

# Fiddlehead Forum

## Bulletin of The American Fern Society

Editor: John T. Mickel ☆ Art Director: Edgar M. Paulton (≡!!!) ☆ Fern Physician: Bruce W. McAlpin

### Editorial

We like to extoll our own virtues at least once a year, and we can find no reasonable excuse for neglecting to do so with the heralding in of our eighth anniversary. Last year proved to be a creditable one in terms of FIDDLE-HEAD FORUM issues: we were able to produce eight-page issues for all six numbers. Reading between the lines - and even on them - we would like to receive more contributing articles, inquiries and criticisms (hopefully favorable) from more readers. Our thanks go to our regular contributors; we'd like to extend that to more irregular ones. That means YOU!

### A Jog from Skog

1982 dues are now due. If you owe 1982 dues, you received a dues notice with your ballot last November. Members who have not paid 1982 dues will receive a FINAL NOTICE in February, and this newsletter will be the last publication to be sent to those not responding. Check your records now and send in your dues to the Records Treasurer: Dr. Judith Skog, Biology Dept, George Mason Univ., Fairfax, VA 22030.

### Mexican Collectors - Please Note

Dr. Irving Knobloch, a past president of the American Fern Society, is attempting to publish the names of all persons who have collected plants in Mexico proper. "If you qualify, please send your name and particulars to Dr. Irving Knobloch, Department of Botany and Plant Pathology, Michigan State Univ., East Lansing, MI 48824 unless your name already appears in publications by Chaudri & DeWal 1972, G. N. Jones 1966, Knobloch 1979, Langman 1964 (need confirmations on some), Lindsay 1955, Lanjouw & Stafleu 1954, 1957, McVaugh 1972, Pennell 1945, Standley 1920-26, Humphrys 1961, Geiser 1948 and Barnhardt 1965."

### Symbol

An awesome thing  
This small, flat stone,  
This fossil,  
With its pattern for a fern.  
What footprints  
Tracked the carpeting  
Of some dim wood,  
When first this frond  
Unrolled  
Into old lace?  
So delicate  
To have withstood  
How many thousand winters  
And emerge  
Still wet with dew,  
Still green and beautiful  
And new!

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Mildred Steed Lancaster, Pa.

### Who's Who in Pteridix

Biographical sketch by Nigel Hall

SAMUEL DOODY (1656-1706)

"If to any man in his day, not professedly an author on the subject, extraordinary praise is due, for discoveries in the indigenous botany, it must belong to Mr. Samuel Doody."

Thus wrote Richard Pulteny eighty years after the death of Samuel Doody. For someone to whom "extraordinary" praise was due, surprisingly little is known of his life. Samuel Doody was born in Staffordshire on the 28th of May 1656. He was the eldest of his father's second family. His father was an apothecary, who, early in Samuel's life, moved to London and opened a shop in the Strand. In those days an apothecary was necessarily an expert plantsman. Many, if not most, drugs were at that time derived from plant material and the apothecaries of the day were required to pass examinations relating to botanical knowledge.

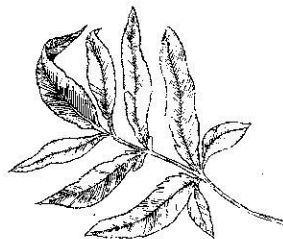
Samuel Doody succeeded to his father's business in 1696 even though he had already, three years earlier, taken the task of looking after the apothecaries garden at Chelsea. For that he was paid a salary of 100 pounds. By this time he knew many of the eminent botanists of England and had assisted Ray with the collection on data for *Historia Plantarum*.

According to Richard Pulteny: "He struck out a new path in botany, by leading to the study of that tribe, which comprehended the imperfect plants, now called the Cryptogamia class."

Records of the apothecaries garden do not show much evidence that Doody's supervisory period was one of any significance. If anything, there was some decline. Doody published very little; a very few articles, and this may account for the paucity of information about his life.

As the years went on, Doody began to suffer from gout and, as the Dictionary of National Biography puts it, suffered from "what seems to have been intemperence."

Doody gave his name to the genus *Doodia*. The genus was erected by R. Brown in 1810 when he described *Doodia aspera*.



*Doodia punctatoplyta*

# American Fern Society Spore Exchange 1982 List

This list replaces all former lists. Please make selections in numerical order with SEVERAL ALTERNATES, and do not request more than single packets of any particular item. A fee of 25¢ PER PACKET should be sent with each request originating in the United States. No charge is made from other countries, but we would appreciate International Postal Response Coupons to help with the return of the spore, and we would appreciate spore of your country.

Sincere thanks are offered to the many members who have made spore contributions to the Exchange. It is urgently requested that all members send in fresh spore or

fertile fronds. The life of the Exchange depends on your spore contributions. Each item should include the technical name, the source if collected in its native habitat, the name of the collector, and the date collected.

A stamped, self-addressed legal-sized envelope should be included with all requests. Address all correspondence regarding the Spore Exchange to:

