## Vitae Max A. Nickerson, Ph.D.

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Born: Maryville, Missouri, USA, 18 July 1938

Education: Public schools in Rock Port, St. Joseph and Eldon, Missouri. Graduate of Eldon High School

## Undergraduate

1956-60 Central College (Central Methodist University), Received B. A.. Fayette, Missouri; Biology Major, Minors = Chemistry / Sociology

### **Graduate Studies**

1961-62 and 1965-68 Arizona State University, Tempe; June 1968, Ph.D. in Zoology

1962-64 University of Texas, Austin, worked on two NSF grants in Mexico and Central America

1978 & 1980 University of California-Berkeley, Post- Doctoral courses

#### **Experience**

University of Florida, Florida Museum of Natural History, Curator of Herpetology (1998 to present) - Responsibilities include curation, growth, management, and dissemination of research data and specimens from one of the largest collections of reptiles and amphibians in North America (210,000+ specimens and lots), with an international resource base. Our herpetology website has received as many as 3,000,000 a month.

Chairman, Department of Interpretation (1990-1997)

Affiliate Professor, College of Wildlife Ecology and Conservation

Affiliate Professor, Center for Latin American Studies

**Curator, School of Natural Resources and the Environment** 

**Affiliate Faculty, Great Smoky Mountains Institute** 

Conservation Fellow, Saint Louis Zoo's Conservation Institute

**Howard Hughes Medical Institute Science for Life Mentor** 

A) 1990- 1997 Chairman, Department of Interpretation. My responsibilities included the education and exhibit programs, public relations and development. We effected restoration of permanent exhibit galleries to completion, following asbestos abatement. We developed the traveling exhibit program to national resource level, reaching 1,700,000 visitors annually. The development team obtained 6.2 million dollars for construction of the new education and exhibition building and assisted in other funding opportunities. My major responsibility was oversight, development, design, construction and programming of the 53,000 sq. ft. UF/Florida Museum of Natural History Powell Hall Education and Exhibition facility.

## **B) Milwaukee Public Museum**

- 1) 1987-1989: Deputy Director. Responsible for a combined budget of ca. \$7,000,000,00 staff of 200± and 500 volunteers. During this period MPM's market penetration was second in the nation for museums of natural history, Smithsonian excluded. Our attendance reached 600,000+ visitors. Our education program was restructured to a permit more time for in-service programs.
- 2) 1971-1990; Curator of Vertebrate Zoology. Began with a staff of two, only one with college training (B.S. biology), and developed to a peak of 19 (14 full time, five PhD's -mostly federally funded). Surveyed collections, established collection focus and policy, obtained multiple year federal funding for removing collections from storage to active utilization. Completely reworked main specimen storage area, brought up to OSHA and Wisconsin Code, i.e., explosion proof wiring, temperature, humidity and light controls, rapid air turnover, fire dams, four hour burn wakks, etc. With staff assistance obtained funding, developed and equipped modern research laboratories adjacent to collection area. All collections reworked, ID's checked, etc. 1990 status = 1,300,000 specimens. National resource level collections in ichthyology, herpetology, and ornithology; 90% of the specimen data computerized.
- 3) Pan Museum; Served on 18 different committees: some examples of productivity are:
  - a) Chair of the Scientific Staff (1972-1975). Developed plans to upgrade, expand, and fund the Scientific Staff. Established two peer reviewed scientific publication series; Publications in Biology and Geology (for

monographs) and Contributions in Biology and Geology for smaller papers.

- b) Chair of the Development Committee. The group included a county supervisor, Friends of the Milwaukee Public Museum (FOMPM) president and Milwaukee Public Museum board member. We developed a plan in 1986-1987 which convinced FOMPM to fund MPM's first strategic planning session, and MPM's first development officer. This was implemented successfully during a time when MPM's Director and Deputy Director left for positions elsewhere.
- c) Chair, Natural History sections 1981-1982. This was a very productive period for these MPM sections, in grant funding, publication, research, and pan museum activities.
- d) Chairman of Environmental Wing Committee. The function of this committee was to create a script, write grants to NEA, NEH, etc. and layout (design), budget, and build the Environmental Wing. The committee obtained two grants: 1974 National Endowment for the Humanities \$77,820.00 and 1975 NEH \$77,750.00 (Total: \$149,570.00).
- e) Curator or Co-Curator of many exhibits and three exhibit floor wings, e.g., Biohall Rain Forest team member 1984-1989. The team was responsible for developing the theme, much of the funding and producing the \$3,000,000.00 hall. The exhibit "The Rain Forest: Exploring Life on Earth" won the largest exhibit grant in the history of NSF's educational section and the American Association of Museums Curator's Award for the best new exhibit.
- e) Active in many other committees including: 1) Executive, 2)
  Publication, 3) Exhibit planning, 4) Space, 5) Expediting, 6) Scientific staff,
  7) Field research, 8) Affirmative action, 9) Biology hall, 10) Development committee, and 11) Sales /shops.
- f) P.I. for federal governmental grants = Federal EEA grant, 19772- 1973, \$500,000.00; Federal CETA grant 1975-1979 \$1,000,000.00; P.I. for Institute of Museum Services grants of \$35,000 and \$32,460.00; U.S. Department of Education grant 6008303083 \$50,000.00
- g) Deputy Director, 1987-1989, responsible for annual budget of ca. \$7,000,000.00.
- h) Acting Director, several periods between 1985 1989.

