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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

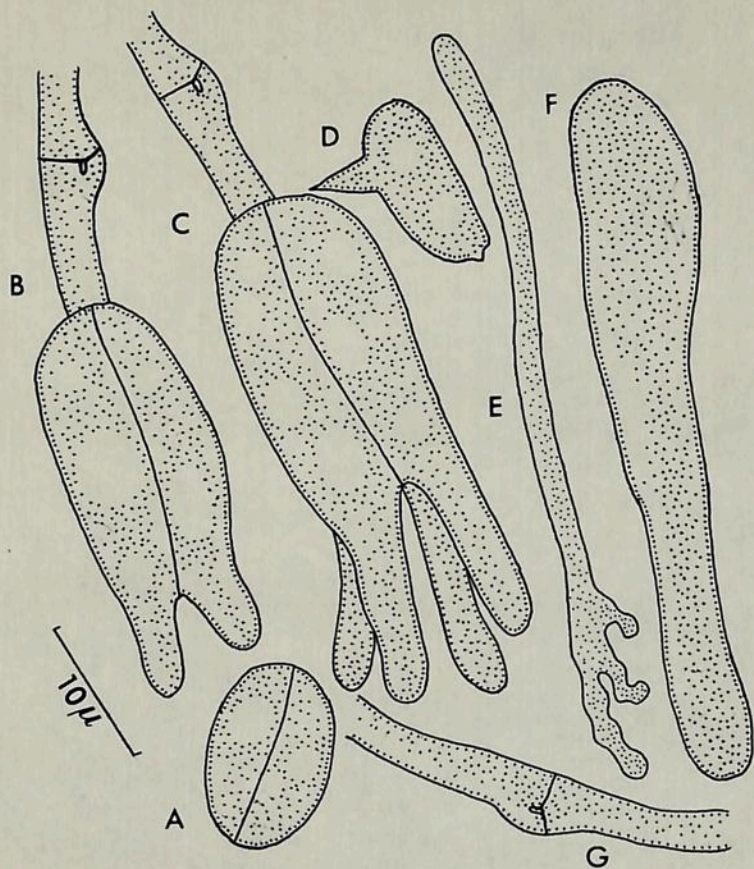


Fig. 1. *Heterochaete maculata* Lowy (Dumont-VE 5672). A, 2-celled probasidium; B, 2-sterigmate, developing basidium; C, 4-sterigmate metabasidium, sterigmata not fully formed; D, basidiospore germinating by repetition; E, apically branched dikaryoparaphysis; F, gloeocystidium; G, hypha with clamp connection.

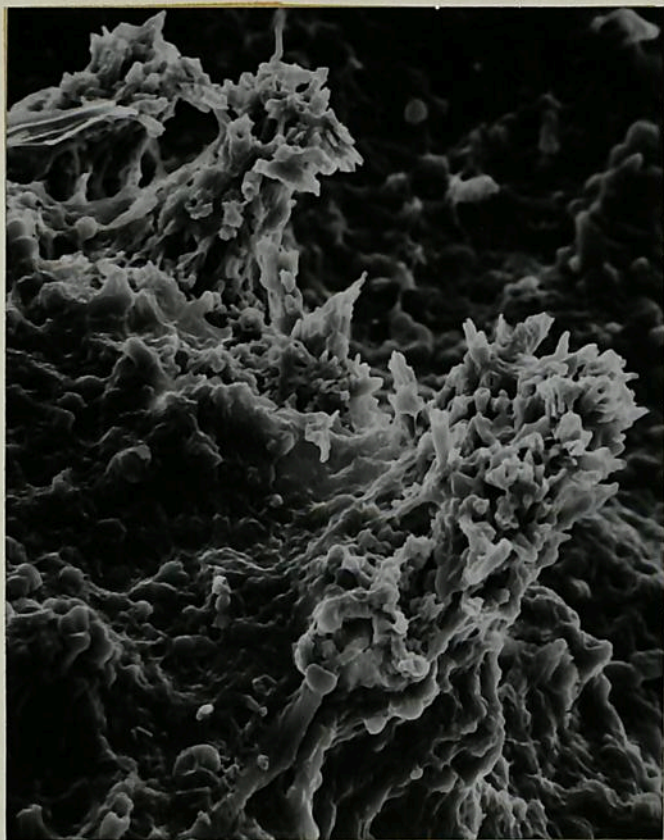


Fig. 2. Fragment of hymenial surface of Heterochaete maculata showing 3 pegs, one in foreground, two in background. Note also the convoluted hymenium. apx. X 1500.



