

Nomenclature of *Acer pictum* Thunberg ex Murray and its Intraspecific Taxa (Aceraceae)

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イタヤカエデとその種内分類群の学名

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Acer pictum Thunberg ex Murray is the oldest and correct name of a maple usually known as *Acer mono* Maximowicz. Nomenclatural relations between *A. pictum* and *A. septemlobum* Thunberg ex Murray are clarified. The correct name, important synonyms and bibliography for *A. pictum* and its distinct infraspecific taxa of *A. pictum* are enumerated including the following 16 new combinations for Japanese and Chinese taxa: (Japanese taxa) *A. pictum* subsp. *dissectum*, subsp. *glaucum*, subsp. *mayrii*, subsp. *mono*, subsp. *savatieri*, subsp. *taishakuense*, f. *ambiguum*, f. *connivens*, f. *magnificum*, f. *piliferum*, f. *puberulum*, and f. *pulvigerum*; and (Chinese taxa) *A. pictum* subsp. *incurvatum*, subsp. *macropterum*, subsp. *minshanicum*, and subsp. *tricuspis*.

Acer pictum Thunberg ex Murray is the oldest and correct name of a maple usually known as *Acer mono* Maximowicz. This paper aims to correct erroneous names of infraspecific taxa which are recognized as distinct under *A. mono*. These taxa are usually treated as varieties or forms of the species, but those varieties are considered to be subspecies under *A. pictum* in this paper, because they are distinct from each other in their morphology as well as habitat and/or geographical distribution. Relations between these taxa in Japan are clarified by Ogata (1964, 1965). His circumscription of infraspecific taxa under *A. mono* has principally been followed by subsequent taxonomists in Japan. In this paper I also adopt his system of classification for those infraspecific taxa, but modify his

concept by recognizing subspecies instead of his variety after examining many specimens and fresh materials. The same concept is applied to Chinese varieties of *A. mono* recognized by Fang (1939, 1981), though further critical studies are needed to analyze variation patterns of *A. pictum* in China and Korea.

Nomenclatural relations between *Acer pictum* and *A. septemlobum*

Recently a proposal to reject *Acer pictum* Thunberg ex Murray was made by Wijnands (1990a) to conserve *A. mono*, but it was rejected by the Committee for Spermatophyta (Brummitt 1993). According to Wijnands, the name *A. pictum* is never used for a maple except Thunberg. However, he overlooked a

number of important taxonomic publication which have used *A. pictum* Thunberg for the maple which has recently been known under the name *A. mono* Maximowicz. Before a treatment of Nakai (1931), who adopted *A. mono* Maximowicz instead of *A. pictum* Thunberg for the first time, *A. pictum* had been used for the maple not only by Thunberg but also De Candolle (1824), Pax (1902), Schneider (1907), Rehder (1927) and others. Such literature of *A. pictum* is fully enumerated by Nakai (1931) and Hara (1954) as a synonym under *A. mono* in their papers.

The reasons why Nakai (1931) thought *Acer pictum* could not be used for the maple now commonly called *A. mono* were explained in detail by Nakai (1931, 1935) and Hara (1986). They had two reasons. First, they believed that Thunberg's *Kaempferus Illustratus* part 2 (published in *Nova Acta Reg. Soc. Sci. Upsal.* 4: 31–40) was published in 1783 in which *A. pictum* was described for the first time based on a plant now referred to *Kalopanax* in *Araliaceae* (Nakai 1927). Accordingly, the name *A. pictum*, so typified, appeared earlier than those published in Murray's *Systema Vegetabilium* ed. 14 published in May or June in 1784 and Thunberg's *Flora Japonica* published in August in 1784. Secondly, Nakai and Hara considered that the entity of *A. pictum* in the *Kaempferus Illustratus* was changed by Thunberg in *Flora Japonica*. *Acer pictum* in the *Kaempferus Illustratus* (published in 1783 as they thought) was divided by Thunberg into two species, i.e., *A. pictum* and *A. septemlobum*, in *Flora Japonica* (August 1784). However, the entity of *A. pictum* (1783) was moved by him to *A. septemlobum* Thunb. (1784), not to *A. pictum* Thunb. (1784). Hence, according to them, *A. pictum* in *Flora Japonica* is a later homonym of *A. pictum* in the *Kaempferus Illustratus*.

This consideration has been accepted exclusively since Nakai (1931) by Hara (1936, 1954), Rehder (1938, 1940), Ohwi (1953, 1965a, 1965b), Ogata (1965), Kitamura and Murata (1971), Kitagawa (1983),

Shimizu (1989), etc. in Japan, by Fang (1939, 1981) in China and by Lee (1980) in Korea. They all used *Acer mono* Maximowicz assuming it to be the first correct species name instead of *A. pictum* Thunberg ex Murray.