# **Administrative / Leadership Experience**

- A) Director or Director on Leave of Max Allen's Zoological Gardens (a small AAZPA zoo, now AZA)., Eldon (Lake of the Ozarks area), Missouri. Responsible for the entire program. Staff did not exceed eight full and part-time employees, 1963-1971.
- B) Site selection and basic design (including the prototype), for the Nickerson Farms chain of 56 restaurants which operated in 15 states, 1965-1968.
- C) Arkansas State University
  Associate Professor of Biological Science (1971)
  Assistant Professor of Biological Science (1968-1970)
  - 1) Arkansas State University Research Council 1969-1971; Chairman, 1970-1971. It was the function of this board to grant start up funding to ASU faculty.
  - 2) Curriculum Committee for the Biological Sciences 1969-1970.
- D) Established the Wisconsin Herpetological Society and served as President and then as a Board member 1972-1978.
- E) Team Leader Kuehne Amazon Expedition. Choose a research team of 11 scientists and support staff from the University of California Berkeley, University of Wisconsin, Texas A & M University, Milwaukee Public Museum (MPM), Milwaukee County Zoo and carried out research projects and surveys within Peru two months in 1974.
- F) Chairman (President), Secretary, and Executive Board of SSAR (Society for the Study of Amphibians and Reptiles 3,200 members internationally). Involved in budgeting and policy making (1971- 1983).
- G) Board of Directors, D & M Development Inc., Missouri, a concern involved with conceptual development of projects in the western U.S., (1973-1993).
- H) Organizer for Wisconsin Department of Natural Resources / Milwaukee Public Museum fish identification seminar held the second week of June 1974. We utilized the top state ichthyologists to train 60 DNR regional fish managers to I.D. non game fishes as the first step in resurveying the states ichthyofauna which had not been updated for ca 75 years.
- I) 1975-1979. Worked with the Wisconsin DNR to establish a stream survey coupled with environmental precise collection localities, preserved samples of fishes, invertebrates, plants, water quality data, etc
- 1) Specimens were stored at MPM. The ichthyology collections from most sites

were divided into two separate groups, one preserved for systematic / taxonomic studies and the other group for potential destructive analyses in ecological/environmental studies. This model was later adopted as the UNESCO model for aquatic studies.

- These collections formed the basis for several major publications including;
   A) The Crayfishes of Wisconsin, and to a substantial extent The Mussels of Wisconsin and The Fishes of Wisconsin.
- J) Board of Directors of MANCO Inc., Missouri A concern involved with zoological park development, leasing, publications and mail order (1975 1986).
- K) Board of Directors, Nickerson & Nickerson Inc., Nebraska- A concern involved with food products, gift products, petroleum products, mail order, etc. under the name of Nickerson Farms, Nickerson's Tin Lizzie & Nickerson Morgan Inc., in Michigan, Illinois, Missouri, Kentucky, Indiana, Ohio, Tennessee, and Arizona (1977-1979).
- L) Served as interim CEO of three businesses during my father's illness. None in excess of 12 months.
  - a) Nickerson & Nickerson of Columbia, Missouri. An interstate restaurant and gift shop employing ca. 60 staff.
  - b) Gates House. An advertising agency dealing primarily in the Midwest U. S.
  - c) Nickerson Forge. A business involved in the production, wholesale and retail sales of wood burning stoves and fireplace inserts in the central, and southwestern U.S. and sales
- M) Organizer for: A short course: Clinical Management of Reptiles with Fred Frye, University of California Berkeley at the University of Wisconsin Milwaukee, 2-4 August, 1980.
- N) Host and Chairman of the Local Committee for August 6-10, 1980 Society for the Study of Amphibians and Reptiles meeting jointly with the Herpetologists League in Milwaukee. Symposia included "Reproductive Biology and Conservation of Crocodilians" and "Fitchian Herpetology: The Descriptive Approach, a Symposium in Honor of Henry Fitch" and a joint meeting of regional herpetology societies.
- O) Board of Directors of the Association of Systematic Collections (Washington, D.C.) 1985-1988. This board guides the association in representing institutions with collections. (other Board members serving during the period included Directors from the American Museum of Natural History, California Academy of Science, Field Museum of Natural History, Academy of Natural Sciences, National Museum of Natural History (Smithsonian), Bishop Museum, National

Museum of Canada, Florida State Museum, and the International Union of Conservation.

P) Founded the Reptile and Amphibian Conservation Corps (RACC) in 1999. The RACC underwrites The Herpetology Conference (34th annual in 2011), provides small grant funding to stimulate and support student research, conservation, herpetological research collections, education, and publications.

# **Grants and Fundings**

P.I. for the following grants: 1965A, 1966A, 1967A Arizona State University Zoology Research Grants; 1966A, 1967A Arizona Academy of Science Grants; 1968A, 1969A, 1970A, Arkansas State University Faculty Research Grants; 1972A 1977A, 1980A, 1981A, 1985A Friends of the Museum Research Grants; 1971A, 1972A Fred Ott Research Fund; 1971A - 1972A; Industrial Cooperative Education Program; 1973-75 Federal EEA grant (\$500,000.00); 1972A, 1973A, 1974A, 1975A, 1976A, 1977A, 1978A, 1979A, 1980A, 1981A, 1982A, 1983A, 1984A, 1985A Milwaukee Public Museum Field Research Grants; 1974, 1975; National Endowment for the Humanities (\$150,000.00); 1974 - 1975 James L. Kuehn Research Fund (\$14,000.00); 1975 Doerr Fund (\$11,505.00); 1975-76 Federal CETA grant (\$1,000,000.00); 1976 Stiemke Foundation (\$14,000.00); 1976A Karl Schmidt Research Fund; 1977A, 1978A Nunnemacher Research Fund; 1979 Institute of Museum Services \$35,000.00; 1979A, 1980A; The Nature Conservancy & Arkansas Natural Heritage, 1980B Marshall & Ilsley Foundation (\$15,000.00); 1980B Puelicher Foundation (\$15,000.00); 1980B Walter Schroeder Foundation (\$15,000.00); 1980A, 1981A Missouri Department of Conservation grants; 1980A, 1981A 1989A, ; Miller Research Fund 1990A; 1981 Institute of Museum Services IMS (\$33,460.00); 1981 Helfaer Foundation (\$32,000.00); 1982 Stiemke Foundation (\$12,000.00); 1982A Missouri Department of Conservation; 1982 Wiscold-Kuehn Fund (\$12,000.00); 1982A Friends of the Museum 1982 (\$11,416.50); 1983A; 1983 Missouri Department of Conservation (\$9,424.00.00); 1983 U.S. Department of Education (\$50,000.00); 1983 Institute of Museum Services (\$13,333.34); 1984 Milwaukee Casket Foundation (\$5,000.00); 1986 Pelton Steel Foundation (\$12,000.00); 1992A, 1993A University of Florida, Office of Student Affairs - Diversity Program; Florida Department of State1992, Seven Council Fires (\$32,000.00); 1992-93 Florida Department of State, - Florida's Fossil History (\$20,000.00) and 1995-96 Florida Fossil Horse (\$15,000); Alachua County Tourism Development (3 grants) 1993A,1994A, 1995A Florida Association of Museums, 1994-95A, Florida Department of State Celebrating Nature's Diversity (\$15,000); 1995-96, F.A.O. Schwartz Foundation, (\$7,000); 1995-96; IBM (\$12,000) and the exhibit Leonardo da Vinci (\$250,000.00.00); 1995A, 1996A, 1997A, 1998A, 1999A, Robert & Janet Miller Fund; Florida Department of State 1996-98 (\$159,079); 1999A Minolta Corporation;1999A Lee Filters; 2000: USDI GSMNP (\$12,000.00); 2001A, 2002A, 2003A, 2004A, 2005A, 2006A, 2007A; 2008A, W.& M. Brandt Gourmet Rodent Fund; 2000A, 2001A, 2002A, 2003A 2004A, 2005A,2006A, 2007A; 2008A, Reptile and Amphibian Conservation Corps; 2000A, 2001, 2002A, 2003A, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011; Great Smoky Mountain

