

通体有整齐的粗锯齿，锯齿顶端大多有短芒刺状尖头；叶脉上面不明显，下面可见，羽状，中脉上侧的侧脉自下而上羽状、二叉状至单一，下侧的单一或二叉状，小脉大多伸入锯齿。叶纸质，干后浅绿色，上面色略深；叶轴禾秆色，下面疏被深棕色、伏贴、卵形、尾状长尖头、边缘有疏齿的膜质小鳞片，上面有沟槽；羽片上面光滑，下面疏被浅棕色的披针形细小鳞片。孢子囊群小，生于较短的侧脉分枝顶端，位于锯齿基部，中脉上侧可达 10 个，下侧不超过 4 个，生于上部；圆盾形的囊群盖深棕色，几全缘，膜质，早落。

特产于云南西北部丽江城南郊的文笔峰，海拔 2500—2800 米，生阔叶林下石灰岩隙。

本种与尖齿耳蕨 *Polystichum acutidens* Christ 相近，区别在于每一植株有多数（超过 10 个）叶，羽片近直角三角形，其下侧边常几通直，锯齿大多开展，孢子囊群近羽片边缘着生。

141. 凸脉耳蕨（新拟） 图版 43：6—7

Polystichum elevatovenusum Ching ex W. M. Chu et Z. R. He, sp. nov. in Addenda.

