

The Lectotypification of *Prunus jamasakura* and Allied Native Species of *Cerasus* sect. *Sargentiella* in Japan (Rosaceae—Prunoideae)

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Abstract The names of *Prunus fimbriisepala* Nakai, *P. fimbriisepala* Nakai var. *grandiflora* Nakai, *P. idzuensis* Nakai, *P. jamasakura* Siebold ex Koidz., *P. jamasakura* Siebold ex Koidz. [unranked] *α. elegans* Koidz. [unranked] *c. compta* Koidz., *P. jamasakura* Siebold ex Koidz. [unranked] *β. speciosa* Koidz., *P. occultans* Nakai, *P. pseudocerasus* Lindl. var. *β. borealis* Makino, *P. pseudocerasus* Lindl. [var.] *α. spontanea* Maxim., *P. pseudocerasus* Lindl. var. *α. jamasakura* (Siebold) Makino subvar. *b. pubescens* Makino, *P. pseudocerasus* Lindl. [var.] *α. spontanea* Maxim. subvar. *humilis* Makino, *P. rotundipetala* Nakai, *P. verecunda* (Koidz.) Koehne var. *intermedia* Nakai are lectotypified. Two new combinations, *Cerasus jamasakura* Siebold ex Koidz. f. *pendula* (Sugim.) H. Ohba & S. Akiyama and *C. jamasakura* Siebold ex Koidz. f. *purpureorubra* (T. Kawasaki) H. Ohba & S. Akiyama, are proposed. Nomenclatorial notes to explain the lectotypification are presented.

Key words : *Cerasus*, *Jamasakura*, Japanese cherry, lectotypification, *Prunus*, Yama-zakura.

The Japanese native species of cherry, genus *Cerasus* sect. *Sargentiella* (sensu Kawasaki, 1991) were studied by many workers since pre-Linnean times (Kæmpfer, 1712). Siebold (1830) listed three species of *Cerasus* under the genus *Prunus*: *P. donarium* with the Japanese name ‘Sakura,’ *P. jamasakura*, and *P. itosakura* with the Japanese name ‘Itosakura’. The first two now belong to *Cerasus* sect. *Sargentiella* and the last one to sect. *Microcalymma* (Kawasaki, 1991). *Prunus itosakura* was accompanied by a short description, but *P. donarium* and *P. jamasakura* had no botanical descriptions, diagnoses, illustrations, or references.

Lindley (1825) described *P. pseudocerasus* based on an imported cherry from China. Siebold and Zuccarini (1845, p. 123) adopted the name to

the species concerned here and recognized two varieties, *α. floribus simplicibus* ... and *β. floribus plenis maximis albis* ... Maximowicz (1883) recognized *P. pseudocerasus* Lindl. with three varieties, *α. spontanea* (syn.: *P. jamasakura* Siebold), *β. hortensis* (syn.: *P. donarium* Siebold), and *γ. sieboldii*.

Makino (1908) published varieties *α. Jamasakura* (Siebold) Makino, *β. borealis* Makino, *γ. serrulata* (Lindl.) Makino, and four subvarieties under *P. pseudocerasus* Lindl. For var. *α. jamasakura* subvar. *a. glabra*, Makino prepared a detailed description over three pages long and a note on miscellaneous matters.

Koidzumi (1911) regarded *P. jamasakura* Siebold [nom. nud.] as a species consisting of four infraspecific taxa, i.e. [unranked] *α. elegans* Koidz. (with [unranked] *a. glabra* Koidz. including f. *hortensis* Koidz., [unranked] *b. pubescens*

Koidz., [unranked] *c. compta* Koidz., and [unranked] *d. parvifolia* Koidz.), [unranked] *β. speciosa* Koidz. (with var. *nobilis* Koidz. including [unranked] *1. serrulata* Koidz. and [unranked] *2. donarium* Koidz.), [unranked] *γ. borealis* Koidz. (with f. *hortensis* Koidz.), and [unranked] *δ. verecunda* Koidz. (Table 1). He cited *P. pseudocerasus* in the synonymy of *P. jamasakura* as 'non Lindl.' He also cited Makino's treatment in 1908, i.e. *P. pseudocerasus* var. *α. jamasakura* [as 'jamasakura'] subvar. *α. glabra*, in the synonymy of *α. elegans* a. *glabra*. Koidzumi's [unranked] *α. elegans* [unranked] a. *glabra* is recognized as [unranked] *jamasakura* [unranked] *jamasakura* under the present *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code)* (Turland *et al.*, 2018).

Koidzumi (1913) revised all species including varieties and subvarieties then known from Japan. Though he adopted *P. donarium* Siebold (nom. nud.) instead of *P. jamasakura* Siebold, his taxonomic scheme contributed much to the delimitation of Japanese *Cerasus* (under *Prunus*) *jamasakura* and allied species, i.e. *Cerasus jamasakura*, *C. leveilleana*, *C. speciosa*, and *C. sargentii*.

Wilson (1916) adopted *P. serrulata* Lindl. as the specific name and included the present *C. jamasakura*, *C. leveilleana*, and *S. sargentii*; those species were treated as varieties *spontanea* (Maxim.) E.H. Wilson, *pubescens* (Makino) E.H. Wilson, and *sachalinensis* (F. Schmidt) E.H. Wilson, respectively. He considered *Cerasus speciosa* to be a form of *P. lannesiana* (Carrière) E.H. Wilson, i.e. f. *albida* (Makino) E.H. Wilson. Ingram (1925, 29) recognized *Cerasus* (as *Prunus*) *sargentii* and *P. speciosa* as species independent from *C. jamasakura* (as *P. mutabilis* Miyoshi), but for *C. leveilleana* he refrained from deciding its taxonomic status, owing to the uncertainty of the identity and variation. For *C. speciosa*, Kuitert (1999) informally regarded it as the variety of *P. serrulata*.

The treatment recognizing four species in the Japanese sect. *Sargentella* have been widely

accepted in both national and regional floras of Japan (e.g. Hara, 1950; Ohwi, 1953, 1965; Ohba 1989, 2001).

Nomenclature and typification of *Prunus jamasakura* Siebold

When Siebold (1830) published *Prunus jamasakura* and *P. donarium*, he gave no descriptions, diagnoses, illustrations, or references, and cited no voucher specimens. They were nomenclatorially invalid names.

When Maximowicz (1883) proposed *P. pseudocerasus* Lindl. [var.] *α. spontanea*, he wrote: 'glabra, flores 25 mm. diametro' against 'glabra, flores diam. 30 mm vel ultra, folia solito grandius paucisque serrata' for *β. hortensis*, and 'juventute villosa tum glabrata, ceterum ut in *β.*' for *γ. sieboldi*. These sentences are apparently diagnoses to distinguish these varieties and are regarded as valid and effective publication according to the present code of nomenclature (see *ICN Art. 38.1*; infraspecific taxa). Although Maximowicz cited no specimens of *α. spontanea*, he cited *P. jamasakura* Siebold (nom. nud.) in the synonymy. Therefore, the original material of *P. jamasakura* Siebold is considered to be the original material of *P. pseudocerasus* Lindl. [var.] *α. spontanea*. Four specimens were recognized as original material of *P. jamasakura* (Akiyama *et al.*, 2014). Two of them are deposited in L, and the other two, kept by Siebold himself, are now in MAK. Although there is no evidence on the two specimens at L that they were examined by Maximowicz, Maximowicz's annotations are on some specimens in L (see e.g. *Rhododendron macrosepalum* Maxim., L0367358). It is therefore reasonable to consider that Maximowicz was able to examine these four specimens. One of them, L0834829 in L, is suitable for the lectotype because it was collected by Siebold and named by him 'Jama Sakura [meaning 'wild cherry' in Japanese].' Here we designate this specimen, L0834829 (L), as the lectotype of *P. pseudocerasus* var. *spontanea* Maxim.

Makino (1908) published the new combination *P. pseudocerasus* Lindl. var. *jamasakura*

Table 1. Intraspecific taxa of *Prunus jamasakura* Siebold ex Koidz. published by Koidzumi (1911)

Intraspecific taxon 1 ¹⁾	Intraspecific taxon 2 ²⁾	Variety	Forma	intraspecific taxa 3 ³⁾	Japanese name	Present treatment under <i>Cerasus</i>	Present Japanese name
<i>α. elegans</i> Koidz.	<i>a. glabra</i> (Makino) Koidz.				Yamasakura	<i>jamasakura</i> (Siebold ex Koidz.) H. Ohba	Yama-zakura
	<i>b. pubescens</i> (Makino) Koidz.		<i>hortensis</i> (Maxim.) Koidz. ⁴⁾		Satosakura		
		<i>c. compta</i> Koidz.				Okuyamasakura	<i>leveilleana</i> (Koehne) H. Ohba
	<i>β. speciosa</i> Koidz.			<i>hortensis</i> (Maxim.) Koidz. ⁴⁾		Akatsuki-sakura	× <i>compta</i> (Koidz.) H. Ohba
<i>d. parvifolia</i> (Matsum.) Koidz. ⁵⁾					Satosakura		
						Kohasakura	
						Ohyamasakura	<i>speciosa</i> (Koidz.) H. Ohba
<i>γ. borealis</i> (Makino) Koidz.					Sato-sakura		
			<i>nobilis</i> Koidz.				
				1. <i>serrulata</i> Koidz. 2. <i>donarium</i> Koidz.			
					Akebonosakura	<i>sargentii</i> (Rehder) H. Ohba	Oyama-zakura
<i>δ. verecunda</i> Koidz.							
			<i>hortensis</i> Koidz. ⁴⁾		Kasumisakura	<i>leveilleana</i> (Koehne) H. Ohba	Kasumi-zakura

1) Intraspecific taxon 1 is nomenclatorially unranked, but it is higher than infraspecific taxon 2 and variety.

