Notulae ad Plantas Japoniae & Koreae XLIII.

By

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1156) **Freycinetia formosana** HEMSLEY in Kew Bull. 1896, p. 166.

var. **boninensis** NAKAI, var. nov.

Syn. *Freycinetia formosana* (non HEMSLEY) MATSUMURA, Ind. Pl. Jap. II pt. 1, p. 23 (1905), quoad pl. ex Bonin.—HATTORI in Journ. Coll. Sci. Imp. Univ. Tokyo XXIII. Art. 10, p. 20 (1908)—MAKINO & NEMOTO, Fl. Jap. p. 1524 (1925), quoad pl. ex Bonin; ed. 2. p. 1277 (1931), quoad pl. ex Bonin.

Frutex dioicus scandens, ramis ascendentibus, sæpe societatem magnam format. Caudex 1–2,5 cm. latus. Folia triserialia imbricata spiralicollocata basi amplexicaulia falcata elongata longissime attenuata circ. 20–90 cm. longa 10–30 cm. lata lævia lucida viridia vel plus minus pruinosa dorso carinata et antrorsum aculeolata margine plus minus revoluta undique aculeolato-serrata, nervis utrinque 12–48 parallelis. Flores ♂ mihi ignoti, fæminei foliis involuerantibus dilatatis amplexentes, interiores breviores, extremis basi intus flavidis falcatis uno latere 3,7 mm. latis apice in folia caudata circ. 40 cm. longa attenuatis, secundariis basi uno latere circ. 40 mm. latis intus aureis extus flavidis apice in folia caudata circ. 36 cm. longa attenuatis, tertiis basi toto aureis basi uno latere 42 mm. latis apice in cauda 18–19 cm. longa attenuatis, quarternis carnosis aureis apice acutis ecaudatis, quinnatis aureis carnosis et spacidem toto amplexentibus. Spadices terminali-tres terete-triquetres 7–10 cm. longi 2,1–2,3 cm. lati, stipite 6 cm. longo 1 cm. lato glabro flavido. Flores in phalanges connati 5 mm. longi apice truncati 4–6 angulares obovato-columnales, facie apicale 1,2–2 mm. lata 2–3 mm. lati. Stigmata 3–7 depressa subconfluentia. Inter spadices folia involuerantia flava 3–5 serialia carnosia imbricata et columna formant. Fructus mihi ignoti.

Nom. Jap. *Tsurudako* vel *Takodzuru*.

Hab.

Bonin: Insula Hahajima (T. NAKAI—typus in Herb. Imp. Univ. Tokyo); Insula Chichijima (T. NAKAI).

This variety is distinguished from the type by its more sharply serrated leaves, and larger floral parts. The fleshy yellow part of involucreal bracts are eaten by rats and birds.

1157) *Cyperus amuricus* MAXIMOWICZ. var. **laxa** (FRANCHET & SAVATIER) NAKAI, comb. nov.

Syn. *Cyperus amuricus* MAXIMOWICZ, Prim. Fl. Amur. in Mém. prés. Acad. Imp. Sci. St. Pétersb. div. sav. IX, p. 296 (1859)—REGEL, Tent. Fl. Uss. in Mém. Acad. Imp. Sci. St. Pétersb. VII sér. IV no. 4, no. 531 (1861)—BOECKEREL in Linnæa XXXV, p. 607 (1868)—KOMAROV in Acta Hort. Petrop. XX, p. 330 (1900), pro parte—C. B. CLARKE in Journ. Linn. Soc. XXXVI, p. 208 (1903), pro parte—NAKAI, Fl. Kor. II, p. 286 (1911); in Tokyo Bot. Mag. XXVI, p. 194 (1912).

Cyperus Kramerii FRANCHET & SAVATIER, Enum. Pl. Jap. II pt. 1, p. 104 (1876); pt. 2. p. 538 (1879); **nov. syn.**

Cyperus Textori var. **laxa** FRANCHET & SAVATIER, l. c. pt. 2, p. 538, 539 (1879); **nov. syn.**

Costa bractearum longe cuspidato-attenuata. Bractearum fuscae. Fructus niger.

Nom. Jap. *Chagayatsuri* (MAKINO).

Hab.

Hondo: Prov. Sagami: circa Yokosuka (SAVATIER no. 2888 bis—type of *Cyperus Kramerii* in Herb. Mus. Paris).

Prov. Shinano: Sarashina (T. SAKAI).

Prov. Musashi: Ueno, Tokyo (legitor?, Herb. Mus. Paris).

Prov. Nagato: oppido Kawakami (J. NIKAI no. 2677).

Prov. Hitachi: Midzuhara (J. MATSUMURA).

Prov. Iwashiro: Aidzu (J. MATSUMURA).

Prov. Mutsu: Aomori (U. FAURIE no. 1080, Herb. Mus. Paris); Hiro-saki (N. KINASHI).

Shikoku:

Prov. Iyo: sine loco speciali (U. FAURIE no. 11716, Herb. Mus. Paris).

Prov. Awa: urbe Wakimachi (R. YATABE); oppido Nakaeda (J. NIKAI no. 1225).

Kiusiu:

Prov. Higo: Ômura (K. MAEBARA no. 375).

Prov. Buzen: Shiita (R. YATABE & J. MATSUMURA).

Korea:

Fluv. Jalu (V. KOMAROV no. 210 partim, Herb. Mus. Paris).

Prov. Kôgen: Tsûsen (T. NAKAI no. 5179).

Prov. Heihoku: Sakushû (R. G. MILLS no. 597).

Amur: sine loco speciali (C. J. MAXIMOWICZ, type of *Cyperus amuricus*, Herb. Mus. Paris).

China :

Prov. Su-tchuen : Tchen-Kéou-Tin (FARGES, Herb. Mus. Paris).

Cyperus amuricus var. **japonica** MIQUEL in Ann. Mus. Bot. Lugd. Bat. II p. 141 (1865); Prol. Fl. Jap. p. 73 (1876)—FRANCHET & SAVATIER, Enum. Pl. Jap. II, p. 105 (1879)—C. B. CLARKE in Bull. Acad. Int. Geogr. Bot. XIII p. 202 (1904).

Nom. Jap. *Ko-Chagayatsuri*.

Hab.

Hondo :

Prov. Mutsu : Oginohama (U. FAURIE no. 6367, Herb. Mus. Paris).

Prov. Uzen : Yonezawa (G. KOIDZUMI).

Prov. Shimotsuke : Nikko (J. MATSUMURA).

Prov. Shinano : Usui (J. MATSUMURA).

Prov. Musashi : Yokohama (C. J. MAXIMOWICZ, Herb. Mus. Paris).

Shikoku :

Prov. Tosa : sine loco speciali (T. MAKINO).

Kiusiu :

Prov. Satsuma : Koyasu (S. YAJIMA) ; insula Sakurajima (legitor ? type of *Cyperus amuricus* var. *japonica*, Herb. Mus. Paris, specimen donated by MIQUEL).

Korea :

Prov. Keiki : Eitôho (T. UCHIYAMA) ; Kahei (T. NAKAI no. 2894).

Prov. Kannan : in agris Ouensan (U. FAURIE no. 975, 988, Herb. Mus. Paris).

Prov. Kanhoku : inter Nôjidô & Sankamen (T. NAKAI no. 3199).

This is a variety having shorter branchlets of spicules. The relation between this variety and the type is similar to the respective relation between *Cyperus Iria* and its variety *paniciformis*. Among the specimens enumerated above, the specimen from Sakurajima and Ouensan (FAURIE no. 975) have the shortest branchlets of spicules.

Cyperus pterygorachis C. B. CLARKE is a nearest species of *Cyperus amuricus*, but it is distinguished from the latter by having more branched inflorescence, broader winged rachis of inflorescence, more greenish bracts, and grayish fruits.

1158) *Cyperus microiria* STEUDEL, Syn. Pl. Glum. II p. 23 no. 238 (1855).

Syn. *Cyperus Textori* MIQUEL in Ann. Mus. Bot. Lugd. Bat. II p. 141 (1865); Prol. Fl. Jap. p. 73 (1866).—FRANCHET & SAVATIER, Enum. Pl. Jap. II, p. 105 (1876), p. 539 (1879)—MATSUMURA, Ind. Pl. Jap.

II pt. 1, p. 143 (1905)—NAKAI in Tokyo Bot. Mag. XXVI, p. 194 (1912).

Cyperus Iria (non LINNÆUS) FRANCHET & SAVATIER, Enum. Pl. Jap. II, p. 103 (1876), pro parte—DEBEAUX, Florule du Tché-foû p. 145 (1877).

Cyperus Iria var. *microiria* FRANCHET & SAVATIER, l. c.

Cyperus Iria var., HANCE. h., n. 1147 ex C. B. CLARKE in Journ. Linn. Soc. XX, p. 138 in nota sub *C. Iria* (1884).

Cyperus amuricus (non MAXIMOWICZ) KOMAROV in Acta Hort. Petrop. XX, p. 330 (1900), pro parte.

Cyperus japonicus (non MIQUEL) MAKINO in Tokyo Bot. Mag. XIX, p. 53 (1904), excl. syn.—MATSUMURA, l. c. p. 141.

Nom. Jap. *Ki-gayatsuri* (MAKINO).

Hab.

Japonia: sine loco speciali (ZOLLINGER no. 75, type, Herb. STEUDEL, Herb. Mus. Paris); loco non indicato (SIEBOLD no. 283, specimen sent from BLUME, Herb. Mus. Paris); loco non indicato (TEXTER, type of *Cyperus Textori*, in Herb. Lugd. Batavi).

Hondo:

Prov. Sagami: Yokosuka (L. SAVATIER no. 1374, 1997, Herb. Mus. Paris).

Prov. Musashi: Yokohama (C. J. MAXIMOWICZ, HERB. Mus. Paris); Tokyo (J. MATSUMURA).

Prov. Mutsu: Nambu (U. FAURIE no. 6134, Herb. Mus. Paris).

Prov. Ise: Komono (J. MATSUMURA).

Prov. Shinano: Sarashina (T. SAKAI).

Prov. Harima: Akashi (K. TSUKIYAMA).

Prov. Inaba: sine loco speciali (Y. IKOMA).

Prov. Nagato: Hagi (J. NIKAI no. 2622, 2623); oppido Tsubakigô Higashibun-Mura (J. NIKAI no. 2678).

Shikoku:

Prov. Awa: oppido Yamashiro-tani (R. YATABE).

Kiusiu:

Prov. Hizen: Tokitsu (R. YATABE & J. MATSUMURA).

Prov. Higo: Ômura (K. MAEBARA no. 374); Aida (K. MAEBARA no. 377).

Prov. Satsuma: insula Sakurajima (U. FAURIE no. 4356, Herb. Mus. Paris).

Tsusima: Kechi (N. OKADA); Sakatamura (Y. YABE).

Dagelet: sine loco speciali (N. OKAMOTO).

Korea:

Prov. Keiki : Seoul (COURANT, Herb. Mus. Paris); Namsan (T. UCHIYAMA).

Prov. Kannan : Ouensan (U. FAURIE no. 974, 975, Herb. Mus. Paris); Fl. Jalu (V. KOMAROV. no. 210).

Prov. Heinan : Heijyô (R. G. MILLS no. 539).

Prov. Heihoku : Shingishû (T. NAKAI).

Manshuria : Liao-Yang (M. NISHIMURA).

China : sine loco speciali (BEAUVOIS, Herb. Mus. Paris).

Prov. Sutchuen : Tchen-Kéou-Tin (R. P. FARGES, Herb. Mus. Paris).

Prov. Hupeh : Ichang (A. HENRY, Herb. Mus. Paris).

Prov. Shantung : Chefoo (FAUVEL Herb. Mus. Paris); ibidem (O. DEBEAUX, Herb. Mus. Paris); Pe-Cheli (G. STAUNTON, Herb. Mus. Paris).

Hongkong (BODINIER no. 84, Herb. Mus. Paris).

