

厘米,寬約 15 厘米,互生,羽柄長約 2—2.8 厘米;小羽片約 30 对,相距 2—2.3 厘米,互生,具极短的小羽柄或几无柄,長約 7—10 厘米,寬 8—12 毫米,狭披針形,向頂端長漸尖,基部稍不等,圓形,有时为浅心脏形,頂生小羽片分离(有小叶柄長約 5 毫米),和下面的小羽片同形,叶緣几为全緣,具有規則的极浅的鈍鋸齿,干时常內捲,但頂端漸尖头,具三角形鋸齿。叶脉两面明显,相距不到 1 毫米,一般为分叉或单脉,近水平开展,頂端稍向上弯,倒行假脉超过孢子囊羣,长达小羽片寬度的 1/2,不透明。叶为草質,下面沿中肋被棕色长鱗片。羽軸光滑,浅褐色,下部直径約 4 毫米,向上漸变細,到頂部直径仅为 1 毫米左右,向頂端无翅。孢子囊羣綫形,長約 1.5 毫米,彼此分离,距叶緣約 0.8 毫米,大都由 20 个孢子囊組成。

特产于云南(河口,曼章)。生林下溪沟中,海拔 100—150 米。

9. 透明脉观音座蓮

Angiopteris henryi Hieron. in Hedwigia LXI (1919) 261; C. Chr. Ind. Fil. Suppl. III (1934) 25 —— *A. fauriei* Hieron. var. *formosana* Hieron. l. c. 274.

植株矮小細瘦,高約 1 米。叶二回羽状;羽片倒闊披針形,上部寬約 10 厘米,向基部变狭,羽軸細瘦,基部粗不过 2.5 毫米,禾稈色;小羽片約 25 对,相距 1.5—1.7 厘米,无柄,基部对生,几开展,向上略对生,斜向上,基部的長 4.5—6 厘米,中部寬不及 1 厘米,向上漸长,頂部的長达 8 厘米,寬 10—12 毫米,狭披針形,漸尖头,通直,但有时頂部弯弓,基部圓楔形,邊緣近全緣,有微齿牙。叶脉开展,通直,单一或分叉,两面明显,倒行假脉明显,在光照下透明,自叶边到达向中肋的 2/3 处。叶为草質,透明,两面光滑,干后为黃綠色。孢子囊羣綫形,長 1—1.7 毫米,彼此不接近,由 10—18 个孢子囊組成,距叶边約 0.8 毫米。

产于台湾 (Bakenseng 山地)。

10. 广西观音座蓮

Angiopteris kwangsiensis Ching, sp. nov.

植株高約 2 米。叶为二回羽状;羽片長圓形,長約 65 厘米,中部寬約 20 厘米,向下部和上部稍变狭,基部和頂部寬約 14 厘米,互生,羽柄長約 15 厘米;小羽片約 16 对,下部的几对对生,开展,上部的互生,斜向上,具明显的柄,基部的較短,長 7.5 厘米,其他的几相等,長 9.2—11 厘米,寬 1.5—1.8 厘米,披針形,向頂端漸尖,基部稍不等,近圓形,頂生小羽片分离,有小叶柄,和下面的小羽片同形;叶緣全緣或具不太明显的鈍鋸齿,干时稍內捲,向頂部具明显的鈍鋸齿或三角形鋸齿。叶脉两面明

显,距离約为 1 毫米,一般为分叉,近水平开展,直行,向頂端稍弯;倒行假脉长过孢子囊羣,約达小羽片寬度的 1/4,半透明。叶为草質,上面綠色,下面淡綠色,沿中肋疏被棕色鱗片。叶軸光滑,直径約 1 厘米,干时深褐色,羽軸基部粗約 2.5 毫米,上面具縱沟,光滑,淡黃褐色。孢子囊羣褐色,綫形或长圓形,長約 1.5 毫米,距叶緣約 1 毫米,由 12—16 个孢子囊組成。

特产于广西(罗城)。生深谷密林下,海拔約 400 米。

11. 疏叶观音座蓮(中国植物分类学报,第八卷)

Angiopteris remota Ching et C. H. Wang in Acta Phytotax. Sinica VIII (1959) 129, t. 17, f. 7.

植株高大。叶为二回羽状;羽片呈长圓状闊倒卵形,長約 60 厘米,上部最闊处寬 20—22 厘米,下部漸狹,柄長約 1 厘米,基部略膨大并为深褐色;小羽片 15—16 对,相距 3—4 厘米,下部的几平展,頂部的稍斜出,披針形,頂部的最大,長 13—15 厘米,中部的最闊,約 2 厘米,下部的小羽片漸縮短,基部一对長仅 2.5—3 厘米,寬 6—8 毫米,先端漸尖,頂部略向上弯,基部近圓形,兩側略不对称,邊緣全緣,柄极短,長仅約 1—1.5 毫米,除基部两对几对生外,余均为互生,頂生小羽片的柄長約 1.5 厘米。叶为厚草質,上面光滑,干后呈暗綠褐色,下面呈浅灰色,中肋附近被浅褐色疏鱗片,羽軸下面浅褐色。叶脉兩面均明显,纤细,黑褐色,平展,单一或近基部分叉,各脉相距 0.5—0.7 毫米;倒行假脉長,达到由叶緣向中肋的 1/2 处。孢子囊羣长圓形,長約 1 毫米,有孢子囊 12 个,距叶緣約 0.5 毫米,下部小羽片的長尖头也能育。

产于海南島(白沙县)。生林下。

12. 云南观音座蓮

Angiopteris yunnanensis Hieron. in Hedwigia LXI (1919) 277; C. Chr. Ind. Fil. Suppl. III (1936) 25—*Angiopteris evecta* var. *alata* Christ in Bull. Herb. Boiss. VI (1898) 973.

