

Hiroyoshi OHASHI*: *Rhaphiolepis* (Rosaceae) of Japan

大橋広好*: 日本産シャリンバイ属植物の分類

Rhaphiolepis occurs in subtropics to warm temperate regions of Southeast and East Asia from Thailand through Laos, Cambodia, Vietnam, Borneo, Philippines, China, Korea to Japan. It is recorded as containing about 15 species (Hutchinson 1964 as *Raphiolepis*, Airy Shaw 1966, Kuau & Yü 1974 as *Raphiolepis*), 3 or 4 species (Rehder 1940 as *Raphiolepis*) or few (Ohwi 1953, Walker 1976, Kitamura & Murata 1979). This discrepancy in recent literature is caused in part by various treatments of Japanese *Rhaphiolepis*. At least four or five kinds of *Rhaphiolepis* have been recognized in Japan. They are named in Japanese as Tachi-syarinbai (or Syarinbai), Maruba-syarinbai (or Syarinbai), Atsuba-syarinbai (or Ogasawara-syarinbai or Shima-syarinbai), Hime-syarinbai and Hosoba-syarinbai. Most or some of them have been treated respectively as distinct species or as infraspecific taxa of one of them or of extra-Japanese species.

Tachi-syarinbai has generally been referred to *Rhaphiolepis umbellata* (Thunb.) Makino. Maruba-syarinbai has been called *R. umbellata* var. *integerrima* (Hook. & Arn.) Rehder, *R. mertensii* Sieb. & Zucc. or *R. umbellata* var. *mertensii* (Sieb. & Zucc.) Makino. Atsuba-syarinbai was described from the Bonin Islands and have sometimes been recognized as a distinct taxon under the name of *R. integerrima* Hook. & Arn., though it has usually been referred to *R. umbellata*. Hime-syarinbai is known only in horticultural form and have usually been referred to *R. umbellata* var. *minor* Makino. Hosoba-syarinbai was found in the Okinawa islands and has generally been referred to *R. umbellata* var. *liukiensis* Koidzumi. The typical forms of these five kinds of Japanese *Rhaphiolepis* are compared with each other in Tab. 1.

The differences between these five forms shown in the Tab. 1 are apparently trivial for dividing them at the specific rank and sometimes continuous between these forms. Therefore, they have often been regarded to be infraspecific taxa of *R. umbellata* by many Japanese taxonomists. For the flora of China, however,

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Tab. 1. Characters used for distinguishing typical forms of Japanese *Rhaphiolepis*.

Syarinbai	Leaves	Leaf-margin	Distribution & Scientific name
Tachi-s.	ovate-oblong~obovate, 4-10 cm long, 2-5 cm wide.	loosely and obtusely toothed or nearly entire.	Honshu (Chugoku Dist.) and Kyushu (Ohwi 1965); S. W. Japan to Amami- oshima, Bonin, Daito Is. (Hatusima 1978). <i>R. umbellata</i> ¹⁾
Maruba-s.	broadly obovate~broadly elliptic, 4-10 cm long, 3-4 cm wide.	entire or with a few teeth.	Honshu (Chubu Dist. and westwards), Shikoku, Kyushu (Ohwi 1965); Middle Honshu to northern Kyushu (Hatusima 1978). <i>R. u. var. integerrima</i> ¹⁾
Atsuba-s.	oblong.	entire or obtusely toothed.	Bonin Is. <i>R. integerrima</i> ²⁾
Hime-s.	ovate-oblong~obovate, 2-4 cm long, 1-2 cm wide.	obtusely toothed or entire.	Cultivated. <i>R. u. var. minor</i> ¹⁾
Hosoba-s.	oblanceolate to narrowly oblong, 5-12 cm long, 1-4 cm wide.	undulately and obtusely toothed or entire.	Ryukyu Is. <i>R. u. var. liukiueusis</i> ¹⁾

¹⁾ According to Ohwi (1965). ²⁾ According to Nakai (1924).

Kuau & Yü (1974) distinguished *R. umbellata* and *R. integerrima* at the rank of species by differences of branching system and of leaves. But, characters they used are, also, inadequate for separating both species.

