

ICONES FILICUM SINICARUM

BY

REN-CHANG CHING, B. S.

FASCICLE 2

中國蕨類植物圖譜 第二卷

靜生生物調查所
秦仁昌編纂
植物標本室主任

靜生生物調查所印行

375.9
102

中 國 蕨 類 植 物 圖 譜

ICONES FILICUM SINICARUM

BY

REN-CHANG CHING, B. S.

CURATOR OF HERBARIUM
FAN MEMORIAL INSTITUTE OF BIOLOGY

FASCICLE 2, PLATES 51-101

第 二 卷

PUBLISHED BY
THE FAN MEMORIAL INSTITUTE OF BIOLOGY
PEIPING, CHINA
January, 1934

靜 生 生 物 調 查 所 印 行



128659

3-72-2

72-14

501/1374/1243

TO

PROFESSOR HSEN-HSU HU, D. Sc.

DIRECTOR OF THE FAN MEMROIAL INSTITUTE OF BIOLOGY
AS ONE OF THE OUTSTANDING BOTANISTS OF PRESENT-DAY CHINA

IN RECOGNITION OF
HIS LEADERSHIP IN PROMOTING THE STUDY OF SYSTEMATIC BOTANY

IN CHINA AND
HIS SUPPORT IN VARIOUS MANNERS FOR THE ICONOGRAPHY OF CHINESE
FERNS FROM ITS INCIPIENCE AS ONE OF THE MOST RELIABLE MEANS OF
DISSEMINATING CHINESE PTERIDOPHYTIC KNOWLEDGE

THIS SECOND FASCICLE OF ICONES FILICUM SINICARUM
IS RESPECTFULLY DEDICATED

TABLE
PLATES OF FASCICLE 2
Arranged in Numerical Order

Plate No.

51. *Oleandra Wallichii*, 高山樺蕨
52. *Woodwardia Harlandii*, 哈氏狗脊
53. *Asplenium adnatum*, 合生鉄角蕨
54. *Taenitis blechnoides*, 竹葉蕨
55. *Pteris insignis*, 全緣鳳尾蕨
56. *Adiantum Faberi*, 峨嵋鉄線蕨
57. *Lepisorus Lewisii*, 廬山瓦葦
58. *Lepisorus eilophyllus*, 高山瓦葦
59. *Lepisorus sublinearis*, 滇瓦葦
60. *Lepisorus pseudonudus*, 長瓦葦
61. *Lepisorus loriformis*, 帶瓦葦
62. *Lepisorus macrosphaerus*, 大瓦葦
63. *Lepisorus macrosphaerus*
var. *asterolepis*, 黃瓦葦
64. *Lepisorus kuchenensis*, 獐山瓦葦
65. *Lepisorus bicolor*, 兩色瓦葦
66. *Lepisorus obscure-venulosus*, 粵瓦葦
67. *Lepisorus clathratus*, 網眼瓦葦
68. *Lepisorus sordidus*, 黑鱗瓦葦
69. *Lepisorus suboligolepidus*, 擬鱗瓦葦
70. *Lepisorus oligolepidus*, 鱗瓦葦
71. *Lepisorus subconfluens*, 連珠瓦葦
72. *Lepisorus heterolepis*, 茂瓦葦
73. *Lepisorus angustus*, 狹葉瓦葦
74. *Lepisorus ussuriensis*, 烏蘇里瓦葦
75. *Lepisorus contortus*, 扭瓦葦

Plate No.