When was Thunberg's *Kaempferus Illustratus* part 2 published? It was thought to be published in 1783, one year earlier than the year when Thunberg's *Flora Japonica* was published, by Nakai (1931) for the first time in relation to the name of *A. pictum*. Although it had often been treated as published in 1783 (Nakai 1927, Rehder 1938, Hunt 1977 and Hara 1986) or in 1774 but earlier than the *Flora Japonica* (Merrill and Walker 1938), the publication date of the *Kaempferus Illustratus* is mentioned as 1784 by Koidzumi (1925), Stafleu (1967) and Stafleu and Cowan (1979). Also, Wijnands (1990) concluded that "it was published late in 1784 or in 1785, in any case later than Thunberg's *Flora Japonica* (August)". These results indicate Thunberg's *Kaempferus Illustratus* part 2 was published in 1784 and later than his *Flora Japonica*. *Acer pictum* published in the *Kaempferus Illustratus* has, therefore, no status as the new name.

Descriptions of *Acer pictum* change from "lobis integris" in Murray's *Systema Vegetabilium* ed. 14 and *Flora Japonica* to "lobis aequaliter acuteque serratis" in the *Kaempferus Illustratus*, while those of *A. septemlobum* in the former two books and *A. pictum* in the last reference are almost identical.

Then, what is the entity of *Acer pictum* Thunberg ex Murray? There are two sheets of *A. pictum* determined by Thunberg in the Herbarium Thunberg of the University of Uppsala (UPS-THUNB). According to Nakai (1935), the determination of one of them was changed by Thunberg to *A. septemlobum*, but, there remained traces of Thunberg's handwriting as *A. pictum* on the sheet when he examined it in 1925. This specimen corresponds with UPS-THUNB 24085 cited by Hunt (1977 as 24095), Hara (1985) and Wijnands (1990), while the other agrees with UPS-THUNB

24084 cited by Wijnands.

Koidzumi (1925), Nakai (1927, 1935), Hunt (1977) and Hara (1986) determined UPS-THUNB 24084 of *A. pictum* in Flora Japonica as a species of *Acer*, while UPS-THUNB 24085 of *Acer pictum* in the Kaempferus Illustratus and *A. septemlobum* of Flora Japonica as a species of *Kalopanax*. Koidzumi (1925) made a new combination *K. septemlobus* (Thunb.) Koidzumi based on UPS-THUNB 24085, but Nakai (1927) published another combination *K. pictus* (Thunb.) Nakai also based on UPS-THUNB 24085. Later, Hara (1986) selected UPS-THUNB 24085 as the lectotype of both *Acer pictum* Thunb. in the Kaempferus Illustratus (as 1783; not 1784) and *A. septemlobum* Thunb. in Flora Japonica (1784). Wijnands again designated this 24085 as the lectotype of *A. septemlobum* Thunberg.

Taxonomic treatments of *Acer pictum*

Acer pictum Thunberg ex Murray is one of the most extensively studied species in the genus. Taxonomic relations between this species and its closely related ones are much problematical. *Acer pictum* and *A. mono* were treated by Pojarkova (1933, 1949) as different species. *Acer pictum* (or as *A. mono*), *A. truncatum* Bunge and *A. cappadocicum* Gled. have usually been regarded to be distinct from each other, but were united by E. Murray (1969) into one species. In this paper, *A. pictum* is treated in usual circumscription which includes *A. mono* but excludes *A. truncatum* and *A. cappadocicum*. Many varieties and forms have been described under *A. pictum* or *A. mono*. Hara (1954) revised these infraspecific taxa recorded in Japan. A recent historical change of treatments of infraspecific taxa in Japan is summarized in Table 1. The following are taxonomic treatments and enumeration of infraspecific taxa of *A. pictum* including necessary new combinations, synonyms and bibliography.

***Acer pictum* Thunberg ex A. Murray, Syst. Veg.**

ed. 14, 912 (May/June 1874) [Lectotype: UPS-THUNB 24084 (Wijnands 1990a)]. Thunberg, Fl. Jap. 162 (Aug. 1784), in Nova Acta Reg. Soc. Sci. Upsal. 4: 40 (later than Oct. 1784), Diss. Acer. 7 (1793), Icon. Pl. Jap. 5, t. 3 (1805); Pax in Engler, Bot. Jahrb. 7: 235 (1886), in Engler, Pflanzenr. IV-163, Ht. 8, 47 (1902); Pojarkova in Acta Inst. Bot. Acad. Sci. USSR ser. 1, fasc. 1, 280, fig. 9 (1933), in Fl. USSR 16: 450 (1949); Koidzumi in Acta Phyt. Geob. 3: 177 (1934), in Bot. Mag. Tokyo 39: 317 (1936). Detailed synonymy and bibliography of this species and *Acer mono* published before 1964 see Nakai (1931), Hara (1954) and Ogata (1965) enumerated under *Acer mono* in their papers.

