

David L. Dilcher

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Florida Museum of Natural History
University of Florida
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Research Interests

Education

Positions

Grants and Fellowships

Professional and Honorary Societies

Publications

Books, Symposium Volumes, and Volume-Length Paper

Published Papers (most in reviewed journals)

Numerous Published Abstracts Presented at Professional Meetings

Served on the Following Committees at Indiana University

Professional Activities

Editorial Positions held

Special Recognition

Courses Initiated and taught

Courses Taught

Ph.D. Dissertations Completed Under My Direction

M.S. Thesis Completed Under My Direction

Masters Degree Students in Biology

Postdoctoral Fellows Who Have Been Associated With My Research Lab

Research Interests

Angiosperm evolution; the origin of flowers to the reproductive biology of the first flowering plants. The evolution of diversity in early angiosperms, the recognition of early phylogenetic lines of relationship between major taxa, trends in evolution of the group. Tertiary age radiations of angiosperms and their phytogeography. Evolutionary Biology. Plant/animal coevolution. Biostratigraphy, Biodiversity, Global Vegetational Change.

Education:

University of Minnesota 1954-58 B.S. Natural History
University of Minnesota 1958-60 M.S. Botany, Geology and Zoology
University of Illinois 1960-62 Transferred to Yale
Yale University 1962-64 Ph.D. Biology, Geology

Positions:

1958-63 Teaching Assistant University of Minnesota, University of Illinois, Yale University
1963-64 Cullman-University Fellow Yale University
1964-65 NSF Postdoctoral Fellow Senckenberg Museum, Frankfurt am Main, Germany
1965-66 Instructor in Biology Yale University, Department of Biology
1966-70 Assistant Professor of Botany Indiana University, Department of Botany
1970-76 Associate Professor of Botany Indiana University, Department of Botany
1972-73 Guggenheim Fellow Giessen, Germany, Imperial College in London, England, and Indiana University.
1975-90 Associate Professor of Geology, Indiana University, Department of Geology
1977-90 Professor of Paleobotany Indiana University, Department of Botany and Department of Geology
1981 Distinguished Visiting Research Scholar University of Adelaide, Adelaide, Australia
1985 Continuing Education, Professor ARAMCO, Dahrain, Kingdom of Saudi Arabia
1986 Visiting Scholar Beijing, China
1987-88 Guggenheim Fellow British Museum of Natural History, London and Indiana University
1988 Distinguished Visiting Research Scholar University of Adelaide, Adelaide, Australia
1990- Graduate Research Professor Florida Museum of Natural History, University of Florida
1990- Univ. Florida Adjunct Professor, Departments of Botany, Geology, Zoology
1990- IU Adjunct Professor, Department of Biology
1990- IU Overseas Studies, Prof., Costa Rica

Grants and Fellowships:

1961 Sigma Xi Grant-in-aid. Collecting Eocene age plants in Tennessee, University of Illinois
1962 Sigma Xi Grant-in-aid. Research on Eocene age plants. University of Illinois

1963 Eaton-Hooker Fellowship. Graduate student stipend. Yale University
1963-64 Cullman-University Fellowship. Yale University
1964-65 National Science Foundation Postdoctoral. Fellowship - Senckenberg Museum,
Frankfurt am Main, Germany. Yale University
1966 Sigma Xi Grant-in-aid. Research on fossil leaves from Eocene sediments. Indiana
University 10-441-68
1966-69 National Science Foundation Research Grant. Cuticular analysis of Eocene leaves with
special reference to their modern affinities. NSF GB 5166X Indiana University 48-245-78
1966-67 Indiana University Grant-in-aid. Faculty Research, Indiana University 10-441-68
1967-68 Indiana University Grant-in-aid. Work-study help for paleobotanical collections.
Indiana University 10-241-68
1968 Indiana University Grant-in-aid. Field dendrology course in Costa Rica. Indiana University
10-441-68
1969-75 National Science Foundation Research Grant. The Eocene floras of southeastern North
America. NSF GB 12803, Indiana University 48-244-09
1971 Indiana University Grant-in-aid. Travel to Afghanistan and Lucknow, India. Indiana
University
1971-73 Organization for Tropical Studies Grant-in-aid. Foliar physiognomy of vegetation in
Costa Rica. Indiana University.
1972 National Science Foundation Equipment Grant. Scanning Electron Microscope Facility.
Indiana University (prepared the documentation but was not the P.I. on this grant.
1975-77 National Science Foundation Research Grant. Foliar morphology of fossil and extant
leaf forms. NSF BMS 75-02268, Indiana University 48-244-28.
1972-73 Guggenheim Fellowship. Indiana University.
1972-74 National Science Foundation Grant. Doctoral dissertation research support for Frank
Potter. NSF GB 32289, Indiana University 48-244-18.
1976-77 National Science Foundation Grant. Equipment request for light microscope facility.
NSF DEB 75-19849, Indiana University 48-246-18.
1976-77 National Science Foundation Research Grant. Foliar morphology of fossil and extant
leaf forms. NSF DEB 75-02268A1, Indiana University 48-246-51.
1977-79 National Science Foundation Research Grant. Investigation of angiosperm fossils. NSF
DEB 77-04846, Indiana University 48-246-50.
1979-80 National Science Foundation Research Grant. Early Tertiary Paleosols. NSF EAR 79-
00898, Indiana University 48-246-64.
1979-82 National Science Foundation Research Grant. Doctoral dissertation research support for
Steven R. Manchester NSF DEB 79-06837, Indiana University 48-246-68.
1979-85 National Science Foundation Research Grant. Early angiosperm evolution and ecology.
NSF DEB 79-10720, Indiana University 48-246-70.
1980 Indiana University Overseas Travel Grant-in-aid. Travel to Reading, England., Indiana
University.
1980-81 Amax Coal Foundation Grant. Pennsylvanian plant fossils of Indiana. Indiana
University 54-246-02.
1983 National Science Foundation Research Grant. Major equipment request (co-P.I. with four
other faculty). Indiana University.
1983-84 National Science Foundation Research Grant. An angiosperm leaf flora from mid-
Cretaceous sediments. NSF BSR 83-00476.

