

2. Pileus green; stipe white to yellowish f. *viscosa*.
3. Pileus olivaceous or green; stipe yellow-orange to orange f. *aurantipes*.
4. Pileus dull orange-yellow; stipe greenish f. *anthocephala*.
5. Plants entirely greenish or olivaceous f. *Stevensonii*.
6. Plants greenish or green, ramoso-lobate f. *portentosa*.
7. Plants entirely green f. *chlorosoma*.
- II. Plants small, less than about 1.5 cm. in length.
8. Plants entirely yellowish-ochraceous or ochraceous f. *minima*.
9. Plants entirely greenish or green f. *atrovirens*.

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Studia Orchidacearum Japonicarum. VIII.

Orchidaceae Formosae et Insulae Kōtō-syo Novae Atque Criticae.
auctore

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66) **Gastrochilus quercetorum** FUKUYAMA, sp. nov.

Epiphyticus, longe adpresso prostratus, radicibus e caule emittentibus filiformibus flexuosis teretibus ¼-1 mm diametentibus glabris, caulis 10-25 cm. longis 1.5-2 mm. diametentibus laxiuscule foliatis cum vaginis foliorum toto facie obtectis glabris.

Folia patentia, alterna, disticha, elliptica, interdum longe elliptica, apice oblique breveque acuta, basi contracta, in petiolos per breve abeuntia, 1-2 cm. longa, medio 6-8 mm. lata, crassa, supra medio leviter unisulcata, subtus convexa, utrinque sparse purpureo-punctata vel purpureo-maculata, glabrata.

Racemus lateralis, 1-2-floratus, breviter pedunculatus, pedunculis rectiseulis c. 5 mm. longis glabris pauci-vaginulatis, vaginulis inferioribus tubiformibus ore truncatis sursum sensim in bracteas decrescentibus, bracteis minutis triangulatis acutis glabratis.

Flores apertentes, flavescentes, rubro-fusco-maculati, inter apices sepalorum intermediorum et fundos saccorum c. 1.3-1.5 cm. diametentes, pedicellis rectis bracteas multo superantibus c. 1 cm. longis glabris. Sepala crassa, patentia, glabra, sepalo intermedio elliptico-ovato apie rotundato basin versus plus minusve attenuato c. 5 mm. longo supra medium 3.5 mm.

aribus vel anguste oblongis paullo falcatis apice acutis margine anteriore irregulariter papillosis, parte intermedia infracta linearis apice acuta et papillosa quam partibus lateralibus paullo longiore angustioreque. Columna labello brevior, glabra, biappendiculata.

Nom. Jap. *Zyōrō-ran* (nov.).

Hab. Formosa; insl. Kōtō-syo, in pluviišilvis monte Sadaki-rei, c. 250 m. alt. (N. FUKUYAMA) Jul. 25, 1935. no. 4839. Typus in Herb. Orch. Fuk.).

The genus is new to the flora of Japan.

69) ***Goodyera yamiana* FUKUYAMA, sp. nov.**

Terrestris, erecta, c. 20–30 cm. alta, rhizomate decumbente cauliniformi tereti viridi carnoso ad nodos radicante, radicibus brevibus vermiformibus dense breveque pilosis. Caulis simplex, erectus, teres, glaber, viridis, vivo medio 4–5 mm. diametens, dimidio inferiore laxe fere 3–5-foliatus, supra folia inflorescentiam versus puberulus et pauci-squamatus, squamis lanceolatis acuminatis sensim in bracteas abeuntibus.

Folia erecto-patentia, ovata vel ovato-oblonga vel elliptico-oblonga, apice acuta, basi rotundato-contracta, subito ad petiolum abeuntia, lamina 3–8 cm. longa, infra medium 2–3.5 cm. lata, margine integra, supra sericea et viridia interdum obscure albescente-reticulata, subtus pallida, utrinque glabra, membranacea, multi-nervata, petiolis 2–2.5 cm. longis glabris dimidio inferiore dilatatis et amplexicaulibus.

Racemus florifer erectus, fere 4–6 cm. longus, dense multi-floratus, subsecundus, bracteis lanceolatis acuminatis margine integris vel ad basin leviter denticulatis pedicellos longitudine subexcedentibus utrinque glabris uninervatis.

