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## Additional Iowa Pteridophyte References

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## Additional Iowa Pteridophyte References

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Fifty-two annotated references are added to the bibliography of references on Iowa pteridophytes. The bibliography was compiled to include references which treated the taxonomic, ecologic, physiologic or phytogeographic aspects of Iowa's ferns, horsetails, quillworts, clubmosses, and spikemosses. The total bibliography now contains 218 references. The status of the Iowa pteridophyte floristics is compared with that in other states in the Upper Midwest and the Great Plains. The Iowa pteridophyte flora consists of 57 species and 8 hybrids, including 47 ferns, 9 horsetails, 1 quillwort, 6 clubmosses, and 2 spikemosses.

INDEX DESCRIPTORS: Clubmosses, Ferns, Horsetails, Iowa Flora, Pteridophytes, Quillworts, Spikemosses, Bibliography.

The Iowa pteridophyte (ferns and fern allies) flora has been the subject of a field, herbarium, and literature investigation for the past decade (1972-1982). These efforts have resulted in the preparation of a new summation of floristic collections (Peck, 1976b), along with an annotated bibliography to references on Iowa pteridophytes (Peck, 1976a). Since then, continued field and herbarium study has resulted in additional floristic information being reported (Peck, 1980; 1983). Similar studies have been conducted in neighboring states over the past decade as part of their state floristic surveys, endangered species programs, or natural heritage programs. States in the Upper Midwest with recent pteridophyte floras include Illinois (Mohlenbrock, 1967; 1970; Mohlenbrock and Ladd, 1978; Mohlenbrock and Ladd, in press), Minnesota (Tyron, 1980), Missouri (Steyermark, 1963; Key, 1982), and Wisconsin (Peck and Taylor, 1980a; 1980b; 1981). States in the Great Plains to the west of Iowa which have had recent floras include North Dakota (Pelvitt and Barker, 1975) and South Dakota (Van Bruggen, 1976). Two physiographic regions adjacent to Iowa have also been studied, resulted in reports covering the entire Great Plains (Great Plains Flora Association, 1977; Petrik-Ott, 1975; 1979) and the Driftless Area of northeastern Iowa and parts of Illinois, Minnesota, and Wisconsin (Hartley, 1966; Peck, 1982). Maps of pteridophyte distributions in the Upper Midwest (Illinois, Iowa, Minnesota, Missouri, and Wisconsin) were included in the recent

revision of the Driftless Area pteridophyte flora (Peck, 1982). These state and regional treatments, along with the manuals of Wherry (1961) and Mickel (1979) and the new world treatment of pteridophytes by Tyron and Tyron (1982), provide pteridologists and Iowa's botanists with much improved floristic and distributional data. Consequently, studies of the floristic affinities and vicariance geography of Iowa's pteridophytes can now examine historical and ecological influences on species' abundance and patterns of distribution.

Since publication of the Iowa pteridophyte bibliography (Peck, 1976a), 52 additional references to Iowa pteridophytes have been located, including 35 published since 1975 and 17 older references. As before, each reference was annotated to clarify the title, contents, and significance. To date, a total of 218 references to Iowa pteridophytes have been located and annotated. Based upon these references, the Iowa pteridophyte flora consists of 65 pteridophytes (58 species plus 8 hybrids), including 47 ferns, 9 horsetails, 1 quillwort, 6 clubmosses, and 2 spikemosses. The fern *Botrychium dissectum* Spreng. and the quillwort *Isoetes melanopoda* Gay & Dur. occur in Iowa as two distinct forms, making the final flora of Iowa pteridophytes a total of 67 (species, hybrids, plus noteworthy forms). The purpose of this report is to provide a current statement on Iowa pteridophyte literature by updating a previous report (Peck, 1976a) for workers in Iowa, as well as workers in other states, who use Iowa data for floristic and ecologic investigations.

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- LAMMERS, T. G. 1980. The vascular flora of Starr's Cave State Preserve. Proc. Iowa Acad. Sci. 87:148-158. (Reports 2 horsetails and 11 ferns at a state preserve in Des Moines County; provides floristic comparison with other preserves in Iowa).
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- PECK, J. H. 1976b. The pteridophyte flora of Iowa. Proc. Iowa Acad. Sci. 83:143-160. (Reports 57 species and 3 hybrids; habitats, abundance, and distributional data; commentary on history of Iowa pteridophyte study).
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- PECK, J. H. 1979. Compilatory list of the rare, threatened, and endangered plants of the five states of the Upper Mississippi River: Illinois, Iowa, Minnesota, and Wisconsin. Contr. Herbarium University Wisconsin - La Crosse 26:1-48. (Lists 6 horsetails, 2 quillworts, 7 clubmosses, 3 spikemosses, and 52 ferns of biological concern in the Upper Midwest; Iowa lists 4 horsetails, 1 quillwort, 5 clubmosses, 2 spikemosses, and 14 ferns; discusses idiosyncratic approaches taken by each state in designating and listing species).
- PECK, J. H. 1980a. Additions to the pteridophyte flora of Iowa. Proc. Iowa Acad. Sci. 87:39-40. (Reports two state records and 85 county records; *Dryopteris X triplioidea* Wherry and *Equisetum X litorale* Kuhlw. were reported for first time).
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- PECK, J. H. 1983. Additions to the pteridophyte flora of Iowa — II. Proc. Iowa Acad. Sci. 90:28-31. (Reports *Dryopteris X bootii* and *Dryopteris X uliginosa* as state records, along with 118 new county records; observations on field status of populations of the 12 rarest species were summarized; reports on the rediscovery of *Isoetes melanopoda* in Iowa which had not been observed since its discovery in 1863).
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rence of *Botrychium* in the Upper Midwest).  
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### IN MEMORIAM Dr. Robert H. Chapman

Dr. Robert H. Chapman, Assistant Professor of Botany, Iowa State University, died February 3, 1984 in Ames, Iowa. He was born in Atlanta, Georgia and received a B.A. degree from Emory University in 1969. Following three years in the Army Security Agency, including 15 months as an interpreter in Viet Nam, he enrolled at the University of Georgia and received an M.S. (1974) and Ph.D. (1977) in Botany. He was a post-doctoral fellow at the University of Rochester but left early to accept an appointment at Iowa State in fall, 1977.

His teaching responsibilities included general biology, biological evolution, and plant population biology. He became especially interested in evolution and, in addition to teaching in the formal evolution course, often spoke to student groups about evolution. He became a spokesman for biologists on the question of what is science and what is

not science in the field of evolutionary biology.

Dr. Chapman was known beyond the campus for his efforts to raise awareness of the impact of the evolution controversy on science. He wrote a chapter for a book on the subject and presented papers about it at meetings. He was a member of the Controversial Issues Panel of the Iowa Academy of Science which dealt with this matter.

His research interests were in evolutionary biology, specifically in the application of electrophoresis techniques to problems in plant population biology. He had published papers in this discipline. For a short period he was Associate Editor for Botany for the *Proceedings of the Iowa Academy of Science*.

Bob Chapman was an amiable and intelligent teacher and scientist. The early end to his career is an unfortunate loss to both Iowa State University and the state of Iowa.