Inula britannica (non L.) quoad pl. ex Japon.—MATSUMURA, l. c. p. 651 (1912).

Inula britannica subsp. *japonica* KITAMURA, in litt.

Nom. Jap. *Oguruma*, *Yezo-oguruma*.

Hab. at the foot of Mt. Apoi, Samani, etc. Fl. Aug.

Dist. Kyushu, Shikoku, Honshu, Yezo, Korea, China and Manchuria.

602⁽⁴⁰⁾**Inula salicina* LINNAEUS, Sp. Pl. ed. 1, II, p. 882 (1753).

* var. *asiatica* KITAMURA in Acta Phytotax. et Geobot. II, p. 44 (1933).

Syn. *Inula salicina* (non L.) quoad pl. ex Japon.—MATSUMURA, Ind. Pl. Jap. II-2, p. 652 (1912).—TATEW., Veg. Apoi p. 114 (1928).

Inula involucrata (non KALENICZENKOW 1845) MIQUEL in Ann. Mus.

Bot. Lugd.-Bat. II, p. 171 (1866).—NAKAI, Veg. Apoi p. 72 (1930).

Nom. Jap. *Kasensô*.

Hab. at the foot of Mt. Apoi, Samani, etc. Fl. Aug.

Dist. Kyushu, Shikoku, Honshu, Yezo, Korea and Manchuria.

(To be continued.)

Contributions to the Knowledge of the Systematics of *Morus* in Japan. IX.

Morus in Shikoku and Kiusiu.

By

Teikichi Hotta¹⁾.

With 5 Text-figures.

Received October 28, 1937.

Various papers have hitherto been reported on *Morus* in Shikoku and

1) Deep acknowledgement is due to Prof. Emer. K. MIYABE and Prof. S. ITO, who have given constant guidance, to Prof. Y. TOCHINAI and Dr. M. TATEVAKI, who have rendered kind advices, to Prof. T. NAKAI, Dr. M. HONDA, Prof. G. KOIDZUMI and Dr. R. TAKENOUCHI, who helped the writer in many ways, as well as to those authorities of the Forestry Bureau and other institutions in Shikoku and Kiusiu, who were kind enough to send specimens at his request.

Kiusiu by G. KOIDZUMI²⁾, Y. DOI³⁾, G. MASAMUNE⁴⁾ and S. HATSUSHIMA⁵⁾. They have, however, dealt with *Morus bombycis* KOIDZ. and its variety *caudatifolia* KOIDZ., *Morus tiliaefolia* MAKINO and *Morus australis* POIRET.

**Key to the species, subspecies, varieties and forms of
Morus found in Shikoku and Kiusiu.**

1. Style long, stigma divided into two parts at its apex. 2
 Sect. I. *Dolichostylae* KOIDZ. 2
 Style none or very short with sessile or subsessile stigma divided into two parts.
 Sect. II. *Macromorus* KOIDZ. 13
 Morus tiliaefolia MAKINO.
2. Cystolith of epidermis is rather acute at apex, rarely crooked. Apex of the leaf abruptly acuminate or acuminate. *M. bombycis* KOIDZ. 3
 Cystolith of epidermis is usually projecting at the upper part, and obtuse at apex. Apex of the leaf caudate or long acuminate. *M. australis* POIRET.
3. Upper surface of the leaf scabrous, or rarely smooth, and both surfaces hirsute on the veins, margin irregularly dentato-serrate or rarely dentato-crenate.
 M. bombycis KOIDZ., var. *typica* HOTTA 4
 Upper surface of the leaf smooth and both surfaces glabrous, margin dentato-serrulate, veins and petiole very slender.
 M. bombycis KOIDZ., var. *Koketsuana* HOTTA.
4. Leaf lobate or not lobate and ovate or ovato-elliptical. 5
 Leaf testudiniform. var. *testudiniformis* HOTTA.
5. Both surface with a few short hairs, rarely hairless only on the under surface. . . 6
 Upper surface of the leaf hirsute on the veins, under surface with rather dense hairs.
 var. *pubescens* HOTTA.
6. Apex of the leaf caudate or subulate. 7
 Apex of the leaf abruptly acuminate or acuminate or acute. 9
7. Apex of the leaf caudate. 8
 Apex of the leaf subulate. var. *subulata* HOTTA.
8. Leaf 2-4 (-6) lobate or not lobate. var. *caudatifolia* KOIDZ. 9
 Leaf irregularly doubly lobate, upper surface asperate or very scabrous.
 var. *pseudodiabolica* HOTTA.
9. Upper surface of the leaf scabrous or somewhat smooth. 10
 Upper surface of the leaf very asperate rarely scabrous, apex caudate or long acuminate. var. *asperata* HOTTA.
10. Teeth of the leaf usually irregularly dentate. 11
 Teeth of the leaf very irregularly dentate, leaf cordate in shape.
 var. *irregularidentata* HOTTA.
11. Leaf lobate or not lobate. In the former case usually the length of the lobe is

