Report

Plant Type Materials from Kanagawa Prefecture (Japan) in the Herbarium of the Komarov Botanical Institute (LE; Russia): Lycophytes, Ferns, Gymnosperms, and Angiosperms (Monocots and some Dicots)

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Abstract. In this study, we examined type specimens and related materials collected from Kanagawa Prefecture, Japan, deposited in the herbarium of the Komarov Botanical Institute of the Russian Academy of Sciences (LE). Many of these specimens were collected by the Russian botanist C. J. Maximowicz (1827–1891) and his assistant Tschonosuki Sukawa, and most have been described as new taxa by C. J. Maximowicz. Additional complementary data obtained in this investigation, such as collection date, locality, and collector, are registered in the database of Kanagawa Prefectural Museum of Natural History along with images of the specimens: 62 specimens from 29 taxa comprising lycophytes, ferns, gymnosperms, and angiosperms (monocots and some dicots). In this paper, we indicated the information of examined type materials, including the type materials of two taxa (*Polygonatum giganteum* A. Dietr. var. *macranthum* Maxim. and *Juncus effusus* L. var. *decipiens* Buchenau) that we have discovered.

Key words: Carl Johann Maximowicz, *Juncus effusus* var. *decipiens*, *Polygonatum giganteum* var. *macranthum*, Tschonosuki (Chonosuke) Sukawa

Introduction

Modern taxonomic studies of the Japanese flora were initiated with the collections made by Carl Peter Thunberg, who came to Japan in 1775, followed by Philipp Franz Balthasar von Siebold, Paul Amedée Ludovic Savatier, Carl Johann Maximowicz and others. Many of the type specimens and related materials of the plants they studied are deposited in the herbaria of institutes within their home countries, and so are the plants collected from Kanagawa Prefecture.

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The plants described from Kanagawa Prefecture have been listed by Ozaki (2001). In order to establish a database of the regional flora, we have studied the specimens kept in these foreign herbaria and published serial reports on the type materials (Katsuyama *et al.*, 2013; Tanaka *et al.*, 2015, 2016). In this study, we examined the type materials of vascular plants [lycophytes, ferns, gymnosperms, and angiosperms (all monocots and some dicots)] collected from Kanagawa Prefecture in the Central and East Asian Department of Herbarium of higher plants at Komarov Botanical Institute of the Russian Academy of Sciences (LE). Various specimens of vascular plants, bryophytes, lichens, fungi, and algae collected worldwide are deposited in LE, among which are numerous specimens collected in Japan by Maximowicz and his assistant, Tschonosuki (Chonosuke in the Hepburn system of Romanizing the Japanese language) Sukawa.

The Russian botanist Maximowicz (1827–1891) who studied vascular plants, primarily in East and Central Asia, spent the years from 1860 to1864 in Japan, during which time, he actively surveyed the flora of the Yokohama in Kanagawa Prefecture, as well as Oshima Peninsula in

Submitted: 21 Oct. 2022; Accepted: 11 Nov. 2023; Published: 22 Mar. 2024

Hokkaido, Nagasaki, and other areas. In the course of the fieldtrip, Maximowicz hired Sukawa Tschonosuki as an assistant collector. After Maximowicz had returned to Russia, Tschonosuki responded to Maximowicz's request to collect plant specimens from wider regions of Japan, which were duly sent to Maximowicz in St. Petersburg. Maximowicz's activities and research in Japan, and his interaction with Japanese botanists are shown in detail by Grabovskaya-Borodina (2016).

Materials and Methods

We examined the type specimens and related materials of plants collected from Kanagawa Prefecture in the LE from September 4 th to 13 th, 2019, with reference to Ozaki (2001) and Grubov (2004). The specimens were photographed using a hand-held Nikon D800E digital SLR camera with a built-in flash and AF-S NIKKOR 28mm f/1.8G. The resulting images were 4,912 × 7,360 pixels. All cited specimens have already been scanned (600 DPI) and deposited at the database of the Komarov Botanical Institute (LE) (https://en.herbariumle.ru/). The collection information of cited specimens on the LE database were compiled from the "Catalogue of the type specimens of East-Asian vascular plants in the Herbarium of the Komarov Botanical Institute (LE) Part 1 (Japan and Korea)" (Grubov, 2004) and the latest studies by A. E. Grabovskaya-Borodina. The collected images and specimen collection information have been registered at the vascular plant image database (KPM-NX) in the collection management system of the Kanagawa Prefectural Museum of Natural History.

Results and Discussion

Among the materials examined in the LE herbarium, we identified 62 type materials on 56 sheets of vascular plants collected from Kanagawa Prefecture. These comprise 2 holotypes, 3 isotypes, 14 lectotypes, 12 isolectotypes, 30 syntypes, and 1 isosyntypes of 29 taxa belonging to 17 families. Most of these taxa were described by C. J. Maximowicz, with the exception of eight taxa described by other authors, namely, Eduard August von Regel, Vladimir Leontjevich Komarov, Gunnar Samuelsson, Adrien René Franchet & Paul Amedée Ludovic Savatier (2 taxa), Franz Georg Philipp Buchenau (2 taxa), and Merritt Lyndon Fernald. The type materials of *Polygonatum giganteum* A. Dietr. var. *macranthum* Maxim. and *Juncus effusus* L. var. *decipiens* Buchenau are recognized for the first time and are herein treated as syntypes.

A List of Type materials

Explanation

1. The arrangement of families in the list follows Christenhusz & Schneider (2011) and Christenhusz *et al.* (2011b) for ferns, Christenhusz *et al.* (2011a) for gymnosperms, and the Angiosperm Phylogeny Group (2016) for angiosperms. Genera and species within families are arranged alphabetically by scientific name.
2. The descriptions of each species are presented in the following order:
(1) the scientific name and nomenclature citation.
(2) accepted name: the scientific name accepted by the Flora-Kanagawa Association (2018). The taxa which are not listed in the Flora-Kanagawa Association (2018), *Veratrum stamineum* Maxim. var. *stamineum* and *Iris tectorum* Maxim., follow Yonekura & Kajita (2003–).
(3) specimen collection information, including locality, date, collector, and collector specimen number, as indicated on the label attached to the specimen. In C.J. Maximowicz's collections we use two dates - the Gregorian and the Julian calendar, which were then used in Russia. We use a previously adopted form of labeling (Tanaka *et al.*, 2015, 2016). We omit Iter secundum – C.J. Maximowicz second journey in the Russian Far East and Japan (1859 – 1864).
(4) specimens ID: The herbarium acronym LE refers to the Herbarium of higher plants at Komarov Botanical Institute of the Russian Academy of Sciences.
(5) figure numbers and images ID: KPM-NX indicates the vascular plant image database in the collection management system of the Kanagawa Prefectural Museum of Natural History.
(6) comment: Typification and other information. Typification was based on Grubov (2004) and the latest studies.
3. No typification is proposed in this publication, only information from the published literature and labels attached to the specimens.
4. The abbreviations of authors and literary sources of the names are those given in the International Plant Names Index database (https://www.ipni.org/). Herbarium acronyms were obtained from the Index Herbariorum database (http://sweetgum.nybg.org/science/ih/).

