

Hideaki OHBA*: *Microsorium sulawesiense* (Polypodiaceae,
s. s.), a new species from Middle Celebes, Indonesia**

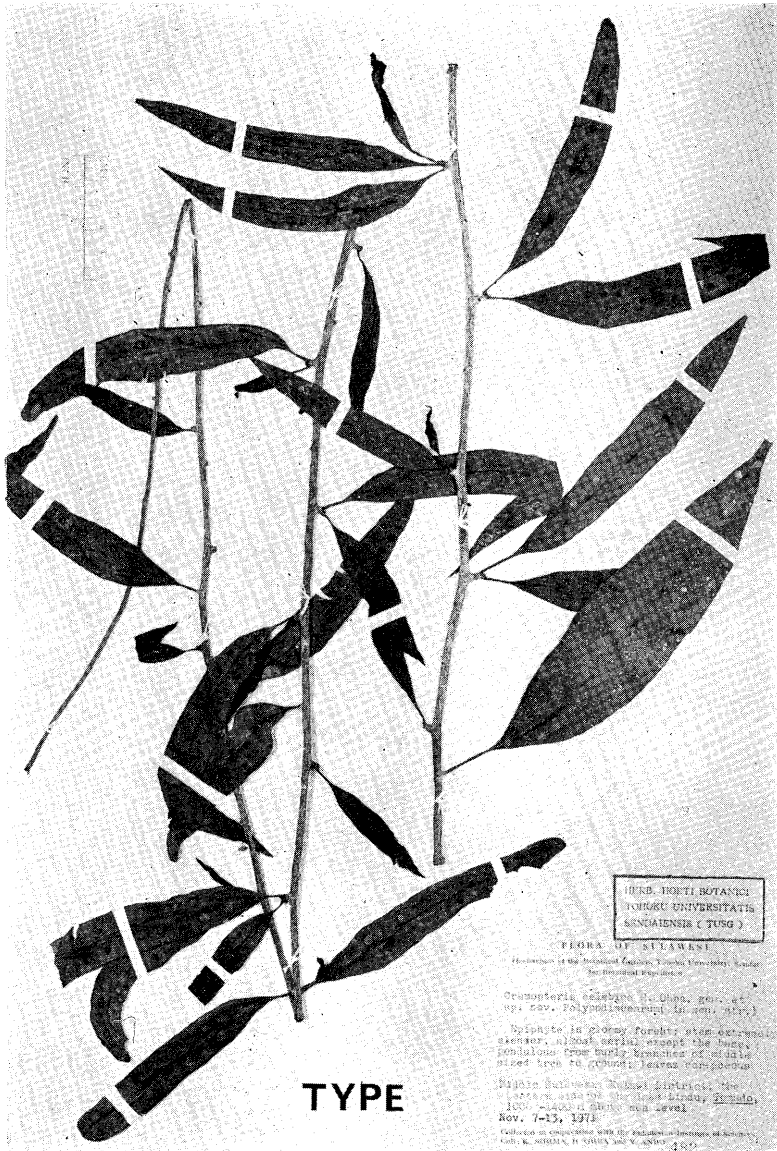
大場秀章*: セレベス島産ウラボシ科の一新種
Microsorium sulawesiense について**

Microsorium sulawesiense H. Ohba, sp. nov. (Figs. 1, 2 & 3)

