

上最寬，下部漸狹，柄長 3—6 厘米，基部稍膨大并呈深褐色；小羽片約 16—18 对，下部的近对生而平展，上部的互生，斜向上，相距約 2 厘米，披針形，頂部的最大，長約 12 厘米，寬約 2 厘米，近基部最寬，向頂端漸狹，下部的小羽片漸縮短，基部的長約 3—4 厘米，寬僅約 1 厘米，先端長漸尖，基部圓楔形而稍不对称，邊緣几全緣，干后略反捲，小羽柄短，長 1—1.5 毫米，頂生小羽片和其下側生的同形，但其基部呈闊楔形，有長達 2 厘米的柄。葉為薄紙質，干后上面呈深綠褐色，下面為暗淺綠色，下面中肋及其附近的葉面上被淺褐色疏鱗片；葉軸暗褐而略帶紅色，光滑無毛，被疏鱗片。葉脈兩面均明顯，纖細，黑褐色，單一或从基部分叉或很少从中部分叉，几平展，通直而頂部稍向上弯，相距約 0.5—0.6 毫米，倒行假脈短，仅略超过孢子囊羣。孢子囊羣長圓形，長約 1 毫米，有孢子囊 12—18 个，距离葉緣約 0.3 毫米，小羽片的基部兩側及尖端不育。

产于海南島(儋县，沙堡山)。

40. 短尾头观音座蓮

Angiopteris brevicaudata Ching, sp. nov.

植株高大。葉柄未見，葉二回羽狀；羽片長圓形，長 47 厘米，基部寬 10—12 厘米，羽柄長 2 厘米，羽軸褐色，光滑，頂端不具狹翅；小羽片 12 对或更多，基部的相距 2.5 厘米，上部為 3.5 厘米，对生至近对生，柄長 2 厘米，基部小羽片長 5—6 厘米，平展，上部小羽片長 11.5 厘米，寬 3 厘米，長圓形，基部圓形，先端急尖，有短尾头，長 5—12 毫米，邊緣近全緣，具淺圓齒，多少內卷。葉脈开展，大都分叉，下面明显，上面不見，沒有倒行假脈。葉厚紙質，干后上面黑綠色，下面綠色，中脈及細脈下面有不少紅棕色綫形鱗片。孢子囊羣綫形，長 2—2.5 毫米，有孢子囊 22—24 个，密接，距几平伏不育的邊緣 1.5 毫米处着生，先端不育。

产于云南东南部(屏边，石板乡，下米租)。海拔 800 米。

41. 河口观音座蓮

Angiopteris hokouensis Ching, sp. nov.

植株高大。葉柄粗大如指，干后黑褐色。葉二回羽狀；羽片長圓倒披針形，長 60 厘米，基部寬仅 6 厘米，上部寬 20 厘米，羽柄長 6 厘米，褐色；小羽片 11 对，基部的相距 2.5 厘米，对生，上部為 3 厘米，近于互生，柄短，不及 1 毫米，基部小羽片長 6—8 厘米，寬 2 厘米，長圓形，短尾头，下向，上部的小羽片長達 13 厘米，中部較寬，達 3 厘米，倒披針狀長圓形，基部圓形，先端漸尖，近尾头，邊緣有銳鋸齒。葉脈开展，大都分叉，下面明显，上面隱約可見，沒有倒行假脈。葉厚草質，上面黑綠色，下面綠色，

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 m 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.

