

A Contribution to the Knowledge of the Mountain Moss Flora of Sri Lanka

by

PIERRE TIXIER*

Muséum National d'Histoire Naturelle de Paris (Cryptogamie)

This is a check list of Moss collections from Ceylon made by the author during the end of July 1973. This collection dealt about one hundred species; only few species seem to be new (with an asterisk). I thank here Prof. M. D. Dassanayake, Head of the Department of Botany in the University Campus, Peradeniya, and also Prof. R. N. de Fonseka, who helped the author with great competence and much kindness.

The following abbreviations are used :—

- HP : Horton Plains, 2100 m
NE : Nuwara Eliya, 1800 m
P : Mt. Pedrutallagalla, 2000 m
Pe : Peradeniya Botanic Garden, 500 m.

Fissidens mittenii Par.

NE, on ground, 19/VII/1973, n° 6985 ; P, on bark, 20/VII/1973, n° 7027. Ceylon, Sumatra, Java, Sulawesi, Borneo, Vietnam, Hong Kong, Batan, Luzon.

Fissidens nobilis Griff.

HP, on banks mixed with *Pseudosymblypharis*, 22/VII/1973, n° 7085; on bark, 21/VII/1973, n° 7032, 7088.

India, Ceylon, Indochina, China, Japan, Malesia, New Guinea, d'Entrecasteaux Islands.

Fissidens schmidii C. Muell.

P, on bark, 20/VII/1973, n° 7021.
Nilghiri, Ceylon, Java, Japan, Cambodia.

Fissidens sylvaticus Griff.

Pe, on ground, 23/VII/1973, n° 6549, 6551.
From India to New Caledonia.

*Present address: Institut National Agronomique, El Harrach, République Algérienne.

Fissidens zollingeri Mont.

HP, Farr Inn garden, on ground, 21/VII/1973, n° 7033.

Ceylon, Hong Kong, Indochina, Malesia, New Guinea, New Caledonia, New Zealand.

Dicranella coarctata (C. Muell.) Bosch & Lac.

Pe, on bark, 23/VII/1973, n° 6548.

Ceylon, Java, Pegu, Western Australia.

Campylopus caudatus (C. Muell.) Mont.

HP, on ground, 21/VII/1973, n° 7052, 7068.

India, Ceylon, Malesia, New Guinea, New Caledonia.

Campylopus richardii Brid.

NE, on banks, 19/VII/1973, n° 6466, 6575, 6990, 6997 ; HP, on ground, 21/VII/73 n° 7038.
Cosmopolitan.

Campylopus zollingerianus (C. Muell.) Doz. & Molk.

P, on ground, 20/VII/1973, n° 7022.

Ceylon, Sumatra, Java.

Dicranodontium uncinatum (Harv.) Jaeg.

NE, on bark, 19/VII/1973, n° 6990.

India, Ceylon, Indochina, Java, Luzon, Moluccas.

Dicranoloma assimile (Hpe.) Par.

HP, on bark, in forest, 22/VII/1973, n° 7096.

Ceylon, Malesia, New Guinea, d'Entrecasteaux islands.

Leucoloma molle (C. Muell.) Mitt.

HP, on twigs in forest, 21/VII/1973, n° 7032.

From India to Japan and Pacific islands.

Octoblepharum albidum Hedw.

Pe, on palm bark, 23/VII/73, n° 6548.

Cosmopolitan.

Syrrhopodon albidus Thw. & Mitt.

P, on twigs in secondary forest, 20/VII/1973, n° 7001.

Ceylon, Malaya.

Calymperes dozyanum Mitt. fide BESCHERELLE

Pe, on bark, 23/VII/1973, n° 6551.

It is difficult to have a good idea through M. FLEISCHER's comments about this species. The synonymy of asiatic *Calymperes* must be revised. For the author *C. dozyanum* and *C. tenerum* are distinct and sympatric species. *C. tenerum* has a leaf with smooth cells, without exohyalocystes, sterile leaves with always gemmae at the top of the leaf. *C. dozyanum* shows papillous cells with exohyalocystes, with a larger cancelline, two types of leaves (anormal and normal) and fructifications.

Ceylon, Malaya, South Vietnam, Sumatra, Java, Borneo.

Calymperes serratum A. Br.

HP, on bark, 22/VII/1973, n° 8000

From Southern India to Japan, Fiji and New Caledonia.