A. mono Maxim. in Bull. Phys.-Math. Acad. Sci. St. Petersburg. 15: 126 (1856), in Mel. Biol. 2: 416 (1856); Nakai in Bot. Mag. Tokyo 45: 124 (1931); in J. Jap. Bot. 11: 442 (1935); Pojarkova, l. c. 278, fig. 8 (1933); Rehd., Man. Cult. Tr. Shr. ed. 2, 569 (1940); Hara, Enum. Sperm. Jap. 3: 104 (1954); Ohwi, Fl. Jap. 746 (1953); l. c. ed. rev. 866 (1965), l. c. ed. Engl. 609 (1965); Makino New Ill. Fl. Jap. 369, f. 1475 (1961); Ogata in J. Geob. 12: 94 (1964), in Bull. Tokyo Univ. Forest. 60: 5 (1965); Kitam. in Kitam. and Murata, Col. Ill. Woody Pl. Jap. 1: 293 (1971); Hatusima, Woody Pl. Jap. 286 (1976); Kitagawa, Neo-Lin. Fl. Mansh. 438 (1979); T. B. Lee, Ill. Fl. Korea 522, f. 2086 (1980); W. P. Fang in Fl. Rep. Pop. Sin. 46: 94 (1981); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. 2: 16 (1989); Wijnands in Taxon 39: 536 (1990) in Thunbergia 12: 10 (1990).

1. *A. pictum* subsp. **pictum**

var. **pictum**

1-1. f. **pictum**

A. pictum f. *albomaculatum* Dippel, Handb. Laubh. 2: 455 (1892).

A. pictum var. *marmoratum* Nichols. in Gard. Chron. ser. 2, 16: 375 (1881).

A. mono f. *marmoratum* (Nichols.) Rehd. in J. Arn. Arb. 19: 81 (1938).

Table 1. Historical changes of taxonomic treatments of infraspecific taxa of *Acer pictum* in Japan

Hara 1954	Ogata 1965	Kitamura 1971	Shimizu 1989	Ohashi (in the present paper)
<i>Acer mono</i>	<i>Acer mono</i>	<i>Acer mono</i>	<i>Acer mono</i>	<i>Acer pictum</i> Thunb. ex Murray
var. <i>ambiguum</i>	var. <i>ambiguum</i>	subsp. <i>ambiguum</i>	var. <i>ambiguum</i>	subsp. <i>pictum</i> オニイタヤ
f. <i>albo-maculatum</i> *	f. <i>ambiguum</i>	×	×	var. <i>pictum</i> オニイタヤ
	f. <i>pulvigerum</i> **	×		f. <i>ambiguum</i> (Pax) Ohashi オニイタヤ
var. <i>glabrum</i>	var. <i>glabrum</i>	subsp. <i>mono</i>	var. <i>glabrum</i>	f. <i>pictum</i> * フイリオニイタヤ
f. <i>acutissimum</i>	f. <i>glabrum</i>		f. <i>pulvigerum</i>	f. <i>pulvigerum</i> (Ogata) Ohashi ミヤマオニイタヤ
	f. <i>magnificum</i>	×		subsp. <i>mono</i> (Maxim.) Ohashi エゾイタヤ
f. <i>magnificum</i>	f. <i>magnificum</i>			var. <i>mono</i> (Maxim.) Franch. エゾイタヤ
f. <i>latialatum</i>		×	×	f. <i>mono</i> エゾイタヤ
var. <i>marmoratum</i>	var. <i>marmoratum</i>	subsp. <i>marmoratum</i>	var. <i>marmoratum</i>	f. <i>magnificum</i> (Hara) Ohashi オオエゾイタヤ
f. <i>dissectum</i>	f. <i>marmoratum</i>		f. <i>dissectum</i>	subsp. <i>dissectum</i> (Wesmael) Ohashi エンコウカエデ
f. <i>heterophyllum</i>				var. <i>dissectum</i> Wesmael エンコウカエデ
f. <i>tashiroi</i>				f. <i>dissectum</i> エンコウカエデ
var. <i>connivens</i>	f. <i>piliferum</i> **	×	f. <i>piliferum</i>	f. <i>piliferum</i> (Ogata) Ohashi エンコウカエデ
f. <i>subtrifidum</i>	f. <i>connivens</i>	var. <i>connivens</i>	var. <i>connivens</i>	f. <i>connivens</i> (Nichols.) Ohashi ウラゲエンコウカエデ
	f. <i>puberulum</i> **	×	f. <i>puberulum</i>	f. <i>puberulum</i> (Ogata) Ohashi ケウラゲエンコウカエデ
var. <i>glaucum</i>	var. <i>glaucum</i>	subsp. <i>glaucum</i>	var. <i>glaucum</i>	subsp. <i>glaucum</i> (Koidz.) Ohashi ウラジロイタヤ
var. <i>savatieri</i>	var. <i>trichobasis</i>	subsp. <i>savatieri</i>	var. <i>trichobasis</i>	subsp. <i>savatieri</i> (Pax) Ohashi イトマキイタヤ
<i>Acer mayrii</i>	var. <i>mayrii</i>	subsp. <i>mayrii</i>	var. <i>mayrii</i>	subsp. <i>mayrii</i> (Schwerin) Ohashi アサイタヤ
	var. <i>taishakuense</i> **	subsp. <i>taishakuense</i>	var. <i>taishakuense</i>	subsp. <i>taishakuense</i> (Ogata) Ohashi タイシャクイタヤ

* a horticultural form.

