

## CURRICULUM VITAE

### Dieter Mueller-Dombois

#### Academic Background

- Agrar Ingenieur (German degree in Agricultural Engineering), University of Stuttgart- Hohenheim, 1951
- B. S.F., University of British Columbia, 1955
- Ph.D. in Forest Ecology, University of British Columbia, 1960
- Forest Research Officer, Canada Department of Forestry, Winnipeg, Manitoba, 1958-1963
- Assistant Professor of Botany, University of Hawaii, 1963-1968
- Associate Professor of Botany, University of Hawaii 1968-1972
- Professor of Botany, University of Hawaii 1972 - 1990
- Professor Emeritus, 1990

#### Research Support

- Principal Investigator, "Forest Site Classification for Southeastern Manitoba", 1959-1963, supported by Canadian Government.
- Principal Investigator, NSF GB 23230, "Vegetation Processes on New Volcanic Surfaces in Hawaii", 1965-1968; \$24,500.
- Principal Investigator and Field Director, Smithsonian-University of Ceylon PL-480 Ecology Project on "Monsoon Grasslands and Vegetation-Elephant Relationships in Monsoon Forests" in Sri Lanka, 1967-1969; \$250,000.
- On-Site Administrator of "Ceylon Flora Project" PL-480 Grant to Smithsonian Institution (F. R- Fosberg, P.I.) and University of Ceylon, Peradeniya, 1967-1969; \$300,000.
- Executive Director, Scientific Coordinator and Principal Investigator of Hawaii IBP (Intern. Biol. Program) Island Ecosystems IRP (Integrated Research Program) 1970-1976; \$1,500,000.
- Principal Investigator, "Ecological Investigations of *Acacia koa*", supported by Bishop Estate, Honolulu, 1972-1974; \$8,000.
- Principal Investigator, National Park Service Contract CX-8000-6-0006 "Ecological Investigations of the 'ohi'a Dieback Problem in Hawaii", 1975-1977; \$55,000.
- Principal Investigator, NSF DEB-7910993, "Spatial Variation and Succession in Tropical Island Rain Forests", 1979-1983; \$425,000.
- Principal Investigator, EWC-UH Collaborative Research Grant "Nutrient Potentials in Disturbed and Undisturbed Sections of a Hawaiian Rain Forest Watershed", 1983-1984; \$14,000.
- Principal Investigator, McIntire-Stennis Grant Haw-00684 on "The *Metrosideros* Dieback Problem in Hawaii: Soil Nutrient and Successional Relationships", 1982-1985; \$15,000.
- Principal Investigator, McIntire- Stennis Grant Haw-00684 on "Developing a Growth Simulation Model for Tree Senescence in *Metrosideros* Populations", 1985-1987; \$25,000
- Co-Principal Investigator, NSF Grant BSR-8416178 on "The Role of *Myrica faya* in Altering Primary Succession in Hawaii Volcanoes National Park". Collaborative Research with Peter M. Vitousek from Stanford University, 1985-1987; \$121,000.
- Principal Investigator, "Environmental Changes and Recovery of Cut-over Lowland Rainforest in Hawaii". Supported by Campbell Estate, 1986-1988; \$40,000.
- Co-Principal Investigator, NSF Grant BSR-8718004 on "The Role of *Myrica faya* in Altering Primary Succession in

Hawaii Volcanoes National Park". Collaborative Research with Peter M. Vitousek, Stanford University, Phase II, 1987-1990; \$130,000.

- Co-Principal Investigator, NSF Grant BSR-8918525 "Ecosystem Dynamics in Hawaii". Collaborative research with Peter M. Vitousek, Stanford University, 1990-1996; \$671,025.
- Principal Investigator, NARS (Natural Area Reserves System) Grant for Student Project, "Population Dynamics of Woody Species in the Dry/ Mesic Forest Mosaic of Pahole Natural Area, Oahu", 1990-1991; \$9,080.
- Principal Investigator, NARS Grant for Student Project, "Vegetation Mapping of

Lihau, West Maui Natural Area Reserve", 1991-1992; \$8,300.

