

15. 边位观音座莲

Angiopteris sakuraii Hieron. in *Hedwigia* LXI (1919) 280; C. Chr. Ind. Fil. Suppl. III (1934) 25.

植株细瘦，高约1米。叶为二回羽状；羽片为倒阔披针形，基部宽约5—6厘米，向上部为12厘米；小羽片约20对，基部的近于对生，长约3.5厘米，中部宽不及1厘米，中部的最大，长约8厘米，中部宽约1.3厘米；向顶部又渐小，长仅6厘米，阔披针形，短尖头或急尖头，稍向上弯弓，基部近圆形，上侧为短楔形，下侧为圆形，柄长约1—1.5毫米，开展，叶边有粗齿牙。叶脉单一或分叉，两面明显，向顶部通直，尖端膨大，并进入灰绿的软骨质的粗齿牙，倒行假脉明显，在光照下不透明，长达向中肋的1/2处。叶为草质，干后为淡绿色，两面光滑。孢子囊长圆形，彼此不密接，由6—8个孢子囊组成，着生于离叶边不远处。

产于台湾（Liutintai 地方）。

本种的形体极近于日本南部产的 *A. fauriei* Hieron.，但小羽片较宽，不为渐尖头，倒行假脉在光照下并不透明，叶边锯齿为软骨质，干后脆而易断。

16. 尖齿观音座莲（中国植物分类学报，第八卷）

Angiopteris acutidentata Ching in *Acta Phytotax. Sinica* VIII (1959) 127, t. 16, f. 1.

植株高达1—2米。叶柄灰褐色，光滑无毛，有宽沟及稜。叶为二回羽状；羽片为长圆状倒卵形，长50—60厘米，中部宽20—25厘米，柄长2.5—3厘米，基部稍膨大，暗褐色，奇数一回羽状；小羽片16—18对，具长仅1—2毫米的短柄，相距2—2.5厘米，中部以下的几平展，近对生，顶部的向上斜出，披针形，中部以上的最宽，顶部的长18—20厘米，宽1.6—2厘米，下部的羽片逐渐缩小，基部的长约10厘米，宽0.8—1厘米，先端长渐狭，基部稍狭而略为不对称的圆形，其上侧稍偏斜而较短，边缘有整齐而几直立的长尖齿，齿的基部宽约0.8毫米；顶生小羽片与侧生小羽片同形而较长，柄长约2.3厘米，基部圆形，两侧对称。叶为草质，干后上面呈深绿褐色，下面呈浅绿色，下面中肋基部有稀疏的褐色鳞片。叶轴灰褐而带暗绿色，有宽沟；羽轴下面深稻秆色。叶脉两面均明显，先端稍向上弯，纤细，单一或从基部分叉，平展，相距0.8—1毫米，倒行假脉由叶缘达向中肋的1/2处。孢子囊椭圆形，长约1毫米，贴近叶缘，有孢子囊5—10个。

产于海南岛（保亭县，毛岸乡，尖岭山），海拔420米，生于山谷中林下疏荫处。

17. 短果观音座莲

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

植株形体比較瘦弱，二回羽状；羽片长圓形，尾头，长 50—56 厘米，中部寬 18—20 厘米，基部稍狹，羽柄长 1.5 厘米，向頂端兩側有狹翅，光滑无鱗片，棕禾稈色；小羽片 20—25 对，相距 1.5—2 厘米，互生，开展，有短柄，中部的长 9—10 厘米，中部寬 1.7 厘米，向基部稍狹，約 1.4 厘米，披針形，长漸尖头而稍上方弯弓，基部楔形，对称，基部一对較短，約 5—6 厘米，第二及第三对长 8 厘米，頂端一片最长，約 12 厘米，柄长 1 厘米，有狹翅，基部楔形，邊緣自基部以上有均匀的鋸齿。叶脉下面明显，纤细，較疏，单一或分叉，倒行假脉明显，从叶边几到达中肋附近。叶草質，干后为棕綠色，下面光滑无鱗片。孢子囊羣小，卵形，由 6—8 个孢子囊組成，远分开（間隔寬几等于囊羣寬），外側有一狹边。

产于台湾（Rimogan-Rahao 地方）。特产。

18. 台湾观音座蓮***Angiopteris taiwanensis* Ching, sp. nov.**

本种与下面的片裂观音座蓮极为相似，与此种不同处在于本种的叶緣具有尖銳的三角形鋸齿，孢子囊羣距叶緣較近，为 0.5—1.5 毫米。

特产于台湾。

19. 片裂观音座蓮***Angiopteris lobulata* Ching, sp. nov.**

植株高大，高約 2 米以上。叶为二回羽状；羽片长圓形，长約 50 厘米，上部寬約 25 厘米，向下稍变狹，基部寬約 15 厘米，羽柄长約 4.5 厘米，奇数羽状；小羽片約 11 对，具长 2—2.7 毫米的小羽柄，长 6—10 厘米，寬 2—3.3 厘米，下部的开展，較短，三角状闊披針形，上部的斜升，較长，披針形，向頂端漸尖，基部特闊，斜截形或闊楔形，小羽片的分裂情况变化大，基部大都为不規則的少数羽状全裂或浅裂，全裂片为扇形，倒卵形或长方形，偶为卵形，頂生羽片比其下面的羽片为长，具小羽柄，叶緣浅波状，全部具粗鈍鋸齿。叶脉下面明显，上面不太明显，相距 1 毫米左右，一般分叉，頂端稍向

