

**Hirosi ITO*: Ferns of Indo-China and Thailand collected
by Dr. Hayata in 1917 and 1921**

伊藤 洋*: 早田博士採集のインドシナとタイのシダ類

The late Prof. Bunzo Hayata (1874-1934) at Tokyo Imperial University made a botanical expedition alone to Indo-China and Thailand over fifty years ago. He brought a lot of specimens belonging to both phanerogams and pteridophytes to the herbarium of the university. With regard to the ferns he published three new species of the Marattiaceae, namely *Archangiopteris subintegra*, *A. tamdaoensis* and *Protomarattia* (a new genus) *tonkinensis* in 1919. But, unfortunately the rest of the collection was left untouched in the packages for many years. In 1941 Dr. T. Tuyama and I classified them into families, or in some cases also into genera. Recently I had an opportunity to look over the specimens through the courtesy of the authorities of the University Museum, the University of Tokyo (Herb. TI). I have determined the following 204 species belonging to 80 genera in the collection (fern allies were excluded). For the saving of space, only plant names and place-names are set forth, but the names of countries, etc. are neglected. In the list, a star * indicates that the specimen has been determined by some one before my study as the concerned name on the label. The following persons are the authors. Nishida: *Botrychium lanuginosum*. Nakai: *Dicranopteris pteridifolia* and *D. splendida*. W. C. Shieh: *Pteris linearis*. Kurata: *Pteris tokioi*, *Athyrium acutissimum*, *A. erythropodium* and *Loxogramme saziran*. K. Iwatsuki: 7 species of *Abacopteris* and *Anisocampium cumingianum*. Tagawa: *Ctenitopsis setulosa*, *Diplazium donianum*, *Polystichum eximium* and *Polypodium argutum*.

An outline of Dr. Hayata's itinerary is as follows (places on the way omitted).

In 1917. [Tonkin] Laokay (Jun. 18)—Chapa (Jun. 21-Jul. 5)—Laokay (Jul. 9-10)—Muong Xen (Jul. 11-13)—Yunnanfu (China, Jul. 20)—Tamdao (Jul. 27-Aug. 6).

* [redacted] Bunkyo-ku, Tokyo. 東京都文京区 [redacted]

In 1921. [Annam] Ninhhoa Mai (May 17)—Dalat (Jun. 3-10)—Dankia (Jun. 7)—Pics (Jun. 7-9)—Dran (Jun. 14-16)—Belluvue (Jun. 17-18)—Da Ban (Jun. 20)—Krong Pha (Jun. 18-23). [Thailand and Laos] Lampang (Sep. 19)—Xenmai (Sep. 24)—Doi Step (Oct. 2-19)—Ho Keao (Oct. 12)—Xenmai (Oct. 16)—Pong Pa Paw (Oct. 30)—Hue San (Nov. 4-5)—Luang Prabang (Nov. 17-19)—places along the basin of the River Mekong (Nov.-Dec.)—Vientiane (Dec. 8)—Vaktoong (Dec. 26).

BOTRYCHIACEAE

Botrychium lanuginosum Wall. ex Hook. et Grev.*—Chapa.

MARATTIACEAE

Angiopteris cochinchinensis de Vries—Dalat.

A. polytheca Tard. et C. Chr.—Laokay; Doi Step.

Archangiopteris subintegra Hayata*—Muong Xen, Tamdao.

A. tamdaoensis Hayata*—Tamdao.

Protomarattia tonkinensis Hayata*—Tamdao.

SCHIZAEACEAE

Lygodium circinnatum (Burm. f.) Sw.—Xenmai.

L. flexuosum (L.) Sw.—Krong Pha; Xenmai, Bothene—Ken Thoe, Bau Khong—Bau Tha Bhoung.

L. giganteum Tagawa et K. Iwatsuki—Xenmai, Doi Step.

L. polystachyum Wall. ex Moore—Vieng Pa Paw—Tha Kaw.

L. scandens (L.) Sw.—Dran.

GLEICHENIACEAE

Dicranopteris pteridifolia (Pr.) Nakai*—Dalat.

D. splendida (Hand.-Maz.) Nakai*—Chapa.

HYMENOPHYLLACEAE

Crepidomanes latealatum (v.d. Bosch) Copel.—Muong Xen.

C. makinoi (C. Chr.) Copel.—Muong Xen.

Mecodium badium (Hook. et Grev.) Copel.—Tamdao.

M. exsertum (Wall.) Copel.—Dalat; Doi Step.

M. polyanthos (Sw.) Copel.—Tamdao.

Selenodesmium obscurum (Bl.) Copel.—Dalat.

Vandenboschia auriculata (Bl.) Copel.—Muong Xen, Tamdao.