- Co-Principal Investigator, NSF Grant BSR-8918525 "Ecosystem Dynamics in Hawaii". Collaborative research with Peter M. Vitousek, Stanford University, 1990-1997; \$671,025.
- Principal Investigator, MacArthur Grant 98-52474-GSS: "Initiating the Pacific-Aska Biodiversity Transect Network (the PABITRA net):", June 1998; \$30,000.
- Principal Investigator APN Award 2002-17 on "PABITRA Network for Collaborative Research on the Ecology of Global Change in Island Landscapes of the Tropical Pacific", 2002/2003; \$45,000.

### Honors Awarded

- Gifford Pinchot Award of the U.S. Forest Service for Forest Ecology Research in Hawaii, 1981.
- Double Merit Award for Distinguished Service at the University of Hawaii, 1982.
- Hawaii Governor's Award for Service as Commissioner on the Hawaii State Natural Area Reserves System Commission, 1972-1984.
- Fujio Matsuda Scholarship, University of Hawaii, 1988.
- John D. & Catherine T. MacArthur Foundation Award (97-44271) in support of book publication, 1997. \$35,000.
- The Reinhold Tüxen Prize, 2000.
- Honorable Doctor's Degree in Engineering (Dr. h.c.) received 2004 from Brandenburg Technical University, Cottbus, Germany.

### Teaching

- General Botany, (introductory botany lecture and laboratory course). University of Hawaii, 1963-1966.
- Evolution (intermediate-level lecture course). University of Hawaii, 1964-1966.
- Plant Ecology (intermediate-level lecture and lab course). University of Hawaii, 1963-1966.
- Plant and Vegetation Ecology (lecture, labs and field trips). University of Ceylon, Peradeniya, Sri Lanka, 1967-1969.
- Vegetation Ecology (intermediate-level lecture, indoor and field lab course); wrote a textbook in this area with H. Ellenberg: *Aims and Methods of Vegetation Ecology*, John Wiley & Sons, Inc. 547 p. 1974; course taught every spring semester, 1970 to 1990.
- Plant Ecology and Environmental Measurements (intermediate-level lecture, indoor and field lab course); taught every fall semester, 1969-1990.
- Graduate Seminar in Ecology (each spring semester), 1970-1990.

### Chairmanship of Graduate Students

- Completed PhD's: 18 dissertations
- Completed MSc's: 17 theses

### Professional Service

- President, Hawaiian Botanical Society, 1965-66.
- Pacific Science Association Chairman of Committee on Ecology, Conservation and Environmental Protection, 1975-present.
- Adjunct Research Associate, East-West Center Environment and Policy Institute 1979-1985.
- Research Affiliate, Bernice P. Bishop Museum, 1969-present.
- Commissioner, Hawaii State Governor's Commission on Natural Area Reserves System, 1972-84.
- U.S. Editor of *Phytocoenologia* (International J. of Vegetation Science), 1973-present.
- Member, Ecology Commission of IUCN, 1975-1985.
- Member, Advisory Committee of Environmental Studies Certificate, University of Hawaii, 1980-85.
- Member, US Congress Advisory Panel on OTA Project, "Integrated Renewable Resource Management for US Insular Areas", 1985.
- President of ATB (Amer. Assoc. of Trop. Biology) 1986.
- Member, Coordinating Committee of Tropical Mountain Program in IUBS "Decade for Tropics" Program, 1984-1994.
- University of Hawaii Representative to OTS (Organization for Tropical Studies), 1986-1990.
- National Academy of Science Delegate to 23rd General Assembly of IUBS, Canberra, 1988.
- Member, Advisory Council of IAVS (the Intern. Assoc. for Vegetation Science) 1991-present.
- Honorary Life Member of IAVS since 1997.
- Honorary Life Member of PSA since 1999.
- Member, Steering Committee of DIWPA (Diversitas in Western Pacific and Asia), 1996-present.
- International Coordinator of PABITRA (Pacific-Asia Biodiversity Transect) Network, 1998-present.