植株高大,高达 2 米。叶柄粗約 2—2.5 厘米,叶片广闊,二回羽状;羽片互生,長 60 厘米,下部的較短,寬 20—24 厘米,长圓形,基部稍狹,羽柄粗壮,直径約 2 厘米,羽軸向頂端有翅;小羽片約 20 对(在下部羽片約有 15 对),几开展,下部的对生,相距 2 厘米,向上部略为互生,相距約 3 厘米,基部的較短,長 8—9 厘米,中部的長 12—13 厘米,寬 2 厘米,漸尖头,基部为圓截形或近圓截形,有短柄,邊緣几全緣,向先端有小鋸齿。叶为紙質,干后經常变为褐色或褐綠色,下面光滑或沿中肋下部稍有少数綫状鱗片疏生。叶脉近张开,多数分叉,上下兩面明显,尤以下面为甚,倒行假脉纤细,向

Planta ultra 1 m alta, stipite 2 cm crasso, fuscente-brunneo, glabro; lamina ampla, bipinnata; pinnis alternis, 48—60 cm longis, parte superiore 20 cm latis, oblongo-obovatis, deorsum sensim angustatis, parte basali ca. 8 cm latis; pinnulis ca. 13-jugis, alternis, 2.5—3 cm inter se remotis, obliquis, brevissime petiolulatis, basalibus ca. 6 cm longis, sequentibus sensim majoribus, supremis maximis, ad 16 cm longis, 3 cm latis vel latioribus, lanceolatis, basi subaequaliter cuneato-rotundatis, apicem versus in cuspidem 5—12 mm longam. 3 mm latam subito acuminatis, marginibus ubique regulariter serratis, dentibus deltoideis, obliquis, acutis; venulis subrecte patentibus, plerisque furcatis, intus marginem antrorsim curvatis, in dentes intrantibus, utrinque distinctis, striis recurrentibus obsoletis, vix ultra soros progredientibus; textura folii herbacea, in sicco brunneo-viridi, utraque glaba, ad costas subtus paleis parvis filiformibus, rufis perspersis onusta; soris linearibus, ca. 2 mm longis, non contiguis, a se distantibus, lineas regulares continuas vel saepe interruptas occupantibus, sporangiis 16—22.

Yunnan austr.-orient., Hokou, Yiang-ping-pa, leg. *Chow Tsang-yi* No. 20, V, 1953.

8. **Angiopteris parvipinnula** Ching, sp. nov.

Planta ad 2 vel 3 m alta, stipite incompleto, 3 cm crasso, laete stramineo, glabro; lamina ampla, bipinnata; pinnis oblongis, ad 60 cm longis, ca. 15 cm latis, alternis, petiolo 2—2.8 cm longo, 4—5 mm crasso, stramineo, glabro suffultis; pinnulis ca. 30-jugis, 2—2.3 cm inter se remotis, alternis, brevissime petiolulatis vel sessilibus, 7—10 cm longis, 8—12 mm latis, lineari-lanceolatis, acuminatis, basi subinaequaliter rotundatis, omnibus similibus, marginibus subintegris vel obscure serrulatis, apice serratis, e sicco leviter revolutis; venulis patentibus, furcatis aut simplicibus, ad marginem parum curvatis, utrinque prominulis, striis recurrentibus ultra soros usque ad medium semifaciarum pinnularum progredientibus; textura folii herbacea, statu sicco obscure viridi, supra glabra, infra ad costas paleis rufis filiformibus parce vestita; soris linearibus, ca. 1.5 mm longis, a se magis distantibus, 0.8 mm e margine remotis, sporangiis plerumque 20.

Yunnan austr.-orient., Hokou, Man-Chang, leg. *Tsai Ke-hwa* No. 513, IV, 24, 1933, in ravine under forest.

10. **Angiopteris kwangsiensis** Ching, sp. nov.

Planta ad 2 m alta, stipite incompleto, parte superiore ca. 1.5 cm crasso, brunnescente nigricante, glabro; lamina ampla, bipinnata; pinnis alternis, obliquis, oblongis, ca. 65 cm longis, 17 cm medio latis, basi parum angustatis, petiolo ad 15 cm longo, 3.5 mm crasso, brunnescente stramineo, glabro suffultis; pinnulis ca. 16-jugis, 3 cm inter se remotis, breviter petiolulatis, inferioribus parum abbreviatis, patentibus, oppositis, sequentibus suboppositis, parum majoribus, mediis 9—11 cm longis, 1.5—1.8 cm basi latis, lanceolatis, apice acuminatis, rectis vel paulo curvatis, basi latiore subrotundatis, terminali aequali, marginibus integris vel inconspicue serrulatis, apex serratis; venulis patentibus, furcatis, parte superiore intra marginem leviter curvatis, quam mesophyllo obscurioribus, striis recurrentibus subpellucidis, ultra soros progredientibus; textura folii herbacea, supra obscure et infra pallide viridi, utraque glabra; soris linearibus, 1.5 mm longis, contiguis, 1 mm e margine remotis, sporangiis 10—16.