** the taxon described for the first time.

× the taxon not treated by the author.

A. mono f. *albomaculatum* (Dippel) Rehd. in J. Arn. Arb. **20**: 417 (1939); Hara, Enum. Sp. Jap. **3**: 105 (1954), ut var. *ambiguum* f. *albomaculatum*.

The lectotype of *Acer pictum*, UPS-THUNB 24084, is a variegated form. It has been considered to be a horticultural form (Koidzumi 1925, Nakai 1935, Rehder 1939 and Hara 1954).

Although Thunberg in Flora Japonica (1784) described the leaves of *A. pictum* as ‘*Folia utrinque glabra*’, the lectotype has minute hairs uniformly on the under surface of leaves. This fact was confirmed by Nakai (1935), Koidzumi (1936) and Hara (1986). Subsp. *pictum* is characteristic in having such hairs and is found in southern Hokkaido, Honshu, Shikoku, Kyushu and southern Korea. Thunberg (1784) noted that *A. pictum* was grown in Fuji (as Fusi) and Hakone (as Fakoniae) regions in central Honshu in his Flora Japonica.

Acer pictum var. *marmoratum* was regarded as distinct from f. *pictum* first by Hara (1954), but, Nicholson (1881) already suggested as “the plant figured by Thunberg may be the var. *marmoratum*”, and Rehder (1938) treated his f. *marmoratum* (Nichols.) Rehder as the type of *A. pictum*. Rehder (1939) believed that the leaves of the type of *A. pictum* Thunberg are glabrous as described in Flora Japonica and hence he referred f. *marmoratum* to the type. Accordingly, he distinguished it from f. *albomaculatum* (Dipp.) Rehder. Based on Rehder’s treatments Hara (1954) must have referred var. *marmoratum* to a variegated form of subsp. *dissectum* which is known in cultivation.

1-2. f. **ambiguum** (Pax) Ohashi, comb. nov.

A. ambiguum Dippel, Handb. Laubh. **2**: 457 (1892), non Heer (1878), fide Rehder in J. Arn. Arb. **20**: 416–417 (1939).

A. pictum var. *ambiguum* Pax in Engler, Bot. Jahrb. **16**: 401 (1892), ut (Dippel) Pax.

A. pictum var. *paxii* Schwerin in Gartenfl. **42**: 458 (1893).

A. mono f. *ambiguum* (Pax) Rehder in J. Arn. Arb. **20**: 416 (1939); Ogata in Bull. Tokyo Univ. Forest. **60**: 13 (1965).

A. mono var. *ambiguum* (Pax) Rehder, Man. Cult. Tr. Shr. ed. 2, 570 (1940); Hara, Enum. Sp. Jap. **3**: 104 (1954); Ogata in J. Geob. **13**: 37 (1964); Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

A. mono subsp. *ambiguum* (Pax) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. **1**: 293 (1971)] ex Kitam. and Murata in Acta Phyt. Geob. **25**: 41 (1972).

A. truncatum var. *paxii* (Schwerin) E. Murray in Kalmia **1**: 41 (1969).

1-3. f. **pulvigerum** (Ogata) Ohashi, comb. nov.

A. mono var. *ambiguum* f. *pulvigerum* Ogata in J. Geob. **12**: 96 (1964) [Holotype: T. Sato 3823. TI]; in Bull. Tokyo Univ. Forest. **60**: 14 (1965); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

2. *A. pictum* subsp. **dissectum** (Wesmael) Ohashi, stat. nov.

A. pictum var. *dissectum* Wesmael in Bull. Soc. Bot. Belg. **29**: 56 (1890).

2-1. f. **dissectum**

A. pictum var. *eupictum* Pax in Engler, Bot. Jahrb. **7**: 236 (1886).

A. mono var. *dissectum* (Wesmael) Honda in Bot. Mag. Tokyo **46**: 371 (1932).

A. mono f. *dissectum* (Wesmael) Rehder, Bibl. Cult. Trees. Shr. 414 (1949); Hara, Enum. Sp. Jap. **3**: 106 (1954); Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 16 (1989).

A. mono var. *eupictum* f. *heterophyllum* Nakai in J. Jap. Bot. **25**: 133 (1950) [Holotype: T. Nakai Dec. 1948. TNS]; Hara, Enum. Sp. Jap. **3**: 106 (1954); Kitagawa, Ohwi Fl. Jap. 978. 1983.

A. mono var. *marmoratum* Hara, Enum. Sperm. Jap. **3**: 106 (1954), ut var. *marmoratum* (Nichols.)

Hara, p.p., *excl. typo*; Ogata in J. Geob. **13**: 36 (1964); Hatusima, Woody Pl. Jap. 287 (1976).

A. mono var. *marmoratum* f. *tashiroi* (Hisauichi) Hara, Enum. Sp. Jap. **3**: 107 (1954). Kitagawa, Ohwi Fl. Jap. 978 (1983).

