

The Correct Names of Two Japanese Species of *Physaliastrum* Makino (Solanaceae)

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日本のイガホオズキ属 2 種 (ナス科) の正しい学名

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The names to be used for two species of the small Japanese/Chinese genus *Physaliastrum* (Solanaceae) are corrected. The original description of *Chamaesaracha japonica* of Franchet and Savatier (1877) included two taxa and when this was discovered the epithet *japonica* was attached to the wrong taxon. Hence the names used in modern floras and even in the revision of the genus (Kuang and Lu 1965), are incorrect.

The correct name of the large-flowered, lanceolate-leaved species (Ao-hodzuki), is *P. japonicum* (Franch. et Savat.) Honda, not *P. savatieri* as is now in use. The correct name of the small-flowered, broad-leaved species (Iga-hodzuki) is *P. echinatum* (Yatabe) Makino, not *P. japonicum* as is now in use. It is noted that the genus is typified by *P. japonicum* (Franch. et Savat.) Honda, as proposed by Kuang and Lu (1965), even though these authors had another species in mind.

Introduction

Physaliastrum is a genus of about seven species distributed in Japan and China. It was founded by Makino (1914) to include two species that had previously been placed in the North American genus *Chamaesaracha* A. Gray. It was subsequently included in *Leucophysalis* by Averett (1977), but will, in the coming 'Flora of China', be reinstated by D'Arcy (pers comm.) and expanded to include *Archiphysalis*, another small Japanese/Chinese genus of three species.

This paper, however, deals with the application of correct names for two Japanese species of the genus. The two species are as follows.

1. ***Physaliastrum japonicum*** (Franch. et Savat.) Honda in Bot. Mag. Tokyo **45**: 139 (1931).

Physaliastrum savatieri (Makino) Makino in Bot. Mag. Tokyo **28**: 22 (1914).

Chamaesaracha savatieri Makino, Ill. Fl. Jap. **I**(11): 1 (1891).

Chamaesaracha watanabei Yatabe in Bot. Mag. Tokyo **5**: 315 (1891).

Chamaesaracha japonica Franch. et Savat., Enum. Pl. Jap. 2: 454 (1876).

TYPE: Japan, Nikko Savatier 2166 (P, lecto). Fig. 1.

2. ***Physaliastrum echinatum*** (Yatabe) Makino in Bot. Mag. Tokyo 28: 21 (1914).

Chamaesaracha japonica Makino, Ill. Fl. Jap. I(11): 1 (1891).

Chamaesaracha echinata Yatabe in Bot. Mag. Tokyo 5(56): 317 5(57): 355 (1891).

TYPE: Japan, Savatier 245 (P, lecto). Fig. 2.

Lectotypification is made on both species. The type of *P. japonicum* is clearly designated in the original description to Savatier 2166 bis but only Savatier 2166 could be traced. Although Yatabe did not designate a type for *P. echinatum*, it is quite clear from his publication that the name is based on the material supplied to Franchet and Savatier by the Japanese botanists Keiske Ito and Tanaka. The chosen lectotype bears the notations "Iga-hodzuki" and "*Chamaesaracha japonica* Fr. & Sav. en Tanaka".

A third Japanese taxon, *kimurai*, sometimes treated as a form of *P. echinatum*, sometimes as a species, is correctly named and is not further mentioned here.

Background

In 1877 Franchet and Savatier described a new taxon with the name *Chamaesaracha japonica*. The description was based on a specimen from Nikko, a town north of Tokyo, i.e. Savatier n. 2166 bis, which have solitary flowers and lanceolate leaves. Their description also included material, sent from Japan by the two Japanese botanists Keiske Ito and Tanaka, which have two to three flowers together and broadly ovate leaves. The vernacular name, according to Tanaka, was Iga-hudzuki.

That the description of *C. japonica* included two elements, was discovered independently(?) by

two Japanese botanists in 1891. Makino separated the two elements of *C. japonica* into two species, *C. japonica* and a new species *C. savatieri*. His new species was based on the Savatier element, which is clearly indicated by the name of the epithet and reference to the Savatier material from Nikko, and hence he relegated the remaining element to *C. japonica*. In terms of real plants he named the more common, broad-leaved species (Iga-hodzuki), *C. japonica* Makino (nom. illeg.), and the lanceolate-leaved, large-flowered species from Nikko, *C. savatieri* Makino. The vernacular name of the latter was Ao-hodzuki. Likewise Yatabe, only one day later, named the broad-leaved species, corresponding to the material sent by Keiske Ito and Tanaka, *C. echinata* Yatabe, and the lanceolate-leaved, large-flowered species, corresponding to the Savatier specimen, *C. watanabei* Yatabe. In a later publication Yatabe (1891b) expanded his description of *P. echinatum* and provided an illustration (Fig. 2). Statements setting forth this incorrect nomenclature were presented by Makino (1908).