1984-86 National Science Foundation Research Grant. Doctoral dissertation research support for Warren Kovach. NSF BSR 84-01148, Indiana University 48-245-13.

1985 Indiana University Overseas Travel Grant-in -Aid. Travel to ICSEB Meeting, Brighton, England. Indiana University.

1986-89 National Science Foundation Research Grant. Mid-Cretaceous angiosperms. NSF BSR 86-16657, Indiana University 48-245-34.

1986 National Academy of Sciences, Visiting Scholar. Exchange Program, China Lecture tour, plus expense for 4 weeks while in China.

1986 Senckenberg Museum, Frankfurt, Germany and Volkswagen, . Travel funds to participate in the Symposium on The Fossils from Messel, Germany.

1987-88 John Simon Guggenheim Fellowship. The Evolution of Flowers. Indiana University.

1987-88 Office of Research and Graduate Development. College of Arts and Sciences Research Leave Supplement.

1987-88 Indiana University Sonneborn Award.

1988-89 National Science Foundation Int. Joint Seminar/Workshop . Organic Geochemical Biomarker Techniques NSF 88 00 341, Indiana University 48-245-50.

1988-89 National Science Foundation Grant. Doctoral dissertation research support for Patrick Herendeen NSF BSR 88 00 900, Indiana University 48-245-51.

1988-89 Kansas Geological Survey. Collecting and mapping Lower and mid-Cretaceous plant microfossils, Indiana University 41-246-02

1996-99 National Science Foundation. Curation of the Florida Museum of Natural History Paleobotanical Collection. NSF 9631371. University of Florida

1996-99 National Science Foundation. Late Paleocene and early Eocene nonmarine climates in the Gulf of Mexico Basin, Texas. NSF. University of Florida.

Professional and Honorary Societies:

National Academy of Sciences; Botanical Society of America; Paleontological Society; Paleontological Association; American Association for the Advancement of Science; International Organization of Paleobotanists; Association for Tropical Biology; Society of the Sigma Xi; American Institute of Biological Sciences; American Association of Stratigraphic Palynologists; International Association of Angiosperm Paleobotany; Society of Vertebrate Paleontology; Geological Society of America; Indiana Academy of Science; Kentucky Academy of Science

Linnean Society; Explorer's Club; Corresponding Member, Senckenberg Museum; Frankfurt am Main, Germany.

Publications:

Books, Symposium Volumes, and Volume-Length Paper

1965 Dilcher, D.L. Epiphyllous fungi from Eocene deposits in western Tennessee, USA. *Paleontographica*, Bd. B, vol. 116:1-54, pls. 1-26.

1973 Dilcher, D.L., D. Redmon, M. Tansey, and D. Whitehead. *Plant Biology Laboratory Manual*. Burgess Publishing Company, Minneapolis, pp. 1-116.

- 1974 Dilcher, D.L. Approaches to the identification of angiosperm leaf remains. *Botanical Review* 40:1-157.
- 1975 Dilcher, D.L., D. Redmon, M. Tansey, and D. Whitehead. *Plant Biology Laboratory Manual*, second edition. Burgess Publishing Co., pp. 1-116.
- 1979 Taylor, T., D.L. Dilcher, and T. Delevoryas, Editors. The Symposium volume, *Plant Reproduction in the Fossil Record*, published in *Rev. Palaeobotany and Palynology* 27:211-358.
- 1980 Dilcher, D.L. and T. Taylor, Editors. *Biostratigraphy of Fossil Plants: Successional and Paleocological Analysis*. Dowden, Hutchinson and Ross, Publishers, pp. 1-275.
- 1982 Dilcher, D.L., Editor. Abstracts of the annual meetings of the Botanical Society of America. Misc. Series Pub. No. 162, *Bot. Soc. Am.*, pp. 1-117.
- 1983 Dilcher, D.L., Editor. Abstracts of the joint meeting of the Botanical Society of America and the Canadian Botanical Association. *American Journal of Botany*, vol. 70, no. 5, pt. 2, pp. 1-145.
- 1984 Dilcher, D.L., Editor. Abstracts of the Annual Meetings of the Botanical Society of America. *American Journal of Botany*, vol. 71, no. 5, pt. 2, pp. 1-212.
- 1984 Dilcher, D.L. and W.L. Crepet, Editors. *Origin and Evolution of Flowering Plants*, Symposium Volume. *Annals Mo. Bot. Gd.* vol. 71, no. 2, pp. 347-630.
- 1986 Dilcher, D.L. and M. Zavada, Editors. *Symposium: Phylogeny of the Hamamelidae*. *Annals Mo. Bot. Gd.*, Volume 73, no. 2. pp. 225-441.
- 1986 Botanical Society Membership Directory and Handbook. 196 pp.
- 1992 Herendeen, P.S. and D.L. Dilcher, Editors. *Advances in Legume Systematics, Part 4. The Fossil Record*.
- 1992 B.S. Venkatachala, D.L. Dilcher and H. K. Maheshwari, Editors. *Essays in Evolutionary Plant Biology, The Palaeobotanist Volume 41*.