Institute; 2004A, 2008A; St. Louis Zoo *Cryptobranchus* habitat \$9,885.00, 2005-2006 St. Louis Zoo \$10,585.00 Hellbender habitat; 2006-2007 St. Louis Zoo Wildcare Institute \$10,000.00 + \$1,500.00 supplement; (CoPI with Dr. F.W. King) National Science Foundation, Florida's HERPNET \$23,285.00, Curatorial support (J. Andres Lopez PI) 2006- National Science Foundation, Enhancements for the genetic resources of the Florida Museum of Natural History (\$169,273.00), 2007-2008, St. Louis Zoo Wildcare Institute (Bosawas International Biosphere Project, Nicaragua, C.A.) \$21,000.00; 2008-2009 Country-wide Conservation Assessment of Critically Endangered Amphibians in Honduras, Conservation International (\$44,554.00), Co-P.I.'s Josiah H. Townsend and James D. Austin; 2008A, 2009A, 2010A, 2011A Rodent Pro RACC Conference Fund, NSF-BRR Curation of large Ichthyological and Herpetological specimens \$205,954.00 Co-P.I.'s L. Page. K. Krysko, & R. Robbins. 2010A UF School of Natural Resources and the Environment

- A) less than \$5,000
- B) These grants were pooled to form the Puelicher Trust for Natural History Publication.
- C) Also served as a member of development groups which have raised more than \$10,000,000.00 for education and research.

Beta Beta Beta (President-Gamma Upsilon Chapter)... 1958, Sigma Xi (Full Member)... 1968, American Men of Science... 1969, Arkansas State University Research Council (Biological Science Representative)... 1969, (Chairman)... 1970, 1971, Society for the Study of Amphibians & Reptiles (Officer Nominating Committee)... 1970, (Secretary)... 1971-1973, (Elector)...1972, 1973, (Chairman/President)... 1977, (Member of the Board)... 1981-1983, Society for the Study of Amphibians & Reptiles (SSAR)/Herpetologists' League (HL), American Society for the Study of Ichthyologists and Herpetologists (ASIH) Joint Conservation Committee)... 1974, 1975 ASIH, HL, and SSAR Joint Herpetological Resources Committee... 1980, 1981; Personalities of the South (Science)... 1970, American Institute of Chemists (Fellow) 1971, Milwaukee Public Museum (Chairman Scientific Staff). 1971-1974, (Chair, Natural History Sections)... 1981, (Two Thousand Men of Achievement)... 1972-1978 Wisconsin Herpetological Society (President)... 1972-1974, (Director)... 1975-1977, International Platform Association 1972-1975, (Who's Who in the Midwest)... 1975, Central Methodist University Distinguished Alumni Award... 1976, Max Allen Nickerson Scholarship in the Natural Sciences established 1979 at **Central Methodist University, Fayette, Missouri, Citizen's Natural Resources** Association of Wisconsin (Council)...1981-83, Association of SystematicsCollections (Institutional Representative)...1975-1990, (Chairman Nominating Committee)...1982-1983, (Board of Directors)...1985-1988, Board of Paleo-biological Fund 1996-2001), Advisory Board of the University of Florida Seahorse Key Marine Station 1998-2011, Chair of The Herpetology Conference,

including the All Florida Herpetology Conference 2000-2011. Editorial Board, Southeast Naturalist 2006-2011. Nominee, Arizona State University Founder's Award 2011.

# **Teaching Experience**

- 1. Arizona State University. A) Comparative Anatomy lab. Zool. 271 1961-1962; B) General Zoology lab Zool. 100 and Human Anatomy and Physiology lab. Zool. 201.1965-1967; C) Herpetology 473 and Research Methods 600 level with Dr. A.E. Dammann 1965-66.
- 2. Scottsdale High School, AZ. Substituted in Chemistry and Biology 1967.
- 3. Arizona State University. Field Zoology Zool. 474g, with Dr. W.L. Minckley 1968.
- 4. Arkansas State University. Histology Zool. 43004, Gen. Zoology 1-Zool. 13004 and II-Zool. 13014, Histology Zool. 43004, Gen. Zoology 11-Zool. 13004 and Natural History of the Vertebrates Zool. 52004G 1969-1971. Biological Science 10003 (non-major course).
- 5. University of Wisconsin. Herpetology with Dr. Jeffrey Briggs 1971.
- 6. Hawthorne Glen Nature Center, Milwaukee, WI. adult education course Amphibians and Reptiles, December 1971 & 1972.
- 7. Riveredge Nature Center, Cedarburg, WI. A) A Survey of the Worlds Amphibians and Reptiles, April 1972; B) The Natural History of Amphibians and Reptiles, Emphasizing Wisconsin Species, April 1973, C) Eco-Focus and Herpetology 1976-1977.
- 8. Nicolet High School, Glendale, WI. Amphibian and Reptile Biology-an update, exceptional student program, April 1972.
- 9. University of Wisconsin.
  - A) Herpetology Zool. 525 with Dr. John Minnich.
  - B) Museum Methods I-Anth. 620 and Anth. 621 with Dr. R.Ritzenthaler and Dr. N. Lurie 1973; 1972-1982
  - C) Systematic Zoology and Evolution Zool.931 with Dr. C. Norden 1975.
- 10. Carroll College, Waukesha at MPM. Ecology class 1974-86.
- 11. University of Wisconsin, Parkside at MPM. Vertebrate Zoology course with Dr. Omar Amin 1975.
- 12. Wehr Nature Center, Hales Corner, WI. Reptiles and Amphibians of Wisconsin 1975-1977 and 1979.

