

叶柄粗如拇指,干后淡棕色,光滑;叶二回羽状;羽片长圆状倒披针形,长约62厘米,上部最宽处达21厘米,基部宽11厘米,羽柄长4—5厘米,向羽轴先端两侧略有狭翅,奇数羽状;小羽片达18对,相距约3厘米,近对生,几无柄,或有短柄,长不及1毫米,基部的小羽片长6.5厘米,平展,上部的长达16厘米,宽达2.5厘米,斜向上,长披针形至阔披针形,基部圆形,先端长渐尖,边缘几全缘,或有极浅锯齿,小羽片上面有一条灰白色的软骨质的叶边(由膨大的水囊形成)。叶脉开展,单一或分叉,下面明显,上面可见,达于软骨质边缘,倒行假脉不明显,长超过孢子囊群。叶为草质,干后上面黑绿色,下面淡绿色,两面光滑。孢子囊群线形,长1.5毫米,有孢子囊16—20个,距平伏边缘0.8—1毫米处着生,先端不育。

产于云南(河口市,三角卡)。海拔260米。

30. 林氏观音座莲

Angiopteris lingii Ching, sp. nov.

植株高大而强壮,高2—3米。叶柄下部粗约2.5厘米,干后为深褐棕色,几无鳞片。叶广大,三角形,二回羽状;羽片7—8对,近对生或几互生,相距8厘米,柄长4厘米,基部的最长,约55厘米,中部宽18厘米,向基部略变狭,羽轴顶部两侧有翅;小羽片25对或更多,互生,相距1.5厘米,基部的长5—6厘米,宽1.5厘米,渐尖头,多少向下,中部的长8厘米,宽1.3厘米,披针形,渐尖头,基部较宽,圆截形,几无柄,开展,边缘有阔而钝的矮锯齿,上面变成肥厚的灰白色软骨质,彼此接近,向顶部有小尖锯齿。叶脉近开展,二叉或单一,下面明显,上面可见,向顶部稍弯弓,脉端为纺锤形,倒行假脉自叶边下行向中肋的1/3处。叶为厚纸质,干后坚实,褐绿色,下面黄绿色,中肋有疏鳞片散生或几光滑。孢子囊群线形,长2.8毫米,彼此密接,由16—18个孢子囊组成,直达小羽片的顶部,外侧不育叶边宽约1毫米。

产于福建西南部(龙岩,天马山南坡)。生木栢林下。

31. 阔叶观音座莲

Angiopteris vasta Ching, sp. nov.

叶柄粗如指,干后灰绿色,光滑。叶二回羽状;羽片长圆形,向基稍变狭,长达62厘米,上部宽30厘米,羽柄长4—6厘米,奇数羽状;小羽片9对,下部相距3厘米,上部为4厘米,近对生,有短柄,长2毫米,基部的小羽片长8—10厘米,宽2.5厘米,长圆形,中部的长15厘米,宽2.5—3厘米,阔披针形,上部的长约21厘米,斜向上,阔披针形,基部近圆形,先端长渐尖,边缘几为全缘,有浅锯齿。叶脉开展,单一或分叉,上面不明显,下面明显,倒行假脉短而不明显,约与孢子囊群同长。叶为薄纸质,

上面灰綠色,下面淺灰綠色,兩面光滑。孢子囊羣綫形,長 1.5 毫米,有孢子囊 16—22 個,距平伏不育的邊緣 1 毫米處着生,上部及先端不育。

產于雲南南部(西雙版納)。

近于大觀音座蓮 *A. magna* Ching, 但本種倒行假脈短而不明顯,邊緣几為全緣,或有淺鋸齒,從不作圓齒狀。

32. 披針觀音座蓮

Angiopteris caudatiformis Hieron. in *Hedwigia* LXI (1919) 278; C. Chr. Ind. Fil. Suppl. III (1934) 25; Tard.-Blot et C. Chr. in *Fl. Indo-Chine* VII, ii (1939) 20.

葉柄粗如拇指,干後淺綠棕色,光滑。葉二回羽狀;羽片長圓形,基部略變狹,長達 70 厘米,上部最寬處達 25 厘米,基部寬 16—20 厘米,羽柄長 3—3.5 厘米;小羽片 14—18 對,几對生,柄短,長 1 毫米;基部小羽片稍向上,長 8.5 厘米,上部的長達 22 厘米,寬達 2.5 厘米,斜向上,長披針形,基部近圓形(上側廣楔形,下側圓形),先端長漸尖,邊緣有鋸齒。葉脈開展,單一或分叉,兩面都明顯,倒行假脈不明顯,長與孢子囊羣相等。葉為紙質,上面灰綠色,下面淺灰綠色,下面中脈及細脈上有棕色綫形的鱗片疏生,或几光滑。孢子囊羣綫形,長 2 毫米,有孢子囊 18—24 個,距平伏不育的邊緣 1 毫米處着生,先端不育。

產于雲南東南部。

33. 馮氏觀音座蓮

Angiopteris fengii Ching, sp. nov.