## Membership in Professional Societies

- American Institute of Biological Sciences (AIBS)
- Ecol. Soc. of America (ESA)
- Intern. Soc. for Vegetation Science (IAVS) honorary life member
- Intern. Soc. for Tropical Ecology (ISTE)
- Intern. Association for Ecology (INTECOL)
- Assoc. for Tropical Biology (ATB)
- American Association for the Advancement of Sciences (AAAS), Fellow
- Pacific Science Assoc. (PSA), honorary life member
- Hawaiian Botanical Society, life member

## Publications

1. Mueller-Dombois, D. 1964. The forest habitat types in southeastern Manitoba and their application to forest management *Can J. Bot.* 42: 1417-1444.
2. Mueller-Dombois, D. 1964. Effect of depth to water table on height growth of tree seedlings in a greenhouse. *Forest Sci.* 10 (3): 306-316.
3. Mueller-Dombois, D. 1965. Techniques for studying soil-water-growth relations on an artificial slope. Pages 153-161 in *Forest-Soil Relationships in North America*. C.T. Youngberg, ed. Oregon State University Press. 523 p.
4. Mueller-Dombois, D. 1965. Ecogeographic criteria for mapping forest habitats in southeastern Manitoba. *Forestry Chron.* (Canada) 41 (2): 188-206.

