Report of the President for 1971

At this, the completion of my second term of office, I can honestly say that I am proud of our organization. The American Fern Society has shown itself to be increasingly a participant in national and international botanical affairs, and its activities have played a substantial role in fostering research and teaching of the pteridophytes. As the new officers take over, I wish them success in the coming year and I pledge them my support and assistance in their undertakings. We have indications of a number of important new developments.

The year was marred by the tragedy of the death of Dale J. Hagenah, one of our most devoted members and contributors. It will come as a surprise to many of our members that Dale was connected with industry for practically all of his adult life -- botany was a sideline. He was an outstanding example of a non-professional who managed to make substantial contributions to pteridology. His work on fragile ferns, Cystopteris; wood ferns, Dryopteris; the hart's-tongue, Phyllitis; and his general investigations of the pteridophytes of the upper Great Lakes area have strongly influenced our ideas about these subjects. Dale Hagenah will be sorely missed by those who knew him through his papers in the FERN JOURNAL and his participation in American Fern Society forays. A biographical obituary including a bibliography will be published by Stanley A. Cain and me in the forthcoming issue of THE MICHIGAN BOTANIST.

One of the subjects that Dale Hagenah wanted to pursue in his later years was that of the broad distribution of North American ferns -- a subject of great timeliness because of its relation to the FLORA NORTH AMERICA project. His own field explorations and herbarium studies in this connection were exemplary, and as all students of ferns know, he managed to make many striking range extensions and to fill in the range maps of a number of species, especially in Michigan, his home state. It seems to me that one of the functions of the American Fern Society is to stimulate and augment this type of research and to encourage all members -- whether or not they are professionals -- to join in.

At the risk of fomenting arguments, I should like to stress my belief that there is still very much to be learned about the temperate and arctic ferns of North America. It is true that many of my own studies, and those of my students, deal mostly or entirely with tropical pteridophytes. Indeed in all of North America we are probably concerned with only 360 taxa, including hybrids, compared to at least 820 in a small tropical country like Costa Rica. Nevertheless, we are still in the dark about many questions concerning our United States and Canadian ferns. When we deal with tropical ferns in most warm lands, only a few people are interested -- perhaps a couple of dozen. But our temperate ferns are the ones which are taught in hundreds of schools and universities. We use them as living examples of biological principles. They are readily available for appreciation by the public, for use as pedagogical objects by teachers, and for use as experimental objects by
researchers. I do not want members of this Society to become discouraged when they learn that "there are much greener pastures" for study in the tropics!

Let me give some examples of questions that have been agitating me. What is the western American grapefern that resembles both the common moonwort, Botrychium lunaria, and the endemic eastern American MINGAN moonwort, B. minganense? What is the plant -- so common in certain areas of the western Lake Superior region, including the Porcupine Mts. -- known as Woodsia abbiae? Is it a sterile hybrid? If so, how can it be so common on the escarpment of the Lake of the Clouds? If it is a hybrid, of what parents? Woodsia ilvensis X oreana? W. ilvensis X scopulina? What of the plant known as southern woodfern, Dryopteris X australis? No one doubts that it is a sterile hybrid; Stanley Walker brilliantly demonstrated this. It is D. celata X ludoviciana. If this is true, however, why has it never been found or reported as growing with both of its parents? (see below). Another problem involves our American hart's-tongue fern, Phyllitis scolopendrium var. americanum. Most workers realize that this plant occurs on the Niagara escarpment, a mainly dolomitic limestone outcropping, and that it differs in technical details from the common European type. One of its populations -- that in Marion Co., Tennessee, occurs in an isolated limekiln, some 750 miles disjuncted from the northern metropolis. Is the Tennessee plant the same? Or is it different? Detailed laboratory studies are called for, as well as field studies.

One of the interesting by-products of our meeting at Edmonton last June was the realization that the mysterious western moonwort is very widespread in Alberta and adjacent provinces. Some of the localities are near Edmonton, and on the spur of the moment a number of Fern Society members went out on June 22, 1971, to one of them which was precisely described as being in a particular relation to a river. After a completely unsuccessful search we learned that in fact the river had been moved since the plant had been collected there, and the original stand presumably covered over. Through the help of Dr. John G. Packer and of Miss Madeleine Dunn of the Herbarium of the University of Alberta, however, we are now learning more about these plants and their distribution in the northwest. The evidence is that our plant is actually the same as or close to the South American Botrychium dusenii (Christ) Alston, and a heretofore overlooked addition to the North American flora.

