

锯齿，下侧基部狭楔形，平截，全缘，中部以上向上弯曲呈弧形，边缘有整齐而常向内弯、顶端也具芒刺的锐锯齿；叶脉羽状，上面可见，下面明显，侧脉几达边缘，在主脉上侧的自下而上羽状、二叉状至单一，在主脉下侧的单一或二叉状。叶纸质或厚纸质，干后灰绿色，上面色较深；叶轴禾秆色，上面有沟槽；羽片上面光滑，下面疏被浅棕色、卵形、贴生的细小薄膜质鳞片。孢子囊群生于较短的小脉顶端，在主脉两侧各有1行，近中生，上侧的较多，通常5—9个，下侧1—4个，生于上部，下部不育；圆盾形的囊群盖浅棕色，全缘或边缘略呈波状，易脱落。

产四川南部（屏山）及北部（城口）、贵州西部（纳雍）及云南东南部（蒙自）。生海拔750—1600米的山地阴湿处石上。模式标本采自贵州纳雍。

134. 对生耳蕨（中国主要植物图说·蕨类植物门） 对生叶耳蕨（中国蕨类植物图谱）

Polystichum deltodon (Bak.) Diels in Engl. u. Prantl, Nat. Pflanzenfam. 1 (4): 191. 1899; Christ in Bull. Soc. Bot. France 52 Mém. 1: 26. 1905; C. Chr. Ind. Fil. 580. 1906, et in Acta Hort. Gothob. 7: 67. 1924; in Contr. U. S. Nat. Herb. 26 (6): 283. 1931; Hand.-Mazz. Symb. Sin. 6: 26. 1929; Hu et Ching, Ic. Fil. et Sin. 1: 21—22, pl. 11. 1930; Tagawa in Acta Phytotax. Geobot. 8: 26. 1939, pro parte, 9: 135. 1940, pro parte, et Col. Ill. Jap. Pterid. 80, 247, pl. 25, f. 148. 1959; H. Ito, Fil. Jap. Ill. pl. 312. 1944; Dickason in Ohio Journ. Sci. 120. 1946; Ohwi, Fl. Jap. Pterid. 62. 1957, pro parte; 傅书遐, 中国主要植物图说·蕨类植物门 179, 图 238. 1957; Cop. Fern Fl. Philipp. 2: 243. 1960; Ic. Corm. Sin. 1: 230, f. 460. 1972; Daigobo in Sci. Rep. Tokyo Kyoiku Daigaku B. 15 (224): 66. 1972 et in H. L. Li et al. Fl. Taiwan 1: 388. 1975, pro parte; Nakaike, Enum. Pterid. Jap. 242. 1975, pro parte, et N. Fl. Jap. Pterid. 505 cum f. a, b. 1982; 陈仁钧, 安徽植物志 1: 168, 图 172. 1986; Iwatsuki, Ferns & Fern Allies Jap. 168, pl. 98, f. 2. 1992; S. F. Wu in Invest. Stud. Nat. 12: 33. 1992, et in W. T. Wang, Keys Vasc. Pl. Wuling Mts. 56. 1995; C. F. Zhang, Fl. Zhejiang 1: 219, f. 1—229. 1993; S. K. Wu et X. Cheng in W. T. Wang, Vasc. Pl. Hengduan Mts. 1: 138. 1993; J. C. Wang et W. C. Shieh in T. C. Hang, Fl. Taiwan 2 ed. 1: 338. 1994; L. L. Xiang in Acta Phytotax. Sinica 30 (3): 265. 1994, pro parte. — *Aspidium deltodon* Bak. in Gard. Chron. n. s. 14: 494. 1880. — *Hemesteum deltodon* (Bak.) Lévillé, Fl. Kouy-tscheou 497. 1915. — *Aspidium tosaense* Makino in Bot. Mag. Tokyo 13: 61. 1899. — *Polystichum tosaense* (Makino) Makino in Bot. Mag. Tokyo 23: 144. 1909. — *Polystichum pseudodeltodon* Tagawa in Acta Phytotax. Geobot. 6: 159. 1937. — *Polystichum deltodon* Diels var. *pseudodeltodon* (Tagawa) Tagawa in Acta Phytotax. Geobot. 9: 136. 1940.

