

**Larry F. Bednar**  
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### **Objective**

Employment or contract work utilizing expertise in data management, statistics, quality management, programming within a workplace emphasizing systems/quality management principles, efficient use of contemporary computer technology, and teamwork.

### **Qualifications**

- ability to maintain focus on long-term strategic goals
- ability to work very well within interdisciplinary, problem-solving teams
- excellent communication and teamwork skills
- experienced data/database administrator, with 11 years Oracle experience and over 14 years experience with Microsoft Access, FileMaker and other database management software
- strong knowledge of quality management, quality assurance and quality control, including ISO-9000, Malcolm Baldrige National Quality Award, and Oregon Quality Award models
- strong ability to explain technical issues to non-technical personnel
- strong organizational skills
- strong programming skills in various languages (SAS, SPSS, VisualBasic, SQL, PL/SQL, Pascal, FORTRAN 77, Gauss, Perl, Korn shell, LISP, DOS batch)
- strong system analysis and design skills
- strong statistical and data analysis skills
- experience leading team-oriented system development efforts

### **Education**

#### **Post-academic training**

Courses included mathematics, relational databases, SQL, data modeling, data administration, database administration, electronic communications, geographic information systems, SAS programming

#### **M.S. Statistics; Univ. of Ca., Riverside**

**1986**

Courses included mathematics, linear models, statistical computing packages, stochastic models, time series, analysis of contingency tables, mathematical statistics, nonparametric statistics

#### **B.S. Biology (Molecular Biology); Univ. of Ca., Riverside**

**1977**

Courses included microbiology, genetics, biochemistry, chromosomes, biogeography, developmental biology, field botany, art history, urban studies

## **Work Experience**

### **Contracting Statistician/Software Developer/Systems Analyst**

**1987 to present**

Performed varied tasks in statistics, data management, quality management under short-term contracts with clients.

- advice on hardware acquisition
- advice in quality management and quality assurance
- computer training and support in use of software
- data analysis
- data modeling
- database design
- development of survey forms and data entry applications in FileMaker Pro
- development of relationship management/membership databases for a variety of non-profit organizations
- development of data transformation systems used to move data from legacy data management systems into newly implemented data management systems
- software requirements analysis
- software system design and documentation
- review of research proposals
- survey design

### Projects included

- analysis of effectiveness of bacterial insecticides
- assistance in development of county quality assurance plan for application to contracted human services
- county-wide survey and evaluation of school readiness of preschoolers
- data management system revision/implementation (ebase, custom FileMaker applications, MS-Access/VisualBasic, SAS)
- served as member of ebase Technical Advisory Committee
- statistical advice in planning state-wide survey of effectiveness of Head Start program

**Statistician; USDA-Forest Service Research; Portland, OR**

**1995-2001**

Responsible for guiding the use of computer technology in support of long-term monitoring of forest resources on U.S. west coast.

Leader of data processing system redesign project applying Oracle CASE\*Method/CADM

- developed data models for staff databases
- developed metadata system for staff Oracle databases and data processing system
- organized staff for system design efforts
- established code formatting standards for applications developed by team
- established naming guidelines for database and staff files
- established standard application development and documentation systems based on synthesis of Oracle CASE\*Method and ISO-9001 quality assurance guidelines
- facilitated system/data modeling meetings

Oracle database administration (database consisting of 10 data stores with 15-30 tables and 200-600 columns each)

- assisted system administration staff with hardware acquisitions, system updates, planning for and installation of corporate applications, etc. related to operation of Oracle database
- cleaned up and moved badly mismanaged Oracle database from V6 on Data General minicomputer to V7 on IBM AIX server
- developed library of SQL, PL/SQL and Korn shell scripts to automate database and file management tasks
- developed physical mapping of database to hardware
- development and implementation of security guidelines
- implemented indexing required for performance requirements
- tuned database for optimal reliability and performance (table and tablespace defragmentation, database configuration revision, etc.)