Lycophytes

Lycopodiaceae

Lycopodium cryptomerinum Maxim. in Bull. Acad. Sci. Pétersb. 15: 231 (1870).

Accepted name: *Phlegmariurus cryptomerinus* (Maxim.) Satou [Japanese name: Sugiran]

Japonia, Yokohama, hortularis Yedoensibus audit: Sugirang, i. e. cryptomerinum, cultum, 28 VIII/9 IX 1862, Maximowicz [sine num.] [LE 01009938] (Fig. 1; KPM-NX0001851). Y. Ivanenko designated this specimen as the lectotype in Illarionova (2004).

Japonia, Yokohama, cultum, 8/20 I 1864, Maximowicz [sine num.] [LE 01009939] (Fig. 2; KPM-NX0001852). Illarionova (2004) treated this specimen as a syntype .

Ferns

Osmundaceae

Osmunda cinnamomea L. **var.** ***asiatica*** Fernald in Rhodora 32: 75 (1930).

Accepted name: *Osmundastrum cinnamomeum* (L). C.Presl var. *fokiense* (Copel.) Tagawa [Japanese name: Yamadori-zenmai]

Japonia, Yokohama, 1862, Maximowicz [sine num.] [LE 01009936] (Fig. 3, KPM-NX0001858). Illarionova (2004) treated this specimen as a syntype.

Dryopteridaceae

Aspidium craspedosorum Maxim. **var.** ***japonicum*** Maxim. in Bull. Acad. Sci. Pétersb. 15: 231 (1870).

Accepted name: *Polystichum craspedosorum* (Maxim). Diels [Japanese name: Tsuru-denda]

Japonia, Yokohama, in jugo Hakone, in saxis, silvarum frondosarum, 18/30 X 1862, Maximowicz [sine num.] [LE 01009865] (Fig. 4, KPM-NX0001854), Japonia, Yokohama, Hakone, 18/30 X 1862, Maximowicz [sine num.] [LE 01009866] (Fig. 5, KPM-NX0001855). Illarionova (2004) treated these specimens as syntypes.

Gymnosperms

Cupressaceae

Chamaecyparis breviramea Maxim. in Bull. Acad. Sci. Pétersb. 10: 489 (1866).

Accepted name: *Chamaecyparis obtusa* (Siebold & Zucc.). Endl. [Japanese name: Kurobe]

Japonia, Yokohama, culta, 1/13 II 1862, Maximowicz [sine num.] [LE 01011614] (Fig. 6, KPM-NX0001841). L. Orlova designated this specimen as the lectotype in Novosselova & Orlova (2004).

Japonia, Yokohama, culta, 1/13 X 1862, Maximowicz [sine num.] [LE 01011615] (Fig. 6, KPM-NX0001841), Japonia, Yokohama, culta, 5/17 IV 1862, Maximowicz [sine num.] [LE 01042739] (Fig. 7, KPM-NX0001923), Japonia, Yokohama, culta, 18/30 V 1862, Maximowicz [sine num.] [LE 01011613] (Fig. 7, KPM-NX0001840),

Fig. 1. Lectotype of *Lycopodium cryptomerinum* Maxim. (LE 01009938; KPM-NX0001851).

Fig. 2. Syntype of *Lycopodium cryptomerinum* Maxim. (LE 01009939; KPM-NX0001852).

Fig. 3. Syntype of *Osmunda cinnamomea* L. var. *asiatica* Fernald (LE 01009936; KPM-NX0001858).

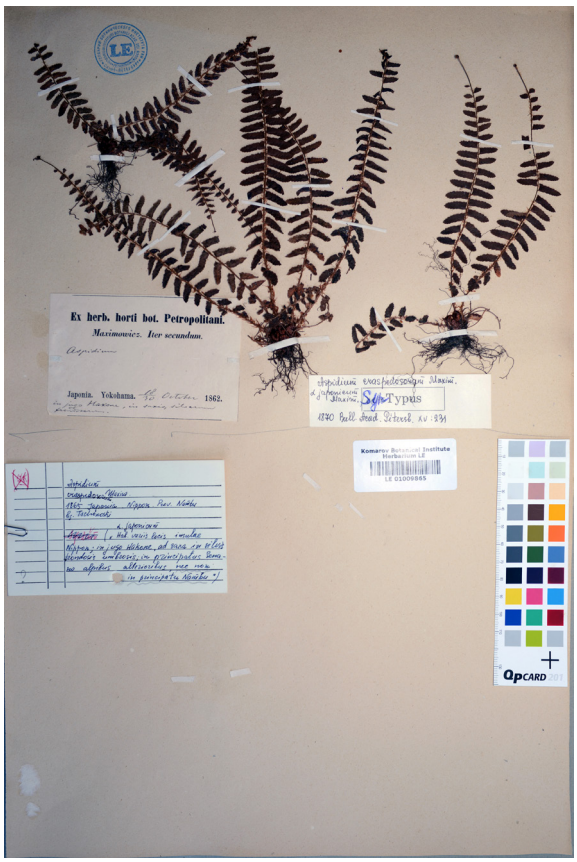

Fig. 4. Syntype of *Aspidium craspedosorum* Maxim. var. *japonicum* Maxim. (LE 01009865; KPM-NX0001854).

Fig. 5. Syntype of *Aspidium craspedosorum* Maxim. var. *japonicum* Maxim. (LE 01009866; KPM-NX0001855).

Fig. 6. Lectotype (LE 01011614) and syntype (LE 01011615) of *Chamaecyparis breviramea* Maxim. (KPM-NX0001841).

Japonia, Yokohama, culta, 22 IX/ 4 X 1862, Maximowicz [sine num.] [LE 01011611] (Fig. 8, KPM-NX0001839), Novosselova & Orlova (2004) treated these specimens as syntypes.