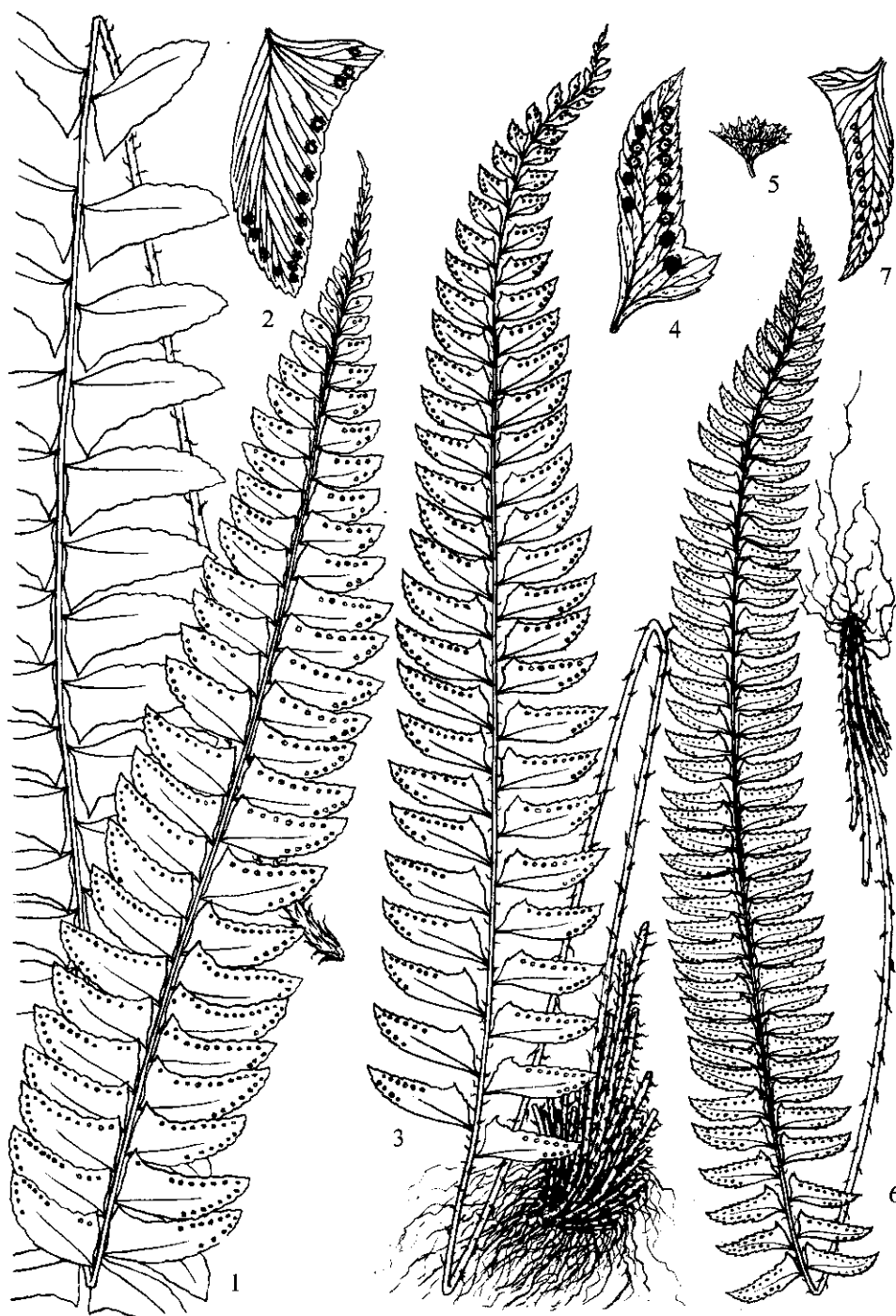
植株高 45—70 厘米。根状茎短而直立，连同叶柄基部直径 2—2.5 毫米，顶端密被鳞片；鳞片棕色，厚膜质，披针形，长达 8 毫米，宽约 1 毫米，近全缘。叶少数簇生；叶柄禾秆色，长 12—20 厘米，直径 1.5—0 毫米，上面有沟槽，基部密被与根状茎上相同或稍宽的近伏贴的鳞片，向上略有同形而贴生的棕色膜质鳞片；叶片长椭圆披针形，长 33—50 厘米，中部宽 3.5—6 厘米，顶端渐尖，中部以下略缩狭，基部宽 2—4 厘米，一回羽状；羽片 30—45 对，互生或近对生，有间距，或上部的密接，有时略呈覆瓦状，大多平展，下部几对或仅基部 1 对或多或多少向下反折，镰刀形或矩圆形，顶端略向上弯，急尖头，基部显著不对称，上侧有急尖头的三角形耳状凸起，其外侧平截或略凸出呈弧形，与叶轴平行，下侧狭楔形，其下部通直或近通直，上部呈弯向上的弧形，上侧边缘通体有浅钝锯齿或缺刻状浅圆齿，下侧边缘的下部全缘，上部有浅锯齿或缺刻状浅圆齿；叶脉羽状，上面可见，下面显著凸起，侧脉大多二叉状，较少单一，在耳状凸起上羽状，几达边缘。叶厚纸质，干后灰绿色，两面几同色；叶轴禾秆色，上面有沟槽，下面疏被与叶柄上相同而较小的贴生薄鳞片；羽片上面光滑，略有光泽，下面略有极小的浅棕色披针形鳞片。孢子囊群小，在中脉两侧各有 1 行，上侧较多，生于较短的小脉顶端，接近孟边缘；圆盾形的囊群盖棕色，早落。

特产于云南西部（潞西）至西北部（泸水、中甸）河谷地区。生于海拔 1200—2400 米的山谷林下阴湿处岩隙。模式标本采自潞西猛旺。

本种形态外貌与尖齿耳蕨 *Polystichum acutidens* Christ 相近，区别在于叶的质地较厚，厚纸质，羽片边缘有圆齿或顶端无芒刺的锯齿，叶脉下面显著凸起，孢子囊群接近羽片边缘着生。

142. 尖顶耳蕨（中国蕨类植物图谱） 图版 43：3—5

Polystichum excellens Ching, Ic. Fil. Sin. **5** : 234. 1958; Pic. Ser. Ind. Fil. Suppl. **4** : 253. 1965; S. F. Wu in J. Wuhan Bot. Res. **10** (4): 317. 1992 et in W. T. Wang, Keys Vasc. Pl. Wuling Mts. **56**. 1995; W. M. Chu et S. G. Lu in H. Li, Fl. Du-