76. *Lepisorus Thunbergianus*, 瓦葦
77. *Lemmaphyllum subrostratum*, 骨牌蕨
78. *Lemmaphyllum adnascens*, 川石蓮
79. *Lemmaphyllum drymoglossoides*, 抱石蓮
80. *Lemmaphyllum microphyllum*, 抱樹蓮
81. *Cyclophorus calvatus*, 光石葦
82. *Elaphoglossum McClurei*, 瓊崖舌蕨
83. *Microsorium Fortuni*, 福氏星蕨
84. *Microsorium hymenodes*, 滇星蕨
85. *Microsorium Buergerianum*, 波氏星蕨
86. *Microsorium punctatum*, 星蕨
87. *Microsorium Zippelii*, 戚氏星蕨
88. *Microsorium membranaceum*, 膜葉星蕨
89. *Neocheiropteris phyllomanes*, 單葉扇蕨
90. *Colysis Bonii*, 彭氏線蕨
91. *Colysis Henryi*, 亨氏線蕨
92. *Colysis longipes*, 長柄線蕨
93. *Christopteris tricuspidata*, 戟蕨
94. *Polypodium manmeiense*, 滇水龍骨
95. *Polypodium lachnopus*, 瀨水龍骨
96. *Polypodium microrhizoma*, 栗柄水龍骨
97. *Polypodium Dielsianum*, 川水龍骨
98. *Polypodium niponicum*, 水龍骨
99. *Polypodium amesonum*, 友水龍骨
100. *Phymatodes nigrovenia*, 黑鱗荊蕨
101. *Microlepia tenera*, 嫩毛蕨

TABLE
PLATES OF FASCICLE 2
Arranged in Alphabetical Order

Plate No.		Plate No.	
Adiantum Faberi 峨嵋鐵線蕨.....	56	Lepisorus pseudonudus 長瓦蕨.....	60
Asplenium adnatum 合生鉄角蕨.....	53	Lepisorus sordidus 黑鱗瓦蕨.....	68
Christopteris tricuspidata 戟蕨.....	93	Lepisorus subconfluens 連珠瓦蕨.....	71
Colysis Bonii 彭氏線蕨.....	90	Lepisorus sublinearis 溟瓦蕨.....	59
Colysis Henryi 亨氏線蕨.....	91	Lepisorus suboligolepidus 擬鱗瓦蕨.....	69
Colysis longipes 長柄線蕨.....	92	Lepisorus Thunbergianus 瓦蕨.....	76
Cyclophorus calvatus 光石蕨.....	81	Lepisorus ussuriensis 烏蘇里瓦蕨.....	74
Elaphoglossum McClurei 瓊崖舌蕨.....	82	Microlepia tenera 嫩毛蕨.....	101
Lemmaphyllum adnascens 川石蓮.....	78	Microsorium Buergerianum 波氏星蕨.....	85
Lemmaphyllum drymoglossoides 抱石蓮.....	79	Microsorium Fortuni 福氏星蕨.....	83
Lemmaphyllum microphyllum 抱樹蓮.....	80	Microsorium hymenodes 偵星蕨.....	84
Lemmaphyllum subrostratum 骨牌蕨.....	77	Microsorium membranaceum 膜葉星蕨.....	88
Lepisorus angustus 狹葉瓦蕨.....	73	Microsorium punctatum 星蕨.....	86
Lepisorus bicolor 兩色瓦蕨.....	65	Microsorium Zippellii 威氏星蕨.....	87
Lepisorus clathratus 網眼瓦蕨.....	67	Neocheiropterais phyllomanes 單葉扇蕨.....	89
Lepisorus contortus 扭瓦蕨.....	75	Oleandra Wallichii 高山稜蕨.....	51
Lepisorus eilophyllus 高山瓦蕨.....	58	Phymatodes nigrovenia 黑鱗蕨.....	100
Lepisorus heterolepis 茂瓦蕨.....	72	Polypodium amoenum 友水龍骨.....	99
Lepisorus kuchenensis 猪山瓦蕨.....	64	Polypodium Dielsianum 川水龍骨.....	97
Lepisorus Lewisii 廬山瓦蕨.....	57	Polypodium lachnopus 瀨水龍骨.....	95
Lepisorus loriformis 帶瓦蕨.....	61	Polypodium manmeiense 溟水龍骨.....	94
Lepisorus macrosphaerus 大瓦蕨.....	62	Polypodium microrhizoma 栗柄水龍骨.....	96
Lepisorus macrosphaerus var asterolepis 黃瓦蕨.....	63	Polypodium niponicum 水龍骨.....	98
Lepisorus obscure-venulosus 粵瓦蕨.....	66	Pteris insignis 全緣鳳尾蕨.....	55
Lepisorus oligolepidus 鱗瓦蕨.....	70	Taenitis blechnoides 竹葉蕨.....	54
		Woodwardia Harlandii 哈氏狗脊.....	52

