

Hideaki OHBA\*: **Miscellaneous notes on ferns.**  
**Studies on the plants of Isl. Minami Iwojima (Japan) (2)\*\***

大場秀章\*: 南硫黄島の植物研究 (2) シダ類覚書

1) **Coniogramme intermedia** Hieron. in Hedwig. 57: 301 (1916)—Tagawa, Col. Ill. Jap. Pterid. 16, 191, Pl. 18 f. 105 (1959).

This is previously unrecorded for the Bonin and Volcano Islands and no material was available when I wrote the Pteridophyte flora (Ohba, 1971). In Minami Iwojima it grows rather thick on the humus-rich floor of *Cyathea Tuyamae*-forest around the summit. The plant from Minami Iwojima (Ohba 826086)<sup>1)</sup> comes under f. *villosa* (Ching) Kurata (in Hokuriku J. Bot. 4: 115, 1955).

2) **Pteris boninensis** H. Ohba in Sci. Rep. Tohoku Univ. Ser. 4, 36: 87 (1971)—Mitui in J. Jap. Bot. 48: 250 (1973).

"*Pteris Fauriei* Hieron."—Tuyama in J. Jap. Bot. 57: 288 (1982).

When I described this species, I noticed a number of specimens differing from it in leaf architecture. Compared with the species they have much larger fronds; especially the lowest pinna has two or three pinnatifid basicopic pinnules and occasionally one or more pinnatifid acroscopic pinnules. So these in appearance resemble *P. rigidula* Copel. known from the Philippines. In Minami Iwojima I could fortunately observe the plants identical with these specimens (Fig. 1c). They are not rare on the steep slopes under *Elaeocarpus pachycarpus*- or *Machilus Kobu*-forests partially developing in the middle elevations of the south side. There appears to be no significant difference from the usual forms of *P. boninensis* in other characters. Moreover, as shown in Fig. 1, they (c) cannot be clearly distinguished from the various forms of *P. boninensis* (Fig. 1a-b, d-f) in leaf architecture. Thus, they appear to come well within the morphological range of this species. Among the *P. quadriaurita*-complex *P. boninensis* should be noted to show such extremely wide range of variation in leaf architecture.

\* Department of Botany, University Museum, University of Tokyo, Hongo 7-3-1, Tokyo 113.  
 東京大学 総合研究資料館植物部門.

\*\* Continued from Journ. Jap. Bot. 57: 321-327 (1982).

1) Specimens cited in the present paper are preserved in TI.



Fig. 1. *Pteris boninensis*, showing various forms of the lowest pinnae collected in Isl. Minami Iwojima. All  $\times$ ca 0.3.

In Minami Iwojima *P. boninensis* is very common, growing in various situations such as exposed bluff and shady forest-floor, and altitudinally extending from near the sea-level to the summit.

3) ***Nephrolepis biserrata*** (Sw.) Schott, Gen. Fil. textu ad t. 3 (1834)—Holttum, Fl. Mal. 2: 380 (1954)—Copel., Fern Fl. Philip. 1: 187 (1958)—Hatusima, Fl. Ryukyu 165 (1971)—Stone in Micronesica 6: 59 (1971)—Walker, Fl. Okinawa 71 (1976).

This is very widely distributed in the Pacific Region and far into the tropical Asia. Nakai (1930) and Ito (1969) listed it as occurring in the Bonin and Volcano Islands, but without giving documentation. In TI I could not trace any specimens to substantiate their record. I considered previously their record was probably based on a misidentification of *N. hirsuta* (Forst.) Presl which is very common in this area (Ohba 1971). So the re-collection of *N. biserrata* had been much expected. Since it has been recorded from the Ryukyu Islands, Guam and other Micronesian islands, its occurrence in the Bonin and Volcano Islands is not surprising. In Minami Iwojima it was found to grow on rocky slopes under *Elaeocarpus pachycarpus*-forest on the south side, alt. ca 450 m (Ohba 826150).

4) ***Diplazium nipponicum*** Tagawa in Act. Phytotax. Geobot. 2: 197 (1933); Col. Ill. Jap. Pterid. 139, 202, Pl. 57 f. 310 (1959).

This is recorded from the Bonin and Volcano Islands for the first time. This species grows on the moist shady floor of a damp *Machilus Kobu*-forest on the south slope, alt. ca 750 m (Ohba 826114). It ranges from Kyushu to Honshu but does not occur in the Izu and the Ryukyu Islands. So this extension southeastward is phytogeographically noticeable.

5) ***Diplazium virescens*** Kunze var. **conterminum** (Christ) Kurata in Hoku-riku J. Bot. 7: 77 (1958).

This variety, growing rather sporadically on the moist floor of a damp *Machilus Kobu*-forest on the south midslope, alt. ca 750 m (Ohba 826113), is previously unknown from the Bonin and Volcano Islands. Var. *virescens* is very abundant in the higher elevations of this island.

6) ***Stegnogramma Pozoi*** (Lags.) K. Iwats. subsp. **mollissima** (Fisch. ex Kunze) K. Iwats. in Act. Phytotax. Geobot. 19: 125 (1963).

*Leptogramma mollissima* (Fisch. ex Kunze) Ching in Sinensia 7: 102 (1936)—Tagawa, Col. Ill. Jap. Pterid. 113, 225, Pl. 44 f. 245 (1959).