植株高 2—3 米。葉柄粗如指,干後黑棕色,光滑。葉二回羽狀;羽片几對生,上部略為互生,長圓形,向基部略變狹,長達 83 厘米,基部寬 12 厘米,上部寬 20 厘米,羽柄長 3 厘米,羽軸頂部兩側有翅,奇數羽狀;小羽片達 24 對,下部的相距 2 厘米,近對生,上部為 3 厘米,互生,柄短,不及 1 毫米;基部小羽片長 6 厘米,寬 1.8 厘米,中部的長 9—11 厘米,寬約 2 厘米,闊披針形,基部圓形,先端漸尖,邊緣有淺波狀齒牙。葉脈開展,單一或分叉,兩面都明顯,倒行假脈不明顯,長與孢子囊羣相等。葉為紙質,上面深綠色,下面淺綠色,兩面光滑,棕色綫形鱗片極稀少或無。孢子囊羣綫形,長 2 毫米,孢子囊 18—24 個,距平伏不育的邊緣 1 毫米處着生,先端不育。

產雲南東南部。

34. 王氏觀音座蓮

Angiopteris wangii Ching, sp. nov.

植株高大,成密叢,高約 1.8 米,葉柄粗肥,葉片廣大,二回羽狀;羽片互生,頗張

Planta ad 2 m vel ultra alta, stipite ca. 2 cm crasso, nigrescente, glabro; lamina ampla, bipinnata; pinnis oblongo-oblancoatis, ad 62 cm longis, parte superiore latissima 21 cm latis, ad basin admodum angustatis, 11 cm latis, petiolo 4—5 cm longo et rachillis nigrescentibus, nudis, ad apicem versus angustissime marginatis praeditis, impari-pinnatis; pinnulis ca. 18-jugis, 3 cm inter se remotis, suboppositis, fere sessilibus, patentibus vel superioribus obliquis, supremis ad 16 cm longis, 2.5 cm latis, lanceolatis, acuminatis, rectis, basi subrotundatis, inferioribus brevioribus, basalibus 5—6 cm longis, apice leviter falcato-incurvatis, marginibus subintegris vel saepe crenulatis, cartilagineo-incrassatis; venulis patentibus, furcatis vel rarius simplicibus, infra distinctis, supra vix notatis, apice ad marginem 1.5 mm latam distincte clavatum incrassatis et lineas pallide albidis secus marginem formantibus, striis recurrentibus obsoletis, paulo ultra soros progredientibus; textura firmuliter herbacea, in sicco supra nigrescente, infra brunneo-viridi, utrinque glabra; soris approximatis, linearibus, ca. 2 mm longis, sporangiis 16—20 ca. 1 mm e margine plano incrassato remotis.

Yunnan austr.-orient., Hokou, Wang Jio-ka, alt. 260 m, leg. *Tsai Ke-hwa* No. 315.

30. **Angiopteris lingii** Ching, sp. nov.

Planta ad 2—2.5 m alta, stipite 2 cm crasso, fusco-brunneo, glabro; lamina deltoidea, 70 cm longa et lata, bipinnata; pinnis ca. 10-jugis, subalternis, subpatentibus, 8 cm inter se remotis, petiolo 4 cm longo, 3—3.5 mm crasso, rufo-brunneo, glabro suffultis, infimis ca. 30 cm longis, 10 cm latis, anguste oblongis, acuminatis; rachillis parte inferiore marginatis, superiore alatis; pinnulis 18-jugis, alternis, approximatis, 8 cm longis, 1.3 cm latis, lanceolatis, acuminatis, basi latiori rotundo-truncatis, breviter petiolulatis, marginibus crenato-dentatis, cartilagineo-incrassatis; venulis patentibus, supra basin aut ad medium furcatis, apice incrassatis in dentes recte intrantibus, quam mesophyllo obscurioribus, infra distinctis, supra non visis, striis recurrentibus paulo ultra soros progredientibus; textura folii firmiter chartacea, in sicco brunnescente viridi, utraque glabra; soris linearibus, contiguis, lineas continuas usque ad apicem occupantibus, ca. 0.6 mm e margine remotis, sporangiis 20—26.

Fukien austr.-occid., Lung-ng Hsien, Tien-ma Shan, leg. *Ling Yung* No. 4333, IX, 6, 1937.

31. **Angiopteris vasta** Ching, sp. nov.

Species statura *A. magnae* Ching valde affinis differt pinnulis subintegris, striis recurrentibus brevibus sat manifestis et venulis ad partem superiorem antrorsim curvatis.