Published Papers (most in reviewed journals)

- 1963 Dilcher, D.L. Cuticular analysis of Eocene leaves of *Octoea obtusifolia*. *American Journal of Botany* 50:1-8.
- 1963 Dilcher, D.L. Eocene epiphyllous fungi. *Science* 142:667-669 and the cover photograph for that issue.
- 1965 Dilcher, D.L. Epiphyllous Fungi From Eocene Deposits in Western Tennessee, U.S.A. *Paleontographica Bd. B.* 116:1-54.
- 1967 Dilcher, D.L. Chlorophyll in der Braunkohle des Geiseltales. *Natur und Museum* 97:124-130.
- 1967 Dilcher, D.L. and J.F. McQuade. A morphological study of *Nyssa* endocarps from Eocene deposits in western Tennessee. *Torrey Bot. Club Bull.*, 94:35-40.
- 1967 Dilcher, D.L. Richard Krausel, 1890-1966. *Plant Science Bull.* vol. 13, no.1, p.8.
- 1967 Dilcher, D.L. Fossil Plants and Their Use in Teaching High School Biology. *School Science and Math*, April, pp. 316-320.
- 1969 Dilcher, D.L. *Podocarpus* from the Eocene of North America. *Science* 164:299-301.
- 1969 Dilcher, D.L. and B. Mehrotra. A study of leaf compressions of *Knighiophyllum* from Eocene deposits of southeastern North America. *American Journal of Botany* 56:936-943.
- 1970 Dilcher, D.L. and G.E. Dolph. Fossil leaves of *Dendropanax* from Eocene sediments of southeastern North America. *Amer.J.Bot.* 57:153-160.

- 1970 Dilcher, D.L., R. Pavlick, and J. Mitchell. Chlorophyll Derivatives in Middle Eocene sediments. *Science* 168:1447-1449.
- 1970 Dilcher, D.L. The Eocene Green River Flora of Northwestern Colorado and Northwestern Utah. *Journal of Paleontology*, vol. 45, book review. p. 739-740.
- 1971 Sheffy, M.V. and D.L. Dilcher. Morphology and taxonomy of fungal spores. *Palaeontographica B* 133:34-51.
- 1971 Dilcher, D.L. A revision of the Eocene Floras of Southeastern North America. *The Paleobotanist* 20:7-18. (Volume 20 published in 1973.).
- 1973 Dilcher, D.L. A challenge to personal attitudes in our population growth. Pollution, a special issue of *American Biology Teachers*, pp. 22-25.
- 1973 Dilcher, D.L. A Paleoclimatic Interpretation of the Eocene Floras of Southeastern North America. In A. Graham, *Vegetation and Vegetational History of Northern Latin America*. Elsevier Publ. Co., Amsterdam. Chapter 2, pp. 39-59.
- 1974 Dilcher, D.L. Approaches to the Identification of Fossil Leaf Remains. *Botanical Review*, 40:1-157.
- 1974 Crepet, W., D.L. Dilcher, and F.W. Potter. Eocene angiosperm flowers. *Science* 185:781-782 and the cover photograph for that issue.
- 1974 Elsik, W.C. and D.L. Dilcher. Palynology and Age of Clays Exposed in Lawrence Clay Pit, Henry County, Tennessee. *Palaeontographica Abst. B.*, Bd. 146:66-87.
- 1975 Dilcher, D.L. and R. Pheifer. Stump casts of aborscent Lycopods. *Indiana Academy of Science Proceedings* 84:114-121.
- 1975 Crepet, W., D. L. Dilcher, and F.W. Potter. Investigations of angiosperms from the Eocene of southeastern North America: A Catkin with Juglandaceous Affinities. *American Journal of Botany* 62:813-823.
- 1976 Dilcher, D.L., F.W. Potter, and W.L. Crepet. Investigations of angiosperms from the Eocene of North America: Juglandaceous winged fruits. *American Journal of Botany* 63:532-544.
- 1976 Dilcher, D.L., W.L. Crepet, C.D. Beeker, and H.C. Reynolds. Reproductive and vegetative morphology of a Cretaceous angiosperm. *Science* 191:854-856.
- 1976 Dilcher, D.L. Paleoecology of terrestrial plants--review of book by V.A. Krassilov. *Science* 194:517.
- 1977 Pheifer, R.N. and D.L. Dilcher. Collecting fossil and rock specimens with a carbide-tipped chain and chain saw. *Journal of Paleobotany* 51:197-198.
- 1977 Dilcher, D.L. and C.P. Daghljan. Investigations of angiosperms from the Eocene of southeastern North America: Philodendron leaf remains. *American Journal of Botany* 64:526-534.
- 1977 Crepet, W.L. and D.L. Dilcher. Investigations of angiosperms from the Eocene of North America: a mimosoid inflorescence. *American Journal of Botany* 64:714-725.
- 1978 Roth, J.L. and D.L. Dilcher. Some considerations in leaf size and leaf margin analysis of fossil leaves. *Courier Forschungs-Institut Senckenberg* 30:165-171.
- 1978 Dilcher, D.L. Angiosperm paleobotany and the IMP. *Courier Forschungs-Institut Senckenberg* 30:7-8.
- 1978 Dilcher, D.L., F. Potter, and H. Reynolds. Preliminary account of middle Cretaceous angiosperm remains from interior of North America. *Courier Forschungs-Institut Senckenberg* 30:9-15.