This is the first member of *Stegnogramma* for the Bonin and Volcano Islands. This subspecies ranges from N. India and Ceylon to Hokkaido through China and Korea. Minami Iwojima where this grows on the humus-rich floor of *Machilus Kobu*-forest around the summit, alt. 910 m (Ohba 826073) obviously becomes the southeastern limit of the range, though subsp. *Pozoi* is known from Polynesia (Iwatsuki 1963).

7) **Loxogramme salicifolia** (Makino) Makino in Bot. Mag. Tokyo 19: 138 (1905)—Tagawa in Act. Phytotax. Geobot. 13: 125 (1943); Col. Ill. Jap. Pterid. 166, 227, Pl. 71 f. 387 (1959).

var. **Toyoshimae** (Nakai) H. Ohba, comb. nov.

*L. boninensis* Nakai in Bot. Mag. Tokyo 43: 10 (1929)—Tagawa, op. cit. 128 (1943)—Nakaike, Enum. Pterid. Jap. 80 (1975).

*L. Toyoshimae* Nakai, op. cit. 9 (1929)—H. Ohba in Sci. Rep. Tohoku Univ. Ser. 4, 36: 118 (1971).

*L. boninensis* Nakai var. *Toyoshimae* (Nakai) H. Ito in J. Jap. Bot. 11: 94 (1935).

“*L. salicifolia* (Makino) Makino”—H. Ito in J. Jap. Bot. 48: 160 (1973).

Although *L. boninensis* has usually been recognized as distinct from *L. salicifolia*, the specific circumscription is obscure. *L. salicifolia* is variable and widespread, ranging from Himalaya to Japan through China and Korea. The representatives of the Bonin and Volcano Islands, which are located far from the main area of distribution, are better regarded as a local variety. It differs from var. *salicifolia* in having the conspicuous raised sori (2–3 mm wide) extending nearly to the margin.

In Minami Iwojima it was found to grow on some big branches of *Machilus Kobu* on the south slope, alt. ca 450 m (Ohba 826140); it is previously unknown from here.

#### Literature cited

- Ito, H. 1969. The Heredity (Iden) 23(8): 35–45. Iwatsuki, K. 1963. Act. Phytotax. Geobot. 19: 112–126. Nakai, T. 1930. Bull. Biogeogr. Soc. Jap. 1: 249–278. Ohba, H. 1971. Sci. Rep. Tohoku Univ. Ser. 4, 36: 75–127.

\* \* \* \*

南硫黄島では津山 (1981) が記録した 24 種のシダ植物のうち、21 種を確認し、新たに 12 種の自生を見い出すことができた。今回新たに見出されたものうち、イワガネ

ゼンマイ (*Coniogramme intermedia*, ウラゲイワガネに当る), オニヒカゲワラビ (*Diplazium nipponicum*), ニセコクモウクジャク (*Diplazium virescens* var. *conterminum*), ミゾンダ (*Stegnoqramma Pozoi* subsp. *mollissima*) は従来, 小笠原・火山諸島に未記録であった。ホウビカンジュ (*Nephrolepis biserrata*) はかつて中井 (1930), 伊藤 (1969) によって当諸島に産することが報じられていたが証拠となる標本がなく, 再確認が期待されていたものであった。

オガサワラハチジョウソウ (*Pteris boninensis*) では葉の形の変化がきわめて大きいことを説明した。ムニンサジランをイワヤナギソウの地方変種とし, *Loxogramme salicifolia* var. *Toyoshimae* の組合せを発表した。

○空からみた南硫黄島の木生シダの群落 (大場秀章) Hideaki OHBA: Bird's-eye-view of the tree-fern forest of Minami Iwojima island, the Volcano group, Japan (Pl. VI & VII).

1982年6月に南硫黄島の植物相を調べるに先立って航空写真で植生を概観したところ, 山頂から北西側の斜面に広範囲にわたって木生シダが多数生育していることが推測された。しかし, 実際にはこの斜面を踏査することはできず, この島での木生シダの分布状況や植生を掌握するうえで残念に思っていた。ところが幸いにも同年8月にヘリコプターから撮影した, この斜面の写真を手にする事ができた。

写真は斜面から比較的至近な距離で撮影されており, 少なくとも木生シダだけは確実に他の植物から区別できる。図版中で星状に樹冠を広げているのが木生シダである。

Pl. VIは島の北西側の山頂直下を写している。本誌57巻11月号(1982)に発表したエダウチムニンヘゴ (*Cyathea Tuyamae* H. Ohba) は幹から枝を多数出すため, 樹冠が非常に混み合って配している。したがって写真で星状の樹冠が多数密集しているものがエダウチムニンヘゴと考えられる。それにたいして樹冠のひとつひとつがやや孤立しているものは, 同島山頂での実際の調査から, 少なくともその一部はマルハチ (*Cyathea Mertensiana* (Kunze) Copel.) ではないかと思う。だが私が調べた限りではエダウチムニンヘゴのどの個体も枝を分枝していた。もし分枝することがこの種の特徴だとしたら, このやや孤立した樹冠のものはすべてマルハチという可能性もあるが, いずれとも決し難い。それはエダウチムニンヘゴとマルハチの葉形が極めてよく類似しており, この写真では区別できないことによる。こんもりとした樹冠をもつ木本植物はコブガシ (*Machilus Kobu* Maxim.) であると思われるが, 一部にはトキワイヌビワ (*Ficus bonin-simae* Koidz.) やヒサカキ (*Eurya japonica* Thunb.) も混在しているようだ。

山頂部とその下に横線状に配した淡い緑白色の部分はススキの草地である。ススキは崩壊の激しい島の東側斜面に群生しており, 写真左側の稜線にもみえている。ここのス