

Tetsukazu YAHARA*: **Note on nomenclature and infraspecific classification of *Boehmeria japonica* (L. f.) Miq. and *B. spicata* (Thunb.) Thunb. (Urticaceae)**

矢原徹一*: コアカソとヤブマオの学名および種内の分類について

In the course of taxonomic investigations on Japanese *Boehmeria* species, it became necessary to revise the concept of *Urtica japonica* L.f. and *U. spicata* Thunb. based on the examination of their type specimens. *U. japonica* L.f. is a valid name effectively published in 1781 based on Thunberg's collection from Japan, and transferred to *Boehmeria* by Miquel (1867). This is the oldest name next to *Acalypha japonica* Houtt. (1779) which was published for Japanese *Boehmeria* species. However, *B. japonica* (L.f.) Miq. has not been adopted for any *Boehmeria* species in current taxonomic literature in which Japanese *Boehmeria* species are referred (Satake 1936, Ohwi 1956, 1965, Kitamura & Murata 1965, Wang 1981).

Urtica spicata Thunb. was published in 1784 and transferred to *Boehmeria* by Thunberg (1789) himself. As is pointed by Maximowicz (1876), the original specimens of *U. spicata* Thunb. include two different species: *B. japonica* (L.f.) Miq. and *B. spicata* (Thunb.) Thunb. in the emended sense in this paper. Since Thunberg's confusion of two species, these two, especially *B. japonica* (L.f.) Miq., have been cited by various names among taxonomic literature.

In the present paper, the type specimens of *U. japonica* L.f., *U. spicata* Thunb. and several concerned names are examined in order to solve the nomenclatorial confusion since Thunberg. Based on its result, taxonomy of two different species, *B. japonica* (L.f.) Miq. and *B. spicata* (Thunb.) Thunb., are revised including their infraspecific classification.

1) ***Boehmeria spicata*** (Thunb.) Thunb., Trans. Linn. Soc. 2: 330 (1794), excl. *Urtica japonica* L.f. & *Acalypha japonica* Houtt.; Willd., Sp. Pl. 4(1): 341 (1805), excl. *U. japonica* L.f. & *A. japonica* Houtt.; Spr., Syst. Veg. 3: 844 (1826), excl. *U. japonica* L.f.; Bl., Mus. Bot. Lugd.-Bat. 2: 220 (1856);

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Miq., Ann. Mus. Bot. Lugd.-Bat. 131 (1867); Fr. & Sav., Enum. Pl. Jap. 1: 440 (1875), nom. tant.; Maxim., M el. Biol. 9: 645 (1876); Fr. & Sav., ditto 2: 497 (1879), nom. tant.; C.H. Wright, Journ. Linn. Soc. (Bot.) 26: 488 (1899), nom. tant.; Matsum., Ind. Pl. Jap. 2(2): 43 (1912), nom. tant.; Makino & Nemoto, Fl. Jap. 1064 (1925) & ed. 2, 224 (1931), excl. var. *duploserrata* C.H. Wright; Satake, Journ. Fac. Sci. Univ. Tokyo, sect. III, 4: 482 (1936), p.p.; Makino, Ill. Fl. Nippon 642, fig. 1924 (1940) & New Ill. Fl. Nippon 105, fig. 418 (1961); Ohwi, Fl. Jap. 441 (1953) & rev. ed. 514 (1965); Kitamura & Murata, Col. Ill. Herb. Pl. Jap. II, 339, pl. 71-637 (1961); W.T. Wang, Act. Bot. Yunnan. 3: 411 (1981); Satake in Satake *et al.* (eds.), Wild Fls. Jap. 2: 9, pl. 7-3 (1981).

Urtica spicata Thunb., Fl. Jap. 69 (1784) pro part. maj.; Bl., Bijdr. Fl. Ned. Ind. 492 (1825). Lectotype: Japan, Thunberg 22115 (UPS, new designation, seen in microfilm; Fig. 1, left).

Boehmeria platyphylla D. Don var. *japonica* Wedd., Monogr. Fam. Urtic. 365 (1856) & in DC. Prodr. 16(1): 213 (1863); non *U. japonica* L. f.

B. japonica auct. non (L. f.) Miq.; Yahara, Journ. Fac. Sci. sect. III, 13: 261 (1983).

var. **spicata**

B. spicata var. *akari* Bl., Mus. Bot. Lugd.-Bat. 229 (1856). Holotype: Japan, Herb. Lugd. Bat. 908186-156 (L).

B. spicata var. *tenera* Bl., op. cit. 220 (1856). Holotype: Japan, Herb. Lugd.-Bat. 908186-164 (L).

Japanese name. Ko-akaso.

Chromosome number. $2n=42$ (Okabe 1963, Yahara 1983).

