

RESUMÉ

MARTIN C. MICHENER

75 Hannah Drive, Hollis, NH, 03049 Cell Phone 603-321-0547

email: marty@enjoybirds.com

Dr. Michener has over forty years experience as a teacher, ecologist, zoologist and botanist. His professional expertise in wetland science has been recognized since 1973, when he testified at a New York DEC hearing in Utica on ground truthing aerial photo wetland mapping by wetland community type. He is author of the Wetland Site Index method, used for the refinement of wetland delineation by plant species (Wetlands, 1983) and served as Principal Investigator in a National Research Council 3-year project: National Cooperative Highway Research Program: Project 25-5; 1992-96. "Remote Sensing and Other Technology for the Identification and Classification of Wetlands", FY'92, Phase 1 and 2.

More recently, he authored **EnjoyBirds** software - "*the bird book that migrates with you*" covering 2166 species identification in English and Spanish, making the illustrations and sound recordings as well. In 2004 he republished (as PDF on disc) his 1976 book, written by James D. Lazell: "**This Broken Archipelago, Cape Cod and the Islands Amphibians and Reptiles**". He has self-published two e-books on botany: "**Graminoids - a guide to some common grasses, sedges and rushes of the Northeast**," and recently a huge technical photo guide to 1200 species: "**Botany Everywhere - woods, field, home and garden plants of Northeast USA**."

EDUCATION

Post-doc	1965-67	Biology	Tufts University
Ph.D.	1961-65	Biology	Harvard University
B.S.	1957-61	Biology	Cornell University

FELLOWSHIPS

1965	Post-doctoral Fellow	Tufts University
1961	Teaching Fellow	Harvard University,
1961	NIH Pre-doc. Fellow	Harvard University

PROFESSIONAL EMPLOYMENT HISTORY

2007 **Faculty**, Landscape Institute, Arnold Arboretum, Harvard University, Cambridge, MA.

1993-2006. **President**, MIST Software Associates, Hollis, NH, and consultant.

1989-95 Network and software **consultant** to AMRO Environmental Laboratories, Merrimack, NH Created lab sample tracking and billing software: AMROSAMP.

1996-97 Antioch New England Graduate School, Keene, NH. **Adjunct Professor**: Wetlands Flora; New England Flora.

(PROFESSIONAL EMPLOYMENT HISTORY Cont'd.)

- 1989-94 **Executive Director** of New England Institute for Environmental Studies.
- 1981-96 **Scientist**. Normandeau Associates Inc., Bedford, NH
- 1979 Jason M. Cortell and Associates, Inc. **Senior Scientist**. Included a study in Florida on reclamation of phosphate mining land for development purposes. Other project work on wastewater disposal, hazardous waste planning, impact assessment in air and water quality, noise.
- 1979 Sandy Neck Ecological Project with Dr. J.D. Lazell, Jr. and P. Auger, **Bio-electronics Consultant**, developing and implementing a radio tracking system for studying diamond-backed terrapins in the salt marsh at Sandy Neck, Cape Cod, MA.
- 1978 Eye Research Institute, Retina Foundation, Boston, MA. for Dr. Peter Hartline, Bio-electronics **Consultant**, developed digital temperature controller for nerve preparations.
- 1977 Echolab, Burlington, MA. Video **Electronics Consultant**.
- 1973-75 Jason M. Cortell and Associates, Inc. Wellesley, MA. Part time summer **consulting & environmental impact work**.
- 1972 Dr. Roger S. Payne, Rockefeller University, NY. **Consultant** on electronics on bioacoustics of whales, preparing sonobuoys for permanent installations..
- 1970-79 Palfrey Street School, Watertown, MA. High School **Teacher**, taught Basic Science, Chemistry, Physics, Whole Earth, Photography. Short courses on Speleology, Rock Climbing, Oceanography, Field Biology.
- 1969 **Instrument Engineer**, Polaroid Corporation, Waltham, MA.
- 1968 Shintron Company, Cambridge, MA. **Senior Electronics Design Engineer**, Facsimile Communication.
- 1966-1969 Elementary Science Study, Education Development Center, Newton, MA. **Developer**. Preparation of technical manuals and teaching guides for in-service training of science teachers; curriculum development in science classes in public and private schools.

SELECTED PROJECT EXPERIENCE at Normandeau Associates, Inc. (NAI).