- 13, Washington University, St. Louis, MO. Portions of Ecological Methods (graduate course) 1981 & 1982.
- 14. Ecology of Reptiles and Amphibians in Minnesota sponsored by the University of Minnesota, Bell Museum of Natural History, Science Museum of Minnesota, Minnesota Department of the Natural Resources, Minnesota Audubon Council, U.S. Forest Service and U.S. Fish and Wildlife Service and Bemidji State University at Cass Lake, Minnesota March. 1983
  - 15. Camp Heritage, Climax Springs, MO. Reptile Natural History annual minicourse 1982-1985.
  - 16. Methodist Hospital, Madison, WI. American Trauma Society Emergency Medical Seminar: Environmental Injuries, Venom Diseases 1985.
  - 17. University of Florida, Gainesville 1991 Present. Taught portions of courses in the Department of Zoology, Wildlife Conservation and Ecology, Honors College, College of Veterinary Medicine, Art (Museum Studies), and IDH 2931 Museum Adventures.

Courses with teaching experience: Ecology, Histology, Herpetology (Graduate), General Zoology, Vertebrate Zoology, Conservation Biology, Comparative Anatomy, Human Anatomy & Physiology, Micro Technique, Systematic Zoology & Evolution (Graduate), Natural History of the Vertebrates (Graduate)

#### Taught recently at the University of Florida

1998. Fall Zoo 6927 Herps and Climate, with Dr Lillywhite (2hrs)

1999 Spring WIS 5155 Natural History of Reptiles and Amphibians, with Dr. King (4 hrs)

1999 Fall Zoo 6927 Current Research Methods in Herpetology, with Dr.

Lillywhite (2 hrs)

2000 Spring WIS 6934 Biology of Snakes, with Dr. King, (2 hrs).

2000 Spring & 2004 Fall, Zoo 2303 Vertebrate Zoology, with FLMNH team (4hrs)

2000 Fall Zoo 6927 Amphibian Declines, with Drs. Lillywhite and Storfer (2hrs)

2001, 2003, 2005 Spring Zoo 6927/4926 Herpetology, with Dr. King (4 hrs)

2007 Spring Zoo 6927/4926 Herpetology with Dr. Krysko (Lecture) and Josiah Townsend (Lab) (4hrs)

2009 Spring WIS 6934 Salamander Biology with Josiah Townsend (Lab) (3 hrs).

2010 Spring Zoo 6927 Snake Structure and Function with Dr. Lillywhite (2 hrs).

### **Bibliography**

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Herpetology 3(11):284.

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Nickerson, M.A. & H.L. Heringhi. 1966. Three noteworthy colubrids from Southern Sonora, Mexico. Great Basin Naturalist 26(3-4): 136-140).

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Neel, D., M.A. Nickerson, & C.E. Mays 1967. Aldehyde fixation and celloidin embedding for enzyme histochemistry (Abstract) from 43<sup>rd</sup> Annual Meeting of Southwestern and Rocky Mountain Division of the AAAS.

Nickerson, M.A. 1968. More aberrations in the color patterns of rattlesnakes, genus *Crotalus*. Wasmann Journal of Biology 26(1): 125-131.

Nickerson, M.A. & C.E. Mays 1968. Notes on the shedding of sea snakes, *Laticauda semifasciata* (Reinwardt) in captivity. Copeia 1968 (3): 619.

Nickerson, M.A. 1968. Dissertation: A study of the ultrastructure and histochemistry of the venom apparatus of some elapine snakes. Arizona State University. June,  $1968 \times 1-119 p$ .

Nickerson, M.A. & C.E. Mays. 1968. *Bufo retiformis* Sanders and Smith from the Santa Rosa Valley Pinal Co., Arizona. Journal of Herpetology 1(1-4): 103.

Nickerson, M.A. & C.E. Mays. 1968. Amphibians and Reptiles (Pinalenos) of Arizona. *In* W.L. Minckley ed Vertebrate Fauna of the Graham (Pinaleno) Mountains of Southeastern Arizona Arizona State University Field Studies ii + 1-96.

Nickerson, M.A. & C.E. Mays. 1968. Nocturnal behavior in certain iguanid lizards with possible correlations to road kills. Herpetologica 24(3): 258-259. (Co-author C. E. Mays)

Nickerson, M.A. & C.E. Mays. 1969. Publications, concerning African mammals, from Haile Selassie I University. Bulletin American Association of Zoological

Parks and Aquaria 10(2): 19.

Nickerson, M.A. & C. E. Mays, 1969. A preliminary herpetofaunal analysis of the Graham (Pinalenos) Mountain region, Graham Co. Arizona with ecological comments. Transactions Kansas Academy of Sciences 72(4): 492-505.

Nickerson, M.A. 1970. New uses for an old method used in ophidian sex determination. British Journal of Herpetology 4(6): 138-139.

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Nickerson, M.A. 1972. Diving for Hellbenders. Lore 22(4): 119-121.

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#### **Submitted**

Pitt, A.L. and M.A. Nickerson. Freshwater turtle populations and community composition in two thermally distinct sections of a river, Chelonian Conservation and Biology, 1-61.

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#### **Near submission**

Nickerson, M.A., C.E. Mays, A.L. Pitt, and M.D. Tohulka. 2010. Historical and changing turtle populations in a spring-fed river. 1-27.

## Papers Presented At Professional Meeting and Invited Addresses

Ophidian biology. Midwest Regional Conference of Tri Beta at Central Missouri State University, Warrensburg, Missouri (1958).