Distribution. Japan (Honshu, Shikoku, Kyushu), Korea and eastern China.

var. **microphylla** Nakai ex Satake, Journ. Fac. Sci. sect. III, 4: 483 (1936).

Holotype: Mt. Amagi, Shizuoka Pref.; T. Nakai, June 26, 1931 (TI).

Japanese name. Kobano-ko-akaso.

Chromosome number. $2n=28$ (Okabe 1963, Yahara unpublished).

Distribution. Japan (Honshu, Shikoku and Kyushu).

Type of *Urtica spicata* As is pointed out by Maximowicz (1876), original specimens of *U. spicata* Thunb. include two different species. In the IDC microfiches of Thunberg Herbarium in UPS, there are two sheets of specimens noted as *U. spicata*: nos. 22115 and 22116. Of them, 22115 is composed of a single specimen which is identical with the species known as '*B. spicata* Thunb.' in

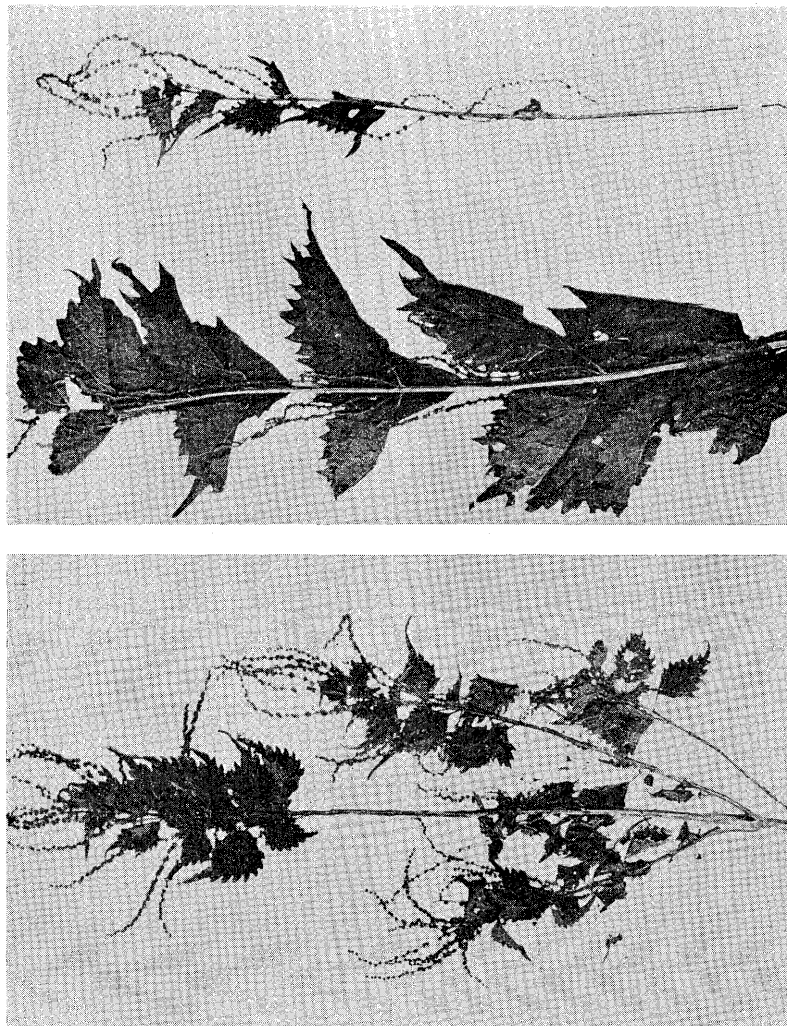


Fig. 1. Original specimens of *Urtica spicata* Thunb.; Thunberg Herbarium no. 22115 (left) and no. 22116 (right).

current taxonomic and floristic literature in Asia, and as 'Koakaso' in Japanese (Fig. 1-left). This is a good species easily recognizable by its shrubby habit accompanying woody much-branched stems. On the other hand, 22116 is a mixture of two different species (Fig. 1, right): the right half is identical with 22115 while the left half belongs to the *B. longispica* complex (Yahara 1983) which is composed of several related species with apomictic polyploid nature, showing much complicated morphological and cytological variations and whose species taxonomy is poorly understood as yet.

These left and right plants of 22116 are apparently different in their leaf size, size and form of teeth along leaf margin, spike length, and other features. The reason why Thunberg regarded these two as identical is speculated as follows. He (1784) described *U. macrophylla* on the same page as *U. spicata*. The type specimen of *U. macrophylla* (UPS, Thunberg 22160; Fig. 2, left) belongs to the *B. longispica* complex as in the case of the left half of 22116 but it has much-branched inflorescences against the left half of 22116 having spicate ones. He noted 'Flores axillares, paniculati' in the description of *U. macrophylla* and 'Flores spicati' in that of *U. spicata*. The epithet of '*U. spicata*' was probably given stressing its spicate nature of inflorescences. The left and right halves of 22116 are different in many morphological features as stated above but common in having spicate inflorescences. This is probably the reason why he mixed them under *U. spicata* against *U. macrophylla* which is in fact related to the left half of 22116.

