

CURRICULUM VITA

Name: Frederic H. Nichols

Addresses:

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Social security number: 010-30-9075

Date of birth: November 28, 1937

Place of birth: Boston, MA

Educational background:

Year	Degree	Institution	Field
1960	A.B.	Hamilton College	Liberal Arts
1968	M.S.	University of Washington	Oceanography
1972	Ph.D.	University of Washington	Oceanography

Professional background:

1965-1969	Teaching Assistant, University of Washington
1969-1972	Research Assistant, University of Washington
1971-Present	Oceanographer, U. S. Geological Survey
1975-1976	Visiting Scientist, University of Kiel, West Germany
1979-1982	Associate Chief, Branch of Pacific Marine Geology
1979-Present	Adjunct Professor, Calif. State University Hayward

Research interests:

Marine and estuarine benthic ecology
 Invertebrate population dynamics and production
 Long-term variations (natural cycles vs man-induced changes) in
 estuaries
 Benthos-water column interactions

Professional Committee Assignments:

Biological Effects Panel, California Ocean Pollution Research
 Conference (1973)
 California Commission on Marine Ecological Survey Standards (1974-77)
 San Francisco Bay and Estuary Advisory Committee (1976-78)
 National Science Foundation Joint Committee on Systematic Resources
 in Invertebrate Zoology (1974-77)

National Science Foundation Panel on Long-Term Ecological Measurements (1978)
Association of Systematics Collections National Conference on Voucher Specimen Management (1981, Working Group Chairman)
Governing Board, Tiburon Center for Environmental Studies (1977-1986, Chairman 1982-83)
Tomales Bay Technical Advisory Committee (1982-84)
California Regional Water Quality Control Board Regional Effects Technical Advisory Committee (1982-1986)
California Academy of Sciences Fellows' Steering Committee (1982-84)
National Science Foundation Workshop on biological effects of coastal ocean suspended sediment transport, BECOSST (1984-Present)
American Society of Limnology and Oceanography Organizing Committee for National Science Foundation workshop on land-sea interface (1986-Present)
San Francisco Bay Conservation and Development Commission Scientific and Technical Advisory Committee (1986-Present)
Environmental Protection Agency San Francisco Bay Project Technical Advisory Committee (1987-Present)
National Research Council/National Academy of Sciences Chesapeake Bay Monitoring Case Study Panel (1987-present)
Editorial Board, Estuarine Research Federation journal, Estuaries (1987-present)

Memberships:

American Association for the Advancement of Science
American Society of Limnology and Oceanography
Biological Society of Washington
Ecological Society of America
Estuarine Research Federation
Pacific Estuarine Research Society
Western Society of Naturalists

Elected Memberships:

Sigma Xi (The Scientific Research Society)
Fellow, California Academy of Sciences

Community Activity:

Member, City of Palo Alto Planning Commission (1977-82,
Chairman 1980-81)

Publications (chronological order):

- Banse, K., and F. H. Nichols. 1968. Two new species and three new records of benthic polychaetes from Puget Sound (Washington). Proc. Biol. Soc. Washington 81:223-230.
- Banse, K., K. D. Hobson, and F. H. Nichols. 1968. Annotated list of polychaetes. Pages 521-556 in U. Lie. A quantitative study of benthic infauna in Puget Sound, Washington, USA, in 1963 and 1964. FiskDir. Skr. Ser. HavUnders. 14.
- Nichols, F. H. 1969. Tenonia kitsapensis, a new genus and species in the family Polynoidae (Polychaeta) from Puget Sound, (Washington). Proc. Biol. Soc. Washington 82:205-208.
- Nichols, F. H. 1970. Benthic polychaete assemblages and their relationships to the sediment in Port Madison, Washington. Mar. Biol. 6:48-57.
- Banse, K., F. H. Nichols, and D. R. May. 1971. Oxygen consumption by the seabed. III. On the role of the macrofauna at three stations. Vie et Milieu, Supp. 22:31-52.
- Nichols, F. H. 1973. A review of benthic faunal surveys in San Francisco Bay. U. S. Geological Survey Circ. 677, 20 pp.
- Nichols, F. H. 1974. Sediment turnover by a deposit-feeding polychaete. Limnol. Oceanogr. 19:945-950.
- Nichols, F. H. 1975. Dynamics and energetics of three deposit-feeding benthic invertebrate populations in Puget Sound, Washington. Ecol. Monogr. 45:57-82.
- Nichols, F. H. 1977. Infaunal biomass and production on a mudflat, San Francisco Bay, California. Pages 339-358 in B. C. Coull, ed. Ecology of marine benthos, Belle W. Baruch Libr. in Marine Sci. 6.
- Nichols, F. H. 1977. Dynamics and production of Pectinaria koreni (Malmgren) in Kiel Bay, West Germany. Pages 453-463 in B. F. Keegan, P. O. Ceidigh, and P. J. S. Boaden, eds. Biology of benthic organisms. Pergamon Press, Oxford.
- Cloern, J. E., and F. H. Nichols. 1978. A von Bertalanffy growth model with a seasonally varying coefficient. J. Fish. Res. Bd. Canada 35:1479-1482.
- Conomos, T. J., F. H. Nichols, R. T. Cheng, and D. H. Peterson. 1978. Field and modeling studies of San Francisco Bay. Coastal Zone 78 - Symposium tech. environ. socioecon. regulatory aspects of coastal zone planning and management 3:1917-1927.
- Lee, W. L., F. H. Nichols and others. 1978. Resources in invertebrate systematics. Am. Zool. 18:167-185.