2) KOIDZUMI, G.:—Synopsis Specierum Generis Mori, in Bull. Imp. Sericult. Exp. Stat., II, 1, p. 10, 14, 19 (1923).

3) DOI, Y.:—Florula Satsumensis sive Enumeratio Plantarum in Provincia Satsuma, Sponte Nascentium, I, 3, p. 30 (1928).

4) MASAMUNE, G.:—*Moraceae* in Floristic and Geobotanical Studies on the Island of Yakushima, Prov. Ōsumi, in Mem. Fac. Sc. Agricult. Taihoku Imp. Univ., XI, (1934).

5) HATSUSHIMA, S.:—*Moraceae* in Report Experimental Forest Faculty Agriculture, Kiusiu Imp. Univ., 5, p. 54-5 (1934).

about half-way between the margin and midrib, f. *normalis* HOTTA.
 Leaf is pinnatisect or pinnatifid and the segments are very narrow.

f. *dissecta* NAKAI.

Sect. I. ***Dolichostylae*** KOIDZUMI, Imp. Sericult. Exp. Stat., II,
 1, p. 3 (1923).

(1) ***Morus bombycis*** KOIDZUMI, Bot. Mag. (Tokyo), XXIX, p. 313
 (1915).

Nom. Jap. *Yamaguwa*.

Nom. Vern. *Marukuwa*, *Mimikire-guwa*.

Hab.

Shikoku.

Prov. Sanuki: Mt. Konpira (T. HOTTA, no. 10125).

Prov. Awa: Shinryo, Myosaigun (R. UCHIHARA, no. 25026); Sakaki,
 Yokose (Z. NOZAKI, no. 25028); Mt. Takagoshi (Z. TASHIRO, fr. ♀, ex herb.
 Univ. Kyo.); Soyayama, Mimagun (no. 2564, ex herb. Univ. Tok.); Shishi-
 kui, Kaibugun (K. KAWASEYE, no. 25025); Ogawa, Higashisoyayama, Mima-
 gun (S. KANEKO, no. 25002); Mitsuna (T. HOTTA, no. 10571).

Prov. Iyo: Koyayama, Mikawa, Kamiukenagun (Z. SUGIYAMA, no.
 39097); Mt. Aina, Omokawa, Kamiukena (M. YAMANAKA, no. 39050); Mt.
 Koyayama, Mikawa, Kamiukenagun (Z. SUGIYAMA, no. 39096); Kigatsu-
 toge, Higashiuwagun (T. HOTTA, no. 10567); Osu (T. HOTTA, no. 10716);
 Mt. Deishi (T. HOTTA, no. 10577); Mt. Hobashiraya, Goso, Minamiuwagun
 (M. SUGAHARA, no. 39093); Mt. Sumiyoshi, Uwajima (T. HOTTA, no. 10230);
 Ogawa, Iyayama, Mimagun (S. KANEKO, no. 25020).

Prov. Tosa: Takeyashiki, Kitagawa, Akigun (K. HARA, no. 10968);
 Osugi (T. HOTTA, no. 10115 et 30426); Suzaki (T. HOTTA, no. 10128);
 Motokawa, Tosagun (S. KUHARA, no. 30431 et Y. OKABAYASHI, no. 30418);
 Ikegawa, Azumagun (S. KAWAKAMI, no. 30417); Mt. Miyanotani, Taishyo-
 mura (S. FUJII, no. 110-A).

Kiusiu.

Prov. Chikuzen: Oshima (S. TAKASU et K. HANADA, no. 11456, fl. ♀,
 ex herb. Univ. Kyu.); Nishitozaki (M. TAKENOUCHI, no. 865, fl. ♀, ex herb.
 Univ. Kyu.); Insula Genkai, Kitazaki, Itoharagun (K. NAKAMURA, no.
 476); Hakozaiki (T. HOTTA, no. 10082); Mt. Yufu (S. HANADA, no. 13549,
 ex herb. Univ. Kyu.); Misetoge (M. TAKENOUCHI, no. 3256, ex herb. Univ.
 Kyu.); Gokayama, Minamihata, Chikushigun (S. SATO, no. 30134).