5. Mueller-Dombois, D. 1965. Initial stages of secondary succession in the coastal Douglas-fir and western hemlock zones. *Ecology of Western North America* 1: 38-41.
6. Doty, M. S. and D. Mueller-Dombois. 1966. *Atlas for Bioecology Studies in Hawaii Volcanoes National Park*. University of Hawaii, Hawaii Botanical Science Paper No. 2. 507 p. Republished 1970 as College of Trop. Agric. Hawaii Agric. Expt. Sta. Miscell. Public. No. 89.
7. Mueller-Dombois, D. and H.P. Sims. 1966. Response of three grasses to two soils and a water table depth gradient. *Ecology* 47 (4): 644-648.
8. Doty, M.S. and D. Mueller-Dombois. 1966. The biology of fresh, brackish and saline water as it contributes to tropical delta formation. Pages 253-256 in *Scientific Problems of Humid Tropical Zone Deltas and their Implications*. Proceedings of the Dacca Symposium. Published by UNESCO, Paris. 422 p.
9. Mueller-Dombois, D. 1967. Ecological relations in the alpine and subalpine vegetation on Mauna Loa, Hawaii. *J. of Indian Botan. Soc.* 96 (4): 403-411.
10. Ellenberg, H. and D. Mueller-Dombois. 1967. A key to Raunkiaer plant life forms with revised subdivisions. *Ber. Geob. Inst. ETH R/ bel, Z/ rich* 37: 56-73.
11. Ellenberg, H. and D. Mueller-Dombois. 1967. Tentative physiognomic-ecological classification of plant formations of the Earth. *Ber. Geob. Inst. ETH R/ bel, Z/ rich* 37: 21-55.
12. Mueller-Dombois, D. and C.H. Lamoureux. 1967. Soil-vegetation relationships in Hawaiian kipukas. *Pac. Sci.* 21: 286-299.
13. Mueller-Dombois, D. and V.J. Krajina. 1968. Comparison of east-flank vegetations on Mauna Loa and Mauna Kea. *Rec. Adv. Trop. Ecol* 2: 508-520.
14. Sims, H.P. and D. Mueller-Dombois. 1968. Effect of grass competition and depth to water table on height growth of tree seedlings in a greenhouse. *Ecology* 49: 597-603.
15. Mueller-Dombois, D. 1968. Ecogeographic analysis of a climate map of Ceylon with particular reference to vegetation. Including climate diagram map of Ceylon at 1:506,880. *The Ceylon Forester* 8 (3&4): 39-58.
16. Crum, H. and D. Mueller-Dombois. 1968. Two new mosses of Hawaii. *J. Hattori Botan. Lab* 31: 293-296.
17. Mueller-Dombois, D. 1969. Vegetation map of Ruhuna National Park, Ceylon. 5 sheets, 1:31,680. Published by Ceylon Survey Department.
18. Doty, M.S., F.R. Fosberg and D. Mueller-Dombois. 1969. Initial site studies for the International Biological Program in the Tropical and Far Western Pacific. *Micronesica* 5 (2): 283-293.
19. Mueller-Dombois, D. 1970. Vegetation map of Wilpattu National Park, Ceylon. 4 sheets, 1:31,680. Published by Ceylon Survey Department.
20. Mueller-Dombois, D. ed. 1970. Hawaii Terrestrial Biology Subprogram: First Progress Report and Second-year Budget. *US/IBP Univ. Hawaii, Tech. Rep.* No. 1, 144 p.
21. Mueller-Dombois, D. 1971. Planned utilization of the lowland tropical forests. *Nature and Resources*. Unesco, Paris. 7: 18-22.
22. Mueller-Dombois, D. and Malini Perera. 1971. Ecological differentiation and soil fungal distribution in the montane grasslands of Ceylon. *Ceylon J. of Sci.* 9 (1): 1-41.
23. Mueller-Dombois, D. 1972. Crown distortion and elephant distribution in the woody vegetation of Ruhuna National Park, Ceylon. *Ecology* 53 (2): 208-226.
24. Kartawinata, K. and D. Mueller-Dombois. 1972. Phytosociology and ecology of the natural dry-grass communities on Oahu, Hawaii. *Reinwardtia* 8 (3): 369-494.
25. Richmond, T. De A. and D. Mueller-Dombois. 1972. Coastline ecosystems on Oahu, Hawaii. *Vegetatio* 25 (5-6): 367-400.
26. Mueller-Dombois, D. 1972. Relationships between monsoon vegetation and elephants in Sri Lanka. *Sri Lanka Wild Life Bull.* 18-20: 8-11.
27. Mueller-Dombois, D. 1972. Natural vegetation and agricultural development in the hill country of Ceylon. *Loris* (The J.