Species maxime insignis rhizomate gracillimo quidem usque ad 5 m longo aereo et libere pendulo, a speciebus ceteris omnibus bene distincta.— Filix mediocris epiphytica perennis. Rhizoma longissimum ad 5 m longum, subteres striis 4-6 laxis subparallelis indistincte canaliculatum, in sectione transversali paene transverse late ellipticum, dictyostelicum (stela fasciculis aliquot fibrosis sclerenchymatis praedita), solidum aequicrassum 4-6 mm dimetiente, viridulum et aliquantum glaucum, opacum plus minusve scabridiusculum glabrum sed sparsim squamulosum, basi curvatum vel declinatum, praeter basin libere pendulum rectiusculum aerium et vix radicans. Squamae rhizomatis minutae 0.3-0.5(-0.7) mm latae, circulares vel late ovatae vel triangulari-ovatae, parte mediana affixae, aridae fragiles impellucidae plerumque vitricae, in partibus medianis saltem clathratae parietibus cellularum atrobadiis incrassatis, margine cellulis procurrentibus irregulariter denticulatae vel raro dissectae. Folia simplicia, sempervirentia aegre dimorpha, angustiora verum semper fertilia, in rhizomate intersitiis 4-7 cm longis dissita sed in ramulis lateralibus vulgo perbrevis ea 2-6(-10) condensata; petiolis brevibus 0.5-2 cm longis glabris, prope basin phyllopo dio articulatis, in sectione transversali transverse ellipticis circa 1.5 mm latis, fasciculis vascularibus duobus sursum in unum unitis; lamina adulta peranguste elliptica, in medio vel 1/3 fere supra basin latissima, coriacea laevigata micanti supra viridescenti inferne dilute viridescenti vel subglaucoviridescenti, utrinque glabra, (9-)12-15(-18) cm longa (1-)1.7-2.6(-3.1) cm lata, 5.8-9-plo longiore quam latiore, margine integerrima et sub lente

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HERB. HORTI BOTANICI
TOKYO UNIVERSITATIS
SUWAJENSIS (TUSG)

FLORA OF SUWAWASI

Herbarium of the Botanical Garden, Tokyo University, under
the direction of the late

Cranontaria ciliolata H. Blom, gen. et
sp. nov. Polypodiaceae in gen. et sp.

Epiphyte in 2000m forest; stem exserted
erect, 100cm tall, except the base
terminal; few large branches of 1m in
size; tree to 20cm; leaves compound

Pinak. Suwawasi, Sulawesi, Indonesia, the
holotype, 100m tall, 100cm tall,
Nov. 1-12, 1971

Collected in cooperation with the Institute of Botany,
Gadjah Mada University, Yogyakarta, Indonesia,
G. H. SUTOMO, H. SUTOMO and Y. ANSO 485

TYPE

Fig. 1. *Microsorium sulawesense*, the holotype specimen.