Recently, Kitamura (1974) and Hatusima (1978) studied relationships between *R. umbellata* and *R. indica* (L.) Lindley. These species are different in several characters. According to Kuau & Yü (1974) and Kitamura (1974), pomes of *R. indica* are smaller than those of *R. umbellata*. Kuau & Yü (1974) described that the fruits of *R. indica* as purplish black and about 5 mm in diameter, while those of *R. umbellata* as blackish purple and 7-10 mm in diameter. Hatusima (1978) mentioned that *R. indica* has smaller flowers than those of *R. umbellata*. Except these differences no characters seem to be available to distinguish both species. Kitamura (1974) treated both species as conspecific. He considered Tachi-syarinbai and Maruba-syarinbai are the same kind of plant and treated them as a variety of *R. indica*. Also, he regarded each of Hime-syarinbai and Hosoba-syarinbai as a variety of the species.

Examining many herbarium specimens and fresh material of living plants of *R. umbellata* and *R. indica*, I know that there are several forms intermediate between them. Leaves of Tachi-syarinbai, Maruba-syarinbai and Atsuba-syarinbai show continuous variation in shape and serration. In Tachi-syarinbai and Maruba-syarinbai, even one individual has ovate-oblong, oblong or obovate leaves with entire or obtusely toothed margins. Tachi-syarinbai, Maruba-syarinbai and Atsuba-syarinbai are apparently indistinguishable. Hime-syarinbai has generally smaller leaves than Tachi-syarinbai and Maruba-syarinbai and no such a small-leaved form has been found in wild state. Hosoba-syarinbai is usually different from others in having narrower leaves, but Tachi-syarinbai in the Yakushima island has narrower leaves than that in the other regions and has often undulately and obtusely toothed margins.

From these studies I have the same conclusion with Kitamura (1974) that *R. indica* and *R. umbellata* are distinguishable at the rank of variety. He made a new combination name, i.e., *R. indica* var. *integerrima* (Hook. & Arn.) Kitamura, though *R. japonica* var. *integerrima* (Hook. & Arn.) Hook. f. is an illegitimate name. *R. japonica* Sieb. & Zucc. was published in 1841, while *R. integerrima* Hook. & Arn. was in 1838. So, I have to select a new variety name instead of var. *integerrima* (Hook. & Arn.) Kitamura. The first legitimate variety name was published by Makino in 1902 as *R. umbellata* var.

mertensii (Sieb. & Zucc.) Makino. Therefore, the autonym of this species name, i. e., var. *umbellata* (Thunb. ex Murrey), has priority over var. *mertensii* based on Article 57.3 of International Code of Botanical Nomenclature (1983). Hime-syarinbai was treated by Kitamura (1974) to be a variety of *R. indica*, but I think it is a cultivated form of var. *umbellata*. Kitamura's treatment of Hosoba-syarinbai is accepted in this paper.

Number of species contained in the genus *Rhaphiolepis* is questionable as mentioned at the beginning of this paper, but at most five species or at least two species of Japanese *Rhaphiolepis* which are probably counted within the fifteen species by Hutchinson (1964) are reduced to synonym of one of the extra-Japanese species. Kalkman (1973) predicted already that not more than three species will survive a full revision of the genus. Although further revisional studies are much needed, the genus seems to have four or five species.

The taxonomic treatments are as follows:

Rhaphiolepis indica (L.) Lindley ex Ker

var. ***umbellata*** (Thunb. ex Murrey) Ohashi, comb. nov. ジャリンバイ (タチジャリンバイ, マルバジャリンバイ, アツバジャリンバイ).

Laurus umbellata Thunb. ex Murrey, Syst. Veget. ed. 14, 384 (1784), ut *Thunb. jap. mspt. M.* Thunb., Fl. Jap. 175 (1784).

Mespilus sieboldii Bl., Bijdr. Fl. Ned. Ind. 1102 (1826).

Rhaphiolepis integerrima Hook. & Arn., Bot. Beechey's Voy. 263 (1838). Nakai in Journ. Arn. Arb 5: 62 (1924). Kanehira, Formos. Tr. 279, f. 228 (1936). Kuau & Yü in Fl. Reip. Pop. Sin. 36: 281 (1974). Terasaki's Illust. ed. 2, f. 1336 (1977).

R. japonica Sieb. & Zucc., Fl. Jap. 1: 162, t. 85 (1841).

R. mertensii Sieb. & Zucc., Fl. Jap. 1: 164 (1841), in nota. Sugimoto, New Key Woody Pl. Jap. 228 (1972).

Opa japonica (Sieb. & Zucc.) Seemann in Journ. Bot. 1: 281 (1863).

R. japonica var. *integerrima* (Hook. & Arn.) Hook. f. in Curtis Bot. Mag. 91: t. 5510 (1865), nom. illeg. Maxim. in Bull. Acad. Sci. St. Petersburg. 19: 181 (1873).