The type of *Cyperus microiria* STEUDEL is not *Cyperus Iria* as the later botanists led erroneously. It is conspecific with *Cyperus Textori* MIQUEL of later edition. It is an intermediate species between *Cyperus Iria* and *Cyperus amuricus*, but is diagnosed from the former by less branched inflorescence, more distinctly mucronate bracts; and from the latter by its more branched inflorescence, more yellowish and shorter pointed bracts, and paller nuts. In *Cyperus Iria* the bracts are roundish and their upper margin exceeds the tip of costa, while in *Cyperus microiria* and *C. amuricus* the upper edges of the bracts are shorter than the tip of costa. *Cyperus paniciformis* FRANCHÊT & SAVATIER (*C. Iria* var. *paniciformis* C. B. CLARKE) is such an individual of *Cyperus Iria* having shortest branchlets and elongated main axis of the spicules. It varies in one hand to forma *depauperata* BOECKEREL and in the other hand to the typical form of *Cyperus Iria*. We often see specimens with those three forms in one stock in the field. Dr. MAKINO mistook *Cyperus amuricus* var. *japonica* MIQUEL for *Cyperus microiria*, but the type specimen of MIQUEL is a specimen of *Cyperus amuricus* with short spikelets.

1159) *Cyperus truncatus* TURCZANINOW var. *typicus* NAKAI.

Syn. *Cyperus truncatus* TURCZANINOW, Cat. Baic. Dah. no. 1206 (1838), nom. nud.—LEDEBOUR, Fl. Ross. IV, p. 241 (1853)—STEUDEL, Syn. Glum. II, p. 23 no. 244 (1855)—TURCZANINOW, Fl. Baic. Dah. II p. 254 no. 1202 (1856)—BOECKEREL in Linnæa XXXV, p. 604 (1868).—KOMAROV in Acta Hort. Petrop. XX, p. 329 (1900), pro parte.

Scapus 1 (2-3) gracilis quam 20 cm. brevior. Folia omnia linearia 1-2,5 mm. lata margine integerrima rarissime dentibus minutissimis adspersis. Umbellæ breviradiatæ vel spiculæ sessiles glomeratæ. Spiculæ

3-12 mm. longæ.

Nom. Jap. *Hime-Ushikugu*

Hab.

Dahuria: ad confluum fluviorum Schilka et Argun, 1833 (TURCZANINOW, type, Herb. STEUDEL in Herb. Mus. Paris); sine loco speciali (FISCHER, Herb. Mus. Paris).

Amur: Fluvium Amur, circa Poschkova (V. KOMAROV no. 209, Herb. Mus. Paris).

This typical variety is not found from either Korea or Japan as yet.

Cyperus truncatus var. **robustus** NAKAI, var. nov.

Syn. *Cyperus truncatus* (non TURCZANINOW) MAXIMOWICZ, Prim. Fl. Amur. p. 297 (1859)—KOMAROV in Acta Hort. Petrop. XX, p. 329 (1900), pro parte—C. B. CLARKE in Journ. Linn. Soc. XXXVI, p. 218 (1903)—MATSUMURA, Ind. Pl. Jap. II pt. 1, p. 143 (1905)—NAKAI in Tokyo Bot. Mag. XXVI, p. 192 (1912).

Scapus 1-5 vulgo robustus. Folia omnia margine per totam longitudinem serrulata subulata vel linearia 3-9 mm. lata (in speciminibus exsiccatis margines sæpe revolutæ tum serrulæ occultantes). Umbellæ longe radiatæ. Spiculæ usque 15 mm. longæ sæpe decompositæ.

Nom. Jap. *Usikugu*.

Hab.

Amur: sine loco speciali (C. J. MAXIMOWICZ, Herb. Mus. Paris); Blagowjestchensk (F. KARO no. 90, Herb. Mus. Paris).

Ussuri: Vladivostok (H. BOHNHOF no. 345, Herb. Mus. Paris), ad ripas fl. Lagar (V. KOMAROV no. 209).

Korea:

Prov. Heihoku: Pen-nian (V. KOMAROV no. 209, Herb. Mus. Paris); Shingishû (T. NAKAI no. 2924).

Prov. Kannan: inter Futenpô & Hôtaidô (T. NAKAI no. 3960); distr. Paiktusan (T. MORI); in terris argilosis et humidis Ouensan (U. FAURIE no. 977, Herb. Mus. Paris).

Prov. Heinan: ad ripas fl. Daidôkô (H. IMAI).

Prov. Kôgen: Mt. Kongôsan (T. UCHIYAMA); Chôenri (T. UCHIYAMA); Makkiri (T. NAKAI no. 5178).

Prov. Keiki: Mt. Kôkyôzan (H. UEKI no. 498); Goryûdô (T. UCHIYAMA); Kôryô (T. MORI).

Prov. Keihoku: Mt. Chôrei (T. UCHIYAMA).

Quelpaert: in agris Hongno (E. TAQUET no. 1997).

China:

Prov. Yunnan: Tchou-fong-chan (DELAVAY no. 5119, Herb. Mus. Paris).

Yeso :

Prov. Oshima : Hakodate (C. J. MAXIMOWICZ, Herb. Mus. Paris);
ibidem (U. FAURIE no. 1425, 3342, Herb. Mus. Paris); ibidem (K.
TSUKAMOTO).

Prov. Kitami : Birô (U. FAURIE no. 4833, Herb. Mus. Paris).

Prov. Ishikari : Sapporo (U. FAURIE no. 323, Herb. Mus. Paris).

Prov. Iburi : Muroran (U. FAURIE no. 1126, Herb. Mus. Paris).

Hondo :

Prov. Mutsu : Nambu (U. FAURIE no. 6136, Herb. Mus. Paris);
Aomori (R. YATABE); Kuroishi (U. FAURIE no. 1263, Herb. Mus.
Paris); sine loco speciali (U. FAURIE no. 1268, Herb. Mus. Paris).

Prov. Rikuzen : Sendai (U. FAURIE no. 1809, Herb. Mus. Paris);
Matsushima (U. FAURIE no. 1810, Herb. Mus. Paris); Sendai (I.
TAMAKI).

Prov. Iwashiro : Aidzu (R. YATABE & J. MATSUMURA).

Prov. Echigo : Takata (J. MATSUMURA).

Prov. Sado : sine loco speciali (U. FAURIE no. 1863, Herb. Mus.
Paris).

Prov. Hitachi : circa lacum Senba (I. ANDÔ no. 43).

Prov. Musashi : Tokyo (J. MATSUMURA).

Prov. Shinano : Shimosuwa (J. MATSUMURA).

Prov. Inaba : Yashiromura (Y. IKOMA).

Prov. Bitchû : Takamatsumura (J. NIKAI no. 924); Kawakami (Z.
YOSHINO).

When this variety becomes small enough as the type (in FAURIE no. 1268 the stem measures only 5–6 cm.) it would be mistaken with it, but the leaves are broader and has the serration along entire edges.

Cyperus truncatus var. **orthostachys** C. B. CLARKE in Journ. Linn. Soc. XXXVI, p. 218 (1903)—MATSUMURA, Ind. Pl. Jap. II pt. 1, p. 143 (1905)—NAKAI in Tokyo Bot. Mag. XXVI, p. 193 (1912).

Syn. *Cyperus fimbriatus* (non NEES) MIQUEL, Prol. p. 73 (1866); p. 357 (1867)—FRANCHET & SAVATIER, Enum. Pl. Jap. II p. 107 (1876).

Cyperus orthostachys FRANCHET & SAVATIER, l. c. p. 106 (1876), p. 539 (1879).

Caulis robustus. Folia subulata per totam longitudinem serrulata. Umbellæ longe radiatæ. Spiculæ decompositæ vel interdum umbellulatæ, semper breves 4–7 mm. longæ.

Nom. Jap. *Ko-Ushikugu* (MAKINO).

Hab.

Hondo :

Prov. Sagami : Yokosuka (L. SAVATIER no. 1369, type, no. 2005, 2514 ;

Herb. Mus. Paris.)

Prov. Mutsu : Hirosaki (U. FAURIE no. 3429, Herb. Mus. Paris.); Aomori (U. FAURIE no. 1082, 1152, Herb. Mus. Paris); Kuroishi (U. FAURIE no. 1249, Herb. Mus. Paris); Nambu (U. FAURIE no. 6225, Herb. Mus. Paris).

Prov. Rikuzen : Matsushima (U. FAURIE no. 1810, Herb. Mus. Paris)

Prov. Suruga : Nishimashidzumura (D. SHIMIDZU).

Prov. Musashi : Dôkanyama (J. MATSUMURA).

Prov. Tango : Miyadzu (U. FAURIE no. 4921, Herb. Mus. Paris).

Yezo :

Prov. Oshima : Hakodate (C. J. MAXIMOWICZ, Herb. Mus. Paris).

Prov. Kitami : Monbetsu (U. FAURIE no. 1003, Herb. Mus. Paris).

Prov. Iburi : Iagri (K. MIYABE).

Manshuria : Lao-Yang (M. NISHIMURA).

China :

Prov. Yunnan : Tchou-fong-chan (DELAVAY no. 5119, Herb. Mus. Paris).

The relation between the variety *robustus* and the variety *orthostachys* is similar to the respective relation between *Cyperus anuricus* and its variety *japonicus*, or between *Cyperus Iria* and its variety *paniciformis*. So, the distinction becomes insignificant in some individuals.

1160) **Heloniopsis japonica** (THUNBERG) MAXIMOWICZ in Bull. Acad. Imp. Sci. St. Pétersb. XI, p. 437 (1867); in Mél. Biol. VI, p. 211 (1867)-MIQUEL in Ann. Mus. Bot. Lugd. Bat. IV, p. 146 (1877).

Syn. *Scilla japonica* THUNBERG, jap. mspt. ex MURRAY, Syst. Veget. ed. 14, p. 329 (1784)-THUNBERG, Fl. Jap. p. 137 (1784)-GMELIN, Syst. Nat. II, p. 552 (1791)-WILLDENOW, Sp. Pl. II pt. 1, p. 127 (1799).-THUNBERG, Icon. Pl. Jap. IV t. 4 (1802)-PERSEON, Syn. Pl. I p. 366 (1805)-SPRENGEL, Syst. Veget. II p. 68 (1825)-SCHULTES, Syst. Veget. VII p. 580 (1829).-KUNTH, Enum. Pl. IV, p. 330 (1843).

Heloniopsis pauciflora A. GRAY in Mem. Americ. Acad. Arts & Sci. new ser. VI, p. 416 (1859)-MIQUEL in Ann. Mus. Bot. Lugd. Bat. III, p. 146 (1867); Prol. Fl. Jap. p. 310 (1867)-MAXIMOWICZ, l.c. l.c.-BAKER in Journ. Linn. Soc. XVII, p. 460 (1879).

Sugerokia japonica MIQUEL in Versl. Med. Acad. Wet. 2 ser. II, p. 88. ex MIQUEL in Ann. Mus. Bot. Lugd. Bat. III, p. 145 (1867); Prol. Fl. Jap. p. 309 (1867).

Heloniopsis brevica MAXIMOWICZ in Bull. Acad. Imp. Sci. St. Pétersb. XI, p. 436 (1867); in Mél. Biol. VII p. 211 (1867)-BAKER, l. c.-MAKINO in Tokyo Bot. Mag. V, p. 126 (1891); VIII, p. 303

Helionopsis breviscapa FRANCHET & SAVATIER, Enum. Pl. Jap. II, p. 87 (1876).

Helionopsis japonica FRANCHET & SAVATIER, l. c.

Helionopsis pauciflora FRANCHET & SAVATIER, l. c.

This is Japanese Hyacinth. It grows throughout Japan, especially predominating in the middle part. Some remarkable variation of flowers are seen.

Heloniopsis japonica var. **purpurea** NAKAI.

Perigonium sub anthesin purpurea vel dilute purpurea, post anthesin fusco-viridescens.

Nom. Jap. *Shôjyô-bakama*.