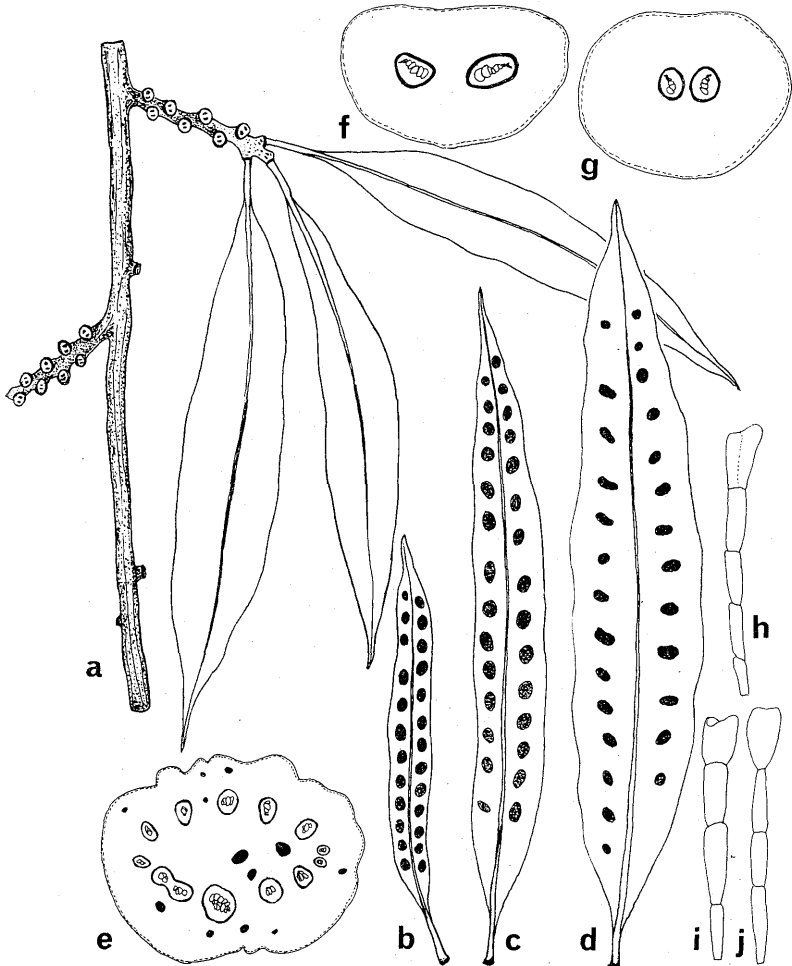


Fig. 2. *Microsorium sulawesiense*, habit (a), $\times 2/3$; variation of fertile leaves (b-d), $\times 2/3$; transverse section of rhizome (e), $\times 7$; transverse sections at the base (f) and the apex (g) of petiole, $\times 14$; paraphyses (h-j), $\times 100$.

paulo incrassato-marginata, apice rostellata vel acuminata acuta vel raro vere acuta, basi attenuata vel acuta; costa conspicua supra in vivo et in sicco distincte prominenti subtus in sicco prominenti, utrinque glabra et viridi; venis invisibilibus reticulatis utroque latere costae tres ad quinque

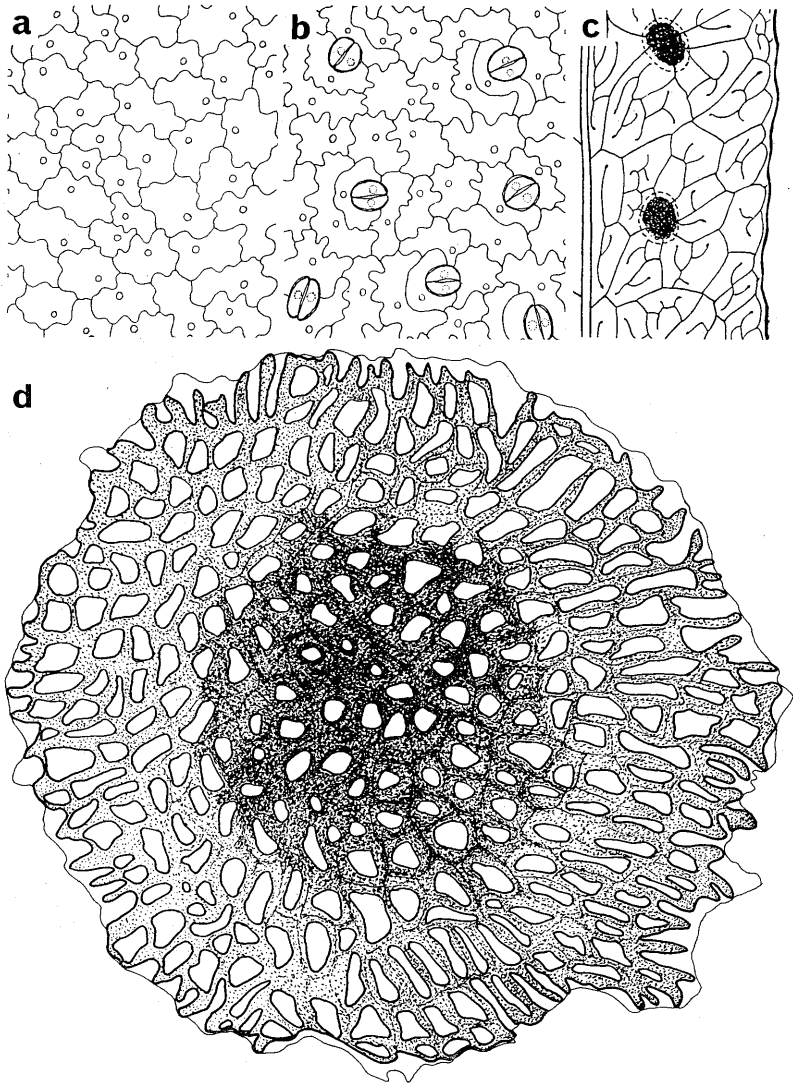


Fig. 3. *Microsorium sulawesiense*, epidermal cells on upper (a) and lower (b) surface, \times ca. 250; venation pattern and sori (c), \times ca. 2; clathrate scale (d), \times ca. 200.