It is now necessary to choose a lectotype of *U. spicata* Thunb. As stated above, the species cited as '*B. spicata* Thunb.' in current taxonomic and floristic literature is identical with 22115 and the right half of 22116, and the specimen 22115 is designated here as the lectotype of *U. spicata* Thunb.

Comments on infraspecific taxa Some varieties have been published under *B. spicata* Thunb. Among them, var. *akari* and var. *tenera* were described by Blume (1856) with insufficient diagnoses. As a result of the examination of their type specimens, it is concluded that they are indistinguishable from typical *B. japonica*.

Var. *microphylla* is tentatively treated here to be a distinct variety differing in its chromosome number ($2n=28$) from var. *spicata* ($2n=42$). This variety was characterized by having smaller leaves glabrous above and much branched stem (Satake 1936). Okabe (1965) reported that var. *spicata* is triploid ($2n=42$)

and reproduced apomictically while var. *microphylla* is diploid ($2n=28$) and sexual. The occurrence of diploid and triploid races in *B. spicata* is also confirmed by me. In my preliminary examination, it was observed that the diploid race of *B. spicata* always bears male inflorescences while the triploid race usually lacks them (Yahara 1983 and unpublished data). By this criterion, it is usually possible to distinguish the diploid sexual and triploid apomictic races morphologically and these two seem to be separable as two varieties.

However, the separation of var. *microphylla* from var. *spicata* as a distinct variety of diploid still remains an assumption because the correlation between ploidy level and phenetic features is not fully understood yet as stated below.

1) According to my observations on cultivated strains whose chromosome numbers are already examined, the diploid race tended to have smaller leaves than the triploid race did. However, cytological examinations are not enough to conclude that the diploid and triploid races are distinguishable by their leaf size.

2) The holotype of var. *microphylla* is a sterile specimen and it cannot be concluded at present whether it belongs to the sexual diploid race or not. The cytological examination of the population of Mt. Akagi (type locality of var. *microphylla*) is necessary for elucidating the cytological property of the type specimen of var. *microphylla*.

2) **Boehmeria japonica** (L.f.) Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 131 (1867); Maxim., Mém. Biol. 9: 642 (1876); Makino, Iinuma's Somoku Zusetsu 4: 1272 (1912); Mori, Enum. Pl. Corea, 125 (1922); Makino & Nemoto, Fl. Jap. 1063 (1925) & ed. 2, 223 (1931); Miyabe & Kudo, Fl. Hokkaido & Saghal. 4: 490 (1934).

Urtica japonica L.f., Suppl. Pl. 418 (1781). Holotype: Japan, Thunberg (no. 1456-5 in Smith Herbarium, LINN; Fig. 2, right).

B. platyphylla D. Don var. *japonica* (L.f.) Wedd., Monogr. Fam. Urtic. 365 (1856) & in DC., Prodr. 16(1): 213 (1863), quoad basionym tant.

U. elongata Gmel., Syst. Nat. 2(2): 269 (1791), based on *U. japonica* L.f., nom. superfl.

Acalypha japonica Houtt., Nat. Hist. II, 11: 291, pl. 72, fig. 2 (1797), pro '*A. japonische*'.

U. spicata auct. non Thunb.; Thunb. Fl. Jap. 79 (1784), p.p.

var. **japonica**

Japanese name. Togariba-Yabumao.

Distribution. Japan (western Honshu, Shikoku and Kyushu).

Specimens examined. Yamaguchi Pref. Murozumi-iwaya, Hikari City, H. Masaki 29454 (TI). Ehime Pref. Uchiumi-mura, Minami-Uwa-gun, N. Fukuoka 8720, 8725 (KYO); Ikata-cho, Nishi-Uwa-gun, Y. Nomura s.n. (KYO). Fukuoka Pref. Tsuyazaki-cho, Munakata-gun, S. Tsutsui 21108, 21109, 21110 (TI); Komono, Kasuya-gun, S. Hatusima 27 (TI); Ino, Kasuya-gun, S. Hatusima 23b (TI); Sasaguri, Kasuya-gun, S. Hatusima 5 (TI); Mt. Wakasugi, Kasuya-gun, S. Hatusima 20a (TI); Kashii, Fukuoka City, S. Hatusima 13 (TI); Shiraito-daki, Itoshima-gun, T. Yahara 1539A (TI); Tobaru, Itoshima-gun, T. Yahara 1634, 1635 (TI). Saga Pref. Otonashi, Kashima City, T. Baba s.n. (KYO); Kunimi, Imari City, T. Baba s.n. (KYO); Nakayama, Fujitsu-gun, T. Baba s.n. (KYO); Inubashiri, Kishima-gun, K. Yamashita s.n. (KYO). Nagasaki Pref. Arakawa, Fukue Isl., S. Tsutsui 19519 (TI); N foot of Mt. Tatera, Shimoagata-gun, H. Koyama 3004 (KYO).

var. **appendiculata** (Bl.) Yahara, comb. nov.

