary Research* 58:182-188.
- Jacob, J.S. and C.T. Hallmark. 1996. **Holocene stratigraphy of Cobweb Swamp, a Maya Wetland in Northern Belize.** *Geological Society of America Bulletin* 108: 883-891
- Jacob, J.S. 1995. **Ancient wetland agricultural fields at Cobweb Swamp, Belize: Construction, chronology, and possible function.** *Journal of Field Archaeology* 22:175-190
- Pohl, M.D., K.O. Pope, J.G. Jones, J.S. Jacob, D.R. Piperno, S.D. deFrance, D.L. Lentz, J.A. Gifford, M.E. Danforth, J.K. Josserand. 1996 **Early Agriculture in the Maya Lowlands.** *Latin American Antiquity*. 7:355-372.
- Alcala, J., J.S. Jacob, M. Machain-Castillo, and R. Neck. 1994. **Holocene paleosalinity as inferred from the microfossil assemblage in a Maya wetland, Belize.** *Quaternary Research* 41:121-130.
- Machain-Castillo, M.L. F.R. Gío-Argaez, J.A. Alcalá-Herrera, and J.S. Jacob. 1992. **Ostrácodos del Holoceno del norte de Belice y su interpretación paleoambiental.** *Revista de la Sociedad Mexicana de la Historia Natural*. 43:87-94.
- Jacob, J.S. and L.C Nordt. 1991. **Soil and landscape evolution: A paradigm for pedology.** *Soil Sci. Soc. Am. J.* 55:1194.
- Jacob, J.S. and B.L. Allen. 1990. **Persistence of a zeolite in tuffaceous soils of the Texas Trans-Pecos.** *Soil Sci. Soc. Am. J.* 54:549-554.

Books

- Moulton, D.S., and J.S. Jacob. 2000. **Texas Coastal Wetlands Guidebook.** Texas Sea Grant. 66p. TAMU-SG-00-605. College Station.

Refereed Book Chapters

- Jacob, J.S., R. Griffin, L.P. Wilding, W.L. Miller. 1997. **Aquerts and Aquertic soils: A querulous proposition.** *In* M. Vepraskas and S. Sprecher, eds., *Aquic Conditions and Hydric Soils: The Problem Soils.* Soil Science Society of America Special Publication No. 50. Madison, WI.
- Pope, K.O., M.D. Pohl, and J.S. Jacob. 1996. **Formation of ancient Maya wetland fields: Natural and anthropogenic processes.** pp. 165-176 *In*: S. Fedick (ed.). *The Managed Mosaic: Ancient Maya Agriculture and Resource Use.* University of Utah Press, Salt Lake City.
- Jacob, J.S. 1995. **Archaeological pedology in the Maya lowlands.** *In* M. Collins, ed., *Pedological perspectives in archeological research.* Soil Science Society of America. Soil Science Society of America Special Publication 44. Madison, WI.

- Jacob, J.S. 1995. **Perspectivas edafológicas sobre la agricultura en las chinampas: observaciones iniciales.** *In*, T. Rojas Rabiela, ed., *Presente, pasado, y futuro de las chinampas*. Centro de Investigaciones y Estudios Superiores en Antropología Social, Mexico, D.F.
- Nordt, L.C., L.P. Wilding, C.T. Hallmark, and J.S. Jacob. 1996. **Carbon isotope composition of soil carbonates and their use in studying pedogenesis.** *In*: S. Yamaski and T.L. Boutton (eds.), *Mass spectrometry of soils*. Marcel Dekker Inc.
- Nordt, L.C., J.S. Jacob, and L.P. Wilding. 1991. **Map unit composition and quality assurance in soil survey.** *In* L.P. Wilding and M. Mossbauch (ed.). *Spatial variabilities of soils and landforms*. Soil Science Society of America Special Publication No. 28. Madison, WI.

Extension Bulletins and Pamphlets

- Shafer, S. and J.S. Jacob. 2006. **The Value of Small Urban Parks, Plazas, and other Outdoor Spaces.** Texas Cooperative Extension. E-426.
- Jacob, J.S., and D. Crossley. 2005. **Choices for Growth: Quality of Life and the Natural Environment.** TAMU-SG-05-701.
- Jacob, J.S. 2001. **WaterSmart Landscapes, Upper Gulf Coast.** Extension pamphlet. Texas Cooperative Extension.
- Jacob, J.S. 2001. **Five Tips for Organic Lawn Care on the Upper Texas Gulf Coast.** Extension pamphlet. Texas Cooperative Extension.
- Jacob, J.S. 2000. **Soil and site evaluation manual for on-site septic systems.** Manual for 8-hr short course. Texas Cooperative Extension.
- Hollin, D., J. Massey, J. Jacob, and G. Treece. 1998. **Airing out the problem: Methods of reducing water quality impacts and fish kills in coastal marinas.** Marine Advisory Bulletin. TAMU-SG-98-503, Texas Sea Grant College Program, Texas A&M University, College Station.