National Academy of Sciences, National Research Council, National Cooperative Highway Research Program: Project 25-5; 1992-96; **Principal Investigator**. "Remote Sensing and Other Technology for the Identification and Classification of Wetlands", FY'92, Phase 1 and 2, over three years.

Wetland Studies for Add-A-Lane Project, Route 3, Massachusetts Department of Highways & Fay, Spofford & Thordike; 1991-1992; **Field coordinator** of the delineation and review by local conservation commissions of 21 miles of highway corridor, west, east and center, by both Federal and by Massachusetts procedures.

(SELECTED NAI PROJECT EXPERIENCE, Cont'd)

Ecological Studies for Concord Community Development Corp., Concord, NH, Airport, and Caron Engineering; 1991; **Endangered Species Ecologist.** Determined the suitability of a Concord Airport Parcel for both non-airport subdivision and for restoration as Karner Blue Butterfly habitat.

US AID - Jamaica, Development of a wetland delineation and evaluation model for the Caribbean; 1990-91; Introduce Univ. West Indies & NRCD staff to computer analysis of plant, soil and wetland data. 60% of the project was usurped from Normandeau by the Caribbean Project Manager, the late Dr. Peter Bacon.

NH DOT. **Designer** of Wetland Mitigation plan for Squamscott River Bridge Replacement; 1990

Study of Wetland Mitigation Effectiveness; 1988-90; Federal Highway Administration; **Senior Wetland Scientist.**

Coastal NH Wetlands Mapping, Office of State Planning; 1985; **Project Manager:** Wetland evaluation & mapping for Rye, Hampton, Hampton Falls, Seabrook, North Hampton and New Castle, NH.

The NH Office of State Planning, Seabrook Conservation Commission 1984-85; **Project Manager.** Education Plan & Nature Guide for Dunes.

Hospital Corporation of America, 1984-85, **Project Manager:** Wetland Mitigation, HEP Studies and new wetlands design, Portsmouth, NH, resulting in conversion of a gravel pit into a well studied and diverse wetland.

Seabrook Conservation Commission & NH Office of State Planning: interpretive nature trail layout and guide for the seacoast back-dune area (1985-85).

Water supply Alternatives Study - Metropolitan District Commission Bird and amphibian studies, 1983-84.

Exxon Minerals Company, Crandon Mining Project, Rhinelander, WI 1981; **Terrestrial Ecologist.** Ornithological and Herpetological Studies.

Great Northern Paper Company, Penobscot River Hydroelectric Development; 1981; **Terrestrial Ecologist.** Ornithological and Herpetological Studies.

Goffstown Conservation Commission, Goffstown, NH; 1984; **Project Manager.** Interpretive Nature Trail for South Uncanoonuc Mountain.

Lincoln Land Conservation Trust, Lincoln, MA; 1975; Consultant. Researched and wrote and educational trail guide to a preserve with a sphagnum bog: historic, geological, hydrological, zoological and botanical observations.

LECTURES ON WETLANDS EVALUATION & RESTORATION

Office of State Planning, Portsmouth, NH; 1983.

Harris Center, Hancock, NH; 1983.

Lake Winnepesaukee Association, Moultonboro, NH (invited), 1984.

Rockingham Planning Commission lecture series, April, 1984.

Association of State Wetlands Managers, Portland, ME, 1985. NH Center, NEIWPC, State of NH (invited), 1986.

Association of State Wetlands Managers, Lake George (invited), 1987. Antioch College, NE, wetlands course (invited), 1987, 1990, 1991.

Town of Salem, NH, Prime wetlands mapping, May 1988.

American Bar Association/Environmental Law Institute Fourth Annual Conference on Wetlands Law and Regulation (invited), 1989.

Resource Education Inst., Wetland Issues in Land Use & Real Estate; 'Wetland Assessment Techniques', Oct. 1989.

Organized & Moderated NEIES workshop on Stormwater Impacts to Natural Wetlands, 35 invited New England agency, university & industry experts, Oct. 1989.

New Hampshire Wetlands Board for state's wetland conference with ASWM, at Ctr for New Hampshire, 'No Net Loss', Oct 1989. Northeast Wetlands conference, EEI, July 9-10, 2 talks: 'WSI method' & 'Wetland construction project', 1990.

Organized & Moderated NEIES Conference: Environmental Planning for Onsite Wastewater Treatment in New Hampshire, Aug. 1990.