Stipite incompleto, sordide brunneo, glabro; lamina ca. 80 cm longa, 60 cm lata, bipinnata; pinnis 4-5-jugis, alternis, obliquis, elongato-oblongis, ad 47 cm longis, 10—12 cm latis (frondis sterilis majoribus), petiolo 2—3 cm longo, geniculo 1 cm longo tumido, nigrescente instructo suffultis, rachillis nigrescente brunneis, glabris, apicem versus exalatis; pinnulis 12-jugis, inferioribus 2.5 cm, superioribus 3.5 cm inter se remotis, oppositis vel suboppositis, obliquis, breviter petiolulatis (petiolulo ca. 2 mm longo), basin versus abbreviatis, infimis 5—6 cm longis, sequentibus gradatim majoribus, mediis 8 cm longis, supremis 11.5 cm longis, 3 cm latis, oblongis, basi aequaliter rotundatis, rectis, apice in cuspidem brevem 8—14 mm longam, 4 mm basi latam subito contractis, marginibus crenulatis vel subintegris, in sicco revolutis, venulis subpatentibus, densis, nigrescentibus, e basi furcatis, ad marginem leviter incurvatis, infra distinctis, supra vix notatis, spuriis recurrentibus nullis; textura firmiter chartacea, statu sicco fulvo-viridi, ad costas nervasque squamulis parvis rufis filiformibus subtus sparse vestita; sori lineari, contigui, 2—3 cm longi, sporangii 22—24, magis ab marginibus pinnularum recedente, e basi usque ad basin cuspidis adscendente.

Yunnan austr.-orient., Pingpien Hsien, Shi-ban-shiung, Hsia-me-tsui, alt. 800 m, leg. *Chu et Li*, by stream side under thickets.

41. **Angiopteris hokouensis** Ching, sp. nov.

Planta ad 2 m alta, stipite 2 cm vel ultra crasso, nigrescente, glabro; lamina ampla, bipinnata; pinnis oblongo-oblancoelatis ad 60 cm longis, parte superiore ca. 20 cm latis, basin versus gradatim angustatis, petiolo 6 cm longo, nigrescente, glabro, 3—4 mm crasso suffultis; pinnulis ca. 11-jugis, basalibus abbreviatis, 6—8 cm longis, 2 cm latis, oblongis, breviter caudatis, patentibus vel subdeflexis, ca. 2.5 cm inter se remotis, sequentibus majoribus, supremis ad 13 cm longis, 3 cm medio latis, oblongo-oblancoelatis, basi rotundatis, ad apicem in cuspidem brevem contractis, margine ubique acute serratis; venulis subpatentibus, plerisque furcatis, infra prominulis, supra notatis, ad apicem intus marginem curvatis et parum incrassatis, striis recurrentibus nullis; textura folii firmiter herbacea, supra obscure et infra pallide viridi, utraque pagine glabra; sori linearibus, 2—3 mm longis, contiguis, 1.8 mm e margine remotis, sporangii 20—28.

Yunnan austr.-orient., Hokou, Lan-shiu-kou, leg. *Tsai Ke-hwa* No. 469, V, 8, 1953.

42. **Angiopteris crenata** Ching, sp. nov.

Planta verisimiliter ad 2 m alta, stipite deest; lamina ampla, bipinnata; pinnis alternis, 85 cm vel ultra longis, 20 cm latis, elongato-oblongis, basin versus vix vel parum angustatis, petiolo 4 cm longo, ad 4 mm crasso, fuscente-brunneo, glabro suffultis, rachillis crassis, exalatis; pinnulis ca. 29-jugis, inferioribus oppositis, infimis deflexis, sequentibus patentibus, superioribus alternis, obliquis, 2.5—3 cm inter se remotis, breviter petiolulatis (petiolulo ca. 2 mm longo), mediis 10 cm longis, 1.5 cm latis, lineari-lanceolatis, basi rotundatis, ad apicem versus potius in cuspidem brevem, 5—12 mm longam, 3 mm latam subito contractis, marginibus ubique regulariter grosse crenatis, dentibus obtusis, cartilagineis; venulis patentibus, simplicibus vel furcatis, apice fere rectis vel leviter curvatis, magis incrassatis et in dentes ingredientibus, striis recurrentibus nullis; textura folii firmiter chartacea, utrinque glabra, in sicco supra obscure et infra brunnescente viridi; sori linearibus, contiguis, e basibus pinnularum usque ad cuspidem protensis, ca. 1 mm e margine plano cartilagineoque