

Norio SAHASHI*: **Morphological and taxonomical studies on
Ophioglossales in Japan and the adjacent regions (8)****
**New taxa of *Sceptridium* in Isl. Oshima,
the Izu Islands**

佐橋紀男*: 日本および近隣産ハナヤスリ目の形態学的
分類学的研究 (8)
伊豆大島産オオハナワラビ属の新分類群

Up to the present time five taxa belonging to *Sceptridium* Lyon have been recorded from the Izu Islands (Sahashi 1979). In the present paper a new species, two new varieties and three new hybrids will be added.

1) ***Sceptridium triangularifolium*** Sahashi, sp. nov. (Figs. 1-A, 2-A)

Species similis *S. nipponici*, sed differt laminis sterilibus atrovirentibus et non latericiis hieme; sporis maturescentibus prius; laminis sterilibus semper triangularibus.

Plant medium rather lax, almost glabrous, 36 (24-45)cm high; rhizome fleshy, cylindrical, 0.5-1.5 cm long, 2-5 mm thick (living), giving rise to 8-20 lateral roots; root fleshy, lorate, 8-15 cm long, 2-3 mm thick (living) in 1 cm from the rhizome, usually without root contraction; common stalk 1-4 cm long, 2-4 mm thick at the middle; sterile stalk 9-14 cm long, very sparsely lanuginose; blade membranous to herbaceous, often thick, almost equilaterally triangular in outline, subternately or ternately divided, green to dark green, margin reddish during winter, 5-12 cm long, 5-13 cm broad, with three major divisions on stalks 1-3 cm long; basal pinna 2-5 cm long, 1-2.5 cm wide, ovate to oblong, acute at the apex; fertile stalk 19-31 cm long, rarely sparsely lanuginose, far surpassing the sterile blade; spike 4-10 cm long, usually bipinnate; sporangia 0.8-1.2 mm in diameter, tan to yellowish brown when mature; spores maturing during late September and October.

Jap. Name: Midori-hanawarabi, nom. nov.

Holotype: Near Habu-harbor, in a half-shaded secondary forest, alt. ca 200 m,

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10 Oct. 1981 (TNS; Sahashi 439091).

Range: Endemic in Isl. Oshima.

This is rarely found in a secondary forests or bamboo thickets or in the forest of *Camellia japonica*, growing with *S. nipponicum* or *S. ternatum*.

Examined specimens: Near Habu-harbor, alt. ca 200 m, N. Sahashi 7405, 81028-81032, 82020-82023. Near Motomachi-harbor, alt. ca 200 m, N. Sahashi 76086-76088, 79010-79014, 81033-81035, 81053-81056, 83035-83037.

2) ***Sceptribidium japonicum*** (Prantl) Lyon, Bot. Gaz. 40: 457 (1905).

var. ***silvicola*** Sahashi, var. nov. (Figs. 1-B, 2-B)

Simile var. *japonico* et *S. atrovirenti*, sed differt ab anteriore: laminis sterilibus herbaceis, pinnulis ovatis vel oblongis, apice acutis vel saepe obtusis, margine irregulariter serratis vel crenulatis; a posteriore: laminis sterilibus gracilibus, pinnulis elongatis et latis.

Plant lax to rather stout, sparsely lanuginose, 22-58 cm high; rhizome fleshy, cylindrical, 1-3.5 cm long, 4-7 mm thick; common stalk 4-10 cm long, 5-7 mm thick at the middle; sterile stalk 7-15 cm long; blade herbaceous, pentagonal, subternately divided, 15-27 cm long, 19-28 cm broad: ultimate segment usually acutish at the apex, and irregularly serrate or crenulate margins; fertile stalk 11-31 cm long; fruiting spike 7-17 cm long, bi- to tri-pinnate; sporangia yellowish brown, 1-1.2 mm in diameter.

Jap. Name: Gojinka-hanawarabi, nom. nov.

Holotype: Near Motomachi-harbor, alt. ca 300 m, 15 Jan. 1979 (TNS; Sahashi 439095).

Range: Endemic in Isl. Oshima.

