

中国科学院植物研究所编辑

植物学集刊

第 2 集

BOTANICAL RESEARCH

CONTRIBUTIONS FROM THE INSTITUTE OF BOTANY

ACADEMIA SINICA

No. 2

科学出版社

SCIENCE PRESS

1987

植物学集刊 第2集

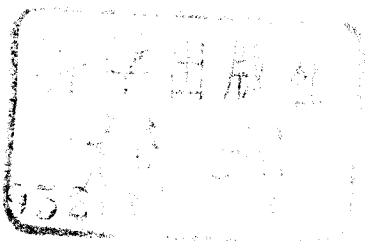
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中 国 蕨 类 植 物 新 种 (1)

NOVITATES FILICUM SINICARUM (I)

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Abstract

The present paper treats of 45 species of *Dryopteris* mainly Sect. *Bulliferae* from Southeast China in preparation for the Flora of China, Vol. V. The specimens were largely collected by the junior author since 1958 and provisionally named in the herbarium, Institutum Botanicum, Academia Sinica. Duplicate specimens are preserved in the Department of Biology, Shanghai Teachers' University.

摘 要

本文发表中国蕨类植物新种 45 种 (包括 2 种重新描述的老种)。它们大都属于鳞毛蕨属 (*Dryopteris*) 的泡鳞组 (Sect. *Bulligerae*)。这些材料大都是本文第二作者由 1958 年起到 1980 年止,在华东、华南各省广泛采集的。现将拉丁文描述发表如下,中文描述将见于《中国植物志》第五卷,不在此重复。

龙泉鳞毛蕨 新种 图版 I, 图 1

Dryopteris lungquanensis Ching et Chiu, sp.
nov. Sect. *Bulligerae* Ser. *Fuscipedes*

Species gregis *D. fuscipedis* C. Chr., recedit statura majore, usque ad 94 cm alta, stipite paleis atrobrunneis lanceolatis sat dense vestito, rachi paleis dilute fusco-brun-

neis minoribus ab initio praedita, pinnulis majoribus margine crenulatis, soris costularibus.

Zhejiang austr.: Lungquan Xian, Feng-Yang Shan, P. C. Chiu 4079 (typus), VI, 1964.

Tota planta usque ad 94 cm alta. Stipite usque ad 47 cm longo, 2.5 mm diam., rufo-stramineo, basi paleis atrobrunneis lanceolatis, ca. 1.5 cm longis dense vestito, sursum paleis minoribus dilute fusco-brunneis conspersis; lamina oblonga, ca. 47 cm longa, basi 24 cm lata, acuminata, bipinnata; pinnis pinnatis 7—8-jugis, inferioribus oppositis, patentibus, petiolatis, spatio lato separatis (inferioribus 2-jugis ca. 7 cm inter se remotis), basalibus 12—13 cm longis, 4 cm medio latis, lanceolatis, acuminatis, basi angustatis, petiolatis (petiolo 4 mm longo), pinnatis; pinnulis ca. 13-jugis, patentibus, approximatis, sessilibus, vel paulo adnatis, inter se separatis, basiscopicis quam acroscopicis longioribus, pinnula basali conspicue abbreviata, 1—1.2 cm longa, oblonga, pinnula secunda longiore, 2 cm longa, pinnulis tertia quartaque 2.2 cm longis, oblongis, falcatis, serratis, ad apicem obtusum paulo angustatis, basi rotundatis utrinque dilatatis, margine incis, pinnulis acroscopicis brevioribus, 1.8 cm longis, oblongis, obtusis serratis. Pagina frondis textura in sicco chartacea, costis pinnarum subtus paleis brunneis bullatis sat abunde praeditis, rachi paleis iis stipitis minoribus sparsa. Soris 4—7(8)-jugis pro pinnula, costularibus, indusiis rufo-brunneis, sat magnis, integris.

本种产浙江南部龙泉县风阳山,形体最似黑足鳞毛蕨 *D. fuscipes* C. Chr., 但远较高大,小羽片较大,边缘有缺刻,顶端有锯齿,孢子囊群紧靠中肋,易于区别。

三门鳞毛蕨 新种 图版I, 图2

Dryopteris shanmenensis Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Fuscipedes*

Species gregis *D. fuscipedis* C. Chr., differt stipite aut rachi paleis minoribus nigris obtecto, pinnis multo latioribus, oblongis, proximis, pinnulis duplo longioribus margine crenatis, basi utrinque vix dilatatis, soris costulae approximatis.

Guangxi bor.-orient.: Lungsheng inter Shanmen et Huaping, P. C. Chiu 4577 (typus) in silvis umbrosis.

Tota planta 46 cm alta. Stipite ca. 20 cm longo, 2.5 mm diam., stramineo, parte inferiore paleis nigris lanceolatis longe acuminatis sat abunde obtecto, sursum sparsis minoribusque; lamina ovato-oblonga, ad 28 cm longa, basi 19 cm lata, acuminata, bipinnata; pinnis pinnatis ca. 9-jugis, proximis horizontaliter patentibus, breviter petiolatis, pinnis infimis 10 cm longis, 4 cm latis, oblongis, caudato-acuminatis, pinnatis; pinnulis ca. 10-jugis, sessilibus vel plus minusve adnatis, basiscopicis quam acroscopicis paulo longioribus, basali abbreviata, ca. 1 cm longa, oblonga, pinnulis secunda tertiaque longioribus, 2 cm longis, 8 mm latis, sursum paulo angustatis, apice obtusis, falcatis, basi utrinque nec auriculato-dilatatis, margine crenatis, apice crenulato-dentatis, pinnulis acroscopicis

ad 1.7 cm longis, basali anteriori reducta, 1 cm longa; pinnis secundis ambitu infimis similibus, pinnulis uni-jugis basalibus ad 1.5 cm longis, Pagina frondis textura in sicco chartacea, costis pinnarum subtus subglabris paleis bullatis brunneis parvis sparsis, rachi paleis lanceolatis fuscis linearibus conspersis. Soris sat magnis, 4—8-jugis pro pinnula, costularibus; indusiis magnis, fusco-brunneis persistentibus.