- of the Wildlife and Nature Protection Society of Ceylon) 12 (5): 262-263.
28. Mi, M.P., S. Yamashiro and D. Mueller-Dombois. 1972. Data storage and retrieval for the study of Hawaiian ecosystems. Pages 243-245 in *Proceed Fifth Intern. Conf. on Systems Sciences*, Honolulu, Hawaii.
  29. Mueller-Dombois, D. and G. Spatz. 1972. The influence of sulfur dioxide fuming on the vegetation surrounding the Kahe Power Plant on Oahu, Hawaii. *Univ. Hawaii US/IBP Tech. Rep. No. 14*, 46 p.
  30. Mueller-Dombois, D., ed. 1972. Island Ecosystems Stability and Evolution Subprogram. Second Progress Report and Third-year Budget. *US/IBP Univ. Hawaii, Tech. Rep. No. 2*. 290 p.
  31. Spatz, G. and D. Mueller-Dombois. 1973. The influence of feral goats on koa tree reproduction in Hawaii Volcanoes National Park. *Ecology* 54 (4): 870-876.
  32. Mueller-Dombois, D. 1973. A non-adapted vegetation interferes with soil water removal in a tropical rain forest area in Hawaii. *Trop. Ecol.* 24: 1-18.
  33. Mueller-Dombois, D. 1973. Soils of Ruhuna National Park. *Sri Lanka Wild Life Bull.* 24-26: 6-7.
  34. Mueller-Dombois, D. 1973. Natural area system development for the Pacific region, a concept and symposium. *Univ. Hawaii US/IBP Techn. Report No. 26*, 55 p.
  35. Mueller-Dombois, D. and KW. Bridges, eds. 1973. Origin and Structure of Ecosystems Subprogram. Third Progress Report and Budget for FY 74 and FY 75. *US/IBP Univ. Hawaii, Tech. Rep. No. 21*, 153 p.
  36. Mueller-Dombois, D. and H. Ellenberg. 1974. *Aims and Methods of Vegetation Ecology*. John Wiley & Sons, New York. 547 p.
  37. Smathers, G. A. and D. Mueller-Dombois. 1974. Invasion and Recovery of Vegetation after a Volcanic Eruption in Hawaii. *National Park Service Scientific Monogr. Series No. 5*, 129 p.
  38. Mueller-Dombois, D. 1974. The ohia dieback problem in Hawaii: A proposal for integrated research. *Univ. Hawaii/CPSU Tech. Report No. 3*, 35 p.
  39. Mueller-Dombois, D. and F. R. Fosberg. 1974. Vegetation map of Hawaii Volcanoes National Park. *Univ. Hawaii/CPSU Tech. Report No. 4*, 44 p.
  40. Mueller-Dombois, D. and K. W. Bridges, eds. 1974. Origin and Structure of Ecosystems Subprogram. Fourth Progress Report and Budget Proposal for FY 75. *US/IBP Univ. Hawaii Tech. Rep. No. 36*, 44 p.
  41. Walter, H., E. Harnickel and D. Mueller-Dombois. 1975. *Climate-Diagram Maps of Individual Continents and Ecological Climatic Regions of the Earth*. Vol. X of H. Walter's Series: Vegetation Monographs of World Regions. Gustav Fischer, Stuttgart. 36 p. + 9 maps.
  42. Mueller-Dombois, D. 1975. Some aspects of island ecosystem analysis. Pages 353-366 in *Tropical Ecological Systems: Trends in Aquatic and Terrestrial Research*. F.B.. Golley and E. Medina, eds. Springer Verlag, Heidelberg, Berlin. Vol. 11. Ecol. Studies Series. 398 p.
  43. Mueller-Dombois, D. and G. Spatz. 1975. Application of the relevé method to insular tropical vegetation for an environmental impact study. *Phytocoenologia* 2 (3/4 ): 417- 429.
  44. Mueller-Dombois, D. and G.A. Smathers. 1975. Sukzession nach einem Vulkanausbruch auf der Insel Hawaii. Pages 158-188 in *Sukzessionsforschung*, Ber. Intern. Symp. der Vereinigung für Vegetationskunde. W. Schmidt, ed. Cramer, Vaduz.
  45. Mueller-Dombois, D. and G. Spatz. 1975. The influence of feral goats on the lowland vegetation in Hawaii Volcanoes National Park. *Phytocoenologia* 3 (1): 1-29.
  46. Spatz, G. and D. Mueller-Dombois. 1975. Succession patterns after pig digging in the grassland communities on Mauna Loa, Hawaii. *Phytocoenologia* 3 (2/3): 346-373.
  47. Mueller-Dombois, D. 1976. The major vegetation types and ecological zones in Hawaii Volcanoes National Park and their application to park management and research. Pages 149-161 in