Hab. in Yesso, Hondo, Shikoku, Kiusiu et Korea.

Heloniopsis japonica var. **grandiflora** NAKAI, comb. nov.

Syn. *Helionopsis grandiflora* FRANCHET & SAVATIER, Enum. Pl. Jap. II, p. 87 (1876), nom. nud.; p. 529 (1879).

Heloniopsis breviscapa (non MAXIMOWICZ) MAKINO in Tokyo Bot. Mag.

V, p. 126 (1891)—MATSUMURA, Ind. Pl. Jap. II pt. 1, p. 197 (1905).

Perigonium sub anthesin candidum, post anthesin viridescens vel fusco-viridescens. Folia et scapus viridia.

Nom. Jap. *Shirobana-Shôjyôbakama*.

Hab. in Hondo : praecipue in regione Yamashiro et Yamato vulgatis-sima.

Heloniopsis japonica var. **sanguinea** NAKAI.

Perigonium sub anthesin sanguineum, post anthesin fusco-viridescens.

Nom. Jap. *Benibana-Shôjyôbakama*.

Hab. in Hondo.

Heloniopsis japonica var. **flavida** NAKAI.

Perigonium sub anthesin viridi-flavum, post anthesin viridescens.

Nom. Jap. *Kibana-Shôjyôbakama*.

Hab. in prov. Yamato.

Dr. KORDZUMI says that *Heloniopsis pauciflora* can not be recognised as valid, because a piece of *Luzula* is mounted on the sheet of type-specimen. This is a disgrace to the great American botanist. Preceding to the publication of his new species ASA GRAY had carefully analyzed his materials, and made a perfect sketch in detail. I saw his sketch of *Heloniopsis* in Gray Herbarium when I studied his Japanese specimens in 1923. One who renders full approbation on the plates of his 'Genera of North America' will share the same to his sketch of new Japanese species. Somebody might have pasted later a piece of *Luzula* on the sheet of *Heloniopsis*, but so far as his diagnoses and sketches have no concern on it

his *Heloniopsis pauciflora* is a perfect genus and species. I have seen no *Luzula* on the sheet. Professor MIYABE had been the student of ASA GRAY. He had been the classmate with Professor ROBINSON of Harvard University. While he was staying in Cambridge he made a sketch of *Heloniopsis pauciflora* complying with the request of the late Russian botanist C. J. MAXIMOWICZ. He strongly denied to impart *Luzula* to *Heloniopsis pauciflora* when our conversation went on the paper of Dr. KOIDZUMI.

1161) ***Minuartia capillaris*** (POIRET) NAKAI, comb. nov. {non *Minuartia capillacea* (ALLIONI) ASCHERSON & GRÆBNER}

var. ***glabra*** (SERINGE) NAKAI, comb. nov.

Syn. *Arenaria capillaris* POIRET in LAMARCK, ENCYCLOP. Méthod. VI, p. 380 (1804)—G. DON, General Hist. Dichl. Pl. I p. 432 no. 14 (1831)—FR. SCHMIDT in Mém. Acad. Imp. Sci. St. Pétersb. VII sér. XII no. 2 p. 116 (1868)—KOMAROV in Acta Hort. Petrop. XXII, p. 188 (1903).

Arenaria sibirica PERSOON, Syn. Pl. I p. 504 no. 39 (1805).

Arenaria lychnidea M. a BIEBERSTEIN var. β . *glabra* SERINGE in A. P. DE CANDOLLE, Prodr. I p. 40 (1825).

Arenaria Laxmanni FISCHER in litt. ex SERINGE, l. c. pro syn.

Arenaria capillaris α . *glabra* FENZL in LEDEBOUR, Fl. Ross. I p. 367 (1841)—MAXIMOWICZ, Prim. Fl. Amur. suppl. Index Fl. Mongol. p. 480 (1859); in Mém. Biol. IX p. 34 (1874); Enum. Pl. Mongol. fasc. 1, p. 97, no. 242 (1889).

Arenaria capillaris α . *typica* REGEL, Pl. Radd. I p. 367 (1861).

Arenaria capillaris β . *typica* REGEL, l. c. Tab. VIII. fig. 18.

Nom. Jap. *Karafuto-Tsumekusa*.

Hab.

Korea: Mt. Kanbôhō 2500 m. prov. Kanhoku (Y. KISHINAMI).

Sachalin: Mt. Tossozan (H. HARA).

This is a new addition to the Flora of Korea.

1162) ***Aconitum nipponicum*** NAKAI in Tokyo Bot. Mag. XXXI, p. 26 (1917).

Nom. Jap. *Miyama-Torikabuto*.

Hab.

Korea: Mt. Kanbôhō (Y. KISHINAMI).

This species is a new addition to the Flora of Korea.

1163) ***Agrimonia pilosa*** LEDEBOUR, Ind. Hort. Dorpat. suppl. p. 1.

(1823).

Forma **typica** NAKAI.

Caulis simplex patentim hirsutus. Foliola terminalia tria, dentibus utrinque 4-7 (vulgo 4-5), supra parce pilosa, subtus supra venas primarias hirtella, glandulis crebris vel paucis. Bracteæ 5-lobatæ.

Hab.

Sibiria: Altai (LEDEBOUR, type in Herb. Mus. Paris); prope Trokan (FISCHER, Herb. Mus. Paris); Tunka (FISCHER, Herb. Mus. Paris).

Agrimonia pilosa forma **davurica** (WILLDENOW) NAKAI, comb. nov.

Syn. *Agrimonia davurica* WILLDENOW ex STEVEN in litt. ex SERINGE in A. P. DE CANDOLLE, Prodr. II p. 587 (1825).

Agrimonia Eupatoria var. *davurica* LINK, Enum. Pl. Hort. Berol. II, p. 34 (1822).

Agrimonia pilosa (non LEDEBOUR) SERINGE in A. P. DE CANDOLLE, Prodr. II; p. 588 (1825), pro parte—LEDEBOUR, Fl. Ross. II p. 32 (1844), pro parte.

Agrimonia davurica SCHLECHTENDAL sen. in herb. reg. berol. ex LEDEBOUR, Fl. Ross. II, p. 32 (1844), pro syn. *Agr. pilosæ*.

Forma inter var. *japonica* et *typica* intermedia. Caulis simplex. Foliola dentibus utrinque 6-10 supra adpresse pilosa, subtus supra venas brevius pilosa.

Hab.

Sibiria: Altai (POLITAW, Herb. Mus. Paris).

Dahuria: sine loco speciali (FISCHER Herb. Mus. Paris); Nerszynsk (F. KARO no. 389 Herb. Mus. Paris).

Mongolia orient: sine loco speciali (A. DAVID no. 2824, Herb. Mus. Paris).

Agrimonia pilosa var. **japonica** (MIQUEL) NAKAI, Veget. Mt. Apoi p. 54 no. 195 (Apr. 1930); in Kôryô Shikenrin Japan p. 39 no. 336 (1932).

Syn. *Agrimonia Eupatoria* (non LINNÆUS) THUNBERG, Fl. Jap. p. 195 (1784), spécimen desideratur.

Agrimonia viscidula BUNGE in Mém. Sav. étrang. St. Pétersb. II p. 100 (1834).

Agrimonia pilosa (non LEDEBOUR) MAXIMOWICZ in Mém. Prés. Acad. Imp. Sci. St. Pétersb. div. sav. IX p. 94 (1859)—HOOKER fil., Fl. Brit. Ind. II p. 361 (1878), pro parte.

Agrimonia viscidula var. *japonica* MIQUEL in Ann. Mus. Bot. Lugd. Bot. III, p. 38 (1867)—FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 133 (1875).

Agrimonia pilosa var. *viscidula* KOMAROV in Acta Hort. Petrop. XXII pt. 2 p. 519 (1903).

Agrimonia japonica KOIDZUMI in Tokyo Bot. Mag. XLIV p. 104 (Feb. 1930).

Caulis hirsutus vulgo ramosus. Foliola terminalia tria obovata vel oblanceolata dentibus utrinque 7-13 (vulgo 9-11) subtus glandulosa secus venas pilosa.

Nom. Jap. *Kin-Midzuhiki*.

Hab. in Sachalin, Yeso, Hondo, Shikoku, Kiusiu, Liukiu, Tsusima, Quelpaert, Korea et etiam

Amur: sine loco speciali (C. J. MAXIMOWICZ, Herb. Mus. Paris); idem (V. KOMAROV 901, Herb. Mus. Paris).

Manshuria: Lakka (CHAFFANJON no. 1330, Herb. Mus. Paris); Hanka (H. BOHNHOF no. 140, Herb. Mus. Paris).

China:

Chili: Peking (A. DAVID, Herb. Mus. Paris).

Shantung: Chefoo (C. C. STUHLMANN no. 6521, Herb. Mus. Paris).

Kiang-su: Shanghai (HÉLOT et D'ARGY, Herb. Mus. Paris).

Su-tchuen. Tchen-Kéou-Tin (FARGES no. 244, Herb. Mus. Paris).

Hupei: Patung (A. HENRY, Herb. Mus. Paris); On-tan-Scian (C. SILVESTRI no. 888, Herb. Mus. Paris); Ta-Tsien-Lu (J. A. SOULIÉ no. 647 partim, Herb. Mus. Paris); Soukiang (MONTIGNY no. 181, Herb. Mus. Paris).

Kwangtung: sine loco speciali (C. FORD no. 67, Herb. Mus. Paris).

Yunnan: pede montis Maeulchon (DELAVAY no. 3859, Herb. Mus. Paris).

Hongkong: (E. BODINIER, Herb. Mus. Paris).

Himalaya bor. occid. (L. PIERRE, Herb. Mus. Paris).

Indo-China: Chapa (LECOMTE & FINET no. 502, Herb. Mus. Paris).

Agrimonia pilosa var. *japonica* forma **bracteata** NAKAI.

Bracteae trifidae vel 5-fidae flores manifeste superantes.

Hab. in Yeso, Hondo, Shikoku et Kiusiu.

Agrimonia pilosa var. *japonica* forma **subglabra** NAKAI.

Syn. *Agrimonia Eupatoria* forma *subglabra* CARDOT in Herb. Mus. Paris.

Foliola subtus tantum supra venas primarias pilosa.

Hab. in Yeso, Hondo et etiam.

Formosa: Shakko (U. FAURIE no. 1017, Herb. Mus. Paris); sine loco speciali (R. OLDHAM no. 103, Herb. Mus. Paris).

China: Kwagtung: Kun Yam Nyam (H. F. HANCE no. 10982, Herb. Mus. Paris); Pouo Hoa Chan (A. PR. no. 106, Herb. Mus. Paris).

Tonkin: Long Tchéou (SIMOND no. 260, type of *A. Eupatoria* f. *subglabra* CARDOT, Herb. Mus. Paris).

Indo-China: Thaumai (EBERHARDT no. 3275, Herb. Mus. Paris).

Agrimonia pilosa var. **nepalensis** (D. DON) NAKAI, comb. nov.

Syn. *Agrimonia nepalensis* D. DON. Prodr. Fl. Nepal. p. 229 (1825)—SERINGE in A. P. DE CANDOLLE, Prodr. II, p. 587 (1825)—CAMBESSEDES in JACQUEMONT, Voy. IV (Plantæ Rariores Ind. Orient. coll. V. JACQUEMENT) p. 55 fl. 68 (1844).

Agrimonia lanata WALLICH, Cat. no. 709 (1828), nom. nud.

Agrimonia Eupatoria (non LINNÆUS) J. D. HOOKER, Fl. Brit. Ind. II p. 361 (1878), pro parte.

Agrimonia Eupatoria forma *pilosa* CARDOT in LECOMTE, Fl. Gén. Indo-Chine II p. 658 (1920).

Caulis et flores ut var. *japonica*, sed pilosiores saepe villosae. Foliola subtus saepe lanata.

Nom. Jap. *Ke-Kinmidzuhiki*.

Hab.

Korea:

Prov. Kôkai: Kumiho vel Sorai Beach. (R. G. MILLS no. 4266).