Kwangsi: Mung Tung Kou, 24 km. north of Luchen, leg. *R. C. Ching* 5501, under

forest in ravine, alt. 400 m, V, 28, 1928.

13. **Angiopteris robusta** Ching, sp. nov.

Planta ad 2 m vel ultra alta, stipite ultra 3 cm crasso, fusco-brunneo, glabro; lamina ampla, bipinnata; pinnis oblongis, ultra 60 cm longis, 20 cm medio latis, obliquis, alternis, petiolo 4.5 cm longo, supra geniculum 5 mm crasso, robusto, fusco-stramineo, glabro, non marginato suffultis, rachillis ad apicem non alatis; pinnulis 14-18-jugis, alternis, 3 cm inter se remotis, basalibus ca. 8.5 cm longis, 2.5 cm latis, acuminatis, basi rotundatis, breviter petiolulatis, patentibus, sequentibus majoribus, supremis 13-15 cm longis, 2.2-2.6 cm latis, gradatim acuminatis (pinna terminali aequali), margine integris, cartilagineo-incrassatis, in sicco leviter revolutis, apice minute et remote serrulatis; venulis subpatentibus, plerisque furcatis, infra prominulis, supra notatis, ad marginem parum curvatis, apice incrassatis, striis recurrentibus distinctis vix ultra soros progredientibus; textura folii crasso-chartacea, supra atro-viridi, infra pallidiore, ad costas paleis parvis, rufis filiformibus, adpressis sparse vestita; soris linearibus, 2-3 mm longis, contiguis, e basi usque ad apicem pinnularum extensis, ca. 1.5 mm e margine remotis, sporangiis 22-30.

Kwangsí occid., Pe-seh, Tang-li-shiang, Red River basin, Kwangsí Vegetation Survey No. 3481, IX, 8, 1953, under dense forest. Unfolding leaves used as a vegetable.

14. **Angiopteris officinalis** Ching, sp. nov.

Planta parva, ad 80 cm alta, stipite ca. 30-40 cm longo, basi 6 mm crasso, pallide stramineo, nudo; lamina 30-40 cm longa et lata, bipinnata; pinnis (praeter terminalem) 2-jugis, alternis, 4 cm inter se separatis, breviter petiolatis (petiolo 1-2 cm longo), ascendentibus, oblanceolatis, 20-40 cm longis, ca. 12 cm supra medium latis, deorsum gradatim decrescentibus, basi 4-6 cm latis, pinnatis; rachillis tenuibus, 1.5-2 mm crassis, stramineis, glabris, marginatis, ad apicem alatis; pinnulis 14-20-jugis, alternis, sessilibus, 1.8 cm a se remotis, basalibus valde reductis, ca. 2 cm longis, 6 mm latis, acuminatis, patentibus, sequentibus sensim majoribus, mediis 4-5 cm longis, 1 cm latis, oblongo-lanceolatis, parum obliquis, apice subcaudatis et leviter falcato-incurvatis, basi subrotundatis, supremis et terminali maximis, 9 cm longis, 1.3 cm medio latis, lanceolatis, gradatim acuminatis, basin versus leviter vel vix angustatis, obliquo-rotundatis, rectis, obliquis, marginibus ubique crenato-serratis; venulis patentibus, furcatis aut simplicibus, laxis, apicem versus leviter incurvatis, utrinque praesertim subtus prominentibus, striis recurrentibus usque ad medium semifaciarum pinnularum progredientibus; textura folii tenuiter herbacea, supra obscure et infra brunnescente viridi, utraque glaberrima; soris parvis, ellipticis 1 mm longis, a se magis separatis, e margine plano steriliusque magis remotis, sporangiis 6-10.

Chekiang, Pin-yang Hsien, Yi-tang Shan, leg. K. K. Tsoong No. 1882.

17. **Angiopteris rahaoensis** Ching, sp. nov.

Stipite.....; lamina ampla, bipinnata, rachide fuscente brunnea, 5 mm crassa, glabra; pinnis alternis, angulo antico ca. 85° a rachide patentibus, oblongis, 50 cm vel ultra longis, 20 cm medio latis, basin versus parum angustatis, petiolo 1.5 cm longo, incrassato, fusco-brunneo suffultis; rachillis gracilibus, ca. 2 mm crassis, stramineis, ad apicem anguste alatis, pinnulis praeter terminalem 21-jugis, alternis, patentibus, 2 cm inter se remotis, basalibus parum abbreviatis, ceteris fere aequalibus, mediis 10-11 cm longis, 1.5 basi latis, ad medium