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# Japanese Cherry Trees under the Genus *Cerasus* (Rosaceae)

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## 日本のサクラ属植物の学名

大場秀章

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The generic treatment of cherry trees is still controversial. Two contradictory concepts have been proposed: One is a broad concept classifying them in the genus *Prunus* together with other members in the subfamily Prunoideae while another is a narrow concept providing the genus *Cerasus* for them. Recent studies support the generic separation of *Cerasus* from *Prunus*. 33 new names of Japanese species and infraspecific taxa of cherry trees under *Cerasus* are proposed.

The taxonomy of cherry trees is still not sufficient. One of the controversial problems is their generic treatment. Two contradictory concepts have been proposed. One is a broad concept in which cherry trees are classified in the genus *Prunus* together with plum, apricot and peach (Koidzumi 1913, Wilson 1916, Rehder 1940, Hutchinson 1964); the other is a narrow concept in which a proper genus, *Cerasus,* is provided only for cherry trees (Pojarkova 1941, Yü and Li 1986).

Once I have taken the broad concept in my previous treatment of the Japanese species of the subfamily Prunoideae and adopted *Prunus* for the cherry trees (Ohba 1989). During the preparation of the revising paper, I have noticed that all species of cherry trees are closely related and taxonomically separable from other members of the Prunoideae by some proper features in morphology, flavonoids (Hasegawa 1958), wood anatomy and others.

The Prunoideae can be classified into 7 genera as *Prinsepia, Maddenia, Pygeum, Laurocerasus, Padus, Cerasus,* and *Prunus* (including *Armeniaca* and *Amygdalus*). *Cerasus* and *Prunus* are regarded as a sister group having flowers in axillary corymbose or umbel-like inflorescence or solitary, separated from the leaves, and a single pistil with terminal style. *Cerasus* differs from *Prunus* by combinations of such gross characters as the corymbose or umbel-like inflorescence, the flowers and fruits with long pedicels, and the small drupes without conspicuous groove as well as rather smooth and thin stones.

Recently a general survey of Japanese species of cherry trees was done by Kubota, Kawasaki and others (Honda and Hayashi 1982). The detail of

the generic delimitation of Prunoideae and species delimitation of Japanese *Cerasus* will appear in my forthcoming paper. This article aims to publish thirty three new combinations of the cherry trees known from Japan under the genus *Cerasus*.

## A list of wild and some important cultivated species of cherry trees known from Japan

Genus **Cerasus** Miller, Gard. Dict., Abridged ed. 4, 300 (1754).

Sect. **Cerasus.**

(1) Subsect. **Phyllomahaleb** (Koehne) H. Ohba, comb. nov.

*Prunus* sect. Cremastosepalum subsect. Phyllomahaleb Koehne in Sarg., Pl. Wils. **1:** 238 (1912).

1) **Cerasus maximowiczii** (Rupr.) Komarov in Komarov et Klob.-Alis., Key Pl. Far East. Reg. URSS **2:** 567 (1932).

*Prunus maximowiczii* Rupr. in Bull. Acad. Sci. St.-Pétersb. **15:** 131 (1857).

Japanese name: Miyama-zakura.

(2) Subsect. **Sargentiella** (Koehne) H. Ohba, comb. nov.

*Prunus* sect. Pseudocerasus subsect. Sargentiella Koehne in Sarg., Pl. Wils. **1:** 245 (1912).

2) **Cerasus apetala** (Sieb. et Zucc.) H. Ohle [in Schltze-Motel, Mansfeld, Verz. Landwirtsch. u. Gart. Kulturpfl. 2 Aufl. **1:** 419 (1986), comb. nud.] ex H. Ohba, comb. nov.

*Ceraseidos apetala* Sieb. et Zucc. in Abh. Mat.-phys. Cl. k. Baier. Akad. Wiss. **3:** 744 (1843); **4**(2): 122 (1845). Miq., Ann. Mus. Bot. Lugd.-Batav. **2:** 93 (1865), excl. syn.