图版 43 1—2. 凸脉耳蕨 *Polystichum elevatovenosum* Ching ex W. M. Chu et Z. R. He: 1. 植株全形, 2. 羽片背面, 表示叶脉及孢子囊群着生位置 (放大)。3—5. 尖顶耳蕨 *Polystichum excellens* Ching: 3. 植株全形, 4. 羽片背面, 表示叶脉、小鳞片及孢子囊群着生位置 (放大), 5. 囊群盖 (放大)。6—7. 尖齿耳蕨 *Polystichum acutidens* Christ: 6. 植株全形, 7. 羽片背面, 表示叶脉及孢子囊群着生位置 (放大)。(蔡淑琴绘)

通), alt. 2500 m, in forest, C. W. Wang (王启无) 66612, 1935 - 09; Daguan (大关), Tangjia Shan (唐家山), alt. 1100—1800 m, in fissures of rocks by brook under broad-leaved forest, W. M. Chu 5167, 1973 - 06 - 17; ib. Chushui (出水), alt. 1700—1800 m, in fissures of moist rocks under broad-leaved forest in ravine, W. M. Chu 5261, 1973 - 06 - 25; ib. Huanglianhe (黄连河), alt. 1100—1400 m, in fissures of moist rocks in shady place by brook, W. M. Chu 5576, 1973 - 06 - 16; ib. W. M. Chu 5167A, 1973 - 06 - 16; Suijiang (绥江), Zhongcun (中村), Shanheba (山河坝) alt. 850 m, in fissures of sandstone by waterfall in shady and moist ravine, W. M. Chu 5044, 1973 - 06 - 01.

Polystichum disjunctum Ching ex W. M. Chu et Z. R. He, sp. nov.

Species *P. biaristato* (Bl.) Moore primo aspectu maxime similis, sed rhachidibus prope apicibus plerumque gemmiferibus facile distinguenda.

Yunnan (云南): Maguan (马关), Dutian (独田), alt. 1500 m, under evergreen broad-leaved forest, J. J. He (和积鉴) 75 - 6 - 31, 1975 - 06 - 18; Jinping (金平), Kuconglaoling (苦聪老岭), Liangzhuzhai (良竹寨), alt. 1200 m, under moist evergreen broad-leaved forest, W. M. Chu (朱维明), J. L. Sun (孙吉良) et W. D. Li (李卫东) 6479, 1976 - 05 - 31; Jiangcheng (江城), alt. 1200 m, under evergreen broad-leaved forest in valley, W. M. Chu, J. L. Sun et W. D. Li 6745 (typus, PYU), 1976 - 06 - 24; ib. alt. 1150 m, under evergreen broad-leaved forest, W. M. Chu, S. G. Lu (陆树刚) et Z. Y. Liu (刘正宇) 15805, 1982 - 12 - 23; Jinghong (景洪), Kunhan (困罕), alt. 1300 m, under evergreen broad-leaved forest, W. M. Chu et Y. M. Feng (冯永民) 510, 1957 - 04 - 19; Menghai (勐海), Nanqiao (南峤), alt. 1400 m, under forest, C. W. Wang (王启无) 75130, 1936 - 06; Xishuangbanna (西双版纳), Sino-USSR Yunnan Complex Exped. (中苏云南综考队) 5898 et 7936, 1957; Lancang (澜沧), alt. 1200 m, under forest by valley, W. T. Wang (王文采) 10208, 1958 - 12 - 08; Lincang (临沧), Mayidui (蚂蚁堆), alt. 1200—1300 m, under dense forest by valley.

Guangxi (广西): Lingyun (凌云), Qinglong Shan (青龙山), Guangxi Univ. 155, 1925 - 03 - 27.

Vietnam (越南): Shaba (沙巴), Hugui Lake (呼贵湖), alt. 2100 m, under forest, Sino-Vietnam Exped. 205, 1964 - 02 - 09.

Polystichum elevatovenosum Ching ex W. M. Chu et Z. R. He, sp. nov.

Species habitu *P. acutidentis* Christ proxima, differt pagina frondis textura crasse papiracea, pinnis margine crenatis vel exaristate serratis, venis subtus manifeste elevatis, soris prope marginem pinnae sitis.