A. mono subsp. *marmoratum* (Nichols.) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. **1**: 294 (1971)] *ex* Kitam. and Murata in Acta Phyt. Geob. **25**: 41 (1972).

A. mono var. *marmoratum* f. *marmoratum auct. non* Rehder: Ogata in Bull. Tokyo Univ. Forest. **60**: 7 (1965); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

2-2. f. *connivens* (Nichols.) Ohashi, comb. nov.

A. pictum var. *connivens* Nicholson in Gard. Chron. ser. 2, **16**: 375 (1881).

A. pictum var. *dissectum* subvar. *subtrifidum* Makino in Bot. Mag. Tokyo **18**: 114 (1904).

A. mono f. *connivens* (Nichols.) Rehd. in J. Arn. Arb. **19**: 81 (1938); Ogata in Bull. Tokyo Univ. Forest. **60**: 9 (1965), *ut* var. *marmoratum* f. *connivens*.

A. mono var. *connivens* f. *subtrifidum* (Makino) Rehd. Bibl. Cult. Trees Shr. 414 (1949); Hara, Enum. Sp. Jap. **3**: 105 (1954); Kitagawa, Ohwi Fl. Jap. 978 (1983).

A. mono var. *connivens* (Nichols.) Hara, Enum. Sp. Jap. **3**: 105 (1954); Ogata in J. Geob. **13**: 36 (1964); Kitam. in Kitam. and Murata, Col. Ill. Woody Pl. Jap. **1**: 294 (1971); Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

2-3. f. *piliferum* (Ogata) Ohashi, comb. nov.

A. mono var. *marmoratum* f. *piliferum* Ogata in J. Geob. **12**: 95 (1964) [Holotype: M. Furuse Aug. 11, 1931. TNS]; in Bull. Tokyo Univ. Forest. **60**: 9 (1965); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

2-4. f. *puberulum* (Ogata) Ohashi, comb. nov.

A. mono var. *connivens* f. *puberulum* Ogata in J. Geob. **12**: 95 (1964) [Holotype: S. Okuyama Jun. 17, 1943. TNS]; in Bull. Tokyo Univ. Forest. **60**: 10

(1965); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

3. *A. pictum* subsp. *glaucum* (Koidz.) Ohashi, comb. nov.

A. pictum var. *glaucum* Koidz., Rev. Acer. Jap. 64 (1911) [Holotype: S. Ishizuka 136. TI].

A. pictum var. *glaucum* subvar. *latilobum* Koidz., l.c. 64 (1911) [Holotype: G. Koidzumi s.n. Uzen: Azumayama. TI].

A. latilobum (Koidz.) Koidz. in Bot. Mag. Tokyo **30**: 328 (1916).

A. mono var. *glaucum* (Koidz.) Honda in Bot. Mag. Tokyo **11**: 373 (1932); Hara, Enum. Sp. Jap. **3**: 106 (1954); Ogata in J. Geob. **13**: 37 (1964); in Bull. Tokyo Univ. Forest. **60**: 10 (1965), *ut* var. *glaucum* (Koidz.) Sugimoto; Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. **2**: 17 (1989).

A. mono subsp. *glaucum* (Koidz.) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. **1**: 294 (1971)] *ex* Kitam. and Murata in Acta Phyt. Geob. **25**: 41 (1972); T.Z. Hsu in Guihaia **12**: 232 (1992), *sphalm. stat. nov.*

A. truncatum Bunge f. *glaucum* (Koidz.) E. Murray in Kalmia **1**: 7 (1969).

A. truncatum Bunge var. *latilobum* (Koidz.) E. Murray, l.c. 8 (1969).

Ogata (1964, 1965) adopted a combination made by Sugimoto (1928) in his private publication, Nippon Journal of Botany, for *A. mono* var. *glaucum*. Later, however, Honda et al. (1980) proposed to treat the Sugimoto's publication as an invalid publication. In this paper, therefor, I referred the author name for this variety as cited above.

4. *A. pictum* subsp. *mayrii* (Schwerin) Ohashi, comb. nov.

A. mayrii Schwerin in Mitt. Deuts. Dendr. Ges. **10**: 58 (1901); Rehder, Man. Cult. Tr. Shr. ed. 2, 570 (1940); Hara, Enum. Sp. Jap. **3**: 103 (1954).

A. pictum var. *mayrii* (Schwerin) Henry in Elwes et Henry, Tr. Gr. Brit. Irel. **3**: 662 (1908); Koidz., Fl.

Symb. Or.-Asia. 54 (1930), *sphalm. var. nov.*

A. mono var. *mayrii* (Schwerin) Murai, Fl. Cent. Iwate 63 (1935), *fide* Ogata (1965). Nemoto, Fl. Jap. Suppl. 451 (1936); Ohwi, Fl. Jap. 746 (1953), *ut* Koidz. ex Nemoto; l.c. ed. rev. 866 (1965), l.c. ed. Engl. 609 (1965); Ogata in J. Geob. 13: 37 (1964), *ut* Sugimoto; in Bull. Tokyo Univ. Forest. 60: 10 (1965); Kitagawa, Ohwi Fl. Jap. 978 (1983), *ut* Koidz. ex Nemoto; Shimizu in Wild Fl. Jap. Wood. 2: 17 (1989), *ut* Sugimoto.