On November 12, 1971, four of us -- Dr. James F. Matthews of the University of North Carolina at Charlotte, Mr. Steven W. Leonard of the University of North Carolina at Chapel Hill, and Mr. R. L. Kologiski of North Carolina State, and I -- visited a locality discovered by Steve Leonard where he found Dryopteris X australis together with one of its parents, D. ludoviciana. The place comprised a large, deep swamp along Swift Creek south of Hartsville, Darlington Co., S.C. We found Leonard's populations of the two woodfetns with no difficulty at all -- and a marvelous locality it is, the specimens tall and abundant. Now the question was: where was the other parent? We therefore set out into the swamp in search of D. X celata and very soon came up with dozens of plants, these scattered here and there over a large area. This seems to be the first time that we have actually found all three taxa growing together in
one locality. Further studies are now being made, especially in Mecklenburg County, where Dr. Matthews is continuing the field explorations.

On December 29, 1971, three of us -- Kerry S. Walter, A. Murray Evans, and I (plus Evans' three young children) -- investigated the famous limesink locality west of South Pittsburgh, Tennessee, where the hart's-tongue grows. The sink is spectacular, at least 75 deep, and very dark and wet at the bottom where the spray from a waterfall scatters. We had planned to drop Walter (who weighs only 140 pounds) into the sink on a rope, but the sides of the sink are so irregular that this proved unfeasible. So Murray Evans, decided he would descend himself into the sink, climbing down on a rope, hand over hand and placing loops in appropriate places of the rope, where he could step. Naturally we were apprehensive -- Dr. Evans weighs over 190 pounds and is 6 ft. 3 in. tall -- but he succeeded in getting down (and later, getting up, which is more important!) American fern students will be glad to know there were still 22 plants growing there, most of them, however, quite small. A couple of them were taken for laboratory studies which are now being carried out. We hope to find out, once and for all, whether the Tennessee hart's-tongue is the same morphologically and cytologically as the one in the Great Lakes area, as well as to establish a permanent laboratory culture of this plant. As many individuals who raise ferns from spores realize, there is a culture of the Alabama Scott's spleenwort, Asplenium X ebeneoides, which is now being grown in various places and has been available in spore supplies for a number of years. Thus, if ever the Alabama population disappears, through disease, destruction of the habitat, or other factors, we shall always have the stock available alive for study if our spore banks maintain it. We have this in mind in connection also with the Tennessee Hart's-tongue, which we hope, using ideal conditions of culture, to bring to maturity and spore-production.

The day following our trip to the limesink in southern Tennessee, we visited the locality at Havana, Hale County, Alabama, where the fertile Asplenium X ebeneoides grows. We are glad to report that the habitat is in good condition and that we saw between 200 and 300 plants. The reason we visited the area was not only to determine its status and to prepare a more detailed description of it, but also to determine whether fertile A. X ebeneoides will hybridize with other ferns -- as it readily does in the laboratory. (In laboratory cultures we have records of its crossing with both its parents, Camptosorus rhizophyllus and Asplenium platyneuron, as well as with Asplenium pinnatifidum and with Phyllitis scolopendrium -- the last, an incredible looking plant, is the first record of a so-called "triploenic fern hybrid"). The results were excellent: we found at least 2 or 3 examples of Asplenium ebeneoides X platyneuron -- the first time this taxon has ever been discovered in nature, and a "new twist" in the study of ferns, namely the finding in nature of a plant previously known only in laboratory culture!

I mention these experiences only to illustrate my point that there is still much work to be done on our "local" ferns in North America. In-depth studies are called for in many cases, and these require cooperation between knowledgeable non-professionals and professionals, and between botanists working in different institutions and in different geographical areas. This is the sort of inter-action for which the American Fern Society and its associated group, the Pteridology Section of the
Botanical Society of America, are especially suited.

Finally I should like, in this report, to salute one of our senior members the finest "cooperator" of them all -- Professor Edgar T. Wherry, to whom we are all so indebted for his stimulation of the study of ferns. In all of the projects mentioned above, plus very many others, Dr. Wherry has been ever present through his letters and his solid advice, and I, like so many workers, consult him constantly at his home in the Cresham Arms Hotel, 41 W. Allen's Lane, Philadelphia 19119, and at the Philadelphia Academy, where he makes weekly visits.