- 1979 Taylor, T.N., D.L. Dilcher and T. Delevoryas. Introduction: Plant reproduction in the fossil record. *Review of Palaeobotany and Palynology* 27:211-212.
- 1979 Dilcher, D.L. Early angiosperm reproduction: An introductory report. *Review of Palaeobotany and Palynology* 27:291-328.
- 1979 Dolph, G. and D.L. Dilcher. Foliar physiognomy as an aid in determining paleoclimate. *Palaeontographica Abst. B*, 170:151-172.
- 1979 Roth, J. and D.L. Dilcher. Investigations of angiosperms from the Eocene of North America: stipulate leaves of the Rubiceae. *Amer. Journ. of Bot.* 66:1194-1207.
- 1980 Jones, J.H. and D.L. Dilcher. Investigations of angiosperms from the Eocene of North America: *Rhamnus marginatus* (Rhamnaceae) reexamined. *American Journal of Botany* 67:959-967.
- 1980 Dolph, G.E. and D.L. Dilcher. Variation on leaf size with respect to climate in Costa Rica. *Biotropica* 12:91-99.
- 1980 Dolph, G.E. and D.L. Dilcher. Variation in leaf size with respect to climate in the Western Hemisphere. *Bulletin Torrey Bot. Club* 107:157-162.
- 1980 Potter, F. and D.L. Dilcher. Biostratigraphic analysis of Middle Eocene floras of western Kentucky and Tennessee. In Dilcher and Taylor, *Biostratigraphy of Fossil Plants: Successional and Paleocological Analysis*. Dowden, Hutchinson and Ross, Publishers. Chapter 8, pp. 211-225.
- 1981 Retallack, G. and D.L. Dilcher. A Coastal theory of flowering plant origin. In Niklas, K.J., *Paleobotany, Paleoecology, and Evolution*. Praeger Publishers, N.Y. Chapter 2, pp. 27-77.
- 1981 Retallack, G. and D.L. Dilcher. Arguments for a glossopterid ancestry of angiosperms. *Paleobiology* 7:54-67.
- 1981 Retallack, G. and D.L. Dilcher. Early angiosperm reproduction: *Prisca reynoldsii* gen. et sp. nov. from Mid-Cretaceous coastal deposits in Kansas, USA. *Palaeontographica, Abst. B*, 179:103-137, 7 plates and 9 figures.
- 1982 Manchester, S.R. and D.L. Dilcher. Pterocaryoid fruits (Juglandaceae) in the Paleocene of North America and their evolutionary and biogeographic significance. *American Journal of Botany* 69:275-286.
- 1983 Dilcher, D.L. and L. Eriksen. Sycamores are Ancient Trees. *The Museum of Western Colorado Quarterly*, Spring, 1983, pp. 8-11.
- 1984 Dilcher, D.L. and P.R. Crane. In pursuit of the first flowers. *Natural History Magazine* 93:56-61.
- 1984 Kovach, W.L. and D.L. Dilcher. Dispersed cuticles from the Eocene of North America. *Botanical Journal of the Linnean Society* 88:63-104.
- 1984 Basinger, J.F. and D.L. Dilcher. Ancient bisexual flowers. *Science* 224:511-513.
- 1984 Dilcher, D.L. In *Search of Fossil Plants*. *Terra* Jan./Feb., pp. 10-15.
- 1984 Reynolds, D.R. and D.L. Dilcher. A foliicolous alga of Eocene Age. *Review of Paleobotany and Palynology* 43:397-403.
- 1984 Dilcher, D.L. and P.R. Crane. *Archaeanthus*: An Early Angiosperm from the Cenomanian of the Western Interior of North America. *Annals Mo. Bot. Gd.*, vol. 71, no. 2, pp. 351-383.
- 1984 Crane, P.R. and D.L. Dilcher. *Lesqueria*: an Early Angiosperm Fruiting Axis from the mid-Cretaceous. *Annals Mo. Bot. Gd.*, vol. 71, no. 2, pp. 384-402.
- 1984 Kovach, W.L. and D.L. Dilcher. A new combination in the fossil megaspore genus *Paxillitriteles*. *Taxon* 34 (2):297-298.