- Proceed. First Conf. on Nat. Sci. Hawaii Volc. National Park.* C.W. Smith, ed. Coop. National Park Studies Unit, University of Hawaii, Honolulu. 243 p.
48. Mueller-Dombois, D. 1977. Integrierung von Tier-und Pflanzensoziologie an der Ostflanke des Mauna Loa, Insel Hawaii. Pages 451-453 in *Proceed. 20th Intern. Sympos. Intern. Soc. for Vegetation Science*, R. Tüxen, ed. Cramer, Vaduz.
  49. Mueller-Dombois, D. 1978. Hawaii IBP Synthesis: Brief introduction survey. The Mauna Loa transect analysis. Pages 219-230 in *Proceed. Second Confer. in Natural Sciences, Hawaii Volcanoes National Park.* C.W. Smith, ed. Cooper. National Park Resources Studies Unit, Univ. of Hawaii at Manoa, Dept. of Botany, Honolulu. 354 p.
  50. Mueller-Dombois, D. 1978. Island Ecosystems: what is unique about their ecology. Pages 231-234 in *Proceed Second Confer. in Natural Sciences, Hawaii Volcanoes National Park.* C.W. Smith, ed. Cooper. National Park Resources Studies Unit, Univ. of Hawaii at Manoa, Dept. of Botany, Honolulu. 354 p.
  51. Mueller-Dombois, D. 1979. Aspekte der Sukzessionsforschung auf der Insel Hawaii. Pages 491-500 in *Vegetationsentwicklung (Syndynamik)*. Ber. Intern. Symp. der Intern. Vereinigung für Vegetationskunde. R. Tüxen, ed. Cramer, Vaduz.
  52. Pemadasa, M. A. and D. Mueller-Dombois. 1979. An ordination study of montane grasslands of Sri Lanka. *J. of Ecol.* 67: 1009-1023.
  53. Mueller-Dombois, D. 1979. Succession following goat removal in Hawaii Volcanoes National Park. Pages 1149-1151 in *Proceed. First Confer. on Scientific Research in National Parks.* R.M. Linn, ed. USDI National Park Service Transactions & Proceed. Series No. 5. 1325 p.
  54. Qureshi, A. H., L. S. Hamilton, D. Mueller-Dombois, W. R. H. Perera, and R. A. Carpenter. 1980. *Assessing Tropical Forest Lands: Their Suitability for Sustainable Uses.* East-West Environment and Policy Institute, East-West Center Publ. Honolulu. 69 p.
  55. Mueller-Dombois, D. 1980 The 'ohi'a dieback phenomenon in the Hawaiian rain forest. Pages 153-161 in *The Recovery Process in Damaged Ecosystems.* John Cairns, Jr., ed. Ann Arbor Science Publishers, Inc. 167 p.
  56. Mueller-Dombois, D. and H. Ellenberg. 1980. Methods available for vegetation classification and their suitability for various purposes. Pages 26-54 in *The IBP Survey of Conservation Sites: An Experimental Study.* A.R. Clapham, ed. IBP Internat'l Series No. 24. Cambridge University Press. 334 p.
  57. Mueller-Dombois, D. and A.L. Dahl. 1980. Monitoring island ecosystems: an approach for conservation purposes. Pages 150-159 in *Proceed. of the XIVth Pac. Sci. Congress, Khabarovsk* August 1979 Publ. by USSR. Acad. of Sciences, Moscow.
  58. Gerrish, G. and D. Mueller-Dombois. 1980. Behavior of native and non-native plants in two tropical rain forests on Oahu, Hawaiian Islands. *Phytocoenologia* 8 (2): 237-295.
  59. Mueller Dombois, D. 1980. Spatial variation and vegetation dynamics in the coastal lowland ecosystem, Hawaii Volcanoes National Park. Pages 235-248 in *Proceed. 3rd Conf. on Natural Sciences, Hawaii Volcanoes National Park.* C.W. Smith, ed. Coop. Park Studies Unit/Univ. Hawaii. 396 p.
  60. Mueller-Dombois, D., J. D. Jacobi, R. G. Cooray and N. Balakrishnan 1980. *Ecological Investigations of the 'ohi'a Dieback Problem in Hawaii.* Second ed. College of Trop. Agri. and Human Resources. Miscell. Public. No. 181. 64 p.
  61. Mueller-Dombois, D. 1981. Spatial variation and succession in tropical island rain forests. *Hawaii Botan. Sci. Paper* 41. 93 p.
  62. Mueller-Dombois, D., K. W. Bridges and H. L. Carson, eds. 1981. *Island Ecosystems: Biological Organization in Selected Hawaiian Communities.* US/IBP Synthesis Series 15. Hutchinson-Ross