Pseudosymblepharis angustata (Mitt.) Chen

HP, on bark in forest, 21/VII/1973, n° 7046, 7060 ; idem, 22/VII/1973, n° 7085, 7086.
India, Ceylon, Indochina, Malesia, New Guinea.

Pseudosymblepharis duriuscula (Wils.) Chen

NE, on bark in the gardens, 19/VII/1973, n° 6995 ; P, idem, 20/VII/1973, n° 7011.
Ceylon.

Pseudosymblepharis subduriuscula (C. Muell.) Chen

HP, on bark, 21/VII/1973, n° 7070.
China, Philippines, Borneo.

These three species are probably synonyms.

Hyophila involuta (Hook.) Jaeg.

Road to Nuwara Eliya, 1000 m, on rocks, 19/VII/1973, n° 6996.
Cosmopolitan.

Hydrogonium consanguineum (Thw. & Mitt.) Hilp.

Pe, on bark, 23/VII/1973, n° 6548.
Ceylon, Vietnam, Thailand, Nepal, Java, Philippines.

Hydrogonium inflexum (Duby) Chen

HP, on bark, 21/VII/1973 ; on the ground, 22/VII/1973, n° 7090.
Ceylon, Java, Fiji.

Entosthodon wichurae (Broth.) Fleisch.

HP, on ground, in the meadows (patanas), 21/VII/1973, n° 7040, 7043.
Ceylon, Java.

Corresponding to M. FLEISCHER's keys, though the taxonomy of the asiatic species is dubious.

Brachymenium exile (Doz. & Molk.) Bosch & Lac.

NE, on bark, 19/VII/1973, n° 6986.
Ceylon, Java, Vietnam, Sumatra, Philippines, Formose, Hawaii, New Guinea.

Brachymenium nepalense Hook.

P, on bark, 20/VII/1973, n° 7026 ; HP, on bark, 21/VII/1973, n° 7076, 7087.
From : India to New Guinea, d'Entrecasteaux islands, Bismarck archipelago, Fiji and Japan.

Bryum argenteum Hedw.

Road to Nuwara Eliya, 1000 m, on banks, 19/VII/1973, n° 6999.
Cosmopolitan.

Bryum coronatum Schwaegr.

Pe, on bark, 23/VII/1973, n° 6548.
Pantropical.

Bryum porphyroneuron C. Muell.

Road to Nuwara Eliya, 1000 m, on banks, 19/VII/1973, n° 6996.
Tropical Asia and Oceania.

Rhodobryum giganteum (Weis.) Limpr.

Road to Nuwara Eliya, 1000 m, on wet ground, 19/VII/1973, n° 6998 ;
P, on bark in secondary forest, 20/VII/1973, n° 7004.
From India to Japan and Hawaii.

Rhodobryum roseum (Weiss.) Limpr.

HP, on bark in forest, 21/VII/1973, n° 7057.
From Western Europe to Southern and Eastern Asia.

**Orthomniopsis dilatata* (Mitt.) Noguchi

Sterile plant, HP, Farr Inn garden mixed with *Plagiomnium maximoviczii*
From Himalaya to Japan and New Guinea.

Plagiomnium maximoviczii (Lindl.) Kop.

P, foot of tree in wet forest, 20/VII/1973, n° 7005 ; HP, Farr Inn garden on bark, 21/VII/1973, n° 7019, 7036, 22/VII/1973, n° 7089.

Southern and Eastern Asia.

Rhizogonium spiniforme (Hedw.) Brid.

P, on bark in forest, 20/VII/1973, n° 7026 ; HP, on bark in forest, 22/VII/1973, n° 8000.
Pantropical.

Philonotis mollis (Doz. & Molk.) Bosch & Lac.

Road to Nuwara Eliya, 1000 m, on wet banks, 19/VII/1973, n° 6997, 6999; HP, foot of tree, 21/VII/1973, n° 7063.

Southern India, Ceylon, Indochina, Western Malesia.

Erpodium biseriatum (Aust.) Aust. (= *Solmsiella ceylanica* Thw. & Mitt.)

Pe, on walls near the greenhouses, 23/VII/1973, n° 6547, 6552.

Classic station for the species, pantropical.

Macromitrium fasciculare Mitt.

P, on twigs, 20/VII/1973, n° 7000, 7004, 7014 ; HP, 21/VII/1973, on twigs, n° 7032, 7039, 7040, on trunks, n° 7045, 7087, 7091.