本种产于广西东北部龙胜县花坪与三门之间林区内, 形体最近黑足鳞毛蕨 *D. fuscipes* C. Chr., 但叶柄上的鳞片黑色; 较小, 羽片较宽, 长圆形, 彼此密接, 小羽片较长, 长圆披针形, 边缘有圆齿。基部两侧不为耳状凸起, 孢子囊群大, 紧靠中肋, 叶轴上的鳞片褐棕色。

假黑足鳞毛蕨 新种 图版 I, 图 3

Dryopteris pseudofuscipes Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Fuscipedes*

Species arete affinis *D. fuscipedi* C. Chr., recedit pinnis latioribus fere oblongis, nec lanceolatis, pinnulis multo majoribus, ad 3 cm longis, oblongo-lanceolatis, basi late cuneatis nec rotundatis, margine acute serrulatis, costis pinnarum subtus paleis brunneis bullatis paucis obtectis.

Fujian bor.-occident.: Chong-an Xian, P. C. Chiu, s.n. (typus).

Tota planta ca. 64 cm alta. Stipite ca. 30 cm longo, 3 mm. diam., fusco-stramineo, basi paleis brunneis lanceolatis dense vestito, sursum fere glabro; lamina ca. 35 cm longa, 26 cm lata, ovata, acuminata, basi rotundata, bipinnata; pinnis pinnatis 6-jugis, patentibus, fere proximis, petiolatis, inferioribus 2—3-jugis 5—6 cm distantibus, basalibus unijugis ambitu sequentibus similibus, 16 cm longis, 6 cm latis, oblongis, acuminatis, basi rotundo-cuneatis, petiolatis (petiolo ca. 3 mm longo), pinnatis; pinnulis ca. 12-jugis, patentibus, spatio angusto separatis, sessilibus, paulo adnatis, pinnulis basiscopiceis quam acroscopicis paulo longioribus, pinnula basali abbreviata, ca. 1.5 cm longa, 1.1 cm lata, oblonga, basi rotunda, sessili, margine acute serrulata, pinnula secunda producta, 3 cm longa, pinnula tertia ad 3.5 cm longa, oblonga, superne paulo angustata apice obtusa, basi rotundo-cuneata paulo adnata, margine acute serrulata, pinnulis acroscopicis brevioribus, basali reducta, secunda ad 2.2 cm longa paulo adnata, basi cuneata, pinnula infima postica quam secunda paulo brevior, ad 2.5 cm longa, margine acute serrulata. Pagina frondis textura in sicco chartacea, costis pinnarum subtus paleis parvis bullatis paucis vel fere glabris, rachi straminea, fere glabra. Soris medioeribus, costulae appropinquatis; indusiis firmis, fusco-brunneis, demum delapsis.

本种产于福建崇安县武夷山林下, 形体最近黑足鳞毛蕨 *D. fuscipes* C. Chr., 但羽片较宽, 近长圆形, 不为披针形, 小羽片远较大, 长 3 厘米, 长圆披针形, 基部阔楔形, 不为圆形, 边缘有尖锯齿, 羽轴下面仅有棕色疏鳞片, 故易区别。

新黑足鳞毛蕨 新种 图版 I, 图 4

Dryopteris neofuscipes Ching et Chiu, sp. nov. Sect. *Bulligerae* Ser. *Fuscipedes*

Species habitu magnitudineque *D. fuscipedi* C. Chr., differt stipite rachique paleis brunneis e basi ovata lanceolatis densissime obtectis, costis pinnarum subtus paleis sparsis plerumque bullatis praeditis.

Zhejiang: West Tian-mo Shan, prope Laodien, P. C. Chiu 5323 (typus) in silvis, alt. 1000 m.

本种产于浙江西天目山老殿林下, 形体大小酷似黑足鳞毛蕨 *D. fuscipes* C. Chr., 但叶柄和叶轴密被棕色、基部卵形、向上披针形的鳞片, 羽轴下面的鳞片较稀疏, 大部分为泡状, 小部分为披针形, 故易区别。

拟黑足鳞毛蕨 新种 图版 II, 图 1

Dryopteris parafuscipes Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Fuscipedes*

Species proxime affinis *D. fuscipedi* C. Chr., differt statura minore, basi stipitis paleis nigris lineari-lanceolatis dense obtecta, sursum glabra, pinnis lateralibus pinnatisectis, pinnulis (segmentis) integris, adnatis vel subconfluentibus, costis pinnarum subtus paleis bullatis fere nullis, soris medialibus.

Guangxi centr.: Wu-ming Xian, Da-ming Shan, P. C. Chiu 5114 (typus) in silvis, alt. 1100 m.

Tota planta usque ad 50 cm alta. Stipite stramineo tenui, 13—21 cm longo, 1.2 mm diam., ad basin paleis nigris lineari-lanceolatis 1.2 cm longis dense obtecto, sursum glabro; lamina deltoideo-oblonga, 27 cm longa, basi 18 cm lata truncata, apice acuminata, bipinnata; pinnis pinnatifidis 6—7-jugis, horizontaliter patentibus, oppositis, spatio lato separatis, breviter petiolatis, e basi lata lanceolatis, acuminatis, infimis paulo majoribus, ad 9 cm longis, 3.2 cm basi latis, pinnatisectis; pinnulis (segmentis) ca. 10-jugis, paulo oblique patentibus, basalibus unijugis liberis, sessilibus, ceteris plus minusve adnatis vel confluentibus, inferioribus quam superioribus paulo majoribus, 2 cm longis, 9 mm basi latis, ovato-lanceolatis, integris apice obtusis, pinnula basiscopica infima paulo abbreviata, 1.5 cm longa, ovata-deltoidea, sessili; pinnis sequentibus ambitu similibus, paulo brevioribus, segmentis similibus, basalibus unijugis paulo adnatis. Pagina frondis textura in sicco chartacea, costis pinnarum subtus subglabris, paleis nigris bullatis fere nullis. Soris parvis, 3—5-jugis pro pinnula, medialibus; indusiis fusco-brunneis, firmis, demum delapsis.