Prov. Buzen: Yabakei (M. TAKENOUCHI, no. 6215, ex herb. Univ. Kyu.).

Prov. Chikugo: Tomarisako, Hasegawa, Onogun (I. KAI, no. 30357);
 Maezaki (M. TAKENOUCHI, no. 864, fl. ♂, ex herb. Univ. Kyu.); Kuroki (T.
 HOTTA, no. 39077); Yoshii (T. HOTTA, no. 10569); Toyama (T. HOTTA,

39066); Mt. Yosomuki (T. HOTTA, no. 10121); Ginsui, Miikegun (T. SUGINO, ex herb. Univ. Kyo., ?).

Prov. Bungo: Morimachi, Kusugun (Y. KATO, no. 39885); Yutsubo, Iida, Kusugun (K. ITO, no. 39882); Tano, Iida, Kusugun (S. ITO, no. 39877); Nogami, Kusugun (Y. KATO, no. 39880); Minaniyamada, Kusugun (S. ITO, no. 39879); Yuhira (T. HOTTA, no. 10056); Otake, Naworigun (M. KUKU, no. 30355); Kusumi, Naorigun (B. FURUDERA, no. 30353); Sayeki (F. TAKASU, no. 39156); Kawaragi, Minamiamabegun (G. TAKAGI, no. 39159); Nagano, Kodachi, Minamiamabegun (F. TAKASU, no. 39163); Nawomi (T. HOTTA, no. 9138).

Prov. Tsushima: Kotomura, Kamigatagun (S. SUYEDA, no. 30159); Mt. Tatsura (Z. TASHIRO, ex herb. Univ. Kyu., ?); Zusan, Shimogatagun (S. KUROKI, no. 30162).

Prov. Hizen: Matsukuma, Higashiseburi, Kanzakigun (S. SATO, no. 30120); Matsukuma, Higashiseburi, Kanzakigun (S. SATO, no. 30132); Kitayama, Ogigun (S. KOGA, no. 30133); Shimokumagawa, Minamiyamamura, Ogigun (M. MORIU, no. 30123); Matsuo, Ogigun (N. TAJIMA, no. 30122); Minamiyama, Ogigun (S. YAMAGUCHI, no. 30119); Aichi, Higashimatsuura-gun (K. ICHINO, no. 30127); Yamashiro, Higashimatsuura-gun (K. YOKOYAMA, no. 39104); Hisasato, Higashimatsuura-gun (S. IKI); Ike, Aichi, Higashimatsuura-gun (K. ICHINO, no. 30130); Kurimura, Higashimatsuura-gun (K. ICHINO, no. 30128); Kagamimura, Higashimatsuura-gun (Y. IRIGUCHI, no. 30121); Imari, Nishimatsuura-gun (E. MINAMISAKO, no. 39129); Takikawa, Higashiyamashiro, Nishimatsuura-gun (K. YOKOYAMA, no. 39128); Higashimachi, Minamimatsuura-gun (I. HIRAMOTO, no. 30180); Arikawa, Minamimatsuura-gun (I. HIRAMOTO, no. 30182); Shimabara (M. TAKENOUCHI, no. 863, ex herb. Univ. Kyu., ?); Nokomi, Fujitsugun (R. KAWASAKI, no. 39095); Nanaura, Fujitsugun (S. SAKAI, no. 39089); Tanoye, Matsuo-sato, Tomiguchi (Y. MIYAZAKI, no. 744-A); Kishuku, Minamimatsuura-gun (I. HIRAMOTO, no. 30414).

Prov. Higo: Sakashita (T. HOTTA, no. 39062); Uchimaki (T. HOTTA, no. 25006, typus); Seta (T. HOTTA, no. 55004); Takamori (R. KOKETSU, K. HANADA et M. TAKENOUCHI, ex herb. Univ. Kyu.); Momikimura, Yatsushiro-gun (M. TAKENOUCHI, no. 4738, ex herb. Univ. Kyu.); Shimomatsukuma, Yatsushiro-gun (T. HOTTA, no. 9163); Sakamoto (T. HOTTA, no. 413); Aida, Tamagun (M. UCHIYAMA, no. 39075); Yamaji, Aida, Tamagun (G. KOIDE, fl. ♀, ex herb. Univ. Kyo.); Watari, Tamagun (S. FUKUYAMA, no. 39085).