Amphibian and reptile collecting in the tropical Americas, Midwestern Regional Beta Beta Conference at the Lake of the Ozarks, Missouri, 1960.

Aldehyde fixation and celloidin embedding for enzyme histochemistry. 43rd Annual Meeting of the Southwestern and Rocky Mountain Division of the American Association of the Advancement of Science, Tucson, Arizona, with Charles E. Mays and Daniel L. Neel, 1967.

Histochemistry and ultrastructure of some elapine venom gland. Arkansas Academy of Sciences, University of Arkansas Fayetteville, Arkansas, 1969.

A serum protein study of Ozark *Cryptobranchus*, Society for the Study of Amphibians and Reptiles, University of Missouri at Kansas City, with J.W. Edward Wortham, 1970.

Amphibians reptiles and the fungus *Basidiobolus ranarum* Eidam. American Association for the Advancement of Science / Herpetologists League, Chicago with James Hutchison 1970.

A population of Ozark hellbenders. American Association for the Advancement of Science / Herpetologists League, Chicago, May 1970.

Reptilian diversity. *Invited annual* Sigma Xi lecture. Arkansas State University, State University, Arkansas, May 1981.

Venomous reptiles and their venom apparatuses. *Invited biology colloquium.* University of Wisconsin-Whitewater, Oct. 1971.

A population study of the Ozark hellbender salamander Cryptobranchus bishopi

Grobman. Indiana Academy of Science 1971, with Charles E. Mays.

Venomous reptiles and their venom apparatuses. Friends of Milwaukee Public Museum Lecture. April 1972.

Herpetology, conservation, and departments of conservation. Society for the Study of Amphibians and Reptiles University of Oklahoma, August 1972.

The venom glands: A histochemical approach. *Invited biological colloquium.* University of Wisconsin-Milwaukee, Dec. 1972.

The venom glands of elapid snakes: A histochemical approach. *Invited zoology seminar*. University of Wisconsin-Milwaukee, Jan. 1973.

Hellbender ecology. *Invited.* Chicago Academy of Sciences and the Chicago Herpetological Society, Feb. 1973.

Hellbender biology, Wisconsin Herpetological Society, Milwaukee, February. 1973.

Evolution of the Reptilia. *Invited zoology seminar*. University of Wisconsin-Milwaukee, March 1973.

Research at natural history museums, Milwaukee Public Museum docents and guests, March 1973.

A population of Ozark hellbenders. Their habitat and some unique adaptations for respiration, *Special zoology seminar*. Southern Illinois University, Carbondale, 1 June 1973.

Venomous animals, *Invited seminar*. Kemper Academy, Kenosha, Wisconsin, June 1973.

Venomous reptiles. *Invited seminar.* St. John's Academy, Delafield, Wisconsin, June 1973.

Under Ozark waters. Friends of the Milwaukee Public Museum lecture, Dec. 1973.

The potential consequences of a sea level canal through Mexico or Central America: Should two oceans meet?" Friends of the Milwaukee Public Museum lecture, Jan. 1974.

Salamander hemoglobins and habitats. *Invited graduate zoology seminar.* University of Wisconsin-Milwaukee, March 1974.

Ophidian venom glands. *Invited Honors Colloquium* at Beloit College, March, 1974. Held jointly with students from Lawrence College, Rockford College and nearby community colleges.

Children's Hospital, Milwaukee. Organized and presented much of seminar for Milwaukee County medical doctors, nurses and Milwaukee County Zoo herpetology staff 20 June 1974. Three part presentation: 1) venom glands and production, 2) venom pharmacology, and 3) first aid treatment in the field.

Venomous snakes, Invited lecture, Rotary Club of Milwaukee, 4 April 1974.

The partial value of a habitat using the hellbender, *Cryptobranchus allganiensis* as a model. *Invited*, Florida, Southeastern Endangered Species Conference cosponsored by the Southeastern Section of the Wildlife Society, Tall Timbers Research Station and Southeastern Section of the American Fisheries Society. Tallahassee, Florida, 27 September 1974.

Zoological research at today's natural history museums. *Invited*, Southeast Wisconsin Naturalists Association, Milwaukee, Feb. 1975.

Live animals in museums and museum studies. *Invited*, Milwaukee, Feb. 1975. American Association of Laboratory Science.

Wisconsin Herpetological Society. Herpetological results of the Kuehn-Amazon expedition, Milwaukee, Feb. 1975.

Live animal research by museums. *Invited lecture,* Beta Beta Beta, at Carroll College, Waukesha, Wisconsin, March 1975.

The Kuehn-Amazon expedition. Friends of the Milwaukee Public Museum lecture, March 1975.

An Amazonian experience. Milwaukee Public Museum lecture, March 1975.

An Amazonian expedition. Invited lecture, Milwaukee Rotary Club, April 1975.

An Ozark population of map turtles, *Graptemys geographica. Invited*, American Society of Ichthyologists & Herpetologists, Williamsburg, Virginia, June, 1975. Turtle Symposium.

Amphibians and reptiles of the Sonoran desert. Wisconsin Herpetological Society, Milwaukee, Sept. 1975.

Population dynamics of two ectotherms in an Ozark spring-fed river. *Invited zoology seminar*, University of Wisconsin-Parkside, Sept. 1975.

The Sonoran desert: Unique flora and fauna. *Invited annual address*, American Forestry Society (Wisconsin Chapter), Milwaukee, September, 1975.

An Amazonian venture. *Invited presentation*, Milwaukee Aquarium Society, Sept. 1975.

An Amazonian expedition. *Invited*, Central Missouri Lions Club. Eldon / Lake of the Ozarks, April 1976.

Reproductive biology of paedogenic salamanders *Invited*. International Symposium of Reproductive Biology of Amphibians. Sponsored by the Society for the Study of Amphibians and Herpetologists' League and Miami University of Ohio, 9 August 1976.

Urban habitat and its cosmopolitan effects: the Amazon basin as an example. *Invited.* First Unitarian Church, Distinguished Speakers Program, Milwaukee, Wisconsin. 21 November 1976.