Prov. Zennan: Kyobuntô vel Port Hamilton (T. NAKAI no. 11401).

Quelpaert: sine loco speciali (T. MORI).

China:

Kiang-su: Nanking (HOANG I NIN).

Shangtung: Tsingtau (ZIMMERMANN no. 239, Herb. Mus. Paris); Chefoo (FAUVEL, Herb. Mus. Paris); Yangtai (O. DEBEAUX, Herb. Mus. Paris).

Sze-Chwan: Oua-Pao-Shan (LEGENDRE no. 477, 486, Herb. Mus. Paris).

Tchentou (LEGENDRE no. 244, Herb. Mus. Paris).

Shensi: Ouæ Ssu Sil-ti (J. GIRALDI partim, Herb. Mus. Paris).

Kwei-chow: Kouy-yang (E. BODINIER, Herb. Mus. Paris); circa Kouy Yang fou (BEAUVOIS no. 282, Herb. Mus. Paris); sine loco speciali (CAVALERIE, Herb. Mus. Paris).

Yun-nan: Mongtze (TANANT, Herb. Mus. Paris); Yunnan (G. FORREST no. 4426, Herb. Mus. Paris); ibidem (DELAVAY, Herb. Mus. Paris); Touy-tchouan (E. MAIRE, Herb. Mus. Paris); Lao Kouy Chan (F. DUCLOUX, Herb. Mus. Paris); Yo lin chan (F. DUCLOUX no. 7279, Herb. Mus. Paris); circa Pa eul ngay (F. DUCLOUX no. 2990, Herb. Mus. Paris); Telen fong chan (DELAVAY no. 5178, Herb. Mus. Paris); Hay tien (F. DUCLOUX no. 3188, Herb. Mus. Paris); Mo so yu (DELAVAY, Herb. Mus. Paris); Ta pin tze (DELAVAY no. 473, Herb. Mus. Paris).

- Paris); Yun nan sen (F. DUCLOUX no. 3882, Herb. Mus. Paris); Mong tze (LEDUC, Herb. Mus. Paris).
- Tibet: Ta chien lou (J. A. SOULIÉ no. 647 partim, Herb. Mus. Paris); ibidem (A. E. PRATT no. 109, Herb. Mus. Paris); ibidem (MUSSOT no. 122, Herb. Mus. Paris); Mou pin (DAVID no. 1669, Herb. Mus. Paris); Tsekou (SOULIÉ, Herb. Mus. Paris); Gnia-patong (SOULIÉ no. 1456 Herb. Mus. Paris); Tsé kou (MONBEIG, Herb. Mus. Paris).
- Himalaya: Simla (HARMAND, Herb. Mus. Paris); Gurhwal (FALCONER no. 385, Herb. Mus. Paris); Himalaya bor.-occid. (J. D. HOOKER & T. THOMSON no. 1323, Herb. Mus. Paris); East Himalaya (GRIFFITH no. 2112, Herb. Mus. Paris); Nepaul (WALLICH, type of *Agrimonia nepalensis* D. DON et *Agrimonia lanata* WALLICH, Herb. Mus. Paris); Khasia (J. D. HOOKER & T. THOMSON no. 589, Herb. Mus. Paris).
- India orient: East Bengal (GRIFFITH no. 2113, Herb. Mus. Paris); Kumaon, Navni Tal (STRACHEY et WINTERBOTTOM no. 1010, Herb. Mus. Paris); sine loco speciali (DENTINSK, Herb. Mus. Paris); sine loco speciali (JACQUEMONT no. 675, type of *Agrimonia nepalensis* CAMBES, SEDES).
- Tonkin: Sonkiang (MONTIGNY no. 44, Herb. Mus. Paris); Laokaya (CHEVALIER no. 29290, Herb. Mus. Paris); sine loco speciali (HAUTEFEUILLE no. 135, 138, 39, 158, 190, Herb. Mus. Paris).
- Annam: Mekong, Tsékon (BIET, Herb. Mus. Paris); Laos, Xieng Kouang (SPIRE no. 435, Herb. Mus. Paris).

This variety is a new addition to the Flora of China and Korea. *Agrimonia Eupatoria* and the varieties of *Agrimonia pilosa* are distinguished in the following way.

1	{	Flores diametro 8-10 mm. Fructus 4-5 mm. latus; aculei 3-4 mm. longi vulgo sepalis æquilongi vel ea superantes. Folia inferiora sub anthesin fere toto manent. <i>A. Eupatoria</i> LINNÆUS.
		Flores diametro 4-8mm. (rarissime 9-10 mm). Fructus diametro 3-4 mm. latus; aculei 2-3 mm. longi vulgo sepalis breviores vel fere æquilongi. Folia inferiora sub anthesin vulgo emarcida. 2.
2	{	Foliola terminalia tria cum dentibus utrinque 3-10 (vulgo 4-7), subtus supra venas primarias pilis elongatis 1-2 mm. longis hirtella. 3.
		Foliola terminalia tria cum dentibus utrinque 7-15 (vulgo 9-11). 4.
3	{	Foliola terminalia cum dentibus utrinque 3-7 (vulgo 4-5). <i>A. pilosa</i> f. <i>typica</i> NAKAI.
		Foliola terminalia cum dentibus utrinque 6-10. <i>A. pilosa</i> f. <i>davurica</i> NAKAI.

- 4 { Foliola subtus villosa. *A. pilosa* var. *nepalensis* NAKAI.
 { Foliola subtus adpressius pilosa. 5.
 5 { Foliola subtus secus venas primarias pilosa.
 { *A. pilosa* v. *japonica* f. *subglabra* NAKAI.
 { Foliola subtus secus venas toto pilosa. 6.
 6 { Bracteæ floribus breviores simplices vel dentatæ
 { *A. pilosa* v. *japonica* NAKAI.
 { Bracteæ floribus æquilongæ vel eos manifeste superantes trifidæ vel
 { flabellatæ. *A. pilosa* v. *japonica* f. *bracteata* NAKAI.

1164) ***Sanguisorba argutidens* NAKAI, sp. nov.**

Species insignia cum foliis acutis argute dentatis, spicis oblongis ab apice florentibus, staminibus elongatis.

Pars basalis caulis mili ignota. Folia radicalia glabra cum petiolo 8–10 cm. longo 14–20 cm. longa 5–6 jugo-imparipinnata; foliola terminalia petiolulata 20–26 mm. longa 7–10 mm. lata oblonga, lateralia superiora 3–juga subæquantia oblonga vel ovato-oblonga sessilia vel brevissime stipitata 20–28 mm. longa 7–10 cm. longa basi latissima truncata vel subcordata 3–juga, inferiora ad infimam magnitudine sensim diminuta, infima 8–10 mm. longa 5 mm. lata, omnia apice acuta et margine argute æqualiter serrata supra viridia infra pallida. Caulis glaberrimus. Folia sub inflorescentia sessilia proxime pinnata vel pinnis imbricatis 4–6 jugo imparipinnata foliolis lanceolatis vel lineari-lanceolatis, terminalibus 18–32 mm. lobgis 3–5 mm. latis, infimis 5–7 mm. longis 2–2,5 mm. latis. Inflorescentia glabra corymbosa vel racemoso-ramosa. Spicæ oblongæ 17–27 mm. longæ cum antheris patentibus 13–16 mm. latæ ab apice florentes. Sepala 4–5 elliptica vel late elliptica vel obovata 1 mm. longa viridi-alba. Stamina 4–5 (3), 3–4 mm. longa alba clavata apice in antheras minutas atras subito attenuata. Stigma clavatum fimbriatum.

Nom. Jap. *Kôrai-Tôchisô*.

Hab.

Korea: in alpina Toseihô prov. Kanhoku (Y. KISHINAMI, type in Herb. Imp. Univ. Tokyo).

By having whitish spike flowering from the apex, this species stands near by *Sanguisorba obtusa* of North Hondo, but the leaflets are smaller in size and narrower, obtuse at the apex, the flowers are smaller.

1165) *Prunus anceps* CARDOT in LECOMTE, Not. Syst. IV no. 1, p. 32 (1923). = *Prunus ansu* KOMAROV in Acta Hort. Petrop. XXII, p. 451 (1903); Fl. Mansh. II, p. 451. (1904).

I saw the type-specimen of *Prunus anceps* in the herbarium of natural

history museum, Paris in 1924. The specimen was taken from a cultivated tree in the north of the city Akita in May 17th of 1888 by the late Father FAURIE.

1166) *Prunus salicina* LINDLEY in Trans. Hort. Soc. London VII p. 239 (1830).

var. **typica** NAKAI.

Syn. *Prunus domestica* (non LINNÆUS) THUNBERG, Fl. Jap. p. 203 (1784), specimen desideratur.

Prunus triflora ROXBURGH, Hort. Bengal. p. 38 (1814), nom. nud.

Prunus trifolia ROXBURGH, Fl. Ind. II, p. 501 (1832).

Prunus japonica (non THUNBERG) MIQUEL in Ann. Mus. Bot. Lugd. Bot. II. 90 (1865); ProL. p. 22 (1866).

Pyrus Malus γ. *glabra* FRANCHET & SAVATIER, Enum. Pl. Jap. II p. 349 (1876); **nov. syn.**

Prunus communis (non LINNÆUS) MAXIOMWICZ in Bull. Acad. Imp. Sci. St. Pétersb. XXIX p. 88 (1883), pro parte.

Folia glaberrima obovata basi acuminata apice acuta. Pedicelli flori-feri 5–10 mm. longi glaberrimi. Cupula glabra.

In Korea (Heinan, Heihoku, Kôgen, Keihoku, Keinan, Chûhoku, Zenan), China (Szechwan, Hupeh, Yunnan, Tibet orient.), Indo-China (Tonkin, Laos) spontanea etiam culta. In Japonia tantum culta, e. g. SAVATIER no. 323 (type of *Pyrus Malus* γ. *glabra*).

Prunus salicina var. **pubipes** (KOEHNE) NAKAI, comb. nov.

Syn. *Prunus triflora* var. *pubipes* KOEHNE in SARGENT, Pl. Wils. I p. 280 (1912)–SCHNEIDER, Illus. Handb. Laubholz. II p. 990 (1912).

Prunus triflora var. *pubescens* CARDOT in LECOMTE, Not. Syst. IV, p. 33 (1923); **nov. syn.**

Hab. in China (Szechwan, Hupeh, Yunnan).

Prunus salicina var. **pilosa** NAKAI, var. nov.

Glabrior quam var. *pubipes*. Pedicelli adpresse pilosi ad basin glabram sensim glabrescentes. Cupula fere glabra vel glaberrima. Folia subtus secus costas utrinque albo-pubescentia. Petioli adpresse parceque pilosi.

In Japonia culta, e. g. Aomori (FAURIE no. 2094, Herb. Mus. Paris), Akita (FAURIE no. 2123, Herb. Mus. Paris), interdum hic illuc elapsa.

Prunus salicina var. **angustifolia** NAKAI, var. nova, an species propria ?

Folia oblanceolata apice attenuata basi longissime cuneata, adulta

usque ad 11 cm. longa 2-3 cm. lata minute glanduloso-serrulata petiolis 1-1,5 cm. longis pilosis vel glabrescentibus ad apicem glandulis 2-3 instructis. Flores pedicellis 15-20 mm. longis adpresse pilosis, cupulae lobis oblongo-oblanco-latis vel lanceolatis 4-5 mm. longis glanduloso-serrulatis. Pedicelli fructiferi robusti glabri.

Hab.

Hondo :

Prov. Ômi : in montibus borealibus lacu Biwa (U. FAURIE no. 7819, type of flower, Herb. Mus. Paris).

Prov. Shinano : Kiso (J. MATSUMURA).

Prov. Kii : Monte Kôyasan (legitor? type of fruits, Herb. Mus. Paris).

Kiusiu : Nagasaki (R. OLDHAM no. 190, fors. culta, Herb. Mus. Paris).

Yesso : Hakodate ubi culta (MAXIMOWICZ anno 1861, Herb. Mus. Paris).