- 1985 Kovach, W.L. and D.L. Dilcher. Morphology, ultrastructure, and paleoecology of *Paxillitriletes vittatus* sp. nov. from the mid-Cretaceous of Kansas. *Palynology* 9:85-94.
- 1985 Kovach, W.L. and D.L. Dilcher. A new combination of *Paxillitriletes* (fossil megaspores). *Taxon* 34:297.
- 1986 Manchester, S.R., D.L. Dilcher and W.D. Tidwell. Interconnected reproductive and vegetative remains of *Populus* (Salicaceae) from the Middle Eocene Green River Formation, Northeastern Utah. *American Journal of Botany* 73:156-160.
- 1986 Dilcher, D.L. and W.L. Kovach. Early Angiosperm Reproduction: a new fruitification from the Dakota Formation (Cenomanian) of Kansas. *American Journal of Botany* 73:1228-1235.
- 1986 Zavada, M.S. and D.L. Dilcher. Comparative pollen morphology and its relationship to phylogeny of pollen in The Hamamelidae. *Annals Mo. Bot. Gd.*, Vol. 73 (2):348-381.
- 1986 Dilcher, D.L. and D. Macklin. Systematic index of the Hamamelidae. *Annals Mo. Bot. Gd.*, Vol. 73 (2):340-345.
- 1986 Dilcher, D.L. and M. Zavada. Phylogeny of the Hamamelidae: An Introduction. *Annals Mo. Bot. Gd.*, Vol. 73:225-226.
- 1986 Farley, M.B. and D.L. Dilcher. Correlation between miospore and depositional environments of the Dakota Formation of north-central Kansas and adjacent Nebraska. *Palynology* 10:117-133.
- 1986 Dilcher, D.L. Origin of Flowering Plants. 1987 McGraw-Hill Yearbook of Science and Technology 339-343.
- 1986 Retallack, G.J. and D.L. Dilcher. Cretaceous angiosperm invasion of North America. *Cretaceous Research* 7:227-252.
- 1986 Dilcher, D.L. and S.R. Manchester. Investigations of Angiosperms from the Eocene of North America: Leaves of the Engelhardieae (Juglandaceae). *Botanical Gardens* 147:189-199.
- 1987 Coe, M.J., D.L. Dilcher, J.D. Farlow, D.M. Jarzen, and D.A. Russell. Of dicots and dinosaurs. Chapter in *The Origin of Angiosperms and Their Biological Consequences*. Friis, E.M., W. Chaloner and P. Crane, Eds., pp. 225-258.
- 1988 Dilcher, D.L. Memorial to Herman F. Becker (1907-1985). *Annals Mo. Bot. Gd.* 74:689-691.
- 1988 Crane, P.R., S.R. Manchester, and D.L. Dilcher. Morphology and phylogenetic significance of the angiosperm *Platanites herbridicus* from the Paleocene of Scotland. *Paleontology* 31:503-517.
- 1988 Dilcher, D.L. and S.R. Manchester. Investigations of the angiosperms from the Eocene of North America: A fruit belonging to Euphorbiaceae. *Tertiary Research* 9:45-68.
- 1988 Jones, J.H. and D.L. Dilcher. A study of the *Dryophyllum* leaf forms from the Paleocene of southeastern North America. *Palaeontographica*, Bd. B 208:53-80.
- 1988 Jones, J.H., S.R. Manchester, and D.L. Dilcher. *Dryophyllum* Debey ex Saporta, Juglandaceous not Fagaceous. *Rev. Palaeobot. and Palynology* 56:205-211.
- 1988 Retallack, G.J. and D.L. Dilcher. Reconstructions of selected seed ferns. *Annals of the Mo. Bot. Gd.* 75:1010-1057.
- 1988 Zavada, M.S. and D.L. Dilcher. Pollen wall ultrastructure of selected dispersed monosulcate pollen from the Cenomanian, Dakota Formation of central USA. *American Journal of Botany* 75:669-679.

- 1988 Dilcher, D.L. Book Review, *Fundamentals of Palaeobotany* by Sergei V. Meyen. *American Scientists* 76:406.
- 1988 Dilcher, D.L. Book Review, VII Simposia Argentino de Paleobotanica y Palinologia Actas, 1987, Ed. by S. Archangelsky, R. Herbst and W., I.O.P. Newsletter 35 : 12.
- 1988 Kovach, W.L. and D.L. Dilcher. Megaspores and other dispersed plant remains from the Dakota Formation (Cenomanian) of Kansas. *Palynology* 12:89-119.
- 1989 Grote, P.J. and D.L. Dilcher. Investigations of angiosperms from the Eocene of North America: A new genus of Theaceae based on fruit and seed remains. *Botanical Gazette* 150:190-206.
- 1990 Herendeen, P.S., D.H. Les, and D.L. Dilcher. Fossil *Ceratophyllum* (Ceratophyllaceae) from the Tertiary of North America. *American Journal of Botany* 77:7-16.
- 1990 Dilcher, D.L., D.C. Christophel, H.D., Bhagwandin, and L. Scriven. Evolution of the Casuarinaceae: Morphological comparisons of some extant species. *American Journal of Botany* 77:338-355.
- 1990 Crane, P.R., S.R. Manchester, and D.L. Dilcher. A preliminary survey of fossil leaves and well-preserved reproductive structures from the Sentinel Butte Formation (Paleocene) near Almont, North Dakota. *Fieldiana Geology New Series* No. 20. pp, 1-63.
- 1990 Dilcher, D.L. and P. Basson. Mid-Cretaceous angiosperm leaves from a new fossil locality in Lebanon. *Botanical Gazette*.151:538-547.
- 1990 C.R. Hill and D.L. Dilcher. Scanning electron microscopy of the internal ultrastructure of plant cuticle. In: D. Claugher, (Ed.), *Scanning electron microscopy in taxonomy and functional morphology*, pp. 95-124, Clarendon Press, Oxford.
- 1990 Dilcher, D.L. Eocene Lake Messel, edited by J.L. Franzen and W. Michaelis. *Geochimica et Cosmochimica* 54:2901-2902.
- 1990 McKnight, C.L., S.A. Graham, A.R. Carroll, Q. Gan, D.L. Dilcher, M. Zhao, Y.H. Liang. Fluvial sedimentology of an Upper Jurassic petrified forest assemblage, Shishu Formation, Junggar Basin, Xinjiang, China. *Paleogeogr., Paleoclimatol., Paleoecol.* 79:1-9.
- 1990 Herendeen, P.S. and D.L. Dilcher. Fossil mimisoid legumes from the Eocene and Oligocene of southeastern North America. *Rev. Palaeobot. Palynol.* 62:339-361.
- 1990 Herendeen, P.S. and D.L. Dilcher. *Diploptropis* (Leguminosae, Papilionoideae) from the Middle Eocene of southeastern North America. *Systematic Botany* 15: pp. 526-533.
- 1990 Upchurch, G.R. and D.L. Dilcher. Cenomanian angiosperm leaf megafossils from the Rose Creek locality of the Dakota Formation, Southeastern Nebraska. *U.S. Geological Survey Bulletin* 1915, pages 1-55, plates 1-31.
- 1990 Herendeen, P.S. and D.L. Dilcher. Reproductive and vegetative evidence for the occurrence of *Crudia* (Leguminosae, Caesalpinioideae) in the Eocene of Southeastern North America. *Botanical Gazette* 151:402-413.
- 1991 Herendeen, P. S. and D.L. Dilcher. *Caesalpinia* subgenus *Mezoneuron* (Leguminosae, Caesalpinioideae) from the Tertiary of North America. *American Journal of Botany* 78:1-12.
- 1991 Manchester, S.R., P.R. Crane and D.L. Dilcher. *Nordenskioldia* and *Trochodendron* (Trochodendraceae) From the Miocene of Northwestern North America. *Bot. Gaz.* 152:357-368.
- 1991 Schwarzwaldner, R. and D.L. Dilcher. Systematic Placement of *Platanaceae* in the Hamamelidae. *Ann. Missouri Bot. Gard.* 78: 962-969.

