

Fiddlehead Forum

Bulletin of The American Fern Society

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Editorial

This year the Fiddlehead Forum uncurls its leaves for the sixth time and we are looking forward to another healthy year. In this regard we hope our members will germinate their ideas into contributing articles - and less spore-adically. We welcome your letters and criticisms and hope thereby to make our publication of interest to the general membership. Announcements and notices should be sent to us well in advance of happenings - at least three months - to insure timely reporting.

We would like to thank those who have contributed in the past and sincerely hope they will continue to do so in the future.

Two Membership Classes Now in Effect

As you have probably noticed in previous notes in the Fiddlehead Forum and the dues renewal notice, there are now two distinct classes of membership in the Fern Society - Regular Membership and Journal Membership. Regular Membership (annual dues \$5) includes access to the spore bank, attendance at the annual foray and meetings, voting privileges, and a subscription to the bulletin, Fiddlehead Forum. This class of membership was instituted to accommodate those who found the American Fern Journal too technical for their taste. Journal Membership (annual dues \$8) includes the above benefits plus a subscription to the American Fern Journal. We hope this greater flexibility will better suit the needs of our membership.

Rare Honor to an Honorary Member

We are pleased to report that F. Gordon Foster, an honorary member of the American Fern Society, was awarded the Pennsylvania Horticultural Society's Distinguished Achievement Medal on October 19, 1978 with the following citation:

"Close observation and accurate record keeping have always been essential to horticulture. Within the life of the Pennsylvania Horticultural Society (a brief chapter in the chronicle of horticulture), two instruments have developed that vastly enhance our ability to observe and to record. They are the microscope and the camera.

"Today the Society honors a man who has broadened and refined the application of these instruments to the green world, particularly that part of the green world that is inhabited by ferns. F. Gordon Foster has brought to bear (focussed, if you will) upon these plants an unparalleled knowledge of microscopy and photography. By this means he has enriched the understanding of the thousands of people who have read his books, heard his lectures, seen his slides or talked with him about ferns. In recognition of this rare combination of accomplishments, the Society awards him its Distinguished Achievement Medal."

Xerocopies of Jenman's Ferns of Jamaica For Sale

George S. Jenman (1845-1902) originally published his Synoptical List, with Descriptions of the Ferns and Fern-Allies of Jamaica in many parts in the Bulletin of the Botanical Department of Jamaica during the years 1890-1898. Neither the Bulletin nor the scattered parts of Jenman's Ferns of Jamaica have been available readily to libraries or to researchers interested in the pteridophyta of Jamaica.

Apparently Jenman intended to republish this material in book form, for the Institute of Jamaica has a unique, cut-and-paste copy of Jenman's work. This copy has all the Bulletin parts gathered into one volume in order of original publication in the Bulletin, repaged, and concludes with a printed index giving the new page numbers. Apparently this was a dummy copy or page proof that never was printed, for no published copies of a book are known that match the cut-and-paste copy.

Thanks to Dr. G. R. Proctor, the Institute of Jamaica has allowed their cut-and-paste copy to be micro-filmed and made available for distribution by xerography. Although the xerographic copy constitutes publication in the botanical sense (whereas the microfilm copy does not), it does not constitute original publication, but is in effect a long-delayed, repaged reprint. Therefore, all references to this work must cite the Bulletin volume, issue, and page number. To facilitate this, an index compiled by Dr. Proctor relates the taxa sequentially arranged in the cut-and-paste copy to the pages of the original publication in the Bulletin.

Copyflow xerocopies will be available by pre-paid subscription only before February 1, 1979 by sending a check or money order for \$15.00 (payable to the Smithsonian Institution) to: Dr. D. B. Lellinger, U. S. Nat'l. Herbarium, NHB-166, Smithsonian Institution, Washington, DC 20560.

Composition of Scientific Words

Roland W. Brown's classic treatise on scientific words, which is invaluable for coining botanical epithets and similar tasks, has been reprinted by the Smithsonian Institution Press after a lapse of several years. The work is a unique and comprehensive lexicon providing materials, instructions, and examples for constructing words from Greek or Latin roots. It is available from the Press (P. O. Box 1579, Washington, DC 20013) for \$13.75 postpaid in the United States, Canada, and Mexico, \$14.00 elsewhere by surface mail. Orders from outside the United States should be directed to Feffer & Simons, 100 Park Ave., New York, NY 10017.

1979 Fern Festivals

The dates for two Fern Festivals in 1979 have been called to our attention. The South Florida Fern Society will hold its festival at Fairchild Tropical Garden May 5-6; the American Fern Society's New York Chapter will hold its festival at the N.Y. Botanical Garden, May 11-12.

FERNWOOD

Niles, Michigan. by Kay Boydston

Fernwood is unique. We thought so on our first visit (October 12, 1938), have continued to think so since the day three years later when its purchase made this few acres of woods and water our family home. It is patent that others feel the same way for "unique" and "unusual" are the adjectives so often used by first time visitors and by long-time friends who come often.