American Planning Assn. conference: Planning Directions, Moderator for session: 'Wetlands Mitigation: How viable is it?', Nov. 1990.

NH Assoc of Wetland Scientists: 'Hollands-Magee models & Michener software', Feb. 1991.

NH Landscape Association: 2 day conference; "The Use of Wetland Plants in the Landscape"; March 1991.

Mass Continuing Legal Ed., Environmental Science for Environmental Lawyers: 'Wetland resources and their protection'; May 1991.

Nashua Regional Planning Commission; videotape on wetland issues and permitting; July 1992.

PROFESSIONAL AFFILIATIONS

New England Institute for Environmental Studies, **Executive Director**, ret.
Ret. New Hampshire Association of Wetland Scientists, (Ex-founding **Secretary and Newsletter Committee**).
New England Botanical Club, member.
New England Wild Flower Society, member.

PUBLICATIONS

- **Michener, M. C. May 2007. **Botany Everywhere – Woods, Fields, Home and Garden Plants of Northeastern USA**. Interactive PDF book on disc.
ISBN: 0-9728035-5-6
- **Michener, M. C. 2006. **Invasive Plants of New Hampshire** - Invasive Plants Identification primer and remediation and management options, web links. Prepared & distributed for discussion in Hollis, NH, April 2006. Interactive PDF book.
- **Michener, M. C. 2005. **Grassland Birds of New Hampshire** - Bird Images and Sounds, grass identification primer, and management links. Prepared and distributed for workshop in Dartmouth, NH, June 2005, sponsored by New England Wild Flower Society. Interactive PDF book on disc.
ISBN: 0-9728035-4-8
- **Michener, M. C. 2004. **Graminoids** - a guide to some common grasses, sedges and rushes of the Northeast. Interactive PDF book on disc, 128 pages, 360 photos. ISBN: 0-9728035-2-1
- **Lazell, James D. & M. C. Michener, 2004. **This Broken Archipelago**, on disc.
ISBN: 0-9728035-1-3
- **Michener, M. C. 2001. **EnjoyBirds**, software to identify 2166 species of birds, as found from Alaska and Labrador south to Hawaii, Panama & Trinidad.
ISBN: 0-9728035-0-5
- Michener, M.C. 1992. Using databases to model real world objects and relations. **FACTS WET**, Newsletter of NH Assoc. Wetland Scientists. Summer. 3 pp.
- Michener, M.C. 1992. Ice-rise. April issue of **FACTS WET**, the NHAWS newsletter.
- Michener, M. C., 1991. Wetland Resources and Their Protection. Pp 29-63 in "Environmental Science for Environmental Attorneys", publ. 91-09.17 Massachusetts Continuing Legal Education, Inc. Steven C. Davis, Chair. Boston, MA 5/91, 178 pp.
- Michener, M.C., 1990. User's Manual for NEIES Plant and soil Database. Distributed to reviewers and purchasers of the NEIES Database Software. 52 pp.
- Michener, M. C., 1990. Determining Percent Hydrophytes by Weighted Average. Paper #13 in Proc. the Northeast Wetlands Conference, Boston, MA, Exec. Enterprises, Inc., Ed. Wm. Taylor, Esq.
- *Michener, M. C., 1989. A Wetland Dilemma. **Wildflower Notes**, Wetlands:

- 4(1):33-36.
- Magee, D. & M. C. Michener, 1987. The Normandeau Approach; Computerization index. Proc. of Assoc. State Wetland Managers, Lake George, NY.
- Michener, M. C., 1985. A boundary definition methodology: The wetland site index. Proc. of Assoc. State Wetland Managers, Portland, ME.
- Michener, M. C., 1985. Assessing wetlands for pipeline corridors. Proc. of Assoc. State Wetland Managers, Portland, ME.
- Michener, M. C., 1983. Wetlands site index for summarizing botanical studies. Presented at the annual meeting, Society of Wetland Scientists, St. Paul, Minn., 8 June 1983.
- *Michener, M. C., 1983. Wetlands site index for summarizing botanical studies. **Wetlands** 3:180-191.
- Michener, M.C. and P.W. Fairbairn. 1989. Wetlands and road runoff. **Proc. of 1989 New England Environmental Expo**, Boston, MA.
- *Michener, M. C. and J. D. Lazell. 1989. Distribution and relative abundance of the Hognose Snake, *Heterodon platirhinos* in Eastern New England. **J. Herpetology** 23(1):35-40.
- Michener, M. C., 1975. Trail Guide to Silver Hill Bog. Sponsored by the Lincoln Land Conservation Trust, Lincoln, MA. Typescript reproduced locally for school, groups, etc.
- Lazell, J. D. and M. C. Michener, 1976. **This Broken Archipelago**. Reptiles and Amphibians of Cape Cod. Quadrangle/The New York Times Book Company, New York, NY. 160 pp. plus 105 photographs (see above).
- Michener, M. C. and N. Stewart, 1975. Extensions of Airport and Overhead Caves. **The Northeastern Caver**. Vol. VI(3):67-72.
- Walcott C. and M. C. Michener, 1971. Sun navigation in homing pigeons - attempts to shift sun coordinates. **J. exp. Biol.** 54:291-316.
- Walcott, C. and M. C. Michener, 1967. Analysis of tracks of single homing pigeons. **Proc. XIV International Ornith. Congress.** 311- 330.
- Michener, M. C. and C. Walcott, 1967. Homing of single pigeons - analysis of tracks. **J. exp. Bio.** 47:99-131.
- Michener, M. C., 1967. **Eggs and Tadpoles, trial teaching edition**, Elementary Science Study, E.D.C., Newton, MA.
- Michener, M. C. and C. Walcott, 1966. Navigation of single homing pigeons: airplane observations by radio tracking. **Science** 154:410.
- Michener, M. C., 1965. Airplane following of single homing pigeons by radio tracking. **Ph.D. thesis**, Harvard University, Cambridge, MA.
- Michener, M. C. and C. Walcott, 1965. Airplane tracking of single homing pigeons. **Amer. Zool.** 5:703-704.
- Michener, M. C., J. Weske, and R. Clapp, 1964. A breeding colony of Agami Herons in Veracruz. **Condor** 66:77-78.
- *Smith, P. B. and M. C. Michener, 1962. An adult albino Ambystoma. **Herpetologica.** 18:67-68.
- Stein, R. C. and M. C. Michener, 1961. Least Flycatchers in N.W. Washington and

central British Columbia. **Condor**. 63:181-182.

** available from publisher: MIST Software Assoc., Inc., Box 269, Hollis, NH 03049

* available as PDF file at :<http://www.EnjoyBirds.com/HomePublishing/PubHome.htm>

SOFTWARE WRITTEN

Wetlands evaluation database - (in Rbase System V) plant listing and analysis, evaluation of wetlands by Hollands-Magee models. 1986. NAI in-house use only.

Michener software - (in dBase III+, dBase IV) site evaluation by plant lists and Hollands-Magee wetland assessment models (1987- 1990). NAI in-house use only.

NEIES Database for indexing Mass DEP Adjudicatory Hearings (Microsoft Quickbasic 4.5, 1990). NEIES In-house use only.

AMROSAMP dBase relational files and program for managing samples, results, labwork and invoicing for AMRO Environmental Laboratories, Merrimack, NH (1992-1999).

NEIES Plant & Soil Database - (compiled Microsoft Professional Basic 7.0) site evaluation by plant indicator attributes and soil horizon analysis. Compiled program, example brochure, menu chart and user's manual; plant list of 2300 forms. (1990-91) Reviewed by 2 US Federal agencies, 5 New England state agencies; leased to users for \$89.

LATLONG.EXE Program to convert quadrangle sector locations into Latitude and Longitude (compiled Microsoft Professional Basic 7.0) (1991) Not yet released.

Database complex of 9 related tables for compiling wetland Resource Information, (dBase IV) joint project with Audubon society of NH, with Ms. Amanda Stone. (1991 - 1993).

MAPS.EXE (for DOS) donated to the National Wetlands Inventory (NWI, USFWS) to display a North American map, and allow mouse-click choice of a location, then to display all the topo maps within a one degree square, by name, date and status for which NWI has completed wetlands mapping. Now being distributed by NWI free of charge.

SELECT.EXE DOS Software for extending single-table queries to the DOS Command line, then viewing, editing, appending, indexing and reporting; flexible columns and rows manipulation; use of proprietary data dictionaries to control editing and lookups. MIST Software Associates, Inc.

+**EnjoyBirds+** - - bird identification database for all North America, including regularly ranging species from Panama to Alaska, MIST Software Associates, Inc. ISBN: 0-9728035-0-5