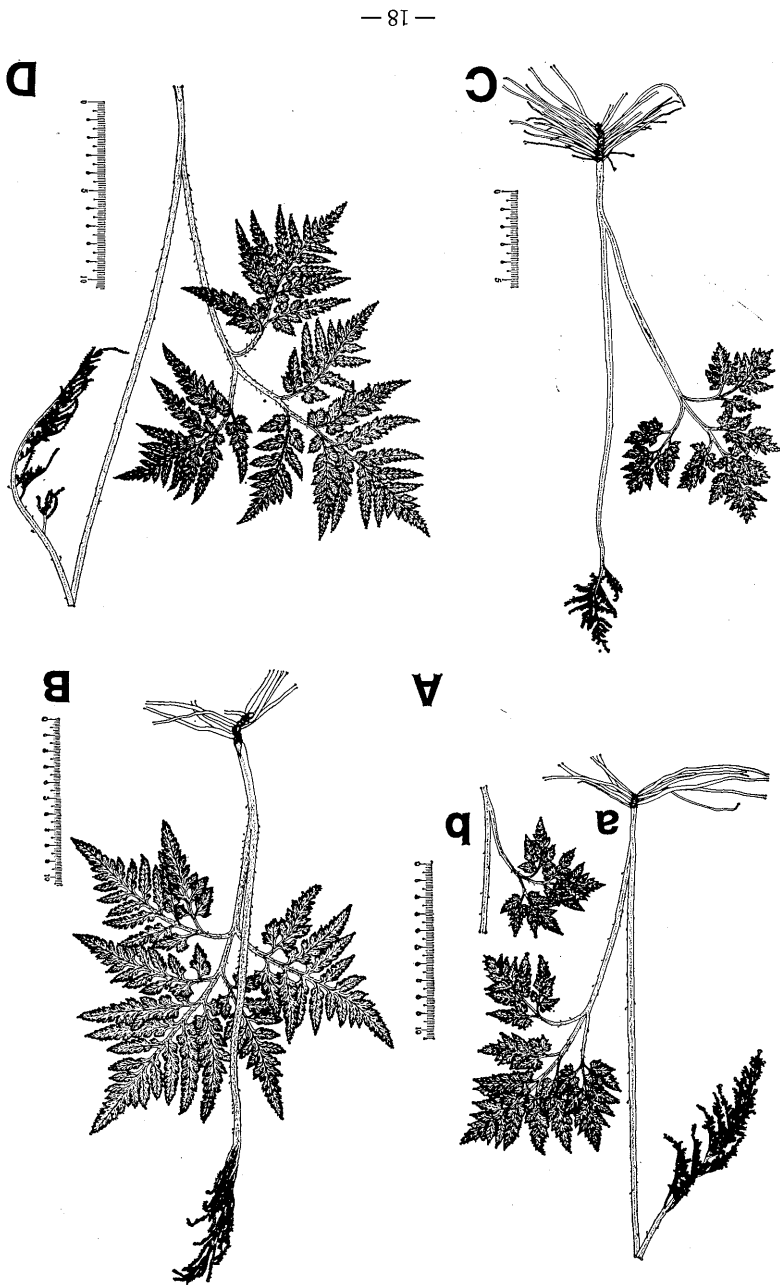
This is somewhat rarely found in shady secondary forests where both var. *japonicum* and *S. atrovirens* are sympatrically growing with vigour. It is probable that this variety is a hybrid between above two taxa from the viewpoint of its habitat and gross morphology.

Examined specimens: Near Habu-harbor, alt. ca 200 m, N. Sahashi 7603, 7605, 7621, 81038-81050, 81057-81061. Near Motomachi-harbor, alt. ca 300 m, N. Sahashi 7610, 7900, 7903, 7915, 82005-82011, 83001-83003.

3) ***Sceptribidium ternatum*** (Thunb.) Lyon, Bot. Gaz. 40: 458 (1905).

var. ***pseudoternatum*** Sahashi, var. nov. (Figs. 1-C, 2-C)

Valde similis var. *ternati* et *S. nipponici* var. *nipponici*, sed differt ab ambabus: laminis sterilibus latericis hieme; a posteriora: segmentis nec acutis