本种产于广西中部武鸣县大明山林下, 形体略近黑足鳞毛蕨 *D. fuscipes* C. Chr., 但叶柄基部密被黑色线状披针形鳞片, 向上光滑, 叶片为 2 回羽状全裂, 小羽片合生, 全缘, 羽轴下面光滑, 偶有 1—2 泡状小鳞片, 孢子囊群中生, 故易区别。

桐木鳞毛蕨 新种 图版II, 图2

Dryopteris oblongipinnula Ching et Chiu, sp. nov.

Sect. *Bulligerrae* Ser. *Fuscipedes*

Species adspectu *D. fuscipedi* C. Chr. similis, recedit basi stipitis paleis minoribus rufo-brunneis lineari-lanceolatis vestita, pinnulis anguste oblongis, basi plus minusve adnatis, anguste decurrentibus, costis pinnarum subtus paleis lanceolatis basi vix vel paulo saccatis praeditis.

Fujiang bor.-occident.: Chong-an Xian, Wuyi Shan (Tong-mo), P. C. Chiu 17901, 1227 (typus) in silvis umbrosis.

Tota planta 35—40 cm alta. Stipite 13—23 cm longo, 1.5 mm diam, stramineo, basi paleis brunneis lineari-lanceolatis sparso, sursum glabro; lamina oblonga, 22 cm longa, 13 cm lata, acuminata, bipinnata; pinnis pinnatis 7-jugis, suboppositis, patentibus, breviter petiolatis, proximis vel spatio angusto separatis, late lanceolatis, acuminatis, basilibus uni-jugis 8 cm longis, 2.5 cm latis, basi rotundatis; pinnulis ca. 12-jugis, proximatis, basiscopis inferioribus 3 ambitu similibus, 1.5 cm longis, ca. 5 mm latis, basi subaequalateralibus, anguste decurrentibus, margine integris, apice paulo serratis; pinnis sequentibus basalibus similibus, pinnulis infimis uni-jugis ambitu similibus, antica rachi adpressa. Pagina frondis in sicco tenuiter chartacea, costis pinnarum subtus paleis rufo-brunneis lanceolatis basi paulo saccatis sparse vestito. Soris parvis, 5—4 pro pinnula, medialibus; indusiis fusco-brunneis firmis, demum delapsis.

本种产于福建崇安县武夷山, 形体颇似黑足鳞毛蕨 *D. fuscipes* C. Chr., 但叶柄基部鳞片红棕色, 较小, 狭披针形, 羽轴下面鳞片红棕色, 披针形, 仅基部呈囊状, 小羽片较狭, 多少合生, 有狭翅相连, 基部1对羽片的基部下侧1片不缩短, 而与第二、第三片等长, 第二对片羽的基部下侧下1片小羽片也不缩短, 而与第二片同大, 故易区别。

龙山鳞毛蕨 新种 图版II, 图3

Dryopteris lungshanensis Ching sp. nov.

Sect. *Bulligerrae* Ser. *Fuscipedes*

Species habitu magnitudineque *D. fuscipedi* C. Chr., differt paleis ad basin stipitis nigrescentibus nitidis, pinnulis basi leviter adnatis, utrinque obliquis, margine serrulatis, textura tenuioribus, soris costularibus.

Hunan: Lungshan, L. H. Liu (刘林翰) 1880 (typus) in fruticetis, alt. 1070 m; specimen ex Hunan Forestry Institute.

Guangdong: Wan Tong Shan, H. Y. Liang 60448.

Zhejiang: Sine loc. exacto, no. 39281 ex Herb. Zhejiang Univ.

Tota planta usque ad 70 cm alta. Stipite usque ad 40 cm longo, 1.8 mm diam., pallide stramineo, basi paleis nigrescentibus nitidis lanceolatis vestito, sursum glabro; lamina oblonga, ca. 30 cm longa, 14 cm lata, acuminata, basi rotundata, bipinnata; pinnis pin-

natis ca. 7-jugis, oblique patentibus, oppositis vel sursum alternis, breviter petiolatis, inferioribus 2—3-jugis inter se late separatis, basalibus ca. 10 cm longis, 4—4.5 cm latis, lanceolatis, acuminatis, ad basin angustatis; pinnulis ca. 10-jugis, patentibus, spatio separatis, oblongis, ad apicem paulo angustatis obtusis, basi utrinque obliquis, margine serrulatis, basiscopicis quam acroscopicis longioribus, pinnula infima valde abbreviata, ca. 1.1 cm longa, subovata, integra, pinnulis secunda tertiaque longioribus, 2.3 cm longis, oblongis, obtusis, margine grosse serratis, pinnulis acroscopicis usque ad 1.5 cm longis, margine crenatis; pinnis sequentibus ambitu similibus. Pagina frondis textura tenuiter chartacea, costis pinnarum subtus paleis brunneis bullatis abundantibus, rachis subglabra sed ad insertionem pinnarum paleis brunneis bullatis sat densis. Soris parvis, (6)5—4(3)-jugis pro pinnula, costularibus; indusiis brunneis persistentibus.

本种形体大小酷似黑足鳞毛蕨 *D. fuscipes* C. Chr., 但叶柄基部的披针形鳞片近黑色, 有光泽, 叶柄上部有 1—2 近黑色而较小的披针形鳞片, 小羽片较长, 多少与羽轴合生, 基部两侧斜切, 边缘有锯齿, 孢子囊群靠近中肋, 故易区别。

中生鳞毛蕨 新种 图版 II, 图 4

Dryopteris medialisora Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Fuscipedes*

Species configuratione *D. lushanensis* Ching et Chiu, differt statura majore robustioreque, stipite rachique crassioribus, pinnulis praeter eas pinnarum inferiorum integris, nec crenatis, iis basalibus basiscopicis minoribus, soris in pinnulis medialibus, haud costularibus. Etiam *D. fuscipedi* C. Chr. similis, recedit statura multo majore, crassioreque, pinnis supra basales usque ad 15 cm longis, 4 cm latis, pinnulis majoribus, iis pinnarum inferiorum praecipue basiscopicis elongatis, 2.5—3 cm longis, falcatis margine crenatis, ad apicem angustatis acutisque, costis pinnarum subtus paleis brunneis bullatis fere nullis, soris pro pinnula 5—6-jugis, medialibus.