PLATE 51

OLEANDRA WALLICHII (Hooker) Presl

POLYPODIACEAE

OLEANDRA WALLICHII (Hooker) Presl, Tent. Pterid. 78 (1836); Hk. et Bak. Syn. Fil. 303 (1868); C. Chr. Ind. Fil. 467 (1906).

Aspidium Wallichii Hooker, Exot. Fl. 1: t. 5 (1823); Bedd. Ferns Brit. Ind. t. 265 (1868).

Neuronia asplenoides Don, Prod. Fl. Nepal. 6 (1825).

Oleandra Wallichii var. *lepidota* Christ, Bull. Acad. Géogr. Bot. (1906) 140.

Rhizome horizontally creeping, densely shaggy scaly; *scales* ferruginous, spreading, linear-subulate, fimbriate, dorsally affixed; stipe distant or approximate, 1.5-5, cm long, ferruginously hairy, jointed close to the base, so that the very short, lower articulation is quite concealed among the scales; *lamina* 15-30 cm long, 2-3.5 cm broad, apex suddenly and sharply acuminate; base subrounded or rotundo-cuneate, both edges parallel, somewhat wavy; *texture* papyraceo-herbaceous, midrib densely scaly beneath, rather densely hairy on veins on both sides and densely ciliate along the edges; *venation* distinct, veins patent, fine, closely parallel, generally forked from near, or above the base; *sori* rather irregularly uniseriate on each side, close and parallel to the midrib; *indusium* orbicular-reniform, hispidato-ciliate, attached by a deep sinus and opening outwardly.

Yunnan: Shweli-Salwin Divide, *G. Forrest* 11799, 18581, 24738. Szechuan occid. *E. H. Wilson* 5246. Tibet: Adung-seninghku junction, *Capt. Kingdon Ward* (1926).

Birma, Sikkim-Himalayas, Malayan Peninsula.

A well marked species of the genus, common in the Sikkim-Himalayas and the southwestern part of Yunnan. In habit, it resembles *O. Cumingii* J. Sm. from the Philippines and South China, which differs from the present species in rhizome scales being imbricatingly adpressed, usually much higher articulation of the stipe and leaf-margin not densely ciliate.

Plate 51. Fig. 1. habit sketch (natural size). 2. portion of a lamina, showing venation and position of sori ($\times 2$). 3. hairs from lamina ($\times 50$). 4. scales from rhizome ($\times 50$).