- Botkin, D. B., F. H. Nichols and others. 1979. A pilot program for long-term observation and study of ecosystems in the United States - report of a 2nd conference on long-term ecological measurement, Woods Hole, Massachusetts, February 1978, 44 pp.
- Nichols, F. H. 1979. Natural and anthropogenic influences on benthic community structure in San Francisco Bay. Pages 409-426 in T. J. Conomos, ed. San Francisco Bay, the urbanized estuary. Pacific Division, Am. Assoc. Adv. Sci., San Francisco, Calif.
- Nichols, F. H. 1981. The temporal scale of disturbance in estuarine benthic communities (abs.). *Estuaries* 4:256.
- Thompson, J. K., F. H. Nichols, and S. M. Wienke. 1981. Distribution of benthic chlorophyll in San Francisco Bay, California, February 1980 - February 1981. U. S. Geological Survey Open-File Rep. 81-1134, 36 pp.
- Thompson, J. K., and F. H. Nichols. 1981. Benthic macrofaunal biomass of San Francisco Bay, January/February and August 1973. U. S. Geological Survey Open-File Rept. 81-1331, 39 pp.
- Conomos, T. J., and F. H. Nichols. 1982. Recent research trends in the San Francisco Bay estuarine system (abs.). *EOS* 63:946.
- Lee, W. L., F. H. Nichols, and others. 1982. Guidelines for acquisition and management of biological specimens. Report of the participants of a conference on voucher specimen management sponsored under the auspices of the Association of Systematics Collections, Council on Curatorial Methods, Univ. Maryland, Sep. 1981. *Assoc. Systematics Collections*, 42 pp.
- Nichols, F. H., and J. K. Thompson. 1982. Seasonal growth in the bivalve Macoma balthica near the southern limit of its range. *Estuaries* 5:110-120.
- Nichols, F. H. 1983. Abundance fluctuations among benthic invertebrates in two Pacific estuaries (abs.). *Estuaries* 6:329.
- Nichols, F. H. 1984. Significance of long-term variations in estuarine benthos. *U. S. Geol. Surv. Circ.* 938: 91-97.
- Nichols, F. H. 1984. Increased benthic grazing: one explanation for low phytoplankton biomass in northern San Francisco Bay during the 1976-77 drought (abs.). *EOS* 65:908.
- Thompson, J. K., and F. H. Nichols. 1984. Benthic macrofauna of a south San Francisco Bay, California, mudflat, 1974 to 1983: U. S. Geological Survey Open File Rept. 84-759:1-200.
- Cloern, J. E., and F. H. Nichols, Eds. 1985. Temporal dynamics of an estuary: San Francisco Bay. *Developments in Hydrobiology*, Dr. W. Junk Publ. 30:1-237.

- Cloern, J. E., and F. H. Nichols. 1985. Time scales and mechanisms of estuarine variability, a synthesis from studies of San Francisco Bay. *Hydrobiologia* 129:229-237.
- Nichols, F. H. 1985. Abundance fluctuations among benthic invertebrates in two Pacific estuaries. *Estuaries* 8:136-144.
- Nichols, F. H. 1985. What have we learned from long-term data sets: an overview and summary (abs.). *Estuaries* 8:100A.
- Nichols, F. H. 1985. Increased benthic grazing: an alternative explanation for low phytoplankton biomass in northern San Francisco Bay during the 1976-77 drought. *Estuar. Coast. Shelf Sci.* 21:379-388.
- Nichols, F. H., D. A. Cacchione, D. E. Drake, and J. K. Thompson. 1985. Bulldozing of shelf-depth sediments by an "infaunal" macroinvertebrate - a response to storm disturbance (abs.)? *EOS* 66:1315.
- Nichols, F. H., and J. K. Thompson. 1985. Persistence of an introduced mudflat community in south San Francisco Bay, California. *Mar. Ecol. Prog. Ser.* 24:83-97.
- Nichols, F. H., and J. K. Thompson. 1985. Time scales of change in the San Francisco Bay benthos. *Hydrobiologia* 129:121-138.
- Nichols, F. H., J. E. Cloern, S. N. Luoma, and D. H. Peterson. 1986. The modification of an estuary. *Science* 231:567-573.
- Nichols, F. H. In press. Benthic ecology and heavy metal accumulation. Proc. National Oceanic Atmospheric Admin., U. S. Environmental Protection Agency, and U. S. Fish and Wildlife Serv., Estuary of the Month Seminar, Washington, DC, November 1985. 8 ms pages.
- Nichols, F. H. and J. E. Cloern. In press. San Francisco Bay, U.S.A.: a case study of human influence on an estuary. Proc. 4th Int. Cong. Ecol., Syracuse, NY, August 1986. 13 ms pages.
- Nichols, F. H. and M. M. Pamatmat. In press. The ecology of the soft-bottom benthos of San Francisco Bay: a community profile. U. S. Fish Wildlife Serv. Biol. Rept. 85(7.). 150 ms pages.
- Thompson, J. K. and F. H. Nichols. In press. Food availability controls the seasonal cycle of growth in the bivalve *Macoma balthica*. *J. Exp. Mar. Biol. Ecol.* 29 ms pages.

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