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A BIBLIOGRAPHY OF BIOLOGICAL LITERATURE ON VASCULAR EPIPHYTES

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ABSTRACT. A bibliographic list of 658 citations dealing with the biology of vascular epiphytes is provided. Papers pertinent to the systematics, ecology, physiology, anatomy, morphology, and natural history of vascular epiphytes are included. Purely taxonomic and floristic accounts are generally excluded. The bibliography is also available in electronic form.

INTRODUCTION

Ten percent of all vascular plant species are epiphytic (Madison, 1977; Kress, 1986). It is therefore no wonder that a significant segment of biological literature is devoted to descriptions and investigations of epiphytic plants. Two recent symposia in 1985 on the biology of tropical epiphytes, one at the Marie Selby Botanical Gardens (proceedings published in *Selbyana* Vol. 9) and the other at the Missouri Botanical Garden (published in *Ann. Missouri Bot. Gard.* Vol. 74) underscored the current interest in plants which spend most of their life cycle perched on other plants and which receive their mineral nutrients from nonterrestrial sources. The rapid rate of tropical deforestation has also spurred biologists to accelerate their studies of tropical epiphytes before many habitats and species become extinct.

For these reasons a bibliography of published investigations on the biology of vascular epiphytes was deemed necessary. The definition of an epiphyte follows that outlined in Kress (1986) and includes "true epiphytes," "hemi-epiphytes," "casual epiphytes," and to some extent "semi-epiphytic climbers." The list of citations provided here includes papers pertinent to the systematics, ecology, physiology, anatomy, morphology, and natural history of vascular epiphytes. No attempt is made to include purely taxonomic treatments registering new species, descriptions, and distributions, or floristic treatments even though some such works containing discussions of biological features of epiphytes are incorporated. The size of some families of epiphytes, such as the Orchidaceae with nearly 14,000 epiphytic species (Atwood, 1986), prohibits the listing of all publications pertinent to these families and only frequently cited or major works are included. Some references address the biology of epiphytes indirectly, but are deemed important enough to the development of an understanding of epiphytes to be included. In many cases the literature cited in the list should serve as the starting point for a thorough study of a particular group or subject.

The bibliography includes 658 citations and was compiled by an exhaustive search of all published literature on epiphytes available to the authors. For completeness important unpublished masters and doctoral dissertations are also included. In some instances citations were abstracted from literature referred to by other authors and the original works were not seen by us. The earliest reference cited here was published in 1856 by Chatin (citation number 132); the most recent appeared in 1987. It is inevitable that some important investigations are inadvertently omitted. These exclusions are not intentional and readers are urged to send such omissions as well as editorial corrections and new citations to the second author (W.J.K.) for inclusion in periodic updates of this list which will be published in future issues of *Selbyana.*

The entries are listed alphabetically by author, followed by year of publication, complete title and citation. In developing the bibliography each citation was given several key words to summarize the basic subject matter of the paper and the major taxonomic group(s) covered. In many cases assigning such key words proved difficult.

Because of this incompleteness key words were not included in the bibliography provided here. However, the citations have been sorted according to major subject (Appendix 1) and taxonomic family (Appendix 2). In Appendix 1 papers are categorized into six major headings: Anatomy and Morphology (including papers on roots, stems, leaves, trichomes, velamen, and seeds/seedlings), Systematics (including cytology, floristics, geographic distribution, and phylogeny), Ecology (including geographic distribution, tree distribution, mycorrhiza, ecophysiology, and field methods), Physiology (including mineral cycling, nutrition, photosynthesis, water relations, and physiological ecology), Plant-Animal Interactions (including ant-plants and reproductive biology), and General References (as an introduction to the biology of epiphytes). A citation may appear in more than one category. In Appendix 2 only major families with over 50 epiphytic species and four or more citations in the bibliography are listed. Although the categories are broad the authors hope that the appendices will facilitate manual searching of the bibliography by readers interested in a particular topic.