In the first place, the surrounding countryside of this southwestern corner of Michigan is relatively flat farmland. Yet Fernwood can boast steep hillsides and a drop of 125 feet from the level of our east entrance to the St. Joseph River, our boundary on the west. Because of this, every type of scenic and growing area is offered - from high dry lands, steep wooded hillsides to low marsh lands, the soils varying from sandy to deep leaf mold, with spots of clay and marl found here and there. With such a variety of soils, exposures and amounts of moisture, there is opportunity to grow a very large number of plant species, unusual in so small an area. In addition the protection offered by Lake Michigan assures the hardiness of many trees and native plants usually found in at least one zone farther south.

We must admit one limiting factor - there is no wet acid area where ladyslippers, pitcher plants and cranberries can be at home. All of the spring water is very, very limey and this precludes construction of such a habitat. On a visit here in 1948 Dr. Wherry said, "If there were an acid bog, too, every plant native in this latitude could be grown at Fernwood." At that time, only sixteen acres, Fernwood now covers one hundred acres. There is a stretch of dry acid high land along the river where huckleberries grow under oaks and hickories, but no bog of sphagnum treasures. However, several lifetimes would not be enough to take full advantage of the opportunities offered to grow all the plants possible in the range of micro-climates to be found at Fernwood.

That we have made a beginning may be evidenced in the arboretum planting of trees and shrubs in forty-five acres of farm land, the first purchased addition to the original sixteen acres. Even now, collections (representative if not extensive) of pines, maples, oaks, crabapples and other tree and shrub families may be seen. It is planted in landscape fashion as planned; planting was begun in 1967 by Mr. Clarence Godshalk who retired as Director of Morton Arboretum the very year we needed his help here. The young Arboretum offers not only meadows, walks and roads for future scenic enjoyment but practical help to the home-owner who wants plant material somewhat out of the ordinary. Included in this arboretum area is a memorial shrub garden of about two acres overlooking the river and valley below.

Further horticultural plantings may be studied and enjoyed near the Meeting House (foundation plantings, Main Garden and Herb Garden) and the parking lot (borders of shrub roses and Juniper Hill). These, too, were planned and planting begun by Mr. Godshalk and added to the earlier gardens developed by our family near the two houses. These included several wide borders, the Rock Garden and rock wall, a half-shade Perennial Garden and large Lilac Garden with its entrance, a small Boxwood Garden. These gardens of early years were not changed by Mr. Godshalk, though plants were added to all as possible.

A little later, the planting around the Office-Greenhouse complex, the additional beds of annuals in the Main Garden and most recently, the eleven acres of the Jean Hussey Memorial Gardens have been planned by

and are being developed under the watchful eye of Stan Beikmann who came to Fernwood in 1972 as horticulturist and has been its dedicated and hard working Director since January 1975. In these eleven memorial acres there will be a rose garden, a shrub garden, Japanese garden and others. Newest vegetables and annuals also have their showplace here each summer.

All of these garden and horticultural plantings from the earliest to the most recent are located on our only level land (about ten to twelve acres) which lies approximately half way between the top arboretum level and the river level below - another unique feature of our landscape.

Fernwood's other and perhaps first interest is the conservation of the remaining acres of choice natural areas, a total of about forty to forty-five. To protect and use them as a teaching tool for the many hundreds of children who come to Fernwood each year in school groups and for summer day camps is the responsibility of our naturalist, Mike Champagne. Tireless, and generous with his time and energy to awake an awareness in adults as well as children, he encourages all birdwatching activities, keeping records of bird residents and migrants each year (a total of 160 species have been recorded at Fernwood this past year), is keeper of the growing collection of hundreds of slides, leader of the Fernwood Photographers Club, leads many trips and forays to near and far places as well as countless tours of the Fernwood paths.

To be found in these natural areas is a self-guided nature trail (with map to be picked up at the office), a fern trail slowly built over many years, a sizeable pond lovely at all seasons with a screened shelter on its shore and, perhaps most significant, eighteen acres of what we call "wilderness area" dedicated in 1968 by the Michigan Natural Areas Council as a "study area" (their preferred name) where it was agreed that Fernwood would never add or remove any plants, but would keep a path open thru it, an area extremely rich in spring wildflowers and native trees and shrubs. Only the plants put here by nature will be seen in this eighteen acres. In contrast, on the hillside from the Summer House to the river, hundreds of wildflowers and ferns have been planted. Consequently, many additional Eastern species not indigenous to Fernwood may be seen and studied here.

Perhaps this is the place to mention one of Fernwood's most recent projects - the painstaking and tedious establishment of five acres of authentic tallgrass prairie. Although it is located in the north part of the arboretum, it falls under the heading of natural

(continued on page 7)

EPATHETIC DIFFERNITIONS



❖ The American Fern Society Spore Exchange ❖ 1979 List of Spore Available ❖

This list replaces all previous lists.

It is urgently requested that all members send in fresh spore or fertile fronds. The Exchange depends on annual contributions of fresh spore. Each item should include the technical name, the source if collected in its native habitat, the name of the contributor, and the date collected.

Please make selections by ITEM NUMBERS IN NUMERICAL ORDER with several alternates, and do not request more than single packets of any particular item. A fee of TWENTY FIVE CENTS PER PACKET should be sent with each request originating in the UNITED STATES. Please print your name and address. No charge is made for requests from other countries, but we would appreciate spore in exchange.

Sincere thanks are offered to the many members who have made annual contributions to the Exchange. Particularly, my gratitude must go to the many botanical gardens, fern societies, and universities throughout the world, who have furnished spores of many rare species.