Chamaecyparis pendula Maxim. in Bull. Acad. Sci. Pétersb. 10: 489 (1866)

Accepted name: *Chamaecyparis obtusa* (Siebold & Zucc.) Endl. [Japanese name: Hinoki]

Japonia, Yokohama, culta 29 IX/11 X 1862, Maximowicz [sine num.] [LE 01011619] (Fig. 9, KPM-NX0001845). V. Novosselova annotated on the sheet as "Syntypus" in 23 X 1997.

Angiosperms

Lauraceae

Lindera hypoglauca Maxim. in Bull. Acad. Sci. Pétersb. 12: 71 (1867).

Accepted name: *Lindera umbellata* Thunb. var. *umbellata* [Japanese name: Kuromoji]

Japonia, in jugi Hakone, m. Ftango, in cacumine, 5/17 X 1862, Maximowicz [sine num.] [LE 01014213] (Fig. 10, KPM-NX0001248). Imkhanitzkaya (2002) designated this specimen as the lectotype.

Alismataceae

Alisma rariflorum Sam. in Ark. Bot. 24. A, 7: 32 (1932).

Accepted name: *Alisma rariflorum* Sam. [Japanese name: Tōgoku-hera-omodaka]

Japonia, Yokohama 18/30 VII 1862, Maximowicz, no.1571 [LE 01011710] (Fig. 11, KPM-NX0001249), Japonia, Yokohama, 18/30 VII 1862, Maximowicz [sine num.] [LE 01011711] (Fig. 12, KPM-NX0001250). Grabovskaya-Borodina (2004) treated these specimens as isolectotypes.

Hydrocharitaceae

Najas serristipula Maxim. in Bull. Acad. Sci. Pétersb. 12: 72 (1867).

Accepted name: *Najas graminea* Delile [Japanese name: Hossumo]

Japonia, Yokohama, in fossis, 13/25 IX 1862, Maximowicz [sine num.] [LE 01011708] (Fig. 13, KPM-NX0001252). Grabovskaya-Borodina (2004) treated this specimen as the holotype, with an isotype [LE 01011709] (Fig. 14, KPM-NX0001253).

Fig. 7. Syntypes of *Chamaecyparis breviramea* Maxim. (LE 01042739, LE 01011613; KPM-NX0001923).

Fig. 8. Syntype of *Chamaecyparis breviramea* Maxim. (LE 01011611; KPM-NX0001839).

Fig. 9. Syntype of *Chamaecyparis pendula* Maxim. (LE 01011619; KPM-NX0001845).

Fig. 10. Lectotype of *Lindera hypoglauca* Maxim. (LE 01014213; KPM-NX0001248).

Fig. 11. Isolectotype of *Alisma rariflorum* Sam. (LE 01011710; KPM-NX0001249).

Fig. 12. Isolectotype of *Alisma rariflorum* Sam. (LE 01011711; KPM-NX0001250).

Fig. 13. Holotype of *Najas serristipula* Maxim. (LE 01011708; KPM-NX0001252).

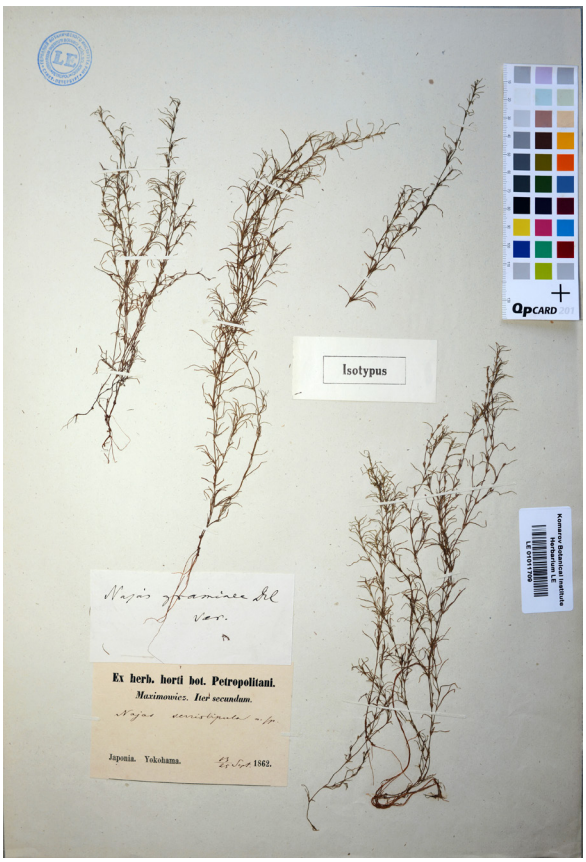

Fig. 14. Isotype of *Najas serristipula* Maxim. (LE 01011709; KPM-NX0001253).

Nartheciaceae

Metanarthecium luteo-viride Maxim. in Bull. Acad. Sci. Pétersb. 11: 438 (1866).

Accepted name: *Metanarthecium luteoviride* Maxim. [Japanese name: Nogiran]

Japonia, in montibus Hakone prope Foudgi-Yama, 1864, Tanaka et Yeouchima [sine num.] [LE 01012496] (Fig. 15, KPM-NX0001921). Popova (2004) treated this specimen as a syntype.

Melanthiaceae

Veratrum stamineum Maxim. in Bull. Acad. Sci. Pétersb. 15: 230 (1870).

Accepted name: *Veratrum stamineum* Maxim. var. *stamineum* [Japanese name: Ko-baikeisō]

Japonia, Nippon media, 1866, Tschonoski [sine num.] [LE 01012500] (Fig. 16, KPM-NX0001258). V. Grubov designated this specimen as the lectotype in Popova (2003), with isolectotypes [LE 01012501] (Fig. 17, KPM-NX0001257), [LE 01012502] (Fig. 18, KPM-NX0001256), [LE 01012503] (Fig. 19, KPM-NX0001255), [LE 01012504] (Fig. 20, KPM-NX0001254), [LE 01012505] (Fig. 21, KPM-NX0001259).

Although the specimens do not include any locality names of the Kanagawa Prefecture, they are listed here because it is suggested that they are collected in Hakone in the original description as follows: “In Nippon media, verosimiliter jugo Hakone, detexit a. 1866 et misit indef. Tschonoski …”. According to the Flora Kanagawa Association (2018), however, *Veratrum stamineum* Maxim. var. *stamineum* is not distributed in Kanagawa Prefecture.