Zhejiang austr.: Qingyuan Xian, Bei-shan Zu, P. C. Chiu 4286 (typus).

本种产于浙江南部庆元县百山祖林下, 形体颇似黑足鳞毛蕨 *D. fuscipes* C. Chr., 但远较高大和强壮, 高达 86 厘米, 羽片较大, 基部一对宽达 5 厘米, 下侧下部的小羽片长达 3 厘米, 向顶部渐变狭, 钝尖头, 边缘有圆齿, 向上羽片的小羽片全缘或微波状, 孢子囊群每小羽片 5—6 对, 中生, 羽轴下面几无泡状鳞片, 故易区别。

红鳞毛蕨 新种 图版 III, 图 1

Dryopteris rufosquamosa Ching et Chiu sp. nov.

Sect. *Bulligerae* Ser. *Championianae*

Species configuratione arcte affinis *D. integrilobae* C. Chr., differt praecipue paleis ad basin stipitis rufo-brunneis majoribus lanceolatis tenuioribus, sursum glabro, rachis paleis brunneis nec fuscis vestita, pinnis lateralibus e rachis sub angulo 90° recte egredientibus, costis pinnarum subtus paleis paucis lanceolatis basi vix vel paulo saccatis

conspersis, pinnulis pinnarum infimarum longioribus lobato-crenatis ad apicem serrulatis, soris submarginalibus.

Guangxi centr.: Wu-ming Xian, Da-ming-shan, P. C. Chiu 4984 (typus), in silvis umbrosis, alt. 450 m.

Tota planta ca. 55 cm alta, stipite 25 cm longo, 2.2 mm diam., stramineo, basi paleis brunneis lanceolatis ad 2.5 cm longis dense vestito, sursum subglabro; lamina ca. 35 cm longa, basi 20 cm lata, oblonga, acuminata, bipinnata; pinnis pinnatis ca. 9-jugis, horizontaliter patentibus, alternis, (inferioribus oppositis), spatio lato separatis, lanceolatis, acuminatis, basi rotundo-truncatis, rachis adpressis, inferioribus 2-jugis ambitu similibus, 10 cm longis, 3 cm latis, bipinnatifidis; pinnulis ca. 15-jugis, approximatis, patentibus, inferioribus breviter petiolulatis, basiscopiceis quam acroscopicis longioribus, basali abbreviata, 1.5 cm longa, 8 mm lata, lanceolata, acutiuscula, basi subtruncata utrimque auriculata, parte inferiore pinnatifida, sursum crenata, apice integra, pinnula secunda longiore ad 2 cm longa, pinnula tertia ambitu fere simili vel paulo brevior. Pagina frondis textura in sicco chartacea, costis pinnarum subtus paleis brunneis lanceolatis, basi nec bullatis sed paulo saccatis conspersis. Soris parvis submarginalibus, 6—8-jugis pro pinnula, indusiis rufo-brunneis firmis demum evanidis.

本种产于广西武鸣县大明山，形体最似羽裂鳞毛蕨 *D. integriloba* C. Chr., 但叶柄基部的鳞片为红棕色，远较大，羽片较宽，以直角开展，下部羽片的小羽片（特别是下侧的）羽状半裂和有圆齿，顶端以下有细锯齿，羽轴下面仅有红棕色、披针形疏鳞片，基部略呈勺状，但不为泡状。孢子囊群较近叶边，故易区别。

庆元鳞毛蕨 新种 图版 III, 图 2

Dryopteris qinyuanensis Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Championianae*

Species gregis *D. championii* (Benth.) C. Chr., differt statura multo majore, usque ad 110 cm alta, lamina textura herbacea, pinnulis acroscopicis pinnarum infimarum quam iis basiscopiceis paulo brevioribus, ambitu falcatis apice acutiusculis, costis pinnarum ad apicem paleis bullatis adsunt.

Zhejiang austro-occident.: Qing-yuan Xian, Bei-shan, Zu, P. C. Chiu 3924 (typus), in silvis.

Tota planta usque ad 110 cm alta. Stipite ca. 40 cm longo, 2.8 mm. diam. pallide brunneo-stramineo, paleis magnis, rufo-brunneis late lanceolatis crispatis omnino densissime oblecto, tum demum partim delapsis scabro: lamina ca. 70 cm longa, 30 cm lata, parte inferiore bipinnato-tripinnatifida; pinnis pinnatis ca. 16-jugis, patentibus, alternis, petiolatis, inferioribus spatio lato separatis, basalibus uni-jugis quam sequentibus latioribus, ca. 17 cm longis, 5 cm latis, lanceolatis, acuminatis, petiolatis (petiolo ca. 3 mm longo), basi non-aequilateralibus, bipinnatifidis; pinnulis ca. 19-jugis, patentibus, spatio angusto separatis, inferioribus pinnatifidis, basiscopiceis quam acrosticopicis longioribus,

infima 2.3 cm longa, secunda tertiaque ad 3.5 cm longis, basi 1.1 cm latis, falcatis; pinnis sequentibus ambitu similibus. Pagina frondis textura herbacea vel tenuiter chartacea, costis pinnarum subtus paleis rufo-brunneis crispatis saepe delapsis ad apicem bullatis dense obtectis, rachi similiter paleacea, Soris parvis, 10—5-jugis pro pinnula, medialibus; indusiis magnis rufo-brunneis, membranaceis persistentibus.

本种产浙江西南部庆元县百山祖林下, 形体近于阔鳞鳞毛蕨 *D. championii* (Benth.) C. Chr., 但较高大, 叶片下部 3 回羽状半裂, 小羽片较长, 呈镰刀形, 羽轴下面向顶部的鳞片泡状, 故易区别。

强壮鳞毛蕨 新种 图版 III, 图 3

Dryopteris grandiosa Ching et Chiu, sp. nov.

Sect. *Bulligerae* Ser. *Championianae*

Species ex affinitate *D. chinyuanensis* Ching et Chiu ex eadem loci, differt habitu robustiore, lamina textura firme chartacea, pinnis basalibus latioribus, pinnulis latioribus basi subimbricatis, soris majoribus, contiguis subcostularibus.