*Prunus apetala* (Sieb. et Zucc.) Franch. et Savat., Enum. Pl. Jap. **2:** 329 (1879).

Japanese name: Chôji-zakura.

2a) var. **pilosa** (Koidz.) H. Ohba, comb. nov.

*Prunus ceraseidos* (Sieb. et Zucc.) Koidz. var. *pilosa* Koidz. in J. Coll. Sci. Univ. Tokyo **34**(2): 282 (1913).

*P. apetala* (Sieb. et Zucc.) Franch. et Savat. subsp. *pilosa* (Koidz.) H. Ohba in J. Jpn. Bot. **64:** 327 (1989).

Japanese name: Oku-chôji-zakura.

3) **Cerasus campanulata** (Maxim.) A. Vassiliev in Trans. Sukhumi Bot. Gard. Fasc. 10, 119 (1957).

*Prunus campanulata* Maxim. in Bull. Acad. Sci. St.-Pétersb. **29:** 103 (1883).

Japanese name: Kan-hi-zakura; Hi-zakura.

4) **Cerasus × chichibuensis** (Kubota et Moriya) H. Ohba, comb. nov.

*Prunus × chichibuensis* Kubota et Moriya in Bull. Chichibu Mus. Nat. Hist., No. 10, 117 (1960).

Japanese name: Chichibu-zakura.

This is regarded as a putative hybrid between *Cerasus apetala* and *C. spachiana* f. *ascendens*.

4a) nothovar. **uyekii** (Kubota) H. Ohba, comb. nov.

*Prunus × chichibuensis* var. *uyekii* Kubota in J. Geobot. (Kanazawa) **25:** 239 (1978).

Japanese name: Ogurayama-zakura.

This is considered to be a putative hybrid between the same parents as nothovar. *chichibuensis* but differs from that by precocious flowers with linear-ovate, 8–12 mm long petals and 7–8 mm long calyx-tube as well as oblong- or elliptic-oblanceolate leaves with acuminate apex, cuneate base, 11–14 lateral veins tomentosely hairy beneath, and petioles with spreading hairs. Nothovar. *uyekii* is much close to *C. spachiana* having numerous characters of which states approach to those of the species.

5) **Cerasus × furuseana** (Ohwi) H. Ohba, comb. nov.

*Prunus furuseana* Ohwi in J. Jpn. Bot. **26:** 229 (1951).

Japanese name: Minobu-zakura.

Ohwi presumed that this is a hybrid between *Cerasus incisa* and *C. jamasakura*.

6) **Cerasus hisauchiana** (Hisauchi) H. Ohba, comb. nov.

*Prunus hisauchiana* Koidz. ex Hisauchi in J. Jpn. Bot. **13:** 550 (1937).

Japanese name: Yabu-zakura.

This occurs in sunny lowland thickets in south Kanto and Tokai (including Yamanashi Pref.) districts, central Honshu, and has an intermediate feature between *Cerasus incisa* and *C. subhirtella*.

7) **Cerasus incisa** (Murray) Loisel. in Duhamel, Traite Arbr. Arbust. New ed., **5:** 33 (1812).

*Prunus incisa* Thunb. ex Murray in Linn., Syst. Veg. ed. 14, 463 (1784).

Japanese name: Mame-zakura; Fuji-zakura.

7a) f. **urceolata** (Koidz.) H. Ohba, comb. nov.

*P. incisa* var. *urceolata* Koidz. in Bot. Mag. Tokyo **30:** 77 (1916).

Japanese name: Ôbana-mame-zakura.

7b) f. **yamadae** (Makino) H. Ohba, comb. nov.

*P. incisa* var. *yamadae* Makino, J. Jpn. Bot. **1:** 9 (1916).

Japanese name: Midori-zakura; Ryokugaku-zakura.

7c) var. **bukosanensis** (Honda) H. Ohba, comb. nov.

*Prunus nipponica* Matsum. var. *bukosanensis* Honda in Bot. Mag. Tokyo **51:** 56 (1937).

Japanese name: Bukô-takane-zakura.