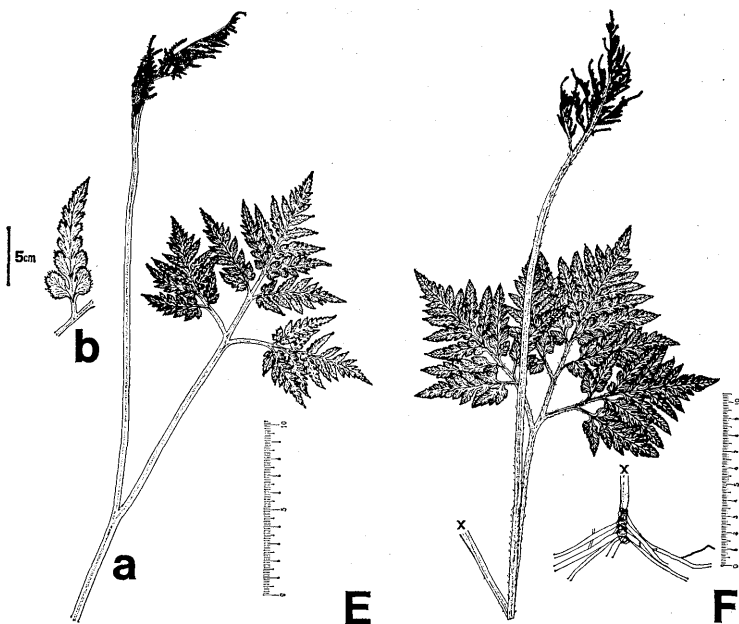


Fig. 1. Type specimens of new taxa of *Sceptribidium*. A. *S. triangularifolium* (TNS; Sahashi 439091). a. average plant growing at a half-shaded place. b. small plant growing at somewhat sunny place. B. *S. japonicum* var. *silvicola* (TNS; Sahashi 439095). C. *S. ternatum* var. *pseudoternatum* (TNS; Sahashi 439096). D. *S. × argutum* (TNS; Sahashi 439092). E. *S. × elegans* (TNS; Sahashi 439093). a. upper portion of a plant. b. a pinna enlarged. F. *S. × pulchrum* (TNS; Sahashi 439094).

et non elongatis.

This variety is similar to var. *ternatum* and *S. nipponicum* var. *nipponicum* in having typical ternate blades, growing in the same habitat and having the same spore maturing season. But it differs from the former in the blades lateritious in winter and lime-green in other seasons, and differs from the latter in the ovate to oblong pinnae and pinnules with obtuse or somewhat acute apex.

Jap. Name: Aka-fuyunohanawarabi, nom. nov.

Holotype: Near Habu-harbor, alt. ca 200 m, 10 Oct. 1981 (TNS; Sahashi 439096).

Range: Very rare in northern and central Honshu. Rare in Isl. Oshima, the Izu Islands.

In Isl. Oshima, this grows in half-shaded or somewhat sunny places or often in secondary forests where both *S. ternatum* var. *ternatum* and *S. nipponicum* var. *nipponicum* are growing in groups. This fact suggests that this variety may be a hybrid between above two taxa.

Examined specimens: Near Habu-harbor, alt. ca 200 m, N. Sahashi 81063, 81066, 82017-82019, 83032-83034. Near Motomachi-harbor, alt. ca 200 m, N. Sahashi 81064-81065.

4) **Sceptridium** × **argutum** Sahashi, hybr. nov. (Fig. 1-D)

Putative parents: *S. japonicum* var. *japonicum* × *S. triangularifolium*.

Valde similis *S. japonici*, sed differt a se stipitibus laminarum fertiliium majoribus, laminarum steriliium atrovirentibus; a *S. triangularifolio* laminis membraneis, margine aliquantum acutis serratis; sporis abortis.

Plant rather lax, 51 cm high; rhizome fleshy, erect; common stalk 5 cm long, sparsely lanuginose; sterile stalk 12 cm long; blade membranous, subternately divided, somewhat deep green, 18 cm long, 21 cm wide; penultimate segment lanceolate to lanceolate-oblong, acute, with finely and sharply serrate margins; fertile stalk 32 cm long; fruiting spike 14 cm long; spores abortive; stomata 66 (56-75) μm long.

Jap. Name: Habu-hanawarabi, nom. nov.

Holotype: Near Motomachi-harbor, alt. ca 200 m, 10 Oct. 1981 (TNS; Sahashi 439092).

Range: Endemic in Isl. Oshima.

Very rare in bamboo thickets where both putative parents are growing sympatrically.

Examined specimens: Only the holotype was investigated.

5) **Sceptridium** × **elegans** Sahashi, hybr. nov. (Figs. 1-E, 2-D)

Putative parents: *S. japonicum* var. *japonicum* × *S. nipponicum* var. *nipponicum*.

Valde similis *S. japonici*, sed differt laminis sterilibus latericiis hieme; a *S. nipponico* laminis magnis, stipitibus laminarum lanuginosis; sporis abortis.