Address all correspondence regarding the Spore Exchange to:

Mr. Neill D. Hall
1230 Northeast 88th Street
Seattle, Washington 98115

Item No.	Year Coll.	SPECIES AND VARIETIES ON HAND
1	1978	Acrostichum aureum
2	1978	speciosum
3	1978	species
4	1978	Adiantum aemulum
5	1978	bausei
6	1977	bellum
7	1978	capillus-veneris
8	1978	caudatum
9	1978	chilense
10	1977	cunninghamii
11	1978	decorum
12	1977	" var. magnificentum
13	1977	delicatulum
14	1977	diaphanum
15	1978	dissectum
16	1977	formosum
17	1977	fulvum
18	1978	hispidulum
19	1978	" (a dainty form)
20	1978	incisum
21	1977	monochlamys
22	1977	moorei
23	1978	pedatum
24	1978	" var. aleuticum
25	1977	" cv. 'Dyce's Dwarf'
26	1978	" cv. 'Minus'
27	1978	" (Forma imbricatum)
28	1978	" (Patrick Creek Form)
29	1978	peruvianum
30	1977	petiolatum
31	1978	philippense
32	1977	pubescens
33	1978	pulverulentum
34	1977	raddianum
35	1977	" cv. 'Deflexum'
36	1977	" cv. 'Dissectum'
37	1977	" cv. 'Elegans'
38	1977	" cv. 'Fragrantissimum'
39	1978	" cv. 'Fritzluthii'
40	1978	" cv. 'Gracillimum'
41	1977	" cv. "
42	1977	" cv. 'Grandiceps'
43	1978	" cv. 'Majus'
44	1977	" cv. 'Ocean Spray'
45	1978	" cv. 'Pacific Maid'
46	1977	" cv. 'Pacottii'
47	1977	" cv. 'Weigandii'
48	1977	" cv. 'Variegated Tesselate'
49	1978	reniforme
50	1978	" var. pusilla
51	1978	scutum
52	1977	seemanii
53	1978	sylvaticum
54	1977	tenerum cv. 'Bicolor'
55	1978	trapeziforme
56	1978	venustum

57	1978	villosum
58	1977	wagneri
59	1978	Aglaomorpha coronans
60	1977	meyeniana
61	1977	Amphineuron opulentum
62	1978	Anemia phyllitidis
63	1977	tomentosa
64	1977	Angiopteris evecta
65	1978	lygodiifolia
66	1978	Anogramma chaerophylla
67	1978	leptophylla
68	1978	Arachniodes aristata
69	1978	" cv. 'Variegata'
70	1978	denticulata
71	1977	miqueliana
72	1977	X masaki
73	1978	mutica
74	1977	nipponica
75	1977	simplicior
76	1977	" var. major
77	1977	standishii
78	1977	tripinnata
79	1978	Arthropteris articulata
80	1978	Aspidotis densa
81	1978	Asplenium adiantum-nigrum
82	1978	adulterinum
83	1978	africanum
84	1977	antiquum
85	1978	billottii
86	1978	bradleyi
87	1978	bulbiferum
88	1977	butnerii
89	1978	cerro
90	1977	crinicaule
91	1978	erosum
92	1978	exiguum
93	1978	fissum
94	1978	fontanum
95	1978	hookerianum
96	1978	hybrid
97	1977	incisum
98	1978	lucidum
99	1978	lyallii
100	1978	monanthes
101	1978	myriophyllum
102	1978	nidus
103	1977	" var. australasicum
104	1978	" (Madagascar)
105	1977	obtusatum
106	1978	oligophlebium
107	1977	onopteris
108	1978	paleaceum
109	1978	platyneuron
110	1977	protensum
111	1977	pteridoides
112	1978	repens
113	1978	resiliens
114	1977	richardii
115	1977	ritoense
116	1978	ruta-muraria
117	1977	sarelii
118	1978	septentrionale
119	1978	" X trichomanes
120	1978	serra
121	1978	simplicifrons
122	1978	terrestre var. maritimum
123	1978	" var. terrestre
124	1978	trichomanes
125	1978	" cv. 'Cristatum'
126	1978	" cv. 'Incisum'
127	1977	unilaterale
128	1978	viride
129	1978	viviparum
130	1978	species (Japan, China)
131	1978	" (New Zealand)
132	1977	" (Papua)
133	1978	"
134	1978	Athyrium arisanense
135	1978	assimile
136	1978	australe
137	1978	delavayi
138	1977	" X yakusimense
139	1978	deltoidofrons
140	1978	dombii
141	1977	eremicola
142	1978	filix-femina
143	1978	" " var. asplenioides
144	1978	" " cv. 'Congestum Grandiceps'