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

| Item No. | Year Collected | SPECIES AND VARIETIES ON HAND   |     |      |                                  |
|----------|----------------|---------------------------------|-----|------|----------------------------------|
| 1        | 1981           | Acrostichum aureum              |     |      |                                  |
| 2        | 1980           | danaeifolium                    | 54  | 1981 | Adiantum, cont.                  |
| 3        | 1980           | Actiniopteris australis         | 55  | 1981 | "    cv. 'Fergusoni'             |
| 4        | 1980           | Adiantum aethiopicum            | 56  | 1981 | "    cv. "    Rubrum'            |
| 5        | 1981           | bausei                          | 57  | 1981 | trapeziforme                     |
| 6        | 1980           | bellum                          | 58  | 1981 | venustum                         |
| 7        | 1981           | capillus-veneris                | 59  | 1981 | wagneri cv. 'Magnificum'         |
| 8        | 1981           | caudatum                        | 60  | 1980 | ?    cv. 'Cardosa Gardens'       |
| 9        | 1979           | collisii                        | 61  | 1980 | wagneri (medium size)            |
| 10       | 1981           | concinnum                       | 62  | 1980 | "    (medium fine)               |
| 11       | 1981           | "    cv. 'Latum'                | 63  | 1979 | "    (variegated)                |
| 12       | 1981           | cunninghamii                    | 64  | 1981 | Aglaomorpha heraclea             |
| 13       | 1979           | decorum var. magnificum         | 65  | 1981 | meyeniana                        |
| 14       | 1981           | delicatulum                     | 66  | 1981 | splendens                        |
| 15       | 1980           | diaphanum                       | 67  | 1980 | Alsophila australis              |
| 16       | 1979           | dissectum                       | 68  | 1980 | metteniana                       |
| 17       | 1980           | formosum                        | 69  | 1981 | Ampelopteris prolifera           |
| 18       | 1981           | fulvum                          | 70  | 1981 | Amphineuron terminans            |
| 19       | 1981           | hemsloviaum                     | 71  | 1979 | Anemia phyllitidis               |
| 20       | 1981           | hispidulum                      | 72  | 1981 | Anogramma chaerophylla           |
| 21       | 1981           | macrophyllum                    | 73  | 1980 | Antrophyum species (Philippines) |
| 22       | 1980           | monochlamys                     | 74  | 1981 | Arachniodes aristata             |
| 23       | 1981           | pedatum                         | 75  | 1980 | "    cv. 'Variegata'             |
| 24       | 1981           | "    cv. 'Minus'                | 76  | 1981 | chinensis                        |
| 25       | 1979           | "    var. aleuticum             | 77  | 1981 | dimorphophylla                   |
| 26       | 1979           | "    var. nanum                 | 78  | 1979 | maximowiczii                     |
| 27       | 1981           | "    f. patrick creek           | 79  | 1979 | miqueliana                       |
| 28       | 1981           | "    var. subpumilum            | 80  | 1979 | mutica                           |
| 29       | 1980           | "    (large foliose form)       | 81  | 1979 | simplisior                       |
| 30       | 1980           | "    (large pinnae form)        | 82  | 1979 | "    cv. 'Major'                 |
| 31       | 1981           | peruvianum                      | 83  | 1980 | standishii                       |
| 32       | 1979           | pubescens                       | 84  | 1981 | webbiana                         |
| 33       | 1981           | pulverulentum                   | 85  | 1981 | Arthropteris beckleri            |
| 34       | 1979           | raddianum                       | 86  | 1981 | Aspidotis densa                  |
| 35       | 1981           | "    cv. 'Elegantissimum'       | 87  | 1980 | Asplenium adiantum-nigrum        |
| 36       | 1981           | "    cv. 'Fragrantissimum'      | 88  | 1979 | antiquum                         |
| 37       | 1981           | "    cv. 'Fritzluthii'          | 89  | 1980 | auritum                          |
| 38       | 1981           | "    cv. 'Gracillimum'          | 90  | 1981 | australasicum                    |
| 39       | 1981           | "    cv. "    Cristata'         | 91  | 1981 | bellangeri                       |
| 40       | 1980           | "    cv. 'Grandiceps'           | 92  | 1981 | boltonii                         |
| 41       | 1980           | "    cv. 'Legrande Morgan'      | 93  | 1980 | brachycarpon                     |
| 42       | 1981           | "    cv. 'Micropinnulum'        | 94  | 1980 | bulbiferum                       |
| 43       | 1979           | "    cv. 'Mundulum'             | 95  | 1979 | cuneatum                         |
| 44       | 1980           | "    cv. 'Pacific Pride'        | 96  | 1980 | daucifolium                      |
| 45       | 1981           | "    cv. 'Pacific Maid'         | 97  | 1981 | dimorphum                        |
| 46       | 1981           | "    cv. 'Pacottii'             | 98  | 1980 | erectum                          |
| 47       | 1981           | "    cv. 'Sea Foam'             | 99  | 1979 | falcatum                         |
| 48       | 1980           | "    cv. 'Sleeping Beauty'      | 100 | 1981 | flabellifolium                   |
| 49       | 1981           | "    cv. 'Weigandii'            | 101 | 1980 | forisiense                       |
| 50       | 1980           | "    cv. 'Variegated Tesselate' | 102 | 1979 | gemmaferum                       |
| 51       | 1981           | reniforme cv. 'Pusilla'         | 103 | 1981 | griffithianum                    |
| 52       | 1980           | silvaticum                      | 104 | 1981 | hemionitis                       |
| 53       | 1981           | tenerum cv. 'Bicolor'           | 105 | 1980 | lobatum                          |
|          |                |                                 |     |      | lucidum                          |

