

# 云南植物志

## 第二十卷 ( 蕨类植物 )

中国科学院昆明植物研究所编著

科学出版社

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## 第二十卷

(蕨类植物)

中国科学院昆明植物研究所 编著

云南省自然科学基金委员会 资助项目  
中国科学院生命科学与生物技术局

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北京

# FLORA YUNNANICA

**Tomus 20**

(PTERIDOPHYTA)

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ACADEMIAE SINICAE EDITA**

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Chu Weiming: Psilotaceae, Huperziaceae, Lycopodiaceae, Selaginellaceae, Isoëtaceae, Equisetaceae, Athyriaceae

He Zhaorong: Helminthostachyaceae, Botrychiaceae, Ophioglossaceae, Angiopteridaceae, Christenseniaceae, Plagiogyriaceae, Gleicheniaceae, Hymenophyllaceae, Antrophyaceae, Vittariaceae, Peranemaceae

Zhang Guangfei: Osmundaceae, Dicksoniaceae, Cyatheaceae, Dennstaedtiaceae, Sinopteridaceae, Adiantaceae, Aspleniaceae, Pleurosoriopsidaceae, Onocleaceae, Woodsiaceae, Blechnaceae

Lu Shugang: Schizaeaceae, Lygodiaceae, Monachosoraceae, Lindsaeaceae, Hypolepidaceae, Pteridiaceae, Pteridaceae, Acrostichaceae, Stenochlaenaceae, Parkeriaceae, Hemionitidaceae, Hypodematiaaceae, Thelypteridaceae

## 编写说明

《云南植物志》系记载云南地区野生及习见栽培高等植物的专著。含苔藓植物、蕨类植物、裸子植物和被子植物四个部分，分 21 卷出版。苔纲、角苔纲采用 R. M. Schuster (1966) 和 R. Grolle (1983) 系统，藓植物采用陈邦杰 (1963) 系统，蕨类植物采用秦仁昌 (1978) 系统，裸子植物采用郑万钧系统 (1978)，被子植物采用哈钦松 (1926, 1934) 系统。各科按原系统科号，随后另立并为我们采用的科，均列于原科后，在其科号后加 a、b、c…等字样，以示区别。

本志所记载的科、属、种，均有中拉名称、形态特征、产地、生境、分布、经济用途及有关问题的讨论等；科、属下均列有检索表，并附有一定数量的图版，以便识别和比较。

本志所记载之种的中文正名，别名（含邻近省常用名）一般在其后用括号注明出处；拉丁学名，科名不列命名者、发表年代及所载文献，属名仅列出命名者，科属名称一般不列异名；种名列出命名者及其后置于括号内的发表年代，不列文献，右上角有“\*”者，表示该文献中含附图。

中文书籍之引用，凡集体编著的，只引书名或缩写，不列作者名，如中国植物志、海南植物志、横断山区维管植物，图鉴（中国高等植物图鉴）、图鉴补编（中国高等植物图鉴补编）等。

凡在本志发表的新分类单位，只发表拉丁文特征集要及模式标本产地及收藏地点。新组合名称，均列出其基名的原文献，以获得合格发表。已出版各卷所发表的新种、新亚种、新变种、新组合，除署名有命名者外，凡署名 C. Y. Wu 者，均由吴征镒研究员负责并提供拉丁特征集要。

《云南植物志》编辑委员会

2003 年 9 月 26 日

## Editorial Explanation

Flora of Yunnanica is a series of volumes which records the wild and naturized higher plants of Yunnan, China. It contains four plant groups including Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms, and is to be published in 21 volumes. The systematic arrangement of these four groups follows the system of R. M. Schuster (1966) for Hepaticae, R. Grolle (1983) for Anthocerotae, and Chen Bangjie (P. C. Chen, 1963) for Musci, Qing Renchang (R. C. Ching, 1978) for Pteridophytes, Zheng Wanjun (W. C. Cheng, 1978) for Gymnosperms, and Hutchinson (1926, 1934) for Angiosperms. Each family is arranged according to the family number in the specific system. For new families not treated in the respective systems, they are listed after the related families, and the letter of a, b, c etc. is added after the family number to distinguish them.