Programming

- application development using SAS, PL/SQL, Perl
- developed library of SAS macros to standardize routine tasks performed by staff analysts
- developed EMACS extensions and modes using LISP

Staff information management

- developed Microsoft Access applications for data entry, client request tracking, tracking of equipment inventory
- established filing structure and security guidelines for staff files

- established regular backup of PC hard disks using Windows NT server on local area network
- established use of Oracle database as shared data source, reduced use of data copies
- moved staff from terminal/server to PC/server computing model
- organized staff file cleanup and migration from Data General to IBM AIX server
- served as staff representative in national meetings of information managers from Forest Service inventory groups
- served as Program representative in national meetings concerned with national standardization of documentation and statistical estimation procedures

#### Statistical support

- data analysis
- provided general statistical support to staff
- statistical review of manuscripts and study plans

#### Team leadership

- developed team evaluation/planning process applied at 6 month intervals to track job requests and team performance
- responsible for final approval of training, submitted timesheets, expenditures

#### Training

- trained new staff in SAS, SQL, PL/SQL

#### **Statistician; USDA-Forest Service Research; Portland, OR**

**1989-1995**

Provided statistical, data management, and quality assurance support during initial establishment of regional system of large, interdisciplinary research sites.

- data analysis
- developed data entry applications for use on microcomputers and field data recorders (using ALPHA4, Paradox, Pascal)
- developed logical data model for storage of research data from funded projects within Oracle database
- developed standard research proposal, study plan and data documentation formats
- developed quality assurance guidelines for project
- performed mandated statistical, data management, and quality assurance reviews of research proposals
- served as Oracle database administrator

- served as team leader for 1 year
- used Oracle CASE\*Designer to design Oracle data library for carbon budget research data

Served as general statistical consultant for Demonstration of Ecosystem Management Options experiment.

- performed power analysis for overall experiment
- provided general statistical review and assistance to project researchers

**Statistician; USDA-Forest Service Research; Riverside, CA**

**1986-1989**

Responsible for general statistical and data analysis support for over 100 employees.

- developed data entry applications using Data General Forms Entry System
- developed data analysis applications using SAS, MINITAB, FORTRAN 77 and GAUSS and other software on PC, Macintosh, Data General and IBM mainframe hardware
- developed and taught a 2-day in-house SAS course
- performed mandatory statistical review of all study plans and manuscripts
- provided assistance in experiment and survey design
- provided assistance in data management
- provided assistance in data analysis and interpretation
- served as EEO counselor and member of Pacific Southwest Research Station civil rights committee

**Lab Assistant III; U.C. Riverside**

**1980-1985**

Responsible for general management of research laboratory.

- designed and implemented experiments in insect nutrition
- hired and trained workers
- maintained colonies of subject insects, mice, shistosomes and aquatic snails
- performed statistical analysis of data resulting from laboratory experiments using MINITAB and SAS

**Insectary Manager; Rialto, CA**

**1979-1980**

Responsible for overall operation of large-scale commercial insectary.

- hiring and training of workers
- maintenance and troubleshooting for 7 large-scale insect colonies

**Lab Assistant; U.C. Riverside**

**1977-1979**

Performed various tasks required for implementation of air pollution and plant breeding experiments.

### Volunteer Experience

**Bicycle Transportation Alliance; Portland, OR** **1991-1994**

Served in various capacities, including

- Chair, Board of Directors
- Initial composition of corporate by-laws and organizational structure
- Member, Board of Directors
- Newsletter editor
- Volunteer coordinator

### Awards

**Special Service Award** **\$500** **1987**

For exceptional assistance in statistical design of fire management research

**Superior Accomplishment Award** **\$1000** **1993**

Outstanding achievement, progress and improvement of research activities while acting as leader of Integrated Research Sites Team in the Pacific Northwest Long-Term Ecosystem Productivity Program.

**Special Act Award** **\$50** **1993**

For contributing to resolution of station wide issues through the information management work group.

**Special Service Award** **\$1000** **1996**

For outstanding contributions to the Demonstration of Ecosystem Management Options project in biometric consultation.

**Annual Performance Award** **\$1900** **1997**

For superior performance during the proceeding year in leadership of data processing system redesign efforts.