Costa Rican amphibians and reptiles. Organization of Tropical Studies / Coe College, Iowa biology class taught in Puerto Viejo, Heredia, Costa Rica, January 1977.

Optimal conditions for maintaining giant salamanders. American Association of Zoological Parks and Aquaria. 1977. Little Rock, Arkansas.

Contemporary ecological problems in Amazonian, South America. *Invited annual address*. Midwestern Regional Meeting of Beta Beta, University of Wisconsin-Oshkosh, April, 1978.

Rain forest ecology. *Invited annual address*. American Interprofessional Institute. Milwaukee. May 1978.

SSAR mini-grants in herpetology, 2nd Annual SSAR Regional Herpetological Societies Conference. Arizona State University Tempe, June, 1978.

Hellbenders and habitats. *Invited seminar.* St. Louis University, Missouri. April 1979.

Hellbender research: A review. Wisconsin Herpetological Society. April 1979.

Multi-disciplinarian tropical expeditions. *Invited annual address*. Kansas City, Missouri, Zoo Docents and Staff. April 1979.

Reptile tracking by radio. Friends of the Milwaukee Public Museum Lecture 11 April 1979.

Radiotracking wildlife in tropical rainforests. *Invited annual address*. Friends of the Kansas City Zoo, Kansas City, Missouri, April 1979.

The use of radiotelemetry in wildlife investigations. *Invited zoology seminar.* St. Louis University, Missouri, April 1979.

Hellbenders: Giant salamanders. Invited. Brown Natural History Club, Brown

University, Providence, Rhode Island, 4 May 1979.

Reintroduction of captive Ozark hellbenders, *Cryptobranchus alleganiensis* bishopi into formerly occupied microhabitat. Lincoln University, Jefferson City, Missouri Missouri Academy of Science. April, 1979.

The use of radiotelemetry in studies of amphibian and reptilian ecology. *Invited.* Boston University and Massachusetts Herpetological Society. 4 May 1979.

Hellbenders and habitat: A 10 year study. Recent Advances in Biology series, *Invited.* Lawrence University, Appleton, Wisconsin. 11 May 1979.

The need for herpetological surveys of the Intervalley Ridges of the Mississippi Alluvial Plain Section in Southeastern Missouri. Missouri Academy of Sciences. NE Missouri State University, Kirksville. April 1980.

The amphibians and reptiles of Wisconsin: Some ecological and zoogeographical considerations. The University of Wisconsin-Madison and Madison Audubon Society, *Invited.* Spring, 1980.

Biological detective work: Unraveling family trees. Friends of the Milwaukee Public Museum lecture. *Invited*. 10 September 1980.

Reptiles and amphibians in Wisconsin: An overview. The Wisconsin Society of Biological Scientists, *Invited.* annual address. Milwaukee. November 1980.

Animal life in the Amazon Basin and Central America. Milwaukee County Zoo, *Invited annual address*. Milwaukee, Wisconsin. 17 January 1981.

Fossils, ferns and faraway places: Research activities at the museum. *Invited* annual address. Friends of the Milwaukee Public Museum lecture. April 1982.

Understanding the uglies and fearsomes. Fish and Wildlife Resources of McHenry County (Chicago Area Wildlife Conference). *Invited luncheon address*. 23 October 1982.

Priority needs and directions identified by professional herpetological societies members. Association of Systematics Collections. University of Illinois, Champaign – Urbana, 24 May 1984.

Changing chelonian populations in a springfed Ozark river. Joint meetings of American Society of Ichthyologists and Herpetologists, Society for the Study of Amphibians and Reptiles and the Herpetologists League. University of Oklahoma Norman, 30 July 1984.

Radiotelemetry in reptiles and amphibians. *Invited,* Texas Herpetological Society. University of Texas, Arlington November 1984.

Turtle population changes over a decade. University of Georgia Savannah River Ecology Institute, Aiken, South Carolina. January 1985.

Rain forest reptiles *Invited lecture series*. Lincoln Park Zoological Gardens, Chicago, Illinois 23 and 27 January 1985.

Amazon basin amphibians and reptiles. Milwaukee County Zoo. *Invited docent and staff lecture*. April,1985.

Sea serpents. American Association of Laboratory Animal Sciences. Medical College of Wisconsin, Milwaukee. *Invited.* 24 January 1986.

Herpetological dominance in an Ozark river. Invited seminar. Midwestern Herpetological Society. Milwaukee, October 1986.

Understanding hellbenders *Invited*, 50th Anniversary of the Herpetological League meeting jointly with SSAR. SW Missouri State University, Springfield. August 1987.

Tropical American rain forests Overcoming complexities. *Invited Sigma Xi address*. Marquette University.

Tropical Rain Forests: The Milwaukee Connection: MPM Lecture Series and panel with Drs. A. Young and M. Dibben. 15 January 1990.

The conservation of Wisconsin's cold-blooded animals, *Invited summation* speaker for symposium. University of Wisconsin Madison, March 1991.

Surprises from radiotelemetry studies of amphibians and reptiles. *Invited keynote speaker.* All Florida Herpetological Conference. University of Florida, Gainesville, 13 April 1991.

What your state museum can do for you. *Invited speaker and panelist*. Florida Association of Museums, Jacksonville, 1993.

Conservation through collection: Does the use of animal specimens in museum exhibits or in systematic study endanger or engender *Invited speaker and panelist*. Southeast Museum Conference, Memphis, TN, 1994.

Taking a stand; Museums and environmental issues. *Invited speaker and panelist*. Southeast Museum Conference, New Orleans, LA, Oct. 1995.

Reflections of a late 20<sup>th</sup> century herpetologist. The Herpetology Conference. Gainesville, FL, April 1999.

An overview of the use of reptiles in research / teaching. Concepts of Reptiles Disease and Surgical Techniques. *Invited*. University of Florida College of Veterinary medicine, Institutional Animal Care and Use Committee coupled with

The Herpetology Conference April 1999.

Lessons learned from diving for hellbenders. The Herpetology Conference. Gainesville, FL. March, 2002.

Thirty five years of hellbenders. *Invited keynote address*. Hellbender Conservation Conference, 24-26 July 2003, Georgia.