Zhejiang austro-occident.: Qing-yuan Xian, Bei Shan, C. P. Chiu 4237 (typus) in silvis umbrosis.

Anhui austr.: Huangshan, T. N. Liou et P. C. Tsoong 2063.

Tota planta usque ad 90 cm alta. Stipite ca. 35 cm longo 4 mm diam., obscure stramineo, paleis sordide rufo-brunneis late lanceolatis, demum delapsis scabro; lamina ca. 60 cm longa, 27 cm lata, oblonga, acuminata, basi rotundata, parte inferiore bipinnato-pinnatifida; pinnis pinnatis 13-jugis, alternis, oblique patentibus, petiolatis inter se contiguis, late lanceolatis, acuminatis, basi rotundatis, basalibus 22 cm longis, 6 cm latis, bipinnatifidis; pinnulis ca. 20-jugis, patentibus, basi plus minusve imbricatis, breviter petiolulatis, basiscopiceis quam acroscopicis longioribus, infima brevior, secunda tertiaque 4 cm longis, basi 1.4 cm latis, acutiusculis, profunde pinnatifidis, sursum gradatim abbreviatis, pinnulis acroscopicis 2—2.4 cm longis, acutiusculis, basi imbricatis, pinnatifidis; pinnis sequentibus ambitu similibus, pinnulis iis pinnarum infimarum ambitu pinnatifidis. Pagina frondis textura firme chartacea; costis pinnarum subtus paleis rufo-brunneis lanceolatis basi bullatis vel subbullatis sat dense vestitis. Soris magnis inter se contiguis costulae paulo appropinquatis; indusiis magnis, pallide brunneis demum delapsis.

本种产浙江西南部庆元山百山祖和安徽南部黄山林下, 形体略近庆元鳞毛蕨 *D. chinyuanensis* Ching et Chiu, 但较强壮, 叶为厚纸质, 干后褐色, 羽片较宽, 小羽片也较宽, 基部多少瓦覆, 孢子囊群彼此接近, 较近中肋, 故易区别。

高鳞毛蕨 新种 图版 III, 图 4 图版 IV, 图 1

Dryopteris excelsior Ching et Chiu, sp. nov. Sect. *Bulligerae* Ser. *Championianae*

Species a turba *D. championii* (Benth.) C. Chr., recedit statura multo majore, tota

planta usque ad 110 cm alta, lamina bipinnatopinnatifida, pinnis pinnulisque longioribus, pinnulis omnibus profunde pinnatifidis, paleis lanceolatis longioribus sparsioribus.

Guangxi bor.-orient.: Longsheng, Huaping, P. C. Chiu 4680 (typus), in silvis, alt. 800 m.

Tota planta usque ad 110 cm alta. Stipite ca. 50 cm longo, 3.5 mm. diam., stramineo, paleis rufo-brunneis, lanceolatis ca. 1.5 cm longis demum delapsis scabro; lamina usque 60 cm longa, 28 cm lata, oblonga, acuminata, parte inferiore bipinnato-pinnatifida, pinnis pinnatis 11-jugis, alternis (infimis oppositis), patentibus, breviter petiolatis, inferioribus 3-jugis ca. 7 cm distantibus, pinnis basalibus 17 cm longis, 5 cm latis, late lanceolatis, basi subtruncatis, bipinnatifidis; pinnulis ca. 18-jugis, patentibus, spatio angusto separatis aut basibus proximatis, pinnulis basiscopicis quam acroscopicis paulo longioribus, infima et secunda ambitu similibus quam sequentibus (tertia et quarter) paulo brevioribus, 3.2 cm longis, basi 1.2 cm latis falcatis, acutiusculis, profunde pinnatifidis; segmentis ultimis 7-jugis, oblongis, integris, apice truncatis, pinnulis sequentibus gradatim abbreviatis similiter pinnatifidis, pinnulis acroscopicis brevioribus, 2—2.3 cm longis, acutiusculis pinnatifidis; pinnis sequentibus ambitu infimis similibus etiam bipinnatifidis, pinnulis duabus basiscopicis inferioribus aequilongis, profunde pinnatifidis, sequentibus longioribus, falcatis obtusiusculis. Pagina frondis textura subcoriacea, costis pinnarum subtus paleis rufo-brunneis lanceolatis basi saccatis aut saepe bullatis sparsis. Soris parvis densis 4—2-jugis pro segmento submarginalibus, utraque costulae latere sterilibus, in pinnulis pinnarum superiorum 10—6-jugis, medialibus; indusiis obscure brunneis firmis demum delapsis.

本种产广西东北部龙胜县花坪林区,是阔鳞鳞毛蕨 *D. championii* (Benth.) C. Chr., 的近亲种,其特点是体形特大,高过 1 米,下部 3 回羽状半裂,羽片长达 17 厘米,下部羽片的下侧小羽片长 3 厘米,宽 1 厘米,羽状半裂,裂片 6—8 对,叶柄、叶轴的鳞片披针形,较稀疏,故易区别。

糙柄鳞毛蕨 新种 图版 IV, 图 2

Dryopteris scabripes Ching, sp. nov. Sect. *Bulligerae* Ser. *Championianae*

Species ex affinitate *D. championii* (Benth.) C. Chr., recedit stipite supra basin paleis nigris paucis linearibus sparso, sursum uti rachi glabrato, lamina ampla bipinnato-pinnatipartita, rachillis pinnarum subtus paleis minutis fuscis basi bullatis vel subbullatis sparsis sed costis pinnularum subtus paleis brunneis bullatis copice vestitis.

Sichuan orient.: Beipei, Jinyun Shan, Y. Zhou (周铨), s.n. (typus) in pinnetum, alt. 500, III. 1952.