Popular Articles

- Jacob, J.S. 2004. **Transportation: Which Future is 2025 Plan For?** Houston Chronicle Op-Ed page, Wednesday, June 24. Article addressing transportation and land use issues.
- Jacob, J.S. 2004. **One suburbanite's view: Core of Houston must grow, prosper.** Houston Chronicle Op-Ed front page, Sunday, January 16. Article on the advantages of dense urban growth for environmental and urban quality of life issues.
- Jacob, J.S. 2001. **What we can control: Damage from the flooding.** Houston Chronicle Op-Ed page. Wednesday, June 20th. Article on the implications of Tropical Storm Allison for local patterns of development.

Jacob, J.S. 1999. **Washington's answers won't do to save Houston's wetlands.** Houston Chronicle Outlook Section, front page. Sunday, August 22.

Web-based Documents

Jacob, J.S., Lopez, R. 2004 . **No La Riegues** Spanish language runoff pollution education site. (www.Nolariegues.com).

Vojta, M., Jacob, J.S., Lopez, R. 2004. **Armand Bayou Watershed Web Site** (www.armandbayou.org).

Jacob, J.S., Lopez, R. 2003. **Texas Coastal Watershed Program Web Site** (www.urban-nature.org)

Jacob, J.S., Lopez, R. 2003. **Texas Coastal Wetlands Web Site** (www.texaswetlands.org)

Jacob, J.S., LaChance, C. 2002. **Watersmart Web Site** (www.watersmart.cc).

Jacob, J.S., Lopez, R., 2002. **Clear Creek Watershed Wetland Habitat Atlas.** Hard copy map and ARCIMS web site (www.urban-nature.org).

Contract and Other Reports

Jacob, J.S. 2007. **Legal and policy frameworks for adaptation to climate change in the U.S. Gulf Coast region: Wetlands and the Built Environment.** Contract reports to the Organization for Economic Cooperation and Development. Paris.

Jacob, J.S., and L. Respass. 2006. **The Aransas Quality of Life Survey.** Contract project for the Texas General Land Office.

Jacob, J.S., R. Lopez, and H. Biggs. 2007. **Anticipated local response to sea level rise on the Texas Coast: A first approximation.** Contract report to USEPA.

Jacob, J.S. and Lopez, R. 2005. **Freshwater Wetland Loss in the Lower Galveston Bay Watershed.** Contract report to the Galveston Bay Estuary Program.

Kim Crumpler, Ricardo Lopez, John Jacob, Rajavan Srinivasan. 2005. **Linking Land Use to Water Quality through Geospatial Technology: A Case Study for the Houston-Galveston Area.** Contract report to the Texas General Land Office.

Mandel, R.D., Jacob, J.S., and Nordt, L.C. 2004. **Geoarchaeology of the Richard Beene Site.** *In:* Archaeological and Paleoecological Investigations at the Richard Beene Site 41BX831 -South Central Texas. A.V. Thoms and R.D. Mandel, eds. Reports of Investigations No. 8. Center for Ecological Archaeology, Texas A&M University, College Station, Texas.

Jacob, J.S. 2002. **Analysis of Wetlands at the Bayport Site.** Two contract reports for the Galveston Bay Preservation and Conservation Association, Houston, Texas.

- Jacob, J.S. 2002. **Pilot Study for Shallow Groundwater Maps for On-Site Evaluation.** Final Contract Report to the Texas On-Site Wastewater Treatment Research Council. Austin, TX.
- Jacob, J.S. 2000. **Evaluation of shallow groundwater tables for on-site septic systems: A synthetic review of the literature.** Contract report to the Texas On-Site Wastewater Research Council.
- Jacob, J.S. 1994. **Evidencia para cambio ambiental en Nakbé, Guatemala.** *In* VII Simposio de Investigaciones Arqueológicas en Guatemala. J.P Laporte and H.L. Escobedo, eds. pp 275-280. Ministerio de Cultura y Deportes, Instituto de Antropología e Historia. Asociación Tikal. Museo Nacional de Arqueología y Etnología, Guatemala.
- Waters, M.W. and J.S. Jacob. 1991. **Geological and pedological investigations of Site 41HR273.** *In* H.B. Ensor and D. Carlson (eds.). Alabonson Road: Early ceramic period adaptation to the inland Coastal Prairie zone, Harris County, Southeast Texas. Report of Investigations No. 8. Archeological Research Laboratory. Texas A&M University, College Station, TX.
- Jacob, J.S., and C.T. Hallmark. 1988. **Soil descriptions and analyses.** *In* Archaeological investigations at 41HR530 and 41HR608, Langham Creek, Addicks Reservoir, Harris Co. Texas. Report of Investigations No. 6. Archeological Research Laboratory, Texas A&M University, College Station, Texas.

