

## 越南、老挝蕨类植物新记载 (3) ——

### 凤尾蕨属<sup>\*</sup>

武素功<sup>1</sup>, 向建英<sup>1</sup>, Phan Ke Loc<sup>2 3</sup>, Onevilay Souliya<sup>4</sup>

(1 中国科学院昆明植物研究所生物多样性与生物地理学院重点实验室, 云南 昆明 650201; 2 Hanoi University of Science (HUS), VNU, 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam; 3 Institute Ecology and Biological Resources (IEBR), VAST, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Vietnam;  
4 Ministry of Health, Traditional Medicine Research Center, Vientiane)

**摘要:** 通过野外调查和标本研究, 报道越南、老挝两地凤尾蕨属 *Pteris* 7 个新记载的物种, 它们分别是 *P. argyraea*、四川凤尾蕨 *P. sichuanensis*、两广凤尾蕨 *P. maclarei*、单叶凤尾蕨 *P. pseudopellucida*、有刺凤尾蕨 *P. setuloso-costulata*、琼南凤尾蕨 *P. morii*、栗轴凤尾蕨 *P. wangiana*.

**关键词:** 凤尾蕨属; 凤尾蕨科; 越南; 老挝

中图分类号: Q 949

文献标识码: A

文章编号: 2095-0845(2012)01-022-03

## Some New Records of Ferns from Vietnam and Laos (3)

### *Pteris* (Pteridaceae)

WU Su-Gong<sup>1</sup>, XIANG Jian-Ying<sup>1</sup>, Phan Ke Loc<sup>2 3</sup>, Onevilay Souliya<sup>4</sup>

(1 Key Laboratory of Biodiversity and Biogeography, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China;  
2 Hanoi University of Science (HUS), VNU, 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam; 3 Institute Ecology and Biological Resources (IEBR), VAST, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Vietnam;  
4 Ministry of Health, Traditional Medicine Research Center, Vientiane)

**Abstract:** Genus *Pteris* from Vietnam and Laos is revised in this paper. Seven species newly reported from Vietnam and Laos are *P. argyraea*, *P. sichuanensis*, *P. maclarei*, *P. pseudopellucida*, *P. setuloso-costulata*, *P. morii*, and *P. wangiana*.

**Key words:** *Pteris*; Pteridaceae; Vietnam; Laos

*Pteris* L. is a genus with about 250 species widely distributed in the warm-temperate and tropical areas of the world (Kubitzki, 1990). Christensen and Tardieu-Blot (1940) reported 29 *Pteris* species from Vietnam, Laos and Cambodia. However, Ho (1990) reported 26 species and one variety of *Pteris* in Vietnam and other three species were considered as synonyms. Tagawa and Iwatsuki (1985)

reported 27 species of *Pteris* from Thailand, while Holttum (1968) reported 14 species from Malaysia. During our extensive expedition to Vietnam and Laos in past five years, we collected 21 species of the taxa which reported by Ho (1990) and we collected 7 species as new records for Vietnam and Laos. Our report could be a very useful data for the ‘Flora of Vietnam, Laos and Cambodia’ in progress.

\* Foundation item: U.S. National Geographic Society (6300-98, 7312-03)

Received date: 2011-04-10, Accepted date: 2011-08-26

作者简介: 武素功 (1935-) 男, 研究员, 主要从事植物分类学与蕨类植物学的研究工作。E-mail: sugong@mail.kib.ac.cn

**1 *Pteris argyraea*** T. Moore, Gard. Chron. 691. 1859; Hieronymus in Hedwigia **55**: 342. 1914; C. Chr. Index Fil. Suppl. 58. 1913–1916; Moran Fern Grower's Manual 473. fig. 13. 105. 2001.

Specimens examined: **Vietnam**: Lam Dong Prov., Da Lat city, Ta Nung Commune Tran Le agriculture farm, approximately  $11^{\circ}56'08''$  N,  $108^{\circ}22'47''$  E, 1 310–1 380 m. 08. Nov. 2006, WP<sup>①</sup>-4459. **Laos**: Khammouane Prov., Hinboun Distr., Khounkham Vill., Houay Muang (Phou Hai),  $18^{\circ}13'469''$  N,  $104^{\circ}32'671''$  E, 9 Nov., 2007, WS-338.

Ecology: In primary broad-leaved evergreen forest.

Distribution: Indonesia (type from Java), **New to Vietnam and Laos**.

Discussion: The blade of *P. argyraea* resembles that of *P. quadriaurita* Retz. but differs by whitish band on the center of the underside of the pinnae. It also resembles *P. aspericaulis* var. *tricolor* Moore, but distinctly different from it by without minor mucronate at the apex of ultimate segments and with longer spines along the costa.