Orchidaceae

Calypso japonica Maxim. ex Kom. in Acta Horti Petrop. 20: 533 (1901).

Accepted name: *Dactylostalix ringens* Rchb. f. [Japanese name: Ichiyō-ran]

Japonia, Nippon, Hakone ad rivulos in sylvis, 1864, Tschonoski [sine num.] [LE 01012253] (Fig. 22, KPM-NX0001920). Grabovskaya-Borodina (2004) treated this specimen as a syntype.

Malaxis japonica Maxim. in Bull. Acad. Sci. Pétersb. 22: 257, tab. [sine No.], fig. 17–22 (1876).

Accepted name: *Oberonia japonic*a (Maxim.) Makino [Japanese name: Yōraku-ran]

Fig. 15. Syntype of *Metanarthecium luteo-viride* Maxim. (LE 01012496; KPM-NX0001921).

Fig. 16. Lectotype of *Veratrum stamineum* Maxim. (LE 01012500; KPM-NX0001258).

Fig. 17. Isolectotype of *Veratrum stamineum* Maxim. (LE 01012501; KPM-NX0001257).

Fig. 18. Isolectotype of *Veratrum stamineum* Maxim. (LE 01012502; KPM-NX0001256).

Fig. 19. Isolectotype of *Veratrum stamineum* Maxim. (LE 01012503; KPM-NX0001255).

Fig. 20. Isolectotype of *Veratrum stamineum* Maxim. (LE 01012504; KPM-NX0001254).

Fig. 21. Isolectotype of *Veratrum stamineum* Maxim. (LE 01012505; KPM-NX0001259).

Fig. 22. Syntype of *Calypso japonica* Maxim. ex Kom. (LE 01012253; KPM-NX0001920).

sur le Cephalotaxus drupacea, aux environs d'Yokoska, 1866–1871, L. Savatier, no. 3062 [LE 01012245] (Fig.23, KPM-NX0001275). Grabovskaya-Borodina (2004) treated this specimen as a syntype.

Iridaceae

Iris tectorum Maxim. in Bull. Acad. Sci. Pétersb. 15: 380 (1870).

Accepted name: *Iris tectorum* Maxim. [Japanese name: Ichihatsu]

Japonia, Yokohama, Kamakura, cult., 15/27 IV 1862, Maximowicz, no.1129 [LE 01011510] (Fig. 24, KPM-NX0001279). V. Grubov designated this specimen as the lectotype in Grabovskaya-Borodina (2004).

Japonia, Yokohama, in tectis …vicorum nec non into ... in agris, 26 IV/8 V 1862, Maximowicz [sine num.] [LE 01011511] (Fig. 25, KPM-NX0001280), Japonia, Yokohama, ad agrorum margines, 3/15 V 1862, Maximowicz [sine num.] [LE 01011512] (Fig. 26, KPM-NX0001281). Grabovskaya-Borodina (2004) treated these specimens as syntypes.

Amaryllidaceae

Allium japonicum Regel in Acta Horti Petrop. 3, 2: 133 (1875), nom. illeg., non Steud. (1840).

Accepted name: *Allium thunbergii* G.Don [Japanese name: Yama-rakkyō]

Japonia, Yokohama, Hakone, 6/18 X 1862, Maximowicz [sine num.] [LE 01012554] (Fig. 27, KPM-NX0001287). R.V. Kamelin designated this specimen as the lectotype in Buzunova (2004), with two isolectotypes [LE 01012561] (Fig. 28, KPM-NX0001289), [LE 01012553] (Fig. 29, KPM-NX0001284)

Japonia, Yokohama, 12/24 X 1862, Maximowicz [sine num.] [LE 01012557] (Fig. 30, KPM-NX0001282), Japonia, Yokohama, 5/17 XII 1861, Maximowicz, no. 822. [LE 01012558] (Fig. 30, KPM-NX0001282), Japonia, Yokohama, 8/20 X 1862, Maximowicz [sine num.] [LE 01012555] (Fig. 31, KPM-NX0001285). Buzunova (2004) treated these specimens as syntypes.

Lycoris sanguinea Maxim. in Bot. Jahrb. 6: 80 (1885).

Accepted name: *Lycoris sanguinea* Maxim. var. *sanguinea* [Japanese name: Kitsune-no-kamisori]

Japonia, Yokohama, 3/15 XII 1861, Maximowicz, no. 805

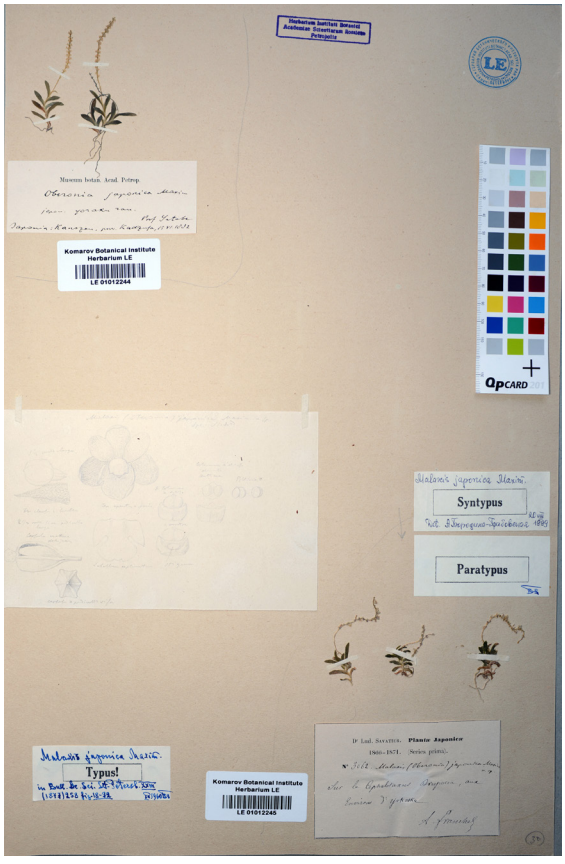

Fig. 23. Syntype of *Malaxis japonica* Maxim. (LE 01012245; KPM-NX0001275).

Fig. 24. Lectotype of *Iris tectorum* Maxim. (LE 01011510; KPM-NX0001279).

Fig. 25. Syntype of *Iris tectorum* Maxim. (LE 01011511; KPM-NX0001280).

Fig. 26. Syntype of *Iris tectorum* Maxim. (LE 01011512; KPM-NX0001281).