2) Intraspecific taxon 2 is nomenclatorially unranked. It is uncertain whether it is higher than variety or not.

3) Intraspecific taxon 3 is nomenclatorially unranked. It is lower than variety. It is uncertain whether it is higher than form or not.

4) The identity of *f. hortensis* will be treated in the coming paper.

5) This is a horticultural taxon.

(Siebold) Makino with two subvarieties, a. *glabra* Makino and b. *pubescens* Makino. In the treatment Makino gave the synonymy and description for var. *jamasakura* subvar. *glabra* but not for var. *jamasakura*. As was the custom in those days, subvar. *glabra* is regarded as subvar. *jamasakura* according to the present *ICN* (Turland *et al.*, 2018; Art. 26.1). The name of any infraspecific taxon that includes the type of the adopted, legitimate name of the species to which it is assigned is to repeat the specific epithet unaltered as its final epithet, not followed by an author citation (see *ICN* Art. 26.1). Such names are autonyms (see *ICN* Art. 6.8 and also Art. 7.7). Though Makino's description of subvar. *glabra* (\equiv subvar. *jamasakura*) explains the features of *Cerasus* (*Prunus*) *jamasakura* (\equiv *P. pseudocerasus* Lindl. var. *jamasakura*) well, his var. *jamasakura* is evidently a superfluous name for *P. pseudocerasus* [var.] *α. spontanea* Maxim., because Makino cited *P. pseudocerasus* var. *spontanea* Maxim. in the synonymy of var. *jamasakura* subvar. a. *glabra* (\equiv subvar. *jamasakura*) (see *ICN* Art. 52.1).

Koidzumi (1911) recognized *P. jamasakura* Siebold as a species distinct from *P. pseudocerasus* Lindl. As mentioned above *P. jamasakura* was a *nomen nudum* published by Siebold. Koidzumi defined it as 'Arbor glaber rarius pubescens. Folia elliptica subito acuminata, argute setaceo-serrulata. Petioli plerumque versus apicem glandulis duobus. Flores coetanei rarissime subprecociores, corymbosi vel fasciculati. Stylus glaber.' *Prunus jamasakura* Siebold ex Koidz. is a validly published legitimate species name, however Koidzumi did not designate a type. Since Koidzumi cited *P. pseudocerasus* var. *spontanea* Maxim. in the synonymy, it is reasonable to select the type of *P. pseudocerasus* var. *spontanea* as the lectotype of *P. jamasakura* Siebold ex Koidz. Here we designate the lectotype specimen of *P. pseudocerasus* var. *spontanea*, L0834829 (L), as the lectotype of *P. jamasakura* (see *ICN* Art. 7.9 and also 52.1).

Prunus jamasakura [unranked] *α. elegans* Koidz. [unranked] a. *glabra* Koidz. is regarded

as *P. jamasakura* [unranked] *jamasakura* [unranked] *jamasakura* in the present code of *ICN*. Koidzumi's three additional infraspecific taxa, [unranked] β , [unranked] γ , and [unranked] δ (Koidzumi, 1911), are also regarded as naturally occurring, having distinguishing characteristics and distinct ranges of distribution (Ohba, 2001). Lectotypes for these three names with synonyms (native in Japan) are proposed in this paper. We use 'original material' for specimens that we consider to have been the basis for *nomen nuda*. There still remains problems for the treatment of horticultural taxa, so the treatment of those will be discussed on a coming paper.

Taxonomic treatment of the native species in Japan

1) ***Cerasus jamasakura*** (Siebold ex Koidz.) H. Ohba in *J. Jap. Bot.* 67: 278 (1992).

Prunus jamasakura Siebold [Syn. Pl. Oeconom. 68 (1830), nom. nud.] ex Koidz. in *Bot. Mag.* (Tokyo) 25: 184 (1911). Type: Japan (Japonia). Siebold s.n. (L0834829, L-lectotype, designated here). Additional original material was cited in Akiyama *et al.* (2014). [Fig. 1]

Prunus pseudocerasus Lindl. [var.] *α. floribus simplicibus ...* Siebold & Zucc. in *Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss.* 4(2): 123 (1845), pro parte. Type: Original material was not found in L, M, MAK.

Prunus pseudocerasus Lindl. [var.] *α. spontanea* Maxim. in *Bull. Acad. Imp. Sci. St.-Petersbourg* 29: 102 (1883). Type: Japan (Japonia). Siebold s.n. (L0834829, L-lectotype, designated here).

Prunus pseudocerasus Lindl. var. *α. jamasakura* Makino in *Bot. Mag.* (Tokyo) 22: 93 (1908), as 'var. *α. jamasakura* (Siebold ex Koidz.) Makino subvar. a. *glabra* Makino', nom. illegit. (nom. superfl. for *P. pseudocerasus* Lindl. [var.] *α. spontanea* Maxim.). Type: Japan. (T. Makino s.n., holotype, not found in MAK, or TI).

Prunus pseudocerasus Lindl. var. *α. jamasakura* Makino subvar. a. *glabra* Makino in *Bot. Mag.* (Tokyo) 22: 93 (1908), nom. illegit. (nom. superfl. for *P. pseudocerasus* Lindl. var. *jama-*

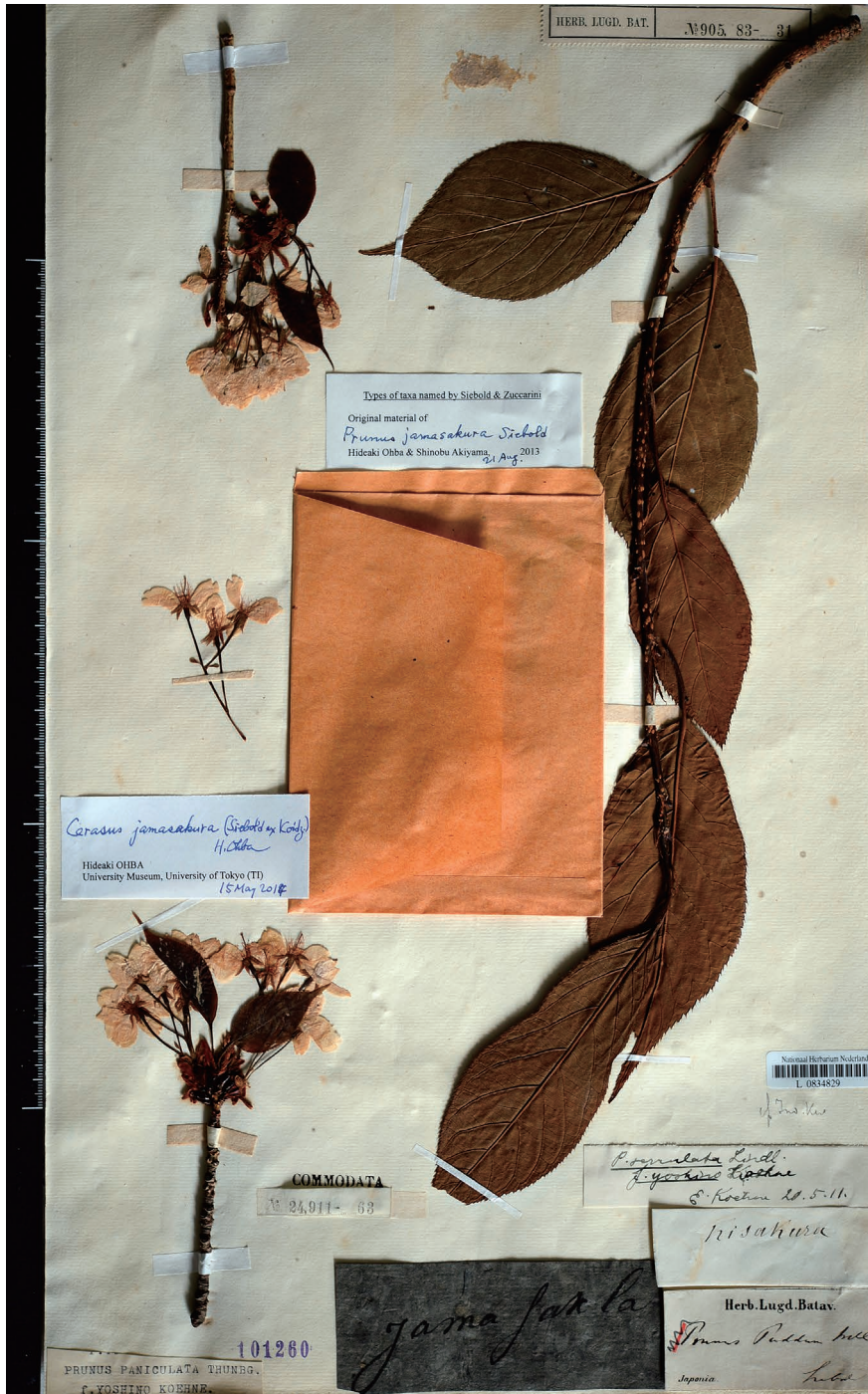


Fig. 1. Lectotype of *Prunus jamasakura* Siebold ex Koidz. (Siebold s.n., L0834829).

sakura Makino subvar. *jamasakura*). [Japanese name: Yama-zakura].