series areolarum formantibus, primariis potius indistinctis utrinque 14-20 a costa sub angulis circa 40°-60° prodeuntibus 6-7-ramulosis leviterque ascendenter flexuosis arcuatis, marginem non attingentibus; venulis in areolis inclusis directione varie currentibus, simplicibus vel 2(-4)-furcatis; areolis forma variis sed plerumque irregulariter lunate quadrangulatis vel rhombice ovatis, 3-5 inter venas primarias sitis, ad 3×5 mm magnis; cellulis epidermidis irregulari-ovatis 3-5-parvilobulatis, lobulis sinubusque rotundatis, in infera facie margine plus sinuolatis; stomatibus tantum facie infera sparsis, cellulis accessoriis eis epidermidis minoribus, propatulo profundiore. Sori superficiales, exindusiati ad iuncturas venularum (quarum una ex paene basi venarum primariarum semper acroscopice proveniens) siti, circulares vel elliptici vel oblique elliptici vel ovati, (3.5-)4-5(-5.5)mm dimetiente, in cavitates proprias (quae in pagina supra apparenter prominentes) immersi, utroque latere costae uniseriati, exacte inter marginem et costam intermedii, plerumque per totam laminam; paraphysisibus (quas forsitan sporangiis sterilisatis homologas esse puto) minimis filamentosis diaphanis circa 0.3 mm longis apice capitatis, 4-5 cellulis compositis. Sporangia nuda, annulo 14-18-articulato.

Habitat in Sulawesi (Celebes) centrali. Kulawi: Tomado in sylvis occidentalibus, prope lacum Lindu, circa 1000 m alt. [Kankichi Sohma, Hideaki Ohba et Yukio Ando n. 482 Nov. 8, 1971 (holotypus in herbario Horti Botanici Tohoku Universitatis Sendaiensis, TUSG et isotypus in Herbario Universitatis Tokyoensis, TI) et n. 473 (TUSG, TI)].

This new epiphytic species was found on branches of middle-sized trees in secondary forests. Its rhizome is very long and hanging downward attaining to 5 m long. The forest is chiefly composed of tropical broad-leaved trees often with buttressed- or stilt-roots associating with palms, screw-pines, lianes, and many kinds of both epiphytes and climbers. Relatively common ferns collected in the forest were as follows: *Drymoglossum piloseloides*, *Lemmaphyllum accendens*, *Lecanopteris carnosa*, *Dipteris conjugata*, *Arcypteris irregularis*, *Lomagramma lomarioides*, *Didymochlaena truncatula*, *Diplazium silvaticum*, *D. crenato-serratum*, *Asplenium Nidus*, *Angiopteris evecta*, *Marattia silvatica* and *Ophioderma pendula*.

Although fern flora of Celebes has been studied by Christ (1894-7, 1898, 1904), Kjellberg & Christensen (1933), Posthumus (1933), Lam (1945) and

others, there seem to remain a number of unsolved problems. Evidently, however, this species is belonging to the group of *Microsorium Scolopendria* (Burm. f.) Copel. and its relatives in having the very distinct acroscopic veinlets arising from the base of each main vein to the sorus, the concealed veins and the sunken sori. This group has often been regarded as a distinct genus, *Phymatodes* Presl (e.g. Holttum 1954), but, as pointed out by Copeland (1947) and Sledge (1960), the generic boundary between the two genera is occasionally obscure. Accordingly at present I adopt *Microsorium* until clear delimitation of *Phymatodes* would be made.

I am greatly indebted to Dr. Hiroyoshi Ohashi, Department of Botany, Faculty of Science, University of Tokyo, for his valuable advices. I wish to express my sincere thanks to Prof. Emeritus Arika Kimura of Tohoku University, for his kindness in correcting the Latin description.