1167) *Prunus nudiflora* KOIDZUMI in Acta Phytotaxonomica et Geobotanica I no. 2, p. 178 (1932), excl. syn.

= *Prunus quelpaertensis* NAKAI in FEDDE, Repert. XIII, p. 276 (1914); in Tokyo Bot. Mag. XXIX p. (1915); Fl. Sylv. Kor. V, p. 25 t. IX (1916).

This species is nearest to *Prunus donarium* var. *pubescens* (*P. serrulata* var. *pubescens*), but has longer, more slender pedicels. Dr. KOIDZUMI has mistaken this with *Prunus yedoensis* var. *nudiflora* KOEHNE, but KOEHNE's variety is a glabrescent form of *Prunus yedoensis*. Dr. KOIDZUMI has been in Quelpaert last spring and told me when I met him in Keijyo last summer that in Quelpaert *Prunus yedoensis* is very rare, but *Prunus quelpaertensis* is much more common. We are obliged to him for the donation of his type-specimens of *Prunus nudiflora* to our herbarium.

Some Chinese and Japanese *Actinidia* in the Herbarium of 'Muséum National d'histoire naturelle de Paris'.

In May of 1924 amidst the flowers of Lilacs, apple-trees, and Golden Showers, I entered into Beau Paris with the desire to see the specimens of Japanese plants studied by French botanists. First of all, I paid a visit to the Natural History Museum and was received by Professor LECOMTE and Mr. GAGNEPAIN. At that time, Professor LECOMTE was the head of the Phanerogamic Department of said museum. He gave me most cordially special permission to see any specimens and any books therein. As the supervisor of Flore général de l'Indo-Chine he has great interest on East Asiatic plants, and he demanded me to correct the erroneous names given upon the Japanese and Korean specimens whenever I noticed. Mr. GAGNEPAIN is too well known of his knowledge of Asia-

tic plants, and I got many instructive suggestions from him during my sojourn. French botanists successively took greatest cares on the herbarium specimens, so the collections are in the best condition. We can see largest number of type-specimens on the same table than any other herbaria in the world. When I wanted to know the distribution of an East Asiatic plant, I took out the type specimen and the original descriptions of it and studied its specific characteristics at first. Keeping it in the centre I studied on the specimens from successive regions which were determined as conspecific one after another, thus I could make out the real distribution of the typical species. From my studies in the museum I can conclude that the majority of plants indigenous to North East Asia have their west flank of distribution in the Baikal-Dahurian regions. However, I do not intend here to make farther discussion on the distribution of plants. The following note regarding *Actinidia* is the first passage of my studies in Paris Museum.

In 1894, FRANCHET described *Actinidia melanandra* in LOUIS MOROT's Journal de Botanique Tome VIII p. 278 based on the Chinese specimens collected by R. P. FARGES (specimens are numbered 715) in the district Tchen-Kéou-Tin of the Province of Sez-chwan (or Su-tchuen). FARGES collected three different species of *Actinidia* in the same locality and put the same number 79 thereupon. This induced the confusion of *Actinidia melanandra* with other species of *Actinidia* by the later botanists. *Actinidia melanandra* has brown lamellate pith and belongs to the group of *Actinidia arguta*. In Paris Museum two type specimens of it with the handwriting of the author are kept in the herbarium; one has the female flowers, and the other the fruits. More specimens of the same number are considered to be the co-type, but has no handwriting of the author; they are two specimens with fruits and one specimen with male flowers. Among the specimens numbered 79 by FARGES three specimens with male flowers belong to this species, two specimens with female flowers and one specimen with fruits belong to *Actinidia purpurea* REHDER, and lastly two specimens with fruits belong to an undescribed species. *Actinidia purpurea* REHDER belongs also to the group of *Actinidia arguta*, but the undescribed species has white solid pith and belongs to the group of *Actinidia polygama*. It has white or brownish crisped hairs on the principal veins at the lower surface of the leaves like *Actinidia polygama*, but lacks of rigid glands. Its anthers are not yellow, but are purplish or purple. I shall call it *Actinidia Lecomtei*, sp. nov.

1168) *Actinidia melanandra* FRANCHET in MOROT, Journ. Bot. VIII p. 278 (1894)—FINET & GAGNEPAIN in Mém. Soc. Bot. Franc. IV p. 21 (1905),

pro parte—DUNN in Journ. Linn. Soc. XXXIX p. 402 (1911), pro parte.

Hab. in China.

Sez-chwan; District de Tchen-Kéou-Tin 1400 m. (R. P. FARGES no. 715, fruiting type 1, 1 type with female flowers, 2 co-types with fruits, 1 co-type with male flower); ibidem 1600 m. (FARGES no. 79, pro minoribus partibus, vel 3 specimina cum fl. masculis).

1169) **Actinidia purpurea** REHDER in SARGENT, Pl. Wils. II, p. 378 (1915).

Syn. *Actinidia melanandra* (non FRANCHET) FINET & GAGNEPAIN in Mém.

Soc. Bot. Franc. IV p. 21 (1905), pro parte—DUNN in Journ. Linn.

Soc. XXXIX p. 402 (1911), pro parte.

Hab. in China.

Sez-chwan orient.; District de Tchen-Kéou-Tin 1600 m. (R. P. FARGES no. 79 pro parte, vel 2 specimina cum fl. fæmineis; 1 cum fructibus); sine loco speciali (E. H. WILSON, VEITCH expedition no. 3269 cum fl. masc.).

Yun-nan: Ki-chan, pres de Hee-gni-tang (DELAVAY no. 4353, 4 specimina cum fl. masc.); San-tchang-kiou (DELAVAY no. 4264, specimina 3 cum fruct.).

1170) **Actinidia Lecomtei** NAKAI, sp. nov.

Syn. *Actinidia melanandra* (non FRANCHET) FINET & GAGNEPAIN in Mém.

Soc. Bot. Franc. IV p. 21 (1905), pro parte—DUNN in Journ. Linn.

Soc. XXXIX, p. 403 (1911), pro parte.

Actinidia polygama (non PLANCHON) FINET & GAGNEPAIN, l. c. pro parte—REHDER in SARGENT, Pl. Wils. II p. 380 (1915), pro parte.

Frutex polygamo-dioicus alte scandens. Ramuli teretes initio rufescenti-pilosi demum glabrescentes, hornotini fusci minute crebri-lenticellati, annotini brunnei vel brunnescenti-grisei lenticellis angustis creberrime punctulati. Medulla alba solida. Folia annua papyracea oblongo-rotundata vel latissime ovata apice subito acuminata, basi rotundata vel subcordata vel acuta, serrata dentibus parvis acuminatis ascendenti-divaricatis, 4-13 cm. longa 3-9 cm. lata, supra viridia vel interdum alba glaberrima, subtus pallida supra venas primarias albido- vel fusciscenti-crispulo-ciliata; petioli 0,5-3 cm. longi adpresse ciliati. Flores masculi in quoque axillis foliorum cymosim 3-5; pedunculi et pedicelli fusciscenti-crispulo-tomentosi; bractæ et bracteolæ angustæ 1 mm. longæ fusciscenti-ciliatæ. Calyx alte 5-partitus, lobis lineari-oblongis vel ovato-oblongis imbricatis ciliatis 3-5 mm. longis. Petala 5 obovata vel oblongo-obovata æstivatione imbricata circ. 1 cm. longa margine minute undulata extus adpresse ciliolata intus glaberrima. Stamina numerosa petalis breviora, filamentis

linearibus glaberrimis, antheris oblongis vel ovatis vel sagittatis apice apiculatis 1-1,3 mm. longis plus minus purpureo-coloratis. Ovarium abortivum. Flores fæminei axillari 1-2, sepalis et petalis ut in floribus masculis sed stamina desiderantur, ovario oblongo glaberrimo, stylis radiatis 13-17, stigmatibus recurvis anguste spathulatis. Flores hermaphroditi cum staminibus et pistilibus perfectis. Fructus calyce persistente recurvo, oblongus vel ovato-oblongus drupaceus. Semina lucida 1 mm. longa.

Hab. in China.

Sze-chwan orient., Districtu Tchen Kéou Tin (R. P. FARGES no. 406, typus in Herb. Mus. Paris, specimina 3 cum fl. masculis, specimen 1 cum fructibus; no. 79 pro parte, in Herb. Mus. Paris, specimina 3 cum fructibus.

Hu-peh: Ichang (A. HENRY no. 1788, specimen unicum cum floribus; no. 6644 cum floribus masculis; sine numero, specimen 1 cum fructibus maturatis, in Herb. Mus. Paris).

Tibet orient. Prov. Moupin (DAVID, specimen 1 cum floribus hermaphroditis et fæmineis, in Herb. Mus. Paris).

The real *Actinidia polygama* is found in China, too.

1171) ***Actinidia polygama*** MAXIMOWICZ in Mém. Sav. Étrang. Acad. Sci. St. Pétersb. IX p. 64 (1859); in Bull. Acad. Imp. Sci. St. Pétersb. XXXI, p. 19 (1886); in Mém. Biol. XII, p. 425 (1886)—REHDER in Mitteil. Deutsch. Dendrol. Gesells. XII p. 123 (1903); in SARGENT, Pl. Wils. II, p. 380 (1915).

Syn. *Trochostigma polygama* SIEBOLD & ZUCCARINI in Acta Acad. Monac. Phys.-Math. III fasc. 1. (nova Gen.) p. 728 no. 2, Tab. II fig. d 1-4 (1843); in Abh. Muench. Akad. IV 3 p. 164 no. 213 (1845).

Trochostigma repanda SIEBOLD & ZUCCARINI in Acta Acad. Monac. Phys.-Math. III. fasc. 1. p. 728 no. 3 (1843); in Abh. Muench. Akad. IV 3 p. 164 no. 212 (1845).

Trochostigma volubilis SIEBOLD & ZUCCARINI in Acta Acad. Monac. Phys.-Math. III fasc. 1 p. 725 no. 5 (1843); in Abh. Muench. Akad. IV 3 p. 164 no. 214 (1845).

Actinidia polygama PLANCHON apud MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 15 (1867); Prol. Fl. Jap. pt. 2, p. 203 (1867).—FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 59 (1875), excl. specim. SAVATIER no. 205.

Actinidia polygama var. *latifolia* MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 16 (1867); Prol. p. 204 (1867); Cat. Mus. Bot. Lugd. Bat. p. 13 (1870).—FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 59 (1875).

Actinidia volubilis PLANCHON apud MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 16 (1867); Prol. p. 204 (1867); Cat. Mus. Bot. Lugd.

Bat. p. 13 (1870)—FRANCHET & SAVATIER, l. c.

Actinidia Kolomikta (non MAXIMOWICZ) CARRIÈRE in Rev. Hort. XLVI, p. 394 fig. 53 (1874), **nov. syn.**

Actinidia arguta (non PLANCHON) DIPPEL, Handb. Laubholzk. III p. 25 cum fig. (1892), **nov. syn.**

Actinidia polygama FRANCHET & SAVATIER apud FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 20 (1905), pro parte., **nov. syn.**

Actinidia polygama MIQUEL apud DUNN in Journ. Linn. Soc. XXXIX p. 403 (1911).

Hab.

China: W. Hupeh (E. H. WILSON in VEITCH Exped. no. 1363, 1363a Herb. Mus. Paris).

Manshuria austr.-orient.: Bay Possjet (MAXIMOWICZ, Herb. Mus. Paris); Port Deans Dundas (MAXIMOWICZ, Herb. Mus. Paris).

Korea sept.: Fluvium Jalu, ad trajetum Undou-ieu (V. KOMAROV no. 1089, fr., Herb. Mus. Paris).

Yeso: Hakodate (MAXIMOWICZ, specimen 1 fl. masc., specimen 1 cum fr., Herb. Mus. Paris); Mombetsu (FAURIE no. 820, cum fl. masc., Herb. Mus. Paris); Otaru (FAURIE no. 2841, cum fl. masc., Herb. Mus. Paris).