Fig. 27. Lectotype of *Allium japonicum* Regel (LE 01012554; KPM-NX0001287).

Fig. 28. Isolectotype of *Allium japonicum* Regel (LE 01012561; KPM-NX0001289).

Fig. 29. Isolectotype of *Allium japonicum* Regel (LE 01012553; KPM-NX0001284).

Fig. 30. Syntypes of *Allium japonicum* Regel (LE 01012557, LE 01012558; KPM-NX0001282).

[LE 01012637] (Fig. 32, KPM-NX0001294), Japonia. Yokohama, 2/14 VIII 1862, Maximowicz. [sine num.] [LE 01012635] (Fig. 32, KPM-NX0001294), Japonia. Yokohama, 29 IX/12 X 1862, Maximowicz [sine num.] [LE 01012636] (Fig. 32, KPM-NX0001294). Grabovskaya-Borodina (2004) treated these specimens as syntypes.

Japonia. Yokohama, perfrequens ad declivitates, fossas est, 25 VII/ 6 VIII 1862, Maximowicz, no.1610, [LE 01012633] (Fig. 33, KPM-NX0001297). Grabovskaya-Borodina (2004) treated this specimen as a syntype, with an isosyntype [LE 01012634] (Fig. 34, KPM-NX0001295).

Ungernia oldhamii Maxim. in Bot. Jahrb. 6: 76 (1885).

Accepted name: *Lycoris sanguinea* Maxim. var. *sanguinea* [Japanese name: Kitsune-no-kamisori]

Japonia, Yokohama, 1862, botan. Japon. [sine num.] [LE 01012630] (Fig. 35, KPM-NX0001293). Grabovskaya-Borodina (2004) treated this specimen as the holotype.

Asparagaceae

Polygonatum giganteum A. Dietr. **var.** *macranthum* Maxim. in Bull. Acad. Sci. Pétersb. 29: 210 (1883).

Accepted name: *Polygonatum macranthum* (Maxim.) Koidz. [Japanese name: Oō-narukoyuri]

Japonia, Yokohama, Hakone, 7/11 X 1862, Maximowicz. [sine num.] [LE 01012153] (Fig. 36, KPM-NX0001304). V. Grubov [sine datum] annotated on the sheet as "Typus!". It is a syntype newly pointed out here.

Eriocaulaceae

Eriocaulon alpestre Hook.f. & Thomson ex Körn. **var.** ***robustium*** Maxim., Diagn. Pl. Nov. Asiat. 8: 25 (1893) ("*robustius*").

Accepted name: *Eriocaulon cinereum* R. Br. [Japanese name: Hoshikusa]

Hakone, Sagami, 27 IX 1886, T. Makino, no 497 [LE 01012432] (Fig. 37, KPM-NX0001310). Tzvelev (1985) designated this specimen as the lectotype.

Japonia, Yokohama, 5/17 IX 1862, Maximowicz [sine num.] [LE 01012430] (Fig. 37, KPM-NX0001310), Yokoska, in orizetis (Nippon) L. Savatier, 1866–1871, L. Savatier [sine num.] [LE 01012427] (Fig. 38, KPM-NX0001308). Novosselova (2004) treated these specimens as syntypes.

Eriocaulon nipponicum Maxim., Diagn. Pl. Nov. Asiat. 8: 9 (1893).

Accepted name: *Eriocaulon decemflorum* Maxim.

Fig. 31. Syntype of *Allium japonicum* Regel (LE 01012555; KPM-NX0001285).

Fig. 32. Syntypes of *Lycoris sanguinea* Maxim. (LE 01012637, LE 01012635, LE 01012636; KPM-NX0001294).

Fig. 33. Syntype of *Lycoris sanguinea* Maxim. (LE 01012633; KPM-NX0001297).

Fig. 34. Isosyntype of *Lycoris sanguinea* Maxim. (LE 01012634; KPM-NX0001295).

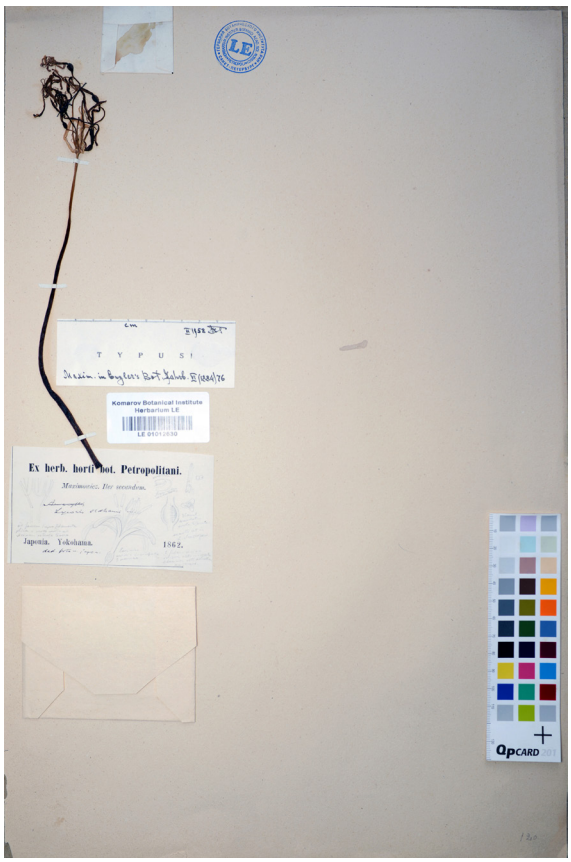

Fig. 35. Holotype of *Ungernia oldhamii* Maxim. (LE 01012630; KPM-NX0001293).

Fig. 36. Syntype of *Polygonatum giganteum* A. Dietr var. *macranthum* Maxim. (LE 01012153; KPM-NX0001304).

Fig. 37. Lectotype (LE 01012432) and syntype (LE 01012430) of *Eriocaulon alpestre* Hook.f. & Thomson ex Körn. var. *robustium* Maxim. (KPM-NX0001310).

