

BRUCE A. BILTGEN, M.S.

Areas of Specialization:

Freshwater invertebrate taxonomy; biological, chemical and physical analyses of water and sediments for nutrients, organic and inorganic constituents, and trace metals; federal, state, and local regulatory agency permitting and permitting processes; project management including client interaction.

Experience:

Senior Scientist/Project Manager, Breedlove, Dennis & Associates, Inc. (BDA), Orlando, Florida. 1993 to present.

Responsible for data collection, preparation and submittal of federal, state, and local permit applications for wetland and surface water impacts. Experienced in calculation and summary of Uniform Mitigation Assessment Method and Wetland Rapid Assessment Procedure, and Modified Wetland Rapid Assessment Procedure scores for wetland impacts. Experience with development of on-site and off-site mitigation plans including preservation, creation, and enhancement and purchase processes of credits from authorized mitigation banks. Experience with designing, conducting, summarizing, and coordinating Threatened and Endangered species surveys and Species of Special Concern. Developed management and enhancement plans for red-cockaded woodpeckers (*Picoides borealis*). Familiarity with Section 7 consultations and Biological Opinions for listed species. Field experience with locating and monitoring avian listed species and authoring annual and incidental reports of such monitoring studies. Considerable experience with special concern species surveys, permitting, and relocations. Experienced with conducting regulatory agency meetings and negotiations and participating with clients, project teams and interested parties in review, strategy, and decision directed meetings and public hearings. Experience with organizing and executing special projects as requested by other scientific staff or senior management personnel.

Director of Proposals and Contracts, BDA, Orlando, Florida. 1986 to present.

Responsible for development, preparation, negotiation, and authorization for proposals and contracts company wide. Maintained accounts database for historic reference and reporting. Provided weekly reports on new projects, clients, and service provisions.

Created and maintained client/consultant databases for tracking and history of projects, clients, and services provided and contract obligations and finances. Maintained insurance coverage and tracking required by the company for clients and consultants.

Responsible for and assisted with print ads in trade journals and organization of trade show advertising and set-up. Attended trade shows as a representative of company.

Assisted company president, vice president of marketing and marketing manager with development of new service initiatives and client service introductions and creation and production of marketing materials.

Wrote, coauthored, maintained, and organized marketing materials including project summaries, company profiles and employee resumes, federal service provision forms, and in-house marketing brochures and circulars.

Associate Scientist, Director of Field Services, BDA, Orlando, Florida. 1982 - 1993.

Assisted with installation of solid-state weather monitoring stations in Tierra del Fuego, Chile. Worked with local metal fabricators to create stationary, weather resistant mounting tripods.

Conducted aerial reconnaissance for a salt drift study at the Crystal River Energy Complex for Florida Power Corporation (FPC). Completed semiannual aerial photo acquisition of monitoring plots and drift fields from elevations ranging from 9,000 ft to 800 ft above sea level. Maintained Hasselblad camera equipment and true color and color-infrared (CIR) film inventories, transparencies, and finished product for report production.

Extensive experience with the collection, preservation, and analysis of physical, chemical, and biological water quality and quantity samples, collection and monitoring protocols, data analysis and comparisons data analysis. Familiarity with state descriptive and numeric water quality standards for Class I, II, II, and IV waters, as well as requirements for Outstanding and Special Florida Waters. Worked in fresh water, estuarine, and marine environments. Developed sampling strategies, programs, and methods for myriad projects from simple baseline sampling to in-depth site specific/data monitoring events. Have completed single sample collections to decades long monitoring programs.

Assisted with herbicide application monitoring (glyphosate) for a high line transmission corridor right-of-way. Monitored spray drift, surface water, and groundwater uptake, bioaccumulation in native clam species and sediment sampling. Collected local clam species and relocated within wetland and deep water areas within the corridor. Set up and collected drift spray samplers. Collected, preserved, and processed surface and groundwater samples on transects through time elapsed sampling. Polk County, Florida. FPC.

Completed numerous aerial platform photographic and reconnaissance acquisitions, utilizing CIR and true color formats, and video cameras at various altitudes, under varying weather conditions from fixed wing and helicopters from southern Georgia through southern Florida.

Wetlands mining Environmental Impact Statement (EIS). Authored the invertebrate review section of the EIS for a large phosphate mining operation. Data review from five years of collected samples from drift net sampling, Hester-Dendy samples, Ponar[®] samples, and drift nets. Assisted with production of statistical analysis of summarized data. Occidental Chemical Agricultural Products, Inc.