Plant rather lax, 40-55 cm high; rhizome fleshy, erect; common stalk sparsely lanuginose, 5-7 cm long; blade subternately divided, broadly triangular to pentagonal, herbaceous, lime-green, latericious in winter, 13-23 cm long, 15-25 cm wide; penultimate segment lanceolate to lanceolate-oblong, acute, with finely and sharply serrate margins; fertile stalk 22-29 cm long; fruiting spike 10-18

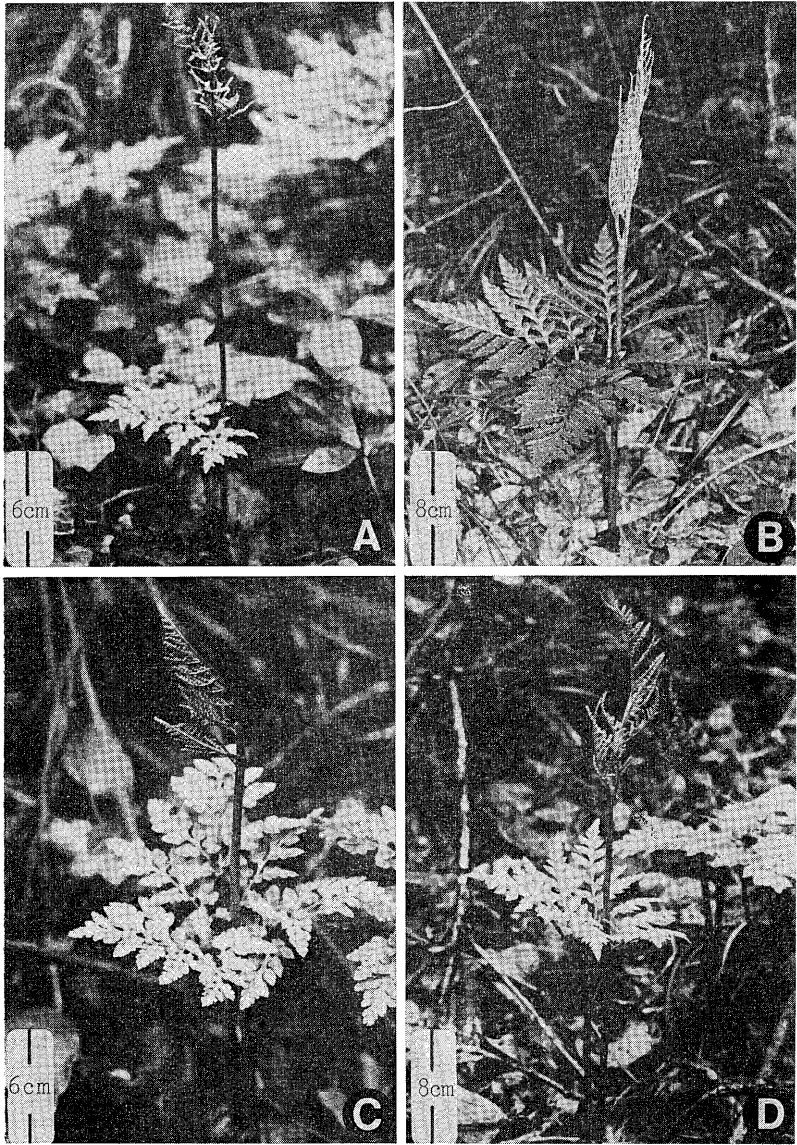


Fig. 2. *Sceptridium* spp. at their type localities. A. *S. triangularifolium* at a half-shaded place in secondary forest. B. *S. japonicum* var. *silvicola* in shady secondary forest. C. *S. ternatum* var. *pseudoternatum* at a half-shaded place in secondary forest. D. *S. ×elegans* in secondary forest, at a somewhat humid and shaded place.

cm long; spores abortive; stomata 65 (56-70) μ m long.

Jap. Name: Akane-hanawarabi, nom. nov.

Holotype: Near Habu-harbor, alt. ca 250 m, 2 Oct. 1982 (TNS; Sahashi 439093).

Range: Endemic in Isl. Oshima.

Very rare in half-shaded deciduous forests or in bamboo thickets where a fair number of both putative parents are growing sympatrically.

Examined specimens: Near Motomachi-harbor, alt. ca 250 m, 3 Oct. 1982 (TOHO; Sahashi 82004).

6) **Sceptridium** \times **pulchrum** Sahashi, hybr. nov. (Fig. 1-F)

Putative parents: *S. atrovirens* \times *S. nipponicum* var. *nipponicum*.