|     |      |                             |     |      |  |
|-----|------|-----------------------------|-----|------|--|
| 106 | 1981 | marinum                     | 183 | 1980 | colensoi                                   |
| 107 | 1981 | mayi                        | 184 | 1981 | discolor                                   |
| 108 | 1981 | nidus                       | 185 | 1980 | fraseri                                    |
| 109 | 1980 | normale                     | 186 | 1980 | fluviatile                                 |
| 110 | 1979 | obtusatum                   | 187 | 1980 | gibbum                                     |
| 111 | 1980 | paleaceum                   | 188 | 1980 | lanceolatum                                |
| 112 | 1981 | pellucidum                  | 189 | 1981 | lehmanii                                   |
| 113 | 1981 | platyneuron                 | 190 | 1981 | minus                                      |
| 114 | 1981 | praemorsum                  | 191 | 1980 | moorei                                     |
| 115 | 1981 | rutaefolium                 | 192 | 1981 | norfolkianum                               |
| 116 | 1980 | ruta-muraria                | 193 | 1981 | nudum                                      |
| 117 | 1981 | sandersonii                 | 194 | 1980 | occidentale                                |
| 118 | 1981 | septentrionale              | 195 | 1981 | patersonii                                 |
| 119 | 1980 | simplicifrons               | 196 | 1981 | penna-marina                               |
| 120 | 1981 | trichomanes                 | 197 | 1980 | roseum                                     |
| 121 | 1981 | cv. 'Incisum'               | 198 | 1981 | spicant                                    |
| 122 | 1979 | unilaterale                 | 199 | 1981 | " cv. 'Cristatum'                          |
| 123 | 1981 | veillardii                  | 200 | 1981 | unilaterale                                |
| 124 | 1979 | viride                      | 201 | 1981 | vulcanicum                                 |
| 125 | 1981 | species (Philippines)       | 202 | 1980 | wattsii                                    |
| 126 | 1981 | Asplenosorus X ebenoides    | 203 | 1979 | species (King Island)                      |
| 127 | 1980 | Athyrium assimile           | 204 | 1980 | " (New Caledonia)                          |
| 128 | 1981 | australe                    | 205 | 1980 | " (New Zealand)                            |
| 129 | 1980 | dilatatum                   | 206 | 1980 | " (S. Australia)                           |
| 130 | 1980 | dimorphophyllum             | 207 | 1981 | Bolbitis appendiculata                     |
| 131 | 1981 | distentifolium              | 208 | 1980 | hemionata                                  |
| 132 | 1981 | filix-femina                | 209 | 1980 | heteroclita                                |
| 133 | 1981 | " var. asplenioides         | 210 | 1980 | rhizophylla                                |
| 134 | 1980 | " var. boenholmiensis       | 211 | 1981 | sinuata                                    |
| 135 | 1981 | " cv. 'Congestum Cristatum' | 212 | 1981 | subcordata                                 |
| 136 | 1979 | " cv. 'Corymbiferum'        | 213 | 1980 | species                                    |
| 137 | 1981 | " cv. 'Cristatum'           | 214 | 1981 | Botrychium dissectum var. obliquum         |
| 138 | 1981 | " var. cyclosorum           | 215 | 1981 | obliquum                                   |
| 139 | 1981 | " cv. 'Fieldiae'            | 216 | 1981 | virginianum var. virginianum               |
| 140 | 1981 | " cv. 'Frizelliae'          | 217 | 1980 | Callipteris esculenta                      |
| 141 | 1981 | " var. Michauxii            | 218 | 1980 | species                                    |
| 142 | 1981 | " cv. 'Minutissimum'        | 219 | 1981 | Camptosorus rhizophyllum                   |
| 143 | 1981 | " cv. 'Multifidum'          | 220 | 1981 | Campyloneuron angustifolium var. undulatum |
| 144 | 1981 | " cv. 'Percristatum'        | 221 | 1979 | phyllitidis                                |
| 145 | 1979 | " var. rubellum             | 222 | 1979 | Ceterach aureum                            |
| 146 | 1981 | " var. rubellum cristatum   | 223 | 1981 | dalhousiae                                 |
| 147 | 1981 | " var. sitchense            | 224 | 1981 | officinarium                               |
| 148 | 1981 | " cv. 'Vernoniae'           | 225 | 1981 | " X Phyllitis scolopendrium                |
| 149 | 1981 | " cv. 'Victoriae'           | 226 | 1981 | Cheilanthes alabamensis                    |
| 150 | 1981 | " (highly dissected)        | 227 | 1981 | argentea                                   |
| 151 | 1981 | " (crested)                 | 228 | 1981 | caudata                                    |
| 152 | 1981 | melanolepis                 | 229 | 1981 | concolor                                   |
| 153 | 1979 | setigerum cv. 'Cristatum'   | 230 | 1980 | distans                                    |
| 154 | 1981 | " (English crested)         | 231 | 1980 | farinosa                                   |
| 155 | 1980 | " (English crested mixed)   | 232 | 1981 | feeii                                      |
| 156 | 1979 | iseanum var. angustisectum  | 233 | 1981 | lanosa                                     |
| 157 | 1980 | grammitoides                | 234 | 1980 | sieberi                                    |
| 158 | 1979 | kirsimaense                 | 235 | 1981 | tenuifolia                                 |
| 159 | 1981 | niponicum                   | 236 | 1981 | vellea                                     |
| 160 | 1981 | " cv. 'Metalicum'           | 237 | 1981 | wootonii                                   |
| 161 | 1981 | " cv. 'Pictum'              | 238 | 1980 | Chingia ferox                              |
| 162 | 1979 | pyncocarpon                 | 239 | 1981 | paucipaleates                              |
| 163 | 1980 | reflexipinnum               | 240 | 1980 | Christella acuminata                       |
| 164 | 1979 | sheareri                    | 241 | 1979 | dentata                                    |
| 165 | 1981 | thelypteroides              | 242 | 1981 | Cibotium barometz                          |
| 166 | 1979 | vidalii                     | 243 | 1981 | chamissoi                                  |
| 167 | 1980 | wichurae                    | 244 | 1980 | cumingii                                   |
| 168 | 1980 | yakoscense                  | 245 | 1979 | schiedei                                   |
| 169 | 1980 | species                     | 246 | 1981 | splendens                                  |
| 170 | 1980 | species                     | 247 | 1981 | Cionidium moorei                           |
| 171 | 1980 | species (large crested)     | 248 | 1981 | Colysis ampla                              |
| 172 | 1980 | mixture (crested)           | 249 | 1980 | macrophylla                                |
| 173 | 1980 | Belvisia callifolia         | 250 | 1980 | sayeri                                     |
| 174 | 1981 | mucronata                   | 251 | 1980 | Coniogramme affinis                        |
| 175 | 1981 | species (Philippines)       | 252 | 1980 | gracilis                                   |
| 176 | 1980 | Blechnum ambiguum           | 253 | 1980 | ogata                                      |
| 177 | 1981 | australe                    | 254 | 1980 | pteroides                                  |
| 178 | 1980 | brasiliense                 | 255 | 1980 | Cornopteris banahoensis                    |
| 179 | 1980 | camfieldii                  | 256 | 1979 | decurrenti-alata                           |
| 180 | 1980 | capense                     | 257 | 1980 | " var. dilatata                            |
| 181 | 1981 | cartilagineum               | 258 | 1979 | forma pilosella                            |
| 182 | 1980 | " var. tropicum             | 259 | 1979 | opaca                                      |