Java, Ceylon, South Annam.

Macromitrium sulcatum Hook. & Grev. var. *sulcatum*

HP, on barks in forest, 22/VII/1973, n° 7004, 7032.

From Western Ghats to Western Malesia : *M. longipes* (Hook.) Brid. of New Zealand differs only by the peristom.

Macromitrium sulcatum (Hook. & Grev.) var. *ceylanicum* (Mitt.) Fleisch.

HP, on bark in forest, 21/VII/1973, n° 7058, 7059, 7083, 7092.

Ceylon, Thailand.

Macromitrium sulcatum (Hook. & Grev.) var. *torulosum* (Mitt.) P. Tx. comb. nov. (= *Macromitrium torulosum* Mitt, J. Linn Soc., Bot. Suppl. 1 : 53, 1859).

NE, on bark in gardens, 19/VII/1973, n° 6572; P, on trunk in forest, 20/VII/1973, n° 7004, 7009, 7010, 7011, 7014, 7020 ; HP, on bark, n° 7004, 7009, 7018.

Endemic.

Macromitrium minutum Mitt.

NE, on bark, 19/VII/1973, n° 6553, 6571, 6989 ; P, on twigs in forest, 20/VII/1973, n° 7000;
HP, on bark, 21/VII/1973, n° 7073, 7086.

Ceylon, Malaya, Java.

Macromitrium nepalense (Hook. & Grev.) Schwaegr.

Pe, on bark, 23/VII/1973, n° 6552.

Nepal, Sikkim, Ceylon, Indochina, Malaya, China, Japan.

Macromitrium ramentosum Thw. & Mitt.

HP, on twigs in forest, 22/VII/1973, n° 7070.

Endemic.

Groutiella goniorrhyncha (Doz. & Molk.) Wijk & Marg.

NE, on bark, 19/VII/1973, n° 5991, 6557, 6464.

Ceylon, Palni Hills, Himalaya, Indochina, Malesia, New Guinea.

Schlotheimia grevilleana Mitt.

NE, on bark, 19/VII/1973, n° 6572 ; HP, idem, 21/VII/1973, n° 7057.

Africa, Mascarchenas, India, Ceylon, Thailand, Vietnam, Java, Hong Kong.

Racopilum schmidii (C. Muell.) Jaeg.

P, on bark in forest, 20/VII/1973, n° 7004, 7006, 7011, 7012, 7021.

Nilghiri and Palni Hills, Ceylon, Indochina, Philippines.

Trachypus bicolor Hornsch. & Reinw. var. *hispidus* (C. Muell.) Card.

NE, on trunk, 19/VII/1973, n° 6978 ; HP, Farr Inn garden, on bark, 21/VII/1973, on trunks
in forest, 22/VII/1973, n° 7087.

India, Ceylon, Indochina, Japan, Africa, Brazil.

Trachypus humilis Lindl. var. *tenerrimus* (Herz.) Zant.

NE, on bark, 21/VII/1973, n° 7066.

Southern India, Ceylon, Korea, Kiuschu, Japan.

Trachypodopsis serrulata (P. Beauv.) Fleisch. var. *crispatula* (Hook.) Zant.

HP, World's End, on bank along the road, 21/VII/1973, n° 7054.

From India to Japan, Pacific islands and Mexico.

Myurium rufescens (Reinw. & Hornsch.) Fleisch.

HP, Farr Inn garden, on bark, 21/VII/1973, n° 7048, 7054.

Khasia, Ceylon, Southern Indochina, Malesia, Australia, New Guinea, d'Entrecasteaux islands.

Pterobryopsis aurantia (C. Muell.) Fleisch.

P, on trunks, 21/VII/1973, n° 7009, 7014, 7018, 7022, 7032, 7034.

Endemic.

Pterobryopsis frondosa (Mitt.) Fleisch.

NE, on bark, 19/VII/1973, n° 6560, 6572 ; P, corticolous in forest, 20/VII/1973, n° 7008, 7014, 7020, 7021, 7022.

Endemic from Ceylon and Southern India.

Pterobryopsis schmidii (C. Muell.) Fleisch.

P, on bark in forest, 20/VII/1973, n° 7022, 7027 ; HP, in forest, 21/VII/1973, n° 7043, 7054 ; idem, 22/VII/1973, n° 7083.

Endemic from Ceylon and Southern India.