V. maxima (Bl.) Copel.—Chapa.

PTERIDACEAE

- Acrostichum aureum* L.—Nhatrang—Ninhhoa Mai.
Adiantum caudatum L.—Belluvue; Luang Prabang—Pak Lay.
A. induratum Christ—Belluvue.
A. parishii Hook.—Nig Kup.
A. philippense L.—Belluvue, Da Ban; Lampang, Xenmai, Doi Step.
Cheilanthes mysurensis Wall. ex Hook.—Krong Pha.
C. tenuifolia (Burm.) Sw.—Doi Step.
Cibotium barometz (L.) J. Sm.—Vaktoong—Ban Ukhle.
Coniogramme petelotii Tard.—Muong Xen.
Dennstaedtia scabra (Wall.) Moore—Chapa.
Hemionitis arifolia (Burm.) Moore—Krong Pha.
Hypolepis punctata (Thunb.) Mett.—Chapa.
H. tenuifolia (Forst.) Bernh.—Chapa.
Lindsaea cultrata (Willd.) Sw.—Dalat.
L. ensifolia Sw.—Doi Step.
L. orbiculata (Lam.) Mett. ex Kuhn—Dalat.
Microlepia calvescens (Wall.) Pr.—Tamdao.
M. hookeriana (Wall.) Pr.—Muong Xen, Tamdao; Baunhikh—Vaktoong.
M. marginata (Panzer) C. Chr.—Chapa.
Onychium japonicum (Thunb.) Kunze—Chapa.
O. siliculosum (Desv.) C. Chr.—Belluvue.
Pteris decrescens Christ—Doi Step, Muoi Hai—Tami Thao.
P. excelsa Gaud.—Chapa.
P. fauriei Hieron.—Chapa.
P. formosana Bak.—Chapa, Laokay, Tamdao; Doi Step.
P. grevilleana Wall. ex Agardh—Laokay.
P. heteromorpha Fée—Doi Step.
P. linearis Poir.*—Laokay; Doi Step.
P. pellucida Pr.—Doi Step, Houei Sai, Ken Tao—Doi Meu.
P. setuloso-costulata Hayata—Chapa.
P. tokioi Masamune*—Dalat.
P. vittata L.—Chapa; Da Ban.
P. wallichiana Agardh—Baunhikh—Vaktoong.
Sphenomeris chusana (L.) Copel.—Chapa; Dalat.

DAVALLIACEAE

- Araiostegia perdurans* (Christ) Copel.—Doi Step.
Humata repens (L. fil.) Diels—Dalat ; Doi Step.
Leucostegia immersa (Wall.) Pr.—Doi Step, Pong Pa Paw—Pong Kiah.
Nephrolepis cordifolia (L.) Pr.—Doi Step.
N. hirsutula (Forst.) Pr.—(label missed).
Oleandra neriiformis Cav.—Dankia.
O. sibbaldii Grev.—Chapa.

PLAGIOGYRIACEAE

- Plagiogyria adnata* (Bl.) Bedd.—Tamdao.
P. communis Ching—Chapa.
P. gigantea Ching—Chapa.

CYATHEACEAE

- Cyathea contaminans* (Wall.) Copel.—Chapa, Laokay.
C. glabra (Bl.) Copel.—Vaktoong—Ban Uhikle.
C. podophylla (Hook.) Copel.—Chapa, Laokay ; Dalat ; Doi Step.

ASPIDIACEAE

- Abacopteris cuspidata* (Bl.) Ching*—Muong Xen, Tamdao.
A. lineata (Bl.) Ching*—Dalat.
A. multilineata (Wall.) Ching*—Laokay ; Doi Step, Pong Pa Paw—Pong Kiah.
A. rubra (Ching) Ching*—Chapa.
A. simplex (Hook.) Ching*—Laokay.
A. triphylla (Sw.) Ching*—Tamdao ; Hue Sai.
A. urophylla (Wall.) Ching*—Chapa.
Acrophorus stipellatus Moore—Chapa ; Vaktoong—Hewitit.
Acrorumohra diffracta (Bak.) H. Ito—Chapa.
A. hasseltii (Bl.) Ching—Chapa.
Anisocampium cumingianum Pr.*—Ho Keao, Xenmai.
Arachniodes cavaleri (Christ) Ohwi—Chapa ; Pics.
A. coniiifolia (Moore) Ching—Chapa.
Athyrium acutissimum Kodama*—Chapa.
A. drepanopterum (Kunze) A. Br. ex Milde—Doi Step.
A. erythropodum Hayata*—Dalat.
A. flabellulatum (Clarke) Tard.—Chapa.