|     |      |                               |     |      |                                   |
|-----|------|-------------------------------|-----|------|-----------------------------------|
| 260 | 1980 | X masachikana                 | 337 | 1981 | Dicranopteris curranii            |
| 261 | 1981 | Cryptogramma crispa           | 338 | 1980 | linearis                          |
| 262 | 1981 | Ctenitis pentangularis        | 339 | 1981 | " var.linearis                    |
| 263 | 1980 | subglandulosa                 | 340 | 1981 | Dictymia brownii                  |
| 264 | 1980 | Ctenitopsis fuscipes          | 341 | 1980 | Dictyocline griffithiana          |
| 265 | 1980 | Cyathea arborea               | 342 | 1980 | Didymochlaena truncatula          |
| 266 | 1981 | australis                     | 343 | 1979 | Diplaziopsis javanica             |
| 267 | 1981 | " X cunninghamii              | 344 | 1980 | Diplazium chinense                |
| 268 | 1979 | baileyana                     | 345 | 1981 | cranata-serratum                  |
| 269 | 1980 | brownii                       | 346 | 1980 | cultratum                         |
| 270 | 1980 | capensis                      | 347 | 1981 | cumingii                          |
| 271 | 1981 | colensoi                      | 348 | 1980 | dilatatum                         |
| 272 | 1980 | contaminans                   | 349 | 1980 | doedenleinii                      |
| 273 | 1980 | cooperi                       | 350 | 1980 | dolichosorum                      |
| 274 | 1980 | cunninghamii                  | 351 | 1979 | donianum                          |
| 275 | 1981 | dealbata                      | 352 | 1980 | echinatum                         |
| 276 | 1980 | elmeri                        | 353 | 1981 | egregium                          |
| 277 | 1981 | fuliginosa                    | 354 | 1981 | esculentum                        |
| 278 | 1980 | integra                       | 355 | 1981 | forbesii                          |
| 279 | 1980 | latebrosa                     | 356 | 1980 | franconis                         |
| 280 | 1980 | leichhardtiana                | 357 | 1980 | fraxinifolium                     |
| 281 | 1981 | loneri                        | 358 | 1980 | fructuosum                        |
| 282 | 1981 | medullaris                    | 359 | 1979 | heterophlebium                    |
| 283 | 1980 | negrosiana                    | 360 | 1981 | lanceum                           |
| 284 | 1981 | philippinensis                | 361 | 1979 | melanocarpa                       |
| 285 | 1979 | rebecca                       | 362 | 1981 | melanopodium                      |
| 286 | 1980 | robinsonii                    | 363 | 1980 | merrillii                         |
| 287 | 1981 | smithii                       | 364 | 1979 | mesosorum                         |
| 288 | 1980 | spinulosa                     | 365 | 1980 | niponicum                         |
| 289 | 1981 | trichospora                   | 366 | 1979 | okudairae                         |
| 290 | 1979 | woollsiana                    | 367 | 1979 | okudairaeoides                    |
| 291 | 1979 | Cyclosorus penniger           | 368 | 1980 | ophiodonton                       |
| 292 | 1980 | unitis                        | 369 | 1979 | petri                             |
| 293 | 1979 | Cyrtomium capense             | 370 | 1980 | pin-faense                        |
| 294 | 1981 | falcatum                      | 371 | 1979 | ponapense                         |
| 295 | 1979 | " cv.'Cristatum'              | 372 | 1980 | pseudocyatheifolium               |
| 296 | 1981 | " cv.'Rochfordianum'          | 373 | 1980 | X sacrosanctum                    |
| 297 | 1981 | fortunei                      | 374 | 1980 | sibuyanense                       |
| 298 | 1979 | " var.clivicola               | 375 | 1979 | squamigerum                       |
| 299 | 1979 | hookerianum                   | 376 | 1979 | taiwanense                        |
| 300 | 1981 | Cystopteris bulbifera         | 377 | 1979 | tomitaroanum                      |
| 301 | 1981 | dickieana                     | 378 | 1979 | virescens                         |
| 302 | 1981 | " var.crispa                  | 379 | 1979 | werckleanum                       |
| 303 | 1981 | fragilis                      | 380 | 1980 | wichurea                          |
| 304 | 1981 | " var.alpina                  | 381 | 1980 | species (Luzon)                   |
| 305 | 1981 | " cv.'Dickieana'              | 382 | 1979 | Dipteris conjugata                |
| 306 | 1981 | " var.protrusa                | 383 | 1980 | Doodia aspera                     |
| 307 | 1979 | japonica                      | 384 | 1979 | blechnoides                       |
| 308 | 1981 | montana                       | 385 | 1980 | caudata                           |
| 309 | 1980 | regia                         | 386 | 1981 | " var.laminosa                    |
| 310 | 1980 | Davallia bullata              | 387 | 1980 | media                             |
| 311 | 1981 | tasmanii                      | 388 | 1980 | squarrosa                         |
| 312 | 1979 | epiphylla                     | 389 | 1980 | Doryopteris concolor              |
| 313 | 1980 | griffithii                    | 390 | 1981 | nobilis                           |
| 314 | 1980 | mariesii                      | 391 | 1979 | pedata                            |
| 315 | 1980 | pyxidata                      | 392 | 1981 | " var.palmata                     |
| 316 | 1980 | solida                        | 393 | 1981 | redivida                          |
| 317 | 1981 | " var. fijiensis              | 394 | 1980 | Drynaria quercifolia              |
| 318 | 1980 | Davallodes hirsutum           | 395 | 1980 | rigidula                          |
| 319 | 1981 | Dennstaedtia bipinnata        | 396 | 1980 | Drynariopsis heraclea             |
| 320 | 1980 | cicutaria                     | 397 | 1980 | Dryopteris abbreviata cv.'Crispa' |
| 321 | 1981 | elmeri                        | 398 | 1981 | " cv.'Crispa                      |
| 322 | 1981 | punctilobula                  | 399 | 1980 | aemula Cristata'                  |
| 323 | 1980 | scandens                      | 400 | 1979 | affinis                           |
| 324 | 1979 | species (Borneo)              | 401 | 1981 | affinis-pseudo-mas                |
| 325 | 1979 | Deparia affine var.polyrhizon | 402 | 1981 | aitomana                          |
| 326 | 1979 | conilii                       | 403 | 1980 | ambigens                          |
| 327 | 1979 | japonica                      | 404 | 1981 | arguta                            |
| 328 | 1979 | lobato-crenata                | 405 | 1981 | atrata                            |
| 329 | 1979 | otamasui                      | 406 | 1981 | austriaca                         |
| 330 | 1979 | petersenii-varitoana          | 407 | 1979 | X boottii                         |
| 331 | 1979 | uniforea                      | 408 | 1981 | borreri                           |
| 332 | 1981 | Dicksonia antarctica          | 409 | 1981 | " cv.'Crispa'                     |
| 333 | 1981 | fibrosa                       | 410 | 1981 | " cv.'Cristata'                   |
| 334 | 1981 | lanata                        | 411 | 1981 | campyloptera                      |
| 335 | 1981 | mollis                        | 412 | 1980 | carthusiana                       |
| 336 | 1980 | youngiae                      | 413 | 1979 | commixta                          |