Department of Botany  
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Muchas gracias,  
Bernard

[MS for MYCOTAXON - A new sp. of Dactylopusia from Brazil.]


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## A NEW SPECIES OF DACRYOPINAX FROM BRAZIL

B. Lowy

Botany Department, Louisiana State University  
Baton Rouge, LA 70803Dacryopinax maxidorii Lowy, sp. nov.

Fructificatio in humido aurantiolutea, elastico-gelatinosa, pileata, 4.5 cm alta ad 5 cm lata; sicca cornea, ferrugineo-brunnea; caulis elongatus, firme radicans, conspicuus, crassi-venatus; in sicco dense albido-tomentosus; apicis alte ramosus, deinde polycephalus, lobuli flabelliforme ad 450 crassis cum margine crenulata; hymenio glabrum, unilaterali, inferiori, pauci pilosa; probasidia cylindratae, aseptatae, 30.0-36.5 X 4.5  $\mu$ m, metabasidia furcata, aseptata, bisterigmata; hyphae endosae, 2.0-3.0  $\mu$ m diam; basidiosporae leviter curvulo-cylindratae vel subovoideae, uniseptatae, in cumulo aurantiaco-lutea, (7.0-) 8.0-10.0 (-11.5) X 4.5-5.0  $\mu$ m, per promycelium aut conidia germinantes; conidia subspherica, 1.5-2.5  $\mu$ m diam.

Fructification when fresh rubbery gelatinous, orange-yellow, stipitate, pileate, up to 4.5 cm in height, 5 cm broad (Fig. 1); drying horny, rusty brown; arising from a broad, elongated, firmly rooted, sterile stalk; thick veined, densely whitish-pilose when dry, with pilosity diminishing upward; deeply branched apically, frequently becoming polycephalic with broad, veined, flabelliform lobes  $\pm$  450  $\mu$ m thick, often with crenate margins; hymenium unilateral, inferior, producing a dense palisade of basidia; abhymenium thinly covered with hyaline, cylindrical to slightly inflated, unbranched hairs, unicellular to sparsely septate, arising from a layer of irregularly inflated hyphae; probasidia cylindrical, unicellular, 30.0-36.5 X 4.0-4.5  $\mu$ m; occasional cylindrical, slender, unbranched dikaryophyses 20-25 X 2.5-3.0  $\mu$ m; metabasidia furcate, bisterigmate; hyphae without clamp connections,

2.0-3.0  $\mu\text{m}$  diam; basidiospores slightly curved-cylindrical to subovoid with narrowed apices and prominent apiculus, with a single, thick, central septum, (7.0-) 8.0-10.0 (-11.5) X 4.5-5.0  $\mu\text{m}$ , producing subspherical conidia 1.5-2.5  $\mu\text{m}$  diam, or germinating by germ tube.

Holotype, Brazil. Lowy 190 BR (TYPE), km 405 Manaus-Porto Velho road, Amazonas, 16-IX-1980.  
Leg. B. Lowy, D. Coelho. On unidentified log.

This species is named for Maxine and Doris Lowy, enthusiastic collectors of tremellaceous fungi.

In gross morphology the new species somewhat resembles D. indacocheae Lowy (1959), except for the latter's stubby stalk, thinner lobes, and brownish to earth-colored pigmentation. However, the long stalk, bright carotinoid pigmentation, and flabelliform lobes of the new species places it closer to D. martinii Lowy (1971).