We should all thank Dr. James D. Montgomery for his fine job in launching this year for the first time our new publication THE AMERICAN FERN SOCIETY NEWS AND VIEWS, the first issue of which appeared in January, 1971. He is doing a major service for us and our Society and we wish him well. I know that Jim will be grateful to receive any of your notes and news, and I encourage you to submit them.

Respectfully submitted,

Warren H. Wagner, Jr., President

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Report of the Secretary for 1971

Membership in the American Fern Society remains about the same as in the past two years, with 605 individual members. It is not static, however, because this represents over 100 resignations and as many new members. The total number of institutional subscriptions is now up to 376.

The Society has made one change this year which may reduce the rather large turnover in membership. That is the beginning of the publication of a newsletter. Such articles as the one in the October issue on "Winter Care of the Fern Garden" by F. Gordon Foster should be of great interest to all of our members. I hope that the many members who have had the experience raising ferns, indoors or out, from spores or wild transplants, will share with us their experiences. Also those who have had encounters with ferns during their summer excursions or autumn rambles in the woods should tell us all about them. If you have any questions about ferns, send them in, and maybe someone else will know the answer. Only if people will write items for the newsletter can it possibly fulfill its purpose. Send your news items, notes, questions, or whatever, to Dr. James D. Montgomery, Biology Department, Upsala College, East Orange, New Jersey 07019.

Regrettably, the Society has lost a few of its long-standing members this year. Mr. Edward K. Shields of Sarasota, Florida, a member since 1940 and a life member, died; as did Prof. G. Neville Jones of the University of Illinois, a member since 1945. He served as local representative for the annual meeting of 1965. Mrs. C. A. Taibot, of Berwyn, Illinois, also died; and Prof. Wm. Mansfield, Of Delmar, New York, resigned in his 50th year as a member of the Society.

There remain only 6 members with 50 or more years membership in the Society: Mr. Ralph Bean, Mr. Frank Greene, Dr. Flora Haas, Mrs. Frank Lowe, Dr. Blanche McAvoy, and Dr. Edgar Wherry.
With one death last year and two new life members, Mr. Edmund Turnau, a regular member since 1960, and Abdul Abdulla of Malaya, a new member, the number of life members presently stands at 31.

The annual meeting of the American Fern Society was held this year on June 22 at Edmonton, Alberta, Canada, as part of the joint meeting of the American Institute of Biological Sciences and the Canadian Botanical Association. Because of the distance, time of year, and area, no formal meeting was held this year in conjunction with the annual meeting. However, many members of the Society attended Trip No. 8, a trip designed for higher taxonomists. They saw much beautiful scenery in the Jasper, Banff, and Calgary areas, and a number of different plants, but very few Pteridophytes.

On the morning of June 22 the Fern Society was treated to an enlightening symposium, co-sponsored by the Pteridology Section of the Botanical Society of America, on "Tree Ferns". It was chaired by Rolla Tryon, who led off with a discussion of evolutionary relationships among the tree ferns. John Nickel followed with a talk (interspersed with his (un)usual humor) on the relationships of tree ferns to other fern groups. Gastony discussed evolutionary trends in spore characters and sporangial patterns in Cyatheaceae. After a recess, Robert Stolze reported on his Chemidaria work; Terry Lucansky described the anatomical variations of some tree ferns, and Richard White closed the symposium with a paper on the scales, hairs, spines, and other such structures of the Cyatheaceae.

The luncheon at noon was well attended, by 39 people, and provided an opportunity to enjoy not only good companionship, but also good food, thanks to the efforts and planning of our local representative, John Packer.

The afternoon session, of contributed papers, again a joint session with the Pteridological section of the Botanical Society of America, was chaired by John Nickel. It included papers by David Lellinger; William Harvey, and James Caponetti; Harvey, Caponetti and Augustine DeMaggio; Lenette Atkinson; David Barrington; Thomas Bray and Warren Wagner; Warren and Florence Wagner; and Vincent Chiappetta.

The American Fern Society was also co-sponsor of a symposium on "Plant Species Disjunctions" together with the Pteridological and Systematic sections of the Botanical Society of America, the American Society of Plant Taxonomists, and the American Bryological and Lichenological Society. This symposium was held on June 24 and included a paper by Ed Klekowski on "Genetical Features of Ferns as Contrasted to Seed Plants", and one by Warren Wagner on "The Pteridophytes".

The annual meeting of the American Fern Society for 1972 will be held at the University of Minnesota in Minneapolis, together with the AIBS. Dates for this are 27 August to 1 September.