A. mono subsp. *mayrii* (Schwerin) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. 1: 293 (1971)] ex Kitam. and Murata in Acta Phyt. Geob. 25: 41 (1972); Hatusima, Woody Pl. Jap. 287 (1976).

A. truncatum Bunge subsp. *mayrii* (Schwerin) E. Murray in Kalmia 1: 6 (1969).

Who made first the effective combination of *Acer mono* var. *mayrii*? Ogata (1965) referred the author of the combination to Sugimoto, but, as noted under subsp. *glaucum* his publication is thought to be invalid. The next combination, according to Ogata (1965), was made by Murai (1935) in his publication treated a local flora as cited above. Nemoto (1936) adopted this variety under *A. mono* as “var. *Mayri* Koidz. [ex Nakai, Veg. Apoi 59 (1930) – *A. pictum* var. *typicum* subv. *Mayrii* Koidz.]”. Ohwi (1953) referred the author of the variety as Koidz. ex Nemoto.

5. *A. pictum* subsp. **mono** (Maxim.) Ohashi, comb. nov.

var. *mono* (Maxim.) ex Franch., Pl. David. 1: 77 (1883).

5-1. f. **mono**

A. mono Maxim. in Bull. Phys.-Math. Acad. Sci. St. Petersburg. 15: 126 (1856).

A. laetum var. *parviflorum* Regel in Bull. Phy.-Math. Acad. Sci. St. Petersburg. 15: 219 (1857).

A. pictum var. γ Maxim. in Mel. Biol. 10: 600 (1880), *quod syn. A. mono* Maxim.

A. pictum var. *parviflorum* (Regel) Schneider, Ill. Handb. Laubh. 2: 225 (1907).

A. mono var. *glabrum* (Lév. et Vaniot) Hara, Enum. Sp. Jap. 3: 105 (1954); Ogata in J. Geob. 13: 36 (1964); Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild. Fl. Jap. Wood. 2: 17 (1989).

A. mono var. *glabrum* f. *acutissimum* (Nakai) Hara, Enum. Sp. Jap. 3: 105 (1954); Kitagawa, Ohwi Fl. Jap. 978 (1983).

A. mono var. *acutissimum* Nakai in Bot. Mag. Tokyo 45: 127 (1931) [Holotype: T. Nakai s.n., Aug. 1928, in monte Apoi prov. Hidaka. TI].

A. mono var. *glabrum* f. *glabrum*: Ogata in Bull. Tokyo Univ. Forest. 60: 6 (1965).

A. mono subsp. *mono*: Kitam. in Kitam. and Murata, Col. Ill. Woody Pl. Jap. 1: 293 (1971).

A. truncatum Bunge subsp. *mono* (Maxim.) E. Murray in Kalmia 1: 7 (1969).

A. cappadocicum Gled. subsp. *mono* (Maxim.) E. Murray in Kalmia 12: 17 (1982).

A. pictum var. *savatieri* Pax in Engler, Bot. Jahrb. 7: 236 (1886); p.p., *incl. specim. cit.* Yezo: Hakodate (Maxim., Wilford), *cet excl.*

A. mono subsp. *glabrum* (Lévl. and Vaniot) T.Z. Hsu in Guihaia 12: 231 (1992).

5-2. f. **magnificum** (Hara) Ohashi

A. mono var. *magnificum* Hara in Bot. Mag. Tokyo 50: 247 (1936) [Holotype: H. Hara C. 4005c. TI].

A. mono var. *latialatum* Hara in Bot. Mag. Tokyo 50: 248 (1936) [Holotype: H. Hara 3154b. TI].

A. mono var. *glabrum* f. *magnificum* (Hara) Hara, Enum. Sp. Jap. 3: 106 (1954); Ogata in Bull. Tokyo Univ. Forest. 60: 7 (1965); Kitagawa, Ohwi Fl. Jap. 978 (1983).

A. mono var. *glabrum* f. *latialatum* (Hara) Hara, Enum. Sp. Jap. 3: 106 (1954); Kitagawa, Ohwi Fl. Jap. 987 (1983).

6. *A. pictum* subsp. *savatieri* (Pax) Ohashi, comb. nov.

A. pictum var. *savatieri* Pax in Engler, Bot. Jahrb. 7: 236 (1886), p. maj. p., *excl. specim. cit.* Yezo:

Hakodate (Maxim., Wilford).

A. mono var. *savatieri* (Pax) Nakai, Rep. Veg. Koryo 45 (1932) (fide Hara 1954), p.p.; Hara, Enum. Sp. Jap. 3: 107 (1954), p.p.; Ogata in J. Geob. 13: 37 (1964); Hatusima, Woody Pl. Jap. 287 (1976), p.p.; Kitagawa, Ohwi Fl. Jap. 978 (1983).