- Publ. Co. Distributed by Academic Press. 583 p.
63. Mueller-Dombois, D. 1981. Some environmental conditions and the general design of IBP research in Hawaii. Pages 3-32 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  64. Mueller Dombois, D. and KW. Bridges. 1981. Spatial distribution of island biota: introduction. Pages 35-76 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  65. Mueller-Dombois, D., G. Spatz, S. Conant, P. Q. Tomich, F. J. Radowsky, J. M. Tenorio, W. Gagne, B. M. Brennan, W. C. Mitchell, D. Springer, G. A. Samuelson, J. L. Gressitt, W. A. Steffan, Y. K Paik, K. C. Sung, D. E. Hardy, M. D. Delfinado, D. Fujii, M. S. Doty, L. J. Watson, M. F. Stoner, and G. E. Baker. 1981. Altitudinal distribution of organisms along an island mountain transect. Pages 77-180 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  66. Mueller-Dombois, D. 1981. Spatial integration of organisms studied along the transect. Pages 181-210 in *Island Ecosystems* US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  67. Berger, A. J., D. Mueller-Dombois, S. Conant, F. J. Radovsky and F. G. Howarth. 1981. Community structure and niche differentiation: introduction. Pages 213-230 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  68. Mueller-Dombois, D., R. G. Coorey, J. E. Maka, G. Spatz, W. C. Gagne, F. G. Howarth, J. L. Gressitt, G. A. Samuelson, S. Conant, and P. Q. Tomich. 1981. Structural variation of organism groups in the Kilauea forest. Pages 231-317 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583p.
  69. Mueller-Dombois, D. and F.G. Howarth. 1981. Niche and life-form integration in island communities. Pages 337-364 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  70. Bridges, K. W., C. H. Lamoureux, D. Mueller-Dombois, P. Q. Tomich, J. R. Leeper, J. W. Beardsley, W. A. Stefan, Y. K Paik, and K. C. Sung. 1981. Temporal variation of organisms studied. Pages 391-422 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  71. Mueller-Dombois, D. 1981. Island ecosystems: what is unique about their ecology? pages 485-501 in *Island Ecosystems*. US/IBP Synthesis Series 15. Hutchinson-Ross Publ. 583 p.
  72. Mueller-Dombois, D. 1981. Understanding Hawaiian forest ecosystems: the key to biological conservation. Pages 502-520 in *Island Ecosystems*. US/IBP Synthesis Series 15. 583 p.
  73. Mueller-Dombois, D. 1981. Ecological measurements and microbial populations. Pages 123- 184 in *The Fungal Community: Organization and Role in the Ecosystems*. D.T. Wicklow and G.C. Caroll, eds. Marcel Dekker, Inc. New York. 855 p.
  74. Mueller-Dombois, D. 1981. Fire in tropical ecosystems. Pages 137-176 in *Fire Regimes and Ecosystem Properties*. H.A. Mooney, T.M. Bonnicksen, N.L. Christensen, J.E. Lotan, and W.A. Reiners, eds. USDA Forest Service Gen. Tech. Report WO-26. 594 p.
  75. Mueller-Dombois, D. 1981. Vegetation dynamics in a coastal grassland of Hawaii. *Vegetatio* 46: 131-140.
  76. Mueller-Dombois, D. 1981. The ecological series approach to forest land classification. Pages 105-139 in *Assessing Tropical Forest Lands: Their Suitability for Sustainable Uses*. R.A. Carpenter, ed. Tycooly Internat'l, Ltd. Bray Co., Wicklow, Ireland. 337 p.
  77. Pemadasa, M.A. and D. Mueller-Dombois. 1981. An association-analysis of montane grasslands in Sri Lanka. *Austral. J. Ecol.* 6: 111-121.
  78. Mueller-Dombois, D. 1982. Canopy dieback in indigenous forests of Pacific islands. *Hawaiian Bot. Soc. Newsletter* 21: 2-6.
  79. Mueller-Dombois, D. 1982. Island ecosystem stability and *Metrosideros* dieback. Pages 138-146 in *Proceed. 4th Conf. in Natural Sci., Hawaii Volcanoes*