In 1914 Makino described a new genus, *Physaliastrum*, making new combinations and renaming one species. The large-flowered species, Ao-hodzuki, still had the epithet *savatieri* Makino, but the Iga-hodzuki was now called *P. echinatum* (Yatabe) Makino, instead of *P. japonicum* Makino. Makino did not say why he changed the epithet into the one of Yatabe, perhaps he wanted in some way to honor his colleague, or perhaps he wanted to avoid confusion with the two-taxon *japonica* of Franchet and Savatier.

Original epithets cannot, however, just be dropped, as was observed by Honda (1931). He rightly restored the epithet *japonica* in the new combination *P. japonicum* (Franch. et Savat.) Honda. His list of synonyms and the given vernacular name Ao-hodzuki, makes it quite clear that



Fig. 1. *Physalis japonicum* (Franch. and Savat.) Honda, vernacular name Ao-hodzuki. From Makino (1891, plate LXV).

Honda considered the name to be typified by the Savatier specimen, and that this combination correctly denotes the large-flowered species.

Notwithstanding, in modern floras of Japan (e.g. Ohwi 1965) and the revision of the genus (Kuang and Lu 1965), the species underlying the names *P. japonicum* and *P. echinata* were reversed, i.e. using the epithet *japonicum* as Makino (1891) whilst referring to the combination of Honda (1931). Kuang and Lu (1965) even seem to be aware of using the wrong epithets, as they write, “tantum quoad nomen” after *P. japonicum* (Franch. et Savat.) Honda, and they list this combination as a synonym under *P. savatieri* Makino, adding “quoad syn. et specim.”

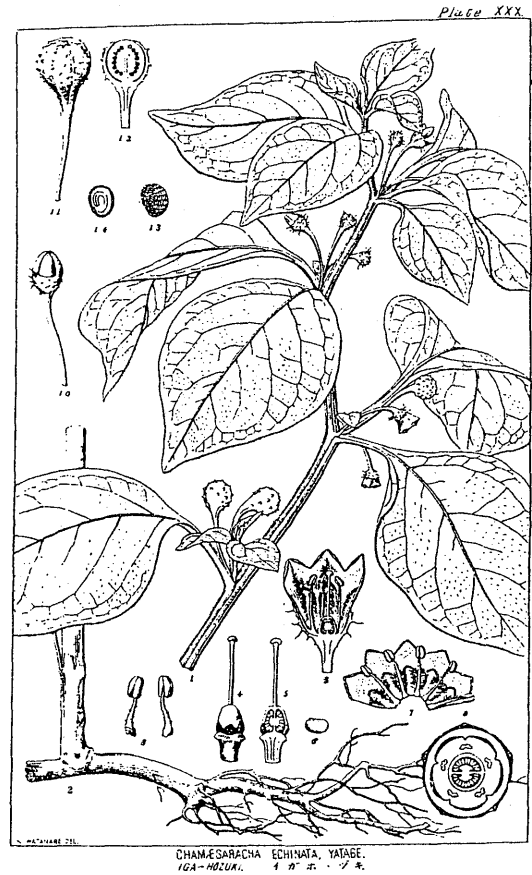


Fig. 2. *Physalis echinata* (Yatabe) Makino, vernacular name Iga-hodzuki. From Yatabe (1891, plate XXX).

Conclusions

The combination *P. japonicum* (Franch. et Savat.) Honda is based on *C. japonica* Franch. et Savat. This name must be considered to be typified by the original material of Savatier and the only specimen mentioned in the original description, i.e. Savatier n. 2166. This conclusion was drawn already by Honda 1931. Hence *P. japonicum* (Franch. et Savat.) Honda is the correct name of the large-flowered, lanceolate-leaved species, Ao-hodzuki, *not* the small-flowered species, as it is used today.

The correct name of the small-flowered, broad-leaved Iga-hodzuki is thus *P. echinata* (Yatabe)

Makino.

An additional note should be made of the typification of the genus. In 1956 Kuang and Lu lectotypified the genus by *P. japonicum* (Franch. et Savat.) Honda and this was accepted by D'Arcy 1986. Even though it is quite clear that the authors by this name meant the small-flowered Iga-hodzuki this typification is formally correct and still in force. Thus the genus is typified by the large-flowered taxon of Franchet and Savatier, *C. japonicum*, and the type of this is Savatier n. 2166.

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Endnote

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要 旨

イガホウズキ属の *Chamaesaracha japonica* Franch. et Savat. が二つの植物を含んでいることがわかって、牧野により改められたとき、学名の適用を誤ったため、今日でもそのまま通用している。アオホオズキは *Physalistrum japonicum* (Franch. et Savat.) Honda であり、イガホオズキは *P. echinatum* (Yatabe) Makino である。