B. longispica Steud. var. *appendiculata* Bl., Mus. Bot. Lugd.-Bat. 2: 221 (1856). Lectotype: Japan, Herb. Lugd.-Bat. 908185-1662 (L, new designation; Fig. 3, right)

Urtica macrophylla Thunb., Fl. Jap. 69 (1784); Poir. in Lamark, Enc. Bot. 4: 642, 26 (1798); Willd., Spec. Pl. 4(1): 350, 9 (1805); Spr., Syst. Veg. 3: 840, 62 (1826). Holotype: Thunb. 22160 (UPS, seen in microfilm; Fig. 2, left).

B. macrophylla (Thunb.) Sieb. et Zucc., Abh. Math.-Phys. Akad. Wiss. München 4(3): 215 (1846), excl. *U. spicata* Bl.; non D. Don, Prodr. Fl. Nepal. 60 (1825).

B. platyphylla D. Don var. *macrophylla* (Thunb.) Wedd. in DC. Prodr. 16(1): 213 (1869).

B. grandifolia Wedd., Sci. Nat. ser. 4, 1: 485 (1854), based on *U. macrophylla* Thunb.; C.H. Wright, Journ. Linn. Soc. Bot. 26: 485 (1899); Matsum., Ind. Pl. Jap. 2(2): 41 (1912); Matsuda, Bot. Mag. Tokyo 28: 7 (1914); Hand.-Mazz., Symb. Sin. 7: 151 (1929); Kitamura & Murata, Col. Ill. Herb. Pl. Jap. II, 341, pl. 71-641 (1961).

B. miqueliana Tanaka, Bult. Sci. Fukult. Terk. Kjusu Imp. Univ. 1: 198 (1925), based on *U. macrophylla* Thunb., nom. superfl.

B. longispica Steud., Fl. Regensb. 33: 260 (1850); Bl., op. cit. 221 (1856); Fr. & Sav., Enum. Pl. Jap. 1: 440 (1875), excl. var. *sieboldiana* Bl.; Satake, Journ.

Fac. Sci. Univ. Tokyo sect. III, 4: 533, fig. 53 (1936) p.p. & in Satake *et al.* Wild Fls. Japan 2: 9, pl. 8-2 (1981); Ohwi, Fl. Jap. 442 (1953) & rev. ed. 515 (1965); W. T. Wang, Acta Bot. Yunnan. 3: 406 (1981). Lectotype: China, Ningpo; *Fortune* 85A, Aug. 1844 (P, new designation).

B. spicata (Thunb.) Thunb. var. *duploserrata* C. H. Wright in Journ. Linn. Soc. Bot. 26: 488 (1899); Hayata, Journ. Coll. Sci. Univ. Tokyo 30: 281 (1911). Holotype: China, Chekiang?; *H. J. Hicken*, Nov. 1896 (K).

Japanese name. Yabumao.

Chromosome number. $2n=42, 56, 70$ (Yahara 1983).

Distribution. China, Taiwan, Korea and Japan (Hokkaido, Honshu, Shikoku and Kyushu).

Type of *U. japonica* L.f. After the publication of *U. japonica* L.f., Thunberg (1794) for the first time referred to this name; he transferred his '*Urtica spicata* Thunb. (1784)' to the genus *Boehmeria* and cited *U. japonica* L.f. as a synonym of *B. spicata* (Thunb.) Thunb. This '*U. japonica* L.f.' is based on Thunberg's collection from Japan (Linné fil. noted it in his original description). Therefore, it is assumed that Thunberg compared his collection in hand with the description of *U. japonica* L.f. and concluded that *U. japonica* L.f. is identical with *U. spicata* Thunb. If this conclusion is acceptable, his combination as *B. spicata* (Thunb.) Thunb. is illegitimate because *U. japonica* L.f. (1781) is published earlier than *U. spicata* Thunb. (1784).

The type of *U. japonica* L.f. is found in the IDC microfiches of Smith Herbarium in LINN: no. 1456-5 (noted as *Urtica japonica* Supp.; L.f., e Japonia, Thunberg; Fig. 2, right). Although this is regarded as a duplicate of Thunberg's 22115 and 22116, it includes only a single specimen morphologically similar to the left half of 22116. Therefore, it is concluded that *U. japonica* L.f. is not identical with *U. spicata* Thunb. (in the sense emended above) but a different species belonging to the *B. longispica* complex.