Hondo: Nuruyu (FAURIE no. 731, cum fl. masc., Herb. Mus. Paris); Miura prov. Kii (legitor?, Specimen exhibited in Exposition 1889, cum fl. masc. Herb. Mus. Paris); Todohoke (FAURIE no. 5817, cum fl. fæmin., Herb. Mus. Paris); Kessenmura (FAURIE no. 6115 cum fruct., Herb. Mus. Paris); sine loco speciali (SAVATIER, cum fl. masc., Herb. Mus. Paris).

When PLANCHON described *Actinidia chinensis* in HOOKER, London Journal of Botany vol. VI 313, 1847, he wrote that *Trochostigma* should be reduced to *Actinidia*, but he never made any such combination as *Actinidia polygama* PL., *A. rufa* PL., *A. arguta* PL. which MIQUEL mentioned in Annales Musei Botanici Lugduno-Batavi III. *Actinidia polygama* MIQ. and *A. arguta* MIQ. which DUNN mentioned in the Journal of Linnaean Society XXXIX are very precise, but how much this scientific accuracy would be estimated by the committees of nomenclature rules is a big question.

Japanese species *Actinidia hypoleuca* NAKAI was mistaken for *Actinidia melanandra* by FINET, GAGNEPAIN, and DUNN, but the leaves of *A. hypoleuca* are broader than the latter's, the branches have no lenticels, and the authers are not produced at their tips.

1172) *Actinidia hypoleuca* NAKAI in Tokyo Bot. Mag. XXVIII, p. 312 (1904).

Syn. *Actinidia polygama* (non MAXIMOWICZ) FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 59 (1875), quoad specimen a SAVATIER lectum, no. 205 partim.

Actinidia melanandra (non FRANCHET) FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 21 (1905), pro parte—MATSUMURA, Ind. Pl. Jap. II pt. 2, p. 357 (1912), pro parte.

Actinidia callosa var. *arguta* (non NAKAI) MATSUMURA l. c. p. 356 (1912), pro parte.

Hab.

Hondo: Yokoska (SAVATIER no. 205 bis, Herb. Mus. Paris.); Nachi prov. Kii (legitor?, specimen exhibited in Exposition 1889, partim. Herb. Mus. Paris).

Actinidia arguta is found nearly everywhere in Japan. It resembles to *Actinidia hypoleuca*, but the twigs have lenticels and the leaves are pale green not being glaucous. It is easily discriminated from *Actinidia hypoleuca* in the field by its green foliages.

1173) *Actinidia arguta* PLANCHON apud MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 15 (1876); Prol. p. 203 (1867)—FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 58 (1875)—MAXIMOWICZ in Bull. Acad. Imp. Sci. St. Pétersb. XXXI p. 18 (1886); in Mém. Biol. XII p. 423 (1886)—REHDER in Mitt. Deutsch. Dendrol. Gesells. XII, p. 123 (1903).

Syn. *Trochostigma arguta* SIEBOLD & ZUCCARINI in Acta Acad. Monac. Phys.-Math. III p. 727 no. 2 (1843); in Abh. Muench. Akad. IV 3, p. 164 (1845).

Actinidia cordifolia MIQUEL, l. c.—FRANCHET & SAVATIER, l. c.

Actinidia polygama (non PLANCHON) FRANCHET & SAVATIER, l. c. p. 59, partim.

Actinidia volubilis (non PLANCHON) K. ITO, Koishikawa Shokubutsu-en Sômoku Dzusetsu II p. 22 t. 23 (1884).

Actinidia melanandra (non FRANCHET) FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 21 (1905), pro parte.

Actinidia rufa (non PLANCHON). FINET & GAGNEPAIN, l. c. pro parte.

Actinidia rufa var. *arguta* DUNN in Journ. Linn Soc. XXXIX p. 402 (1911). Hab.

Hondo: Yokoska (SAVATIER no. 205 partim, Herb. Mus. Paris); Nachi prov. Kii (legitor?, specimen exhibited in Exposition 1889, Herb. Mus. Paris); Hakone (MAXIMOWICZ, Herb. Mus. Paris).

Japonia: sine loco speciali, cotype specimen of *Trochostigma arguta*, communicated by BLUME; specimen numbered 422, communicated

by BLUME.

Kiusiu: Nagasaki, Koishiwara (MAXIMOWICZ, anno 1863, Herb. Mus. Paris).

Yeso: Hakodate (MAXIMOWICZ, Herb. Mus. Paris).

Ussuri: Vladivostok (MAXIMOWICZ, Herb. Mus. Paris).

Actinidia rufa PLANCHON is a southern species. It has very vigorous shoots. Young shoots and leaves, as well as inflorescence have rusty tomentum. Its fruits are biggest among the Japanese *Actinidias*. The northern limit of its distribution hitherto ascertained is the Province of Kii.

1174) *Actinidia rufa* PLANCHON apud MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 15 (1876); Prol. p. 203 (1876)—FRANCHET & SAVATIER, Enum. Pl. Jap. I p. 58 (1875)—FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 21 (1905), pro parte.

Syn. *Trochostigma rufa* SIEBOLD & ZUCCARINI in Acta Acad. Monac. Phys. -Math. III p. 727 no. 1, t. II fig. d 8-d 13 (1843); in Abh. Muench. Akad. IV 3 p. 164 (1845)—A. GRAY in Mem. Americ. Acad. Arts & Sci. New ser. VI p. 383 (1859).

Actinidia arguta var.? *rufa* MAXIMOWICZ in Bull. Acad. Imp. Sci. St. Pétersb. XXXI p. 19 (1886); in Mém. Biol. XII, p. 424 (1886).

Actinidia callosa (non LINDLEY) FORBES & HEMSLEY in Journ. Linn. Soc. XXIII, p. 78 (1886), excl. specimen in Shingking lectum.—ITO & MATSUMURA in Journ. Coll. Sci. Tokyo XII, p. 13 (1899).—DUNN in Journ. Linn. Soc. XXXIX, p. 405 (1911), quoad specimen ex Loochoo Islands.

Actinidia rufa var. *typica* DUNN, l. c. p. 402 (1911).

Actinidia callosa var. *rufa* MAKINO in Tokyo Bot. Mag. XVI, p. 147 (1901)—MATSUMURA, Ind. Pl. Jap. II pt. 2, p. 356 (1912).

Hab.

Kiusiu (SIEBOLD, cotype of *Trochostigma rufa*, communicated by BLUME, Herb. Mus. Paris).

Loochoo: Takunoshima et Ôshima (C. WRIGHT no 51, sent from Herb. Gray, Herb. Mus. Paris).

Dr. MAKINO reduced *Actinidia arguta* and *Actinidia rufa* to *Actinidia callosa* LINDLEY, but *Actinidia callosa* has rusty tomentose ovary, and many lenticellated fruits. The existence of lenticels on the fruits is an important taxonomic characteristic for *Actinidia*. By this characteristic Mr. S. T. DUNN of Kew distinguished *A. callosa*, *A. coriacea*, and *A. rubri-*

caulis from other *Actinidias* and made a new section *Maculata*.

Actinidia platyphylla A. GRAY is nearest to *Actinidia arguta*, but is marked by its more hairy inflorescence and by the leaves with hispidulous glands on the veins. These glands are often found on the petiole; they are sometimes being forked.

1175) ***Actinidia platyphylla*** A. GRAY in sched. ex MIQUEL in Ann. Mus. Bot. Lugd. Bat. III p. 15 (1867); Prol. Fl. Jap. p. 203 no. 2 (1867)—FRANCHET & SAVATIER, Enum. Pl. Jap. I, p. 58 (1875).

Syn. *Actinidia volubilis* (non PLANCHON) CARRIÈRE in Rev. Hort. XLVI p. 394 fig. 54 (1874), **nov. syn.**

Actinidia rufa (non PLANCHON) FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 21 (1905); pro parte, **nov. syn.**

Actinidia polygama (non MAXIMOWICZ) FINET & GAGNEPAIN l. c. p. 20, pro parte; **nov. syn.**

Actinidia rufa var. *cordifolia* DUNN in Journ. Linn. Soc. XXXIX p. 403 (1911), excl. syn.; **nov. syn.**

Hab.

Yeso: cape Singar (C. WRIGHT, type in Herb. Gray, syn-type in Herb. Mus. Paris); Sapporo (FAURIE no. 3308).

Hondo: in prov. Senano (SAVATIER no. 2819).

The real *Actinidia Kolomikta* is not indigenous to China. The Chinese *Actinidia* hitherto mistaken for it has more vigorous shoots, broader leaves with more brownish and thicker hairs on the veins, and more rigid hairs on the surface. The leaves never become white or crimson like *Actinidia Kolomikta*. Its flowers are similar to those of *Actinidia Kolomikta*, but the pedicels are more robust. I shall call it *Actinidia Gagnepaini*.

1176) ***Actinidia Gagnepaini*** NAKAI, sp. nov.

Syn. *Actinidia Kolomikta* (non MAXIMOWICZ) HEMSLEY in Journ. Linn. Soc. XXIII, p. 79 (1886)—FRANCHET, Pl. David. II p. 24 (1888)—PRITZEL in ENGLER, Bot. Jahrb. XXIX p. 470 (1900)—FINET & GAGNEPAIN in Mém. Soc. Bot. France IV p. 20 (1905), pro parte—DUNN in Journ. Linn. Soc. XXXIX p. 404 (1911), pro parte—REHDER in SARGENT, Pl. Wils. II p. 380 (1916)—Omnes excl. syn.

Frutex scandens 3-7 metralis (fide E. H. WILSON). Medulla fusca lamellata. Rami juveniles dense fusco-pubescentes demum glabrescentes, biennes brunnei vel atro-brunnei lenticellati. Petioli 15-50 mm. longi fusco-

pilosi. Folia membranacea vel subchartacea 30–140mm. longa 15–90mm. lata argute serrulata obovata vel rotundato-quadrangularia vel late obovato-oblonga basi cordata vel obtusa apice subito acuminata supra viridia sed folia terminalia interdum albo-variegata primo supra venas fusco-ciliata sed demum glabrescentia simulque setis rigidis sparse setulosa subtus supra venas fusco-pubescentia. Flores masculi axillari 1–3. Pedicelli fusco-pilosi potius graciles. Calyx alte 5-fidus, lobis oblongis vel ovatis vel lanceolatis 3–4 mm. longis adpresse pilosis. Petala 5 alba obovata 8–10 mm. longa margine undulata glabra. Stamina numerosa; antheræ albæ apice acutiusculæ. Flores hermaphroditi axillares solitarii; pedicelli bibracteati magnitudine ut floribus masculis sed stamina breviora; ovarium ovoideum vel subglobosum; pistilla ∞ stellata. Fructus ovoideus viridis vel luteus (fide E. H. WILSON).

Hab. in China.

Szechuan: (A. HENRY no. 8806 cum fl. hermaphroditis, typus; no. 8994 cum fl. hermaphroditis); Mt. Omei (E. H. WILSON, VEITCH Expedition no. 4761 cum fl. masculis); Tachienlu (A. E. PRATT no. 830 cum fl. hermaphroditis).

Tibet orient.: Prov. Moupin (DAVID, cum fl. hermaphroditis).

1177) *Ilex Beecheyi* (LOESNER) MAKINO, Journ. Jap. Bot. III no. 3 p. 14 (1928).

Syn. *Ilex integra* var. *Beecheyi* LOESNER in Nova Acta Acad. Caes. Leopold. Carol. Germ. Nat. Curis. LXXVIII (Monogr. Aquifoliac. I) p. 273 (1901).

