

KAREN A. WESTPHAL

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Our environment is critical to our continuity and quality of life. I devote my energies to the understanding and enjoyment of the natural world in all its many facets - gentle, introspective sunrises to powerful, land-blasting hurricanes.

EDUCATION:

Bachelor of Science (Zoology)-1978, Louisiana State University, Baton Rouge, LA.

29 years research and training in the vegetation, habitats, geography, geology, coastal processes, and biogeomorphology of coastal Louisiana

RESEARCH AND PROFESSIONAL EXPERIENCE:

EMPLOYMENT:

Feb 09-present. **Science Coordinator and Atchafalaya Basin Program Director** for the National Audubon Society Gulf Coast Initiative in Baton Rouge, La.

Aug 76-present. **Freelance Biological Illustrator and Graphic Artist.**

June 89 - present. **Scientific Consultant:**

Photo-interpretation, habitat delineation, ecological oil spill response

Dec 07-Jan 09. **Research Associate V:** Coastal Scientist, Principal Investigator, and Aerial Video Survey Program Manager for the Pontchartrain Institute for Environmental Sciences (PIES) at the University of New Orleans.

Jan 97-Jan 09. **Research Associate IV: Louisiana State University, School of the Coast & Environment Special Programs.** Coastal Scientist, Principal Investigator, executive assistant, project manager, and Aerial Video Survey Program Manager; Jan 2005-Jan 09: part-time program manager for Dr. Robert Twilley and the CLEAR program.

1994-Dec 96. **Research Associate III-IV: LSU Coastal Studies Institute.** Coastal scientist and database manager for Dr. Shea Penland.

Dec 92-94. **Research Associate III: LSU Center for Coastal Energy and Environmental Resources (CCEER).** Coastal scientist and database manager for Dr. Shea Penland.

Feb 84-Dec 92. **Research Associate III: Louisiana Geological Survey.** Coastal scientist and database manager for Coastal Geology Section and Dr. Shea Penland.

Oct 83-Feb 84. **Natural Resource Project Specialist II: Louisiana Geological Survey.** Geological technician and graphic artist for Dr. Tom Moslow and Shea Penland.

Apr 83-Aug 83. **Research Associate II: LSU Center for Wetland Resources.** Biochemist for Dr. Irv Mendelssohn and Dr. Karen McKee.

Mar 82-Nov 82. **Research Associate II: LSU Center for Wetland Resources.** Ichthyoplankton lab technician for Dr. Rich Shaw.

Jul 81-Mar 82. **Research Associate II: LSU Center for Wetland Resources.** Graphical artist and biological illustrator.

Aug 78-Jun 81. **Research Associate II: LSU Center for Wetland Resources.** Marine biologist for Drs. Walt and Jean Sikora.

PROFESSIONAL EXPERIENCE:

- Administrative-- Keep track of salary funds and allocations on 10-15 related contracts; preparation of budgets for proposals and new contracts; subcontracting; organize and manage large field and computer oriented contracts; organize and manage consortiums for aerial video survey flights; program management for multi-task, multi-sub accounts.
- Writing, publication-- author/co-author reports, posters, presentations and publications; coordination of technical input for cartographic products, presentations, and proposals.
- Video—Manager for aerial video surveys of shorelines from a helicopter since 1986; video camera operator, flight technician and still photography; selecting and purchasing equipment to integrate into audio/video system, field video equipment technician; video editing, copying, conversion of analog video to digital data and digital data to analog; creation of a digital video indexing system on DVDs; digital video indexed to GPS generated flight line with Red Hen System and GIS through Media Mapper.
- Photography—Slides/imagery taken on all field excursions; slide documentation of field work and vegetation planting projects, many published in reports, magazines, books, etc.; copystand work, darkroom experience, slide duplications, digital scanning, digital imagery; comparison two time-period photo-pairs; multi-time-period timeseries (see http://www.eowind.com/LA_Coastal_Timeseries/web-content/index2.html for examples).
- Geomorphic – Aerial photo-interpretation by ZTS or computer: land/water interface including along a low-relief, mud or silt shoreline, coastal change, biogeophysical mapping, coastal vegetation identification and habitat determination; hurricane studies.
- Oil Spill-- Supported oil spill response activities including SCAT since 1989: ecological impact assessment, creation or compiling oiling maps, oil spill training sessions, aerial video flights, data management.
- Illustrating-- Technical and graphical illustrations rendered in pen and ink, graphite, water color and other mediums or converted to digital formats for scientific publications and records, text books, brochures, technical poster sessions, color slides, logos, etc. drawing maps, charts, tables, diagrams, animals, and pasting up text for publications, presentations, exhibits, and slides, design of exhibit booths.
- Geology-- Assisted with the handling and processing of sediment cores including splitting, trimming, peeling, slabbing for radiography, sampling for grain size analysis, and maintaining a photographic record of all cores.
- Field-- elevation and vegetation profile surveys with field sampling in very remote and difficult areas. Small boat handling: sailboat, skiff, 19 or 22 ft Boston Whaler, canoe, pirogue. Tow and launch boats, operate trucks with standard transmission. Perform minor mechanical repairs and operate various types of machinery. Trips via helicopter, boat, airboat, float plane, zodiac or waders. Proficient with machete and kicking alligators off the transect lines.
- Laboratory-- running bioassays; compilation and organization of data; development and refinement of laboratory techniques.
- Biological-- taxonomic identification of plants; habitat delineation; benthic and planktonic meiofauna samples, marine fish larvae, fish eggs, and invertebrates; vegetation and its role in erosion and geomorphology; bioassays for protein, ATP, sediment sulfides, and specific enzymes and metabolites as indicators of environmental effects on marsh plants; maintaining laboratory plants in a green house, maintained controlled-condition salt water aquariums of study animals.
- Supervisory-- Train and coordinate other aerial photo interpreters, organize and supervise numerous student workers within a laboratory, coordinate and supervise numerous research associates in field-oriented contracts.