All the taxa (families, genera, and species) are given with the Chinese and Latin names, descriptions, localities, habitat, distribution, and economic uses. In some cases there is also a discussion concerning other matters related to the taxon. Keys under the family and genus are included for convenient identification, and some plates are also included to help in identification and comparison.

The sources of the Chinese species names or synonyms (including that commonly used by the nearby provinces) are explained by the notes in brackets. For families, information about authors, publishing dates, synonyms, and the early literature are not included. For genera, the Latin names, authors, and publication dates are included, but synonyms are not listed. For taxa with a \* mark on the right there is an illustration.

For Chinese literature, only the book name or its abbreviation is cited if it was compiled by a group of author. The authors names are not cited in this case, such as Flora Reipublicae Popularis Sinicae (中国植物志)、Flora Hainanica (海南植物志)、Vascular Plants of the Hengduan Mountains (横断山区维管植物)、Iconographia Cormophytorum Sinicorum (图鉴)、Iconographia Cormophytorum Sinicorum, Supplementum (图鉴补编) etc.

For each new taxon published in Flora Yunnanica, the Latin diagnosis, type collected locality, and herbarium where the holotype is deposited are listed. For new combinations, the original basionym citation is included.

For the new taxa (species, subspecies, and varieties) and combinations published by C. Y. Wu in the all volumes of Flora Yunnanica, Professor Wu Zhengyi (C. Y. Wu) was responsible the names, literature citations, and Latin diagnosis and/or descriptions.

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## 附 录 ADDENDA

**Huperzia muscicola** Ching et W. M. Chu ex W. M. Chu, sp. nov.

Species nova habitu *H. miyoshianae* (Makino) Ching similis, differt foliis coriaceis lucidis linearitriangularibus latioribus (basi latis ca 1 mm), foliis longioribus et brevioribus alternantibus in caudicibus, adspectu ramis distincte zonatis, foliis pluribus fertilibus, sporangiis pallide viridibus vel pallide flavovirentibus.

Yunnan(云南): Lao-jun Shan (老君山) lying between Maguan Xian (马关县) and Malipo Xian(麻栗坡县), in mosses under mossy forest, alt. 2300 m, R. S. Wang (王仁师) 5821 (holotypus, PYU), 1963-03; ib. , in mosses under mossy elfin forest, alt. 2500 m, J. J. He (和积鉴) 75-5-58 (PYU), 1975-05-24; Shuangbai Xian (双柏县), Ailao Shan (哀牢山), in mosses under mossy forest , alt. 2000m, W. M. Chu (朱维明) 4625 (PYU), 1965-11-11.

**Palhinhaea cernua** (L.) Vasc. et Franco f. **ciliatomarginata** W. M. Chu, f. nov.

A f. *cernua* differt foliis sterilibus margine sparse ciliatis.

Yunnan (云南): Yingjiang Xian (盈江县) between Mangyun (芒允) and Geduo (格夺), by ditch in bush-woods , alt. 900m , W. M. Chu et al. 10905 (typus, PYU), 1980-08-31; Zhenyuan Xian (镇沅县), Wuliang Shan (无量山), near Gaofeng Cun (高峰村), on earth wall by road , alt. 2200m, W. M. Chu et Z. Z. Jin (金振洲) 9108(B), 1979-09-09; Hekou Xian (河口县), Binlangzhai (槟榔寨), by ditch at edge of forest, alt. 120m, W. M. Chu 3861(B), 1959-01-29.

**Selaginella effusa** Alston var. **dulongjiangensis** W. M. Chu, var. nov.

Habitu *S. effusae* Alston var. *effusae* et *S. effusae* Alston var. *medogensi* (Ching et S. K. Wu) W. M. Chu\*\* similis, differt a priore foliis sterilibus et sporophyllis ventralibus margine manifeste hyalinis, sculpturis megasporae sparsis verruculatis et extervermicularibus, sculpturis microsporae densis tuberuculatis amplitudine inaequabilibus aspectu irregularibus (in illa foliis sterilibus et sporophyllis margine non hyalinis, sculpturis megasporae densis papillatis parvis, sculpturis microsporae verruculatis amplitudine aequabilibus), a posteriore sculpturis sporarum (praecipue sculpturis microsporae) variis (in illa sculpturis megasporae aliquantum sparsis verruculatis et papillatis parvis, sculpturis microsporae granulatis amplitudine aequabilibus).