CONFERENCES ORGANIZED

II Workshop/Symposium on Coastal Ecosystems of the Gulf of Mexico and Caribbean. June 2007. Co-convened with Universidad Autónoma Juárez de Tabasco and Universidad Veracruzana. Villahermosa, Tabasco, Mexico. (www.golfo-de-mexico.org)

Density by Design. May 2004. Co-Conveners: Houston-Galveston Area Council, Gulf Coast Institute of Houston. Sponsored by Main Street Coalition (Houston), Galveston Bay Estuary Program, and the Houston Chapters of the American Institute of Architects and the American Planning Association. Exploring the relationship between well-designed dense cities and environment and quality of life in Houston. (www.densitybydesign.org)

A Watershed Event: Habitat, Flooding, and Development in Houston. November 2001. Cosponsored with Gulf Coast Institute, Galveston Bay Estuary Program. Exploring sustainable urban patterns for Houston's future.

PROFESSIONAL PAPERS PRESENTED

La Tormenta Perfecta: Crecimiento Poblacional y el Cambio Climático (The Perfect Storm: Population Growth and Climate Change). Invited paper. Internacional Panel on Climate Change: The Coastal Zone in Crisis in the Gulf of Mexico, the Caribbean, and the Mediterranean. August 30, 2007. Instituto de Ecología. Xalapa, Veracruz, Mexico.

Conservación y Restauración del Hábitat Urbano: Reto Principal para la Integridad Ecológica del Golfo. (Conservation and Restoration of Urban Habitat: Principal Challenge for the Ecological Integrity of the Gulf of Mexico). Invited paper. Tercer Encuentro Internacional del Mar. Coatzacoalcos, Veracruz, Mexico. August, 2007.

Urban Open Space: Ecology and Conservation. April 2007. Invited paper. American Society of Landscape Architects Texas meetings. Houston, TX

Changing Tides: Development, climate change, and habitat on the Texas Gulf Coast. April 2007. Invited keynote presentation. Texas Bays and Estuaries Symposium. University of Texas Marine Science Institute, Port Aransas, Texas.

Houston Growth: A Watershed Event. January 2007. State of the Bay (Galveston) Annual Symposium. Invited plenary session paper. Galveston, TX.

Having your cake and eating it too: Quality of Life and the Environment. January 2007. Volunteered presentation. State of the Bay (Galveston) Annual Symposium. Galveston TX.

Houston Growth: A Watershed Event. 2007. Association of Collegiate Schools of Planning national conference. Fort Worth, TX

Higher or lower Density? What gives the best bang for the buck for mitigating the effects of development? J.S. Jacob and Ricardo Lopez. American Water Resources Association National GIS Specialty Conference. Houston, TX. May 2006.

Rapid and Massive Wetland Loss on the Upper Gulf Coast of Texas: Results of a rapid and inexpensive GIS-based assessment. Ricardo Lopez and J.S. Jacob. American Water Resources Association National GIS Specialty Conference. Houston, TX. May 2006.

The Years of Living Dangerously: Development and Coastal Hazards on the Texas Gulf Coast. Sigma Xi Conference. Texas A&M University, College Station, TX. Invited. March 30, 2006

Sea Grant's Coastal Community Development Program. National Association of Community Development Extension Professionals. National meeting. San Antonio, TX. February 2006.

Resilient Coastal Communities: The Smart Growth Imperative. January 2006. 8th Annual Southern and Caribbean Regional Meeting. NOAA Coastal Service Center and Office of Coastal Resource Management. Panama City, Florida.

The New "Urban Grant": Imagining the Role of Extension in Developing Sustainable Cities. Invited paper. New Partners for Smart Growth national conference. Miami, FL. January 2005.

Smart Low Impact Development: Integrating Smart Growth and Low Impact Development. Invited paper. Coastal Zone 05. New Orleans. July 2005

Habitat and Runoff—the linkages. Invited paper. State of the Bay Symposium. Houston. January 2005.

The Isolated State of Texas Coastal Wetlands. Invited paper. Fifth Biennial Coastal Issues Conference, hosted by the Texas General Land Office. March, 2004, Corpus Christi, Texas.

The City by the Bay. Invited paper. State of the Bay Symposium. Moody Gardens, Galveston, TX. January, 2003.

The Nature of Coastal Cities: Patterns of Sustainable Development. J.S. Jacob. Invited Paper. The Coastal Society. 18th International Conference, Galveston, Texas. May 2002.

