

Synopsis Specierum Generis Balanophorae in Japonia et Formosa Sponte Crescentium

Auctore

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Plantarum ad genus Balanophoram pertinentium ex orbi terrarum omnino circiter quinquaginta species adhuc descriptae exstant. Hoc genus, dum per totam Asiam austro-orientalem (videlicet Himalaya, Burma, Cochinchina, China-australis, Paeninsula Malayana, Java, Sumatra, Insulae Philippinae, Formosa, Japonia meridionalis et intermedia, nec non Insulae Marianae et Carolinae) aequae ac per Australiam (cum Nova Guinea) late distributum est, porro autem in regione Africana ad singulam speciem in Insulis Comoro (Africa orientalis) degentem reducitur.

In praesenti opusculo meo systema generis Balanophorae, an potius eius specierum in regione de Insulae Honshu intermedia parte ad Formosam patente Insulis Ryu-kyu inclusis crescentium, tractare conatus sum. Specimina in Herbario Universitatis Imperialis Taihokuensis, et in Herbario Universitatis Imperialis Tokyoensis servata, nec non specimina in collectionibus privatis amicorum K. SAWADA, S. SASAKI etc. exstantia vel ab iis amicis nuperrime collecta diligentissime examinavi.

Species in hoc opusculo tractatae numerum quatuordecim attingunt, et paucis exceptis omnes Imperii Japonici indigenae sunt.

(I) Clavis specierum generis Balanophorae

(A) Flores monoici.

- (a) Flores ♂ pedicellati, perianthia 3-4; antherae 3-4, sessiles connatae, rimis transversaliter dehiscentes.

X Rhizoma facie pustulatum.....*B. Wrightii* MAKINO

XX Rhizoma facie haud pustulatum.....*B. tobiracola* MAKINO

- (b) Flores ♂ pedicellati, perianthia 4-5 raro 6; antherae 4-6, filamentiferae ad columnam hippocrepiforme coalitae, rimis 2 parallelis verticaliter dehiscentes.

X Capitulum floriferum subglobosum 30-50 mm in diametro, pedunculo dense imbricato-squamato.*B. fungosa* FORSTER

XX Capitulum floriferum globosum 13-18 mm in diametro, pedunculo laxo imbricato-squamato.*B. Kuroiwai* MAKINO

(B) Flores dioici.

- (a) Flores ♂ pedicellati, perianthia 3-4; antherae 3-4, sessiles connatae, rimis transversaliter dehiscentes.

- (6) **Balanophora Kuroiwai** MAKINO, in Tokyo Bot. Mag. XVI. (1902) p. 213 (nomen nudum, e notâ); MAKINO, Nippon Shokubutsuzakwan (1925) p. 593, fig. 1143.
Balanophora fungosa FORST. var. *Kuroiwai* MAKINO in Tokyo Bot. Mag. XXI. (1907) p. 49, t. II; MAKINO et NEMOTO, Flora Jap. (1925) p. 1053.
Nom. Jap. Riû-kiû-tsuchitorimochi vel Yaeyama-tsuchitorimochi.
Habit. Formosa (Kashû-tô, S. SASAKI); Riû-kiû Archip. (Yaeyama).
- (7) **Balanophora morrisonicola** HAYATA, Ic. Pl. Formos. V. (1915) p. 198; MAKINO et NEMOTO, Flora Jap. (1925) p. 1053; SASAKI, List Pl. Formosa (1928) p. 166.
Nom. Jap. Niitaka-tsuchitorimochi.
Habit. Formosa (mont. Niitaka).
Distrib. Haec planta in Formosa endemica est.
- (8) **Balanophora mutinoides** HAYATA, Ic. pl. Formos. 111. (1913) p. 168, t. XXXI, et V. (1915) p. 198, et Gen. Ind. Flora Formos. (1917) p. 65; MAKINO et NEMOTO, Fl. Jap. (1925) p. 1053; ITO, T. Taiwan Shokubutsu-Zakwan (1927) p. 27, Fig. XXV. 1, excl. 2.
Balanophora Kasakamii HAYATA, Gen. Ind. Fl. Formos. (1917) p. 65.
Nom. Jap. Fudegata-tsuchitorimochi.
Habit. Formosa (in montibus Arisan et Niitaka).
Distrib. Haec planta in Formosa endemica est.
- (9) **Balanophora nipponica** MAKINO, in Tokyo Bot. Mag. XXIII. (1909) p. 1053.
Nom. Jap. Miyama-tsuchitorimochi
Habit. Japonia: Honshû intermedia et septentrionalis.
Distrib. Haec planta in Japonia endemica est.
- (10) **Balanophora Oshimae** YAMAMOTO, sp. nov.
 Planta parasitica, ad radicem horizontalem *Alni formosanae* fasciculatim sita, dioica circ. 6 cm alta; flos femineus ignotus. Volva cupuliformis vel amorpha vel tuberiformis facie minute punctato-scaberrima vel verrucosa, circ. 1 cm longa, ad orem trifida, fidis triangularibus subaequalibus v. inaequalibus. Scapus teres 5 cm longus a basi ad mediam imbricatim vel plus minusve biserialim squamatus, squamis 14 inaequalibus glabris nitidis in vivo rubicundis a basi ad superiorem gradatim majoribus, basalibus late ovatis 7 mm longis 9 mm latis apice rotundatis, inferioribus ovatis 1.5 cm longis 1.2 cm latis apice obtusissimis, mediis ovatis 2 cm longis 1.5 cm latis, superioribus lanceolatis 3 cm longis 1.5 cm latis apice obtusis, omnibus extus valde convexis intus valde concavis.
 Spicae fl. ♂, cylindraceae vel ellipticae circ. 3.5 cm longae (pedunculo excepto) 1.3 cm in diametro, dense floratae, floribus densissime dispositis, corporibus (bracteis) minutis perianthio alternis glaviformibus 0.5 mm longis apice capitulatis plus minusve irregulariter 4-5 angulatis. Alabastrum floris masculini sessile depresso-subglobosum pentangulare, supra ad basin plus minusve constrictum 1.5 mm longum 3 mm et 2.5 mm latum.
 Perianthium 4-partitum crassum, extus valde convexum intus concavum, segmentis opposito-aequalimagnum, aliis 2 late ovatis 1.5 mm longis 2.5 mm latis apice truncatis, aliis 2 late ovatis 1.5 mm longis 2 mm latis apice triangularibus. Antherarum loculi 20 saepe 12-15 subaequalimagini, 3-seriatim vel subirregulariter vermiformeque connati, transverse siti sessiles.
Nom. Jap. Taroko-tsuchitorimochi (nov.).
Habit. Formosa: trans Hagisaka, ad circ. 4500 ped. alt., Naitaroko, prov. Kawarenkô, leg. Y. YAMAMOTO et S. MOROTOMI, 24 Oct. 1930.