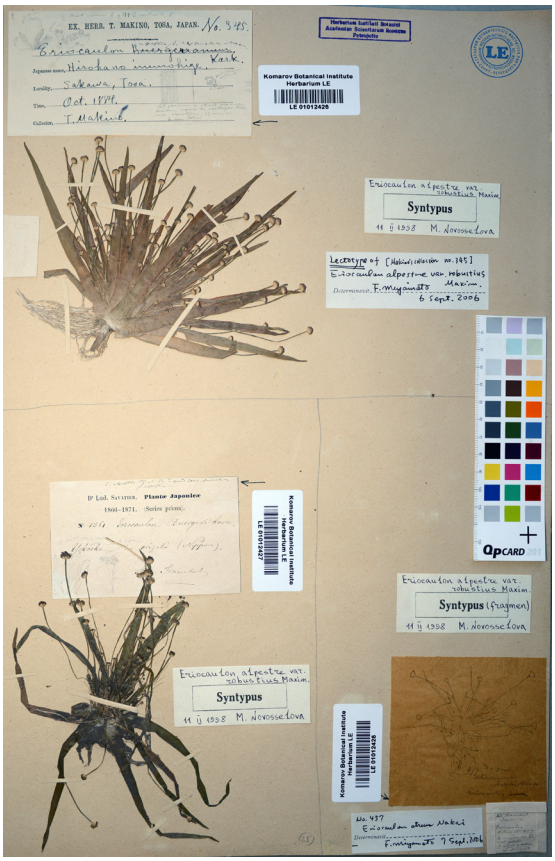

Fig. 38. Syntype of *Eriocaulon alpestre* Hook.f. & Thomson ex Körn. var. *robustium* Maxim. (LE 01012427; KPM-NX0001308).

[Japanese name: Ito-inunohige]

Japonia, Yokohama, 26 VIII/7 IX 1862, Maximowicz [sine num.] [LE 01012449,] (Fig. 39, KPM-NX0001313), Nippon, Hakone, in humidis, 1866–1871, L. Savatier, no.1362 [LE 01012446] (Fig. 40, KPM-NX0001311). Novosselova (2004) treated these specimens as syntypes.

Japonia, Yokohama, 9/21 IX 1862, Maximowicz [sine num.] [LE 01012448] (Fig. 41, KPM-NX0001312). Novosselova (2004) treated this specimen as a syntype. Although F. Miyamoto annotated on the sheet as "lectotype" in 7. Sept. 2006, this treatment is not published yet.

Juncaceae

Juncus effusus L. **var.** ***decipiens*** Buchenau in Bot. Jahrb. 12: 229 (1890).

Accepted name: *Juncus decipiens* (Buchenau) Nakai [Japanese name: I]

Japonia, Yokohama, 28 VI/10 VII 1862, Maximowicz [sine num.] [LE 01012467] (Fig. 42, KPM-NX0001315), Japonia, Yokohama, 20 VI/2 VII 1862, Maximowicz [sine num.] [LE 01012468] (Fig. 43, KPM-NX0001316), Japon, Yokoska, 1866–74, L. Savatier, no.1353 [LE 01012471] (Fig. 44, KPM-NX0001319). F. Miyamoto annotated on the sheets as "syntype" in 17. March. 2011. These are syntypes pointed out here.

Juncus niponensis Buchenau in Bot. Jahrb. 12: 340 (1890).

Accepted name: *Juncus papillosus* Franch. & Sav. [Japanese name: Ao-kōgaizekisyō]

Japonia, Yokohama, 27 IX/9 X 1862, Maximowicz, no.1836 (3662) [LE 01012476] (Fig. 45, KPM-NX0001320). Novosselova (2004) designated this specimen as the lectotype.

Cyperaceae

Carex capricornis Meinsh. ex Maxim. **var.** ***capitata*** Maxim. in Bull. Acad. Sci. Pétersb. 31: 120 (1886).

Accepted name: *Carex capricornis* Meinsh. ex Maxim. [Japanese name: Jōrō-suge]

Japonia, Nippon, Hakone, ad lacum, 1864, Tschonoski [sine num.] [LE 01012319] (Fig. 46, KPM-NX0001322). Novosselova (2004) designated this specimen as the lectotype, with an isolectotype [LE 01012320] (Fig. 47, KPM-NX0001323).

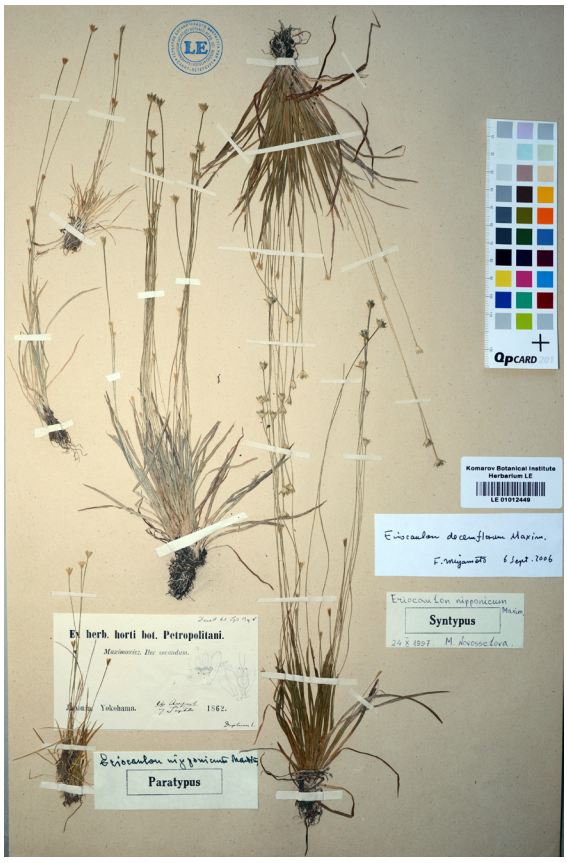

Fig. 39. Syntype of *Eriocaulon nipponicum* Maxim. (LE 01012449; KPM-NX0001313).

Fig. 40. Syntype of *Eriocaulon nipponicum* Maxim. (LE 01012446; KPM-NX0001311).