**2 *Pteris sichuanensis*** H. S. Kung in Acta Bot. Yunn. **4** (4): 337. pl. 1. 1982 et Fl. Sichuan. **6**: 217. pl. 65. 1–2. 1988; S. G. Lu in C. Y. Wu, Fl. Yun. **253**: 2006.

Specimens examined: **Vietnam**: Ha Giang Prov., Yen Minh Distr., Lao Va Chai Mun.,  $23^{\circ}06'30''$  N,  $105^{\circ}04'32''$  E, 25 Nov. 2004, WP-605; WP-690.

Distribution: China (Sichuan, Guizhou, Yunnan). **New to Vietnam**.

Ecology: On crevice of rocks in wet and rich-humus places, at the edge of broad-leaved submontane forest of limestone areas.

Discussion: Similar to *P. deltoton* Bak. but differs from it by the lamina simple or pinnate, lateral pinnae 3–5 pairs, lanceolate, long-caudate at apex,

with laciniate on the margin.

**3 *Pteris maclarei*** Ching, in Bull. Dept. Biol. Sun Yatsen Univ. **6**: 28. 1933; Tagawa in Acta Phytotax. Geobot. **5**: 104. 1936; S. H. Wu in C. Y. Wu Fl. Reip. Pop. Sin. **3** (1): 80. pl. 23. fig. 4. 1990. ——*Pteris nakasimae* Tagawa in Acta Phytotax. Geobot. **7**: 84. 1938.

Specimens examined: **Vietnam**: Hoa Binh Prov., Tan Lac Distr., Lung Van Mun., Huop Vill.,  $20^{\circ}32'52''$  N,  $105^{\circ}11'47''$  E, 900–980 m, 28 Nov. 2003, WP-245; WP-280; Quyet Chien Mun., Hung Vill.,  $20^{\circ}32'58''$  N,  $105^{\circ}11'56''$  E, 700–940 m. 30 Nov. 2003, WP-328. Kon Tum Prov., Kon Plong Distr., Hieu Mun.,  $14^{\circ}41'48''$  N,  $108^{\circ}22'23''$  E, 1 150 m, 20 Nov. 2003, WP-139; Po E Mun., Ist Vill.,  $14^{\circ}43'16''$  N,  $108^{\circ}38'18''$  E, 1 200 m, WP-210. **Laos**: Bolikhamsay Prov., Kham Keuate Distr., Phou Koma Thong Pei Vill., 5 Nov. 2007, WS-0275.

Distribution: China, Japan. **New for Vietnam and Laos**.

Discussion: *P. maclarei* was recorded in Vietnam in the Flora Reipublicae Popularis Sinicae, but not recorded in the work of christensen and Tardieu-Blot (1940).

**4 *Pteris pseudopellucida*** Ching in Lingnan Sc. Journ. **15**: 393. 1936; S. G. Lu in Fl. Yunnan **20**: 244. pl. 46. 1. 2006; *P. subsimplex* Ching ex Ching et S. H. Wu in Acta Bot. Austro-Sinica **1**: 3. 1983; *P. pellucida* f. *simplex* Hook. Sp. Fil. **2**: 161 pl. 128B. 1858 syn. nov.

Specimens examined: **Vietnam**: Kon Tum Prov., Sa Thay Distr., Sa Son Mun., Bar Gok Vill.,  $14^{\circ}26'29''$  N,  $107^{\circ}42'44''$  E, 800–1 000 m, 15 Nov. 2003, WP-036. **Laos**: Khammouan Prov., Phou

① WP and WS are abbreviations of collector-groups. WP including S. G. Wu, L. K. Phan, J. Y. Xiang, X. Gong, V. T. Nguyen, and K. S. Nguyen (2003–2004); S. G. Wu, L. K. Phan, J. Y. Xiang, S. D. Zhang, N. V. Duy, and V. T. Nguyen (2006); WS including S. G. Wu, N. D. Liu, J. Y. Xiang, Somsanith Bouammanivong, and Onevilay Souliya (2007), S. G. Wu, X. Gong, Y. Niu, Somsanith Bouammanivong, and Onevilay Souliya (2008).

Ak , Nakay Distr. ,  $17^{\circ}42'636''$  N ,  $105^{\circ}08'919''$  E , 550 m , 30 Oct. 2007 , WS-098.

Ecology: limestone areas in secondary forests.

Distribution: India , China ( Southeast Yunnan) .

#### New for Vietnam and Laos.

Discussion: Very similar to *P. deltodon* Bak. but rhizome scales are brown but not dark-brown , lamina serrulate , not incised on the margin , cuneate at the base , terminal pinnule without petiolule.