- Bolbitis heteroclita* (Pr.) Ching—Muong Xen, Tamdao.
B. subcordata (Copel.) Ching—Doi Step, Pong Pa Paw—Pong Kiah.
Ctenitopsis kusukusensis (Hayata) C. Chr.—Tamdao.
C. setulosa (Bak.) C. Chr.*—Tamdao.
Cyclopeltis crenata (Fée) C. Chr.—Pak Lay.
Cyclosorus ensifer (Tagawa) Tagawa—Dalat; Doi Step.
C. interruptus (Willd.) H. Ito—Muoi Hai—Tami Thao.
C. truncatus (Poir.) Farwell—Belluvue.
Cyrtomium balansae (Christ) C. Chr.—Tamdao.
Diplaziopsis javanica (Bl.) C. Chr.—Chapa, Muong Xen.
Diplazium donianum (Mett.) Tard.*—Chapa, Tamdao; Dalat.
D. hainanense Ching—Chapa, Tamdao.
D. heterophlebium (Mett.) Diels—Muong Xen.
D. maximum (Don) C. Chr.—Chapa, Muong Xen.
D. megaphyllum (Bak.) Christ—Chapa.
D. opacum Christ—Chapa.
D. petri Tard.—Chapa.
D. pin-faense Ching—Pics.
D. polyodioides Bl.—Chapa; Dran.
D. silvaticum (Bory) Sw.—Tamdao.
D. subsinuatum (Wall.) Tagawa—Dalat; Hue Sai.
Dryopteris cochleata (Don) C. Chr.—Doi Step.
D. erythrosora (Eaton) O. Kuntze—Tamdao.
D. polita Ros.—Dalat.
D. scottii (Bedd.) Ching—Chapa, Muong Xen.
Egenolfia appendiculata (Willd.) J. Sm.—Muong Xen; Ban Tham—Ban Khieng.
Elaphoglossum callifolium (Bl.) Moore—Doi Step.
E. yunnanense (Bak.) C. Chr.—Doi Step.
Hemigramma decurrens (Hook.) Copel.—Tamdao.
Lomariopsis cochinchinensis Fée—Vientiane.
Meniscium proliferum (Retz.) Sw.—Chieng Rai—Hue Sai, Nig Kup, Luang Prabang—Pak Lay.
Phegopteris brunnea J. Sm.—Laokay.
P. yunkweiensis (Ching) Tagawa—Chapa.

- Pleocnemia conjugata* (Bl.) Pr.—Laokay.
Polystichum acutidens Christ—Chapa.
P. eximium (Mett.) C. Chr.*—Tamdao.
Pteridrys australis Ching—Laokay, Tamdao.
Stegnogramma dictyoclinoides Ching—Chapa.
Tectaria cumingiana (Pr.) C. Chr. et Tard.—Laokay; Belluvue.
T. decurrens (Pr.) Copel.—Laokay, Tamdao.
T. macrodonta (Fée) C. Chr.—Tamdao.
T. multicaudata (Wall.) Ching—Muong Xen.
T. polymorpha (Wall.) Copel.—Doi Step.
T. variolosa (Wall.) C. Chr.—Xenmai, Doi Step.
Thelypteris ciliata (Wall.) Ching—Muong Xen.
T. cyclolepis (C. Chr. et Tard.) Tagawa—Dran.
T. erubescens (Wall.) Ching—Chapa.
T. falciloba (Hook.) Ching—Chapa.
T. flaccida (Bl.) Ching—Chapa.
T. simulans Ching—Chapa.

BLECHNACEAE

- Blechnum orientale* L.—Laokay.
Brainea insignis (Hook.) J. Sm.—Dalat, Dankia; Doi Step.
Woodwardia cochinchinensis Ching—Chapa; Dalat; Baunhikh—Vaktoong.

ASPLENIACEAE

- Asplenium annamense* Christ—Pics.
A. crinicaule Hance—Dalat; Doi Step, Pong Pa Paw—Pong Kiah.
A. ensiforme Wall. ex Hook. et Grev.—Dalat.
A. griffithianum Hook.—Tamdao.
A. laserpitiifolium Lam.—Muong Xen.
A. normale Don—Chapa, Tamdao.
A. phyllitidis Don—Chapa, Muong Xen; Baunhikh—Vaktoong.
A. prolongatum Hook.—Chapa.
A. scolopendrioides J. Sm. ex Hook.—Chapa, Muong Xen, Tamdao.
A. tenerum Forst.—Muong Xen.
A. unilaterale Lam.—Chapa, Muong Xen.
A. wrightii Eaton—Chapa.