History of taxonomy after Thunberg (1794) After Thunberg (1794), many authors have treated the concerned species giving various circumscription, various taxonomic status and various names. Although these references are already critically treated in the above synonymic list, it may be fruitful to describe the taxonomic history of *B. japonica* in detail. To give a comprehensive description of taxonomic history, it is necessary to avoid the confusion of taxonomic entity and name itself. In the following description, these two are dif-

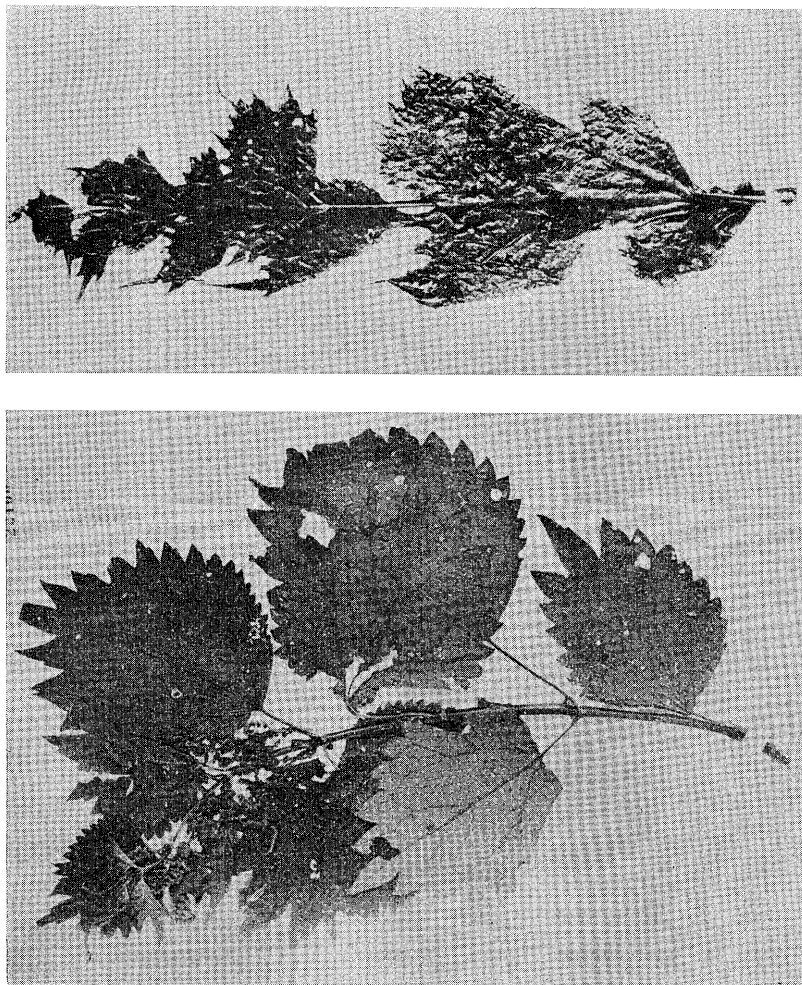


Fig. 2. Holotypes of *Urtica macrophylla* Thunb. (left) and *U. japonica* L. f. (right).

ferently designated as follows; if the name only is referred to, the scientific name is included by quotation mark, and if the taxonomic entity is, without any mark.

1. Willdenow (1805) and Sprenger (1826) followed Thunberg's opinion by citing '*U. japonica* L.f.' as a synonym of '*B. spicata* (Thunb.) Thunb.' and by recognizing *U. macrophylla* as a different species under a different genus from *B. spicata*.

2. Siebold & Zuccarini (1846) for the first time transferred *U. macrophylla* Thunb. to the genus *Boehmeria* and cited it as '*B. macrophylla* S. et Z.', though this name is a later homonym of *B. macrophylla* D. Don (1825). They further emended the circumscription of *B. macrophylla* S. et Z. and *B. spicata* (Thunb.) Thunb.; they cited '*U. japonica* L.f.' not under '*B. spicata*' but under '*B. macrophylla*' and noted 'Spicae... simplices vel basi ramosae' in the description of the latter. It is by them that Thunberg's confusion of two different species based on his overvaluing on the inflorescence feature was revised and the contemporary concepts of two different species, *B. japonica* (= *B. macrophylla* S. et Z.) and *B. spicata* were established.

3. Steudel (1850) published *B. longispica* Steud. from China and Blume (1856) reduced '*U. japonica*' and '*U. macrophylla*' to this species. Blume's definition of *B. longispica* is acceptable but his treatment is illegitimate because '*U. japonica*' is published earlier than '*B. longispica*'.