|     |      |                                    |     |      |                                     |
|-----|------|------------------------------------|-----|------|-------------------------------------|
| 414 | 1981 | cristata                           | 491 | 1980 | Gleichenia cunninghamii             |
| 415 | 1980 | X deweveri                         | 492 | 1979 | flabellata                          |
| 416 | 1979 | dickinsii                          | 493 | 1980 | microphylla                         |
| 417 | 1979 | " forma incisa                     | 494 | 1980 | rupestris                           |
| 418 | 1980 | dilatata                           | 495 | 1980 | Goniophlebium verrucosum            |
| 419 | 1979 | " var.delobata                     | 496 | 1980 | Goniopteris francoana               |
| 420 | 1981 | " cv.'Lepidota Cristata'           | 497 | 1980 | tetragona                           |
| 421 | 1980 | " cv.'Lepidota'                    | 498 | 1981 | Gymnocarpium dryopteris             |
| 422 | 1979 | " cv.'Raakmoor'                    | 499 | 1981 | " cv.'Plumosum'                     |
| 423 | 1979 | " cv.'Recurvata'                   | 500 | 1980 | " (large form)                      |
| 424 | 1981 | erythrosora                        | 501 | 1981 | robertianum                         |
| 425 | 1981 | " cv.'Prolifera'                   | 502 | 1980 | Hemidictyum marginatum              |
| 426 | 1979 | " var.koidzumia                    | 503 | 1980 | Hemigramma decurrens                |
| 427 | 1980 | expansa                            | 504 | 1980 | latifolia                           |
| 428 | 1981 | filix-mas                          | 505 | 1980 | Hemionitis arifolia                 |
| 429 | 1981 | " cv.'Barnesii'                    | 506 | 1980 | palmata                             |
| 430 | 1981 | " cv.'Cristata'                    | 507 | 1980 | Histiopteris incisa                 |
| 431 | 1981 | " cv.'Crispa Cristata'             | 508 | 1979 | Humata tyermanii                    |
| 432 | 1980 | " cv.'Cristata Jackson             | 509 | 1979 | Hypodematium fauriei                |
| 433 | 1981 | " cv.'Cristata Martindale'         | 510 | 1981 | Hypolepis australis                 |
| 434 | 1981 | " cv.'Grandiceps Wills'            | 511 | 1980 | muelleri                            |
| 435 | 1981 | " cv.'Grandiceps Askew'            | 512 | 1981 | punctata                            |
| 436 | 1981 | " cv.'Linearis'                    | 513 | 1980 | species (New Caledonia)             |
| 437 | 1979 | " cv.'Linearis Cristata'           | 514 | 1980 | Lastrea ligulata                    |
| 438 | 1981 | " cv.'Polydactyla'                 | 515 | 1979 | Lastreopsis decomposita             |
| 439 | 1979 | " cv.'Polydactyla Wills'           | 516 | 1979 | effusa                              |
| 440 | 1981 | " (crested)                        | 517 | 1981 | glabella                            |
| 441 | 1979 | formosana                          | 518 | 1980 | grayi                               |
| 442 | 1981 | goldiana                           | 519 | 1981 | hispida                             |
| 443 | 1980 | guanchica                          | 520 | 1980 | marginans                           |
| 444 | 1980 | hayatae                            | 521 | 1979 | microsora                           |
| 445 | 1981 | hangchowensis                      | 522 | 1980 | munita                              |
| 446 | 1979 | hondensis                          | 523 | 1980 | nephrodioides                       |
| 447 | 1981 | intermedia                         | 524 | 1980 | shepherdii                          |
| 448 | 1980 | karwinskyana                       | 525 | 1980 | smithiana                           |
| 449 | 1979 | X kominatoensis                    | 526 | 1981 | tenera                              |
| 450 | 1979 | lacera                             | 527 | 1980 | species (Queensland)                |
| 451 | 1981 | lepida                             | 528 | 1979 | Lecanopteris sinuata                |
| 452 | 1980 | madierensis                        | 529 | 1981 | Lepisorus longifolia                |
| 453 | 1981 | marginalis                         | 530 | 1980 | scolopendrium                       |
| 454 | 1979 | melanocarpum                       | 531 | 1981 | tosaensis                           |
| 455 | 1979 | nipponensis                        | 532 | 1980 | Leptopteris superba                 |
| 456 | 1980 | oreades                            | 533 | 1981 | Leucostegia hymenophylloides        |
| 457 | 1979 | " cv.'Crispa Glenshee'             | 534 | 1980 | Lindsaea microphylla                |
| 458 | 1980 | paleacea (India)                   | 535 | 1981 | Llavea cordifolia                   |
| 459 | 1980 | " (Japan)                          | 536 | 1979 | Lomariopsis variabilis              |
| 460 | 1979 | parallelogramma                    | 537 | 1980 | Lonchitis hirsuta                   |
| 461 | 1979 | patula                             | 538 | 1980 | Loxogramme saziran                  |
| 462 | 1981 | pseudo-mas cv.'Angustata Cristata' | 539 | 1980 | Lunathyrium amabile var.yakusimense |
| 463 | 1981 | " cv.'Crispa'                      | 540 | 1980 | bonicolum                           |
| 464 | 1981 | " cv.'Cristata'                    | 541 | 1979 | boryanum                            |
| 465 | 1980 | " cv.'Grandiceps Askew'            | 542 | 1980 | japonicum                           |
| 466 | 1981 | " cv.'Imbricato Cristatum' (dwarf) | 543 | 1980 | pycnosorum                          |
| 467 | 1981 | " cv. " " (12-15")                 | 544 | 1979 | unifurcatum                         |
| 468 | 1981 | " cv.'Revolvans'                   | 545 | 1980 | Lycopodium annotinum                |
| 469 | 1980 | purpurella                         | 546 | 1979 | clavatum                            |
| 470 | 1980 | reholttumii                        | 547 | 1980 | " var.monostachyum                  |
| 471 | 1979 | ryo-itoana                         | 548 | 1980 | inundatum                           |
| 472 | 1979 | sabaei                             | 549 | 1980 | digitatum                           |
| 473 | 1980 | sieboldii                          | 550 | 1979 | obscurum                            |
| 474 | 1979 | " vorma incisa                     | 551 | 1980 | " var.dendroideum                   |
| 475 | 1979 | sordipes                           | 552 | 1981 | Lygodium circinnatum                |
| 476 | 1979 | sparsa                             | 553 | 1981 | flexuosum                           |
| 477 | 1981 | spinulosa                          | 554 | 1981 | japonicum                           |
| 478 | 1979 | tokyoensis                         | 555 | 1981 | merrillii                           |
| 479 | 1979 | uniformis                          | 556 | 1979 | palmatum                            |
| 480 | 1980 | varia var.subtripinnata            | 557 | 1981 | Macrothelypteris torresiana         |
| 481 | 1981 | villaria                           | 558 | 1981 | Marattia pellucida                  |
| 482 | 1980 | " ssp.submontana                   | 559 | 1980 | Marsilea hirsuta                    |
| 483 | 1981 | wallichiana                        | 560 | 1981 | botryocarpa                         |
| 484 | 1981 | species                            | 561 | 1981 | glomerata                           |
| 485 | 1981 | mixed                              | 562 | 1981 | Matteuccia struthiopteris           |
| 486 | 1981 | Elaphoglossum latifolium           | 563 | 1981 | Merinthosorus drynarioides          |
| 487 | 1981 | schomburgkii                       | 564 | 1980 | Metathelypteris gracilescens        |
| 488 | 1981 | species (Costa Rica)               | 565 | 1980 | singalanensis                       |
| 489 | 1981 | Fadyenia hookeri                   | 566 | 1979 | Microchlaena yunnanensis            |
| 490 | 1979 | Glaphyroidopsis erubescens         | 567 | 1980 | Microlepia hirta                    |
|     |      |                                    | 568 | 1979 | hookeriana                          |