**5 *Pteris setuloso-costulata*** Hayata , Ic. Pl. Form. 4: 241. f. 168. 1914; Ogata , Ic. Fil. Jap. 4: t. 197. 1931; Tagawa in Acta Phytotaxa Geobot. 16: 71. 1956; Shieh in H. L. Li *et al.* , Fl. Taiwan 1: 298. 1975; S. H. Wu in C. Y. Wu Fl. Reip. Pop. Sin. 1 (3) : 63. fig. 18. 5. 1990.

Specimens examined: **Vietnam:** Lao Cai Prov. , Sapa Distr. 1. March. 2002 , T-V 309.

Distribution: Japan , Philippines , China [South Yunnan , Sichuan , Taiwan ( type) ] , **New for Vietnam.**

Ecology: In evergreen forest.

Discussion: The lowest pinnae have more than two pinnules.

**6 *Pteris morii*** Massam in Trans. Nat. Hist. Soc. Form. 32: 242. 1942; Ching *et al.* in W. Y. Chun *et al.* , Fl. Hainan 1: 72. 1964; S. H. Wu in C. Y. Wu , Fl. Reip. Pop. Sin. 3 (1) : 18. 1990.

Specimens examined: **Vietnam:** Dong Nai Prov. , Tan Phu Distr. , Cat Tien National Park ,  $11^{\circ}26'57''$  N ,  $107^{\circ}21'41''$  E , 115 m. 17 Nov. 2006 , WP-1641. ibidem 1684; **Laos:** Saravan Prov. , Tateng Distr. , Panengtay Vill. , 600–700 m , 3 Dec. 2008 , WS-1806; Laonharn Distr. , Vang Kanan Vill. , 13 Dec. 2008 , WS-2047.

Ecology: In disturbed primary or secondary closed semi-deciduous seasonal tropical broad-leaved lowland forest.

Distribution: China ( Hainan , Taiwan) , **New for Vietnam and Laos.**

Notes: Similar to *P. cretica* L. but rhizome erect but not creeping , sterile pinnae ovate not lanceolate , terminal pinnae cuneate at base.

**7 *Pteris wangiana*** Ching , in Bull. Fan. Mem. Inst. Biol. New ser 1: 311. 1949; S. H. Wu in C. Y. Wu , Fl. Reip. Pop. 3 (1) : 73. pl. 21. 1–2. 1990.

Specimens examined: **Vietnam:** Dak Nong Prov. , Dak Gooong Distr. , Dak Plao Commune , Ta Dung Nature Reserve , approximately  $11^{\circ}52'18''$  N ,  $108^{\circ}01'37''$  E. 1 200–1 300 m. 14 Nov. 2006 , WP-1603. Ha Giang Prov. Yen Minh distr , Du Gia Mun. , around  $22^{\circ}56'51''$  N ,  $105^{\circ}10'24''$  E. alt 1 000–1 200 m. about 2 km to SW of Giang Tru C Vill. , 29 Nov. 2004 , WP-797 , ibidem WP-834 , Lam Dong Prov. , Lac Duong Distr. , Da Chays Com Mune. , Bi Doup mountainous range approximately  $12^{\circ}06'02''$  N ,  $108^{\circ}39'33''$  E , 1 800–1 900 m , 31 Oct. 2006 , WP-1277; Nui Ba ( Lang Bian mountain) , approximately  $12^{\circ}02'50''$  N ,  $108^{\circ}26'23''$  E , 1 900–2 000 m , 9 Nov. 2006 , WP-4505. **Laos:** Xiangkhong Prov. , Khoun Dist. , Phak Leung Mt , 1 800–1 900 m , 24 Dec. 2008 , WS-2272.

Distribution: China ( Hainan , Southeast Yunnan) .

#### New for Vietnam and Laos.

Ecology: In evergreen forest , 1 000–1 900 m.

**Acknowledgments:** We are thankful to the Herbarium of Institute of Botany , Chinese Academy of Sciences ( PE) for allowing us to study the specimens.

#### References:

- Christensen C , Tardieu-Blot ML , 1940. *Flore Générale de l' Indochine* [M]. 7 (2) : 423—438
- Ho PH , 1991. *An Illustrated Flora of Vietnam* Vol. 1 [M]. Santa Ana: Mekong Printing , 555 , 337—342
- Holtum RE , 1968. *Flora of Malaya* Vol. 2 [M]. Singapore: Authority Government Printing Office , 393—409
- Kubitzki K , 1998. *The Families and Genera of Vascular Plants* Vol. 1 [M]. Berlin: Springer-Verlag
- Tagawa M , Iwatsuki K , 1985. *Flora of Thailand* Vol. 2 [M]. Bankok: Tistr Press , 231—260