145	1978	"	"	cv. 'Cristatum'	238	1978	<i>Cornopteris crenulatoserrulata</i>
146	1977	"	"	cv. 'Fieldiae'	239	1977	<i>decurrenti-alata</i> var. <i>pilosella</i>
147	1978	"	"	cv. 'Frizelliae'	240	1977	<i>fluvialis</i>
148	1978	"	"	cv. 'Frizelliae Cristatum'	241	1977	<i>hakonensis</i>
149	1977	"	"	var. <i>rubellum</i>	242	1977	<i>opaka</i>
150	1978	"	"	cv. 'Victoriae'	243	1978	<i>Crypsinus glaucus</i>
151	1977	"	"	(English Crested)	244	1978	<i>hastatus</i>
152	1978	"	"	(Mixture)	245	1977	<i>yakushimensis</i>
153	1977			<i>iseanum</i>	246	1977	<i>Cryptogramma crispa</i>
154	1978			var. <i>pictum</i>	247	1977	<i>Ctenitis eatonii</i>
155	1978			<i>japonicum</i>	248	1977	<i>glabella</i>
156	1978			<i>mesosorum</i>	249	1978	<i>Culcita dubia</i>
157	1977			<i>okuboanum</i>	250	1978	<i>Cyathea australis</i>
158	1977			<i>otophorum</i>	251	1978	<i>baileyana</i>
159	1977			<i>pterorachis</i>	252	1977	<i>brownii</i>
160	1978			<i>pyncocaroon</i>	253	1978	<i>celebica</i>
161	1978			<i>pyncopteroides</i>	254	1978	<i>colensoi</i>
162	1978			<i>reflexipinnum</i>	255	1978	<i>cooperi</i>
163	1977			<i>setuligerum</i>	256	1977	" (Northern Form)
164	1977			<i>shearerii</i>	257	1978	<i>dealbata</i>
165	1977			<i>silvicola</i>	258	1978	<i>divergens</i>
166	1977			<i>squamigerum</i>	259	1978	<i>medullaris</i>
167	1978			<i>vidalii</i>	260	1977	<i>metteniana</i>
168	1977			<i>yakusimense</i>	261	1978	<i>mexicana</i>
169	1978			<i>Atrophyum ensiforme</i>	262	1978	<i>rebecca</i>
170	1978			<i>Belvisia callifolia</i>	263	1978	<i>robertsiana</i>
171	1978			<i>mucronata</i>	264	1978	<i>robusta</i>
172	1978			<i>Blechnum banksii</i>	265	1978	<i>woollsiana</i>
173	1978			<i>brasiliense</i>	266	1978	<i>species</i> (Costa Rica)
174	1978			<i>camfieldii</i>	267	1978	" (Lord Howe Isl.)
175	1978			<i>capense</i>	268	1978	" (Mt. Gower, Lord Howe Isl.)
176	1978			<i>cartilagineum</i>	269	1978	<i>Cyclosorus acuminatus</i>
177	1978			<i>chambersii</i>	270	1978	<i>cuspidatus</i>
178	1978			<i>discolor</i>	271	1978	<i>dentatus</i>
179	1978			<i>durum</i>	272	1977	<i>gongulodes</i>
180	1978			<i>falciforme</i>	273	1978	<i>hispidula</i>
181	1978			<i>filiiforme</i>	274	1978	<i>interruptus</i>
182	1978			<i>fluviatile</i>	275	1977	<i>nymphalis</i>
183	1977			<i>gibbum</i>	276	1978	<i>parasiticus</i>
184	1978			<i>glandulosum</i>	277	1978	<i>truncatus</i>
185	1978			<i>indicum</i>	278	1977	<i>Cyrtomium capense</i>
186	1977			<i>lehmannii</i>	279	1978	<i>caryotideum</i>
187	1978			<i>minus</i>	280	1978	<i>falcatum</i>
188	1977			<i>moorei</i>	281	1978	" var. <i>rochfordianum</i>
189	1978			<i>nudum</i>	282	1978	" (Crested)
190	1978			<i>occidentale</i>	283	1977	<i>fortunei</i>
191	1978			<i>patersonii</i>	284	1977	" var. <i>intermedium</i>
192	1978			<i>penna-marina</i>	285	1978	<i>juglandifolium</i>
193	1978			" " cv. 'Cristatum'	286	1977	<i>lonchitoides</i>
194	1978			<i>spicant</i>	287	1978	<i>macrophyllum</i> var. <i>tukusicola</i>
195	1978			<i>spicant</i> cv. 'Cristatum'	288	1978	<i>Cystopteris bulbifera</i>
196	1978			<i>vulcanicum</i>	289	1978	<i>fragilis</i>
197	1978			<i>wattsii</i>	290	1978	" cv. 'Dickieana'
198	1978			<i>species</i> (King Is.)	291	1978	<i>regia</i>
199	1977			<i>Botrychium dissectum</i>	292	1978	<i>ciliata</i>
200	1978			<i>Campyloneuron angustifolium</i>	293	1977	<i>Davallia denticulata</i> (Luzon Isl.)
201	1978			<i>phyllitidis</i>	294	1978	" (Singapore)
202	1978			<i>Cardiomanes reniforme</i>	295	1978	<i>fejeensis</i>
203	1978			<i>Ceterach dalhousiae</i>	296	1978	<i>mariesii</i>
204	1978			<i>officinatum</i>	297	1978	<i>pyxidata</i>
205	1978			" x <i>Phyllitis scolopendrium</i>	298	1978	<i>solida</i>
206	1978			" (Dwarf Form)	299	1978	" var. <i>fijiensis</i>
207	1978			<i>Cheilanthes argentea</i>	300	1978	<i>trichomanes</i>
208	1978			<i>catanensis</i>	301	1978	<i>Dennstaedtia adiantoides</i>
209	1978			<i>chaerophylla</i>	302	1977	<i>apiifolia</i>
210	1978			<i>chusana</i>	303	1977	<i>hirsuta</i>
211	1978			<i>cucullans</i>	304	1977	" (Philippine Isl.)
212	1978			<i>eatonii</i>	305	1978	<i>wilfordia</i>
213	1978			<i>farinosa</i>	306	1978	<i>Dicksonia antarctica</i>
214	1978			<i>feei</i>	307	1978	<i>lanata</i>
215	1978			<i>fendleri</i>	308	1978	<i>squarrosa</i>
216	1978			<i>gracillima</i>	309	1978	<i>youngiae</i>
217	1978			<i>hirta</i> var. <i>ellisiana</i>	310	1978	<i>Dictymia brownii</i>
218	1978			<i>hispanica</i>	311	1978	<i>Didymochlaena truncatula</i>
219	1977			<i>lindheimeri</i>	312	1977	<i>caudatum</i>
220	1978			<i>myriophylla</i>	313	1977	<i>donianum</i> var. <i>aphamoreuron</i>
221	1978			<i>newberryi</i>	314	1977	<i>francois</i>
222	1978			<i>notholaenoides</i>	315	1978	<i>heterophlebium</i>
223	1977			<i>pteridoides</i>	316	1977	<i>kawakamii</i>
224	1978			<i>sieberi</i>	317	1977	<i>lanceum</i>
225	1978			<i>tenuifolia</i>	318	1977	<i>lonchophyllum</i>
226	1978			<i>wootonii</i>	319	1978	<i>mesosorum</i>
227	1978			<i>Christella dentata</i>	320	1978	<i>mettenianum</i>
228	1978			<i>Cibotium barometz</i>	321	1977	<i>nipponicum</i>
229	1977			<i>chamissoi</i>	322	1977	<i>okudairae</i>
230	1978			<i>species</i>	323	1977	<i>polypodioides</i>
231	1978			<i>Cnemidaria subglabra</i>	324	1977	<i>squamigerum</i>
232	1978			<i>choricartha</i>	325	1978	<i>sylvaticum</i>
233	1978			<i>Colysis ampla</i>	326	1977	<i>werkleanum</i>
234	1978			<i>sayeri</i>	327	1978	<i>Doodia aspera</i>
235	1978			<i>wrightii</i>	328	1978	<i>blechnoides</i>
236	1977			<i>Coniogramme intermedia</i>	329	1978	<i>caudata</i>
237	1978			<i>japonica</i>	330	1978	