Papillaria fuscescens (Hook.) Jaeg.

NE, on trunk, 19/VII/1973, n° 6991 ; P, idem, 20/VII/1973, n° 7018, 7020 ; HP, corticolous in forest, 21/VII/1973, n° 7049, 7050, 7054, 7056, 7091, 7095.

India, Ceylon, Indochina, Malesia, New Guinea.

The differences between *P. fuscescens* and *P. semi-torta*, a little dubious, are : difference in size of plants and capsules, twisted leaf apex for the latter.

NOGUCHI (1973) gives *P. feaeae* C. Muell. This name is a *nomen nudum* and probably the type, as most of C. MUELLER's types may be lost.

Aerobryopsis longissima (Doz. & Molk.) Fleisch.

NE, on trunks, 19/VII/1973, n° 6557, 6567, 6999 ; P, idem, 20/VII/1973, n° 7009, 7010, 7018, 7032 ; HP, on bark, 21/VII/1973, n° 7057.

From India to New Caledonia and Pacific islands.

Aerobryidium filamentosum (Hook.) Fleisch.

NE, on trunks, 19/VII/1973, n° 6466.

Ceylon, Indochina, Western Malesia.

Barbella bombycina (Ren. & Card.) Fleisch.

HP, on bark, 21/VII/1973, n° 7050.

Ceylon, Kurseong, Sikkim.

Barbella enervis (Mitt.) Fleisch.

HP, on twigs in forest, 21/VII/1973, n° 7032.

Himalaya, Ceylon, Malesia, New Guinea, Australia, New Caledonia.

Floribundaria floribunda (Doz. & Molk.) Fleisch.

HP, corticolous in forest, 22/VII/1973, n° 7077, 7075.

Pantropical.

Chrysocladium retrorsum (Mitt.) Fleisch.

P, twigs in secondary forest, 20/VII/1973, n° 7000, 7015, 7020, 7022, 7033;

HP, on bark in forest, 21/VII/1972, n° 7049, 7050, 7054, 7056, 7087.

Ceylon, Formosa, Japan.

Meteriopsis squarrosa (Hook.) Fleisch.

NE, on bark in gardens, 19/VII/1973, n° 6567 ; P, corticolous in forest, 20/VII/1973, n° 7009, 7010, 7018, 7032 ; HP, idem, 21/VII/1973, n° 7057, idem, 22/VII/1973, n° 7091, 7093.

Himalaya, Southern India, Ceylon, Indochina, Western Malesia.

Calypothecium wightii (Mitt.) Fleisch.

Pe, on bark, 23/VII/1973, n° 6552.

Nepal, Ceylon, Chittagong, Rangoon, Thailand, Vietnam.

Homaliodendron flabellatum (Sm.) Fleisch.

NE, on bark, 19/VII/1973, n° 6562 ; P, idem, 20/VII/1974, n° 7000, 7015, 7020, 7022, 7033 ; HP, Farr Inn garden, on trunks, 21/VII/1973, idem, in forest, n° 7050 ; idem, 22/VII/1973, n° 7042.

From Ceylon to Pacific islands.

Daltonia angustifolia Doz. & Molk.

P, mixed with *Racopilum schmidii*, 20/VII/1973, n° 7006.

Ceylon, Java, Borneo, Luzon, Negros.

Daltonia contorta C. Muell.

HP, on twigs in forest, 21/VII/1973, n° 7032, 7054.

Ceylon, Java, Vietnam, Hawaii, Fiji, New Guinea.

Distichophyllum cuspidatum Doz. & Molk.

HP, on twigs in forest, 22/VII/1973, n° 7078.

Ceylon, Southern Indochina, Malesia, New Guinea, Carolines, New Caledonia, Society Islands.

**Chaetomitrium horridulum* Doz. & Molk.

P, on twigs in forest, 20/VII/1973, n° 7008, 7009, 7013, 7028.
Java.

Leaves less cucullate than in javanese specimens:

Leucomium aneurodictyon (C. Muell.) Jaeg.

P, corticolous, 20/VII/1973, n° 7032.
From Comores to Southern Asia and Pacific.

Lopidium struthiopteris (Schwacgr.) Fleisch.

HP, mixed with *Mnium* on trunk, 21/VII/1973, n° 7083, 7089, 7094.
From Mascarchenas to Southern Asia, New Guinea and New Caledonia.