4. Weddell (1854) proposed a new name, '*B. grandifolia* Wedd.' based on '*B. macrophylla* Thunb.' because *B. macrophylla* (Thunb.) S. et Z. is a later homonym as stated above.

5. Weddell (1863) gave a status and combination of '*B. platyphylla* D. Don var. *macrophylla* (Thunb.) Wedd.' for *B. japonica* and of '*B. platyphylla* var. *japonica* (L.f.) Wedd.' for *B. spicata*. He cited '*B. spicata* Thunb.' as a synonym of his 'var. *japonica*' and his description of 'var. *japonica*' agrees with *B. spicata*. This treatment is a misinterpretation of '*U. japonica* L.f.' probably based on the above-mentioned citation of this name under '*B. spicata*' by Thunberg (1794).

6. Miquel (1867) transferred *U. japonica* L.f. to the genus *Boehmeria*, making a combination of '*B. japonica* (L.f.) Miq.' and cited '*B. longispica*', '*U. macrophylla*' and '*B. grandifolia*' as its synonyms. His definition of *B. japonica* is acceptable and his combination is valid as a name for the concerned species.

7. Franchet & Savatier (1875) cited '*B. japonica* Miq.' as a synonym of *B.*

longispica Steud. and '*U. japonica* L.f.' as a synonym of *B. spicata* Thunb. His treatment is a misinterpretation of the concept of *U. japonica* L.f. and illegitimate.

8. Maximowicz (1876) correctly adopted the name, '*B. japonica* Miq.' for the concerned species citing '*B. longispica* Steud.' as a synonym.

9. Makino (1912) and Makino & Nemoto (1925, 1931) correctly adopted '*B. japonica* Miq.' for the concerned species.

10. Stake (1936) cited '*U. japonica* L.f.' as a synonym of *B. spicata* Thunb. with a note of 'pro part. major.' and '*B. japonica* Miq.' as a synonym of *B. longispica* Steud. His treatment is probably based on the misinterpretation of Thunberg's 22115 and 22116 as original specimens of *U. japonica* L.f.

11. Yahara (1983) used the name, '*B. japonica* (L.f.) Miq.' in the sense of *B. spicata* (Thunb.) Thunb. This treatment is based on the misinterpretation of Thunberg's 22115 and 22116 as original specimens of *U. japonica* L.f.

Comment on *Acalypha japonica* Houtt. *Acalypha japonica* Houtt. (1779), the oldest name published for Japanese *Boehmeria*, is omitted from the above description to simplify the discussion. The plant drawn in the figure of Houttuyn is regarded as identical with *B. japonica* (L.f.) Miq. It is supposed that this name is described based on the duplicate(s) of Thunberg's collection from Japan. This name is cited along with *U. japonica* L.f. by Thunberg (1794), Willdenow (1805), Blume (1856), Miquel (1867) and other authors. Although it was published older than *U. japonica* L.f., Miquel cited it next to '*U. japonica* L.f.' which was just after his new combination, '*B. japonica* Miq.'. Therefore, '*U. japonica* L.f.' is regarded as the basionym of '*B. japonica* Miq.'.

Relationship between *B. japonica* and *B. longispica* In the above discussion, *B. longispica* Steud. is treated as identical with *B. japonica* (L.f.) Miq. However, there are recognizable morphological differences between the type specimens of these two; the type of *B. japonica* (Fig. 2, right) is characterized by its duplicated teeth with very acute and subcaudate points and also its rather elongate and clearly caudate leaf apex while the type of *B. longispica* (Fig. 3, left) shows points of teeth and leaf apex not so caudate. Type specimens of *B. grandifolia* Wedd. (= *U. macrophylla*) and *B. longispica* var. *appendiculata* Bl. agree with the latter (Figs. 2, left and 3, right, respectively).

To show the features of these two clearly, outlines of their leaves are illustrated in Fig. 4 along with those of related species belonging to the *B. longispica*