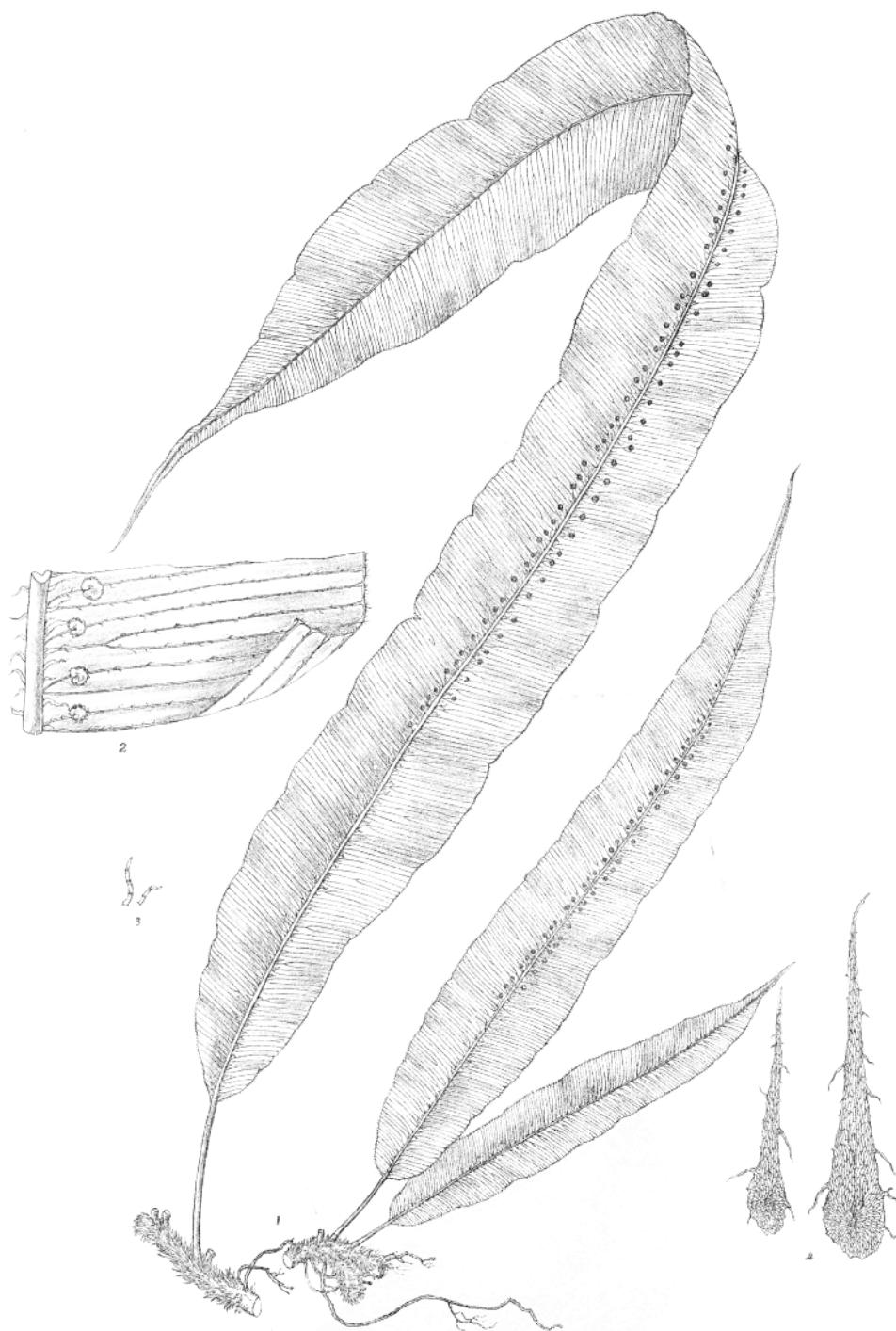
第 五 十 一 圖
高 山 蓀 蕨 (水 龍 骨 科)

OLEANDRA WALLICHII (Hooker) Presl

地下莖廣匍匐於岩石上；鱗片緊密，黃色，開張，狹披針形，邊緣具茸毛，腹部着生。葉疏生或頗密生，葉柄長僅一·五至五粉，被長毛，近基部有明顯之骨節，由此脫落後，留一短柄於莖上，幾為鱗片所掩。葉體長十五至三十粉，寬二至三·五粉，葉端急漸尖頭，基部亞圓或短楔形，兩邊平行，略呈波狀，薄紙質，中肋下面鱗片頗密；葉脈明顯，兩面均具短毛；子囊羣位於中肋兩邊，為不規則之一列；子囊羣蓋圓腎形，膜質，被剛毛，以缺刻着生於葉脈。