Prunus jamasakura Siebold ex Koidz.

[unranked] *α. elegans* Koidz. in Bot. Mag. (Tokyo) 25: 184 (1911), nom. illegit. (nom. superfl. for *P. jamasakura* Siebold ex Koidz.

[unranked] *jamasakura*).

Prunus jamasakura Siebold ex Koidz. [unranked] *α. elegans* Koidz. [unranked] *a. glabra* (Makino) Koidz. in Bot. Mag. (Tokyo) 25: 185 (1911), nom. illegit. (nom. superfl. for *Prunus jamasakura* Siebold ex Koidz. [unranked] *jamasakura*). [Japanese name: Yamasakura].

Prunus donarium Siebold ex Koidz. in Bot. Mag. (Tokyo) 25: 259 (1911), nom. illegit. (nom. superfl. for *P. jamasakura* Siebold ex Koidz.). [Japanese name: Yamasakura, Satosakura].

Prunus donarium Siebold ex Koidz. subsp. *elegans* (Koidz.) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 266 (1913), nom. illegit. (nom. superfl. for *P. donarium* Siebold ex Koidz. subsp. *donarium*).

Prunus donarium Siebold ex Koidz. subsp. *elegans* (Koidz.) Koidz. var. *a. glabra* (Makino) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 266 (1913), nom. illegit. (nom. superfl. for *P. donarium* Siebold ex Koidz. subsp. *donarium* var. *donarium*). [Japanese name: Yamasakura].

Prunus serrulata Lindl. var. *spontanea* (Maxim.) E. H. Wilson, Cherries Japan: 28 (1916).

Prunus mutabilis Miyoshi in J. Coll. Sci. Imp. Univ. Tokyo 34(1): 35 (1916), with a description and references to *P. cerasus* β. Thunb., *P. jamasakura* Siebold, *P. pseudocerasus* Lindl. *α.* Siebold & Zucc., *P. puddum* Wall., *P. pseudo-cerasus* Lindl. [var.] *α. spontanea* Maxim., etc. Type: Original material was not found in TI. [Japanese name: Shiro-yamazakura].

Prunus serrulata Lindl. var. *tokugawana* Makino in J. Jap. Bot. 1: (106) (1917). Type: Original material was not found in MAK or TI. [Japanese name: Kewai-zakura].

Prunus heteroflora Miyoshi in Bot. Mag. (Tokyo) 36: 8 (1922). Type: Japan. Honshu. Gifu Pref.: Ibi, Prov. Mino (unknown collector, TI-holotype, not found). [Japanese name: Nido-sakura].

Prunus serrulata Lindl. var. *spontanea* (Maxim.) Makino f. *tokugawana* (Makino) Makino in J. Jap. Bot. 5: 12 (1928). [Japanese

name: Kewai-zakura].

Prunus superflua Koidz. in Acta Phytotax. Geobot. 1: 175 (1932). Type: Japan. Kyushu [Kyusiu]. Fukuoka Pref.: Prov. Chikuzen, Asakuragun oppidulum Akitsukimachi (G. Koidzumi, 17 May 1932, fol., KYO-lectotype, designated here); ibid. (Y. Nabeshima, 15 Apr. 1932, fl., KYO-syntype). [Japanese name: Nagabayamasacra].

Cerasus donarium (Siebold ex Koidz.) Masam. & Shig. Suzuki in J. Taihoku Soc. Agr. For. 1: 316 (1936).

Cerasus superflua (Koidz.) Masam. & Shig. Suzuki in J. Taihoku Soc. Agr. For. 1: 318 (1936). [Japanese name: Nagaba-yamazakura].

Prunus paramutabilis Nakai, Iconogr. Pl. As. Orient. 4(4): 426, t. 135 (1949), as 'var. *typica* Nakai.' Type: Japan. Chiba Pref.: In montibus Sanakura urbis Tateyama (T. Nakai & N. Maruyama, 8 Apr. 1949, TNS80111-holotype; TNS80112–80115-isotypes). [Japanese name: Otohime-zakura]. [Fig. 2]



Fig. 2. Holotype of *Prunus paramutabilis* Nakai (T. Nakai & N. Maruyama, 8 Apr. 1949, TNS80111).



Fig. 3. Lectotype of *Prunus rotundipetala* Nakai (T. Nakai & N. Maruyama, 7 Apr. 1949, TNS80085).

Prunus paramutabilis Nakai var. *dentisepala* Nakai, Iconogr. Pl. As. Orient. 4(4): 427 (1949). Type: Original material not found in TNS. [Japanese name: Anehime-zakura].

Prunus rotundipetala Nakai, Iconogr. Pl. As. Orient. 4(4): 424, t. 134 (1949). Type: Japan. Chiba Pref.: [Awa-gun, Banda.] In collibus littoralibus cum *Castanopsis cuspidata*, *Machilus thunbergii*, *Camellia japonica* etc crescit. (T. Nakai & N. Maruyama, 7 Apr. 1949, TNS80085-lectotype, designated here; TNS80084-isolectotype). [Japanese name: Fubuki-zakura]. [Fig. 3]

Prunus mutabilis Miyoshi var. *dilatata* Nakai in Bull. Natl. Sci. Mus., Tokyo 29: 95 (1950). Type: Japan. Aichi Pref.: Prov. Mikawa: in silvis prefecturalibus oppidi Hôraizi tractus Minami-Sidara (K. Torii, 30 Oct. 1949, TNS81083-holotype). [Japanese name: Maruba-Yamazakura].

Prunus toriwii Nakai in Bull. Natl. Sci. Mus., Tokyo no. 33, 14 (1953). Type: Japan. Aichi Pref.: Prov. Mikawa, Ohtudani oppidi Hôraiji tractus Minami-Sidara (K. Toriwi, 15 Apr. 1951,

TNS86156-holotype, 86155 and 109403-isotypes). [Japanese name: Maruba-Yamazakura].

Prunus jamasakura Siebold ex Koidz. f. *dilatata* (Nakai) Sugim. in Hokuriku J. Bot. 6: 50 (1957). [Japanese name: Maruba-yama-zakura].

Prunus jamasakura Siebold ex Koidz. f. *paramutabilis* (Nakai) Sugim. in Hokuriku J. Bot. 6: 50 (1957). [Japanese name: Otohime-zakura].

Prunus jamasakura Siebold ex Koidz. f. *superflua* (Koidz.) Sugim. in Hokuriku J. Bot. 6: 50 (1957). [Japanese name: Nagaba-yama-zakura].

Prunus jamasakura Siebold ex Koidz. var. *superflua* (Koidz.) Ohwi in J. Jap. Bot. 33: 212 (1958). [Japanese name: Nagaba-yama-zakura].

Prunus jamasakura Siebold ex Koidz. f. *dentisepala* (Nakai) Sugim., New Keys Jap. Tr.: 214 (1961), comb. nud. [Japanese name: Anehime-zakura].

Prunus jamasakura Siebold ex Koidz. f. *rotundipetala* (Nakai) Sugim., New Keys Jap. Tr.: 214 (1961), comb. nud., as 'f. *rotundipetala* Sugim.' [Japanese name: Fubuki-zakura].

Prunus jamasakura Siebold ex Koidz. var. *dilatata* (Nakai) Nakai ex Sugim., New Keys Jap. Tr.: 215 (1961), comb. nud., as 'var. *dilatata* Nakai.' [Japanese name: Maruba-yama-zakura].

Prunus pseudocerasus auct. non Lindl.: A. Gray, Narrat. Exped. Jap. Perry, U. S. Navy 2: 310 (1857); in Mem. Amer. Acad. Arts, n.s. 6: 386 (1859). Franch. & Sav., Enum. Pl. Jap. 1: 117 (1873).

Prunus puddum auct. non Wall.: Miq., Ann. Mus. Bot. Lugduno-Batavo 2: 90 (1865); 199 (1866).

Japanese name: **Yama-zakura** (Makino, 1908).