- 1991 Crane, P.R., S.R. Manchester and D.L. Dilcher. Reproductive and Vegetative Structure of Nordenskiöldia (Trochodendraceae), A Vesselless Dicotyledon From the Early Tertiary of the Northern Hemisphere. *American Journal of Botany* 78:1311-1334.
- 1992 Call, V.B. and D.L. Dilcher. Investigations of Angiosperms from the Eocene of southeastern North America: Samaras of *Fraxinus wilcoxiana* Berry. *Review of Palaeobotany and Palynology* 74:249-266.
- 1992 Dilcher, D.L., P.S. Herendeen and F. Hueber. Fossil Acacia flowers with attached anther glands from Dominican Republic amber. In : P.S. Herendeen and D.L. Dilcher (Eds.), *Advances in Legume Systematics, Part 4. The Fossil Record*, pp. 33-42.
- 1992 Dilcher, D.L., R.K. Kar and M.E. Dettmann. The Functional Biology of Devonian Spores with Bifurcate Processes-- a Hypothesis. In: B.S. Venkatachala, D.L. Dilcher and H.K. Maheshwari (Eds.), *Essays in Evolutionary Plant Biology, The Palaeobotanist* 41:67-74.
- 1992 Grote, P.J. and D.L. Dilcher. Fruits and Seeds of Tribe Gordonieae (Theaceae) From the Eocene of North America. *American Journal of Botany* 79:744-753.
- 1992 Meitang, M., D.L. Dilcher, and Z.H. Wan. A new seed-bearing leaf from the Permian of China. In: B.S. Venkatachala, D.L. Dilcher and H.K. Maheshwari (Eds.), *Essays in Evolutionary Plant Biology, The Palaeobotanist* 41:98-109.
- 1992 Skog, J.E. and D.L. Dilcher. A new species of Marsilea from the Dakota Formation in central Kansas. *American Journal of Botany* 79:982-988.
- 1992 Skog, J.E., D.L. Dilcher and F.W. Potter. A new species of Isoetites from the mid-Cretaceous Dakota Group of Kansas and Nebraska. *American Fern Journal*, 82:151-161.
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- 1998 Dilcher, D.L., Mehotra, R. C. and Awasthi, N. A Palaeocene *Mangifera*-like leaf fossil from India. *Phytomorphology* 48-91-100.

- 1998 Manchester, S. R., Dilcher, D. L. and Wing, S.L. Attached leaves and fruits of mytaceous affinity from the Middle Eocene of Colorado. *Review of Paleobotany and Palynology* 102: 153-163.
- 1998 Graham, A. and Dilcher, D. L.. Studies in Neotropical paleobotany. XII. A palynoflora from the Pliocene Rio Banao Formation of Costa Rica and the Neogene vegetation of Mesoamerica. *American Journal of Botany*. 85: 1426-1438.
- 1998 Lott, T.A., S.R. Manchester and D.L. Dilcher. A unique and complete Polemoniaceous plant from the middle Eocene of Utah, USA. *Rev. Pal. Pal.* 104:39-49.
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- 2001 Kvacek, Jiri and Dilcher, D.L. Comparison of Cenomanian floras from western interior North America and Central Europe. *Acta Universitatis Carolinae- Geologica* 44:17-38.
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- 2002 Dilcher, D.L. Fresh approach to the study of fossil plants: a review of Evolution of Plants. *Trends in Plant Science* 7:326.
- 2002 Kar, R.K. and D.L. Dilcher. An argument for the origin of heterospory in aquatic environments. *Palaeobotanist* 51:1-11.
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- 2002 Sun, Ge and D.L. Dilcher. [Review of] Early Angiosperms from the Lower Cretaceous of Jixi, eastern Heilongjiang, China. *Palaeobotany and Palynology* 121:91-112.
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- 2002 Wang, Q., S.G. Hao, D.M. Wang and D.L. Dilcher.. An anatomically preserved aborescent Lycopoid, *Sublepidodendron songziense* (Sublepidodendraceae), from the Late Devonian of Hubei, China. *American Journal of Botany* 89:1468-1477.
- 2003 Sun, B., D.L. Dilcher, D.J. Beerling, C. Zhang, D. Yan and E. Kowalski. Variation in *Ginkgo biloba* L. leaf characters across a climatic gradient in China. *Proceedings of the National Academy of Sciences, USA* 100:7141-7146.
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- 2003 Dilcher, D. L. and Y. Wang. [Review of] Rise of the Dragon: Readings from Nature of the Chinese Fossil Record. *Journal of Paleontology* 77:200.
- 2003 Kowalski, E.A. and D.L. Dilcher.. Warmer paleotemperatures for terrestrial ecosystems. *Proceedings of the National Academy of Sciences, USA* 100:167-170.
- 2003 Moore, B.R., D.L. Dilcher and M.A. Gibson.. Paleoenvironment, depositional setting, and plant fossil diversity found in the Claiborne Formation (Middle Eocene) clay deposits of western Tennessee. pp. 187-198 in *Field Trip Guidebook, Joint Meeting South-central and Southeastern Sections, Geological Society of America*. State of Tennessee Department of Environment and Conservation, Division of Geology, Nashville, Tennessee