分布：雲南，四川，西藏，印度，緬甸及馬來半島。

圖註： 1. 本種全形(自然大)， 2. 葉體之一部，表明葉脈及子囊羣之位置(放大二倍)， 3. 葉面上之毛(放大五十倍)， 4. 莖上之鱗片(放大五十倍)。



OLEANDRA WALLICHII (Hooker) Presl

高山篠蕨

PLATE 52

WOODWARDIA HARLANDII Hooker

POLYPODIACEAE

WOODWARDIA HARLANDII Hooker, Fil. Exot. t. 7 (1857); C. Chr. Ind. Fil. 658 (1906); Nakai, Tokio Bot. Mag. **39**:102 (1925); Ching, Bull. Fan Mem. Inst. Biol. **1**: 148 (1930); *ibid.* **2**: 2 (1931); Wu, Polyp. Yaoshan. in Bull. Dept. Biol. Sun Yatsen Univ. n. **3**: 280 t. 95 (1932); Ogata, Ic. Fil. Jap. **5**: t. 250 (1933).

Lorinseria Harlandii J. Sm. Hist. Fil. 311 (1675).

Woodwardia Kempii Cop. Phil. Journ. Sci. Bot. **3**: 280 (1908).

Rhizome wide-creeping, hypogaeous, thick; scales broadly lanceolate, acuminate, brown, entire; *frond* uniform or subdimorphous, far apart, stipe variable in length, in fertile frond about 40 cm long, in sterile frond about half as long, stramineous, naked or sparingly scaly below; lamina variable, from simple to trifid or regularly pinnate, or even irregularly bipinnatifid (*W. Kempii*), in pinnate forms ovate-detoid, rounded at base, about 30 cm long, 20 cm broad, pinnae 2-3 on each side, more or less connected by a narrow wing along rachis, linear-lanceolate, acuminate, about 20 cm long, 2-3 cm broad, the terminal segment much the longest, margin sinuate, rather irregularly serrulate; *texture* subcoriaceous; *veins* quite visible in young state but obscure in fully grown leaves, regularly anastomosing in 3 rows of elongate, oblique, large, subhexagonal areolae; *sori* linear-oblong, rather short, in pairs, close to the midrib, *indusium* membranaceous, vaulted, opening towards midrib.

Hongkong. *Dr. Harland* (type); Lorraine: Victoria Peak, *C. Wilford* 15; *Mathew* 359, 360, 361 (1904). Kwangtung: Tai-mo Shan, *Bodinier* 1191; Loh-fau Shan, *C. Ford* (1883); Swatow, Thai-yong, *Dr. Dalziel*, July, 1901; Lockchong, *N. K. Chun*, 42688; Yao Shan, *S. P. Ko* 51973. Kwangsi: Yao Shan, Pe-niu, *S. S. Sin & K. K. Wang* 177 (1928). Hainan: Ng Chi Leng, Fan-yah, *C. L. Tso & N. K. Chun* 44180, Oct. 26, 1932, in forest ravine.

Also Formosa and Tonkin.

An unique species of the genus, differing from all other known Asiatic species in simple or trifid or simple pinnate frond, with 2-3 pairs of linear-lanceolate, long segments. *W. Kempii* Cop. is only a form with pinnae being more or less lobed.

Plate 52. Fig. 1. habit sketch (natural size). 2. section of a fertile pinna, showing venation and position of sori ($\times 3$). 3. scales from rhizome ($\times 50$).

第五十二圖

哈氏狗脊（水龍骨科）

WOODWARDIA HARLANDII Hooker

地下莖肥大，橫生於土中；鱗片疏生，寬披針形，銹黃色，全緣，葉爲一形或稍爲二形，葉間距離大，柄長短不一，其在著生子囊羣之葉者，長可四十粉以上，其在不生子囊羣之葉者，長約半之，稻桿色，光滑，或下部鱗片疏生，葉體不一其形：或爲披針形之單葉，或爲三裂，或爲羽狀分裂，甚至爲不完全的二次羽狀分裂；其在羽狀分裂者，小葉一至三對，長約二十粉，寬約二至三粉，基部爲具翅之中肋連着，頂部之小葉尤長；亞革質，邊緣具小鋸齒，葉脈不甚顯明，於主脈之兩旁成三列之斜長六角形網眼，近邊緣分開；子囊羣形長，生於主脈之兩側，具膜質全緣之蓋向主脈開離。

