

Hideki TAKAHASHI^{a,*} and Alisa GRABOVSKAYA-BORODINA^b: **Typification of *Acer miyabei* Maxim. (*Aceraceae*)**

^aThe Hokkaido University Museum, Hokkaido University, Sapporo, Hokkaido, 060-0810 JAPAN

^bKomarov Botanical Institute, Russian Academy of Science, Prof. Popov Street, 2 St. Petersburg, 197376 RUSSIA

*Corresponding author: hide@museum.hokudai.ac.jp

Summary: The type specimen of *Acer miyabei* Maxim. at LE consists of flowering and fruiting elements. These two elements are considered to be syntypes, therefore, Popova's use of holotype for the flowering specimen of *A. miyabei* Maxim. is an error to be corrected as lectotype under ICBN Art. 9.8. Isolectotypes of *A. miyabei* are also at GH, SAPS and TL.

Acer miyabei Maxim., an andromonoecious maple tree growing in Honshu and Hokkaido, Japan (Ogata 1999), was described by Russian botanist C. J. Maximowicz (1888) with citation of the flowering and fruiting specimens, i.e., “Yezo: prov. Hidaka, ad Niikappu, med. Junio flor., Augusto fructif. legit K. Miyabe.” The type specimen of *A. miyabei* kept at LE is one herbarium sheet (Fig. 1; also see the lower photograph of p. 36 in Koyama 2000, and fig. 4-2 in Takahashi 2010) which consists of two elements at least. The flowering element (A; left) is composed of four branches (A1 to A4) and fruiting element (B; right) is of one branch, one infructescence and two samaras (B1 to B4). These two elements correspond to the above cited specimens in the protologue by Maximowicz (1888). An original pencil drawing of the flower parts, made by Maximowicz, is in the lower right-hand corner of the herbarium specimen.

Flowering branches of *A. miyabei* collected by Miyabe on June 14, 1884 at Niikappu, Prov. Hidaka, Hokkaido, Japan, were sent on to Maximowicz in St. Petersburg, Russia probably on July 7, 1886 (Takahashi 2010). To

fulfill Maximowicz's hope of examining the fruits, expressed in his letter dated March 21, 1887 [Hokkaido University Archives, M-15, page 4], Miyabe who was studying at Harvard University, U.S.A. at that time requested his Japanese colleague, Mr. Y. Kuroiwa to collect a fruiting specimen at Niikappu (Ito 1953). The fruits of *A. miyabei* collected at Niikappu in August, 1887, were mailed to Maximowicz by Miyabe on April 30, 1888 [St. Petersburg Branch, Archives of Russian Academy of Science, Fund 82, Inventory 2, Case 41, page 14 verte]. Based on both flowering and fruiting specimens, *A. miyabei* Maxim. was described by Maximowicz (1888) in Bull. Acad. Imp. Sci. St.-Petersb. 32: 485 on August 22, 1888.

Maximowicz's handwritten notes are in the lower part of a Miyabe's original herbarium label (Fig. 2), i.e., “fruct. ibid. Augusto 1887 ex eadem arbore lecta mis. ad V. 88” [“Fruit in the same place in August 1887, from the same tree collected, received in May 1888”]. Thus, these two elements on the one sheet; i.e., flowering element (A in Fig. 1) collected in June 14, 1884 by Miyabe himself, and fruiting element (B in Fig. 1) collected by Miyabe's colleague(s); Kuroiwa and others in August, 1887 and arriving in Petersburg in May, 1888, should be considered as syntypes under ICBN Art. 9.4.

Instead of treating these as syntypes, however, Popova (2004) cited the flowering specimen as the holotype of *A. miyabei* Maxim. (Borodina is the determiner on the annotation label, see Fig. 1). Thus, Popova's