1b) ***Cerasus jamasakura*** Siebold ex Koidz. f. ***pendula*** (Sugim.) H. Ohba & S. Akiyama, comb. nov.

Prunus jamasakura Siebold ex Koidz. f. *pendula* Sugim., New Keys Jap. Tr.: 214, 467 (1961). Type: Japan. Honshu. Shizuoka Pref.: Prov. Suruga, Shizuoka, Cult. (J. Sugimoto s.n., holotype, not found in MAK, TI, TNS, or KYO).

[Japanese name: Shidare-yama-zakura].

Japanese name: **Shidare-yama-zakura** (Sugimoto, 1961).

1c) **Cerasus jamasakura** Siebold ex Koidz. f. **purpureorubra** (T. Kawasaki) H. Ohba & S. Akiyama, comb. nov.

Prunus jamasakura Siebold ex Koidz. f. *purpureorubra* T. Kawasaki in J. Jap. Bot. 36: 175 (1961). Type: Japan. Honshu. Shizuoka Pref.: Manadzuru (T. Kawasaki, 4 Apr. 1959, TNS-holotype). [Japanese name: Beni-ke-yamazakura].

The peduncle and pedicel are sparsely pilose, or the petiole, both surfaces of the leaf, pedicel, and calyx lobes are pilose.

Japanese name: **Nekoge-yamazakura** (nov.).

'Ke-yamazakura,' 'Ke-yama-zakura,' or 'Usuge-yama-zakura' has been used as Japanese names for *P. jamasakura* Siebold ex Koidz. var. *pubescens* (Makino) Nakai ≡ *P. jamasakura* Siebold ex Koidz. f. *pubescens* (Makino) Ohwi ≡ *C. jamasakura* (Siebold ex Koidz.) H. Ohba f. *pubescens* (Makino) H. Ohba (basonym: *P. pseudocerasus* Lindl. var. *a. jamasakura* (Siebold) Makino subvar. *b. pubescens* Makino). In this study it became clear that *P. pseudocerasus* Lindl. var. *a. jamasakura* (Siebold) Makino subvar. *b. pubescens* Makino is identical with *C. leveilleana* (Koehne) H. Ohba [Japanese name: Kasumi-zakura]. Therefore, using 'Ke-yamazakura' for a pubescent form of *C. jamasakura* might cause confusion. Although Kawasaki proposed the Japanese name, 'Beni-ke-yamazakura,' the flower color of this form is usually pale pink or very rarely purplish rose. Therefore, we propose here a new Japanese name, 'Nekoge-yama-zakura' because of the pilose hairs.

1d) **Cerasus jamasakura** Siebold ex Koidz. var. **chikusiensis** (Koidz.) H. Ohba in J. Jap. Bot. 67: 278 (1992).

Prunus chikusiensis Koidz. in Bot. Mag. (Tokyo) 32: 57 (Mar. 1918). Type: Japan. Kyushu [Kiusiu]. Prov. Ohsumi, insl. Tane-

gashima (S. Kawagoe s.n., KYO00055889-holotype). [Fig. 4]

Prunus kiusiana Koidz. in Bot. Mag. (Tokyo) 32: (54) (Feb. 1918), pro parte, only cited specimen from Tanegashima (S. Kawagoe s.n., KYO00055889), excl. *P. donarium* subsp. *speciosa* var. *praecox* Koidz. in syn.

Prunus jamasakura Siebold ex Koidz. var. *chikusiensis* (Koidz.) Ohwi in Bull. Natl. Sci. Mus. Tokyo, no 33: 76 (1953). Sugim., New Keys Jap. Tr.: 215 (1961) [Japanese name: Tsukushi-yamazakura (Tsukushi-zakura)].

Japanese name: **Tsukushi-yama-zakura** (Sugimoto, 1961; Ohba, 1992). 'Tsukushi-zakura' is a Japanese name of a horticultural taxon, *P. kiusiana* Koidz. (≡ *P. donarium* ssp. *speciosa* var. *praecox* Koidz.) cultivated in Kajiki-cho, Aira-gun, Kagoshima Pref.

1e) **Cerasus jamasakura** Siebold ex Koidz. var. **humilis** (Makino) Iwamoto & H. Ohba in J. Jap. Bot. 85: 186 (2010).

Prunus pseudocerasus Lindl. var. *humilis* Makino in Bot. Mag. (Tokyo) 6: (52) (1892), nom. nud. [Japanese name: Wakakinosakura].

Prunus pseudocerasus Lindl. [var.] *a. spontanea* Maxim. subvar. *humilis* Makino in Bot. Mag. (Tokyo) 20: 44 (1906). Type: Japan. Shikoku. Kochi Pref.: Prov. Tosa, Sakawa, cult. (T. Makino, in 1889, MAK-lectotype, designated here; TI-isolectotype); ibid. (T. Makino, Apr. 1887, MAK-syntype, not found); ibid. (T. Makino, June 1893, MAK-syntypes, 2 sheets). [Japanese name: Wakaki-no-sakura]. [Fig. 5]

Prunus pseudocerasus Lindl. var. *a. jamasakura* Makino subvar. *a. glabra* Makino f. *humilis* (Makino) Makino in Bot. Mag. (Tokyo) 22: 98 (1908). [Japanese name: Wakaki-no-sakura].

Prunus serrulata Lindl. [unranked] *a. spontanea* (Maxim.) Makino subvar. *glabra* Makino f. *humilis* (Makino) Makino in Bot. Mag. (Tokyo) 26: 176 (1912). [Japanese name: Wakaki-no-sakura].

Prunus donarium Siebold ex Koidz. subsp. *elegans* (Koidz.) Koidz. var. *a. glabra* (Makino) Koidz. subvar. *hortensis* (Koidz.) Koidz. f. 1,

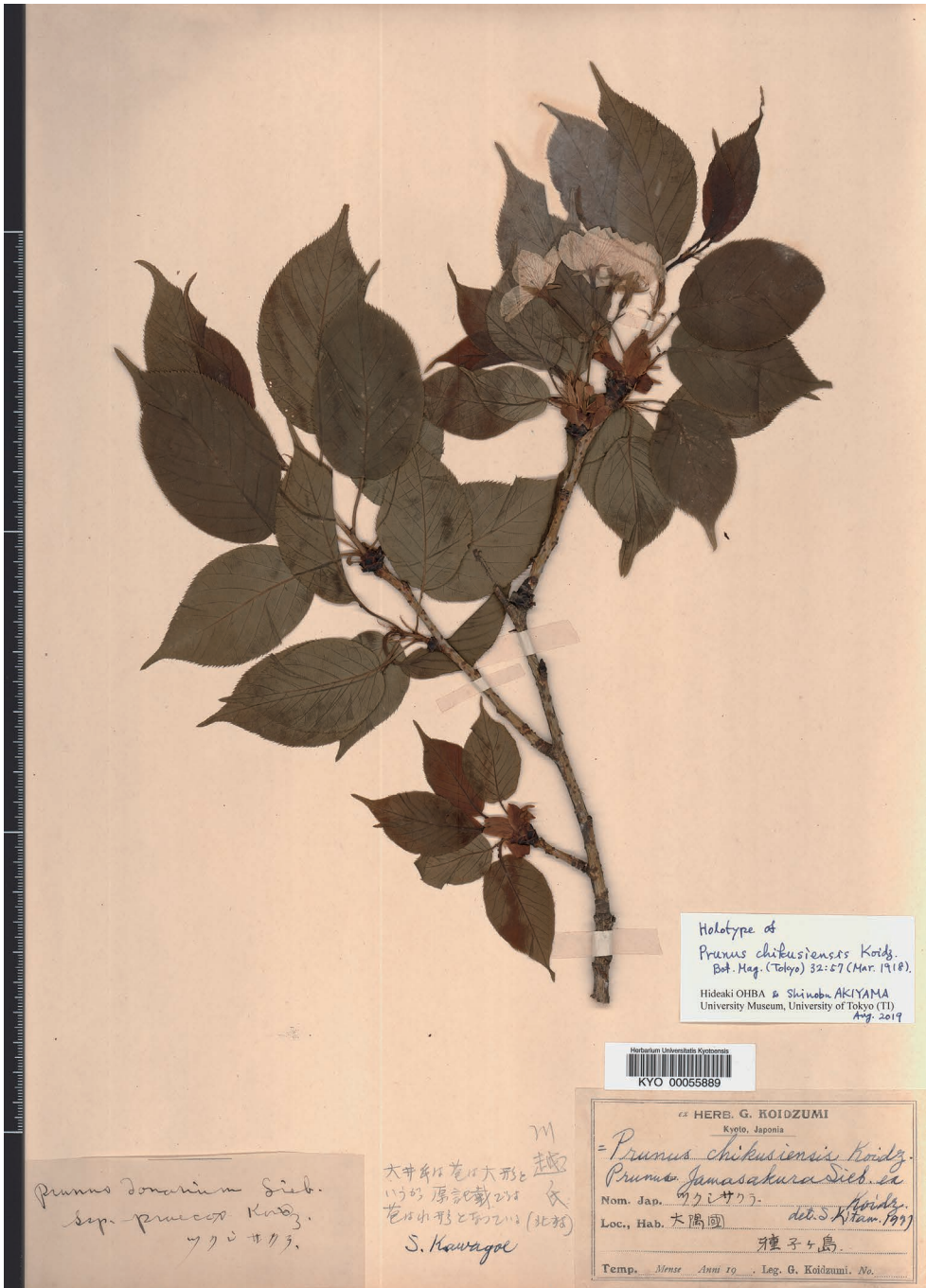


Fig. 4. Holotype of *Prunus chikusiensis* Koidz. (S. Kawagoe s.n., KYO00055889).

humilis (Makino) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 267 (1913). [Japanese name: Wakakino-sakura].