分布：香港，廣東，瓊洲島，廣西，近發現於台灣及東京。

本種爲本屬特殊之一種，其異於其他產於亞洲之種者，爲其全形或三裂或僅一位羽狀分裂之葉體。

W. Kempii Cop. 者僅爲本種之變形，以其兩側小葉有再行羽狀分裂之傾向也。

圖註：1. 本種全形（自然大），2. 子囊羣葉體之一部，表示其葉脈及子囊羣之位置（放大三倍），3. 莖上之鱗片（放大五十倍）。



WOODWARDIA HARLANDII Hooker

哈氏狗脊

C. R. Feng Del. et Lith.

PLATE 53

ASPLENIUM ADNATUM Copeland

POLYPODIACEAE

ASPLENIUM ADNATUM Copeland, Phil. Journ. Sci. Bot. **3**: 284 (1909); C. Chr. Ind. Fil. Suppl. 10 (1906-12).

Rhizome suberect, 5 mm thick, densely scaly; *scales* 5 mm long, linear-lanceolate, entire, blackish; *fronds* caespitose, several together, stipe 10-15 cm long, obscurely blackish, densely clothed in similar but smaller and subdeciduous scales; lamina 15-20 cm long, about 3 cm broad, linear-lanceolate, simple pinnate below pinnatifid apex, rachis green, unisulcate above, sparsely scaly beneath; *pinnae* broadly adnate, the basal ones somewhat shortened, rachis wingless, those above the middle are connected by a narrow wing along the rachis, oblong, subacute, patent, margin obscurely dentate above the entire, constricted base, glabrous above, fibrillose beneath; *texture* subcoriaceous, color pale green; *veins* subflabellate, inconspicuous but caniculate, extending well into the teeth; *sori* 3-5 to each pinna, linear, oblique, about 5 mm long, *indusium* linear, broad, entire.

Kwangtung: Tai-mo Shan, opposite Hongkong, C. G. Matthew (type), November 7, 1907.

An unique species, characterized by narrowly lanceolate, simple pinnate leaves with short, adnate pinnae and dense, black, fibrillose scales on the stipe and rachis beneath. However, it may possibly prove to be a young form of the variable *Asplenium crinicaule* Hance, common in the locality.

Plate 53. Fig. 1. habit sketch (natural size). 2. pinna, showing venation and position of sori ($\times 4$). 3. scales from the base of stipe ($\times 50$). 4. scales from rachis ($\times 50$).

第五十三圖

合生鉄角蕨（水龍骨科）

ASPLENium ADNATUM Copeland

地下莖短肥，斜生；鱗片密生，長約五糎，狹披針形，全緣，黝色，葉簇生，柄長十至十五粉，黝色，鱗片密生，久則脫落，葉體長十五至二十粉，寬約三粉，線披針形，一回羽狀深裂，中肋綠色，上面鱗片疏生，小葉無柄，但合生於中肋，長橢圓形，開張，邊緣具鈍鋸齒，上面光滑，下面具針形鱗片，亞革質，淡綠色，葉脈分開，不顯明；子囊羣每小葉三至五個，斜出，長約五糎，蓋線形，全緣。

分布：廣東之天馬山。

本種爲特殊之種，其一回羽狀分裂之線披針形之葉，與合生之小葉，易與他種分別。

圖註： 1. 本種全形（自然大）， 2. 小葉，表明其葉脈及子囊羣（放大四倍）， 3. 葉柄基部之鱗片（放大五十倍）， 4. 莖上之鱗片（放大五十倍）。



ASPENIUM ADNATUM Copeland

合生鐵角蕨

PLATE 54

TAENITIS BLECHNOIDES (Willdenow) Swartz

POLYPODIACEAE

TAENITIS BLECHNOIDES (Willdenow) Swartz, Syn. Fil. 24, 220 (1806); Hk. et Bak. Syn. Fil. 397 (1868); Christ, Farnkr. d. Erde 130 (1897); Diels, Nat. Pfl. Fam. I: 4. 305 (1899); C. Chr. Ind. Fil. 630 (1906).