Valde similis *S. atrovirens*, sed differt a se stipitibus laminarum fertilium majoribus, laminiis sterilibus latericiis hieme; a *S. nipponico* laminiis magnis, crassi-herbaceis, stipitibus laminarum lanuginosis; sporis abortis.

Plant rather fleshy and lax; rhizome fleshy, cylindrical, 2-3 cm long, ca 5 mm thick, giving rise to some dozens of lateral roots; root fleshy, lorate, 12-20 cm long; common stalk sparsely lanuginose, 3-8 cm long; sterile stalk sparsely lanuginose, 9-13 cm long; blade subternately divided, broadly triangular to pentagonal, thick, herbaceous, lime-green, latericious in winter, 18 (12-20) cm long, 23 (14-26) cm broad; penultimate segment elongate, acute, with minutely serrate to irregularly crenulate margins; fertile stalk 28 (24-32) cm long; fruiting spike 8-14 cm long, bi- to tri-pinnate; spores abortive; stomata 66 (56-77) μ m long.

Jap. Name: Anko-hanawarabi, nom. nov.

Holotype: Near Habu-harbor, alt. ca 200 m, 10 Oct. 1981 (TNS; Sahashi 439094).

Range: Endemic in Isl. Oshima.

Rare in shaded deciduous or secondary forests where both putative parents are growing vigorously. Sympatric occurrence of this hybrid and *S. \times longi-stipitatum* was observed very often.

Examined specimens: Near Habu-harbor, alt. ca 200 m, N. Sahashi 81008-81012, 81014-81027, 81051-81052, 82012-82016, 83004-83030.

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伊豆大島から筆者はオオハナワラビ属 (*Sceptridium*) に 4 種 1 雑種を認め本誌 (54: 241-247, 1979) に報告したが、今回新たに同島から 1 新種, 2 新変種, 3 新雑種

を同属に次のごとく追加した。

1. *S. triangularifolium*, ミドリハナワラビ。大島固有。二次林に稀。アカハナワラビに似るがより小型で、冬期裸葉は紅変しない。
2. *S. japonicum* var. *silvicola*, ゴジシカハナワラビ。大島固有。母種のオオハナワラビとシチトウハナワラビの中間形で、両者の混生地にもみ生じ、雑種とも考えられる。
3. *S. ternatum* var. *pseudoternatum*, アカフユノハナワラビ。東北、関東、中部地方に稀、大島の二次林に稀。母種のフユノハナワラビとアカハナワラビの混生地のみ生じ、裸葉形は前者に似、冬期は後者と同様裸葉は紅変する。両者の雑種とも考えられる。
4. *S. ×argutum*, ハブハナワラビ。大島固有。二次林にごく稀。胞子是不稔。裸葉の形質よりオオハナワラビ (n=135) と、ミドリハナワラビ (n=45) の雑種と推定した。
5. *S. ×elegans*, アカネハナワラビ。大島固有。二次林にごく稀。胞子是不稔。裸葉の形質よりオオハナワラビ (n=135) と、アカハナワラビ (n=45) の雑種と推定した。
6. *S. ×pulchrum*, アンコハナワラビ。大島固有。二次林に稀。胞子是不稔。裸葉の形質よりシチトウハナワラビ (n=135) と、アカハナワラビ (n=45) の雑種と推定した。

□池上義信 (監修), 石沢 進 (編): 新潟県植物分布図集, 第3集 17+438 pp. 1982. 植物同好じねんじょ会, 新潟, ¥5,500. 地方出版物としては広島県植物図選と一二を競う良書であるがともに分布図は金井方式を採用していることが著しく、前者は図集であるのに対し、こちらは地図集であると共に産地を詳記するの差がある。今度出たのは第3集で、100種類を網羅している。今迄のものと大差はない。披いてみると、種類に依って甚だ分布を異にしているのがわかる。たとえば、アベマキヤノウルシは県北にのみ産し、ツルグミヤマトグサは佐渡にのみ産して県の主要部には産地がないなど、まことに不思議な分布を示す。巻末にも石沢進氏が種々の分布型を26型も挙げているが、これも分布図を確認することで生れた産物と思う。しかし、新潟は県が広く、種々の種類が丁度分布の限界に臨むものが多いので、勢いその分布にはきわどい気候や地形の違いによって遮断されるものがしばしばであるために、その表示する分布型は種々となりうることも考慮する必要があるであろう。それはともかく、このような努力を多とし、益々充実されんことを希望して止まない。

(前川文夫)