- Computer-- data management, data analysis, digitizing, graphics, digital imagery, video editing, web design and web site management: Wordperfect, Word, Excel, Photoshop, Illustrator, WinTV, Power Point, DVD Studio Pro, Final Cut Pro, Adobe GoLive, Adobe Acrobat Professional, Red Hen System, etc. IBM and Apple. You got it – I'll learn it.
- Instructor, exhibitor-- Conduct demonstrations for remote sensing classes on use of aerial video; afternoon informal seminar on video mapping; numerous conference exhibits for video or scientific results of projects; presentation at conferences.

SELECT PUBLICATIONS

- Westphal, K.A., 2009. Louisiana Barrier Island Comprehensive Monitoring Program; Volume 1: Barrier Shoreline Post-Storm Assessment. Department of Natural Resources Coastal Management Division internal report. Baton Rouge: Louisiana State University. In 5 parts; 21 DVDs.
- Westphal, K.A., and Paulsell, R., 2004. Aerial Video Survey of the lower Mississippi River on DVDs Year Two Report: Baton Rouge to Arkansas. Louisiana Applied and Educational Oil Spill Research and Development Program Technical Report Series 04-010. Baton Rouge: Louisiana State University. 25 pp + 3 app., 8 DVDs
- Westphal, K.A. and S. Penland 2003. Use of Oblique Aerial Video Imagery as a Resource for Coastal Issues. The International Petroleum Environmental Conference, November 13, 2003. Renaissance Houston Hotel, Houston, Texas.
- Westphal, K.A., Paulsell, R., and Narayanan, P., 2003. Aerial Video Survey of the lower Mississippi River in Louisiana on DVDs Year One Report: 1996 Baton Rouge to the Gulf of Mexico. Louisiana Applied and Educational Oil Spill Research and Development Program Technical Report Series 03-007. Baton Rouge: Louisiana State University. 24 pp + 3 app., 7 DVDs.
- Westphal, K.A., 2002. Aerial Videotape Survey of Coastal Louisiana - 2001; Converted to Digital Video on 8DVDs. Louisiana Applied and Educational Oil Spill Research and Development Program Technical Report Series 02-012. Baton Rouge: Louisiana State University. 28 pp + app., 8 DVDs.
- Ritchie, W., Westphal, K.A., McBride, R.A., and Penland, S.P., 1989. Coastal Sand Dunes of Louisiana: The Isles Dernieres. Joint publication of the Louisiana Geological Survey, Baton Rouge, La. and the Dept. of Geography, Aberdeen University, Scotland. Coastal Geology Technical Report No. 5.
- Ritchie, W., Westphal, K.A., McBride, R.A., and Penland, S.P., 1990. Coastal Sand Dunes of Louisiana: The Plaquemines Shoreline. Joint publication of the Louisiana Geological Survey, Baton Rouge, La. and the Dept. of Geography, Aberdeen University, Scotland. Coastal Geology Technical Report No. 6.
- Ritchie, W., Westphal, K.A., McBride, R.A., and Penland, S. 1992. Coastal Sand Dunes of Louisiana: Chandeleur Islands Shoreline. Joint publication of the Louisiana Geological Survey, Baton Rouge, La. and the Dept. of Geography, Aberdeen University, Scotland. Coastal Geology Technical Report No. 7.
- Ritchie, W., Westphal, K.A., McBride, R.A., and Penland, S. 1995. Coastal Sand Dunes of Louisiana: Bayou Lafourche Barrier Shoreline. Joint publication of the Louisiana Geological Survey, Baton Rouge, La., Louisiana State University, Baton Rouge, La., and the Dept. of Geography, Aberdeen University, Scotland. Coastal Geology Technical Report No. 9.

RECENT RESEARCH

- “Mitigating non-point source pollution in urban watersheds with spatial modeling, Best Management Practices for Watersheds, and community outreach.” East Baton Rouge City-Parish. Dr. Paul Kemp PI. Scientific support 2 mos/yr; 2004-2007.
- “Coastal Louisiana Ecosystem Assessment and Restoration (CLEAR) Program.” Sponsored by LA Department of Natural Resources and the US Army Corps of Engineers. Project Manager and executive assistant. 6-10 mos/yr; 2005-2008.
- “Determinants of plant species zones on beneficial use sites and recommendations for natural habitat restoration.” Coastal Restoration and Enhancement through Science and Technology (CREST). PI. 3.25 months (delayed by Hurricanes Katrina and Rita); 2005-2007.
- “Before/After Imagery for the Hurricanes Katrina and Rita Impact Zone.” Pontchartrain Institute for Environmental Sciences. PI. 1 month; 2005-2006.
- “Coastal Change as a result of the 2005 Hurricanes.” Pontchartrain Institute for Environmental Sciences. PI; 6 months 2006-2007.