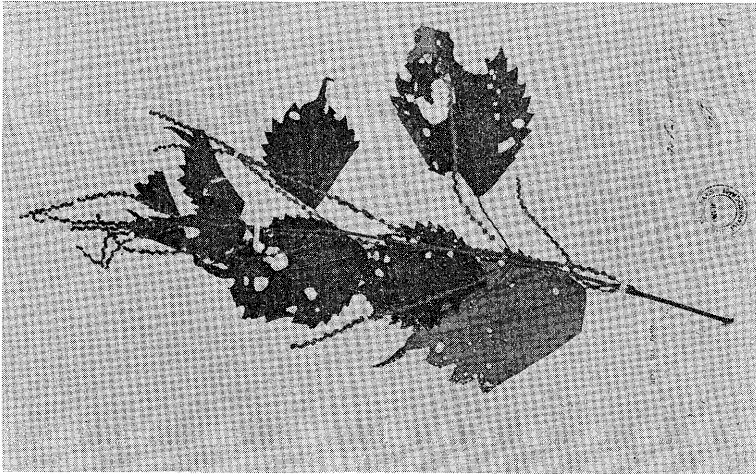
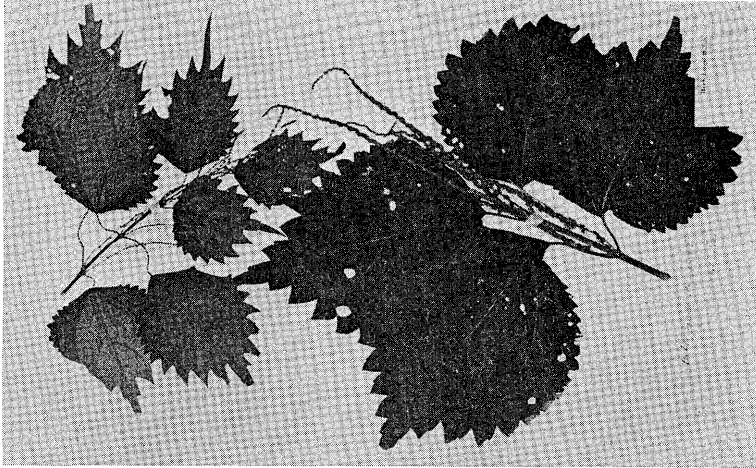


Fig. 3. Lectotypes of *Boehmeria longispica* Steud. (left) and *B. longispica* Steud. var. *appendiculata* Bl. (right).

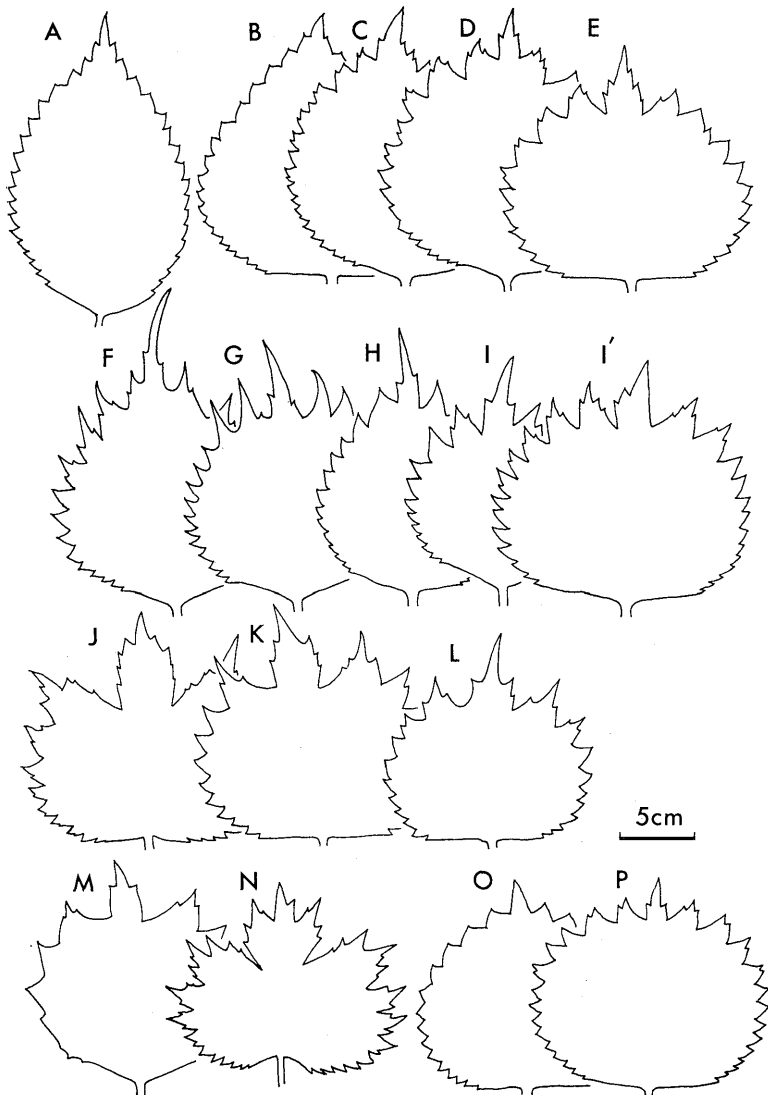


Fig. 4. Leaves of *Boehmeria japonica* (var. *japonica* and var. *appendiculata*) and its close relatives. A: *B. kiusiana* Satake. B: *B. quelpaertensis* Satake. C-I', P: *B. japonica* (F, var. *japonica*; G, intermediate between var. *japonica* and var. *appendiculata*; others, var. *appendiculata*). J-N: *B. plataniifolia* Fr. et Sav. O: *B. hatuimae* Satake.

complex. As shown in this figure, intermediate forms are found between *B. japonica* s. str. (var. *japonica*) and *B. longispica* (*B. japonica* var. *appendiculata*), and it is often difficult to discriminate these two. Concludingly, these two are distinguished here in variety ranks.