A. mono var. *trichobasis* Nakai in J. Jap. Bot. 18: 611 (1942). [Holotype: J. Matsumura s.n. in Nikko. TI]; Ogata in J. Geob. 13: 16 (1964); in Bull. Tokyo Univ. Forest. 60: 12 (1965); Shimizu in Wild Fl. Jap. Wood. 2: 17 (1989).

A. mono subsp. *savatieri* (Pax) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. 1: 293 (1971)] ex Kitam. and Murata in Acta Phyt. Geob. 25: 41 (1972).

A. truncatum subsp. *savatieri* (Pax) E. Murray in Kalmia 1: 41 (1969).

A. cappadocicum subsp. *savatieri* (Pax) E. Murray, l.c. 12: 17 (1982).

A. mono subsp. *trichobasis* (Nakai) T.Z. Hsu in Guihaia 12: 232 (1992).

7. *A. pictum* subsp. *taishakuense* (Ogata) Ohashi, comb. nov.

A. mono Maxim. var. *taishakuense* Ogata in J. Geob. 12: 94 (1964) [Holotype: K. Ogata 7483-g. TOFO]; in Bull. Tokyo Univ. Forest. 60: 10 (1965); Hatusima, Woody Pl. Jap. 287 (1976); Kitagawa, Ohwi Fl. Jap. 978 (1983); Shimizu in Wild Fl. Jap. Wood. 2: 17 (1989).

A. mono subsp. *taishakuense* (Ogata) Kitam. [in Kitam. and Murata, Col. Ill. Woody Pl. Jap. 1: 294 (1971)] ex Kitam. and Murata in Acta Phyt. Geob. 25: 42 (1972).

II. Chinese taxa

8. *A. pictum* subsp. *incurvatum* (Fang et P.L. Chiu) Ohashi, comb. nov.

A. mono var. *incurvatum* Fang et P.L. Chiu in Acta Phytotax. Sin. 17: 62 (1979); W.P. Fang in Fl. Rep. Pop. Sin. 46: 96 (1981).

A. mono subsp. *incurvatum* (Fang et P.L. Chiu) T.Z. Hsu in Guihaia 12: 232 (1992).

9. *A. pictum* subsp. *macropterum* (Fang) Ohashi, comb. nov.

A. mono var. *macropterum* Fang in Acta Phytotax. Sin. 17: 62 (1979); W.P. Fang in Fl. Rep. Pop. Sin. 46: 97 (1981).

10. *A. pictum* subsp. *minshanicum* (Fang) Ohashi, comb. nov.

A. mono var. *minshanicum* Fang in Acta Phytotax. Sin. 17: 63 (1979); W.P. Fang in Fl. Rep. Pop. Sin. 46: 97 (1981).

11. *A. pictum* subsp. *tricuspis* (Rehd.) Ohashi, comb. nov.

A. bodinieri Lévl. in Repert. Sp. Nov. 10: 433 (1913).

A. pictum var. *parviflorum* Schneid. f. *tricuspis* Rehd. in Mitteil. Deutsch. Dendr. Ges. 22: 258 (1913).

A. mono var. *tricuspis* (Rehd.) Rehd. in J. Arn. Arb. 19: 82 (1938); W.P. Fang in Fl. Rep. Pop. Sin. 46: 97 (1981).

A. mono f. *tricuspis* (Rehd.) Fang in Cont. Biol. Lab. Sci. Soc. China, Bot. ser. 11: 34 (1939).

A. mono subsp. *tricuspis* (Rehd.) T.Z. Hsu in Guihaia 12: 232 (1992).

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要 旨

イタヤカエデの種名には *Acer mono* Maxim. が使われている。しかし、この学名は *A. pictum* Thunb. ex Murray の異名であることが明らかになった。これまでは、*A. pictum* Thunb. には先行同名があるとされていたため、イタヤカエデの最も早く発表された種名でありながら、この学名を使うことができず、*A. mono* が使われていた。この論文では、1) *A. pictum* Thunberg ex Murray は後続同名 later homonym ではないことを明らかにし、2) *A. mono* の種内分類群の学名を、*A. pictum* の下で整理した。

カエデ属の中で、イタヤカエデは最も詳しく研究されてきた種の1つであり、多くの変種や品種が記載されている。原 (1954) は、日本産の種内分類群を整理し、学名を正した。また、アカイタヤを別種として扱った。緒方 (1964, 1965) はアカイタヤを含むイタヤカエデの日本における分化と分布とを詳しく解明した。今日でも、日本のイタヤカエデについての分類学的な扱いは、基本的に緒方の研究結果に基づいている。中国の種については W. P. Fang (1939, 1981) の研究がある。

本論文では、日本産のイタヤカエデ種内分類群の範囲は緒方の見解に、中国産のものについては Fang の見解に従った。しかし、分類群のランクについての認識が異なるため、学名の扱いは異なるものとなった。緒方 (1964, 1965) が明記しているように、彼がイタヤカエデの変種と認めた分類群は形態ばかりではなく、分布も異なっている。