7d) var. **kinkiensis** (Koidz.) H. Ohba, comb. nov.

*Prunus kinkiensis* Koidz. in Bot. Mag. Tokyo **37:** 43 (1923).

Japanese name: Kinki-mame-zakura.

8) **Cerasus jamasakura** (Koidz.) H. Ohba, comb. nov.

*Prunus jamasakura* Sieb. [Syn. Pl. Oecon. Jap. 68 (1827), nom. seminud.] ex Koidz. in Bot. Mag. Tokyo **25:** 184 (1911).

Japanese name: Yama-zakura.

8a) var. **chikusiensis** (Koidz.) H. Ohba, comb. et stat. nov.

*Prunus chikusiensis* Koidz. in Bot. Mag. Tokyo **32:** 57 (1918).

Japanese name: Tukushi-yama-zakura.

9) **Cerasus × kubotana** (T. Kawasaki) H. Ohba, comb. nov.

*Prunus × kubotana* T. Kawasaki in J. Jpn. Bot. **34:** 48 (1959).

Japanese name: Takane-ôyama-zakura.

The putative parents are thought as *Cerasus nipponica* and *C. sargentii*.

10) **Cerasus lannesiana** Carr. in Rev. Hort. **1872:** 198 (1872)

*Prunus lannesiana* (Carr.) Wils., Cher. Jap. 43 (1916).

Japanese name: Sato-zakura.

This is regarded as a horticultural species derived through mutation and selection in addition to hybridizations between *Cerasus speciosa* and other species. Cultivars are well defined and described in Honda and Hayashi (1982).

11) **Cerasus × miyasakana** (Kubota) H. Ohba, comb. nov.

*Prunus × miyasakana* Kubota in J. Geobot. (Kanazawa) **25:** 241 (1978).

Japanese name: Yatsugatake-zakura.

This is regarded as a putative hybrid between *Cerasus incisa* and *C. nipponica*.

12) **Cerasus miyoshii** (Ohwi) H. Ohba, comb. nov.

*Prunus fruticosa* Miyoshi in J. Coll. Sci. Univ. Tokyo **34**(1): 141 (1916), non Pallas (1784).

*Prunus × miyoshii* Ohwi in Ohwi and Ohta, Flowering Cherries of Japan, 88 (1973).

Japanese name: Hôki-zakura.

This is a cultivated cherry with several peculiar features different from the cultivars desposed in *Cerasus lannesiana*. Ohwi presumed that this is a putative hybrid between *C. jamasakura* and *C. pseudocerasus* (Lindl.) G. Don.

13) **Cerasus nikaii** (Honda) H. Ohba, comb. et stat. nov.

*Prunus yedoensis* var. *nikaii* Honda in Bot. Mag. Tokyo **45:** 138 (1931).

Japanese name: Midori-yoshino.

14) **Cerasus nipponica** (Matsum.) H. Ohle [in Schltze-Motel, Mansfeld, Verz. Landwirtsch. u. Gart. Kulturpfl. 2 Aufl. 1: 419 (1986), comb. nud.] ex H. Ohba, comb. nov.

*Prunus nipponica* Matsumura in Bot. Mag. Tokyo **15:** 99 (1901).

Japanese name: Takane-zakura; Mine-zakura.

14a) var. **kurilensis** (Miyabe) H. Ohba, comb. nov.

*Prunus ceraseidos* var. *kurilensis* Miyabe in Mem. Boston Soc. Nat. Hist. **4:** 226 (1890).

Japanese name: Chishima-zakura.

15) **Cerasus sacra** (Miyoshi) H. Ohba, comb. nov.

*Prunus sacra* Miyoshi in Bot. Mag. Tokyo **34:** 168 (1920).

Japanese name: Katte-zakura.

This is presumed to be a nothospecies derived from a hybridization between *Cerasus spachiana* f. *ascendens* and *C. jamasakura.*

*16)* **Cerasus sargentii** (Rehder) H. Ohba, comb. nov.