Prov. Hiuga: Yamada, Kitamorogatagun (N. TAKENOUCHI, no. 39144); Minamigo, Higashiusukigun (A. ICHIHARA, no. 25006); Minamigo, Yamada, Kitamorogatagun (N. TAKENOUCHI, no. 39142); Nagaseko, Sanzai, Koyugun (K. SHIRAIISHI, no. 594-A); Nagaseko, Sanzai, Koyugun (T. HOTTA, no.

30252); Yonera (K. MAYEBARA, no. 542, fr. ♀, ex herb. Univ. Kyo.); Kawakita, Tono, Koyugun (H. SHINOHARA, no. 30416); Takanabe, Koyugun (T. HOTTA, no. 379); Sanno, Koyugun (Y. TAGUCHI et S. KAI, no. 30251); Sadohara, Koyugun (T. HOTTA, no. 939); Uchiyama, Takaoka, Higashimorogatagun (S. TAKAHASHI, no. 30379); Uchiyama Takaoka, Higashimorogatagun (S. TAKAHASHI, no. 30370); Ikume, Miyosakigun (T. HOTTA, no. 9158); Shiramizu, Hokita, Kamihokita (H. SHIGA, no. 30359); Hokita, Kamihokita (H. SHIGA, no. 30363); Kawakami, Hokita, Kamihokita (T. MURAKAMI, no. 25016); Nasaki, Suki Nishimorogatagun (Y. HONDA, no. 30384); Shyomeiji, Masaki, Nishimorogatagun (M. UCHIYAMA, no. 39079); Uchino, Masaki, Nishimorogatagun (M. UCHIYAMA, no. 39078); Sakiyama, Takasaki, Kitamorogatagun (N. TAKENOUCI, no. 39140); Mt. Kirishima, Nishidake, Kitamorogatagun (N. TAKENOUCI, no. 39136); Sakiyama, Takasaki, Kitamorogatagun (N. TAKENOUCI, no. 39148); Fukushima (T. HOTTA, no. 39052).

Prov. Osumi: Shimoyaku, Kumakegun (M. AKAMATSU, no. 30268); Tagami, Tarumizu, Kimotsukigun (I. INO, no. 30129); Takakuma, Kanoya, Kimotsukigun (T. HOTTA, no. 198); Kushira (T. HOTTA, no. 197); Oaira (T. HOTTA, no. 5980); Fumoto, Tashiro (I. NIHO, no. 19134).

Prov. Satsuma: Awoki, Oguchi, Isagun (M. UCHIYAMA, no. 39049); Kuna, Satsumagun (K. ASODA, no. 30437); Kawauchi, Satsumagun (T. IWASHITA, no. 30118); Ibusuki, Ibusukigun (T. HOTTA, no. 744-B, cult.?).

Distr. Sachalin, australis insula Tontomushiri (ex Koidz. op.) Hokkaido, Honshiu, Korea.

var. **Koketsuana** HOTTA, var. nov.

Frutex; cortice fusca. Folium subcordatum vel ovato-oblongum, valde herbaceum, supra laeve, utrinque fere glabrum, apice acuminato vel subito, acuminato, margine dentato-serrulata, basi truncata vel aperte cordata, venis valde gracilis; petiolo gracile 2–2.5 cm. longo.

Nom. Jap. *Hosori-guwa* (nov.).

Hab.

Prov. Higo: Aso (R. KOKETSU et K. HANADA, no. 7464, ex herb. Univ. Kyu.).

Remarks. Leaf is ovato-oblong and very thin, upper surface is smooth, both surfaces are rather glabrous, acuminate or abruptly acuminate at the apex, margin dentato-serrulate, truncate or shallowly cordate at the base, vein is very slender; petiole very slender and 2–2.5 cm. in length.

var. **testudiniformis** HOTTA, var. nov.

Folium varie profunde lobatum fere testudiniforme, apice longicaudato vel subulato, subtricuspidato, basi truncata vel aperte cordata.

Nom. Jap. *Kameba-guwa* (nov.).

Hab.

Kiusiu. Prov. Hizen: Honmachi, Minamimatsuuragun (I. HIRANO, no. 30181, typus). Prov. Hiuga: Sakiyama, Takasaki, Kitamorogatagun (N. TAKENOUCHI, no. 39141). Prov. Satsuma: Oaira, Kimotsukigun (T. HOTTA, no. 5980).