Pteris blechnoides Willd. Phytographia 13 t. 9, f. 3 (1794).

Taenitis chinensis Desv. Berl. Mag. 5: 308 (1811).

Rhizome thick, creeping, densely beset with atropurple, spreading, stout, setose hairs, which extend upward to some distance above the base of stipe; *frond* distant, large, stipe 26-50 cm long, firm, naked, glossy, stramineous, continuous to the rhizome, lamina as long as the stipe, oblong-ovate, impari-pinnate, *pinnae* 2-7-jugate, lanceolate, acuminate, margin entire, more or less wavy, cartilaginous, 15-25 cm long, 1.5-2 cm broad, oblique, lower ones subopposite, not shortened, generally broader and sterile, the upper ones subalternate, fertile, the terminal one as large as the lateral ones, shortly petiolate, naked in all parts; *texture* subcoriaceous, color lustrous green above; *veins* reticulated in 2-3 rows of oblong, oblique, hexagonal areolae without including veinlets; *sori* linear, continuous or rarely interrupted, transversing the reticulated veins between the margin and costa, or often nearer to the margin; *paraphyses* dense, atropurple, clavate, multi-septate and higher than sporangia.

Hainan: On the way from Dung Ka to Win Fa Shi, C. L. Tso & N. K. Chun 43462, 43708, August 15, 1932; Mo Shan, C. L. Tso & N. K. Chun 52278, April 30, 1932; on wet rocks under woods.

Malesia, Polynesia, Ceylon, and Indo-China.

This interesting fern, though seems to be common in other parts of tropical Asia, is known for the first time in the island Hainan, the range of distribution being thus extended farther north. According to Copeland, the affinity of this fern to *Syngramma* and *Schizoloma* is unusually clear, though both von Goebel and Bower have regarded it as one of the "genera incertae sedis."

Plate 54. Fig. 1. habit sketch (natural size). 2. a section of pinna, showing venation and position of sori ($\times 2$). 3. paraphysis from a sorus ($\times 50$). 4. spore ($\times 150$). 5. setose hair from the base of stipe ($\times 50$).