331	1977	"	var. laminosa	423	1978	marginans
332	1978	media		424	1977	munita
333	1978	"	var. australis	425	1978	smithiana
334	1977	"	var. milnei	426	1978	tenera
335	1978	Doryopteris	concolor	427	1978	Lepisorus annuifrons
336	1978		elegans	428	1977	obscure-venulosus
337	1977		pedata	429	1978	Leptogramma mollissima
338	1977		"	430	1977	Leptopteris albina
339	1978	Drynaria	angustiloba	431	1978	Leucostegia hymenophylloides
340	1978		banii	432	1978	immersa
341	1978		quercifolia	433	1978	Lindsaea dimorpha
342	1977		rigidula	434	1977	cultrata
343	1978		sparsisora	435	1978	ensifolia
344	1978	Dryopteris	abbreviata	436	1977	hybrid (Queensland)
345	1978		arguta	437	1978	Llavea cordifolia
346	1978		atrata	438	1978	Lonchitis hirsuta
347	1977		austriaca	439	1978	Lophosoria quadripinnata
348	1978		borreri	440	1978	Lunathyrium conilii
349	1978		"	441	1977	unifurcatum
350	1978		cv. 'Cristata'	442	1978	Lygodium circinnatum
351	1977		campylooptera	443	1978	flexuosum
352	1977		carthusiana	444	1977	palmatum
353	1978		commixta	445	1978	reticulatum
354	1977		decipiens	446	1978	species
355	1977		dickinsii	447	1977	Marattia salicina
356	1978		dilatata	448	1977	Matteuccia orientalis
357	1978		"	449	1978	struthiopteris
358	1978		erythrosora	450	1978	Merinthosorus drynarioides
359	1977		"	451	1977	Microchlaena yunnanensis
360	1977		cv. 'Prolifera'	452	1978	Microlepia platyphylla
361	1978		var. koidzumiana	453	1978	spelunca
362	1977		extensa	454	1977	strigosa
363	1977		filix-mas	455	1977	Microsorium buergerianum
364	1978		"	456	1978	lucidum
365	1978		"	457	1978	novae-zealandiae
366	1978		"	458	1978	punctatum
367	1977		"	459	1978	scolopendrium
368	1977		"	460	1977	superficiale var. australiense
369	1977		cv. 'Polydactyla'	461	1977	viellardii
370	1978		formosana	462	1978	Mildella intramarginalis
371	1978		fragrans	463	1977	Monachosorum arakii
372	1977		goldiana	464	1977	maximowiczii
373	1978		hayatae	465	1977	Nephrolepis acuminata
374	1978		hendersonii	466	1977	auriculata
375	1978		indusiata	467	1978	cordata
376	1977		intermedia	468	1977	cordifolia
377	1977		lacera	469	1978	"
378	1978		"	470	1978	cv. 'Plumosa'
379	1978		(Forma intermedia)	471	1977	(Crested)
380	1978		lepidula	472	1978	exaltata
381	1978		ludoviciana	473	1978	falcata cv. 'Furcans'
382	1978		marginalis	474	1978	hirsutula
383	1978		opaca	475	1978	pectinata
384	1978		parallelogramma	476	1978	pendula
385	1977		polylepis	477	1977	Notholaena aurea
386	1977		pseudo-filix-mas	478	1977	cochisensis
387	1978		pycnopteroides	479	1978	dealbata
388	1977		sabaei	480	1978	galeottii
389	1977		sieboldii	481	1978	grayi
390	1978		"	482	1977	rigida
391	1977		(Forma crenata)	483	1977	sinuata var. cochisensis
392	1978		var. Toyamae	484	1978	" var. sinuata
393	1977		spinulosa	485	1977	simulata
394	1978		tasiroi var. tsutuiana	486	1978	standleyi
395	1978		tokyoensis	487	1977	trichomanoides
396	1978		uniformis	488	1978	Nothoperanema hendersonii
397	1978		varia	489	1978	Odontosoria gymnoqrammoides
398	1978		"	490	1977	schlectendalii
399	1978		cv. 'Setosa'	491	1978	Oenotrichia dissecta
400	1978		wallichiana	492	1978	Oleandra comingii
401	1978		Mixture	493	1977	costaricensis
402	1978		Elaphoglossum affine	494	1978	Onoclea sensibilis
403	1978		crinitum	495	1978	Onychium japonicum
404	1978		euraspicum	496	1978	Ophioglossum englemanni
405	1978		species (Costa Rica)	497	1978	species
406	1978		species (Costa Rica-9000')	498	1978	Osmunda cinnamomea
407	1978		species (Mexico)	499	1978	claytoniana
408	1978		species	500	1978	regalis
409	1978		Eriosorus flexuosus	501	1978	"
410	1978		Gleichenia bifida	502	1978	var. gracilis
411	1977		flabellata	503	1978	Paraceterach muellerii
412	1978		Goniopteris francoana	504	1977	Pelapteris peltata
413	1978		Gymnocarpium dryopteris	505	1978	Pellaea atropurpurea
414	1977		robertiana	506	1978	calomelanos
415	1978		oyamensis	507	1978	cardiomorpha
416	1977		Gymnopteris tomentosa	508	1978	doniana
417	1978		Hemionitis palmata	509	1977	falcata
418	1978		Histiopteris incisa	510	1978	"
419	1978		Humata tyermannii	511	1978	var. nana
420	1977		Hypodematum fauriei	512	1978	fendleri
421	1978		Hypolepis bamleriana	513	1978	hastata
422	1978		dicksonioides	514	1978	longimucronata
			Lastreopsis decomposita			ovata
			effusa			rotundifolia
			glabella			sagittata var. sagittata
			hispida			