134a. 对生耳蕨（原变种） 图版 42: 3—4

var. **deltodon**

植株高13—42厘米。根状茎短而斜升至直立，连同叶柄基部直径1—2厘米，顶端

alt. 270 m, in fissures of rocks on limestone hills, W. M. Chu (朱维明) et Z. R. He (和兆荣) 27190, 1993-08-06.

Polystichum daguanense Ching ex L. L. Xiang var. **huashanicolum** W. M. Chu et Z. R. He, var. nov.

A typo differt margine anteriore pinnae serris saepe irregulariter laciniatis.

N. E. Yunnan (云南东北部): Zhengxiong (镇雄), Huashan (花山), alt. 1950 m, in fissures of limestone under shrub forest, W. M. Chu (朱维明) & G. F. Zhang (张光飞) 24241 (typus, PYU), 1991-08-31.

Polystichum deltodon (Bak.) Diels var. **cultripinnum** W. M. Chu et Z. R. He, var. nov.

A typo differt pinnis plerumque cultratis, margine non nisi supra medium acute vel cuspidate serrulato, infra medium integro vel undulato vel incisoserrulato, latere anteriore pinnae raro margine prope basim auriculatam denticula cuspidata.

Sichuan (四川): Emei (峨眉), alt. 1000 m, by stream, T. H. Tu (杜大华) 224, 1931-06-24; Emei Shan (峨眉山), Jiushijiudaoguai (九十九道拐), alt. 1250 m, in fissures of moist rocks, in mixed forest, W. M. Chu (朱维明) et M. Y. Liu (刘茂云) 7301, 1977-09-04; ib. alt. 1450 m, in fissures of limestone, W. M. Chu et Z. R. He (和兆荣) 28322B, 1993-08-23; ib. Longqiaogou (龙桥沟), alt. 1600 m, on cliff of shale under evergreen broad-leaved forest, W. M. Chu et Z. R. He 28312, 1993-08-23; Daxiangling (大相岭), alt. 1300 m, by brook under bushes, H. S. Kung (孔宪需) 4006, 4013, 1964-08-07; Gulin (古蔺), Maomaogou (毛毛沟), alt. 1100 m, under broad-leaved forest in ravine, H. S. Kung et al. 6934, 1985-09-06; ib. Jiancaogou (笕槽沟), alt. 1000 m, on cliffs under broad-leaved forest in ravine, H. S. Kung et al. 6990, 1985-09-09; Hejiang (合江), Dazhong Shan (大钟山), alt. 900 m, by road, Biol. Depart. Southwest Teach. Col. (西南师范学院生物系) 80145, 1980-07-22. **Chongqing** (重庆): Jinyun Shan (缙云山), F. J. Dai (戴番缙) et S. Chou (周铨) 534, 1956-06; Nantong (南桐), Yanghaping (羊哈坪), alt. 1000 m, by ditches, B. Y. Zhang (张百誉) et al. 81-1163, 1981-07-26; Nanchuan (南川), Banhe (半河) alt. 1250 m, under forest by brook, Z. Y. Liu (刘正宇) 2590, 1982-02-07. **Guizhou** (贵州): Chishui (赤水), Jinshagou (金沙沟), alt. 500-600 m, in fissures under forest, P. S. Wang (王培善) 76839, 1984-09-10 et 77830, 1984-10-22. **Yunnan** (云南): Maguan (马关), Bazhai (八寨), alt. 1750 m, in fissures of limestone under evergreen broad-leaved forest, W. M. Chu 8332 (typus, PYU), 1978-01-24. Pinbian (屏边), Dawei Shan (大围山), alt. 1500 m, in fissures of rocks in shady and moist place under evergreen broad-leaved forest, Y. Jiao (焦瑜) 96-56, 1996-10-06; Gongshan (贡山), Qiunatong (秋那桶 = Chi-na-tung 千那

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,