Numerous Published Abstracts of Papers Presented at Professional Meetings:

Served on the Following Committees at Indiana University:

- Curriculum Committee--Division of Biological Sciences
- Equipment Committee--Division of Biological Sciences
- Undergraduate Education Policy Committee--Division of Biological Sciences
- Committee on Graduate Education--Department of Plant Sciences
- Graduate Admissions Committee--Department of Plant Sciences
- Introductory Biology Course Committee--Division of Biological Sciences
- Search Committees for new faculty--Department of Plant Sciences and Division of Biological Sciences
- University Experimental Curriculum Committee--College of Arts and Sciences Science
- Advisory Committee--Indiana University
- Faculty Fellowships--Indiana University
- Degree Requirement Committee--College of Arts and Sciences, 3 years, responsible for writing the entire Arts and Sciences degree requirements
- Search and Screen Committee for chairman of the new Department of Biology -- Arts and Sciences (1976)
- Bloomington Faculty Council, Bloomington Faculty Council Nomination Committee
- Overseas Conference Fund Committee
- Bloomington Campus Planning Committee
- Research and Graduate Development (and subcommittee Chairman for the Research Incentive Program)
- Graduate School Fellowships Committee
- Graduate Admissions Committee, Department of Biology, Ecology and Evolutionary Biology Program (also, the Plant Science Program) Search] for new chairman, Biology Department (1979)
- Capital Priorities Committee (1979-80)
- Research ranks review committee, Dean of Faculties office (1981)
- Promotions and Tenure Committee, Biology Department (1981-82)
- Campus Remodeling and Space Committee (1979-80)
- Arts and Sciences Nominating Committee
- Chairman's Advisory Committee (1983-86)

University Arboretum Planning Committee (1982-84; Latin American Exchange Committee (1987-)

East Asian Exchange Committee (1987-)

Arts and Sciences Nominating Committee

Chairman's Advisory Committee (1983-86)

University Arboretum Planning Committee (1982-84)

Latin American Exchange Committee (1987-)

East Asian Exchange Committee (1987-)

Participated at Indiana University in Various Programs:

Professional Activities:

Chairman, 1974, Paleobotanical Section of the Botanical Society of America

Secretary-Treasurer, 1975-77, Paleobot. Sect. of the Botanical Society of America

North American Representative, 1975-81, International Organization of Paleobotany (IOP)1976

Representative of the Paleobotanical Section of the Botanical Society of America for planning the North American Paleontological Convention 11 and 111, 1977

National Science Foundation, Panel member for Systematic Biology Program, 1977-79

President, 1977-80, International Association of Angiosperm Paleobotany

Geological Society of America Committee on Collections and Collecting, 1978-79

Representative to A.J.B., Editorial Board, 1978-79, Paleobotanical Section of the Botanical Society of America

Conservation Committee of the Botanical Society of America, 1978-81 (Chairman of this committee, 1981 and 1982)

Botanical Society of America Committee to study the future of the Plant Science Bulletin,1979

Member of Special Advisory Committee of Botanical Society of America, 1982

National Science Foundation, panel member for selecting NATO postdoctoral fellows,1982

Program Director (elected Position) of the Botanical Society of America, 1982-84

Executive Board, Botanical Society of America, 1982-84,1985-

President-Elect, Sigma Xi, Indiana Chapter, 1984-85

Chairman, Membership Committee of Sigma Xi, Indiana Chapter, 1984-85

Secretary of the Botanical Society of America (elected position), 1985-88

President, Sigma Xi, Indiana Chapter, 1985-86

Vice-President, International Organization of Paleobotany, 1987-90

Panelist, NSF Graduate Fellowship Program Competition, 1987-88

President-elect, Botanical Society of America, 1988-89

President, Botanical Society of America, 1989-90

Past President, Botanical Society of America, 1990-1991

Executive Board Member, Marine Continuum Foundation, 1992-

Editorial Positions held:

Member of Editorial Board, Botanical Society of America, 1981

Elected to the Editorial Board of American Journal of Botany, 1981-

Member of Editorial Board, Review of Palaeobotany and Palynology, 1985

Member of Editorial Board, *Evolutionary Trends in Plants*, 1986
Member, Columbia University Press Advisory Committee for Paleontology, 1990

Special Recognition:

Published research photograph selected for special exhibit entitled "Art in Science" shown at Univ. of California Berkeley (1965) and Institute of History and Art, Albany, New York (1964). Also used by Gyorgy Kepes, painter and professor of visual design at MIT.
Science year Book 1976, page 253, our paper published in *Science* 1974 on ancient flower types was cited as one of the most outstanding advances of Botany in 1974.
1963-64, Cullman University Fellowship, Yale University
1964-65, National Science Foundation Postdoctoral Fellow, Senckenberg Museum, Germany
1972-73, Guggenheim Fellowship
1977, Audubon Award for environmental work
1980, Distinguished Visiting Research Fellow, Adelaide University
1981, Elected Fellow of the Indiana Academy of Science
1982, Elected Fellow of the Linnean Society of London
1986, Selected as a Visiting Scholar by The Committee on Scholarly Exchange to The People's Republic of China, National Academy of Science
1987-88, Guggenheim Fellow
1987- Listed in various Who's Who
1987-88, Sonneborn Award, Indiana University for combining both Distinguished Teaching and Research
1989, Elected a member of the National Academy of Sciences
1990, Named Corresponding Member of the Senckenberg Museum of Natural History, Frankfurt, Germany