|     |      |   |     |      |                             |
|-----|------|---|-----|------|-----------------------------|
| 569 | 1980 | marginata                                 | 649 | 1980 | chrysophylla                |
| 570 | 1981 | platyphylla                               | 650 | 1981 | triangularis                |
| 571 | 1980 | strigosa                                  | 651 | 1979 | Plagiogyria articulata      |
| 572 | 1979 | villosa                                   | 652 | 1980 | christii                    |
| 573 | 1981 | Microsorium alternifolium                 | 653 | 1980 | glauca                      |
| 574 | 1979 | buergerianum                              | 654 | 1980 | japonica                    |
| 575 | 1979 | climesha                                  | 655 | 1979 | matsumureana                |
| 576 | 1981 | commutatum                                | 656 | 1979 | Platycterium angolense      |
| 577 | 1981 | diversifolium                             | 657 | 1981 | bifurcatum                  |
| 578 | 1980 | hancockii                                 | 658 | 1980 | " cv.'Diddel'               |
| 579 | 1981 | heterolobium                              | 659 | 1980 | " cv.'Netherlands'          |
| 580 | 1981 | howeanum                                  | 660 | 1980 | coronarum                   |
| 581 | 1979 | membranaceum                              | 661 | 1980 | grande                      |
| 582 | 1980 | nigrescens                                | 662 | 1980 | hillii                      |
| 583 | 1981 | punctatum                                 | 663 | 1981 | " cv.'Pumilum'              |
| 584 | 1980 | scolopendrium                             | 664 | 1980 | " (wide pinnae form)        |
| 585 | 1981 | superficiale                              | 665 | 1979 | holttumii                   |
| 586 | 1979 | Monachosorum flagellare                   | 666 | 1981 | ridleyi                     |
| 587 | 1979 | maximowiczii                              | 667 | 1981 | stemmaria                   |
| 588 | 1980 | Nannothelypteris camerinensis             | 668 | 1981 | superbum                    |
| 589 | 1979 | Nephrolepis acuminata                     | 669 | 1981 | " var.tamburense            |
| 590 | 1980 | auriculata                                | 670 | 1979 | vassei                      |
| 591 | 1981 | cordifolia                                | 671 | 1981 | veitchii                    |
| 592 | 1980 | " (crested)                               | 672 | 1980 | willinckii                  |
| 593 | 1981 | " cv.'Plumosa'                            | 673 | 1981 | Pleocnemia broneniortii     |
| 594 | 1979 | davallioides                              | 674 | 1980 | Plesoneuron saviensis       |
| 595 | 1979 | exaltata                                  | 675 | 1980 | Pneumatopteris costata      |
| 596 | 1980 | hirsutula                                 | 676 | 1980 | laevis                      |
| 597 | 1981 | resinifera                                | 677 | 1981 | Polybotrya guatepe          |
| 598 | 1979 | saligna                                   | 678 | 1980 | Polypodium aureum           |
| 599 | 1981 | Notholaena dealbata                       | 679 | 1981 | " cv.'Cristatum'            |
| 600 | 1979 | cochisensis                               | 680 | 1980 | " var. sporadocarpum        |
| 601 | 1979 | rigida                                    | 681 | 1980 | crassifolium                |
| 602 | 1981 | sinuata                                   | 682 | 1981 | glycyrrhiza                 |
| 603 | 1979 | trichomanoides                            | 683 | 1981 | grande                      |
| 604 | 1979 | Nothoperanema hendersonii                 | 684 | 1981 | integrifolium cv.'Cristata' |
| 605 | 1979 | Onychium japonicum                        | 685 | 1981 | interjectum                 |
| 606 | 1981 | Oleandra articulata                       | 686 | 1979 | irioides                    |
| 607 | 1980 | neriiformis                               | 687 | 1979 | laevigatum                  |
| 608 | 1981 | Onoclea sensibilis                        | 688 | 1979 | longissimum                 |
| 609 | 1981 | Oreopteris limbosperma                    | 689 | 1979 | membranaceum                |
| 610 | 1981 | Osmunda claytoniana                       | 690 | 1981 | phyllitidis                 |
| 611 | 1981 | regalis                                   | 691 | 1981 | polycarpon cv.'Grandiceps'  |
| 612 | 1980 | " var.gracilis                            | 692 | 1981 | sanctae-rosae               |
| 613 | 1981 | " cv.'Violacea'                           | 693 | 1981 | scolopendria                |
| 614 | 1980 | Paesia scaberula                          | 694 | 1981 | scouleri                    |
| 615 | 1981 | Paraceterach muelleri                     | 695 | 1981 | tasselata                   |
| 616 | 1980 | Parathelypteris gramminitoides            | 696 | 1981 | virginianum                 |
| 617 | 1979 | Pellaea adiantoides                       | 697 | 1981 | vulgare                     |
| 618 | 1981 | atropurpurea                              | 698 | 1981 | " cv.'Bifidum Cristatum'    |
| 619 | 1980 | falcata                                   | 699 | 1981 | " cv.'Cornubiense'          |
| 620 | 1980 | " var.nana                                | 700 | 1980 | " cv.'Longicaudatum'        |
| 621 | 1981 | glabella                                  | 701 | 1979 | " cv.'Ramosum'              |
| 622 | 1981 | hastata                                   | 702 | 1981 | " cv.'Rothmales'            |
| 623 | 1981 | intermedia                                | 703 | 1981 | species (ca. 3"; B.C.)      |
| 624 | 1980 | rotundifolia                              | 704 | 1980 | " (Kenya)                   |
| 625 | 1981 | viridis                                   | 705 | 1980 | " (Tahiti)                  |
| 626 | 1979 | " var.macrophylla                         | 706 | 1981 | Polystichum acrostichoides  |
| 627 | 1981 | wrightiana                                | 707 | 1981 | " f.acrostichoides          |
| 628 | 1979 | Peranema cyatheoides                      | 708 | 1981 | " cv.'Crispum'              |
| 629 | 1981 | luzonica                                  | 709 | 1981 | " cv.'Cristatum'            |
| 630 | 1981 | Phanerophlebia caryotidea var.micropteris | 710 | 1981 | aculeatum                   |
| 631 | 1979 | nobilis                                   | 711 | 1980 | " cv.'Grandiceps'           |
| 632 | 1980 | umbonata                                  | 712 | 1981 | andersonii                  |
| 633 | 1979 | Phegopteris hexagonoptera                 | 713 | 1980 | australiense                |
| 634 | 1981 | Phlebodium aureum cv.'Sporadocarpum'      | 714 | 1981 | braunii                     |
| 635 | 1981 | decumanum                                 | 715 | 1980 | craspedosorum               |
| 636 | 1981 | Phyllitis scolopendrium (Europe)          | 716 | 1979 | eximium                     |
| 637 | 1981 | " cv.'Angustata Undulatum'                | 717 | 1979 | fallax                      |
| 638 | 1980 | " cv.'Capitatum'                          | 718 | 1980 | formosum                    |
| 639 | 1979 | " cv.'Cristatum Muricatum'                | 719 | 1980 | lepidocaulon                |
| 640 | 1979 | " cv.'Cristatum Digitatum'                | 720 | 1981 | lineare                     |
| 641 | 1981 | " cv.'Laceratum'                          | 721 | 1981 | lonchitis                   |
| 642 | 1981 | " (trested)                               | 722 | 1979 | longifrons                  |
| 643 | 1981 | " (crested & twisted)                     | 723 | 1979 | makinoi                     |
| 644 | 1981 | " (Woodley's L.A.)                        | 724 | 1981 | microchlamys                |
| 645 | 1980 | Phymatodes vieillardii                    | 725 | 1981 | munitum                     |
| 646 | 1980 | Pityrogramma argentea                     | 726 | 1981 | " var.imbricans             |
| 647 | 1979 | calomelanos                               | 727 | 1980 | neolobatum                  |
| 648 | 1980 | " X chrysophylla                          | 728 | 1979 | otomasui                    |