The basidiospores of these three species are predominantly 1-septate, but D. maxidorii shares with D. indacocheae somewhat curved-cylindrical spores with a single, thick septum whereas the spores of D. martinii are characteristically thin septate.

The following revised key includes the seven known species of Dacryopinax occurring in tropical America.

1. Basidiocarp slightly expanded apically; pileus simple or branched. . . . . 2
  2. Stipe tomentose; basidiospores becoming 1-septate. . . . . D. spathularia
  2. Stipe not tomentose; basidiospores becoming 3-septate. . . . . D. dennisii
1. Basidiocarp broadly expanded apically; pileus grossly lobed to flabelliform or polycephalic . . . . 3
  3. Long stipitate; pileus flabelliform. . . . . 4
  3. Short stipitate to substipitate; pileus not flabelliform. . . . . 5
    4. Abhymenium and stipe smooth; dried pileus thin, fragile. . . . . D. martinii
    4. Abhymenium and stipe pilose; dried pileus thick, robust. . . . . D. maxidorii
  5. Hymenium coarsely papillate, yellow when fresh, . . . . . D. yungensis
  5. Hymenium smooth, not yellow when fresh . . . . 6
    6. Pileus spreading-orbiculate, undivided, drying dark brown to blackish. . . . . D. elegans
    6. Pileus foliose, deeply lobed, drying light brown, . . . . . D. indacocheae

## ACKNOWLEDGEMENTS

Thanks are due The New York Botanical Garden, the Instituto Nacional de Pesquisas da Amazonia (Manaus, Amazonas, Brasil), and Louisiana State University (Baton Rouge, LA), under whose sponsorship the field work was completed as part of the Projecto Flora Amazonica.

## LITERATURE CITED

- Lowy, B. 1959. New or Noteworthy Tremellales from Bolivia. *Mycologia* 51: 840-850.
- \_\_\_\_\_. 1971. Tremellales. *Flora Neotropica*. Monograph 6, Hafner Publishing Company, Inc. New York.

LOUISIANA STATE UNIVERSITY  
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences



DEPARTMENT OF BOTANY

17-II-1977

Prof. Richard P. Korf  
Mycotaxon  
P.O. Box 264  
Ithaca, NY 14850

Dear Dick:

I am submitting the enclosed 5-page ms (including 2 plates), entitled "A New Heterochaete" for your consideration.

The reviewer is Arthur Welden, Department of Botany, Tulane University, New Orleans, LA 70118.

Please return both ms and plates when you have finished with them. Appropriate postage is included for this purpose.

Sincerely yours,

B. Lowy

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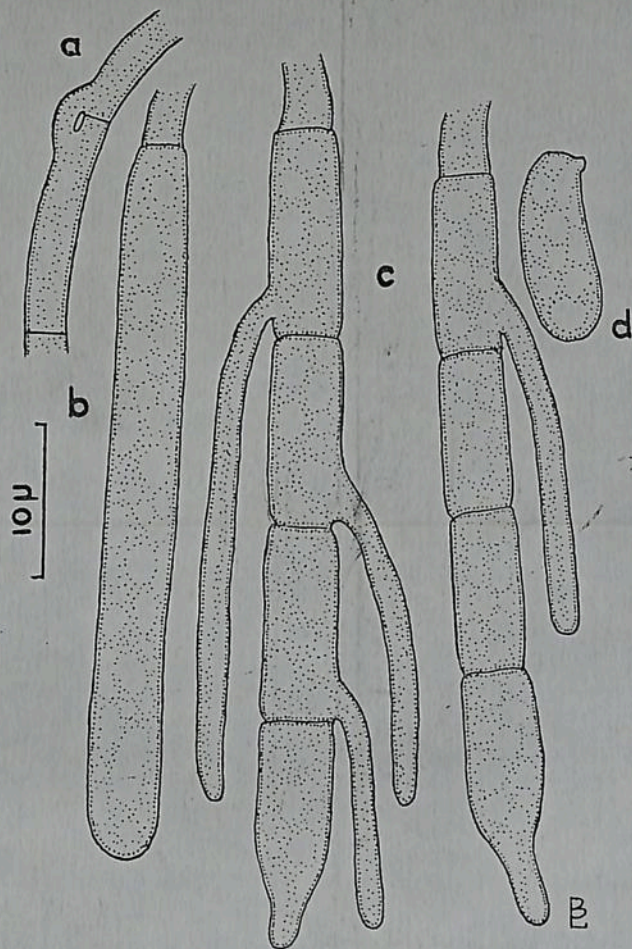