Hellbender habitat in the North Fork of White River, 1969-2004. Hellbender Working Group, with A. Pitt, St. Louis, November 2004.

Hellbenders and floods. The Herpetology Conference. Gainesville, FL. 27 Feb. 2005

Hellbender salamanders: The observations and science leading to current understanding. International Amphibian Days Conference. *Invited speaker*. 30 April 2005, Timonium, Maryland.

Ozark hellbender, *Cryptobranchus alleganiensis bishopi* habitat and population parameters in a research section of North Fork of White River, Ozark County, Missouri 1969-1980. Hellbender Symposium. , Lake View, AR. 21 June 2005 (with A. L. Pitt).

Flooding effects on two populations of hellbenders, *Cryptobranchus alleganiensis*. Hellbender Symposium. Lake View, AR., 21 June 2005 (with A. L. Pitt).

Harvesting as a factor in population decline of a long-lived salamander, the Ozark hellbender, *Cryptobranchus alleganiensis bishopi* Grobman. 2005 Joint meeting of Ichthyologists and Herpetologists, Tampa, FL, 8 July 2005.

Eight thousand years of ceramics. Santa Fe Community College, Gainesville, FL 15 November 2005.

Reassessment of the turtle community in the North Fork of White River, Ozark County, Missouri 25 March 2006 (Amber L. Pitt presenter). The 29 th Annual Herpetology Conference, Gainesville, Florida.

Reassessment of the turtle community in the North Fork of White River, Ozark County, Missouri, 8 April 2006. The Fourth Annual Terrestial and Freshwater Turtle Session at the Sea Turtle Symposium, Island of Crete, Greece. (Amber L. Pitt presenter).

Can Tricaine Affect Your Research? July 2007. Joint Herpetology Meetings (American Society of Ichthyologists and Herpetologists, Society for the Study of Amphibians and Reptiles, and Herpetologist's League) St. Louis, MO. (Kelly Byram presenter).

Science and amphibian populations. 29 March 2008. The Herpetology Conference, Gainesville, FL. (with J. K. Byram, MAN presenter).

Potential impact of capture and MS-222 exposure on hellbender (*Cryptobranchus alleganiensis*) populations in the Ozarks. 24 June 2009. 4<sup>th</sup> Hellbender Symposium, Cumberland Falls State Park, KY., J.K. Byram and M.A. Nickerson (MAN presenter).

A historical turtle community in an Upper Mississippi Embayment Swamp. 25 March 2011. The 34<sup>th</sup> Annual Herpetology Conference, Gainesville, FL.

Population structure of the hellbender (*Cryptobranchus alleganiensis*) in a Smoky Mountain stream. The Herpetology Conference, Gainesville, FL Kirsten Hecht-Kardaz, Max A. Nickerson, and M. Freake (K H-K presenter).

## **Miscellaneous Background**

## A. Zoological Parks. Aquaria:

- 1952-1971. Began work at Max Allen's Zoological Gardens (MAZG) in 1952. Served in positions from Keeper to Director.
- 1962-1963. Assisted in designing the Sonoran Desert exhibits at the Phoenix Zoo (With Dr A.E. Dammann of ASU) and also assisted with initial stocking.
- 1964-1965. Originated zoo based television series "Zoo World" at the University of Missouri -Columbia (KOMU-TV). This required the production of 18 programs, each fitting 30 minute time slots, during two years. The programs were based on natural history and natural history research.
- 1966-1967. Produced a series of programs at Arizona State University, KAET-TV, for Motorola and used in Phoenix School System for a decade, called Desert Denizens, based on the biology of Sonoran Desert animals and their habitats.
- 1972-1978. Established liaison with many zoos for MPM, to obtain specimen materials including St. Louis, Oklahoma City, Memphis, & Little Rock Zoos.
- 1975. Assisted in establishing a permanent zoo member board slot for SSAR board.
- 1976. Established herpetological husbandry fund within SSAR.
- 1977. Established zoo liaison committee within SSAR.

- 1978. Obtained funding for SSAR captive reptile reproduction symposium held at Arizona State University, Tempe, Arizona (used to transport U.S. zoo staff speakers to meetings).
- 1976-1978. Designed new AAZPA (now AZA) zoological park in Missouri (concept and layout).
- 1980. Obtained funding to assist International Crocodilian Symposium-Milwaukee.
- 1988. Milwaukee aquarium committee (established to determine feasibility of developing a major (\$70,000,000.00) aquarium and implementing development if feasible).
- 1989 and 1990. Served on the Zoological Society of Milwaukee County Research and Conservation Committee.
- 2006 -2010. Conservation Fellow of the WildCare Institute of the St. Louis Zoo.

#### **B.** Museum related:

- 1957-1960. Scientific Aide in Central Methodist University (College) Museum (Fayette, Missouri).
- 1960-1962. Acting Curator of amphibians and reptiles at Arizona State University (Tempe, Arizona).
- 1968-1971. Curator of amphibians and reptiles at Arkansas State University Museum, State University, Arkansas.
- 1971-1990. Chief Curator-Vertebrate Division, Head of the Scientific Staff,
  Assistant Director, and Acting Director of the Milwaukee Public
  Museum., Wisconsin
- 1990 -1997. Chairman of Interpretation, University of Florida Florida Museum of Natural History (Gainesville)
- 1997 2007 Co-Curator of Herpetology, University of Florida Florida Museum of Natural History (Gainesville) with F. Wayne King
- 2007 2010 Curator of Herpetology, University of Florida Florida Museum of Natural History (Gainesville)

# C. <u>University / public related:</u>

1966 Originated TV series "Desert Denizens" at Arizona State University KAET-

- TV. Video-taped for use in Phoenix area schools. (Six programs based on desert ecology) funded by Motorola.
- 1970. Produced life science educational programs for Arkansas State University, State University, Arkansas.
- 1972-1985. Miscellaneous television appearances for MPM.
- 1988 Advisor for British Broadcasting series Super Senses (seven programs) produced by David Attenbourgh.
- 1989. Advisor for British Broadcasting programs on Urban Wildlife and Snakes.
- 1995. Advisor for Fox TV network series on collections, five programs, originating in Gainesville, FL
- 2001-2009. Advisor for numerous BBC, National Geographic, and independent nature series.
  - Examples in 2008 National Geographic 1) Salamanders and 2) Crocodilians
- 2009. Advisor for Hellbenders video by Independent Producer in Knoxville, Tennessee.