Year	Species Name	Year	Species Name
515	1978 viridis	607	1977 triangulum
516	1977 " var. macrophylla	608	1977 tripterum
517	1978 " var. viridis	609	1978 tsus-tsimense
518	1978 species	610	1977 " var. mayebarae
519	1978 Phanerophlebia falcata	611	1978 vestitum
520	1978 aff. pumila	612	1977 whiteleggei
521	1978 pumila	613	1978 species
522	1978 Platycerium species (Africa)	614	1978 species
523	1978 Pleopeltis excavata	615	1978 species (Oaxaca, Mexico)
524	1978 percussum	616	1978 Pronephrium asperum
525	1977 Polybotrya cervina	617	1978 triphyllum
526	1977 Polypodium aureum	618	1978 Pseudodrynaria coronans
527	1978 " cv. 'Mandaianum'	619	1977 Psilotum nudum
528	1978 costatum	620	1978 Pteris argyraea
529	1978 crassifolium	621	1978 crenata
530	1977 diversifolium	622	1978 cretica
531	1978 formosanum	623	1978 " cv. 'Albo-Lineata'
532	1978 fraxinifolium	624	1977 " cv. 'Nobilis-Cristata'
533	1978 glycyrrhiza	625	1978 " var. Ouvradi
534	1977 hesperium	626	1977 " cv. 'Parkeri'
535	1978 lachiniferum	627	1978 " cv. 'Rivertoniana'
536	1978 longissimum	628	1978 " cv. 'Wilsonii'
537	1978 loriceum	629	1978 " cv. 'Wimsettii'
538	1978 lowei	630	1977 dispar
539	1978 martensii	631	1978 ensiformis
540	1977 montense	632	1978 " cv. 'Evergemiensis'
541	1978 munchii	633	1978 " cv. 'Victoriae'
542	1978 musifolium	634	1977 flabellata
543	1978 myriolepis (Costa Rica)	635	1978 incisa
544	1978 " (Mexico)	636	1978 laevis
545	1978 percussum	637	1978 longifolia
546	1977 piloselloides	638	1978 multifida
547	1978 plesiosorum	639	1977 oshimensis
548	1978 polycarpon	640	1978 quadriaurita var. tricolor
549	1978 puberulum	641	1978 tremula
550	1978 punctatum	642	1978 tripartita
551	1978 pyrrolepis	643	1977 umbrosa
552	1978 rachypterigium	644	1978 vittata
553	1978 sanctae-rosae	645	1977 wallichiana
554	1978 scouleri	646	1978 Pyrosia adnascens
555	1978 subauriculatum	647	1978 confluens
556	1978 thyssanolepis	648	1978 dielsii
557	1977 vulgare	649	1978 hastata
558	1978 " cv. 'Pulcherrimum'	650	1978 lingua
559	1978 " cv. 'Pulcherrimum' (Baggett's)	651	1978 longifolia
560	1978 " cv. 'Trichomanoides' Form)	652	1978 Quercifilix zeylanica
561	1977 species (Brazil)	653	1978 Rumohra adiantiformis
562	1977 species (Brazil)	654	1978 Sadleria cyatheoides
563	1978 species (Costa Rica)	655	1978 " cv. 'Souleytiana'
564	1978 species	656	1977 Sceptribidium ternatum
565	1978 Polystichum acrostichoides	657	1978 Scyphularia pentaphylla
566	1978 " (Unusual Form)	658	1978 Selligaea feei
567	1977 aculeatum	659	1978 Shaffneria nigripes
568	1977 " cv. 'Proliferum'	660	1978 Sphaeropteris cooperi
569	1978 andersonii	661	1977 horrida
570	1978 australiense	662	1977 Stegnogramma griffithii var. wilfordii
571	1978 braunii	663	1978 mollissima
572	1978 californicum	664	1977 Sticherus flabellatus
573	1978 craspedosorum	665	1977 Struthiopteris niponica
574	1977 eximium	666	1977 Tectaria decurrens
575	1977 fallax	667	1977 gemmifera
576	1978 fragile	668	1977 incisa
577	1978 kruckebergii	669	1978 melanocaulis
578	1978 lonchitis	670	1977 mexicana
579	1977 longifrons	671	1978 muelleri
580	1977 makinoi	672	1978 simonsii
581	1977 mohriodes	673	1978 trifoliata
582	1978 munitum	674	1977 Thelypteris beddomei
583	1978 " var. imbricans	675	1978 conspersa
584	1977 otomasui	676	1978 dentata
585	1977 " X tagawanum	677	1978 esquirolii
586	1977 ovato-paleaceum	678	1977 francoana
587	1977 polyblepharum	679	1977 hexagonoptera
588	1977 " var. fibrilloso-paleaceum	680	1978 navarrensensis
589	1978 proliferum	681	1977 nevadensis
590	1977 pseudo-makinoi	682	1978 patens
591	1977 retroso-paleaceum	683	1978 phegopteris
592	1978 richardii	684	1978 serra
593	1977 rigens	685	1977 taiwanensis
594	1978 scopulinum	686	1977 torresiana
595	1977 setiferum cv. 'Acutilobum'	687	1978 Todea barbara
596	1977 " cv. 'Angulare'	688	1977 Vandeboschia radicans
597	1978 " cv. 'Congestum'	689	1978 Woodsia alpina
598	1977 " cv. 'Divisilobum'	690	1978 ilvensis
599	1978 " cv. 'Divisilobum Densum'	691	1978 " var. rufidula
600	1978 " cv. 'Divisilobum Iveryanum'	692	1978 obtusa
601	1978 " (Dwarf Form)	693	1978 oregana
602	1977 " (English Crested)	694	1978 polystichoides
603	1978 " cv. 'Latipes'	695	1978 Woodwardia fimbriata
604	1977 " cv. 'Polydactyla'	696	1978 orientalis
605	1977 " cv. 'Thompsonae'	697	1978 radicans
606	1977 tagawanum	698	1978 Mixture of Australian Ferns