FIG. 2. *Auricularia polytricha*. a, hypha with clamp; b, probasidium; c, two metabasidia with developing sterigmata; d, basidiospore. Municipio de Gama, Brasília, Brazil. Lowy 97 B, 17 Aug 1965 (LSUM).

as glued - up

## A NEW HETEROCHAETE

B. LOWY

Department of Botany, Louisiana State University  
Baton Rouge 70803

Heterochaete maculata Lowy, sp. nov.

Figs. 1-2

Fructificatio in humido ceraceo-gelatinosa, tenua, resupinata, maculata, confluens, fusca, minuta (2-4 mm late X 50-75  $\mu$ m crassa); in sicco atrofusca; setulis gelatinosus, rectus, scopulosus, dispersis,  $\pm$  70 X 30  $\mu$ m, cum apicibus albidis; dikaryoparaphyseae angusto-cylindratae, sparsae, ad apicem ramosae; hyphae nodosae; gloeocystidia numerosa, irregulariter subclavata, 45-55 X 6-8  $\mu$ m; metabasidia plerumque ovoidea vel ovoidea-elongata, 16.5-21.0 X 8.5-10.5  $\mu$ m, cruciatim septata; basidiosporae leviter curvato-cylindratae, 10.5-12.0 X 4.5-5.5  $\mu$ m, per repetitionem germinantes.

Holotype: Venezuela. Rio Caracas, Dto. Fed. On unidentified wood, 22-VII-1972. Leg. K.P. Dumont, R.F. Cain, G.J. Samuels & B. Manara. Dumont VE-5672 (NY); Isotypes (LSUM), (VEN).

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450

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451

Fig. 2. Fragment of hymenial surface of Heterochaete maculata showing 3 pegs, one in foreground, two in background. Note also the convoluted hymenium. apx.  $\times 1500$ .

of sterile hymenial structures termed pegs, which are gelatinized and composed of compact fascicles of more or less parallel hyphae that arise from the subhymenium. They may be quite small (as in H. maculata) but are generally clearly visible under a hand lens, although their distribution may be sparse. In order to examine more closely the gross structure of the pegs of H. maculata, a portion of the type collection was mounted with silver conducting paint on an aluminum disc, coated in vacuo with a layer of gold (ca 20

452

nm) and observed with a Hitachi S-500 scanning electron microscope operated at 20 kv. Fig. 2 shows that the pegs are composed of craggy bundles of gelatinized hyphae. A comparative study of the sterile hymenial elements of other Heterobasidiomycetidae (Exidia, Pseudohydnum, Protodontia) is under way, since this may reveal significant morphological features heretofore overlooked which may provide additional taxonomically useful criteria on the generic level.

The pegs of Heterochaete sometimes have basidiospores clinging to them and consequently may act as a spore dispersal mechanism through the agency of insects. The same may be true of the papillae of Exidia spp. which I have observed are also frequently covered with basidiospores. Sterile hymenial structures such as spines, setae and asterophyses, found in other Basidiomycetes, may serve this function as well.

The new species appears to be closest to Heterochaete sanctae-martae Bodman (1952) from Colombia, the type collection of which I have examined (SUI). H. maculata differs from this in its gross morphology, characterized by small, irregular patches surrounded by a whitish mycelial zone and by its prominent gloeocystidia (Fig. 1 F) which are absent in H. sanctae-martae.

#### ACKNOWLEDGMENT

For the operation of the scanning electron microscope, the technical assistance of Mr. Michael T. Postek of the LSU Botany Department is gratefully acknowledged.