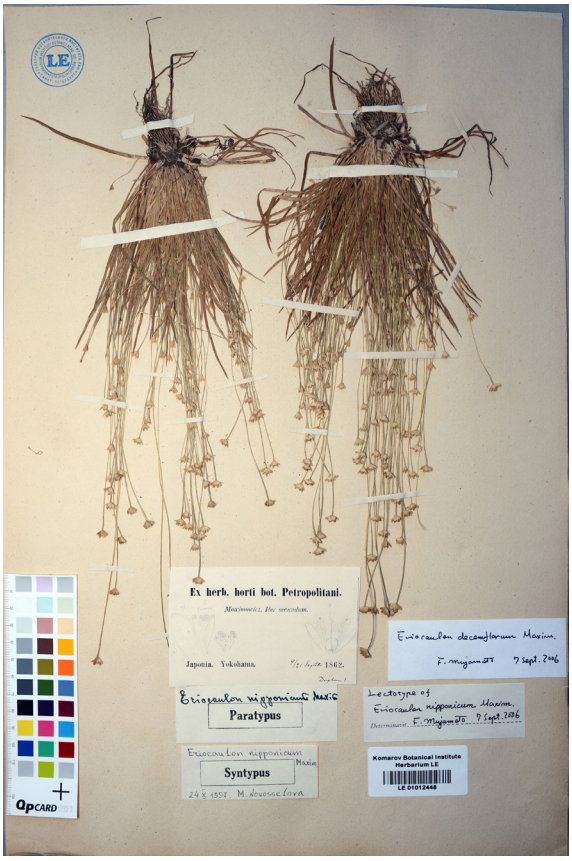

Fig. 41. Syntype of *Eriocaulon nipponicum* Maxim. (LE 01012448; KPM-NX0001312).

Fig. 42. Syntype of *Juncus effusus* L. var. *decipiens* Buchenau (LE 01012467; KPM-NX0001315).

Fig. 43. Syntype of *Juncus effusus* L. var. *decipiens* Buchenau (LE 01012468; KPM-NX0001316).

Fig. 44. Syntype of *Juncus effusus* L. var. *decipiens* Buchenau (LE 01012471; KPM-NX0001319).

Fig. 45. Lectotype of *Juncus niponensis* Buchenau (LE 01012476; KPM-NX0001320).

Fig. 46. Lectotype of *Carex capricornis* Meinsh. ex Maxim. var. *capitata* Maxim. (LE 01012319; KPM-NX0001322).

Carex hakonensis Franch. & Sav., Enum. Pl. Jap. 2, 2: 123, 550 (1878).

Accepted name: *Carex hakonensis* Franch. & Sav. [Japanese name: ko-hari-suge]

in turfosis montium Hakone, 25 V 1870, L. Savatier, no.1409 [LE 01012337] (Fig. 48, KPM-NX0001324). Novosselova (2004) treated this specimen as isotype (2004).

Carex plocamostyla Maxim. in Bull. Acad. Sci. Pétersb. 31: 117 (1886).

Accepted name: *Carex doenitzii* Boeckeler [Japanese name: Ko-tanukiran]

Japonia, Nippon, ad rivulos, 1866, Tschonoski [LE 01012402] (Fig. 49, KPM-NX0001325). Novosselova (2004) designated this specimen as the lectotype.

Although the specimen does not include any locality names of the Kanagawa Prefecture, it is listed here because the specimen collected with the types of *C. scita* which are collected in Hakone, Kanagawa Prefecture, according to the protologue. Takahashi *et al.* (2020) pointed out uncertainty of the locality and collection year of the type specimen.

Carex scita Maxim. in Bull. Acad. Sci. Pétersb. 31: 115 (1886).

Accepted name: *Carex scita* Maxim. var. *scita* [Japanese name: Miyama-ashiboso-suge]

Japonia, Nippon, ad rivulos, 1864, Tschonoski [LE 01012388] (Fig. 50, KPM-NX0001924). Novosselova (2004) designated this specimen as the lectotype, with two isolectotypes [LE 01012386] (Fig. 51, KPM-NX0001327), [LE 01012387] (Fig. 52, KPM-NX0001328).

Although the specimen does not include any locality names of the Kanagawa Prefecture, it is listed here because the specimen collected in Hakone, Kanagawa Prefecture, according to the protologue as follows: “Nippon media, ad rivulos, verosimiliter in montibus Hakone (Tschonoski frf.).” However, Takahashi *et al.* (2020) suggest that the type locality is more likely to be prov. Shinano (Nagano Prefecture).

Cyperus hakonensis Franch. & Sav., Enum. Pl. Jap. 2, 2: 104, 538 (1878).

Accepted name: *Cyperus flaccidus* R.Br. [Japanese name: Hina-gayatsuri]

in uliginosis prope Hakone, 31 VIII 187...(1866–1871),

Fig. 47. Isolectotype of *Carex capricornis* Meinsh. ex Maxim. var. *capitata* Maxim. (LE 01012320; KPM-NX0001323).

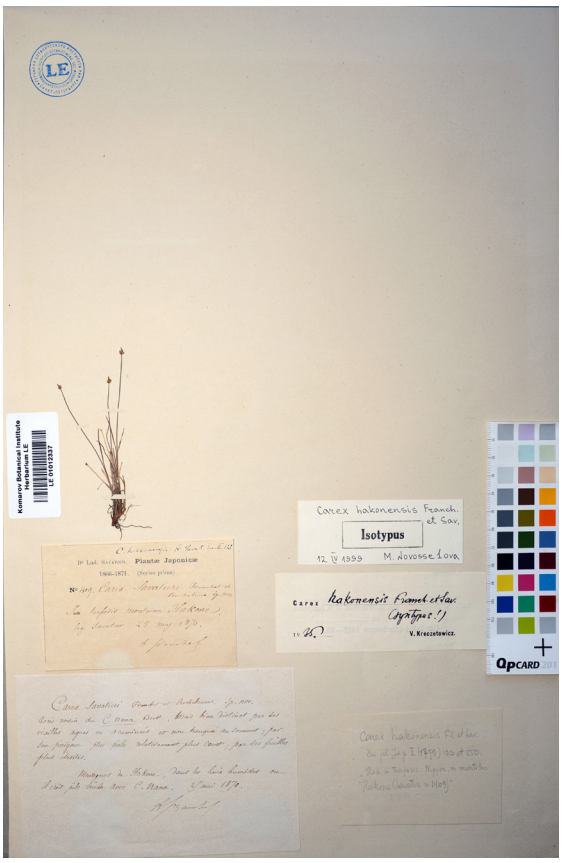

Fig. 48. Isotype of *Carex hakonensis* Franch. & Sav. (LE 01012337; KPM-NX0001324).