It is a very difficult problem to answer the question of what is the species and what is the variety in the *B. longispica* complex because of its apomictic polyploid nature and its putative hybridity. To give a conclusive answer to this question, ancestral diploid species contributed to its origin should be elucidated.

Among many described 'species' belonging to the *B. longispica* complex, *B. dura* Satake and *B. izuoshimensis* Satake seem to have originated through hybridization between a diploid species, *B. biloba* Bl. and some races of *B. japonica* (including *B. longispica*) (Yahara 1983). Besides these two, the following two species are assumed to have originated through hybridizations between *B. japonica* and some diploid species; *B. platanifolia* Fr. et Sav. (*B. japonica* × *B. sylvestrii*; this species and *B. sylvestrii* share the characteristic tricuspidate leaves) and *B. quelpaertensis* Satake (*B. japonica* × *B. holosericea*; this species and *B. holosericea* share the characteristic crenulate serrations and dense appressed hairs). If these assumptions are correct, these two should be treated at species ranks.

On the other hand, phenetic features of var. *japonica* show no pronounced similarity to any diploid species native in Japan. Therefore, it is assumed here that this race is originated as a result of evolutionary diversification within an apomictic species, *B. japonica* (including *B. longispica*). This is one of the reasons why *B. japonica* s. str. and *B. longispica* are treated here as two varieties of *B. japonica*; var. *japonica* and var. *appendiculata*, respectively.

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Literature cited

- Okabe, S. 1963. Apomixis in the genus *Boehmeria*. Sci. Rep. Tohoku Univ. ser. 4 (Biol.) 29: 207-215. Yahara, T. 1983. A biosystematic study on the

local populations of some species of the genus *Boehmeria* with special reference to apomixis. Journ. Fac. Sci. Univ. Tokyo sec. III (Bot.) 13: 218-261. Others are cited in synonymic lists.

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1) コアカソの学名には従来 *Boehmeria spicata* Thunb. が用いられてきた。この名前の basionym である *Urtica spicata* Thunb. の基準標本を検討したところ、コアカソとヤブマオの混合物であることがわかった (Fig. 1)。そこで lectotype の選定を行ない、*B. spicata* (Thunb.) Thunb. をコアカソの種名として採用した。

2) ヤブマオの学名には、*B. longispica* Steud. を採用する意見 (佐竹 1936, 1981; 大井 1953, 1965; 王文采 1981)、あるいは *B. grandifolia* を採用する意見 (北村・村田 1961) などがあり定説が無かった。今回ヤブマオに対して採用されたことのある一連の学名を再検討した結果、*Urtica japonica* L.f. が最も古い有効名であることがわかった。そこでヤブマオの学名は *B. japonica* (L.f.) Miq. が正名となる。

Urtica japonica L.f. は小リンネがツェンペリーより送られた日本産植物の重複標本に基づいて発表した種名の一つである。その基準標本はキュー王立植物園のスミス・ハーバリウムにあるが、それはウブサラ大学のツェンペリー・ハーバリウムにある *Urtica spicata* Thunb. の基準標本の重複標本にあたるものである。前述の通り *U. spicata* Thunb. の基準標本はコアカソとヤブマオの混合物であるが、*U. japonica* L.f. の基準標本はヤブマオのみからなる 1 枚の標本である。ツェンペリーは *U. spicata* Thunb. の発表に際して *U. japonica* L.f. をシノニムとして引用しているが、これは両者が同一の概念であることを意味しない。ツェンペリーは *U. spicata* Thunb. と同時に *U. macrophylla* Thunb. を発表しており、両者は花序が単一か分岐するかという点を重視して区別された。実際には *U. spicata* Thunb. の一部と *U. macrophylla* Thunb. は同一種ヤブマオに属するものである。一方前述の通り、*U. japonica* L.f. はコアカソを含まないヤブマオだけにあてられた名前である。この事情についての理解不足も手伝って、ヤブマオの学名についてはさまざまな見解が発表される結果となった。詳細については本文を参照されたい。

3) *U. japonica* L.f. の基準標本は多型的なヤブマオの中でも鋸歯が粗く、鋸歯の先が尾状に尖る点で比較的良好に認識できる型にあたる。この型は葉がうすく、果穂が細く、茎も比較的繊細で全体の印象はメヤブマオに似る。この型はヤブマオ (狭義) から変種として区別しておくのが妥当と考えられる。そこでヤブマオ (狭義) に対して var. *appendiculata* (Bl.) Yahara の新組かえ名を発表し、var. *japonica* にトガリバヤブマオの和名を与えた。