#### REFERENCE CITED

- Bodman, M.C. 1952. A taxonomic study of the genus Heterochaete. Lloydia 15: 193-233.

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Department of Botany, Louisiana State University  
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One of the distinguishing criteria for the separation of Heterochaete from Exidia is the presence in the former of sterile hymenial structures termed pegs, which are gelatinized and composed of compact fascicles of more or less parallel hyphae that arise from the subhymenium. They may be quite small (as in H. maculata) but are generally clearly visible under a hand lens, although their distribution may be sparse. In order to examine more closely the gross structure of the pegs of H. maculata, a portion of the type collection was mounted with silver conducting paint on an aluminum disc, coated in vacuo with a layer of gold (ca 20 nm) and observed with a Hitachi S-500 scanning electron microscope operated at 20 kv. Fig. 2 shows that the pegs are composed of craggy bundles of gelatinized hyphae. A comparative study of the sterile hymenial elements of other Heterobasidiomycetidae (Exidia, Pseudohydnum, Protodontia) is under way, since this may reveal significant morphological features heretofore overlooked which may provide additional taxonomically useful criteria on the generic level.

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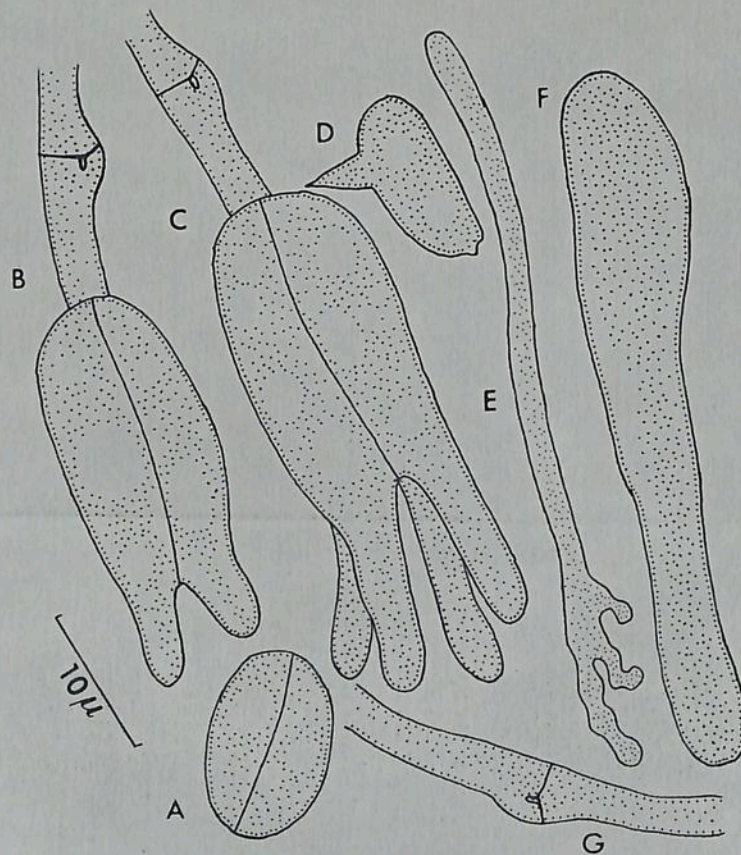