Nota. Affinis *B. morrisonicolae*, sed antherarum loculis circ. 20, inaequali-magnis 3-seriatim dispositis, floribus masculis cum bracteis claviformibus, exqua statim differt.

In honorem cl. Prof. Dr. K. ŌSHIMA, Directoris Facultatis Scientiae et Agriculturae, Taihoku Universitatis Imperialis, grato animo nomen dedico.

- (11) **Balanophora parvior** HAYATA, Fl. Mont. Formos. in Journ. Coll. Soc. Imp. Univ. Tokyo, XXV. Art. 19, (1908) p. 192, Pl. XXXIV; MAKINO et NEMOTO, Fl. Jap. (1925) p. 1053; Iro, T. Taiwan Shokubutsu-Zukwan, (1927) p. 26, fig. XXIV. 5-8; SASAKI, List Pl. Formos. (1928) p. 166.

Balanophora mutinoides (non HAY.) ITO, Taiwan Shokubutsu-Zukwan, (1927) p. 27, fig. XXV. 2, excl. 1.

Nom. Jap. Hime-tsuchitorimochi

Habit. Formosa: in monte Niitaka; Kanshirei, leg. K. SAWADA et E. KUROSAWA, Jan. 1920.

Distrib. Haec planta in Formosa endemica est.

- (12) **Balanophora spicata** HAYATA, Fl. Mont. Formos. in Journ. Coll. Sci. Imp. Univ. Tokyo, XXV. Art. 19, (1908) p. 192, pl. XXXII; ITO, T. Taiwan Shokubutsu-Zukwan, (1928) p. 26, fig. XXIV. 1-4; SASAKI, List Pl. Formos. (1928) p. 116.

Nom. Jap. Hozaki-tsuchitorimochi.

Habit. Formosa: in monte Kishirei; prov. Takao, Kizan, leg. R. HOSOKAWA, Jun. 1931.

Distrib. Haec planta in Formosa endemica est.

- (13) **Balanophora tobiracola** MAKINO, in Tokyo Bot. Mag. XXIV. (1910) p. 290, fig. XVIII; MAKINO, Nippon Shokubutsu-Zukwan (1925) p. 593, fig. 1144; MAKINO et NEMOTO, Fl. Jap. (1925) p. 1054; MASAMUNE, Preliminary Report Veg. Island Yakusima, Kagosima (1929) p. 70.

Nom. Jap. Kiire-tsuchitorimochi vel Tobira-ningyō.

Habit. Japonia (Kiū-Shiū).

Distrib. Haec planta in Japonia endemica est.

- (14) **Balanophora Wrightii** MAKINO, (nomen nudum) in Tokyo Bot. Mag. XXV. (1911) p. 33; MAKINO et NEMOTO, Fl. Jap. (1925) p. 1054.

Balanophora dioica (non R. BROW.) Iro in Journ. Linn. Soc. XXIV. (1887) p. 143, Pl. V. fig. 7-8, excl. 5-6.

Nom. Jap. Raito-tsuchitorimochi (nov.)

Habit. Riū-Kiū Archip.

Distrib. Haec planta in Japonia endemica est.

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Taihoku Univ. Imp., Taihoku, Formosa

Nippon, in mense Feb. anni 1931.