Arborea, maxima 6–7 metralis alta, trunco 1 metralis supra terram circ. 20 cm. lato. Cortex trunci cinereus. Ramuli glaberrimi, hornotini cum foliis juvenilibus colore inter 'Dark Grayish Lavender' et 'Deep State Violet,' parce angulati. Petioli 10–15 mm. longi in sectio hemisphærici glaberrimi. Lamina foliorum oblonga vel lineari-oblonga vel obovata remote crenato-serrata vel integerrima crassiuscula luciduscula, in speciminibus exsiccatis elevati-reticulata, 20–52 mm. longa 12–23 mm. lata basi subcuneato-attenuata apice angustato-obtusiuscula. Flores mihi ignoti. Fructus axillari-glomeratim 2–3, globosum vel depresso-globosus 6–8 mm. latus colore 'Carnelian Red.'

Nom. Jap. *Munin-Mochinoki*.

Hab.

Bonins: in silvis Nakanotaira insulæ Hahajima (H. TOYOSHIMA, type in Herb. Imp. Univ. Tokyo); ibidem (T. NAKAI).

This species is distinguished from *Ilex integra* by its smaller growth, dark grayish lavender or deep state violet coloured young branchlets and

leaves which are crenated at the margin, and smaller fruits.

1178) ***Ilex bonincola*** MAKINO, Journ. Jap. Bot. I fasc. 6 p. 21 (1917).

var. ***angustifolia*** NAKAI, var. nov.

Folia lineari-oblonga 30–55 mm. longa 8–14 mm. lata sed interdum partim oblongo-obovata tum minora.

Nom. Jap. *Nagaba-Munin-Inutsuge*.

Hab.

Bonins : Takedabokujyô insl. Chichijima (T. NAKAI, typus in Herb. Imp. Univ. Tokyo).

Ilex bonincola MAKINO is rarer than *Ilex Matanoana* MAKINO. The former is distinguished from the latter by having larger, more greenish, loosely arranged leaves. The present variety has smaller obovate leaves in the lower part of branchlets, and is easy to mistake with *Ilex Matanoana* in the dried specimens. However, in the living specimens the branchlets and petioles are not dark reddish and not congested as in *Ilex Matanoana*.

1179) ***Viola brevistipullata*** W. BECKER in Beihefte Bot. Centralb. XXXIV p. 265 (1916); XXXVI, p. 50 (1918).

var. ***minor*** NAKAI, var. nov.

Caulis 4–22 cm. altus apice sæpe patente-pubescenti parte hypophylla rubro-purpureus. Folia 16–52 mm. longa 14–50 mm. lata supra glabra, venis impressis. Pedunculi 1,5–1,2 cm. longi. Calcar 2–3 mm. longum. Calyx 6 mm. longus. Petala calycem duplo superantia flava rhodovenia.

Nom. Jap. *Daisen-Kisumire*.

Hab. in Hondo.

Prov. Hôki : Mt. Daisen (A. KIMURA, typus in Herb. Imp. Univ. Tokyo); ibidem (T. SAWADA); ibidem (YOKOO).

Prov. Ômi : Mt. Mikuniyama (H. WATANABE).

Prov. Suruga : Okaya (K. TAKATA).

Prov. Kôdzuke : Mt. Tanigawadake (Y. KISHINAMI).

In the dried specimens the outlook of this variety resembles much to *Viola xanthopetala* NAKAI (*Viola orientalis* W. BECKER, pro parte), but the leaves are broader and glabrous (not setulose) and the veins are more impressed on the upper surface.

1180) ***Monotropa Morisoniana*** MICHAUX, Fl. Bor.-Americ. I p. 266 (1803)–SPRENGEL, Syst. Veget. II p. 317 (1825).

Syn. *Monotropa Morisonii* PERSOON, Syn. Pl. I p. 469 (1805)–NAKAI, Veget.

Kamikôchi prov. Shinano p. 26 (1928).

Monotropa uniflora β . *tripetala* MAKINO, Journ. Jap. Bot. III p. 28.

(1926).

Nom. Jap. *Ko-Ginryôsô* (MAKINO).

Hab.

Hondo.

Prov. Mutsu : Shichinohe (FAURIE no. 673, Herb. Mus. Paris); Mt. Hakkôda (S. HATTORI).

Prov. Rikuzen : Oginohama (FAURIE no. 65, Herb. Mus. Paris).

Prov. Uzen : Rokujyûrigoe (R. YATABE).

Prov. Sado : in monte (FAURIE no. 2725 partim, Herb. Mus. Paris).

Prov. Shinano : Kamikôchi (T. NAKAI); Mt. Yatsugatake (Y. YABE); Mt. Ontake (G. KOIDZUMI).

Since GEORGE DON gave an English description of *Monotropa Morisoniana* in his Gardner's Dictionary III 2 and AUG. P. DE CANDOLLE translated it into Latin in his Prodrômus vol. VII (1838), *Monotropa Morisoniana* became the name of larger form of *Monotropa uniflora*. But, the fact is quite contradictory. Whatever the specimens of MORISON may be, MICHAUX's *Monotropa Morisoniana* is a slender form with tripetalous flowers. MICHAUX had two type-specimens of *Monotropa Morisoniana*. In the Natural History Museum of Paris they are being kept in MICHAUX Herbarium at the side of TOURNEFORT Herbarium and DESFONTAINES Herbarium. One of them is a flowering specimen, but as it was collected late in season the flower became upright like the other fruiting specimen. In the general herbarium many specimens of the same sort of *Monotropa* collected in North America are being kept; they are :

8 specimens from VAILLANT Herbarium.

8 specimens collected by J. HENNECART during the JACQUEMONT Voyage in 1827.

5 specimens collected by LESNEUR in 1832.

One specimen collected by BEADING, from DECAISNE Herbarium.

3 specimens collected by DRIGE in 1852.

One specimen collected by LYALL in 1859, and which was sent from Sir W. J. HOOKER.

14 specimens collected LAMARRE-PICQUET in 1865.

3 specimens collected by J. FOWLER in 1870.

In North America, typical *Monotropa uniflora* is found, too, but is more seldom than *Monotropa Morisoniana*. In Japan, the ratio of two species quite contradicts to the ratio in North America, and *Monotropa Morisoniana* is found always in central and northern part of Hondo.

1181) *Swertia bimaculata* HOOKER & THOMSON ex CLARKE in Journ. Linn. Soc. XIV p. 449 (1875), excl. specimens from Sikkim.

var. **typica** NAKAI.

Corolla 6-12 mm. longa, lobis 2-5 mm. latis vel acuminatis. Capsula 8-12 (vulgo circ. 10) mm. longa. Inflorescentia cymoso-paniculata, ramis potius gracilibus, axis primaria elongata ita inflorescentia vulgo elongata. Semina polygono-sphaerica granulosa.

Nom. Jap. *Akebonosô*.

Hab. in Japonia.

Swertia bimaculata var. **macrocarpa** NAKAI, var. nov.

Syn. *Swertia bimaculata* HOOKER & THOMSON ex CLARKE l. c., excl. specimina Japonica; in HOOKER fil., Fl. Brit. Ind. IV p. 123 (1883)—FRANCHET in Bull. Soc. Bot. France XLVI p. 316 (1899), excl. syn.—HEMSLEY in Journ. Linn. Soc. XXVI p. 139 (1890).

Vulgo robustus et elatus. Corolla 10-15 mm. longa; lobis 3-6 mm. latis. Capsula 12-25 (vulgo 15-20) mm. longa. Inflorescentia vulgo cum ramis elongatis robustis subcorymbosa. Interdum caulis e basi ramosus. Semina rotundata sublævia parce granulosa.

Hab. in China centr. et austr., Himalaya.

Hupeh (A. HENRY no. 5059 A, typus in Herb. Imp. Univ. Tokyo).

1182). *Swertia anomala* NAKAI in Tokyo Bot. Mag. XXVIII, p. 331 (1914). = **Swertia Wilfordii** KERNER in Berl. Gesells. Nat. Innsbruck I p. 102 (1870).

Nom. Jap. *Ôba-Senpuri*.

Hab. in Korea et Manshuria.

1183) **Chrysophyllum Augustini** NAKAI, sp. nov.—Sect. *Gymnanthera*.

Frutex ramosus. Cortex fuscus. Ramuli fere glabri vel pilis minutissimis rubro-fuscis piloselli. Folia alterna. Petioli 6-23 mm. longi glabri rubro-fusci. Lamina foliorum oblonga vel ovato-oblonga 37-132 mm. longa 23-67 mm. lata basi acuta vel obtusa apice acutiuscula, nervis lateralibus utrinque 6-10 indivisis vel 2-3 furcatis omnibus in serrula terminantibus, serrulis triangularibus 1-2 mm. longis 2-3,5 mm. latis acutiusculis vel obtusiusculis. Inflorescentia axillaris paniculata 1-2 cm. longa; axis glabra vel pilosella; bractæ ovatae involutæ 1 mm. longæ acutæ; pedicelli vix 1 mm. longi basi articulati medio et apice bracteolatæ; calyx globosus basi obconicus, limbis æstivatione imbricatis demum suberectis ovatis crassis longitudine 3-4 lineolatis 1 mm. longis; corolla alba, tubo vix 1 mm. longo quam limbus calycis paulo brevior, limbis 5 æstivatione imbricatis late ovatis obtusis 1,5 mm. longis; antheræ 5 limbos corollæ oppositæ sub fauce tubo affixæ subsessiles ovatae 0,5-0,6 mm. longæ biloculares laterali-subintrorso-dehiscentes apice retusæ; ovarium depresso-conicum 3-4 loculare; stylus solitarius 0,2-0,3 mm. longus; stigmata 3 vel

4; ovula in quoque loculo ovarii solitaria pendula. Fructus mihi ignotus.

Nom. Jap. *Augusto-no-ki*.

Hab.

Sulphur Islands: Insula Minami-Iwôtô vel St. Augustine (S AOKI, typus in Herb. Imp. Univ. Tokyo).

The St. Augustine Island is not inhabited. In 1930, Mr. SENZO AOKI, managing director of Iwôtô Takushoku Seitô Kaisha (Sulphur Island Colonization and Sugar Manufacturing Company) went there by a fishing boat to ascertain if the colonization of the island is possible. He found this stranger on an exposed rock and brought it back with him to the Bonin Island. Mr. H. TOYOSHIMA, the administrator of Bonins State Forests received it from him and took care of it in the nursery of his office. In April of 1931 its first flowers appeared and specimens were delivered to me from Mr. TOYOSHIMA for determination. *Chrysophyllum*, a big and old Linnaean genus restricted in the tropics, is new to the Japanese Flora.

1184) **Scopolia parviflora** (DUNN) NAKAI, sp. nov.

Syn. *Scopolia japonica* (non MAXIMOWICZ) HEMSLEY in Journ. Linn. Soc. XXVI, p. 176 (1890)—PALIBIN in Acta Hort. Petrop. XVIII (Consp. Fl. Kor. II) p. 20 (1900)—NAKAI in Journ. Coll. Sci. Tokyo XXXI (Fl. Kor. II) p. 115 (1911).

Scopolia japonica var. *parviflora* DUNN in Kew. Bull. 1912, (Some additions to the Korean Flora) p. 109.

Glaberrima. Caulis 5–7 mm. latus, circ. 15–20 mm. altus. Folia obovato-elliptica apice cuspidata basi attenuata, venis lateralibus utrinque 7–8, subintegerrima. Pedunculi axillares solitarii graciles 3 cm. longi apice sensim incrassati. Calyx 5-fidus, 7–10 mm. longus, lobis triangularibus vel late lanceolatis acutis. Corolla intensè violacea campanulata 12–13 mm. longa lobis late deltoideis. Stamina 5 inserta. Filamenta angusta 5–7 mm. longa. Antheræ oblongo-ovatae 2,5 mm. longæ.

Nom. Jap. *Chôsen-Hashiri-Tokoro*.

Hab.

Korea: Seoul Mts (W. R. CARLES, typus in Herb. Kew).

On 22nd of September, 1924, I saw the type-specimens in the herbarium of Royal Botanic Gardens, Kew. Two specimens are mounted on a sheet; the left hand specimen has two flowers and the leaves are still being halfway folded; the right hand specimen has spread leaves, accompanying one flower.

1185) **Prunus velutipes** NAKAI, sp. nov.—*Cerasus*.