The entire bibliography is also available in electronic form for investigators with access to a microcomputer. This resource will allow researchers to individually search or sort the citations in a variety of fashions for their own purposes. The basic list as it appears here in published form (without key words) is available as an unformatted ASCII file created on MICROSOFT WORD and readable by MS-DOS based word-processing programs. The list is also available as a user data file (with key words) formatted in the standard BIOSIS style (AUthor, YeaR, TItle, CItation, KeY words) which will allow it to be imported into most data base management programs. Investigators interested in obtaining copies of the bibliography in electronic form (via diskette or modem) should contact the second author (W.J.K.).

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APPENDIX 1. Bibliographic citations sorted by subject.

Systematics											
3	87	135	172	224	276	347	398	462	499	546	609
7	90	138	179	225	277	352	399	469	505	547	614
11	92	141	180	226	278	355	406	471	506	552	616
33	95	145	198	227	279	360	412	473	507	561	625
39	106	146	206	228	287	367	414	474	509	575	627
41	107	147	207	229	294	369	415	475	510	580	637
43	110	148	208	230	296	371	423	476	511	587	638
51	112	149	209	234	297	372	432	477	514	589	642
62	113	150	210	235	299	377	433	478	515	594	
66	114	151	211	237	313	378	450	484	530	595	
74	115	161	218	238	318	386	455	485	531	597	
76	124	169	221	240	320	393	457	497	532	605	
77	131	170	222	260	341	397	460	498	533	607	
Anatomy and Morphology											
11	58	87	131	190	219	272	363	442	511	574	635
12	59	88	132	191	227	280	364	448	512	575	636
17	60	89	133	203	233	282	365	449	521	577	640
23	61	93	152	205	235	284	378	450	522	594	644
26	66	97	153	206	239	286	381	454	524	596	650
28	69	101	154	207	241	310	385	456	526	598	657
32	70	102	166	208	242	313	389	459	529	600	658
34	73	108	172	209	244	335	390	460	534	613	
40	75	109	173	210	245	336	402	461	536	620	
41	76	110	174	211	256	338	403	462	540	627	
42	77	113	175	212	259	340	404	466	541	628	
44	79	119	176	213	262	341	408	467	550	629	
45	80	120	177	214	265	349	417	479	555	630	
48	83	122	180	215	266	350	419	486	562	631	
54	84	125	183	216	267	352	420	487	566	632	
55	85	127	186	217	269	354	424	488	572	633	
57	86	130	188	218	270	358	435	501	573	634	
Ecology											
3	61	99	157	220	277	309	357	427	486	546	613
14	62	100	158	222	280	310	362	428	491	548	614
15	63	103	159	223	283	311	369	429	492	549	615
16	64	104	160	229	284	312	372	431	493	551	617
17	65	106	163	230	285	316	375	436	497	552	618
18	68	107	164	231	288	317	376	437	498	553	619
20	69	110	165	234	290	318	378	438	499	554	620
22	70	111	170	235	291	321	379	439	500	557	621
24	71	116	172	248	292	322	380	440	502	560	623
25	72	120	176	249	293	323	382	441	504	565	624
29	75	121	180	251	294	324	384	442	505	571	625
30	76	124	182	252	295	325	393	452	506	572	626
31	77	126	184	253	297	326	398	453	507	586	643
37	78	129	185	256	298	336	399	454	508	587	654
38	80	137	189	257	299	337	400	464	510	590	656

APPENDIX 1. Continued.