At the business meeting of the Society, held in the afternoon on June 22, a committee was appointed to study a change in format for the American Fern Journal. Also, the president was instructed to set up a committee to study the possibility of an annual award in Pteridology.
The Council this year placed on the ballot a constitutional amendment extending the term of office for President and Vice President to two years, and it was approved by the membership. Since it takes about a year to learn the job of an officer in the Society, since most of the past officers have served at least two years, and since the Secretary and Treasurer were already two year terms, it seemed reasonable to extend all terms to two years. With the secretary elected in even numbered years and the other offices in odd years, there should always be at least one experienced person in office. The president and vice president are coterminous so that the vice president during one term can be elected to the presidency for the next term if the Society wishes.

At the end of this, my first year of office as Secretary of the American Fern Society, I wish to thank my predecessor, A. Murray Evans, for his efforts as Secretary from 1969-1970. I also want to thank Roy Henry, who has served the Society for six years as Treasurer and will be turning that difficult office over to Robert Stolze. I remind the membership that all officers are unpaid. If at times you do not receive prompt replies from me or any other officer, it is because we all have to earn a living and must conduct the business of the Society when we can squeeze time from somewhere else.

Respectfully submitted,

Richard L. Hauke

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Treasurer’s Report for 1971

The receipts from all sources for the year 1971 was $5,936.99. We ended this year with $1,332.80 in the checking account. Our savings earned $313.31 and our Growth Savings Certificate is now worth $5,076.02. Both our Royalties and our sale of Back Issues decreased this year; no complete set was sold during the year. Advance payment on dues and subscriptions netted $1,474.00 and the Spore Exchange earned $72.59 beyond expenses.

I have been happy to serve for the past six years as Treasurer, contributing my time and services to the support of the Fern Society.

Respectfully submitted,

L. K. Henry

The details of this report will appear in the next issue. Ed.

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American Fern Society Meeting

The American Fern Society will meet with the AIBS at the University of Minnesota, Minneapolis, Tuesday, August 29. Contributed papers will be presented with the co-sponsorship of the Pteridology Section of the Botanical Society of America.

If you wish to present a paper, Please provide the following information, and send to Rolla Tryon (Gray Herbarium, Harvard University, 22 Divinity Ave., Cambridge, Mass. 02138) before March 10th: Name; title of paper; institution (if applicable), city, state; time 10-20 minutes; projection equipment only 2 x 2 and overhead available).
Report of the Spore Exchange

This year three hundred organizations or individuals from all over the world participated in the Spore Exchange, contributing to the Exchange, and in turn receiving spore of some species that are not available in any other manner.

A complete new list will be issued as early as possible in 1972. I am planning on spending a month in Hawaii, starting December 22, 1971. Hopefully, I will collect spore in Hawaii, and on my way home I will also collect in California. Many of the items numbered 450 to 1091 have been replaced with fresh spore, and I hope to add more than a hundred new species or varieties to the list.

Please send any spore contributions that you have collected as soon as possible. It is important that the Exchange be supplied with fresh spore every year. Each item should be identified with the scientific name and the locality where collected.

It would help to keep the Exchange self-supporting if those members in the United States that wish the new list would send stamps, or a stamped self-addressed envelope.

I wish to thank all the faithful members who have contributed spore to the Exchange year after year. I also wish to express my appreciation to Mr. Morton and Dr. Leilinger for their work in reviewing the spore lists.

Respectfully submitted,

Neill D. Hall
Director of the Spore Exchange

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Fern Field Course at Mountain Lake, Virginia, Summer, 1972

The Pteridology Field course will be given for the sixth time at the beautiful Mountain Lake Biological Station of the University of Virginia. It will start on Thursday, July 20 and last until Wednesday, August 23. The field work involves daily expeditions to a wide variety of habitats, and much exploration in the mountains and valleys of southwestern Virginia. Lectures are given each day on the biology and classification of pteridophytes and problems are emphasized. The station is located on Salt Pond Mountain at 4000 feet. In surrounding Giles County alone some 80 species and hybrids of ferns and "fern allies" have been recorded, but the class visits other counties and nearby states as well. The habitats include bogs, rich forests, limestones, shales, and sandstones. The course is given by Warren "Herb" Wagner, Jr., assisted by Florence Wagner. For other information write to Dr. James J. Murray, Jr., Director, Mountain Lake Biological Station, University of Virginia, Charlottesville, Virginia 22903.

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