图版 III 1—3. 福建观音座蓮 *Angiopteris fokiensis* Hieron., 1. 羽片的一部分×1/2; 2. 小羽片的一部分，表示叶脉、鋸齿及孢子囊羣的位置×1; 3. 孢子囊羣的横切面，表示两个孢子囊着生的位置（放大）。4—6. 河口原始观音座蓮 *Archangiopteris hokouensis* Ching, 4. 一个羽片×1/2; 5. 羽片的一部分，表示叶脉及孢子囊羣的位置×1; 6. 孢子囊羣的横切面，表示两个孢子囊的位置及其下面的夹絲（毛）。7—10. 天星蕨 *Christensenia assamica* (Griff.) Ching, 7. 植株全形×1/2; 8. 羽片的一部分，表示叶脉及聚合孢子囊羣的位置×1; 9. 一个聚合孢子囊羣的側面（放大）; 10. 同上，底面（放大）。

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.

Kwangsi occid., Pe-seh, Tang-li-shiang, Red River basin, Kwangsi 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 semifacierum 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

paulo lationibus, lanceolatis, acuminatis, basi aequaliter et breviter cuneatis, brevi-petiolulatis vel subsessilibus, pinnula apicali aequali, marginibus acute serratis, dentibus deltoideis, acutis, obliquis, apice grosse serratis; venulis patentibus, laxis, furcatis aut simplicibus, intus marginem paulo curvatis, in dentes intransitibus, utrisque prominulis, striis recurrentibus distinctis, pellucidis, fere usque ad costam progredientibus; textura tenuiter herbacea, in sicco brunnescente viridi, utraque glaberrima; soris ovatis vel ellipticis, a se magis distantibus, sporangiis 8—10 compositis, lineas continuas regulares e basi pinnularum usque ad basin cuspidis occupantibus, 1 mm a apice dentium remotis.

Taiwan, Rimogan Rahoa, Y. Kudo, V, 13, 1926.

18. **Angiopteris taiwanensis** Ching, sp. nov.

Species statura *A. rahaoensi* Ching valde similis, differt pinnulis angustioribus, marginibus grosse dentato-serratis, dentibus deltoideis, acutis, subpatentibus, 1 mm altis et basi latis, venulis spuriis distinctis, usque ad costam progredientibus.

Taiwan, Drs. F. et C. Baker, XI, 1914.

19. **Angiopteris lobulata** Ching, sp. nov.

Planta ad 2 m alta, stipite deest, rachide 7 mm crassa, fusco-brunnea, glabra; lamina ampla, bipinnata; pinnis alternis, obliquis, oblongis, ad 50 cm longis, 25 cm supra medium latis, petiolo 4.5 cm longo, supra geniculum nigrum 4 mm crasso, compresso, stramineo, glabro suffultis; pinnulis 11-jugis, alternis, versus basin vix angustatis, infimis 8—9 cm longis, 2.5 cm basi latis, patentibus, breviter aut longe (1—2.5 cm) petiolulatis, sequentibus parum majoribus, supremis terminalique maximis, ad 17 cm longis, 3—3.5 cm latis, e basi latissima deltoidea lanceolatis, acuminatis, integris vel parte inferiore saepe usque ad costam irregulariter lobulatis, lobulis dimensione variabilibus, aut flabellatis, aut obovatis, aut subquadrangularibus, marginibus e basi integra cuneata vel subcordata sursum grosse crenato-serratis; venulis valde obliquis, nigrescentibus, laxis, in parte basium 2-3-furcatis, sursum semel furcatis aut simplicibus, utrinque prominulis, ad apicem intus marginem incurvatis, striis recurrentibus ultra soros progredientibus; textura folii herbacea, statu sicco obscure viridi vel superne nigrescenti, glaberrima; soris oblongis, a se magis distantibus, 1.5 cm longis, lineas continuas vel saepe irregulares et interruptas secus marginem occupantibus, 1.5—2.5 mm e margine remotis, sporangiis 10—16.

Taiwan, Rengechi, Taichu, S. Sasaki, III, 3, 1927.

20. **Angiopteris crassifolia** Ching, sp. nov.

Planta ca. 2 m alta, stipite incompleto, 2 cm crasso, pallide stramineo, glabro; lamina ampla, bipinnata; pinnis alternis, ad 62 cm longis, 17—23 cm medio latis, oblongis, petiolo 1.5—2 cm longo, 5 mm crasso, duro, pallide stramineo, glabro suffultis; pinnulis 13-22-jugis, suboppositis, 2.5 cm inter se remotis, breviter petiolulatis, basalibus parum abbreviatis, deflexis, mediis longissimis, 11—13 cm longis, 2.5—3 cm basi latis, e basi latissima rotundataque late lanceolatis, apice breviter acuminatis, pinnulis supremis decrescentibus, obliquis, ca. 7 cm longis, 2 cm latis, basi cuneato-rotundatis, terminali similibus, marginibus ubique serratis, dentibus deltoideis, obtusis, obliquis, cartilagineis, griseo-albidis, duris; venulis subpatentibus, plerisque furcatis, densis, infra distinctis, supra vix notatis, parte superiore fere rectis et in dentes intransitibus, apice magis incrassatis; textura firmiter chartacea, vel fere subcoriacea, in sicco