Courses Initiated and taught (in addition to those listed above):

L203 Evolution and Diversity of Life (70-120 students a semester)
L550 Approaches to College Teaching
B535 Special Topics in Evolution and Paleobotany
B424 Paleobotany Laboratory
B415 Phytogeography
B525 Paleobotany and Phytogeography Seminar
J359 Studies of the Human Environment
L433 Tropical Biology
L111 Evolution and Diversity, Introductory Biology (250-300 students each semester)
B433 Tropical Biology

Courses Taught:

B101 Introductory Botany (200-350 students a semester)
L100 Introductory Biology (300-350 students a semester)

B423 Paleobotany (22-35 students a semester)

Ph.D. Dissertations Completed Under My Direction:

- 1972 A Study of the Myricaceae from Eocene sediments of southeastern north America, by Mary Sheffy. The complete manuscript of this dissertation was published in *Palaeontographica Abt. B*, 146:88-153, 1974. (Ph.D. Botany)
- 1974 Studies in the Apocynaceae, Part 1: an established analysis of *Apocynophyllum mississippiensis*, by Gary F. Dolph. The complete manuscript of this dissertation was published in *Palaeontographica Abt. B*, 151:1-51, 1975. (Ph.D. Botany)
- 1975 Investigations of angiosperms from the Eocene of southeastern North America: pollen assemblages from Miller pit, Henry County, Tennessee, by Frank W. Potter, Jr. The complete manuscript of this dissertation was published in *Palaeontographica Abt. B*, 157:44-96, 1976. (Ph.D. Biology)
- 1979 The Paleobotany and Paleoecology of the unnamed shale overlying the Danville Coal member (VII) in Sullivan County, Indiana, by Raymond N. Pfeiffer. (Ph.D. Geology)
- 1981 Epidermal studies in the Annonaceae and related families, by John L. Roth Jr. (Ph.D. Biology)
- 1981 Fossil history of the Juglandaceae, by Steven R. Manchester. (Ph.D. Biology)
1987 Manchester, S.R. Fossil history of the Juglandaceae. *Ann. Mo. Bot. Gd. Monographs*. 1-137.
- 1984 Leaf architectural and cuticular analysis of extant Fagaceae and "Fagaceous" leaves from the Paleocene of southeastern North America, by Jay Jones, pp. 1-328. (Ph.D. Biology)
- 1988 Jones, J.H. and D.L. Dilcher. A study of the "Dryophyllum" leaf forms from the Paleocene of southeastern North America. *Palaeontographica*, Bd. B 208:53-80.
- 1986 Systematics and early evolution of the Platanaceae, by Robert N. Schwarzwald, pp. 1-198. (Ph.D. Biology)
- 1987 Dispersed plant remains from the Cenomanian of Kansas: systematic and paleoecologic approaches, by Warren L. Kovach (Ph. D. Biology).
- 1988 Kovach, W.L. and D.L. Dilcher. Megaspores and other dispersed plant remains from the Dakota Formation (Cenomanian) of Kansas. *Palynology* 12:89-119.
- 1989 Selected fruits and seeds from the Middle Eocene Claiborne Formation of southeastern North America, by Paul J. Grote pp. 1-233. (Ph. D. Biology)
- 1990 Fossil History of the Leguminosae from the southeastern North America, by Patrick S. Herendeen pp. 1- 282. (Ph. D. Biology)
- 2002 Angiosperm leaf megafossil from the Dakota Formation (Cenomanian, Cretaceous), Western Interior, USA by Hongshan Wang pp. 1-399. (Ph. D. in Geology)

Two Ph.D. students are currently working under my direction.

M.S. Thesis Completed Under My Direction:

- 1980 Fossil mimosoid leaflets from the Middle Eocene (Claiborne Formation), Graves County, Kentucky, by Paula Weiss. (M.S. Geology)

- 1982 An assessment of the correlation between miospore and depositional environments of the Dakota Formation (Cretaceous), north-central Kansas and adjacent Nebraska, by Martin B. Farley. (M.S. Geology)
- 1983 Taxonomic considerations in the Nyssaceae with emphasis on Nyssa, by William D. Macklin. (M.A. Biology)
- 1989 The Cheyenne Sandstone and Cheyenne Flora of the Upper Lower Cretaceous (Albian) from southwestern Kansas, by Qiangsheng C. Huang (M.S. Geology).
- 1989 General geology and floristic survey of the Warman Clay Pit, Weakley County, Tennessee by Zhenbo Sun (M.S. Geology).

Masters Degree Students in Biology:

Julie Van Horn; Charles D. Beeker; Paul Irwin; Neil Lambert; William Macklin

Postdoctoral Fellows Who Have Been Associated With My Research Laboratory:

William L. Crepet, 1973-75; Gregory Retallack, 1978-81; James Basinger, 1979-80; Peter Crane, 1981-82; Michael Zavada, 1982-84; Garland Upchurch, 1983-84; Steven Manchester 1981- 1990 (Curator of I.U. Fossil Plant Collection); Karl Longstreth 1978-81 (Curator of I.U. Fossil Plant Collection); Elizabeth Kowalski 2000-2001; Hongshan Wang 2002-2003.