Yunnan (云南): Gongshan Xian (贡山县), Dulongjiang valley (独龙江河谷), Bukawang (布卡旺), on cliff at edge of evergreen broad-leaved forest , alt. 1440m , W. M. Chu (朱维明) & Z. R. He (和兆荣) 31291 (PYU), 2004-10-02; ib. between Kongdan (孔当) and Xianjiudan (献九当), on cliff at edge of evergreen broad-leaved for-

est, alt. 1500m, W. M. Chu & Z. R. He 31299 (holotypus, PYU), 2004-10-03.

\* \* ***Selaginella effusa* Alston var. *medogensis*** (Ching et S. K. Wu) W. M. Chu, st. nov.

Basionym: *Selaginella medogensis* Ching et S. K. Wu in C. Y. Wu, Fl. Xizang. 1: 23, f. 6 : 1-6. 1983.

***Selaginella hengduanshanicola* W. M. Chu, sp. nov.**

Species nova habitu *S. sichuanensis* H. S. Kung similis, differt foliis intermediis apice acuminatis vel breviter aristatis (in illa foliis intermediis apice longe aristatis), sporophyllis conformibus (in illa sporophyllis biformibus)\*, megasporis sublaevibus vel indistincte verruculosus (in illa megasporis distincte tuberculatis).

\* The author had examined the specimen of Zheng Xue-Jing (郑学经) 4082 conserved in PYU, which is one of the paratype of *S. sichuanensis* H. S. Kung, and found out in fact its sporophylls are biformis.

Yunnan bro-occid. (云南西北部): Lushui Xian (泸水县), west side of Pian Ma Pass (片马垭口), at edge of Rhododendron forest, alt. 2900m, Exp. Pl. W. Yunnan, Yunnan Univ. (云南大学滇西植物调查组) 1123 (PYU), 1980-09-17; Dêqên Xian (德钦县), Nu Shan (怒山), between Lǎngzhê (永支) and Mizhaitong (莫珍通), in needle-broad-leaf mixed forest on rocks, alt. 3200m, Meili Exped. (梅里队) 28126 (holotypus & isotypi, PYU), 1993-10-04.

***Selaginella monospora* Spring var. *ciliolata* W. M. Chu, var. nov.**

A var. monospora differt foliis sterilibus margine manifeste ciliolatis, sculpturis megasporae albae parvipapilliformibus et verruculatis.

Yunnan (云南): Jingdong Xian (景东县), Ailao Shan (哀牢山), Xujiaba (徐家坝), under evergreen broad-leaved forest, alt. 2450m, J. J. He (和积鉴) 13352 (holotypus, PYU), 1982-04-22; ib. Wuliang Shan (无量山), R. S. Wang (王仁师) et al. 14 (PYU), 1964-04-20; X. W. Ren (任宪威) 3824 (PYU), 1964-07; Wuliang Shan, Mengling (勐令), on moist cliff in evergreen broad-leaved forest, alt. 1800m, W. M. Chu (朱维明) et Z. Z. Jin (金振洲) 9073 (PYU), 1979-09-09; Wuliang Shan, Wenpu (温普), Erdaoya (二道崖), Qingtou (箐头), under evergreen broad-leaved forest, alt. 2100m, W. M. Chu et Z. Z. Jin 9299 (PYU), 1979-09-19; Malipo Xian (麻栗坡县), Laojuan Shan (老君山), under evergreen broad-leaved forest, alt. 1600m, S. G. Lu (陆树刚) & G. F. Zhang (张光飞) 271625 (B), 1993-07-30. Guangdong (广东): Xinyi Xian (信宜县), Datian Ding (大田顶), alt. 1600m, under evergreen broad-leaved forest, W. M. Chu et al. 18296 (PYU), 1984-08-23. East Nepal (尼泊尔东部): Mai Majuwa-Dhara Pani, alt. 1500-1600m, H. Hara et al. Dec. 4. 1963 (KUN).