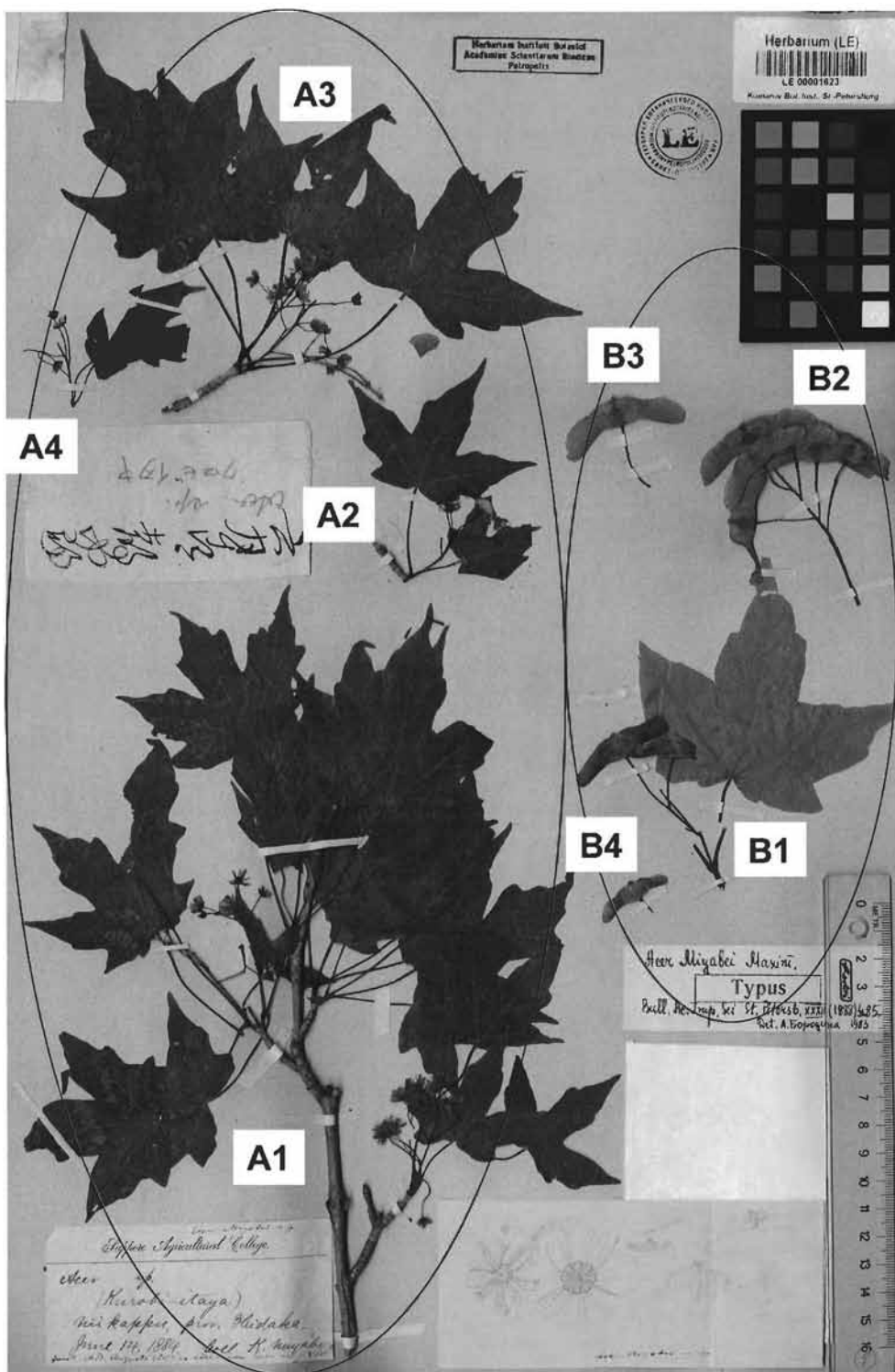


Fig. 1. Type specimen of *Acer miyabei* Maxim. (LE). A1–A4. Lectotype. B1–B4. Syntype.

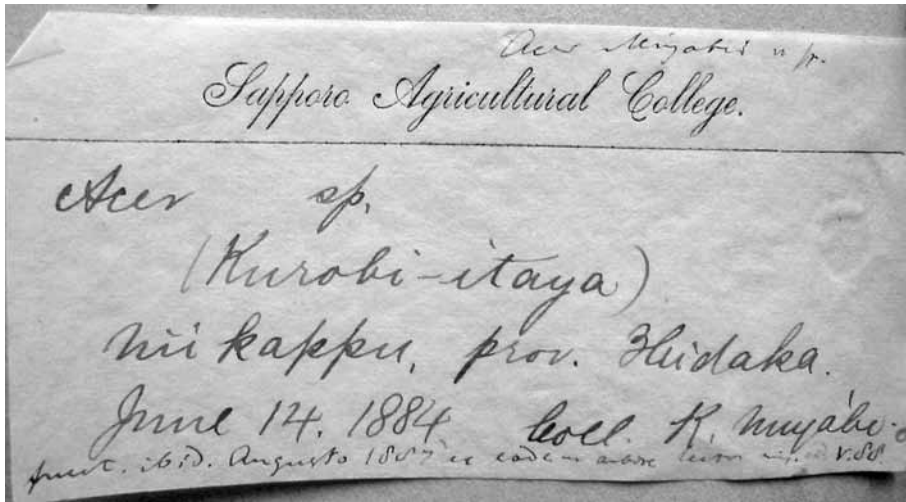


Fig. 2. Enlarged label at bottom left of Fig. 1.

use of “holotype” is an error to be corrected to lectotype under ICBN Art. 9.8.