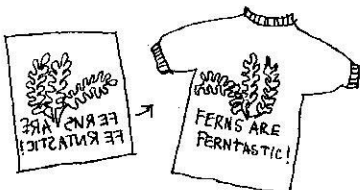
Fern Fabric Design by Dorothy Linde

Fern designs for fabric can be made easily by adults and children alike using the new fabric crayons manufactured by the Crayola Company. Using the process explained in the following paragraphs you can use this transfer process to inexpensively print T-shirts, pillow covers, even quilts or wall hangings.

To carry you through the process from start to finish let us choose as our project a T-shirt design. These could make inexpensive gift items since you could pick up the 3-in-a-pack men's or children's size shirts when they go on sale at your discount store.

To begin our project have several sheets of non-shiny paper such as bond typewriter paper. You will make your design as a line drawing to be the same size as the finished transfer. Since this is a transfer process remember that everything will print in reverse of your design and if you are doing lettering you must make the transfer of the words in reverse so they will print right side up. An easy way to do this would be to take your design to a glass window. Place the pencil line side against the glass and then retrace your lines in reverse on the back of the paper. This is the side you will color in with the fabric crayons.

THIS IS HOW YOUR
CRAYON TRANSFER
WILL APPEAR FOR
IRONING ON.



In applying the crayons be sure to get a heavy area colored so in printing the colors will be more brilliant. Brush away any crayon specks that fall outside your color area as these would print also. For fine designs you will want to have a crayon sharpener handy so that you can keep a point on the crayon after it wears down.

White fabric will, of course, produce the brightest colors with this printing technique. For permanent results you will choose fabric that has at least 50% synthetic in it.