R. ovata Briot in Rev. Hort. 1866: 292 & 1870-71: 348, f. 52 (1870).

R. umbellata (Thunb.) Makino in Bot. Mag. Tokyo 16: 13 (1902). C.K. Schn., Ill. Handb. Laubh. 1: 705 (1906). Koidz. in Journ. Coll. Sci. Univ. Tokyo 34(2): 71 (1913). Nakai in Journ. Arn. Arb. 5: 62 (1924). Rehder, Man. Cult.

Tr. Shr. ed. 2, 386 (1940). Ohwi, Fl. Jap. 662 (1953); l. c. ed. Engl. 547 (1965); l. c. ed. rev. 772 (1965). Makino's New Illust. f. 1035 (1961). Sugimoto, New Key Woody Pl. Jap. 228 (1972). Kuau & Yü in Fl. Reip. Pop. Sin. 36: 280 (1974). Walker, Fl. Okinawa 521 (1976). Terasaki's Illust. ed. 2, f. 1333 (1977). Kitagawa, Ohwi's Fl. Jap. 874 (1983).

R. umbellata var. *mertensii* (Sieb. & Zucc.) Makino in Bot. Mag. Tokyo 16: 14 (1902). Koidz. in Journ. Coll. Sci. Univ. Tokyo 34(2): 72 (1913). Makino & Nemoto, Fl. Jap. ed. 2, 501 (1931). Makino's New Illust. f. 1034 (1961).

R. umbellata f. *ovata* (Briot) C.K. Schn., Ill. Handb. Laubh. 1: 706 (1906); in Fedde, Rep. 3: 152 (1906). Nakai in Journ. Arn. Arb. 5: 63 (1924).

R. integerrima var. *mertensii* (Sieb. & Zucc.) Makino ex Koidz. in Journ. Coll. Sci. Univ. Tokyo 34(2): 72 (1913).

R. mertensii var. *ovata* (Briot) Nakai, Fl. Sylv. Korea. 6: 32, f. 9 (1916).

R. umbellata f. *integerrima* (Hook. & Arn.) Rehd. in Mitt. Deutsch. Dendr. Ges. 1915 (24): 223 (1916).

R. umbellata subsp. *integerrima* (Hook. & Arn.) Masamune in Trans. Nat. Hist. Soc. Formosa 31: 274 (1941).

R. umbellata var. *integerrima* (Hook. & Arn.) Masamune, Enum. Trach. Ryukyu Ins. 5: 111 (1955). Walker, Fl. Okinawa 521 (1976).

[*R. umbellata* var. *integerrima* (Hook. & Arn.) Rehder: Ohwi, Fl. Jap. 662 (1953); l. c. ed. Engl. 547 (1965); l. c. ed. rev. 772 (1965). Terasaki's Illust. ed. 2, f. 1334 (1977). Kitagawa, Ohwi's Fl. Jap. 875 (1983).]

R. indica subsp. *umbellata* (Thunb.) Hatusima in Mem. Fac. Agr. Kagoshima Univ. 7(2): 309 (1970); Fl. Ryukyus 844 (1971); Woody Pl. Jap. 651 (1976).

R. indica var. *integerrima* (Hook. & Arn.) Kitamura in Acta Phyt. Geob. 26: 1 (1974); in Kitamura & Murata, Col. Ill. Woody Pl. Jap. 2: 28 (1979). Hatusima in Journ. Geob. 25: 125 (1978), ut var. *integerrima* (Hook. f.) Kitamura.

R. indica var. *integerrima* f. *umbellata* (Thunb.) Hatusima in Journ. Geob. 25: 126 (1978), nom. illeg.

[*R. indica* subsp. *umbellata* f. *ovata* Hatusima, Woody Pl. Jap. 651 (1976), comb. nud., ut f. *ovata* C.K. Schn.]

R. wrightiana Maxim.: Toyoda, Fl. Bonin 256, f. 132 (1981) [Erroneous name for *R. integerrima*. Probably mixed *Rhaphiolepis* with *Photinia*].

f. **umbellata** (Thunb. ex Murrey) Ohashi, comb. nov. シャリンバイ.

f. *minor* (Makino) Ohashi, stat. nov. ヒメシャリンバイ.

Rhaphiolepis umbellata var. *minor* Makino in Bot. Mag. Tokyo 16: 14 (1902). Ohwi, Fl. Jap. 662 (1953); l.c. ed rev. 772 (1965). Terasaki's Illust. ed. 2, f. 1335 (1977). Kitagawa, Ohwi's Fl. Jap. 875 (1983).