Prunus serrulata Lindl. var. *spontanea*

(Maxim.) E.H. Wilson f. *humilis* (Makino) E.H. Wilson, Cherries Japan: 30 (1916).

Prunus ogawana Makino in J. Jap. Bot. 5: 11 (1928) (nom. nov. for *Prunus pseudocerasus*

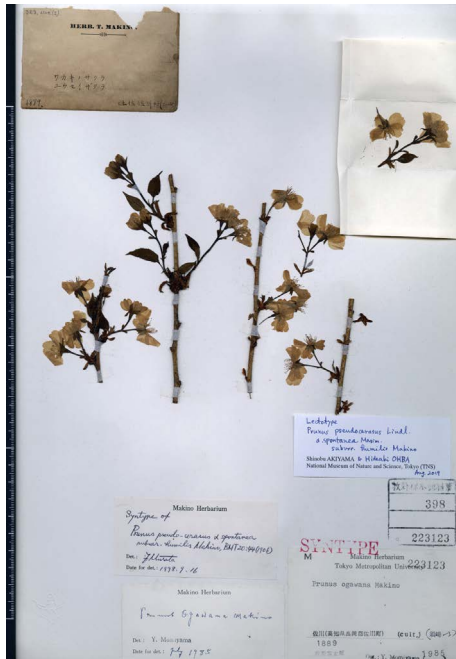


Fig. 5. Lectotype of *Prunus pseudocerasus* Lindl. [var.] *α. spontanea* Maxim. subvar. *humilis* Makino (T. Makino, in 1889, MAK).

[var.] *α. spontanea* Maxim. subvar. *humilis* Makino). [Japanese name: Wakaki-no-sakura].

Prunus jamasakura Siebold ex Koidz. f. *humilis* (Makino) Sugim., New Keys Jap. Tr.: 214, 468 (1961). [Japanese name: Wakaki-no-sakura].

Japanese name: **Wakakino-sakura** (Makino 1892).

2) *Cerasus leveilleana* (Koehne) H. Ohba in K. Iwatsuki *et al.*, Fl. Jap. 2b: 137 (2001).

Prunus leveilleana Koehne in Sarg., Pl. Wilson. 1: 250 (1912). Type: Korea. In the mountains of Mokhpo (T. Taquet 2519, March 1909, A00032099-syntype); *ibid.* (Taquet 2517, May 1909, A00032097 & 00032098-syntypes). (<https://kiki.huh.harvard.edu/databases/>).

Prunus pseudocerasus Lindl. var. *α. jamasakura* (Siebold ex Koidz.) Makino subvar. *b. pubescens* Makino in Bot. Mag. (Tokyo) 22: 98 (1908). Type: Japan. Honshu. Nara Pref.: Prov. Yamato, Yoshino (from S. Matsuda, April 1895, MAK-lectotype, designated here). Tokyo Pref.:

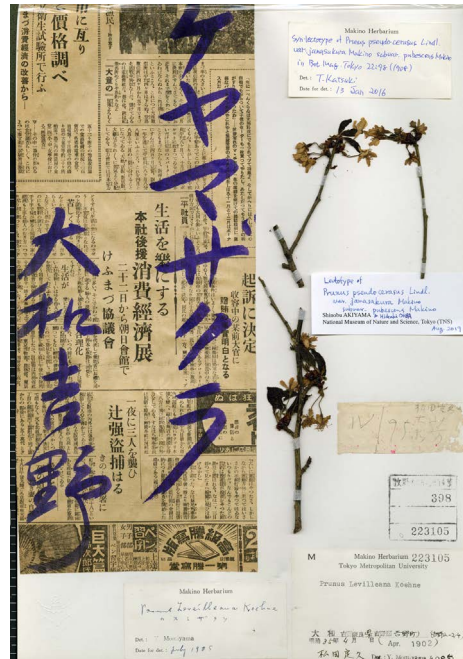


Fig. 6. Lectotype of *Prunus pseudocerasus* Lindl. var. *α. jamasakura* (Siebold ex Koidz.) Makino subvar. *b. pubescens* Makino (from S. Matsuda, April 1895, MAK).

Prov. Musashi, Tokyo, cult. from ?Hokkaido (T. Makino, April 1908, MAK-syntype, not found); *ibid.* (T. Makino, June 1908, MAK-syntype). [Japanese name: Ke-yamazakura]. [Fig. 6]

Prunus jamasakura Siebold ex Koidz. [unranked] *α. elegans* Koidz. [unranked] *b. pubescens* (Makino) Koidz. in Bot. Mag. (Tokyo) 25: 185 (1911). [Japanese name: Okuyama-sakura].

Prunus jamasakura Siebold ex Koidz. [unranked] *δ. verecunda* Koidz. in Bot. Mag. (Tokyo) 25: 188 (1911). Type: Japan. Honshu. Hontō media et boreali. Yamagata Pref.: [Uzen, Ichinen-bo, Wadamura] (G. Koidzumi s.n., TI00031942-lectotype, designated by Nakai) (Nakai 1930); [Mt. Ichinen-bo] (Koidzumi, May 1910, TI-syntype, cited by Nakai in 1930, not found; KYO-isosyntypes, 4 sheets); [Prov. Uzen, Higashiokitama-gun (Kamigō-mura)] (G. Koidzumi, May 1919, TI-syntype, not found; KYO-isosyntype). [Japanese name: Kasumisakura]. Koidzumi (1913) showed a branch of *P. donar-*



Fig. 7. Lectotype of *Prunus jamasakura* Siebold ex Koidz. [unranked] δ . *verecunda* Koidz. (G. Koidzumi s.n., TI00031942).

ium Siebold ex Koidz. subsp. *verecunda* (Koidz.) Koidz. in fig. 10 on page 278 [Japanese name: Kasumi-zakura]. We consider the specimen of this branch to be suitable as the lectotype of *P. jamasakura* δ . *verecunda*, but we did not find it in TI. [Fig. 7]

Prunus jamasakura Siebold ex Koidz. var. *pubescens* (Makino) Nakai, Fl. Kor. 2: 482 (1911), as '*P. jamasakura* (Makino) nom. nov. var. *pubescens* Makino.' Hara in Ishii (ed.), Engei-Dai-Jiten 2: 917 (1950), as 'var. *pubescens* (Makino) Hara.' [Japanese name: Ke-yamazakura]

Prunus mesadenia Koehne in Sarg., Pl. Wilson. 1: 250 (1912). Type: Japan [Nippon]. Swasima (J. Matsumura, April 2, 1879 (kindly sent to me by Professor Matsumura, under the name of *P. pseudocerasus*, β . *spontanea*, B?-holotype, not seen, not found in HUH (<https://kiki.huh.harvard.edu/databases/>)).

Prunus parvifolia (Matsum.) Koehne f. *aomoriensis* Koehne in Sarg., Pl. Wilson. 1: 251 (1912). Type: Japan. Honshu. Aomori Pref.:

Northern Nippon: Aomori [U. Faurie 2093, May 1898, B?-holotype, not seen, not found in HUH (<https://kiki.huh.harvard.edu/databases/>); KYO-isotype].

Prunus tenuiflora Koehne var. *pubescens* (Makino) Koehne in Repert. Spec. Nov. Regni Veg. 11: 268 (1912). [Japanese name: Okuyamazakura].

Prunus verecunda (Koidz.) Koehne in Repert. Spec. Nov. Regni Veg. 11: 271 (1912). [Japanese name: Kasumi-zakura].

Prunus donarium Siebold ex Koidz. subsp. *verecunda* (Koidz.) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 277 (1913). [Japanese name: Kasumi-zakura].

Prunus donarium Siebold ex Koidz. subsp. *elegans* (Koidz.) Koidz. var. b *pubescens* (Makino) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 269 (1913). [Japanese name: Okuyama-sakura].

Prunus serrulata Lindl. var. 2. *pubescens* (Makino) Nakai in Bot. Mag. (Tokyo) 29: 140 (1915). E. H. Wilson, Cherries Japan: 31 (1916), as 'var. *pubescens* Wilson, n. comb.'

Prunus serrulata Lindl. var. *verecunda* (Koidz.) Nakai in Bot. Mag. (Tokyo) 29: 140 (1915).