|     |      |                                      |     |      |                                  |
|-----|------|--------------------------------------|-----|------|----------------------------------|
| 729 | 1979 | ovato-paleaceum                      | 809 | 1980 | mollis                           |
| 730 | 1981 | proliferum                           | 810 | 1981 | varia                            |
| 731 | 1979 | pseudo-makinoi                       | 811 | 1981 | Quercifilix zeylanica            |
| 732 | 1979 | retroso-paleaceum                    | 812 | 1981 | Rumohra adiantiformis            |
| 733 | 1981 | rhizophyllum                         | 813 | 1981 | Sadleria cyatheoides             |
| 734 | 1979 | richardii                            | 814 | 1981 | Schellollepis subauriculata      |
| 735 | 1981 | scopulinum                           | 815 | 1980 | Scyphularia pentaphylla          |
| 736 | 1981 | setiferum                            | 816 | 1980 | Selaginella ascendens            |
| 737 | 1981 | " cv. 'Acutilobum'                   | 817 | 1979 | plumosa                          |
| 738 | 1981 | " cv. 'Congestum'                    | 818 | 1981 | pulcherrima                      |
| 739 | 1980 | " cv. 'Congestum Grandiceps'         | 819 | 1980 | Selliguea feei                   |
| 740 | 1981 | " cv. 'Divisilobum'                  | 820 | 1979 | lima                             |
| 741 | 1981 | " cv. 'Divisilobum Densum'           | 821 | 1980 | Schaffneria nigripes             |
| 742 | 1981 | " cv. 'Divisilobum Densum (crested)' | 822 | 1980 | Sphaerostephanos cooperi         |
| 743 | 1980 | " cv. 'Divisilobum Mrs. Goggeys'     | 823 | 1980 | erectus                          |
| 744 | 1979 | " cv. 'Divisilobum Iveryanum'        | 824 | 1981 | invisus                          |
| 745 | 1979 | " cv. 'Divisilobum Mde. Patti'       | 825 | 1980 | lastreoides                      |
| 746 | 1979 | " cv. 'Falcatum Dyce'                | 826 | 1980 | productus                        |
| 747 | 1979 | " cv. 'Latipes'                      | 827 | 1980 | punctatus                        |
| 748 | 1981 | " cv. 'Perserratum'                  | 828 | 1980 | todayensis                       |
| 749 | 1981 | " cv. 'Polydactyla'                  | 829 | 1981 | unitis                           |
| 750 | 1981 | " cv. 'Rotundatum'                   | 830 | 1981 | Solanopteris brunei              |
| 751 | 1979 | " cv. 'Tripinnatum'                  | 831 | 1980 | Stegnogramma mollissima          |
| 752 | 1979 | tagawanum                            | 832 | 1981 | Stenochlena milnei               |
| 753 | 1979 | triangulum                           | 833 | 1981 | palustris                        |
| 754 | 1981 | " var. illicifolium                  | 834 | 1980 | Sticherus flabellatus            |
| 755 | 1979 | tripteron                            | 835 | 1981 | Syngramma luzonica               |
| 756 | 1981 | tsus-simense                         | 836 | 1979 | species                          |
| 757 | 1981 | vestitum                             | 837 | 1981 | Taenitis blechnoides             |
| 758 | 1981 | whiteleggii                          | 838 | 1980 | Tapeinidium gracile              |
| 759 | 1981 | yaegamense                           | 839 | 1979 | luzonicum                        |
| 760 | 1981 | species                              | 840 | 1980 | Tectaria angulata                |
| 761 | 1980 | Pronephrium asperum                  | 841 | 1980 | codinata                         |
| 762 | 1981 | cuspidatum                           | 842 | 1980 | maingayi                         |
| 763 | 1980 | laphimpure                           | 843 | 1980 | muelleri                         |
| 764 | 1980 | Pseudophegopteris paludosa           | 844 | 1980 | simonsii                         |
| 765 | 1981 | Pteridium aquilinum                  | 845 | 1981 | trifoliata var. heracleifolia    |
| 766 | 1980 | esculentum                           | 846 | 1979 | species (Borneo)                 |
| 767 | 1981 | Pteridrys microtheca                 | 848 | 1979 | species (Borneo)                 |
| 768 | 1981 | Pteris altissima                     | 849 | 1981 | Tectaridium primitivum           |
| 769 | 1981 | argyraea                             | 850 | 1979 | Thelypteris arida                |
| 770 | 1980 | biaurita                             | 851 | 1981 | decursive-pinnata                |
| 771 | 1980 | cretica                              | 852 | 1981 | dentata                          |
| 772 | 1981 | " cv. 'Albolineata'                  | 853 | 1980 | esquirolii                       |
| 773 | 1980 | " cv. 'Albolineata Alexandra'        | 854 | 1979 | gigantea                         |
| 774 | 1980 | " cv. 'Albolineata Cristata'         | 855 | 1981 | guadaloupensis                   |
| 775 | 1981 | " cv. 'Mayi'                         | 856 | 1981 | hexagonoptera                    |
| 776 | 1980 | " cv. 'Parkeri'                      | 857 | 1980 | japonica                         |
| 777 | 1981 | " cv. 'Rivertoniana'                 | 858 | 1980 | lepida                           |
| 778 | 1981 | " cv. 'Rowei'                        | 859 | 1980 | megaphylla                       |
| 779 | 1981 | " cv. 'Wilsonii'                     | 860 | 1980 | nevadensis                       |
| 780 | 1980 | " cv. 'Wimsettii'                    | 861 | 1981 | novaboracensis                   |
| 781 | 1980 | ensiformis                           | 862 | 1980 | omiensis                         |
| 782 | 1981 | " cv. 'Evergemeiensis'               | 863 | 1980 | opposita                         |
| 783 | 1981 | " cv. 'Victoriae'                    | 864 | 1980 | palustris                        |
| 784 | 1980 | excelsa                              | 865 | 1980 | patens var. lepida               |
| 785 | 1979 | formosana                            | 866 | 1981 | phegopteris                      |
| 786 | 1981 | glaucovirans                         | 867 | 1981 | puberula                         |
| 787 | 1980 | kaisenek                             | 868 | 1979 | quadrangularis var. versicolor   |
| 788 | 1980 | kuschinuensis                        | 869 | 1979 | quelpaertensis                   |
| 789 | 1979 | longipinna                           | 870 | 1981 | repens                           |
| 790 | 1980 | longipinnula                         | 871 | 1981 | resinifera                       |
| 791 | 1980 | mertensiooides                       | 872 | 1980 | simplex                          |
| 792 | 1980 | multifida                            | 873 | 1981 | thelypteroides                   |
| 793 | 1980 | pacifica                             | 874 | 1981 | torresiana                       |
| 794 | 1981 | pellucida                            | 875 | 1980 | truncatula                       |
| 795 | 1980 | quadriaurita var. varicolor          | 876 | 1979 | species (Borneo)                 |
| 796 | 1980 | tremula                              | 877 | 1979 | "                                |
| 797 | 1980 | " (fine-cut form)                    | 878 | 1980 | Todea barbara                    |
| 798 | 1980 | ? cv. 'Distinction'                  | 879 | 1980 | Trichipteris aspera              |
| 799 | 1980 | tripartita                           | 880 | 1980 | Trismeria trifoliata             |
| 800 | 1980 | umbrosa                              | 881 | 1981 | Woodsia ilvensis                 |
| 801 | 1980 | vittata                              | 882 | 1981 | obtusa                           |
| 802 | 1980 | wallichiana                          | 883 | 1981 | oregana                          |
| 803 | 1979 | species (Borneo)                     | 884 | 1981 | Woodwardia areolata              |
| 804 | 1980 | Pyrrosia abbreviata                  | 885 | 1981 | fimbriata                        |
| 805 | 1980 | adnascens                            | 886 | 1980 | orientalis                       |
| 806 | 1981 | dielsii                              | 887 | 1980 | unigemmata                       |
| 807 | 1980 | hastata                              | 888 | 1981 | Mixture of Australian ferns      |
| 808 | 1980 | lingua                               | 889 | 1981 | Unknown genera from South Africa |