Determination of probable hydrologic consequences of strip mining in Alabama. Tracked storms, measured stream fluctuations and collected diurnal water samples. Developed stream amplitude models for state designated streams. Small Operator Assistance Program.

Assisted with special project sediment sampling of chemical plant discharge in the Ashley River, Charleston, South Carolina. Responsible for sediment and core sampling, water collection, shrimp and oyster collection for a multinational industrial chemical company.

Water level recorder installation. Responsible for equipment evaluation, purchasing, installation, maintenance, and data retrieval. Summarized data in electronic formats and developed graphic representations for a variety of reports. North Florida to south Florida.

Monthly water quality/quantity monitoring, water level elevation measurements, stream flow determinations and macroinvertebrate sampling, Responsible for data management of results and field surveys. Coauthored annual reports, special study reports, and monthly quality assurance reporting. U.S.S. Agri-Chemicals, Avatar Properties, Inc., and W.R. Grace & Co. (Hooker's Prairie).

Water quality/quantity monitoring, vegetation and water level indicator analysis for litigation support in Brevard County, Florida. Assisted with summarizing and presentation of data for courtroom exhibits. Southern Seafood Company, Inc.

Research Specialist and Adjunct Faculty, River Studies Center, University of Wisconsin, La Crosse, Wisconsin. 1980-1981.

Field supervisor and coordinator responsible for collection of water and biological samples, taxonomic identification, data analysis, and report development for a variety of projects through the Department of the Army, Corps of Engineers.

Studied the impacts of resuspension of sediments from barge traffic in Navigation Pool No. 9 of the Upper Mississippi River. Impacts studied were physical and chemical changes to the composition of background channel and slough waters by the prop passage of barge traffic. Leader and director responsible for four person field crew, maintenance and repair of powerboats, and the collection, processing, preservation, and delivery of samples.

Baseline data acquisition of physical and chemical water characteristics, sediment chemistry, and invertebrate and microbial samples for Navigation Pool No. 9, Upper Mississippi River.

As adjunct faculty, taught limnology laboratory in areas of specialization and assisted advisors with class field trips studying limnology and aquatic sciences in Minnesota and Wisconsin.

Laboratory Technician, River Studies Center, University of Wisconsin, La Crosse, Wisconsin. 1978-1980.

Collection, processing, and physical and chemical analysis of biological and water samples from Navigation Pool No. 18, Upper Mississippi River.

Collection, preservation and analysis of water, sediment, and invertebrate samples from Navigation Pool Nos. 3-7, Upper Mississippi River, and analysis for polychlorinated biphenyls and metals.

Special project energy equivalence determinations of *Vallisneria americana* by bomb calorimetry for faculty adviser.

Education:

M.S. University of Wisconsin, La Crosse, Wisconsin, 1981. Biology/Aquatic Sciences.

B.A. Gustavus Adolphus College, St. Peter, Minnesota, 1972. Biology.

Associations:

American Association for the Advancement of Science
American Society of Sigma Xi
American Society for Testing and Materials
Ecological Society of America
Mississippi River Research Consortium
North American Benthological Society

Publications:

- Biltgen, B.A.** 1981. Aufwuchs and benthic macroinvertebrate community structure associated with three species of rooted aquatic macrophytes in Lake Onalaska. M.S. thesis, University of Wisconsin, La Crosse. 136 pp.
- Clafin, T.O., R.G. Rada, M.M. Smart, and **B.A. Biltgen**. 1981. Study of the effects of diverting water into Upper Burnt Pocket, Navigation Pool No. 18, Illinois and a field test of the regression simulation model previously developed on Navigation Pool No. 8. Final report submitted to GREAT II from the River Studies Center, University of Wisconsin, La Crosse. 128 pp.
- Clafin, T.O., R.G. Rada, M.M. Smart, D.N. Nielsen, J.K. Scheidt, and **B.A. Biltgen**. 1981. The effects of commercial and recreational navigation on selected physical and chemical variables in Navigation Pool No. 9, Upper Mississippi River. Final report submitted to GREAT II from the River Studies Center, University of Wisconsin, La Crosse. 184 pp.
- Rada, R.G., M.M. Smart, T.O. Clafin, **B.A. Biltgen**, D.N. Nielson, and J.K. Scheidt. 1980. A characterization of Navigation Pool No. 9, Upper Mississippi River, and site selections to determine impacts of commercial and recreational navigation. 114 pp.