Prunus pudibunda Koidz. in The Monthly Journal of Science of Japan [Rigakukai] 16: 645, 652 (1919) (nom. nov. for *P. jamasakura* Lindl. var. α . *jamasakura* (Siebold) Makino subvar. b. *pubescens* Makino); Bot. Mag. (Tokyo) 37: 43 (1923). [Japanese name Okuyamasakura, Keyamasakura].

Prunus verecunda (Koidz.) Koehne var. *typica* Nakai in Bot. Mag. (Tokyo) 44: 12 (1930) (nom. superfl. for *P. verecunda* var. *verecunda*). Type: Nakai cited a specimen collected in Wadamura prov. Uzen by G. Koidzumi (TI), which is one of syntypes of *P. jamasakura* Siebold ex Koidz. [unranked] δ . *verecunda* Koidz., as the holotype. So it is regarded that the lectotypification of *P. jamasakura* δ . *verecunda* was done there. Nakai cited also the following specimens in the protologue: Mt. Adzumasán prov. Uzen (G. Koidzumi s.n., TI); Mt. Ichinenpô prov. Uzen (G. Koidzumi

s.n., TI-syntype, not found; KYO-isosyntypes); Iioka prov. Rikuchū (G. Yamada, May 1906, TI); Mt. Himekamiyama prov. Rikuzen [as 'Rikuchiū'] (G. Yamada, May 1908, TI); Mt. Togakushi prov. Shinano (J. Matsumura, 11 July 1884, TI, with unknown person's annotation '*Prunus?* *Miqueliana*—Max.? *pseudo-cerasus* Lindl. var. *Sieboldi*, Max.'). [No Japanese name]

Prunus verecunda Koehne var. *yesoensis* Nakai in Bot. Mag. (Tokyo) 44: 12 (1930). Type: Japan. Hokkaido. Yeso. Mt. Apoi prov. Hidaka (M. Tatewaki s.n., SAP-holotype, not seen; KYO-isotype); *ibid.* (T. Nakai s.n., TI-paratype); Shoya prov. Hidaka (M. Tatewaki s.n., SAP-paratype, KYO-isoparatype). [No Japanese name]

Prunus mutabilis Miyoshi var. *pubescens* (Makino) Nakai, Iconogr. Pl. As. Orient. 4(4): 435 (1949). [Japanese name: Ke-yamazakura (Makino 1908), Usugezakura (as 'Miyoshi, 1916')].

Prunus verecunda (Koidz.) Koehne f. *norioi* Ohwi in J. Jap. Bot. 27: 148 (1952). Type: Japan. Honshu. Nagano Pref.: In Kataokamura, urbe Matsumoto in Shinano (H. Kubota, [13 May 1945], TNS-holotype). [Japanese name: Kataoka-zakura].

Prunus jamasakura Siebold ex Koidz. f. *pubescens* (Makino) Ohwi in Bull. Natl. Sci. Mus. Tokyo, no 33: 76 (1953).

Prunus verecunda (Koidz.) Koehne f. *plena* H. Kubota ex Sugim., New Keys Jap. Tr.: 219 (1961), nom. nud. [Japanese name: Yae-kasumi-zakura].

Prunus verecunda (Koidz.) Koehne var. *kashioensis* H. Kubota & Moriya in J. Geobot. (Kanazawa) 17: 40 (1969). Type: Japan. Honshu. Nagano Pref.: Prov. Shinano, Ooshika-mura, Kashio (H. Kubota, 12 May 1962, TNS-holotype). [Japanese name: Kashio-zakura].

Cerasus serrulata (Lindl.) Loudon var. *pubescens* (Makino) T. T. Yü & C. L. Li in Fl. Reipubl. Popularis Sin. 38: 75 (1986).

Cerasus verecunda (Koidz.) H. Ohba in J. Jap. Bot. 67: 280 (1992).

Cerasus jamasakura (Siebold ex Koidz.) H.

Ohba f. *pubescens* (Makino) H. Ohba in Iwatsuki *et al.*, Fl. Jap. 2b: 140 (2001). [Japanese name: Usuge-yama-zakura].

Japanese name: **Kasumi-zakura** (Koidzumi, 1911).

2b) ***Cerasus leveilleana*** (Koehne) H. Ohba f. ***pendula*** (H. Hara) H. Ohba in Iwatsuki *et al.*, Fl. Jap. 2b: 137 (2001).

Prunus verecunda (Koidz.) Koehne var. *pendula* H. Hara in Bot. Mag. (Tokyo) 49: 210 (1935). Type: Japan. Hokkaido. At the foot of Mt. Apoi (H. Hara or unknown collector s.n., TI-holotype, not found). [Japanese name: Kirifuri-zakura]

Japanese name: **Kirifuri-zakura** (Hara, 1935).

2c) ***Cerasus leveilleana*** (Koehne) H. Ohba f. ***pubipipes*** (H. Hara) H. Ohba & S. Akiyama, comb. nov.

Prunus verecunda (Koidz.) Koehne var. *pubipipes* H. Hara in Bot. Mag. (Tokyo) 49: 210 (1935). Type: Japan. Hokkaido. Shoya (H. Hara or unknown collector s.n., TI-holotype, not found). [Japanese name: Usuge-kasumizakura]

Prunus verecunda (Koidz.) Koehne f. *pubipipes* (H. Hara) Tatew. in Trans. Sapporo Nat. Hist. Soc. 16: 84 (1940).

The petiole is pubescent on upper surface, pedicel is glabrous.

Japanese name: **Usuge-kasumi-zakura** (Hara, 1935).

3) ***Cerasus speciosa*** (Koidz.) H. Ohba in J. Jap. Bot. 67: 279 (1992).

Prunus jamasakura Siebold ex Koidz. [unranked] β. *speciosa* Koidz. in Bot. Mag. (Tokyo) 25: 186 (1911). Type: Japan. in Hontō media, Kiusiu. Tokyo (Bot. Gard.) [from Izu Ōshima] (G. Koidzumi, Apr. 1910, TI00014704-lectotype, designated here; KYO-isolectotypes, 2 sheets). [Japanese name: Ohyamasakura].

[Fig. 8]

Prunus pseudocerasus Lindl. γ. *serrulata* (Lindl.) Makino subvar. b. *sieboldii* (Maxim.) Makino f. *albida* Makino in Bot. Mag. (Tokyo)



Fig. 8. Lectotype of *Prunus jamasakura* Siebold ex Koidz. [unranked] β . *speciosa* Koidz. (G. Koidzumi, Apr. 1910, TI00014704).



Fig. 9. Lectotype of *Prunus fimbrisepala* Nakai (T. Nakai & N. Maruyama, 7 Apr. 1949, TNS80098).

22: 102 (1908). Type: Original material was not found in MAK or TI.

Prunus serrulata Lindl. var. α *serrulata* (Lindl.) Makino f. *albida* (Makino) Makino in Bot. Mag. (Tokyo) 23: 74 (1909). Koehne in Sarg., Pl. Wilson. 1: 247 (1912), as 'f. *albida* (Makino) Koehne, n. comb.'

Prunus serrulata Lindl. var. *albida* (Makino) Makino subvar. b. *speciosa* (Koidz.) Makino in Bot. Mag. (Tokyo) 26: 117 (1912). [Japanese name: Ôshima-zakura].

Prunus serrulata Lindl. f. *speciosa* (Koidz.) Koehne in Repert. Spec. Nov. Regni Veg. 11: 268 (1912).

Prunus donarium Siebold ex Koidz. subsp. *speciosa* (Koidz.) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 271 (1913). [Japanese name: Oh-yamazakura, Ohsimazakura, Takigizakura].

Prunus speciosa (Koidz.) Nakai in Bot. Mag. (Tokyo) 29: 139 (1915). Ingram in J. Roy. Hort. Soc. 25: 80 (1925), as '*Prunus speciosa* Koidzumi.' [Japanese name: Oshima-Zakura].

Prunus mutabilis Miyoshi f. *speciosa* (Koidz.) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(1): 42 (1916), as '*Prunus mutabilis speciosa*.'

Prunus lannesiana (Carr.) E.H.Wilson f. *albida* (Makino) E.H.Wilson, Cherries Japan: 43 (1916).

Prunus fimbrisepala Nakai, Iconogr. Pl. As. Orient. 4(4): 419, t. 132 (1949). Type: Japan. Chiba Pref.: In montibus Banda [Nishizakimura Prov. Awa] (T. Nakai & N. Maruyama, 7 Apr. 1949, TNS80098-lectotype, designated here; TNS80100-isolectotype); ibid. (N. Maruyama, 16 June 1949, TNS-syntype, not found); ibid. (T. Nakai & N. Maruyama, 7 Mar. 1949, TNS635472-paratype); In montibus Sanakura (T. Nakai & N. Maruyama, 8 Apr. 1949, TNS80102-paratype). [Japanese name: Kōsetsu-zakura].