43	83	140	192	260	300	340	407	465	513	591	
47	85	141	193	261	301	343	410	466	515	592	
50	90	142	197	264	302	344	418	473	527	593	
51	91	145	199	268	303	345	420	474	530	602	
52	92	146	200	270	304	346	421	475	534	603	
53	94	151	201	271	305	347	422	476	535	605	
54	96	154	202	272	306	351	423	477	537	607	
56	97	155	204	274	307	352	424	478	539	611	
60	98	156	219	275	308	356	425	482	542	612	
Physiology											
13	58	89	133	191	273	350	394	445	516	558	647
15	59	90	134	192	274	354	396	446	517	559	648
18	60	91	136	193	281	357	399	452	518	564	649
20	63	92	137	194	282	358	400	454	519	566	651
21	65	93	139	232	289	359	401	463	520	567	652
22	67	94	142	243	290	366	404	468	523	568	654
24	72	95	143	244	291	372	405	470	526	569	655
25	73	96	144	245	320	373	411	479	527	570	
27	75	102	153	246	327	374	416	489	528	579	
28	76	104	155	247	330	375	418	490	529	581	
29	78	105	162	250	331	376	421	494	534	599	
34	79	108	163	255	332	378	422	496	535	607	
35	80	109	171	256	333	387	425	502	538	608	
36	81	122	172	257	334	388	426	506	542	610	
38	82	123	175	263	338	389	430	507	543	624	
46	84	124	187	265	339	390	431	508	550	644	
55	86	125	189	269	348	391	434	511	556	645	
57	88	129	190	271	349	392	444	513	557	646	
Plant-Animal Interactions											
1	40	147	184	236	314	368	427	481	576	604	642
2	54	152	195	242	315	370	437	483	577	606	653
4	56	167	196	246	318	371	443	495	578	609	
5	71	168	197	252	319	379	447	503	579	615	
6	73	169	199	253	320	381	451	512	582	621	
7	74	171	200	254	329	383	458	525	583	622	
8	98	172	201	258	342	392	471	537	584	626	
9	117	177	202	262	343	395	472	544	585	627	
10	118	178	225	310	344	409	473	545	588	638	
19	128	180	227	311	352	410	479	562	589	639	
23	135	181	229	312	361	411	480	563	601	641	
General References											
47	172	316	476								
65	180	353	625								
75	233	378									
76	283	439									

APPENDIX 2. Bibliographic citations sorted by taxonomic categories.

Pteridophyta

104 253 295 540 645
130 276 342 550 652
131 277 352 580 653
145 287 418 600
161 289 433 602
239 290 463 603

Araceae

40 206 213 377 466
147 207 214 381 467
148 208 215 411 549
149 209 216 458 588
150 210 217 464
151 211 254 465

Bromeliaceae

11 62 90 114 177 236 375 399 508 539
12 63 91 115 184 237 376 400 511 551
13 64 92 122 197 238 383 401 514 566
32 65 93 123 199 256 386 405 516 586
39 68 94 124 200 257 387 406 517 594
52 73 95 133 202 262 389 427 526 595
53 79 97 139 224 279 390 436 527 596
56 80 100 145 225 343 391 442 528 616
57 81 101 162 226 348 392 443 530
58 82 108 173 227 356 395 451 531
59 84 109 174 228 359 396 483 532
60 86 112 175 234 365 397 495 533
61 87 113 176 235 367 398 502 537

Cyclanthaceae

212 628 632 636
278 629 633
555 630 634
575 631 635

Orchidaceae

1 27 74 145 190 272 341 435 509 608
2 28 77 152 191 275 347 446 521 609
3 29 78 153 203 284 350 448 522 612
4 33 83 154 204 286 360 449 525 613
7 34 85 155 205 291 361 450 534 637
9 35 87 156 221 296 363 452 535 638
10 36 88 166 222 298 364 460 541 639
14 41 89 168 241 313 396 461 553 640
16 42 102 169 242 317 402 462 554 641
17 44 105 171 243 319 403 484 559 642
18 45 106 172 244 320 408 485 561 644
19 46 107 178 245 321 409 487 571 647
20 51 119 179 246 322 412 488 579 648
21 53 120 180 259 323 414 489 589 649
22 59 128 181 265 324 415 496 597 650
23 63 132 183 266 325 416 499 598 651
24 64 135 185 267 328 417 500 601 657
25 69 136 186 270 329 426 501 605
26 70 140 188 271 333 429 503 606

Asclepiadaceae

165 512
258 562
468 577

APPENDIX 2. Continued.

Cactaceae			
43			
110			
268			
469			
Gesneriaceae			
48	344		
127	447		
263	627		
Melastomataceae			
370	472		
371	473		
471			
Moraceae			
99	160	335	459
126	164	454	593
138	220	456	658
141	264	457	
Piperaceae			
145			
338			
419			
542			
Rubiaceae			
310	576		
315	578		
538	626		