Distr. Honshiu.

var. **pubescens** HOTTA, Trans. Sapporo Nat. Hist. Soc., XIV, 3, p. 201, t. VI, c (1936) et XIV, 4, p. 274 (1936), (New to Shikoku et Kiushiu).

Syn. *Morus japonica* AUDUB, var. *pubescens* YENDO, Traité sur la Cult. du Mûr. au Jap., p. 17 (1930) nom. seminud.

Ramulus plerumque tenuis, fere declinatus. Folium subtus insigniter pubescens.

Nom. Jap. *Keyama-guwa* (nov.).

Hab.

Shikoku. Prov. Tosa: Motokawa, Tosagun (I. KUHARA, no. 39238).

Kiusiu. Prov. Bungo: Nogami, Kuzu (Y. KAKU, no. 39883, typus). Prov. Hiuga: Nasaki, Sukimura (Y. HONDA, no. 30383). Prov. Osumi: Awa, Shimoyaku (M. AKAMATSU, no. 30266).

Distr. Yezo, Honshiu.

var. **subulata** HOTTA, Bot. Mag. (Tokyo), LI, 608, p. 692 (1937).

Apex folii subulatus rare caudatus, basi cuneata vel truncata aperte cordata.

Nom. Jap. *Kirisaki-yamaguwa*.

Hab.

Shikoku. Prov. Tosa: Yekawasaki, Hantagun (S. FUJII, no. 39972).

Kiusiu. Prov. Hiuga: Shomioji, Shinkomura (M. UCHIMURA, no. 39084-A, typus).

Distr. Honshiu et in hortis culta.

var. **pseudodiabolica** HOTTA, var. nov.

Folium irregulariter duplo-lobatum, subtus fere pubescens, supra asperatum vel valde scabrum, apice caudato; margine fere arguti-serrulata vel dentato-serrata, apice apiculato; petiolo omnino pubescente.

Nom. Jap. *Onagaoni-guwa* (nov.).

Hab.

Shikoku. Prov. Tosa: Yekawasaki, Hanta (S. FUJII, no. 39975, typus); Suhara, Takaokagun (S. FUJII, no. 108-A).

Remarks. Leaf is irregularly doubly lobate, upper surface of the leaf are asperate or very scabrous, under surface hirsute on the veins. Apex

is caudate, margin is slightly arguto-dentate or dentato-serrate, the apices of the teeth are apiculate, petiole with rather conspicuously white hairs on the whole surface.

var. **caudatifolia** KOIDZUMI, *Kuwazoku Shokubutsu Kô*, p. 33 in nota sub *M. bombycis* (1919); Bull. Sericult. Exp. Stat., II, 1, p. 12 (1923).—NAKAI, Fl. Sylv. Korea, XIX, p. 102, t. XXXII (1932).—HOTTA, Phytotax. Geobot., VI, 2, p. 110 (1937).

Syn. *Morus caudatifolia* KOIDZUMI, MATSUMURA, Icon. Pl. Koishikawaensis III, 4, p. 97, Pl. 185 (1916).—MAKINO et NEMOTO, Fl. Jap., p. 1085 (1925).

Folium: apice caudato subito elongato.

Nom. Jap. *Onaga-guwa*.

Hab.

Shikoku. Prov. Tosa: Suhara, Takaoka (S. FUJII, no. 108-A).

Kiusiu. Prov. Chikugo: Fukushima (T. HOTTA, no. 39052). Prov. Bungo: Higashiiida, Kuzugun (K. YOSHIKAWA, no. 39881, typus). Prov. Hiuga: Minamisato, Higashiusuki (A. ICHIHARA, no. 25003); Nishidake, Kitamorogatagun (N. TAKENOUCI, no. 39136).

Distr. Hokkaido, Honsiu et Korea.

1
Fig. 1. *M. bombycis* Koidz., var. *caudatifolia* Koidz.
2
Fig. 2. *M. bombycis* Koidz., var. *asperata* HOTTA.
3
Fig. 3. *M. bombycis* Koidz., var. *irregularidentata* HOTTA.

var. **asperata** HOTTA, var. nov.

Folium supra valde asperatum rare scaberrimum, apice caudato vel longiacuminato.

Nov. Jap. *Zaraba-guwa* (nov.).

Hab.