**Special Service Award** **\$1000** **1997**

In recognition for the extra effort on the California Inventory CD demonstrating high quality and enterprising initiative developing CD technology for large databases, publications, and other PRIME Program information in an easy to use technology transfer product. (This product was a finalist for the national USDA Forest Service technology transfer award.)

**Special Service Award** **\$1500** **1999**

In recognition of high level of technical expertise and user support to meet the growing technological demands of the Portland Forestry Sciences Laboratory.

### Professional Associations

American Statistical Association; Statistical Computing and Graphics Division, Quality and Productivity Division

American Society for Quality; Statistics Section, Quality Management Section, Software Quality Division

### Personal Interests

Hiking, bicycling, bird watching, gardening, running, backpacking, cross-county skiing, reading, playing guitar, cooking

### Publications

#### Authored or coauthored these works:

Thompson, S.N.; L. Bednar; and H. Nadel. 1983. Artificial culture of the insect parasite, Pachycrepoideus vindemiae. Ent. Exp. & Appl. V33:121-122.

Walker, G.P.; and L.F. Bednar. 1987. Behavioral response of california red scale crawlers (Homoptera, Diaspididae) to solutions behind artificial membranes. Ann. Entomol. Soc. Am 79(4):549-553.

Strauss, David; Larry Bednar, and Romain Mees. 1989. Do one percent of forest fires cause ninety-nine percent of the damage? Forest Science, V35(2):319-328.

Mees, Romain; and Larry Bednar. 1989. The use of fire weather indices in prediction of extreme fire loads. W. J. App. Forestry. 4(2): 46-48.

Gonzalez-Caban, Armando; and Larry F. Bednar. Institutional constraints affect prescribed burning costs variability: preliminary findings. In: MacIver, D.C.; Auld, H.; Whitewood, R.; eds, Proc. 10th Conf. Fire For. Meteor., Ottawa, Canada. Atmospheric Environment Service et al., April 17-21, 1989. 470pp.

Bednar, Larry F.; Romain Mees; and David Strauss. 1990. Fire suppression effectiveness for simultaneous fires: An examination of fire histories. Western Journal of Applied Forestry, V5(1):16-19.

Gonzalez-Caban, Armando; and Larry F. Bednar. Sources of variability in prescribed burning costs. In: Proceedings, Int. Conf. For. Fire Res. Nov. 19-22, 1990. 525pp.

Gordon, John C.; Bernard T. Bormann; Larry Jacobs; Richard H. Waring; Susan N. Little; and Larry F. Bednar. Ecological sustainability: Can it be measured? Ecol. App.

Parks, C.A., L. Bednar, and A.A. Tiedemann. 1993. Browsing ungulates cause pacific yew decline in a northeastern Oregon stand. In Scher, S., Schwarzschild, B.S., tech. eds. Proceedings, International Yew Resources conference, 1993 March 12-13, Berkeley, CA. Gen. Tech. Rep., Portland, Oregon; USDA Forest Service.

Amaranthus, Michael; James M. Trappe; Larry Bednar; and David Arthur. 1995? Hypogeous fungal production in mature Douglas-fir forest fragments and surrounding plantations and its relation to coarse woody debris and animal mycophagy. *Canadian Journal of Forest Research*. V24:2157-2165.

Little, Ronda L., David L. Peterson, David G. Silsbee, Lauri J. Shainsky, and Larry F. Bednar. 1995? Radial growth patterns and the effects of climate on second-growth Douglas-fir (*Pseudotsuga menziesii*) in the Siskiyou Mountains, Oregon. *Canadian Journal of Forest Research*

Bednar, Larry F., and Lauri J. Shainsky. 1996. The concept of overcontrolled systems and its applicability to forest management. *Journal of Forestry*, V94(8):29-33

Catherine G. Parks, David A. Conklin, Larry Bednar, and Helen Maffei. 1999. Woodpecker use and fall rates of snags created by killing Ponderosa Pine infected with dwarf mistletoe. Research Paper PNW-RP-515, USDA Forest Service, Pacific Northwest Research Station. 11p. .

**In progress:**

Quality control and training recommendations for optical estimates of canopy cover. (Intended as a PNW Gen. Tech. Rep.)