# Eth Williams' Merry Stems

## Growing Tips for Horticulturists

DIATOMACEOUS EARTH will interest indoor and outdoor fern gardeners who look for organic solutions to their pesticide problems. D.e. has been used primarily on crops, fruit trees and vegetable gardens, but it also has great possibilities for ridding plants, including ferns, of pests in greenhouses, homes and terrariums. Non-toxic, without harmful residue, non-pollutant, d.e. is safe for humans and animals while insects are killed on contact.

An informative article titled, "Mother Nature's Bug Killer", by Anthony De Crosta in the June 1979 issue of ORGANIC GARDENING, described the composition, source, uses of d.e. and how it works as a pesticide.

D.e., found in large deposits of soft, chalky rock in various parts of the world, including the western United States, is composed of the fossilized silica shells of one-celled microscopic algae. Widely used in swimming pool filters and as industrial abrasives, after refining it can be fed safely to animals to rid them of worms and intestinal parasites. D.e. is in everything from tooth-paste to dynamite.

Mr. De Crosta has this to say about how it works against insects: "Purely a natural product, d.e.'s action against insects is strictly mechanical. Each diatom shell is covered with a pattern of tiny holes. Milling breaks down these shells into microscopic, razor-sharp needles of silica. The silica particles kill insects by attacking the wax coating that covers their external skeletons, a thin, hard frame that is the only thing keeping their vital fluids inside. If an object is small and sharp enough - like d.e. - it will scratch the seal, puncture the skeleton, and cause the insect to lose moisture and die. Some of these very fine abrasive particles find their way inside certain insects and interfere with their breathing, digestion and reproduction, as well as their ability to move."

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Bronx, New York 10458

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D.e. can be applied by brushing on stems and leaves that have previously been misted or by spraying with a mixture of two tablespoons of diatom powder to one gallon of water with a shaving or two added of flax or Fels Naptha soap. Care must be taken to wet the entire plant, and to agitate the container constantly to keep the powder in suspension.

D.e. can be bought at some pet-aquarium stores under the name of Diatom Powders for about \$2.50 a pound, which is enough to last a fern gardener a long time.

As a trial run, I misted for black and green aphids on *Phyllitis scolopendrium* and some young *Adiantums*. The next day only the odd aphid was evident and there was no visible damage to the plants, including the *Adiantums*' new growth. This is surely good news. D.e. should also be useful outdoors, especially for limestone cobbles where walking fern and other prized small ferns are so alluring to slugs. (In this case d.e. can be sprinkled directly on the ground.) Mealy bug, white fly, mites and other pests are reported to be controlled by d.e. My only complaint as a result of this short trial is that the mister nozzle clogged frequently so that the application tended to be uneven and laborious.

FRONDS, INC. of Cincinnati, Ohio, recently sent their interesting listing of Hardy Ferns and Shade Plants. The hardy ferns included some rare varieties of *Athyrium* and *Dryopteris* that are not generally on the market, i.e., are not listed in Will Morrissy's Fern Sources of the United States (FF 8(5):35-38).

All plants are grown in ground beds, according to the folder, and the sizes of plants shipped are equal to plants grown in 4-6 inch containers. Those marked 'Specimen' are equal to one-gallon pot sizes or larger. Minimum order is \$15.00. Inquiry about wholesale prices is invited. Price list is available by writing to FRONDS, INC., Box 20026, Cincinnati, Ohio 45220.

Send in your TIPS, QUESTIONS, and OPINIONS to  
Eth Williams, 57 Clinton St, White Plains, NY 10603.