*Prunus sargentii* Rehder in Mitteil. Deutsch. Dendr. Ges. 1908: 159 (1908).

Japanese name: Ôyama-zakura; Ezo-yamazakura; Beni-yamazakura.

17) **Cerasus shikokuensis** (Moriya) H. Ohba, comb. nov.

*Prunus incisa* var. *shikokuensis* Moriya in J. Geobot. (Kanazawa) **17:** 37 (1969).

Japanese name: Ishizuchi-zakura.

18) **Cerasus sieboldii** Carr. in Rev. Hort. 1866: 279, 370 (1866).

Japanese name: Naden.

This is a peculiar species known only from cultivation.

19) **Cerasus spachiana** Laval. ex H. Otto.

Japanese name: Shidare-zakura; Itozakura.

19a) f. **ascendens** (Makino) H. Ohba, comb. et stat. nov.

*Prunus pendula* var. *ascendens* Makino in Bot. Mag. Tokyo **7:** 103 (1893).

Japanese name: Edo-higan; Azuma-higan; Higan-zakura.

19b) var. **koshiensis** (Koidz.) H. Ohba, comb. et stat. nov.

*Prunus koshiensis* Koidz. [in Toyama-ken Tennenkinenbutsu Chôsahôkoku 10, 9 (1930)] in Acta Phytotax. Geobot. **1:** 14 (1932).

Japanese name: Koshino-higan-zakura.

20) **Cerasus speciosa** (Koidz.) H. Ohba, comb. et stat. nov.

*Prunus jamasakura* Koidz. var. *speciosa* Koidz. in Bot. Mag. Tokyo **25:** 186 (1911).

Japanese name: Ôshima-zakura.

21) **Cerasus subhirtella** (Miq.) Sokolov in Tree and Shrubs USSR **3:** 735 (1954); A. Vassiliev in Trans. Sukhumi Bot. Gard. Fasc. 10, 123 (1957).

*Prunus subhirtella* Miq., Ann. Mus. Bot. Lugd.-Batav. **2:** 91 (1865).

Japanese name: Ko-higan-zakura.

21a) f. **autumnalis** (Makino) H. Ohba, comb. et stat. nov.

*Prunus subhirtella* var. *autumnalis* Makino in Bot. Mag. Tokyo **22:** 117 (1908).

Japanese name: Jûgatsu-zakura.

22) **Cerasus × syodoi** (Nakai) H. Ohba, comb. nov.

*Prunus syodoi* Nakai, Icon. Pl. As.-Orient. **4:** 393, t. 125 (1942).

Japanese name: Syôdô-zakura.

This is regarded as a putative hybrid between *Cerasus incisa* and presumably *C. sargentii.*

23) **Cerasus × takasawana** (Kubota et Funatsu) H. Ohba, comb. nov.

*Prunus × takasawana* Kubota et Funatsu in J. Geobot. (Kanazawa) **14:** 7 (1965).

Japanese name: Ômine-zakura.

This is a putative hybrid between *Cerasus apetala* var. *pilosa* and *C. sargentii*.

24) **Cerasus tschonoskii** (Koehne) H. Ohba, comb. nov.

*Prunus tschonoskii* Koehne in Sarg., Pl. Wils. **1:** 261 (1913).

Japanese name: Nikko-zakura.

This shows a wide range of variations of the size, shape, hairiness of leaves and the hairiness and length of peduncles, and is presumed to be derived from a hybrid between *Cerasus apetala* and *C. vercunda*. From the range and tendency of the variation *C. tschonoskii* may be introgressive to both putative parents.

25) **Cerasus verecunda** (Koidz.) H. Ohba, comb. nov.

*Prunus jamasakura* var. *verecunda* Koidz. in Bot. Mag. Tokyo **25:** 188 (1911).

Japanese name: Kasumi-sakura.

25a) f. **pendula** (Hara) H. Ohba, stat. et comb. nov.

*P. vercunda* var. *pendula* Hara in Bot. Mag. Tokyo **49:** 210 (1935).

Japanese name: Kirifuri-zakura.