Hypopterygium tenellum Mitt.

P, on bark, 20/VII/1973, n° 7010 ; HP, on rotten wood at the ground in forest, 21/VII/1973, n° 7064.
From India to New Guinea.

Fabronia secunda Mont. (= *F. curvirostris* Doz. & Molk., Ann. Sci. Hist. Nat., Bot. sér. 3, 2 : 304, 1844).

NE, on bark in gardens, 19/VII/1973, n° 6976, 6995.
Ceylon, Java, Vietnam, Philippines, New Guinea.

Pelekium bifarium (Bosch. & Lac.) Fleisch.

Pe, on bark, 23/VII/1973, n° 6552.
Sumatra, Ceylon, Luzon, Visayas, Ambon.

Thuidium cymbifolium (Doz. & Molk.) Bosch & Lac.

P, on bark in the foot of trees, 20/VII/1973, n° 7008, 7010, 7023, 7032, 7033 ; HP, idem, 21/VII/1973, n° 7050, 7056.
From Ceylon to Japan and New Guinea.

Thuidium glaucinum (Mitt.) Jaeg.

P, on bark in forest, 20/VII/1973, n° 7004, 7015, 7022.
From Ceylon to Japan and Malesia.

Palamocladium nilgheriense (Mont.) C. Muell.

NE, on sunny barks, 19/VII/1973, n° 6559, 6567, 6571 ; P, idem, 20/VII/1973, 7015, 7016, 7018, 7032, 7033, 7034 ; HP, idem, 21/VII/1973, n° 7057, 7078.
Southern India, Ceylon, Java.

Brachythecium plumosum (Hedw.) B.S.

P, on bark, 20/VII/1973, n° 7028 ; HP, idem, 21/VII/1973, n° 7067.
Cosmopolitan.

Erythrodontium julaceum (Hook.) Par.

Pe, on bark 23/VII/1973, n° 6552.
From Ceylon to New Guinea.

Trachyphyllum inflexum (Harv.) Gepp.

Pe, on bark, 23/VII/1973, n° 6549.
From Ceylon to New Caledonia.

Clastobryella ceylonensis (Broth.) Broth.

P, on sunny bark, 20/VII/1973, n° 7007, 7013, 7026, 7027, 7028; HP, idem, 21/VII/1973 n° 7054. From Ceylon to Philippines, known by various names, filamentous form.

Clastobryum cuculligerum (Lac.) P. Tx.

NE, on trunk, 19/VII/1973, n° 6570 ; P, on bark, 20/VII/1973, n° 7027 ; HP, on twigs in forest, 21/VII/1973, n° 7032, idem, on bark, n° 7050, 7054, 7062, 7067 ; idem, 22/VII/1973, n° 7077, 7093, 7094.
From Ceylon to New Caledonia.

**Meiothecium bogoriense* Fleisch.

Pe, on bark, 23/VII/1973, n° 6552.
Java, Singapore, Malaya.

Meiothecium microcarpum (Harv.) Fleisch.

NE, foot of tree, 19/VII/1973, n° 6986.
From Nepal to New Guinea and New Caledonia.

Warburgiella subleptorrhynchoides (Fleisch.) Fleisch.

P, on bark, 20/VII/1973, n° 7032.
Endemic.

Sematophyllum subhumile (C. Muell.) Fleisch.

NE, on trunk, 19/VII/1973, n° 6565, 6570 ; P. idem, 20/VII/1973, n° 7031.
Southern India, Ceylon, Indochina, Western Malesia.

Acroporium hermaphroditum (C. Muell.) Fleisch.

HP, on bark in forest, 21/VII/1973, n° 7061, 7079, 7094.
Ceylon, Southern Indochina, Malesia, New Guinea, d'Entrecasteaux islands, New Caledonia.

Acroporium oxyporon (Doz. & Molk.) Fleisch.

P, on bark in garden, 20/VII/1973, n° 7032.
Ceylon, Java.

**Acroporium rufum* (Reinw. & Hornsch.) Fleisch.

P, on bark, 20/VII/1973, n° 7010, 7018, 7022.
Sumatra, Java, Borneo, Celebes, Ceram.

Ectropothecium buitenzorgii (Bel.) Jaeg.

(= *Ectropothecium andrei* Card. et P. Varde, Rev. Bryol., 50 : 78, 1923).
NE, on foot of trees in gardens, 19/VII/1973, n° 6558.
Southern India and Ceylon, Indochina, Malesia.