Reclaiming the Bayou City: Learning to Live in the Houston Gulf Coast Watersheds. J.S. Jacob. A Watershed Event: Flooding, Development and Habitat on the Houston Gulf Coast. Houston, Texas, November, 2001.

State of the Wetlands. J.S. Jacob. Invited paper. State of the Bay Symposium. Moody Gardens, Galveston, TX. January, 2001

Clean Water for Armand Bayou: A watershed partnership. J.S. Jacob. State of the Bay Symposium (hosted bi-annually by the Galveston Bay Estuary Program). Moody Gardens, Galveston, TX. January, 1999.

Patterned grounds for dismissal: Hypothesis testing and ancient land use in Mesoamerica. J.S. Jacob. Invited paper, Association of American Geographers annual meetings, Ft. Worth, Texas May, 1997.

Evidencias para cambio ambiental en la cuenca Mirador, Petén, Guatemala. J.S. Jacob. Invited paper, V Simposio de los Investigadores de la Cultura Maya. Universidad Autónoma de Campeche, Campeche, México. November 1995.

Aquerts and aquertic soils: A querulous proposition. J.S. Jacob, R. Griffin, W. Miller, and L. Wilding. Invited paper, special symposium on Problem Hydric Soils, Soil Science Society of America annual meetings, November 1994. Seattle, WA.

$\delta^{13}C$ of paleosol organic carbon indicates vegetation and climate changes during the past 15,000 years in the Southern Great Plains. Nordt, L.C., T.W., Boutton, J.S. Jacob, and R. Mandel. 1995 Annual Meeting, Ecological Society of America.

Todorokite in manganese oxide nodules of a Guatemalan Vertisol. J.B. Dixon, J.S. Jacob, and G.N. White. Soil Science Society of America annual meetings, November 1994. Seattle, WA.

La evaluación de los impactos ambientales en operaciones petroleras. J.S. Jacob. Universidad LaSalle Environmental Symposium for Pemex. Mexico City, November 1994.

Archaeological pedology in the Maya lowlands. J.S. Jacob. Invited paper, special symposium on Pedological Perspectives in Archeological Research, Soil Science Society of America annual meetings, November 1993, Cincinnati, OH.

Late Quaternary landscape evolution and paleoenvironments in the Medina River valley, South-Central Texas. R.D. Mandel, L. Nordt, and J.S. Jacob. Association of American Geographers 91st Annual Meeting, Chicago IL, 1995.

A Tropohemist in Belize: An 8000-yr record of paleosalinity in a Maya wetland. J.S. Jacob and Javier Alcala. Soil Science Society of America annual meetings, November 1992. Minneapolis, MN.

The Maya Clay: Late Classic sedimentation in wetlands of northern Belize. J.S. Jacob. Society for American Archaeology, 1992 Annual Meetings, Pittsburgh, Pennsylvania.

Agroecological evolution of Cobweb Swamp, Belize. J.S. Jacob. International conference on ancient Maya agriculture and biological resource management. University of California at Riverside, August 1991.

Holocene landscape evolution and the Maya at Colha, Belize. J.S. Jacob. International Congress of Americanists, July 1991, New Orleans, LA.

Cobweb Swamp: Stable isotope and microfossil reconstruction of a Holocene Maya Wetland. J.S. Jacob and Javier Alcala. Geological Society of America annual meetings, San Diego, CA, 1991.

Stable carbon isotope ratios of organic matter and carbonates from a paleosol in East-Central Texas. J.S. Jacob, T.W. Boutton, and L.C. Nordt. Soil Science Society of America annual meetings, 1990, San Antonio, TX, and Ecological Society of America, 1991, San Antonio, Texas.

Pedochemical cycling of sulfur in East-Central Texas. J.S. Jacob. Soil Science Society of America annual meetings, 1989, Las Vegas, NV.

Maya raised fields in the Cobweb Swamp Area, Belize: a pedoarchaeologic assessment. J.S. Jacob. Poster presentation, SSSA meetings, 1987, Atlanta, GA; oral presentation, Society for American Archaeology, 1988, Phoenix, AZ, and Conference of Latin Americanist Geographers, 1989, Queretaro, Mexico.

Gypsic horizons in soils of East-Central Texas. J.S. Jacob. Soil Survey and Land Resource Workshop, 1987, TAMU, College Station, TX

Pleistocene Colorado delta, Texas: Soils and geomorphology. J.S. Jacob. Soil Science Society of America annual meetings, 1986, New Orleans, LA

Probabilistic analysis of soil water tables. J.S. Jacob and W. Miller. Professional Soil Scientist Association of Texas annual meeting, 1985, Beaumont, TX

Persistence of a zeolite in tuffaceous soils, Trans-Pecos Texas. J.S. Jacob and B.L. Allen. Soil Science Society of America annual meetings, 1983, Washington, D.C.