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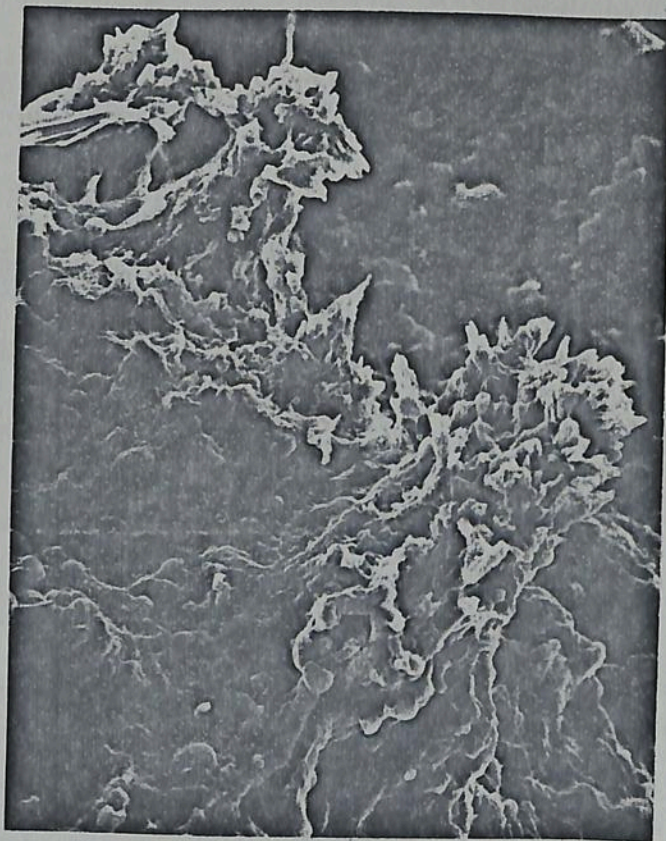


Fig. 2. Fragment of hymenial surface of Heterochaete maculata showing 3 pegs, one in foreground, two in background. Note also the convoluted hymenium. apx. X 1500.

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College of Arts and Sciences

DEPARTMENT OF BOTANY



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In anticipation of my leaving for field work in Guatemala and Mexico late in May, I am enclosing my check for \$33.25 (\$31.75 + \$1.50 estimated postage) for 100 reprints (without covers) of my paper, in the event they are mailed after my departure.

I am indebted to you for your kindness in taking care of these details which certainly go beyond the call of duty.

I hope to see you in Tampa in September.