Duplicates of the flowering specimen are also in GH (Harvard University) where Miyabe studied from September, 1886, until June, 1889, TI (University of Tokyo) where Miyabe once studied, and SAPS (Hokkaido University, formerly Sapporo Agricultural College), where Miyabe worked as a professor. The duplicate specimens should be treated as isolectotypes of *A. miyabei* because the flowering specimen at LE is here recognized as the lectotype. The followings summarize the typification of *Acer miyabei* Maxim.

Acer miyabei Maxim. in Bull. Acad. Imp. Sci. St.-Petersb. **32**: 485 (1888).

Lectotype (as holotype in Popova 2004, but corrected here): The four flowering branches on the left side of the sheet [A1–A4, Fig. 1] collected by Miyabe on June 14, 1884 (LE 1623; isolectotypes: GH 50450, SAPS 39001, TI). **Syntype**: The fruits and fruiting branches on the right side of the sheet [B1–B4, Fig. 1], part(s) of which was (were) collected by Y. Kuroiwa (cf. Ito 1953) in August, 1887 (LE 1623).

Doubtful material: Three leaves and five

samaras are mounted on a herbarium sheet (SAPS 39002) stamped “Co-Typus.” The details on the label on the sheet are: “*Acer miyabei* Maxim. / Type specimen / Niikappu. 1887. Y. Hirano” in Miyabe’s handwriting. But we can not determine with confidence that this specimen is a duplicate of the fruiting element of the type specimen of *A. miyabei* at LE, so we suspend judgment on the type status of this specimen at SAPS.

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クロビイタヤのタイプ検討 (高橋英樹^a, Alisa Grabovskaya-Borodina^b)

クロビイタヤ *Acer miyabei* Maxim. の開花標本は、1884年6月14日に北海道日高地方新冠で当時札幌農学校助教であった宮部金吾により採集された。新分類群と考えた宮部はおそらく1886年7月7日付けで、ロシアの植物学者マキシモヴィッチに標本を送り同定を依頼した。マキシモヴィッチは米国ハーバード大学留学中の宮部宛に1887年3月21日付けで手紙を送り、新種“*Acer Miyabei*”との見立てを示し、さらに果実期の標本を所望した。このため宮部は当時新冠御料牧場の場長だった黒岩四方之進氏に採集を依頼した。その年の8月に新冠で採集されたクロビイタヤの果実標本は米国の宮部の手を経て1888年4月30日付けの書簡でロシアのマキシモヴィッチに転送された。開花期と果実期の標本に基づいてマキシモヴィッチの新種記載文が発表されたのは1888年8月22日、宮部による開花標本採集から4年が経っていた。

マキシモヴィッチにより1888年に新種記載されたクロビイタヤの初発表文中では、宮部金吾採集による花と果実の両方の標本が引用されている。現在、ロシア科学

アカデミーコマロフ植物学研究所(LE)に保管されているクロビイタヤのタイプ標本台紙にはこれら開花標本と果実標本の2標本が貼付されている。同一台紙上に貼付されているこれら2点の標本は国際植物命名規約第9.4条の下では等価基準標本(syntype)とみなされる。

一方、最近になってPopova (2004)はLEのタイプ標本カタログ中で、*Acer miyabei* Maxim. の2標本のうち1884年6月14日に採集された開花標本を正基準標本(holotype)とみなした。これは国際植物命名規約第9.8条の下では選定基準標本(lectotype)と訂正されるべき間違いとして扱われる。そこで開花標本を改めてクロビイタヤの選定基準標本と認め、果実標本は等価基準標本と認めた。さらに副選定基準標本(isolectotype)にあたる選定基準標本(開花標本)の重複標本が、宮部博士がかつて学んだハーバード大学、東京大学、北海道大学にもあることを確かめた。

^a 北海道大学総合博物館,

^b ロシア科学アカデミーコマロフ植物学研究所