POLYPODIACEAE

- Arthromeris wallichiana* (Spreng.) Ching—Doi Step.
Belvisia annamensis (C. Chr.) Tagawa—Dalat.
B. mucronata (Fée) Copel.—Dalat.
Cheiropleuria bicuspis (Bl.) Pr.—Broyi.
Christiopteris tricuspis (Hook.) Christ—Dankia.
Colysis dissimilialata (Bonap.) Ching—Chapa.
C. elliptica (Thunb.) Ching—Dalat.
C. hemionitidea (Wall.) Pr.—Muong Xen.
C. pothifolia Pr.—Bau Ban Mo—Khonfai.
C. wrightii (Hook.) Ching—Laokay, Tamdao.
Crypsinus cruciformis (Ching) Tagawa—Chapa; Doi Step, Ho Keao.
C. griffithianus (Hook.) Copel.—Belluvue.
C. rhynchophyllus (Hook.) Copel.—Chapa.
C. trilobus (Holtt.) Copel.—Dalat.
Drynaria parishii (Bedd.) Bedd.—Dalat; Dran, Doi Step.
D. propinqua (Wall.) J. Sm.—Chapa; Doi Step.
D. rigidula (Sw.) Bedd.—Ba Me Mout, Dran; Doi Step.
Lemmaphyllum carnosum (J. Sm.) Pr.—Dalat.
L. microphyllum Pr.—Bau Khong—Bau Tha Bhoung.
Lepisorus macrosphaerus (Bak.) Ching—Chapa.
L. nudus (Kunze) Ching—Doi Step, Vaktoung—Hewitit.
L. obscure-venulosus (Hayata) Ching—Chapa, Muong Xen.
L. oosphaerus (C. Chr.) Ching—Muong Xen; Dalat; Doi Step.
L. vittarioides Ching—Chapa.
Loxogramme salicifolia (Makino) Makino—Pics; Doi Step.
L. saziran Tagawa*—Chapa.
Microsorium buergerianum (Miq.) Ching—Chapa, Muong Xen.
M. hymenodes (Kunze) Ching—Chapa.
M. membranaceum (Don) Ching—Chapa.
M. pteropus (Bl.) Ching—Luang Prabang—Pak Lay.
M. sarawakense (Bak.) Ching—Muong Xen.
M. scolopendria (Burm.) Copel.—Dalat.
M. superficiale (Bl.) Ching—Chapa; Pics.
Neolepisorus ensatus (Thunb.) Ching—Chapa.

- N. normalis* (Don) Ching—Chapa; Pics.
Platyserium wallichii Hook.—Doi Step, Tha Kaw—Me Sue, Me Sue—Hue Sai.
Polypodium amoenum Wall. ex Mett.—Chapa.
P. argutum Wall. ex Hook.*—Doi Step.
P. subauriculatum Bl.—Dalat, Pics; Doi Step, Pong Pa Paw—Pong Kiah.
Prosaptia obliquata (Bl.) Mett.—Chapa; Dalat.
Pseudodrynaria coronans (Wall.) Ching—Dalat.
Pyrrhosia adnascens (Sw.) Ching—Dran; Woi Taket—Me Wan, Me Sue—
 Hue San, Hue San—Chiang Roi.
P. drakeana (Franch.) Ching—Dalat.
P. lingua (Thunb.) Farwell—Tamdao; Dalat.
P. mollis (Kunze) Ching—Chapa; Doi Step.
P. nuda (Gies.) Ching—Muong Xen.
P. sheareri (Bak.) Ching—Chapa.
P. subfurfuracea (Hook.) Ching—Chapa.
P. varia (Kaulf.) Farwell—Tha Thoung—Naeai.
Scleroglossum pusillum (Bl.) v.A.v.R.—Doi Step.

VITTARIACEAE

- Antrophyum reticulatum* (Forst.) Kaulf.—Muong Xen.
Vittaria flexuosa Fée—Doi Step.
V. forrestiana Ching—Dalat.
V. zosterifolia Willd.—Muong Xen; Dalat.

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早田文蔵博士が 50 数年前インドシナ方面で採集されたシダが顕花植物とともに東大資料館に保存されている。同館のご好意により今回シダの全部を見直すことができた。結果は目録のとおり 80 属、204 種となった。たゞしイワヒバ科やヒカゲノカズラ科は私の手に負えないのでシダ類に限った。目録で * の付いているものは他の学者によって同定されたもので、前文に書き抜いておいた。

早田博士の旅行の道筋は、標本のラベルから逆算して、おおよそ前文に書いたとおりである。第 1 回は 1917 (大正 6) 年 6 月から 8 月の間で、トンキン (今の北ベトナム) の北部、中国々境に近い方面を主とした所であった。第 2 回は 1921 (大正 10) 年で、5 月～6 月に今の南ベトナムの南部の高原地帯、9 月～10 月にタイ北部のチェンマイを中心とした方面、それから国境を越えてラオスに出、メコン河を舟で下って沿岸各地を採集され、12 月下旬で終っている。