Tota planta ca. 60 cm alta. Stipite ca. 25 cm longo, 4 mm diam., brunneo-stramineo, basi paleis nigrescentibus lanceolatis integris dense obtecto, sursum subglabro, facie scabro; lamina late ovata, usque ad 38 cm longa, 32 cm lata, apice acuminata, basi rotundata, bipinnato-pinnatipartita; pinnis ca. 16-jugis, patentibus, proximatis aut plus

minusve imbricatis, inferioribus 7-jugis quam iis superioribus longioribus (i.e. pinnis superioribus subito abbreviatis), basalibus uni-jugis ca. 17 cm longis, 5 cm latis, oblongo-lanceolatis, acuminatis, basi rotundatis, petiolo ca. 1 cm longo suffultis, profunde bipinnatifidis; pinnulis ca. 20-jugis, proximatis, inferioribus 5—6-jugis breviter petiolulatis, falcatis, acutis basi rotundatis, profunde pinnatifidis, pinnula basiscopica infima quam sequentibus 2-jugis paulo brevioribus, lanceolatis, 4—4.5 cm longis, 1.4 cm latis, omnibus profunde pinnatipartitis, pinnulis acroscopicis brevioribus, ca. 3.5 cm longis; segmentis oblongis, integris; pinnis sequentibus ambitu similibus, petiolatis (petiolo 5 mm longo), pinnulis fere oppositis, falcatis, inferioribus breviter petiolulatis, profunde pinnatifidis; pinnulis pinnarum superiorum omnibus oppositis, falcatis, inferioribus breviter petiolulatis apice obtusiusculis. Pagina frondis in sicco lutescenti-viridi, costis pinnarum subtus paleis lanceolatis fusco-brunneis basi plus minus bullatis sparse vestitis, sed costulis pinnularum subtus paleis brunneis bullatis sat dense obtectis, rachi paleis fuscis lanceolatis minutis paucis. Soris mediocribus, 1—3-jugis pro segmento, vel utraque costae laterè uniseriatis medialibus; indusiis magnis, rufo-brunneis, integris persistentibus.

本种产四川重庆,北碚,缙云山松林下,属于阔鳞鳞毛蕨 *D. championii* (Benth.) C. Chr., 群, 但叶柄基部鳞片黑色,线形,向上近光滑,有少数黑色披针形小鳞片,叶片阔卵形,3回羽状深裂,小羽轴下面有密的棕色泡状鳞片,故易区别。

黄龙鳞毛蕨 新种 图版 IV, 图 3

Dryopteris huanglungensis Ching, sp. nov.

Sect. *Bulligerae* Scr. *Championianae*

Species habitu arcte affinis *D. championii* (Benth.) C. Chr., differt statura majore, usque ad 95 cm alta, stipite paleis minoribus lanceolatis paucioribus vestito, pinnis majoribus, 18 cm longis, 6 cm latis, pinnulis longioribus, falcatis pinnatifidis, soris nec medialibus sed costae propioribus.

Jiangxi: Lu-shan, Huanglung-si, R. C. Ching 61 (typus) in silvis, IX, 1935.

Tota planta usque ad 95 cm alta. Stipite ca. 30 cm longo, 2.5 mm diam., stramineo, paleis rufo-brunneis lanceolatis dense oblecto; lamina oblonga, usque ad 66 cm longa, 24 cm lata, acuminata, basi rotundo-cuneata, parte inferiore bipinnato-pinnatifida; pinnis ca. 16-jugis, alternis, oblique patentibus, leviter falcatis, basalibus uni-jugis non abbreviatis, ca. 16 cm longis, 6 cm medio latis, basin versus paulo angustatis, bipinnatifidis; pinnulis ca. 18-jugis, patentibus, late separatis, basali basiscopica paulo reducta, 2 cm longa, 8 mm basi lata utrinque auriculato-dilatata, apice acuminata, margine pinnatifida, pinnulis sequentibus longioribus, 2.5 cm longis, falcatis, breviter petiolulatis, pinnulis acroscopicis brevioribus, ambitu similibus, pinnatifidis. Pagina frondis textura in sicco chartacea, lutescentibrunnea, costis pinnarum subtus subglabris, paleis lanceolatis rufo-brunneis basi saccatis demum delapsis sparsis, rachi sparse paleacea. Soris parvis,

8—12-jugis pro pinnula costae paulo propioribus; indusiis parvis, rufo-brunneis demum delapsis.

本种产于江西庐山黄龙寺林下, 形体颇似阔鳞鳞毛蕨 *D. Championii* (Benth.) C. Chr., 但较高大, 叶柄的鳞片较小较稀, 披针形, 羽片较大, 长达 18 厘米, 宽 6 厘米, 小羽片较长, 镰刀形, 羽状半裂, 孢子囊群不为中生, 但较近中肋, 故易区别。形体最似观光鳞毛蕨 *D. tsoongii* Ching, 但叶柄、叶轴上的鳞片披针形, 稀疏, 孢子囊群较近中肋, 羽片较短, 小羽片较少, 故易区别。

楔形鳞毛蕨 新种 图版 IV, 图 4

Dryopteris cuneatiloba Ching et Chiu, sp. nov. Sect. *Bulligerae* Ser. *Championianae*.

Species gregis *D. championii* (Benth.) C. Chr., differt stipite rachique glabris, paleis ad basin pinnarum minutis fuscis linearibus sparsis, costis pinnarum subtus paleis bullatis sparsis, pinnulis latioribus, ovato-oblongis, basi utrinque oblique abscissis.

Guangxi centr.: Wu-ming Xian, Da-ming Shan, P. C. Chiu 5057 (typus), in silvis umbrosis, alt. 850 m.

Tota planta usque ad 62 cm alta. Stipite ca. 26 cm longo, 1.8 mm. diam., stramineo, basi paleis fuscis lineari-lanceolatis dense vestito, sursum subglabro; lamina ovata, ca. 34 cm longa, 20 cm lata, acuminata, basi subrotundata, tripinnatifida sursum bipinnata; pinnis ca. 15-jugis, inferioribus 7-jugis pinnatis, oppositis, patentibus, petiolatis, spatio angusto separatis, basalibus unijugis majoribus, 13 cm longis, usque ad 5.5 cm latis, oblongis, acuminatis, basi rotundatis, petiolo 6 mm longo, pinnata (basi bipinnatifida); pinnulis ca. 15-jugis, patentibus, proximatis, basi rotundo-cuneatis, utrinque auriculatis, basiscopiceis quam acroscopicis longioribus, infima quam sequentibus paulo brevior, ca. 2 cm longa, basi 1.3 cm lata, lanceolata, acuta, margine pinnatifida, segmentis integris, pinnulis sequentibus longioribus, 3.5 cm longis, pinnatifidis; pinnulis acroscopicis 1.5 cm longis, ovato-oblongis, obtusis, integris; pinnis sequentibus angustioribus, 3.5 cm. basi latis, pinnulis basiscopiceis quam acroscopicis longioribus, inferioribus pinnatifidis. Pagina frondis textura in sicco chartacea, costis pinnarum subtus ad basin paleis brunneis bullatis sparsis, rachi straminea glabraque. Soris mediocribus, 3—5-jugis pro pinnula costae propioribus; indusiis fusco-brunneis firmis partim persistibus.