With best regards,

Bernie

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## MYCOTAXON

Vol. V, No. 2, pp. 449-452

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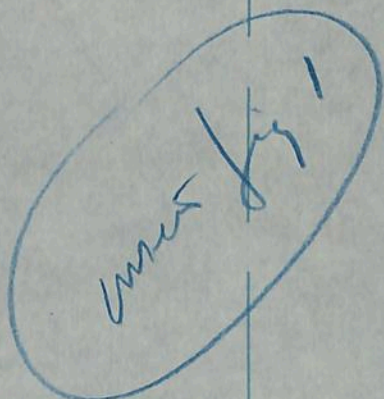
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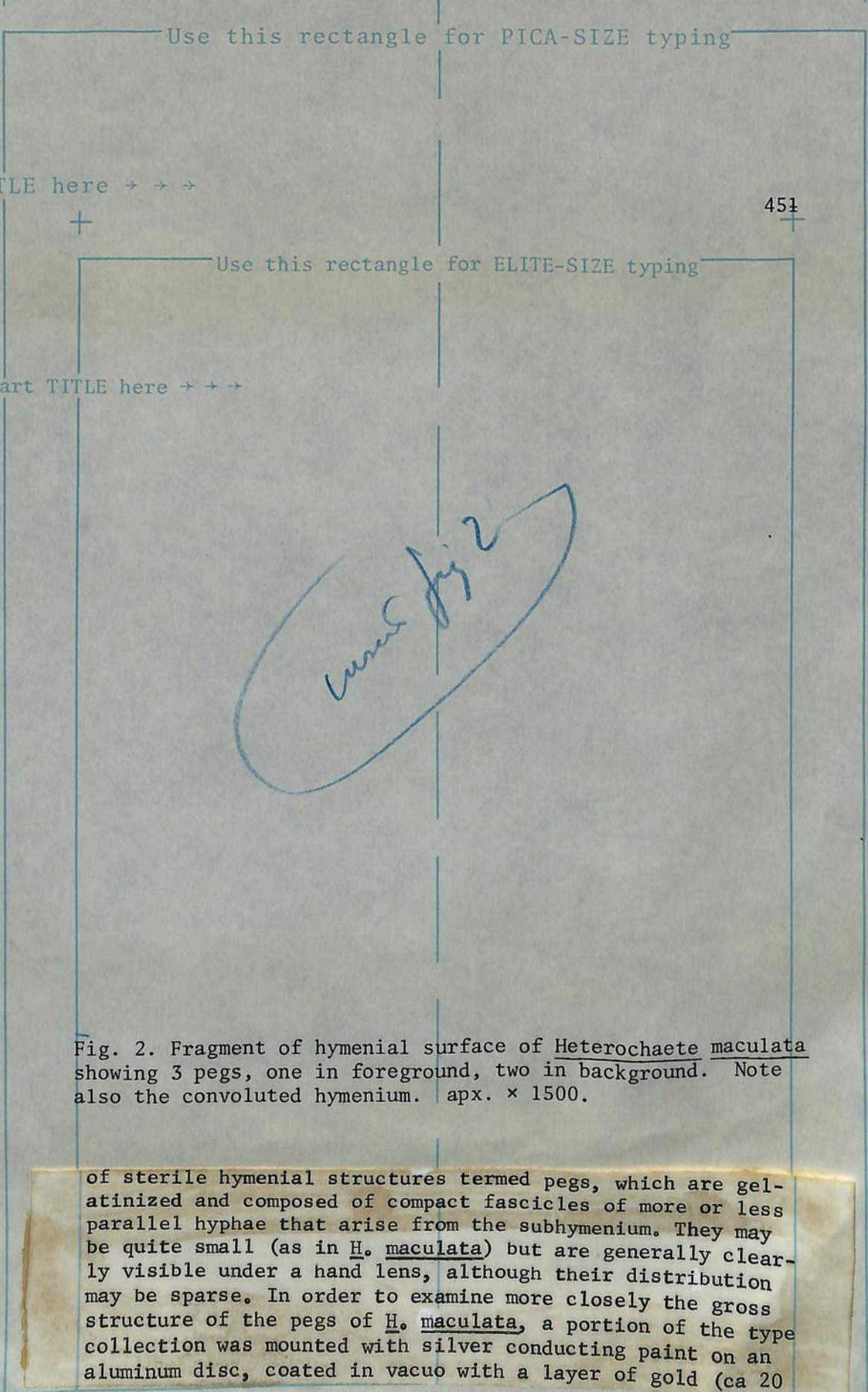
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Fig. 2. Fragment of hymenial surface of Heterochaete maculata showing 3 pegs, one in foreground, two in background. Note also the convoluted hymenium. apx.  $\times 1500$ .

of sterile hymenial structures termed pegs, which are gelatinized and composed of compact fascicles of more or less parallel hyphae that arise from the subhymenium. They may be quite small (as in H. maculata) but are generally clearly visible under a hand lens, although their distribution may be sparse. In order to examine more closely the gross structure of the pegs of H. maculata, a portion of the type collection was mounted with silver conducting paint on an aluminum disc, coated in vacuo with a layer of gold (ca 20

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nm) and observed with a Hitachi S-500 scanning electron microscope operated at 20 kv. Fig. 2 shows that the pegs are composed of craggy bundles of gelatinized hyphae. A comparative study of the sterile hymenial elements of other Heterobasidiomycetidae (Exidia, Pseudohydnum, Protodontia) is under way, since this may reveal significant morphological features heretofore overlooked which may provide additional taxonomically useful criteria on the generic level.

The pegs of Heterochaete sometimes have basidiospores clinging to them and consequently may act as a spore dispersal mechanism through the agency of insects. The same may be true of the papillae of Exidia spp. which I have observed are also frequently covered with basidiospores. Sterile hymenial structures such as spines, setae and asterophyses, found in other Basidiomycetes, may serve this function as well.

The new species appears to be closest to Heterochaete sanctae-martae Bodman (1952) from Colombia, the type collection of which I have examined (SUI). H. maculata differs from this in its gross morphology, characterized by small, irregular patches surrounded by a whitish mycelial zone and by its prominent gloeocystidia (Fig. 1 F) which are absent in H. sanctae-martae.

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## REFERENCE CITED

Bodman, M.C. 1952. A taxonomic study of the genus Heterochaete. Lloydia 15: 193-233.

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