Literature

- 1) Christ, H. (1894-7) Filices Sarasinianae, I-IV. Verhandl. Naturf. Ges. Basel 2: 1-35, 198-219, 221-258, 421-447.
- 2) Christ, H. (1898) Die Farnflora von Celebes. Ann. Jard. Buitenz. 15: 73-186.
- 3) Christ, H. (1904) Zur Farnflora von Celebes. *ibid.* ser. 2, 4: 33-44.
- 4) Copeland, E. B. (1947) Polypodiaceae. *In* Genera Filicum, 174-222.
- 5) Holttum, R. E. (1954) Polypodiaceae. *In* Ferns of Malaya (A revised Flora of Malaya 2), 129-211.
- 6) Kjellberg, C. & C. Christensen (1933) Pteridophyta von Celebes gesammelt von G. Kjellberg 1929. Engl. Bot. Jahrb. 66: 39-70.
- 7) Lam, H. J. (1945) Contribution to our knowledge of the flora of Celebes and of some other Malaysian Islands. *Blumea* 5: 554-599.
- 8) Posthumus, O. (1933) Die Pteridophyten der Elbert'schen Sunda-Expedition. Med. Rijksherb. Leiden no. 70, 3-27.
- 9) Sledge, W. A. (1960) The Polypodiaceae and Grammitidaceae of Ceylon. Bull. Brit. Mus. (Nat. Hist.) Botany 2: 131-158.

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1971年東北大学第一次セレベス学術調査隊(隊長相馬寛吉)の一名として同島のシダ植物を調べることができた。セレベスのシダについては Christ¹⁾²⁾³⁾, Kjellberg & Christensen⁶⁾, Posthumus⁸⁾, Lam⁷⁾などの研究があるが未調査地域も多く今後の調査・研究を待つところが大きい。中部セレベスのリンドウ湖西岸の小村トマドの裏山の古い二次林で採集したウラボシ科の着生シダを新種としてここに発表した。このシ

ダを採集した二次林はヤシ、トウその他の木本性つる植物、タコノキ類が豊富で、高さ 20 m 以上に達する高木などの樹幹には着生植物や登攀植物がおびたゞしい。

本種は中高木の枝に着生し、根茎が非常に長く垂下して長さ 5 m にもなる点の特異である。根茎には多数のごく短かな側枝がまばらにあって、1 から 6 (稀に 10 まで) の単葉を叢生している。葉はまた主軸にも出るがこの場合は 1 葉づゝ着く。葉の着き方で主軸と側枝との間に明らかな差異の認められることから、長枝と短枝の分化がみられると解釈できるかも知れない。このシダは根茎に楯状で中心部に肥厚した細胞壁をもつ鱗片のあること、孢子囊群に包膜や楯状の鱗片様附属物を欠き多細胞の透明な側糸を混じえること、遊離小脈を含む複雑な網状脈系をもつこと、主側脈の基部から遠心的に出て孢子囊群に入る小脈をもつこと等でオキナワウラボシとその近縁種に明らかに類縁関係をもつと考えられる。この群の分類にはいくつかの見解があるが、ここでは Copeland の分類⁴⁾に従い本新種をヌカボシクリハラン属の一種として取扱うことにした。

○ 歎冬を咲かす (富樫 誠) Makoto TOGASHI: Cultivation of *Tussilago farfara* L. in Japan (Plate VIII)

こゝ 4 年来毎年春に咲き続けている。牧野先生の墓前に花を捧げた。先生は遂にこの花の生品は見ずに逝れ、それなのにこの植物に大変に興味を持って居られた様であった。本誌第 1 巻 1 号 (1916)、雑誌「本草」3 号 (1932)、「科学知識」第 14 巻 6 号 (1934) 等に図入りで詳細にこの属と近い種類の論説がある。又「牧野植物一家言」(1956)には「未だ今日に至るも、誰れ一人これを輸入した者は無い」と云って言外に生の花を見られないのを残念がって居られた。それで海外より種子を入手して数回に及び播種したが発芽せず、この種の如く早春に開花結実の種類は取り播きが望ましく 1 年を経過すれば発芽能力がなくなる事に気付いた。幸にフランス国立中央農事試験場長の G. Morel 博士が来日され日光に案内し、その期に種子を依頼した。こころよく 1970 年 6 月 5 日にフランス中央部山地より採集し送って下さった。種子が新鮮であったのですぐに発芽し初秋に富士山麓に移植し習年早春に初花が咲いた。以来株は増殖し、花はタンポポの如く葉はフキの如く、ランナーを出して新株をつくる。このカラー写真と拙文を牧野先生に献じたい。

Explanation of Plate VIII

Tussilago farfara L. (Flowering stage). Cultivated at Oshino, Yamanashi Pref.

Tussilago farfara L. (Vegetative stage). Cultivated at Oshino, Yamanashi Pref.