***Selaginella rubella* W. M. Chu, sp. nov.**

Ad *S. nipponicae* Franch. et Sav. accedit, differt habitu majore, caule principali visibili, ad 22 cm longo, rubello, ramis latoribus, ad 8 mm latis, foliis intermediis late

ovatis, sculpturis megasporae omnino tuberculiformibus, in illa caule princepali indistincto, ca 10 cm long, stramineo, ramisca 4 mm latis, foliis intermediis anguste ovatis, sculpturis megasporae polymorphis (extero-vermicularibus vel ornatis vel baculatis vel mixomorphis).

Yunnan (云南): Luquan Xian (禄劝县), Wumeng Shan (乌蒙山), under bush-woods in valley, alt. 2700-3000m, W. M. Chu (朱维明) et J. L. Wu (吴金亮) 2489 (holotypus, PYU), 1964-10-23. Sichuan (四川): Jiulong Xian (九龙县), Rekugou (热枯沟), under bush-woods, alt. 2900-3100 m, L. B. Zhang (张丽兵) et X. S. Guo (郭晓思) 2531 (PYU, CDBI), 1991-11-04.

**Selaginella xichouensis** W. M. Chu, sp. nov.

Habitu et textura *S. drepanophyllae* Alston et *S. effusae* Alston similis, differt a priore foliis lateralibus margine paulo denticulatis vel fere integris (in illa foliis lateralibus margine manifeste ciliatis et denticulatis), foliis intermediis margine breviter denticulatis (in illa foliis intermediis margine ciliatis), a posteriore foliis lateralibus falcatis (in illa foliis lateralibus deltoideo-ovatis), sculpturis megasporae extero-vermicularibus et tuberculiformibus (in illa sculpturis megasporae papilliformibus minutis).

Yunnan (云南): Xichou Xian (西畴县), Dongzongcao (董棕槽), under evergreen broad-leaved forest in moist limestone, alt. 1500m, W. M. Chu et al. 13149 (typus, PYU), 1981-08-11.

**Botrypus yunnanensis** (Ching) Z. R. He, comb. nov.

Basionym: *Botrychium yunnanense* Ching in S. S. Chien et W. Y. Chun, Fl. Reip. Pop. Sin. 2:329, 1959.

*Botrypus yunnanensis* (Ching) Ching in Shing, A Glossary of Terms & Names of Ferns, 37, 1982, comb. non rite public.

**Angiopteris dianyuicola** Z. R. He et W. M. Chu, st. et nom. nov.

Basionym: *Angiopteris repandula* de Vriese var. *latamarginata* C. Chr. et Tardieu in Not. Syst. V; 8, pl. 2. 1935, non *Angiopteris latamarginata* Ching 1959.

**Lunathyrium medogense** Ching et S. K. Wu var. **glanduliferum** W. M. Chu, var. nov.

A var. *medogense* differt lobis subter et indusiis dorsaliter plus minusve glandulis granulosus citrinis vel hyalinis onustis.

Yunnan bor.-occid. (云南西北部): Gongsan Xian (贡山县), Gaoligon Shan (高黎贡山), Dongshaofang (东哨房), at edge of sparse *Abies* forest by brook in valley, alt. 3100m, W. M. Chu (朱维明) et al. 20224 (holotypus & isotypi, PYU), 1985-07-14.

**Metathelypteris deltoideofrons** Ching ex W. M. Chu et S. G. Lu, sp. nov.

Species habitu *M. decipiente* (Clarke) Ching similis, differt 1-2-jugis pinnarum basalibus oblongilanceolatis (in illa lanceolatis), venulis in segmentis plerumque simplicibus (in illa furcatis).

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Yunnan (云南): Suijiang Xian (绥江县), near Zhongcun (中村), on earth wall by ditch in bamboo forest, alt. 1100m, W. M. Chu 5054 (holotypus, PYU; isotypus, PE), 1973-06-01.

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