25b) f. **pubipes** (Hara) H. Ohba, stat. et comb. nov.

*P. vercunda* var. *pubipes* Hara in Bot. Mag. Tokyo **49:** 210 (1935).

Japanese name: Usuge-kasumi-sakura.

26) **Cerasus yedoensis** (Matsum.) A. Vassiliev in Trans. Sukhumi Bot. Gard. Fasc. 10, 124 (1957); T.T. Yü et C.L. Li in Fl. Reipubl. Popul. Sin. **38:** 74 (1986).

*Prunus yedoensis* Matsumura in Bot. Mag. Tokyo **15:** 100 (1901).

Japanese name: Somei-yoshino.

27) **Cerasus×yuyamae** (Sugimoto) H. Ohba, comb. nov.

*Prunus×yuyamae* Sugimoto, New Keys Wood. Pl. Jap. 507 (1972).

Japanese name: Fuji-kasumi-sakura.

This is presumed to be a hybrid between *Cerasus incisa* and *C. verecunda*.

27a) nothovar. **bukosanensis** (Moriya) H. Ohba, comb. et stat. nov.

*Prunus×bukosanensis* Moriya in J. Geobot. (Kanazawa) **25:** 245 (1978).

Japanese name: Bukô-kasumi-sakura.

The putative parents are regarded as *Cerasus incisa* var. *bukosanensis* and *C. verecunda*.

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Hutchinson J. 1964. Tribe 7. Pruneae. *In* The Genera of Flowering Plants, **1:** 187–189. Oxford University Press, Oxford.

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Pojarkova A. I. 1941. Subfamily Prunoideae. *In* Komarov V. L. (ed.), Flora URSS **10:** 509–604. Nauka, Moscow.

Rehder A. 1940. *Prunus*. *In* Manual of Cultivated Trees and Shrubs, 2nd edition, 452–481. Macmillan Publishing Co., Inc., New York.

Wilson E. H. 1916. The cherries of Japan. 68 pp. Publ. Arnold Arboretum No. 7.

Yü T. T. and C. L. Li 1986. Rosaceae (3) Prunoideae. *In* Flora Reipublicae Popularis Sinicae **38:** 1–133. Science Press, Beijing.

## 要 旨

サクラの属レベルでの分類については2つの見方がある．ひとつは，サクラをスモモ，モモ，バクチノキあるいはウワミズザクラなどと共に *Prunus* に分類する見解である（属の和名としては従来サクラ属が用いられるが，私はスモモ属という和名をプランタ20号（1992）で提唱した）．他方は，サクラに対して他とは別な独立した属を設立する見解である．後者の見解としては *Cerasus* が正名である．この属は Miller（1754）

によって設立され，その基準種は，*Cerasus vulgaris*（スミミザクラ酸味桜桃）であるが，和名にはサクラ属を提唱した．

私は平凡社刊「日本の野生植物」(1989) では前者の見解を採用したが，研究を進める過程で後者が正しい措置であると考えるに至った．それは，前者の見解で *Prunus* に分類される種は外部形態やフラボン化合物などのいくつかの形質によって，明確に複数の自然な群に区分されることによる．

この場合，そうした複数の自然群をまとめてひとつの属として扱う見解もありえるが，広義の *Prunus* はバラ科における属レベルの分類階級としては不自然に大きく，他の分類群の亜科または族に匹敵する．*Prunus* の細分化により，一時的に使い慣れた学名の変更が生じ，一般の混乱を招くことも予想されるが，分類体系の確立のためにはやむを得ぬことと考え本稿では日本の野生種と主要な栽培種について *Cerasus* のもとでの学名を整理した．

日本のサクラは，小泉源一 (1913)，三好学 (1916)，E. H. Wilson (1916)，E. Koehne (1913, 1917など) らによる個体レベルの解析の段階から，久保田秀夫らによる集団を対象とした解析に進み，最近ようやくその実態がかなり判るようになってきた．日本花の会が行なった調査はその成果のひとつである (Honda and Hayashi 1982)．