#### **D.** Editorial related:

- 1971-1981. Primary reviewer for National Wildlife and International Wildlife Magazines.
- !971-1990. Reviewed for Herpetologica, Milwaukee Public Museum (Publications in Biology and Geology, Contributions in Biology and Geology, and Special Publications in Biology and Geology), Wisconsin Archeologist, Ecology, Copeia, J. of Herpetology, and Herpetological Review.
- 1992 -1993. Advisor for Arkansas Department of Conservation's study of the Spring River watershed.

## 1995-1996. Advisor for:

- A. Missouri Department of Conservation studies of the North Fork of White, Current, Jacks Fork and Eleven Point Rivers watersheds.
- B) U.S. Department of Fish and Wildlife-Endangered Species Status review, on the biology of *Cryptobranchus alleganiensis*.
- 1996 1997. Florida Department of State, reviewer and panelist for three grant

programs. Cultural Facilities, Science Museums, and Children's Museums.

2004 - 2010. Special Manuscript Editor, Southeastern Naturalist

1997-2010 Reviewer for Journal of Herpetology, PLOS Evolutionary Biology, Biological Conservation, University of Florida Press, University of Arkansas Press, Herpetologia, Copeia, Southeastern Naturalist, Arkansas Academy of Science, Northeastern Naturalist, and Scientific Areas Journal.

2007- 2008 Reviewer for the University of Florida Presses.

2005 -2010 Editorial Board of Southeastern Naturalist.

### **E. Committee Work:**

## **University of Florida**

1) University Faculty Senate	1991 - 1993 , 2003 - 2006
2) People Awareness Advisory	1991 - 1994
3) Campus Natural Area & Outdoor Teaching Lab.	1992 - 2003
4)TIIE Service to Florida's Children	1992 - 1993
5) UF/UF Foundation Corporation Kickoff Campaign	1997 - 1998
for \$500,000,000.00 goal	

# Florida Museum of Natural History

- 1) Executive Committee 1991-1998
- 2) 34th Street Education and Exhibition Center (Chair) 1993-1998
- 3) Tenure & Promotion 1991-1996
- 4) Expediting Committee (Chair) 1991-1998
- 5) Numerous Ad Hoc Committees 1991-2011
- 6) University Teaching 2006-2011

#### **Recent Graduate Student Committees**

#### **Committee Chair**

Sophia Feliciano, Wildlife Ecology & Conservation, M.S. 2000.

Esther Langan, Wildlife Ecology & Conservation, M.S. 2003.

Katie Noble, Wildlife Ecology & Conservation

Robert Robbins, Wildlife Ecology & Conservation, M.S. 2005.

Keith Morin, Wildlife Ecology & Conservation, M.S. 2005.

Amber Pitt, School of Natural Resources and the Environment, M.S. 2005. PhD 2008

Joseph Townsend, M.S. Center for Latin American Studies.2006
PhD, School of Natural Resources and the Environment,
Kelly Byram, M.S., Department of Wildlife Ecology and Conservation, 2008

Joseph Tavano, M.S., School of Natural Resources and the Environment, 2008

Ben Atkinson, M.S. School of Natural Resources and the Environment, 2009 Jesse Senko, M.S. School of Natural Resources and the Environment, 2009 (Committee Co-Chair)

Kirsten Hecht, Wildlife Ecology and Conservation, M.S. ongoing

### **Committee Member**

Kevin Zippel, Zoology, PhD 2000.

Gary Casper, Zoology, PhD 2004 University of Wisconsin-Milwaukee

Dan Janes, Zoology, PhD 2004.

Tamatha Barbeau, Zoology M.S. 2000.

James Vonesh, Zoology M.S. 2000.

Ryan McCleary, Zoology, M.S., completed PhD 2009.

Andrew Roark, Zoology, M.S. 2003.

Joe Hiduke, Pathology, M.S.

Coleman Sheehy, Zoology, M.S. 2006

Jason Bourque, Museum Studies. M.S.

Greg Klowden, Wildlife Ecology and Conservation, PhD, 2007.

Luis Somma, Zoology, PhD Zoology

Gabe Miller, Wildlife Ecology, M.S.

Travis Blunden, Wildlife Ecology and Conservation, M.S. 2010

Yurii Kornilev, School of Natural Resources and the Environment, M.S. 2008

Melissa DeSa, Wildlife Ecology and Conservation, M.S., 2009

Ann M. Meunch, Wildlife Ecology and Conservation, M.S., 2009

Susan V. Gruner, Entomology, PhD ongoing

Wixson, Joel G., Biology, M.S. ongoing

Zackery Taylor, Biology, M.S. ongoing

## **Mentoring (examples)**

Mark W. Moffit (See "The High Frontier: Exploring the Tropical Rainforest Canopy, Harvard University Press, 1993, p 16), Biologist / Photographer for National Geographic, PhD under E.O. Wilson (Harvard).

Nigel Marvin, Biologist, TV producer, commentator and director for British Broadcasting Corporation,... Nature, Animal Planet, and other series including Life on Earth and Super Senses series by David Attenborough.

Cheryl A. Nickerson-Winner of a Presidential Early Career Award for Scientists and Engineers Award (PECASE) 2003 presented in Washington D.C. following a Presidential Address, and a finalist for NASA Astronaut, Associate Professor, Biodesign Institute, Arizona State University, Tempe.

Josiah Townsend –Howard Hughes Medical Institute Science for Life Award 2006. PhD student University of Florida.

## **Current Research Interests**

Ecology and systematics of amphibians and reptiles.
Vertebrate populations in lotic habitats
Cryptobranchid salamander biology
Micro-fungi relationships with amphibians and reptiles
Reptilian venom glands
Effects of MS-222 on vertebrates
Retardation of regeneration in salamanders (micro-fungi and bacterial components).

### **Recent Events**

Nominated for Arizona State University's Founders Award Dec. 2010.