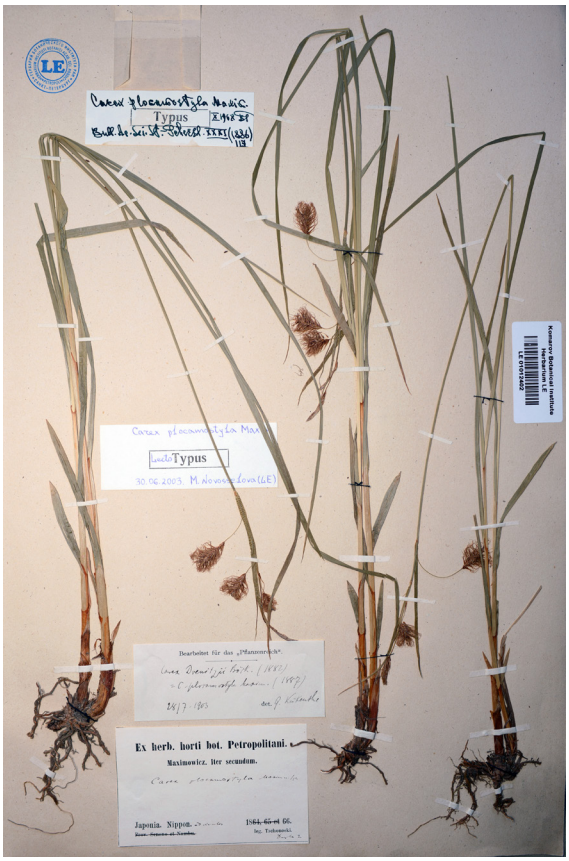

Fig. 49. Lectotype of *Carex plocamostyla* Maxim. (LE 01012402; KPM-NX0001325).

Fig. 50. Lectotype of *Carex scita* Maxim. (LE 012388; KPM-NX0001924).

Fig. 51. Isolectotype of *Carex scita* Maxim. (LE 01012386; KPM-NX0001327).

Fig. 52. Isolectotype of *Carex scita* Maxim. (LE 10012387; KPM-NX0001328).

L. Savatier, no. 1365 [LE 01011733] (Fig. 53, KPM-NX0001329). Novosselova (2004) treated this specimenas an isotype. Other duplicates of this specimen are deposited three sheets (P01869303, P01869305 & P101869306) in P (Tanaka *et al.*, 2015).

Scirpus concolor Maxim. in Bull. Acad. Sci. Pétersb. 31: 110 (1886).

Accepted name: *Scirpus wichurai* Boeckeler f. *concolor* (Maxim.) Ohwi [Japanese name: Abura-gaya]

Japonia, Yokohama, 29 VIII/10 IX 1862, Maximowicz, no.1644 [LE 01011725] (Fig. 54, KPM-NX0001335). Novosselova (2001) designated this specimen as the lectotype.

Scirpus fuirenoides Maxim. in Bull. Acad. Sci. Pétersb. 31: 109 (1886).

Accepted name: *Scirpus fuirenoides* Maxim. [Japanese name: Ko-matsukasasusuki]

Japonia, Yokohama, 13/25 IX 1862, Maximowicz, no. 1761 [LE 01011726] (Fig. 55, KPM-NX0001332). Novosselova (2001) designated this specimen as the lectotype.

Poaceae / Gramineae

Calamagrostis yatabei Maxim. in Bull. Acad. Sci. Pétersb. 32: 627 (1888).

Accepted name: *Calamagrostis ×yatabei* Maxim. [Japanese name: Yamaawa-modoki]

Hakone, 23 VII 1881 [sine coll.], no. 248 [LE 01042711] (Fig. 56, KPM-NX0001925). N. Tanaka & A. Grabovskaya-Borodina designated this specimen as as the lectotype (Tanaka *et al.*, 2023), with an isolectotype in TI.

Acknowledgements

This study was partly supported by JSPS KAKENHI Grant Number JP17K01218 (to N. T.) and also Number JP17K18432 (to W. O.). The study was carried out within the framework of EGISU NIOKTR: 124020100148-3 state task of the Komarov Botanical Institute of the Russian Academy of Sciences and Ministry of Education and Science of the Russian Federation, grant agreement № 20-04-00561075-12-2021-1056 (to A. G-B.). We thank D. V. Geltman (Director of the Komarov Botanical Institute) and L. V. Averyanov (Director of Herbarium prof.) for the invitation to visit the Herbarium LE to study these collections. We thank I. V. Tatanov for scanning the

Fig. 53. Isotype of *Cyperus hakonensis* Franch. & Sav. (LE 01011733; KPM-NX0001329).

Fig. 54. Lectotype of *Scirpus concolor* Maxim. (LE 01011725; KPM-NX0001335).

Fig. 55. Lectotype of *Scirpus fuirenoides* Maxim. (LE 01011726; KPM-NX0001332).

Fig. 56. Lectotype of *Calamagrostis yatabei* Maxim. (LE 01042711; KPM-NX0001925).

specimens and posting these on the Komarov Botanical Institute website (https://en.herbariumle.ru/). This work was done on the materials of the Herbarium of higher plants of the Komarov Botanical Institute of the Russian Academy of Sciences (LE). We thank the reviewers and the editorial board for their valuable advice.

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摘　要

田中徳久・アリサ グラボスカヤ - ボロディナ・勝山輝男・福田知子・大西 亘 , 2024. コマロフ植物研究所所蔵の神奈川県産シダ植物・裸子植物・被子植物（単子葉類と双子葉類の一部）の基準標本と関連標本. 神奈川県立博物館研究報告（自然科学）, (53): 17–38. [Tanaka, N., A. Grabovskaya-Borodina, T. Katsuyama, T. Fukuda & W. Ohnishi, 2024. Plant Type Materials from Kanagawa Prefecture (Japan) in the Herbarium of the Komarov Botanical Institute (LE; Russia): Lycophytes, Ferns, Gymnosperms, and Angiosperms (Monocots and some Dicots). Bull. Kanagawa Pref. Mus. (Nat. Sci.), (53): 17–38.]

コマロフ植物研究所（LE；ロシア科学アカデミー）に収蔵されている神奈川県が基準産地とされるタイプとその関連の維管束植物標本を調査した。これらの大部分は、ロシアの植物学者であるマキシモヴィッチと助手の須川長之助により採集され、マキシモヴィッチにより記載された。ここでは、シダ植物、裸子植物、被子植物（単子葉植物と双子葉植物の一部）29 分類群 62 点のタイプとその関連標本について報告した。このうち、*Polygonatum giganteum* A. Dietr. var. *macranthum* Maxim.（= *Polygonatum macranthum* (Maxim.) Koidz.）オオナルコユリと *Juncus effusus* L. var. *decipiens* Buchenau のタイプ関連標本は初めての報告である。