**Made substantial technical contributions:**

Thompson, S.N. *Brachymeria lasus*: Effects of nutrient level on in vitro growth of a chalcid insect parasite. *Exp. Parasit.* 55(3): 312-319.

Thompson, S.N. Larval growth of the insect parasite *Brachymeria lasus* reared in vitro. *J. Parasitol.* 69(2): 425-427.

Thompson, S.N. Spirulina as a nutrient source in experimental media for maintaining the schistosome vector *Biomphalaria glabrata*. *Ann. Trop. M.* 78(5): 547-548.

Thompson, S.N. Nutritional physiology of *Trichoplusia ni* following challenge by the insect parasite, *Hyposoter exiguae*. *J. Invert. Path.* 45(3): 360-362.

Western Region Prescribed and Natural Fire Monitoring Task Force. 1990. National Park Service Western Region Fire Monitoring Handbook. 202pp.

Miller, Paul R., Kenneth W. Stolte, Daniel M. Duriscoe, and John Pronos. Evaluating Ozone Air Pollution Effects on Pines in the Western United States. USDA Forest Service Gen. Tech. Report. PSW-XXX.

**Planned additional publications:**

Clumping in spatial distribution of plant species during pretreatment surveys of Long-Term Ecosystem Productivity integrated research sites. (Intended as a PNW Gen. Tech. Rep. )

The application of quality control techniques in forest water quality monitoring.

Evolutionary operations in forest management systems.

Computer-based training for optical estimation of canopy cover.

The implications of current understandings of human visual processing mechanisms for various techniques of subjectively estimating canopy cover.

## References

**Jon Stahl** (subcontracting client); ONE/Northwest, Seattle, WA, 98119; 5 206-286-1235; [jon@onenw.org](mailto:jon@onenw.org)

**Kathy Geyer** (former supervisor); (retired) Manager, National Fire Facilities, USDA-Forest Service, Portland, OR; 360-892-9077; [kgeyer@jgainc.com](mailto:kgeyer@jgainc.com)

**Dave Peterson** (biological researcher, former consulting client); Professor, Univ. of Washington., Seattle, WA; 206.543.1587; [wild@u.washington.edu](mailto:wild@u.washington.edu)

**Tim Swedberg** (contract client, former coworker in computer support/data processing system redesign); Public Affairs Officer, North-Central Research Station, USDA - Forest Service, St. Paul, MN; 651.649.5257; [tswedberg@fs.fed.us](mailto:tswedberg@fs.fed.us)

**Jim Ward** (coworker, system administrator); Systems Manager, PNW Research Station, USDA-Forest Service, Portland Forestry Sciences Lab, Portland, OR; 503.808.2039; [jward@fs.fed.us](mailto:jward@fs.fed.us)

**Rivka Gevurtz** (client contact); Northwest Jewish Environmental Project, Portland, OR; 503.224.3352; [rivka@nwjep.org](mailto:rivka@nwjep.org)

**Barbara Koneval** (contract client); Northwest Earth Institute, Portland, OR 97204; 503-227-2807 x104; [Barbara@nwei.org](mailto:Barbara@nwei.org)

**Rebecca Severeide** (contract client); Early Childhood Strategies, Portland, OR 97212; 503-282-7076; [r\\_severeide@qwest.net](mailto:r_severeide@qwest.net)

**Jim Baldwin** (former supervisor, statistician); Station Statistician, Pacific Southwest Forest and Range Experiment Station, USDA - Forest Service, Albany, CA; 510.569.6332; [JBaldwin@fs.fed.us](mailto:JBaldwin@fs.fed.us)

**Jane Kertis** (biological researcher, former consulting client); Ecologist, Siuslaw National Forest, USDA-Forest Service, Corvallis, OR; 541.750.7192; [jkertis@fs.fed.us](mailto:jkertis@fs.fed.us)

**Camryn Porkandi** (former coworker); Systems Manager, NE Research Station, USDA - Forest Service, Radnor, PA; 610-557-4094; [cporkandi@fs.fed.us](mailto:cporkandi@fs.fed.us).