R. minor (Makino) Koidz. in Bot. Mag. Tokyo 23: 171 (1909). Sugimoto, New Key Woody Pl. Jap. 228 (1972).

R. rubra var. *minor* (Makino) Nakai in Journ. Arb. 5: 67 (1924).

R. umbellata cv. *minor*: Ohwi, Fl. Jap. ed. Engl. 547 (1965).

R. indica var. *minor* (Makino) Kitamura in Acta Phyt. Geob. 26: 2 (1974); in Kitamura & Murata, Col. Ill. Woody Pl. Jap. 2: 28 (1979).

var. *liukuensis* (Koidz.) Kitamura in Acta Phyt. Geob. 26: 2 (1974); in Kitamura & Murata, Col. Ill. Woody Pl. Jap. 2: 28 (1979). Hatusima in Journ. Geob. 25: 125 (1978). ホソバシャリンバイ.

Rhaphiolepis umbellata var. *liukuensis* Koidz. in Journ. Coll. Sci. Univ. Tokyo 34(2): 73 (1913). Ohwi, Fl. Jap. 662 (1953); l.c. ed. Engl. 547 (1965); l.c. ed. rev. 772 (1965). Terasaki's Illust. ed. 2, f. 1337 (1977). Kitagawa, Ohwi's Fl. Jap. 875 (1983).

R. liukuensis (Koidz.) Nakai in Journ. Arn. Arb. 5: 64 (1924).

R. indica subsp. *umbellata* var. *liukuensis* Koidz.: Hatusima, Fl. Ryukyus 844 (1971).

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日本のシャリンバイ属植物については分類学的によく調べられてきている。最近では北村 (1974), 初島 (1978) 両先生が研究をまとめ、日本産の種類をモッコクモドキ *Rhaphiolepis indica* (L.) Lindley ex Ker の地方的変種として認めるとする見解を

発表された。モッコクモドキはタイ、インドシナ諸国、フィリピン、ボルネオ、中国、台湾、朝鮮、日本にわたって広く分布し、多型的な一種であると考えられ、私もこの種の範囲の採りに賛成である。北村 (1974) ではジャリンバイ (マルバジャリンバイを含む)、ヒメジャリンバイ、ホソバジャリンバイが日本産の種類としてそれぞれ変種で認められているが、私はヒメジャリンバイはジャリンバイ (マルバジャリンバイを含む) の矮小型と考える。また、ジャリンバイの学名には変種名として *R. umbellata* var. *mertensii* の autonym である var. *umbellata* が生きることになるので、新組合せが必要である。ホソバジャリンバイは北村先生の扱いを採る。花序の軸と萼裂片が無毛である形はオキナワジャリンバイ (*R. indica* var. *insularis* Hatusima, nom. nud.; *R. umbellata* var. *hiiranensis* (Kaneh.) Hatusima, comb. subnud.) と名付けられているが、安定した形かどうか疑問である。ホソバジャリンバイの標本をみると、花期に花序軸が無毛またはほとんど無毛の形があるが、そのような形でも萼裂片は有毛であり、オキナワジャリンバイに当たる形を見ることはできなかった。

○スルガヒョウタンボクの学名 (大橋広好) Hiroyoshi OHASHI: A new name for a Japanese variety of *Lonicera alpigena* L. (Caprifoliaceae)

スルガヒョウタンボクの学名を国際植物命名規約57.3条によって次のように変更することが必要である。

Lonicera alpigena L. var. **watanabeana** (Makino) Ohashi, comb. nov.

L. watanabeana Makino in Bot. Mag. Tokyo 28: 128 (1914).

L. watanabeana var. *viridissima* Nakai, Tent. Capr. Jap. 100 (1921).

L. alpigena var. *viridissima* (Nakai) Nakai ex Hara in Journ. Fac. Sci. Univ. Tokyo ser. 3, 6: 382 (1956), in adnota. Ohwi, Fl. Jap. ed. rev. 1269 (1965). Kitamura & Murata, Col. Ill. Woody Pl. Jap. 1: 13 (1971).

L. alpigena subsp. *glehnii* (Fr. Schm.) Hara var. *viridissima* (Nakai) Nakai ex Hara: Hara in Ginkgoana 5: 60 (1983).

本変種についてのこれまでの分類学上の研究と文献については Hara (1983) に詳しく記述されている。

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