Isopterygium albescens (Schwaegr.) Jaeg.

NE, bark in gardens, 19/VII/1973, n° 6995
From Himalaya to New Caledonia.

Isopterygium pohliaecarpum (Sull. & Lesq.) Jaeg.

HP, on bark, 22/VII/1972, n° 7094.
Southern and Eastern Asia, Pacific, Northern America.

Taxiphyllum taxirameum (Mitt.) Fleisch.

Pe, on trunk, 23/VII/1973, n° 6548.
India, Ceylon, Indochina, Malesia, Formosa, Japan, New Guinea.

Ctenidium lychnites (Mitt.) Broth.

P, on twigs in forest, 20/VII/1973, n° 7001, 7011, 7013, 7022 ; HP, on twigs, 21/VII/1973
n° 7032, 7067, idem, 22/VII/1973, n° 7093, 7094.
Southern India, Ceylon, Luzon.

Pogonatum junghuhnianum Doz. & Molk.

HP, on ground of banks, 21/VII/1973, n° 7052.
India, Ceylon, Indochina, Malesia, New Guinea, Fiji.

Pogonatum microstomum (R. Br.) Brid.

NE, on banks, 19/VII/1973, n° 6992 ; P, banks in forest, 20/VII/1973, n° 7003.
Himalaya, Southern India, Indochina, China, Western Malesia.

The community floristic coefficients between Ceylon and the other countries are established as follows for the 93 species of the list : —

WESTERN MALESIA (Sunda islands, Malaya, Borneo, Philippines).....	60
INDOCHINA (Burma, Cambodia, Thailand, Vietnam).....	56
MELANESIA (New Guinea, New Caledonia).....	31
EASTERN MALESIA (Celebes, Moluccas).....	28
EASTERN ASIA (Japan, China, Formosa).....	16
PACIFIC (Australia, New Zealand, Pacific archipelagos).....	16
NORTHERN INDIA (Himalaya).....	11
ENDEMIC.....	10
COSMOPOLITAN.....	12

The endemism is weak in Ceylon, probably less than in Southern India.

The Ceylonese Moss Flora is the end of the great tropical track that goes off from New Caledonia up to Ceylon.

A small influence of the Himalayan Track may be seen in the bryoflora of Central Province, smaller than in the bryoflora of the Malayan ranges. It is the same thing for the holoarctic one (Japan, China).

LITERATURE

- ABBYWICKRAMA. B. A., 1960—The genera of Mosses of Ceylon. *Ceylon. J. Sc. (Bio. Sc.)*, 3 : 1, 42-122.
- DIXON, H. N., 1914—Report on the Mosses collected by Mr. C.F.C. Fisher and others from South India and Ceylon. *Rec. Bot. Surv. Ind.*, 6 (3), 75-89.
- DIXON H. N., 1919—"Ceylonese Mosses" in *Micellanea Bryologica. J. Bot.*, VI : 57, 77-78.
- DIXON H. N., 1930—Notes on Thwaites' Ceylon Mosses. *J. Bot.*, 68, 1-9.
- FROBLICH J., 1953—Die von Prof. Dr. Viktor Schiffner in dem jahren 1893-94 in Ceylon, Singapore, Sumatra und Java gesammelten Laub und Torf Moose. *Ann. Nat. Mus. Wien*, 59 : 66-116.
- HERZOG T., 1911—Beitrage zur LaubMoosflora von Ceylon. *Hedwigia*, 50 : 115—145.
- MITTEN W., 1859—Musci Indiae Orientalis. *J. Proc. Linn. Soc. (Bot. suppl.)* 1 : 1-171.
- MITTEN W., 1873—New species of Mosses collected by Dr. Thwaites in Ceylon. *J. Proc. Linn. Soc. (Bot. suppl.)*, 13 : 293—326.
- NOGUCHI A., 1973—Mosses of Ceylon collected by Dr. Hiroshi Inoue. *Bull. Nat. Sc. Mus. Tokyo*, 16 : 2, 305-316.
- TIXIER P., 1971—A contribution to the knowledge of Fraser's Hill station (Malaya). *Gard. Bull. Singapore*, XXV : 3, 335-353.
- TIXIER P., 1972—Mount Maquilung Bryoflora (Luzon). *Gard. Bull. Singapore*, XXV, 137-153.

(MS. received 1.11.74).