[Fig. 9]

Prunus fimbrisepala Nakai var. *grandiflora* Nakai, Iconogr. Pl. As. Orient. 4(4): 421 (1949). Type: Japan. Chiba Pref.: In collibus Sanakura (T. Nakai & N. Maruyama, 8 Apr. 1949, TNS80095-



Fig. 10. Lectotype of *Prunus occultans* Nakai (T. Nakai & N. Maruyama, 7 Aug. 1949, TNS298509).

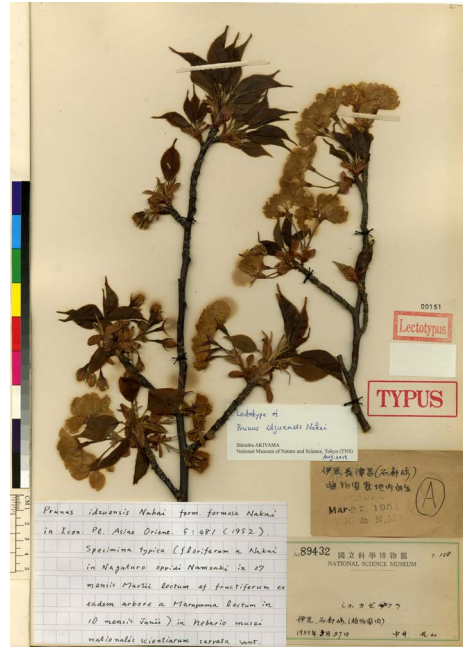


Fig. 11. Lectotype of *Prunus idzuensis* Nakai (Nakai [& Maruyama], 27 Mar. [1951], TNS89432).

lectotype, designated here; TNS80096 & 80097-isolectotypes; 17 June 1949, TNS-syntype, not found). Nakai annotated '*Prunus fimbriisepala* Nakai var. *magnifica* Nakai' on the label. [Japanese name: Gyōsetsu-zakura].

Prunus occultans Nakai, Iconogr. Pl. As. Orient. 4(4): 422, t. 133 (1949). Type: Japan. Chiba Pref.: Banda (T. Nakai & N. Maruyama, 7 Aug. 1949, TNS298509-lectotype, designated here; TNS80086–80088-isolectotypes); Hota (unknown coll., syntype, not found in TNS). [Japanese name: Hagakure-zakura]. [Fig. 10]

Prunus idzuensis Nakai, Iconogr. Pl. As. Orient. 5(2): 481, t. 151 (1952), as 'f. *formosa* Nakai.' Type: Japan. Honshu. Shizuoka Pref.: In Nagaturo oppidi Namzaki [Prov. Izu] (Nakai [& Maruyama], 27 Mar. [1951], TNS89432-lectotype, designated here); ex eadem arbore [Minamikamo-gun, Namzaki-mura] (Maruyama, 10 June [1951], TNS89324–89326-syntypes). [Japanese name: Shiokaze-zakura]. [Fig. 11]

Prunus idzuensis Nakai f. *formosa* Nakai,

Iconogr. Pl. As. Orient. 5(2): 481, t. 151 (1952), nom. illegit. (nom. superfl. for *Prunus idzuensis* Nakai f. *idzuensis*).

Prunus idzuensis Nakai f. *leucantha* Nakai, Iconogr. Pl. As. Orient. 5(2): 483 (1952). Type: Japan. Honshu. Shizuoka Pref.: In Nagaturo oppidi Namzaki [Izu] (Nakai & Maruyama, 27 Mar. 1951, TNS89433-lectotype; TNS89434-isolectotype). [Japanese name: Shirobana-shio-kaze-zakura (tentative)].

Prunus idzuensis Nakai f. *semiplena* Nakai, Iconogr. Pl. As. Orient. 5(2): 483 (1952). Type: Japan. Honshu. Shizuoka Pref.: In colle Namzaki (unknown coll., not found in TNS). [Japanese name: Izu-hata-zakura].

Prunus lannesiana (Carr.) E.H. Wilson f. *idzuensis* (Nakai) Sugim. in Hokuriku J. Bot. 6: 49 (1957). [Japanese name: Shiokaze-zakura].

Prunus lannesiana (Carr.) E.H. Wilson f. *fimbriisepala* (Nakai) Sugim., New Keys Jap. Tr.: 215 (1961), comb. nud., as 'f. *fimbriisepala* Sugim.' [Japanese name: Kōsetsu-zakura].

Prunus lannesiana (Carr.) E.H.Wilson f. *formosa* (Nakai) Sugim., New Keys Jap. Tr.: 215 (1961), comb. nud., as 'var. *speciosa* Makino f. *formosa* (Nakai) Sugim.' [This new combination is based on an illegitimate name.] [Japanese name: Shiokaze-zakura].

Prunus lannesiana (Carr.) E.H.Wilson f. *occultans* (Nakai) Sugim., New Keys Jap. Tr.: 215 (1961), comb. nud., as 'f. *occultans* Sugim.' [Japanese name: Hagakure-zakura].

Prunus lannesiana (Carr.) E.H.Wilson f. *sempliciflora* Makino ex Sugim., New Keys Jap. Tr.: 215 (1961), nom. nud., as 'var. *speciosa* Makino f. *sempliciflora* Makino.' Type: Original material was not found in MAK, TI, or TNS. [Japanese name: Usugasane-oshima].

Prunus serrulata Lindl. var. *speciosa* (Koidz.) Kuitert, Japanese Flowering Cherries: 188 (1999), comb. nud. [Japanese name: Oshima-zakura, Mochi-zakura].

Japanese name: **Oshima-zakura** (Makino 1912).

4) *Cerasus sargentii* (Rehder) H.Ohba in J. Jap. Bot. 67: 279 (1992).

Prunus sargentii Rehder in Mitt. Deutsch. Dendrol. Ges. 17: 159 (1908). Type: Japan. Hokkaido. Kohlegruben bei Utashine (C. S. Sargent, 20 Sept. 1892, syntype, not seen); Hakodate (Y. Tokubuchi, 26 July 1888, syntype, not seen); Sapporo (Y. Tokubuchi, 31 May 1889, syntype, not seen); Sapporo (K. Miyabe, 3 May 1882, syntype, not seen); Makonomai (unknown collector, 5 May 1885, SAP-syntype, not seen); Tankisappo (unknown collector, 7 May 1885, SAP-syntype, not seen). Aomori Pref.: Aomori (U. Faurie 6064, May 1902, syntype, not seen). Korea. Seoul (J. G. Jack 21, Sept. 1905, syntype, not seen). In TI there is a specimen collected by Hara in 1939 (H. Hara, 9 May 1939 (fl.); 14 July 1939 (fr.), TI) from the type tree. But there remains no data regarding the tree.

Prunus pseudocerasus Lindl. var. *sachalinensis* F.Schmidt, Reis. Amur-Land., Bot.: 124 (1868). Type: Auf Anhöhen bei Tunai (Schmidt, Mitte Sept. 1860 (ster.), LE?-syntype, not seen; 9

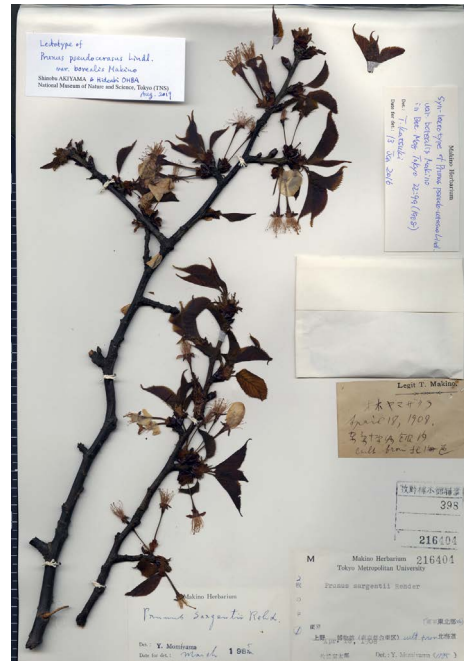


Fig. 12. Lectotype of *Prunus pseudocerasus* Lindl. var. β . *borealis* Makino (T. Makino, April, MAK).

July 1861 (fr. jun. Glehn), LE?-syntype, not seen).

Prunus pseudocerasus Lindl. var. β . *borealis* Makino in Bot. Mag. (Tokyo) 22: 99 (1908). Type: Japan. Honshu. Tokyo Pref.: Prov. Musashi, Tokyo, cultivated from Hokkaido (T. Makino, April, MAK-lectotype, designated here); ibid. (T. Makino, June, 1908, MAK-syntype). [Japanese name: Ō-yamazakura].

[Fig. 12]

Prunus serrulata Lindl. [unranked] β . *borealis* (Makino) Makino in Bot. Mag. (Tokyo) 23: 75 (1909); Bot. Mag. (Tokyo) 24: 146 (1910). [Japanese name: Ō-yamazakura].

Prunus jamasakura Siebold ex Koidz. [unranked] γ . *borealis* (Makino) Koidz. in Bot. Mag. (Tokyo) 25: 187 (1911). [Japanese name: Akebonosakura].