この点で、緒方はこれらの変種それぞれを種と考えることも可能であるとしている。ところが、緒方の変種を種として認めるとすれば、それらの種は、Pax(1902), Schneider (1907), Fang (1981)などの文献をみると、これまで認められている *Platanioideae* 節の種に比べて、非常に小さく範囲づけられる種となってしまうと思う。そのため、私も、北村(1972)のように、緒方(1965)の変種は亜種として扱うことがよいと考える。中国の変種についても同様に扱った。しかし、中国と朝鮮におけるイタヤカエデの変異については今後の研究が必要である。

イタヤカエデの日本に野生する種内分類群についての分類学上の扱いと学名の変遷を原(1954)以後の主な見解について表1にまとめた。便宜上、私の見解には学名の著者名と和名をつけた。また、イタヤカエデの名を種名である *A. pictum* の和名として用いた。これは総称名である(和名については注1で述べる)。

次に、*Acer pictum* Thunberg ex Murray が正名であることについて解説したし、1931年に中井はそれまでイタヤカエデに対して使われていた学名 *A. pictum* Thunberg (1784) は、すでに1年前にハリギリに使われていたこと、そのためにイタヤカエデには *A. mono* Maxim. を用いるべきことを発表した。1935年には本誌11巻にこの考えを詳しく解説した。最近では原(1986)が中井の見解を支持し、Thunberg が最初に発表した *A. pictum* はハリギリであることの原因を詳しく解説した。しかし、中井、原両先生の見解は間違っている。両先生の見解の根拠は *Kaempferus Illustratus II* は1783年に発表されたもので、*Flora Japonica* よりも早く出版されたとすることにある。しかし、同論文は1784年8月に出版された *Flora Japonica* よりも遅く出版されたことが明らかにされている。すでに小泉(1925)は同論文が1784年出版であるとして扱い、Stafleu (1967) や Stafleu and Cowan (1979) にも1784年と明記されている。Wijnands (1990a) はさらに詳しく調査し、*Kaempferus Illustratus II* を含む *Nova Acta Reg. Soc. Scient. Upsal.* の第4巻は1784年10月以後または1785年に出版されたとした。

Kaempferus Illustratus II は *Flora Japonica* より遅く出版されたことから、イタヤカエデもハリギリも *Flora Japonica* の原稿を引用した Murray の *Systema Vegetabilium* ed. 14 で、正式に発表されたことになる(注2)。タイプ標本は、*A. septemlobum* が UPS-THUNB 24085 であり、*A. pictum* は UPS-THUNB 24084 である。

注1) イタヤカエデは、*Acer pictum* または *A. mono* の一形に対する和名として用いられることもある。例えば、原(1954)は *A. mono* f. *heterophyllum* Nakai, 清水(1989)は *A. mono* f. *dissectum* (Wesmael) Rehder に対してイタヤカエデを用いている。緒方(1964)は、イタヤカエデという名は、*A. mono* の総称名と複数の種内分類群(「地方ごとにそこに生育する変種をそれぞれ指し……」北陸の植物12:96)とに用いられていて混乱しているという理由で、var. *marmoratum* f. *marmoratum* をエンコウカエデと呼び、イタヤカエデという和名を使用しなかった。*Acer mono* に対してはイタヤカエデ類とした。私はイタヤカエデという和名を *A. pictum* という種名に対応させる総称名として用い、この種に含まれる種内分類群にはイタヤカエデの名を使わないよう提案したい。*A. pictum* イタヤカエデの種内分類群の学名に対応する和名の全部を表1にまとめた。

和名の命名法にはタイプの概念がないので、和名と学名を対応させにくい。一方、和名にも種類の体系を示す序列があり、イタヤカエデがあって、その中の一形がオニヤタ、さらにオニヤタの中の一形がファイリオニヤタとなる。これは種-亜種-変種とする学名のランクに似た序列である。しかし、タイプ法を和名の命名法に適用すれば、学名ではファイリオニヤタがタイプなので、イタヤカエデ全体をファイリオニヤタと呼ばねばならない。ファイリオニヤタの一形にオニヤタがあるかたちになってしまう。これでは和名の序列に反する。そこで、実体が同じならば同じ和名を使うこととする。そうすると、subsp. *pictum* の和名をオニヤタ、var. *pictum* もオニヤタとする。ただし、f. *pictum* はファイリオニヤタとする。オニヤタは f. *ambiguum* とした。

注2) 1990年に学名の著者名について現行の国際植物命名規約に基づく表記方法を解説し(大橋1990, 植物研究雑誌 65: 248-256), 251ページでMurray, *Systema Vegetabilium* ed. 14がThunbergの*Flora Japonica*よりも早く出版されたとされていることを紹介した。これはStaffeu (1967)が

最初に気付いたと考えて、彼の著書を引用した。しかし、中井(1931)がすでにこの点を明らかにしていて、“*Acer pictum* Thunberg Jap. mspt ex Murray, *Syst. Veg.* ed. 14, p. 912 (1784) – Thunberg, *Fl. Jap.* p. 162 (ex errore typographicae 161) (1784)”という形で発表していた。