Affinis *Prunus Tschonoskii*, sed exqua foliis angustioribus, adultis

subtus æque petiolis velutinis, calyce rubro-fuscis vel intense rubris petalis roseis distincta.

Arborea 5-8m. alta. Truncus 10-30cm. latus. Cortex trunci cinereo-cerasoideus. Rami biennes robusti castaneo-cinerei lenticellis punctulati. Squamæ gemmarum cinereo-castaneæ. Cataphylla extus glabra intus pilosa obovata vel oblongo-obovata viridis et dorso erubescencia margine creberrime eroso-glandulosa 10-13 mm. longa 7-8 mm. lata intima apice trifida. Petioli rubescentes albo-velutini. Folia obovata fuscescenti-viridia supra erectius pilosa infra subvelutina. Gemmæ floriferæ 2-3 floræ. Pedunculi 7-15 mm. longi patentim piloselli virides. Calycis tubus 10 mm. longus intense ruber vel rubro-fuscus parce pilosus basi turbinatus ubi viridis. Calycis lobi horizontali-patentes extus piloselli intus subglabri vel piloselli margine ciliati et serrati. Petala oblonga pallide lilacina 13 mm. longa 7 mm. lata apice dentata et emarginata. Stamina 40-45; filamenta prima lilacina demum sanguinea. Styli 13-14 mm. longi infra medium parce piloselli et lilacini. Stigma discoideum. Drupa 8-10 mm. longa et lata basi latissima. Folia adulta; petioli 7-18 mm. longi velutini; lamina obovata vel oblongo-obovata cum acumine 13-25 mm. longa 50-111 mm. longa 22-53 mm. lata margine duplicato-serrulata, venis utrinque 11-15, supra viridia parce ciliolata cum costa et venis primariis impressis, infra pallida cum costa et venis primariis elevatis et velutinis. Pedunculi fructiferi 2-4 mm. longi pilosi apice bractea unica late obovata glanduloso-dentata instructi interdum sine bractea. Pedicelli 20-22 mm. longi apice incrassati toto velutini. Drupa nigra 8-10 mm. longa et lata.

Nom. Jap. *Hana-ishi-zakura*.

Hab.

Hondo: in montibus Nikko (T. NAKAI, typus in Herb. Imp. Univ. Tokyo).

It was in July 1927 when I found this species at Utanohama in the side of Lake Chûzenji. The tree had the fruits. In April of 1931, we noticed a good specimen of same species is standing among the row of *Yamasakura* at the gateway of Nikko Branch Garden of our Botanic Gardens. When this Branch Garden was opened at present site in June of 1909, many wild *Yamasakuras* were transplanted from the surrounding mountains and hills. They are *Prunus Tschonoskii* KOEHNE, *P. verecunda* KOEHNE, *P. Sargentii* REHDER, *P. nipponica* MATSUMURA, *P. apetala* FRANCHET & SAVATIER, *P. Mochidzukiana* NAKAI, sp. nov., *P. rugulosa* NAKAI, sp. nov., and this. This is certainly an akin of *Prunus Tschonoskii* which is very common in the lower level of Nikko Mountains, and seems very likely to have varied from it.

1186) **Pranus rugulosa** NAKAI, sp. nov.—*Cerasus*.

Arborea circ. 5 metralis alta ramosissima. Rami cinerei, hornotini rubescentes patentim ciliati. Petioli circ. 7mm. longi rubescentes patentim ciliati apice glandulis sphaericis binis instructi. Lamina foliorum obovata vel late obovata basi cordata duplicato-serrulata apice subito caudato-atte-nuata, supra rugosa, pilosa, infra supra venas toto erecto-pilosa præcipue supra costam velutina. Cataphylla magna obovata vel oblongo-obovata dorso rubescentia glabra intus pilosa. Pedunculi vulgo evoluti 5–15mm. longi patentim piloselli 1–2 flori. Pedicelli 14–23mm. longi erecto-pilosi. Calycis tubus tubuloso-campanulatus rubescens 8–9mm. longus 3,5–4mm. latus patentim ciliolatus, lobi ascendentes oblongi acuti virides vel erubes-centes extus parce ciliolati margine creberrime ciliolati intus glabri. Sta-mina circ. 35 primo alba demum lilacina. Styli e basi usque ed $\frac{2}{3}$ pilosi, pilis inferioribus patentibus superioribus ascendentibus.

Nom. Jap. *Chijimi-zakura*.

In horto botanico Nikkoense culta, olim e monte vicinitate allata.

This species is nearest to *Prunus apetala* FRANCHET & SAVATIER (*P. crassipes* KOIDZUMI), but is distinguished as follows.

{	Calycis tubus 7–10 mm. longus 3–4 mm. latus. Pedicelli sub anthesin floribus æquilongi. Petala parva calycis lobis breviora vel æquilonga vel parce longiora. Folia inciso-duplicato-serrata haud rugosa.	 <i>P. apetala</i> .
	Calycis tubus 5–7 mm. longus 2–3 mm. latus. Pedicelli flores plus duplo superantes. Petala calycis lobos plus duplo superantia. Folia dupli-cato-serrata cum venis impressis rugosa.	 <i>P. rugulosa</i> .

1187) ***Prunus Mochidzukiana* NAKAI, sp. nov.**—*Cerasus*.

Arbor circ. 8 metralis alta. Ramus biennis cinereo-fuscus lenticellis sparsim punctulatus potius gracilis. Rami triennes et adultiores atro-fusci. Gemmæ castaneæ squamis multis imbricatis. Cataphylla 2–3, oblongo-oblanceolata parce erubescencia 7–13 mm. longa 3–6 mm. lata utrinque glabra margine glanduloso-dentata atque ciliolata apice acuta rarius den-tata. Rami juveniles glabri. Petioli adpresse piloselli 7–10 mm. longi supra canaliculati marginibus canali erubescens. Stipulæ lineares vel subulatae 3–4 mm. longæ margine glanduloso-serrulatae et ciliolatae. Lamina foliorum juvenilium primo falcata obovato-elliptica basi acuta apice subito acuminata fuscescenti-viridis supra præter costam pilosellam ab initio glaberrima infra costis et venis primariis lateralibus pilosellis margine glabra serrulis simplicibus rarissime subduplicis acuminatis apice glandulis rubris papillosis terminantibus serrulata. Gemmæ florum laterales 1–3. Flores umbellatim 1–4 (vulgo 3–4) suaveolentes, cataphyllis 3–5 suffulti. Pedicelli graciles dependentes 25–34 mm. (vulgo 30 mm). longi

sparsim subpatentim piloselli virides. Calycis tubus tubulosus circ. 9-10 mm. longus ex medio leviter constricto-angustatus fuscescenti-viridis sparsim subpatentim pilosellus; lobi oblongi horizontali patentes rubescenti-viridis 6 mm. longi argute glanduloso-serrulati. Petala pallide lilacina ovata apice emarginata circ. 10-13 mm. longa 8 mm. lata. Stamina inæqualia 25-27 filamentis purpurascensibus 3-7 mm. longi. Antheræ flavæ 0,5 mm. longæ. Ovarium ellipsoideum 2,5 mm. longum viridissimum lucidum. Stylus 11-12 mm. longus infra medium pilosellus. Stigma discoideum. Folia adulta: petioli 8-17 mm. longi pubescentes; lamina oblonga vel elliptica apice in acuminem 5-15 mm. longam subito constricta cum acumine 32-83 mm. longa 19-41 mm. lata basi glandulis binis discoideis instructa supra viridis glabra subplana luciduscula infra albescens cum costa infra medium pilosella, venis primariis utrinque 8-14. Pedunculi subnulli. Pedicelli fructiferi umbellati 1-2, 26-37 mm. (vulgo 30-35 mm.) longi patentim pilosi. Drupa ellipsoidea 7-8 mm. longa 5-6 mm. lata.

Nom. Jap. *Mochidzuki-zakura*.

In horto botanico Nikkoense culta.

This species is found in the lower level than Nikko. The type-tree in Nikko Branch Garden was transplanted from a hill near Imaichi. I have named this species after the family-name of Mr. NAOYOSHI MOCHIDZUKI, who served faithfully assistant of four directors during twenty three years at that garden and retired recently by his age.

The mountain-cherries growing on Nikko Mountains are distinguished as follows.

1	{ Styli glabri.	2
	{ Styli saltem basi pilosi.	10
2	{ Folia margine inciso-duplicato-serrata.	3
	{ Folia margine simpliciter serrata vel subduplicato-serrata.	4
3	{ Arbor. Petioli et folia subtus villosula.	
	<i>P. Tschonoskii</i> KOEHNE var. lelogyna NAKAI, var. nov.	
	{ Frutex vel arborescens. Petioli et pagina inferiora foliorum pilosa vel glabra.	<i>P. nipponica</i> MATSUMURA.
4	{ Folia oblonga vel elliptica basi fere rotundata vel acuta, adulta subtus albescentia, serrulis aciculato-terminantibus. Petioli, venæ foliorum et pedicelli pilosi.	<i>P. donarium</i> SIEBOLD var. <i>pubescens</i> KOIDZUMI.
	{ Folia dilatata late obovata vel rotundato-obovata, basi vulgo truncata vel subcordata, adulta subtus viridula.	5
	{ Flores præcoci magni diametro 30-40 mm., umbellati. Petala rosea pulchra. Ramuli ultimi robusti, cortice lucida.	6

- 5) Flores cætanei vel subcæ'anei, diametro 25-30mm. Petala carnea vel rosacea. Ramuli ultimi vulgo graciliores vel interdum robustiusculi. 7
- 6) { Folia glaberrima. *P. Sargentii* REHDER.
Folia subtus supra venas pilosella. *P. floribunda* KOEHNE.
(Flores corymbosi. Petioli et pedicelli piloselli v. glabri.
7) { *P. verecunda* KOEHNE var. *yessoensis* NAKAI.
(Flores umbellati. 8
- 8) { Folia supra glaberrima. Ramuli ultimi robustiusculi.
..... *P. verecunda* KOEHNE var. *compta* NAKAI.
(Folia supra pilosella. Ramuli ultimi graciles. 9
(Petioli et pedicelli piloselli. *P. verecunda* KOEHNE.
- 9) Petioli et pedicelli glabri.
{ *P. verecunda* KOEHNE var. **intermedia** NAKAI, var. nov.
- 10) { Folia margineæqualiter simpliciter serrulata vel subduplicato-serrulata, ambitu oblonga. Ramuli graciles. Flores cætanei. Petala elliptica carnea. *P. Mochidzukiana* NAKAI.
(Folia conspicue duplicato-serrata. 11.
- 11) { Calycis tubus 7-10mm. longus 3-4mm. latus pilosus sub anthesin pedicello æquilongus. Petala parva sepalis breviora vel parce longiora. Folia inciso-duplicato-serrata utrinque æqualiter velutina.
..... *P. apetala* FRANCHET & SAVATIER
- 12) { Calycis tubus 5-7mm. longus 2-3mm. latus, sub anthesin pedicello plus duplo brevior. Petala sepala plus duplo superantia. Folia duplicato-serrulata. 12
(Folia rugosa, juvenilia subtus æque petioli velutina. Pedicelli pilosi. *P. rugulosa* NAKAI.
- 13) { Folia plana nunquam rugosa. 13
(Folia oblongo-obovata vel oblonga subtus et petioli villosa. Calyx intense ruber vel rubro-fuscus. Petala rosea. *P. velutipes* NAKAI.
- 13) { Folia obovata vel elliptica vel obovato-elliptica, subtus et petioli pilosa vel pubescentia sed non villosa vel velutina. Calyx erubescens vel viridis. Petala carnea. *P. Tschonoskii* KOEHNE

Errata ad XLII.

Vol. XLVI, p. 614 line 31 put 'pro parte' under (1930).

" p. 622 between line 26 and 27 put

Hab.

Hondo: oppido Yanagawa tractus Iwate prov. Rikuchû (G. TOBA no. 483, type); oppido Okina prov. Iwashiro (S HATTORI).