Prunus sachalinensis (F. Schmidt) Koidz. in Bot. Mag. (Tokyo) 26: 52 (1912). [Japanese name: Akebonozakura].

Prunus floribunda Koehne in Repert. Spec.

Nov. Regni Veg. 11: 269 (1912). Type: Japan. Tochigi Pref. Nikko, Prov. Simotsuke [G. Koidzumi, 7 May 1912, B?, not seen; not found in HUH (<https://kiki.huh.harvard.edu/databases/>)].

Prunus donarium Siebold ex Koidz. subsp. *sachalinensis* (F. Schmidt) Koidz. in J. Coll. Sci. Imp. Univ. Tokyo 34(2): 276 (1913). [Japanese name: Yezo-yamasakura].

Prunus sachalinensis (F. Schmidt) Miyoshi in J. Coll. Sci. Imp. Univ. Tokyo 34(1): 75 (1916) nom. illegit.. [Japanese name: Benibanazakura, Ōyamazakura, Ezozakura]

Prunus sargentii Rehder var. *intermedia* Tatew. in Trans. Sapporo Nat. Hist. Soc. 14: 6 (1935). Type: Japan. Hokkaido. Yezo, Oiwake Pass, near Shoya, Prov. Hidaka (M. Tatewaki, 2 May 1927, SAP-holotype, not seen). [Japanese name: Hidaka-yamazakura].

Prunus sargentii Rehder f. *semplena* Sugim., New Keys Jap. Tr.: 218 (1961), nom. nud., as 'f. *semplena* H. K.' [Japanese name: Hitoe-yae-ezo-yama-zakura].

Japanese name: **Oyama-zakura** (Makino 1908).

4b) **Cerasus sargentii** (Rehder) H.Ohba f. **albida** (Miyoshi) H.Ohba in Iwatsuki *et al.*, Fl. Jap. 2b: 139 (2001).

Prunus sachalinensis (F.Schmidt) Miyoshi f. *albida* Miyoshi in J. Coll. Sci. Imp. Univ. Tokyo 34(1): 80 (1916). Type: Original material was not found in TI. [Japanese name: Hatsuyuki-zakura].

Prunus sargentii Rehder f. *albida* (Miyoshi) H.Hara in Ishii, Engei-Dai-Jiten 2: 929 (1950), comb. nud.

Japanese name: **Hatsuyuki-zakura** (Miyoshi 1916).

Hara (1950) treated this as a cultivated plant.

4c) **Cerasus sargentii** (Rehder) H.Ohba f. **pendula** (Honda) Yonek. in J. Jap. Bot 80: 324 (2005).

Prunus sargentii Rehder var. *pendula* Honda in Bot. Mag. (Tokyo) 54: 2 (1940). Type: Japan. Akita Pref.: Towada prov. Ugo (G. Koie 17, in 1939, TI-holotype, not found). [Japanese name:

Shidare-ōyamazakura]

Prunus sargentii Rehder f. *pendula* (Honda) Okuyama in J. Jap. Bot. 30: 44 (1955). [Japanese name: Shidare-ōyamazakura, Shidare-ezo-yamazakura (Sugimoto 1961)]

Prunus sargentii Rehder f. *nagaokae* Tatew. ex Koji Ito [in Hayashi no. 138: 15 (1963), nom. nud.] in J. Geobot. (Kanazawa) 13: 2 (1964). Type: Japan. Hokkaido. Prov. Hidaka, Shoya (Ko. Ito, 10 May 1962, SAP-holotype, not seen). [Japanese name: Shoya-zakura (Ito 1964)]

Japanese name: **Shidare-oyama-zakura** (Honda 1940).

4d) **Cerasus sargentii** (Rehder) H.Ohba f. **pubescens** (Tatew.) H.Ohba in Iwatsuki *et al.*, Fl. Jap. 2b: 139 (2001).

Prunus sargentii Rehder var. *pubescens* Tatew. in Trans. Sapporo Nat. Hist. Soc. 14: 6 (1935), non var. *pubescens* Koidz. under *P. sachalinensis*. Type: Japan. Hokkaido. Yezo, Oniwaki, Isl. Rishiri, cult. (M. Tatewaki, 27 May 1934, SAP-holotype, not seen). [Japanese name: Keyezoyamazakura].

Prunus sachalinensis (F.Schmidt) Koidz. var. *pubescens* Koidz. in Bot. Mag. (Tokyo) 39: 29 (1925). Type: Japan. Nagano Pref.: Prov. Shinano, Kita-azumigori, Jindai-mura (H. Koidzumi, May 1924, holotype, not found in KYO, MAK, or TI). [No Japanese name]

Prunus serrulata Lindl. subvar. *pubescens* (Koidz.) Makino & Nemoto, Fl. Jap. rev. ed. 497 (1931).

Prunus sargentii Rehder f. *pubescens* (Tatew.) Ohwi in Bull. Natl. Sci. Mus. Tokyo, no. 33: 76 (1953).

Japanese name: **Ke-ezo-yama-zakura** (Tatewaki 1935).

4e) **Cerasus sargentii** (Rehder) H.Ohba var. **akimotoi** H.Ohba & Mas.Saito in J. Jap. Bot 75: 370 (2000). Type: Japan. Miyazaki Pref.: Nishiusuki-gun, Gokase-machi, Mt. Shiraiwa-yama, alt. 1580 m (Masami Saito & Osamu Akimoto, 9 May 1999, TI-holotype, A, TI, TNS, Museum and Cultural Institution of Miyazaki Prefecture-



Fig. 13. Lectotype of *Prunus jamasakura* Siebold ex Koidz. [unranked] *a. elegans* Koidz. [unranked] *c. compta* Koidz. (G. Koidzumi s.n., TI00014702).

isotypes).

Japanese name: **Kiritachi-yama-zakura** (Ohba & Saito 2000).

Hybrids

5) ***Cerasus* × *compta*** (Koidz.) H. Ohba in Iwatsuki *et al.*, *Fl. Jap.* 2b: 141 (2001).

Cerasus leveilleana (Koehne) H. Ohba × *C. sargentii* (Rehder) H. Ohba.

Prunus jamasakura Siebold ex Koidz. [unranked] *a. elegans* Koidz. [unranked] *c. compta* Koidz. in *Bot. Mag. (Tokyo)* 25: 186 (1911). Type: Japan. Yamagata Pref.: Japonia boreali [Uzen, Mt. Azuma] (G. Koidzumi s.n., TI00014702-lectotype, designated by Nakai) (Nakai, 1930); [Wadamura (Uzen)] (G. Koidzumi, May 1910, TI00014703-syntype). [Japanese name: Akatsuki-sakura]. [Fig. 13]

Prunus donarium Siebold ex Koidz. subsp. *sachalinensis* (Fr. Schmidt) Koidz. var. *compta* (Koidz.) Koidz. in *J. Coll. Sci. Imp. Univ. Tokyo* 34(2): 277 (1913). [Japanese name: Akebono-

sakura]

Prunus serrulata Lindl. var. *compta* (Koidz.) Nakai in *Bot. Mag. (Tokyo)* 29: 141 (1915).

Prunus verecunda (Koidz.) Koehne var. *compta* (Koidz.) Nakai in *Bot. Mag. (Tokyo)* 44: 12 (1930).

Prunus sargentii Rehder var. *compta* (Koidz.) H. Hara in *Bot. Mag. (Tokyo)* 49: 209 (1935). [Japanese name: Akatsuki-sakura (Koidz. 1911), Akebono-sakura (Koidz. 1913)]

Prunus sargentii Rehder f. *compta* (Koidz.) Ohwi in *Bull. Natl. Sci. Mus. Tokyo*, no. 33: 76 (1953).

Japanese name: **Kasumi-ezo-zakura** (Ohba 2001).

Uncertain taxa

6) ***Cerasus kumanoensis*** T. Katsuki in *Acta Phytotax. Geobot.* 69: 121 (2018). Type: Japan. Honshu. Wakayama Pref.: Kozagawa, Ikenoyama, alt. 40 m (T. Katsuki, 21 Mar. 2017, TI-holotype, TFA HDA-000256–258-isotypes, not seen; TNS1284055-isotype).

Japanese name: **Kumano-zakura** (Katsuki 2018).

This is uncertain. The shape of petals is quite variable to be recognized as a pure wild species.

7) ***Prunus verecunda*** (Koidz.) Koehne var. ***intermedia*** Nakai in *Bot. Mag. (Tokyo)* 47: 267 (1933), in key. Type: Japan. Honshu. Tochigi Pref.: Cultivated in Nikko Botanic Garden (T. Nakai & T. Momiyama 22, 3 May 1931, TI-lectotype, designated here, & isolectotype).

Prunus verecunda (Koidz.) Koehne f. *intermedia* (Nakai) Sugim. ex Moriya in *J. Geobot. (Kanazawa)* 15: 39 (1966).

Japanese name: **Asagiri-zakura**.

This is uncertain. The petioles and pedicels are glabrous, so it is considered to be a hybrid between *C. leveilleana* and a species of *Cerasus*.

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