本种产广西中部武鸣县大明山林下, 形体较近阔鳞鳞毛蕨 *D. championii* (Benth.) C. Chr., 但叶柄, 叶轴光滑, 羽轴基部有少数褐色泡状披针形小鳞片, 羽轴下面略有泡状鳞片, 小羽片较宽, 卵状长圆形, 基部两侧斜切, 不为圆形, 孢子囊群靠近中肋; 本种也近于同地产的无柄鳞毛蕨 *D. sessilipinna* Ching et Chiu, 但叶片基部为 3 回羽裂 (不为 3 回全裂), 羽片有短柄, 较狭, 小羽片较小, 基部两侧斜切, 故易区别。

浙南鳞毛蕨 新种 图版 V, 图 1

Dryopteris zhenangensis Ching et Chiu, sp. nov. Sect. *Bulligerae* Ser. *Championianae*

Species agregis *D. championii* (Benth.) C. Chr. differt, stipite rachi paleis minori-

bus lineari-lanceolatis fusco-brunneis sparsis, pinnis oppositis latioribusque, pinnulis pinnarum inferiorum praecipue basiscopicis falcato-lanceolatis, acuminatis ad 3.5 cm longis, acroscopicis brevioribus acutisque, soris costae propioribus.

Zhejiang austro-occident.: Qing-yuang Xian, Bei-shan Zn, P. C. Chiu (裘佩熹) 4288 (typus).

Tota planta 74 cm alta. Stipite 38 cm longo 3.2 mm diam., purpurascenti-stramineo, basi paleis fusco-brunneis lanceolatis linearilanceolatisque, ca. 1 cm longis sat dense obtecto, sursum paleis minoribus sparsioribusque; lamina ovata, 36 cm longa, basi 32 cm lata, bipinnata (basi basiscopica tripinnatifida); pinnis ca. 10-jugis, oppositis, proximalis, breviter petiolatis, late lanceolatis, vel paulo falcatis, basalibus uni-jugis majoribus. 16 cm longis, 5 cm latis, late lanceolatis, acuminatis, pinnatis (acroscopicis bipinnatifidis); pinnulis ca. 17-jugis, spatio angusto separatis, patentibus, sessilibus, basiscopicis quam acroscopicis longioribus, una infima reducta. 1.7 cm longa, non lobata, sequentibus 2—4 longioribus, usque ad 3 cm longis, falcatis, acuminatis, basi rotundatis utrinque auriculatis, 9 mm latis, pinnatifidis apice serrulatis; pinnis sequentibus angustioribus, 4 cm latis, pinnulis basiscopicis quam acroscopicis longioribus, 2.2 cm longis, acuminatis, margine incis, una infima non abbreviata, acroscopicis inferioribus apice obtusis, superioribus acutis. Pagina frondis textura in sicco chartacea, dilute fusca, costis pinnarum subtus subglabra, hic inde paleis bullatis parvis. Soris parvis, (3)4—5(6)-jugis pro pinnula, ad dimidiam inferioram pinnularum restrictis, sursum sterilibus; indusiis fusco-brunneis, demum delapsis.

一个突出的种;产浙江西南部庆元县百山祖林下,颇近阔鳞鳞毛蕨 *D. championii* (Benth.) C. Chr.,但叶柄、叶轴的鳞片小,披针形,褐色,稀疏,羽片较宽,对生,下部羽片的下侧小羽片较长 3.5 厘米,披针形,渐尖头,羽状半裂,上侧的小羽片较短,急尖头,不羽裂,故易区别。

阔鳞鳞毛蕨 图版 V, 图 2

Dryopteris championii (Benth.) C. Chr. apud Ching in Sinensia 3:

327. 1933; C. Chr. Ind. Suppl. III. 83. 1934.

Descriptio emendata:

Tota planta ca. 80 cm alta. Rhizomate brevi erecto, frondibus fasciculatis, stipite 34—38 cm longo, 2.2 mm diam, stramineo, uti rachi paleis rufo-brunneis magnis late lanceolatis. 1 cm longis primo densissime obtecto tum demum delapso scabroque; lamina anguste oblonga, usque ad 42 cm longa, 20 cm lata, acuminata, basi rotundata, bipinnata; pinnis ca. 15-jugis, alternis, patentibus, spatio lato separatis, falcato-lanceolatis, acuminatis, basi rotundatis, basalibus usque ad 13 cm longis, 4 cm latis, pinnatis; pinnulis ca. 10-jugis, patentibus, fere sessilibus, spatio separatis, basiscopicis quam acroscopicis paulo majoribus, una infima abbreviata, 1.2 cm longa, elongato-ovata, integra, pinnula secunda longiore, 2.2 m longa, ca. 1 cm lata, falcato-lanceolata, acuta, basi rotundata, utrinque

auriculata, parte inferiore lobato-crenata, apice serrulata, pinnulis acroscopicis 1.5—1.7 cm longis, anguste triangularibus, acutis integris; pinnis sequentibus ambitu similibus, pinnulis basalibus unijugis quam sequentibus paulo abbreviatis, ambitu similibus, integris. Pagina frondis textura in sicco chartacea, lutescenti-viridi, costis pinnarum subtus paleis rufo-brunneis lanceolatis basi saepe bullatis vel saccatis sat dense obtectis, rachi paleis ab initio dense demum sparse oblecto. Soris parvis 8—5-jugis pro pinnula; indusiis brunneis, planis persistentibus.

Zhejiang austr.: Lung-quan Xian, Mao-shan, P. C. Chiu 3989 in silvis.