Flores parvi, subapertientes, viridi-albescentes, glabri, pedicellis tortis vix curvatis apicem versus paullo attenuatis glabratis c. 5–7 mm. longis. Sepalum intermedium oblongo-ovatum, apice obtusum, basi contractum, concavum, c. 3½ mm. longum, supra basin c. 1½ mm. latum, utrinque glabrum, membranaceum, uninervatum; sepala lateralia oblique oblonga, apicem versus paullo attenuata, ad summam obtusa, c. 4 mm. longa, supra basin vix 2 mm. lata, utrinque glabra, membranacea, uninervata. Petala falcato-oblanceolata, apice obtusiuscula, ad basin angustata, c. 3½ mm. longa, membranacea, glabra, uninervata.

Labellum subrectum, c. 3½ mm. longum, apice obtusum, margine leviter crenulatum, basi saecato-ventricosum, ventriculo inter margines sepalorum lateralium paullo exerto obtuso c. 2 mm. profundo extus glabro et lutescente intus glanduloso-piloso. Columna brevis, recta, crassa, c. 2 mm. longa, rostello brevi bifido. Anthera cordata.

Nom. Jap. *Kōtō-kagonome-ran* (nov.).

Hab. Formosa; insl. Kōtō-syo, in pluviisilvis monte Sadaki-rei, c. 200 m. alt. (N. FUKUYAMA! Oct. 28, 1934. no. 4804. Typus in Herb. Orch. Fuk.).

70) **Dicerostylis nipponica** FUKUYAMA, sp. nov.

Terrestris, erecta, c. 20–40 cm. alta, rhizomate decumbente cauliformi tereti carnosu ad nodos radicante, radicibus vermiformibus subrectis dense breveque pilosis. Caulis vulgo simplex, erectus, teres, glaberrimus, xerampelinus, medio in exsiccato c. 5 mm. diametriens, superiore subconferte 3–6-foliatus, supra folia glanduloso-pilosus et pauci-squamatus, squamis distantibus lanceolatis sursum sensim in bracteas decurrentibus.

Folia erecto-patentia, longe elliptica vel elliptica, plus minusve obliqua, apice acuminata, basi contraeta, ad petiolum abeuntia, lamina 5–15 cm. longa, medio 3–5 cm. lata, margine integra, membranacea, supra subnitida et atrovirentia, subtus pallidiora, utrinque glabra, multi-nervata, petiolis c. 4 cm. longis dimidio inferiore vaginantibus glabris.

Racemus florifer erectus, 5–10 cm. longus, dense multi-floratus, glanduloso-pilosus, bracteis lanceolatis margine integris pedicellos longitudine sub-excedentibus extus glanduloso-pilosis trinervatis. Flores subelausi, globosi, albescentes, glanduloso-pilosii, pedieillis rectis utrinque paullo contractis dense glanduloso-pilosis c. 1 em. longis. Sepalum intermedium lanceolato-ovatum, ad summam obtusum, basi paullo contractum, dimidio inferiore valde concavum, c. 7–8 mm. longum, supra basin 3½ mm. latum, extus glanduloso-pilosum, membranaceum, trinervatum; sepala lateralia oblique suborbiculata, apice per breve caudata, caudis 1½ mm. longis acutisculis crassiusculis extrorse recurvis, basi rotundata, c. 7 mm. longa, medio 6 mm. lata, extus sparse glanduloso-pilosa, membranacea, quadrinervata. Petala cum sepallo intermedio in galeam cohaerentia, rhomboidea, paullo obliqua, apice acuta, ad basin contraeta, c. 7 mm. longa, medio 3 mm. lata, utrinque glabra, membranacea, binervata.

Labellum c. 6 mm. longum, inclusum, ventricoso-saccatum, apice rotundatum, supra medio umisuleatum, utroque latere extenuatum, margine oris appendice 1 filiformi subrecta 2–3 mm. longa instructum, intra sacci orem in tuberculum carnosum protuberans, utrinque glabrum. Columna labello brevius, antice in rostellum bifidum elongatum semiromboideo-oblanco-latum .acutum desinens, in fronte sub stigmate bicornutum. Anthera oblongo-lanceolatum, c. 5 mm. longum; pollinia 2.

Nom. Jap. Huguri-ran (nov.).

Hab. Formosa; insl. Kōtō-syo, in pluviisilvis monte Kōtō-zan, c. 400 m. alt. (N. FUKUYAMA! Jul. 17, 1934. no. 4793. Typus in Herb. Orch. Fuk.), in pulviisilvis monte Sadaki-rei, c. 200 m. alt. (N. FUKUYAMA! Jul. 3, 1934. no. 4797).