Planta verisimiliter ad 2 m alta, stipite 2 cm crasso, pallide stramineo, glabro; lamina ampla, bipinnata; pinnis ad 62 cm longis, 30 cm latis, oblongis, basin versus angustatis, petiolo 4—6 cm longo, supra geniculum 2.5—3 mm crasso, pallide stramineo suffultis; pinnulis 9-jugis, inferioribus 3 cm, superioribus 4 cm inter se remotis, alternis, petiolulatis (petiولو 2 mm longo), inferioribus 8—10 cm longis, 2.5 cm latis, sequentibus majoribus, supremis 21 cm longis, 3.5—3.8 cm latis, late lanceolatis, acuminatis, basi fere aequaliter rotundatis, marginibus subintegris vel obscure serrulatis; venulis patentibus, tenuibus, furcatis, parte superiore antrorsim curvatis, infra prominulis, supra vix notatis, striis recurrentibus, brevissimis, fere distinctis, usque ad soros progredientibus; textura folii tenuiter chartacea, in sicco virescente, glabra, ad costas subtus paleis parvis rufis perspersis oblecta; soris oblongis, approximatis, lineas interruptas aut subirregulares secus marginem occupantibus, 1—1.4 mm e

margine remotis, sporangiis 16—22.

Yunnan austr., Se-song-ban-nan, Yunnan Complex Expedition No. 5172.

33. **Angiopteris fengii** Ching, sp. nov.

Planta ad 2—3 m alta, stipite 2 cm vel ultra crasso, nigricante, glabro; lamina ampla, bipinnata; pinnis alternis, oblongis ad basin versus parum angustatis, 83 cm longis, basi 12 cm latis, medio 20 cm latis, petiolo 3 cm longo, 3 mm crasso, nigricante, glabro suffultis, rachillis ad apicem alatis; pinnulis 24-jugis, breviter petiolulatis, inferioribus, 6 cm longis, 1.8 cm latis, suboppositis, 2 cm inter se remotis, sequentibus majoribus, mediis 9—11 cm longis, ca. 2 cm latis, late lanceolatis, acuminatis, basi rotundatis, supremis similibus, margine plano minute crenato-dentatis; venulis fere patentibus, plerisque furcatis aut rarius simplicibus, ad apicem parum curvatis, utraque pagine latere prominulis, striis recurrentibus obsoletis, brevissimis; textura tenuiter chartacea, supra viridi, infra pallidiore, glabra, ad costas paleis minutis rufis perspersis excepta; soris linearibus, 2 mm longis, contiguis, 2 mm e margine remotis, sporangiis 20—24.

Yunnan austr.-orient., Mar-li-po (Lao-chun Shan), alt. 1200—1300 m, leg. K. M. Feng No. 13876, in mixed forest along the river bank, XII, 15, 1947.

34. **Angiopteris wangii** Ching, sp. nov.

Planta ad 2 m alta, stipite basi 3 cm vel ultra crasso, nigricante, glabro; lamina ampla, bipinnata; pinnis ultra 60 cm longis, 20 cm latis, oblongis, basin versus non angustatis, petiolo 2—3 cm longo, 5 mm crasso, brunneo-stramineo, glabro suffultis, rachillis crassis, infra teretibus, supra marginatis, ad apicem anguste alatis; pinnulis 20-24-jugis, 2.5—3 cm inter se remotis, inferioribus oppositis, patentibus, vix vel parum abbreviatis, superioribus subalternis, 10 cm longis, 2 cm latis, lineari-lanceolatis, breviter acuminatis, basi rotundatis, breviter petiolulatis, margine serrulatis, in sicco subrevolutis; venulis subpatentibus, furcatis, ad apicem subfalcatum incurvatis, supra notatis, infra prominulis, striis recurrentibus sparsis, obsoletis, brevissimis; textura folii tenuiter chartacea, brunneo-viridi, utraque pagine glabra; soris linearibus, 1.8 mm longis, contiguis vel approximatis, ca. 0.8 mm e margine remotis, sporangiis 12—14.

Yunnan austr.-orient., Hokou, Mar-wang-pa, leg. C. W. Wang No. C1.

35. **Angiopteris crassa** Ching, sp. nov.

Planta ad 1.8 cm alta; lamina ampla, bipinnata; pinnis 60 cm longis, 18 cm latis, anguste oblongis, petiolo 2 cm longo, 3 mm crasso, nigrescente, nudo suffultis, rachillis ad apicem exalatis; pinnulis 17-jugis, 2—2.5 a se remotis, inferioribus suboppositis, sequentibus alternis, brevissime petiolulatis, basi rotundatis, basalibus 7—8 cm longis, mediis longioribus, 1.5 cm latis, supremis ad 12 cm longis, 1.8 cm latis, lanceolatis, rectis, acuminatis, marginibus crenulato-denticulatis; venulis patentibus, furcatis vel raro simplicibus, apice vix vel leviter incurvatis, infra distinctis, supra notatis, striis recurrentibus usque ad soros progredientibus; textura folii crasso-chartacea, utrinque fere glabra; soris contiguis, linearibus, 2 mm longis, ca. 1 mm a margine plano remotis, sporangiis 18—22, apicibus pinnularum sterilibus.

Yunnan austr.-orient., Hokou, Man-pa, alt. 280 m, leg. Tsai Ke-hwa No. 855.

40. **Angiopteris brevicaudata** Ching, sp. nov.