Prepare to transfer your design by placing a pad of newspapers between the inside and the back of the T-shirt. This prevents the design from "bleeding" through to the back of the shirt. Now iron with a steady pressure using the cotton setting and DRY setting. The crayon side will be face down on the fabric and you will be able to see the design 'take' from the backside of your paper transfer as you iron. You may carefully lift each side, while holding the other in place to see that all areas are printed before you move the transfer.

Finished designs may be either hand washed or machine washed, gentle cycle/warm. They should not be bleached or machine dried. ☆

plantings. Peg Kohring, the director of our prairie work, and several helpers have spent countless hours in collecting seed from "prairie remnants" within a radius of one hundred fifty miles, cleaning and preparing the seed (last year they had nearly one hundred pounds of it); in winter, planting and care of seedlings in a small greenhouse just for them; in spring and summer, planting of the peat pots of tiny seedlings in the huge area of a few additional acres. Then the hand weeding! The endless labor of getting all this started is quite unbelievable but these tireless prairie planters will reach their goal in adding to Fernwood our own area of endangered plants and a bit of prairie of the kind which used to cover vast sections of the United States and now has nearly disappeared.

To these two facets of the purpose and program of Fernwood-(1) natural sciences and conservation and (2) gardening and horticulture-a third has quite naturally been added since the first days of the incorporation - that of arts and crafts. Many classes, workshops, lectures, in art and craft subjects are offered as well as those in natural science and gardening.

Because of our location in the country with several communities from three to eighteen miles distant, we felt that Fernwood might not survive as just a nature center or just an arboretum or even as just an art and cultural center. With something of all three, it would have a much richer offering. Now, at last, for two years the Arts and Crafts Department has had its own director, Mr. Ken Saathoff, a local well-known artist. He not only heads all activities of the Arts & Crafts Committee but coordinates the whole year's program, contacts all the teachers and sees that supplies are on hand where and when needed. No small job.

This three-part purpose and program is perhaps the most unique feature of Fernwood, but it works - now, with a full time director of each of the three, they are well balanced, well supported and fully cooperative. Each of the three staff members teaches some of the classes in his field. ☆

(to be continued)

FERN FREAKS



"It's all frightfully romantic... the antheridia are like little Leanders; they actually swim the Hellespont, so to speak, to reach their beloved archegonia."

-8- Fern Fun



Here's a colorful

"Whose Hue?"

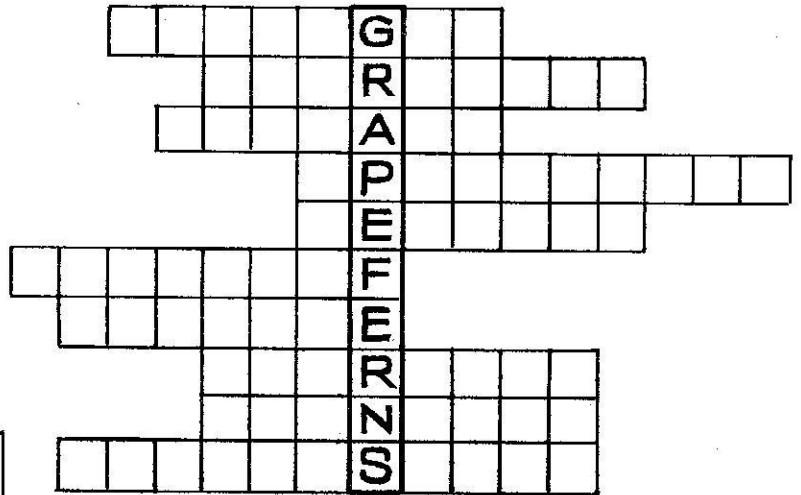
Try matching these Latin epithets with their English equivalents. Fit a letter into the bracket against each number before looking at the answers.

- | | |
|---------------------|----------------------|
| () 1. viridis | (a) black and white |
| () 2. heterochrom | (b) green |
| () 3. purpuraceus | (c) purple |
| () 4. ruber | (d) white |
| () 5. melano | (e) varying in color |
| () 6. albus | (f) red |
| () 7. melanoleucum | (g) black |
| () 8. rhodo | (h) rose |
| () 9. leuco | (i) gray |
| () 10. griseus | (j) yellow |
| () 11. flavus | (k) brick-red |
| () 12. Chryseus | (l) gold |
| () 13. leteritius | (m) purple |
| () 14. niger | (n) black |
| () 15. porphyreus | (o) white |

PHILUPTERIS

How well do you know your Grape Ferns?

See how many colloquial names you can fit into the spaces. If you find two that qualify for the same space one of them is liable to be needed somewhere else. To avoid ambiguity the scientific names are added to the answers; they're all Wherryfiable in the Fern Guide.



Answers: PHILUPTERIS

(a) Triangle (B. lanceolata); (d) Matricary (B. matricariifolia); (e) Alabama (B. alabamensis); (f) Sparrow (B. tenuifolia); (g) Leaf (B. multifida); (h) Face-leaf (B. dissecta); (i) Olive (B. olivacea); (j) Ternate (B. ternata); (k) Moonwort (B. lunaria); (l) Rattlesnake (B. virginiana)

Answers: "Whose Hue?"

Answers: 1p: Set 3c or m; 4f: 2d or n; 5d or o; 7at 8p: 9o or d; 10t: 11j; 12i; 13k; 14n or d; 15m or c

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