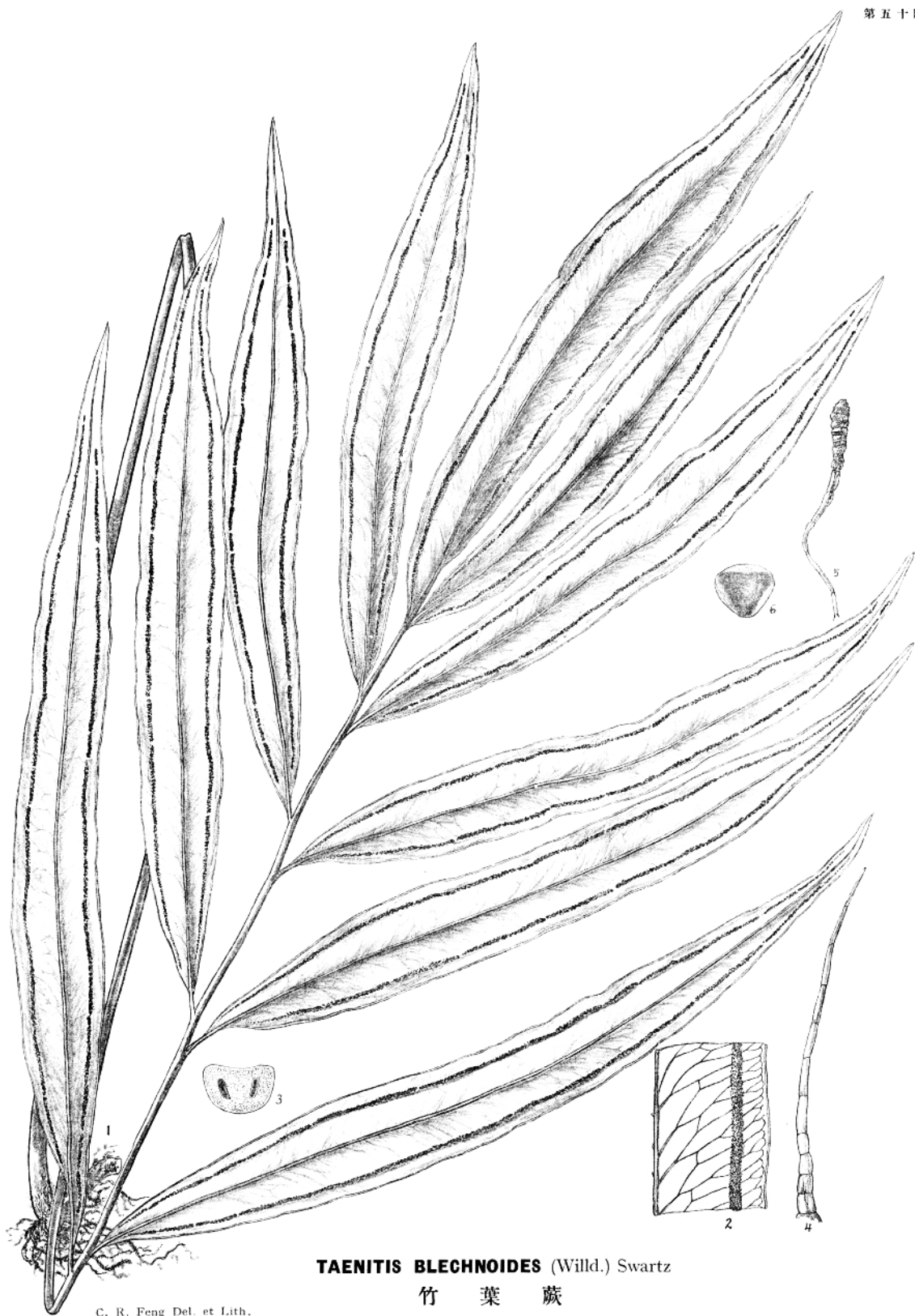
第 五 十 四 圖
竹 葉 蕨 (水 龍 骨 科)

TAENITIS BLECHNOIDES (Willd.) Swartz

地下莖橫生於土中，被紅褐色之開張針狀粗毛；葉疏生，柄長二六至五十粉，稻桿色，光滑，僅基部具同樣之紅褐色毛。葉體略與柄等長或過之，一回單數羽狀分裂；小葉長披針形，二至七對或較多，下者亞對生，上者亞互生，具短柄，形體略等，漸尖頭，基部楔形，革質，深綠色，上面光澤，全緣，具角質透明之狹平邊，葉脈網狀，網眼大，斜長方形，中無小脈；子囊羣無蓋，線形，一列，位於中肋及葉邊之間，或稍貼近葉邊，惟具無數深紅褐色錘形之線狀體。

分布：亞洲熱帶各地；最近發現於瓊洲島。

圖註：1. 本種全形(自然大)， 2. 小葉一部，表示葉脈及子囊羣之位置(放大二倍)， 3. 莖之基部橫切面， 4. 莖上之毛(放大五十倍)。 5. 子囊羣內之線狀體(放大五十倍)， 6. 孢子(放大一百五十倍)。



C. R. Feng Del. et Lith.

TAENITIS BLECHNOIDES (Willd.) Swartz

竹 葉 蕨