本种的身份过去一直混乱不清,因为模式是一个嫩叶,发育不全,原描述也过于简略,现根据浙江龙泉县昂山标本重新描述,以便与近亲种区别。

黄志鳞毛蕨 新种 图版 V, 图 3

Dryopteris wangii Ching, sp. nov. Sect. *Bulligerae* Ser. *Championianae*

Dryopteris championii sensu Ching, Ic. Fil. Sin. 4: t. 181. 1937, non C. Chr. apud Ching, 1931.

Species gregis *D. championii* (Benth.) C. Chr., differt fronde parte inferiore bipinnato-pinnatifid, pinnis lanceolatis rectis nec falcato-incurvatis, pinnulis angustioribus lanceolatis, basi utrinque auriculato-dilatatis sursum gradatim angustatis apice subacuminatis, profunde pinnatifidis, inter se spatio lato separatis.

Guangdong bor.: Qing-yun, C. Wang (黄志) 32526 (typus), in valle humida, 9. VII. 1933.

Tota planta ca. 80 cm alta. Stipite ca. 30 cm longo, 2 mm. diam., stramineo, basi paleis rufo-brunneis lanceolatis 1.2 cm longis dense vestito, sursum minoribus sparsisque; lamina oblonga, 50 cm longa, 32 cm lata, longe acuminata, bipinnata (parte inferiore tripinnatifida); pinnis pinnatis 12-jugis, patentibus, petiolatis, alternis (inferioribus 3-jugis oppositis), spatio lato separatis, basalibus unijugis ca. 19 cm longis, 4 cm latis, late lanceolatis, rectis, longe acuminatis, basi rotundatis, petiolatis (petiolo ca. 6 mm longo), bipinnatifidis; pinnulis ca. 20-jugis, subhorizontaliter patentibus, breviter petiolulatis, spatio lato separatis, subfalcato-lanceolatis, e basi dilatata gradatim angustatis, apice acutis, pinnatifidis, pinnulis basiscopicis quam acroscopicis paulo longioribus, infima abbreviata, sequente longiore, 3 cm longa, basi 1 cm lata, pinnulis acroscopicis ca. 1.6 cm longis angustioribus, subacuminatis. Pagina frondis textura in sicco chartacea, lutescenti-viridi, costis pinnarum subtus paleis brunneis minutis basi vix saccatis sparsis. Soris parvis, 10-5-jugis pro pinnula, medialibus; indusiis brunneis, demum delapsis.

本种产广东中部清远县,形体最近阔鳞毛蕨 *D. Championii* (Benth.) C. Chr.,但叶片下部为3回羽状深裂,小羽片较狭,彼此以等宽间隔分开,下部的羽状深裂,故易区别。

湖南鳞毛蕨 新种 图版 V, 图 4

Dryopteris subchampionii Ching, sp. nov.

Sect. *Bulligerae* Ser. *Championianae*

Species ex affinitate *D. championii* (Benth.) Chr., recedit statura minore, stipite tenuiore, e basi sursum usque ad rachim fere glabro, paleis brunneis lanceolatis minoribus hic illic sparsis, pinnis ad apicem acuminatam incurvatis, pinnulis sessilibus vel paulo adnatis, basi utrinque prominente auriculatis, soris parvis ad dimidiam superiorem pinnularum restrictis, dimidio inferiore sterili.

Hunan occid.: Shao-yang Xian, P. S. Yuan (谭沛祥) 64037 (typus), in silvis, alt. 850 m.

Tota planta ca. 60 cm alta. Stipite 26 cm longo, ca. 2 mm. diam. e basi sursum usque ad rachim subglabro, paleis brunneis lanceolatis sparsis; lamina late ovata, 36 cm longa, 18 cm lata, acuminata, bipinnata; pinnis ca. 8-jugis, patentibus, alternis, breviter petiolatis, basalibus unijugis oppositis, ca. 14 cm longis, 5 cm latis, acuminatis, ad apicem incurvatis, pinnatis; pinnulis ca. 17-jugis, patentibus, spatio angusto separatis, basiscopicis quam acroscopicis paulo longioribus, una infima quam sequenti paulo brevior vel aequilonga, omnibus sessilibus, falcatis, 2.5 cm longis, basi 1.2 cm latis, utrinque prominente auriculatis, apice obtusis, margine incis; pinnis sequentibus ambitu similibus, pinnulis basiscopicis quam acroscopicis paulo longioribus, 2 cm longis, adnatis, crenatis. Pagina frondis textura in sicco tenuiter chartacea, lutescenti-viridi, costis pinnarum subtus paleis brunneis lanceolatis basi aliquantum saccatis sparsis, rachis paleis brunneis lanceolatis spars. Sori parvis, medialibus, 2—5-jugis pro pinnula, ad dimidiam superiorem pinnularum restrictis; indusiis rufo-brunneis, tenuibus, demum delapsis.

本种产湖南西部邵阳县, 形体近阔鳞毛蕨 *D. Championii* (Benth.) C. Chr., 但形体较小, 叶柄纤细, 从基部向上达叶轴近光滑, 仅有少数棕色、披针形小鳞片, 羽片顶部渐尖内弯, 小羽片大都无柄或略合生, 基部两侧有明显的耳状凸出, 孢子囊群小, 生于小羽片上半部, 下半部不育, 故易区别。

观光鳞毛蕨 新种 图版 VI, 图 1

Dryopteris tsoongii Ching, sp. nov., Sect. *Bulligerae* Ser. *Championianae*

Species e turba *D. champinoides* (Benth.) C. Chr. recedit statura majore, stipite rachique paleis rufo-brunneis, ovatis crispatis densissime obtectis, lamina ampla, pinnis multo longioribus, pinnulis numerosis (ca. 20-jugis), basi rotundo-cordatis, breviter petiolulatis, lanceolato-falcatis, longioribus, soris submarginalibus.

Anhui austr.: Yü-t'ing, K. K. Tsoong (钟观光) 4520 (typus).

Tota planta usque ad 1 m alta. Stipite 35 cm longo, 3.5 mm diam. robusto, brunnescenti-stramineo, e basi sursum usque ad rachis paleis magnis ca. 2 cm longis, e basi