Yunnan (云南): Luxi (潞西), Mengwang (猛旺), alt. 1550 m, under forest, H. T. Tsai (蔡希陶) 56335, ib. Xiangtang (象塘), alt. 2100 m, in fissures of rocks, H. T. Tsai 56431; Lushui (泸水), on the way from Manbang (曼蚌) to Shangjiang (上江), alt. 1200 m, in fissures of rocks, in shady and moist place of valley, Exped. N. W. Yunnan,

Kunming Inst. Bot. Acad. Sin. (昆明植物所滇西北考察队) 8111, 1966-04-11 (holotypus, PYU; isotypus, PE et KUN); Zhongdian (中甸), Qiaotou (桥头), alt. 2300—2400 m, on moist limestone in valley, G. M. Feng (冯国楣) 3096, 1939-10-26.

Polystichum falcatilobum Ching ex W. M. Chu et Z. R. He, sp. nov.

Species nova P. formosana Rosenst. affinis, differt pagina frondis textura coriacea, venis indistinctis, pinnis longe falcatis vel falcato lanceolatis subtus paleis minutulis brunneis adpressis lanceolatis vel ovatis apice longe caudatis margine denticulatis, sine pilis articulatis apice glandulosis.

S. Sichuan (四川南部) : Leibo (雷波), Zhongshanping (中山坪), alt. 1400—1600 m, C. T. Kuan (管仲天), 8353 (typus, PE), 1959-06-09; Gulin (古蔺), Huangjing (黄荆), alt. 1000 m, under evergreen broad-leaved forest in ravine, H. S. Kung (孔宪需), W. Li (李伟) & J. Li (李健) 6994, 6996, 1985-09-09; ib. alt. 1050 m, on moist and shady cliff in ravine, H. S. Kung, W. Li & J. Li 7134, 1985-09-15. **N. E. Yunnan (云南东北部)** : Suijiang (绥江), Ershisigang (廿四岗), alt. 1400 m, under evergreen broad-leaved forest in fissures of rocks in moist and shady place by brook, W. M. Chu (朱维明) 4993, 1973-05-29; ib. alt. 1250 m, under evergreen broad-leaved forest in fissures of rocks by waterfall, W. M. Chu 5551, 1973-06-09.

Polystichum gymnocarpium Ching ex W. M. Chu et Z. R. He, sp. nov.

Species nova habitu P. hecatopteroni Diels similis, sed serris pinnae apice breviter aristatis vel exaristatis, pinnis subtus paleis longe fibrosis, exindusiata, facile distinguenda.

S. W. Zhejiang (浙江西南部) : Suichang (遂昌), Jiulong Shan (九龙山), alt. 700 m, on dry rocks by road, P. S. Chiu (裘佩熹) et G. H. Yao (姚关琥) 5686, 1980-06-27; ib. alt. 500 m, on moist rocks under forest, P. S. Chiu et G. H. Yao 5695, 1980-06-29; ib. alt. 600 m, under forest, C. F. Zhang (张朝芳) 6305, 1980-09-20; Wuyi (武义), C. F. Zhang 262, 1970-11-02. **N. Fujian (福建北部)** : Pucheng (浦城), Zoology and Botany Institute, Fujian Academy of Science (福建省研究院动植物研究所) 46 (typus, PE).

Polystichum jiulaodongense W. M. Chu et Z. R. He, sp. nov.

Species gracilis primo aspectu P. omeiensi C. Chr. reducto maxime similis, sed basibus rhachidium superne gemmiparis, soris basibus loborum ultimorum crescentibus, indusiis peltiformibus irregularibus margine grosse laciniatis facile distinguenda.

Sichuan (四川) : Omei Mt. (峨眉山), Jiulaodong (九老洞), in evergreen broad-leaved forest, on moist cliff of calcareous rocks clothed with mosses, alt. 1750 m, W. M. Chu (朱维明) et Z. R. He (和兆荣) 28316 (typus, PYU), 1993-08-23.