Shikoku. Prov. Tosa: Motokawa, Tosagun (U. OKAMOTO, no. 30421).

Kiusiu. Prov. Bungo: Higashiida, Kuzugun (K. YOSHIKAWA, no. 39884, typus). Prov. Hiuga: Sakiyama, Takasaki (N. TAKENOUCHI, no. 39147). Prov. Osumi: Kanoya (S. YEZONO, no. 30194).

Distr. Honshiu.

var. **irregularidentata** HOTTA, var. nov.

Folium cordatum, apice plerumque tricuspido, margine volde irregularidentata, basi plerumque asperter cordata.

Nom. Jap. *Midareha-guwa* (nov.).

Nom. Verm. *Kashiba*.

Hab.

Kiusiu. Prov. Satsuma: Yamano, Isagun (M. HYODO, no. 29942, typus).

Distr. Honshiu.

form. **dissecta** NAKAI, Fl. Sylv. Korea., XIX, p. 101, t. 29 B (1932).—HOTTA, Trans. Sapporo Nat. Hist. Soc. XIV, 3, p. 203 (1936); Bot. Mag. (Tokyo), LI, 611, p. 838 (1937). (New to Shikoku et Kiusiu).

Syn. *Morus alba* var. *stylosa* form. *dissecta* NAKAI, Veget. Isl. Quelpaert, p. 39, no. 5176 (1914), nom. nud.

Folium pinnatifidum vel bipinnatifidum, lobis angustis.

Nom. Jap. *Hosoba-yamaguwa*.

Hab.

Shikoku. Prov. Awa: Sakaki, Yokose (Z. NOZAKI, no. 25030). Prov. Iyo: Mt. Odafuka, Ukenagun (Z. SUGIYAMA, no. 39054); Mt. Sumiyoshi, Uwajima (T. HOTTA, no. 10534). Prov. Tosa: Mt. Miyanotani, Taishyomura (S. FUJII no. 105-A); Sakashima, Taisyomura (S. FUJII, no. 104-A).

Kiusiu. Prov. Bungo: Amagase (T. HOTTA, no. 10079). Prov. Hizen: Mt. Nunofusa (T. SUMITA, no. 10057). Prov. Higo: Hazama, Aita, Tamagun (M. UCHIYAMA, no. 39076). Prov. Hiuga: Nishigo, Higashiusukigun (T. URA, no. 25015); Tono, Koyugun (S. YAMANE, no. 25013); Sadohara, Koyugun (T. HOTTA, no. 408); Uchiyama, Takaoka, Higashimorogatagun (S. TAKAHASHI, no. 30368); Kirishima, Nishidake, Kitamorogatagun (N. TAKENOUCHI, no. 39151). Prov. Satsuma: Tarumizu, Kimotsukigun (T. HOTTA, no. 30196, typus); Yamano, Isagun (M. OCHIAI, no. 39943).

Distr. Yezo, Honsiu, Shikoku, Kiusiu, Korea.

(2) **Morus australis** POIRET.

Morus australis POIRET, LAMARCK Ency. Method. Bot., IV, p. 380 (1797).

Nom. Jap. *Shima-guwa*.

Hab.

Kiusiu. Prov. Osumi: Higashiamagi (S. YOKOTA, no. 39020).

Remarks: Cystolith of epidermis is usually projecting at the upper part, and obtuse at apex.

Distr. in region trop. et subtrop. Asia, Australis.

4

5

Fig. 4. Cystolith of a leaf of *M. australis* POIRET.

Fig. 5. Cystolith of a leaf of *M. tiliaefolia* MAKINO.

Zeiss C × Leitz Periplan 8 (×180).

Sect. II. **Macromorus** KOIDZUMI, Imp. Sericult. Exp. Stat., II, 1, p. 4 (1923).

(3) **Morus tiliaefolia** MAKINO.

Morus tiliaefolia MAKINO, Bot. Mag. (Tokyo), XXIII, p. 88 (1909).

Nom. Jap. *Keguwa*.

Hab.

Shikoku. Prov. Awa: Komimachi, Mimagun (G. KOIDZUMI, ex Herb. Univ. Kyo.). Kiusiu. Prov. Tsushima: Nii (T. NAKAI, ex Herb. Univ. Tok.).

Remarks. Cystolith of epidermis is broad ovate with rather conico-papillate, and acute tip.

Distr. Honsiu, Korea.

Botanical Institute, Faculty of Agriculture,
Hokkaido Imperial University, Sapporo.