- National Park. Coop. National Park Studies Unit Dept. of Botany, Univ. of Hawaii, Honolulu. 189 p.
80. Mueller-Dombois, D., J. E. Canfield, R. A. Holt and G. P. Buelow. 1983. Tree-group death in North-American and Hawaiian forests: a pathological problem or a new problem for vegetation ecology? *Phytocoenologia* 11 (1): 117-137.
  81. Mueller-Dombois, D. 1983. Population death in Hawaiian plant communities: a new causal theory and its successional significance. *Tuexenia* (Göttingen) 3: 117-130.
  82. Vitousek, P. M., K. Van Cleve, D. Mueller-Dombois and N. Balakrishnan. 1983. Soil development and nitrogen turnover in montane rain forest soils in Hawaii. *Biotropica* 15 (4): 268-274.
  83. Mueller-Dombois, D., K. Kartawinata and L. L. Handley. 1983. Conservation of species and habitats: a major responsibility in development planning. Pages 1-51 in *Natural Systems for Development: What Planners Need to Know*. R.A. Carpenter, ed. Macmillan Publish. Co. 488 p.
  84. Mueller-Dombois, D. 1983. Stand-level dieback in New Zealand forests and the theory of cohort senescence. *Hawaiian Bot. Soc. Newsletter* 22: 33-42.
  85. Mueller-Dombois, D. 1983. Canopy dieback and successional processes in Pacific forests. *Pac. Sci.* 37 (4): 317-325.
  86. Jacobi, J. D., G. Gerrish and D. Mueller-Dombois. 1983. 'ohi'a dieback in Hawaii: vegetation changes in permanent plots. *Pac. Sci.* 37 (4): 327-337.
  87. Balakrishnan, N. and D. Mueller-Dombois. 1983. Nutrient studies in relation to habitat types and canopy dieback in the montane rain forest ecosystem, Island of Hawaii. *Pac. Sci.* 37 (4): 339-359.
  88. Mueller-Dombois, D. 1983. Canopy dieback and dynamic processes in Pacific forests: introductory statement and concluding synthesis. *Pac. Sci.* 37 (4): 313-316; 483-489.
  89. Mueller-Dombois, D., P. M. Vitousek, and K. W. Bridges. 1984. Canopy dieback and ecosystem processes in Pacific forests: a progress report and research proposal. *Hawaii Bot Sci. Paper* No. 44. 100 p.
  90. Mueller-Dombois, D. 1984. Zum Baumgruppensterben in pazifischen Inselwäldern. *Phytocoenologia* 12 (1): 1-8.
  91. Burton, P. J. and D. Mueller-Dombois. 1984. Response of *Metrosideros polymorpha* seedlings to experimental canopy opening. *Ecology* 65 (3): 779-791.
  92. Mueller-Dombois, D. 1984. Classification and mapping of plant communities: a review with emphasis on tropical vegetation. Pages 21-88 in *The Role of Terrestrial Vegetation in the Global Carbon Cycle: Measurement by Remote Sensing*. SCOPE 23, ed. by G.M. Woodwell. John Wiley & Sons Ltd. 247 p.
  93. Mueller-Dombois, D. 1985. 'ohi'a dieback in Hawaii: 1984 synthesis and evaluation. *Pac. Sci.* 39 (2): 150-170.
  94. Mueller-Dombois, D. 1985. The biological resource value of native forest in Hawai'i with special reference to the tropical lowland rainforest at Kalapana. *'Elepaio* 45 (10): 95-101.
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