

## I X.

*Diagnostic Characters of New Species of Phanogamous Plants, collected in Japan by CHARLES WRIGHT, Botanist of the U. S. North Pacific Exploring Expedition. (Published by Request of CAPTAIN JOHN RODGERS, Commander of the Expedition.) With Observations upon the Relations of the Japanese Flora to that of North America, and of other Parts of the Northern Temperate Zone.*

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(Read December 14, 1858, and January 11, 1859.)

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THE dried plants collected during the visit of the Expedition, commanded by Captain John Rodgers, to different parts of Japan, were intrusted to me by Mr. Wright for examination; and I have prepared a detailed account of them, intended to form a part of Mr. Wright's general report upon the extensive and interesting botanical collections made by him during the whole cruise of the Expedition. As this report, and that of the important scientific results of this Expedition in various other departments, may not be published for some time, I am permitted and requested, by the Commander of the Expedition, — ever considerate of the interests of science, — briefly to make known the principal novelties which have been discovered in this field. The discoveries in this case are by no means limited to the detection of entirely new species (in which, however, the collection will be seen to abound), but also relate to the detection of known species in a region where they were not known before, and to the identification and elucidation of many obscure species. It will be best, therefore, to take a cursory general notice of the more interesting plants of this collection, adding any remarks which it may be worth while now to make upon their geographical distribution or their characters, and appending the diagnoses of new genera and species in the form of foot-notes.

It should be mentioned that the botanical collections made at Ousima, Katonasima,

Thunberg's *Carduus acaulis* was not met with in Japan, but a species probably the same was collected in various islands of the Loo Choo group.\*

Among the *Cichoraceæ* is a new, small-flowered *Lampsana*, with the involucre only about two lines long in anthesis, and little longer in fruit.†

*Youngia Japonica*, DC. (*Prenanthes Japonica*, Linn., Thunb.) doubtless includes *Y. Thunbergiana*, *multiflora*, *runcinata*, and probably all of the eight species known to De Candolle except *Y. Mauritiana* (which I have not seen) and the ambiguous *Y. napifolia*. The pubescent tube of the corolla, the uniserial pappus, and the habit, may keep the genus distinct from *Crepis*. Under the name of *Youngia integra*, I refer to the genus — notwithstanding a somewhat different aspect — a plant gathered at Tanegasima, off the south end of Kiu-siu, and abundantly in Ousima and the Loo Choo Islands, which is doubtless Thunberg's *Prenanthes integra*, therefore De Candolle's *Y. lanceolata*, but whether Houttuyn's *Prenanthes lanceolata* is doubtful. That specific name, certainly, is not a good one for our plant. The rest of the Japanese species appended by De Candolle to *Youngia*, with a mark of doubt, I can now confidently refer, along with some new ones, to Cassini's genus *Ixeris*. I would add Don's *Chorisma* (*Chorisis*, DC.) to the number; remarking that Don had no good reason for describing the blossoms of *Chorisis repens* as "pale blue," and De Candolle still less for dropping the qualifying adjective. Linnæus in the original account called them yellow, and so they are. It is singular that a plant which inhabits these shores, from Loo Choo and Hong Kong to Kamtschatka, should have so long escaped rediscovery. I append the characters of the Japanese species before me, and of a doubtful one from the Bonin Islands.‡

\* *CIRSIIUM BREVICAULE* (sp. nov.): foliis profunde pinnatifidis dentatis spinosis et spinuloso-ciliatis utrinque glabris (costa subtus primum arachnoidea), radicalibus caule arachnoideo plerumque longioribus, caulinis semi-amplexicaulibus haud decurrentibus oblongis; capitulis 2-5 subcorymbosis breve pedunculatis; involucre pl. m. folioso bracteato hemisphærico glabro, squamis lanceolatis acuminatis erectis, exterioribus ovato-lanceolatis spinula terminatis. *Carduus acaulis*, Thunb.? *Cirsium Japonicum*, Hook & Arn.? Loo Choo Islands, etc.

† *LAMPSANA PARVIFLORA* (sp. nov.): glabra vel glabriuscula; caulibus e radice annua debilibus diffusis; foliis fere omnibus lyrato-pinnatifidis; capitulis laxè paniculatis parvis 14-20-floris; involucri squamis fructiferis planis ecarinatis acuminatis; acheniis breviter oblongis subcompressis, marginibus acutis hispidulo-scabris. Simoda, Hakodadi.

‡ *IXERIS STOLONIFERA* (sp. nov.): pumila, subglauca; stolonibus filiformibus prorepentibus foliatis; foliis orbiculatis late ovalibusve basi obtusis vel subcordatis plerumque integerrimis petioli filiformi brevioribus; pedunculis elongatis scapisve monocephalis nudis; involucre 15-20-floro; acheniis ovali-oblongis rostro suo brevioribus, costis crassis lævibus. — Variat, foliis 2-12 lin. longis nunc parce denticulatis, nunc basi sub-

There are no *Lobeliaceæ* in the collection, and no *Campanulaceæ* new to Japan.

*Ericaceæ.* An interesting discovery is that of the American Cranberry (*Vaccinium macrocarpon*) in the northern part of Japan. I have never received this species from the western side of our continent, nor is it recorded from Russian America. Douglas, however, found it at the mouth of the Oregon, and states it to be common there. *Vaccinium Vitis-Idæa*, although equally new to the flora of Japan, is there within its

hastato-bidentatis; scapo digitali ad spithamæam; floribus flavis. Hakodadi; Simoda; Kagosima Bay, Kiu-siu. — Doubtless the *Youngia pygmæa* of Ledebour and Zuccarini, as to their Japan plant, but not *Prenanthes debilis*, Thunb., and not even a congener of *Prenanthes pygmæa*, Ledeb. (*Crepis nana* of Richardson), which is apparently a *Crepis*.

*IXERIS DEBILIS*: caulibus gracilibus laxis basi stoloniferis superne longe nudis 1-5-cephalis; foliis radicalibus et stolonum obovato-spathulatis oblongis sublanceolatisve in petiolum longum attenuatis integerrimis vel denticulatis nunc pinnatifido-dentatis, caulinis subnullis paucisve; involucri 20-25-floro; acheniis breviter oblongis alato-costatis rostro suo æquilongis, costis lævibus. *Prenanthes debilis*, Thunb. *Fl. Jap. & Ic. Pl. Jap. t. 39.* *P. humilis*, Thunb.? *Youngia?* *debilis*, DC. Hakodadi, Simoda, etc. — Spithamæa ad pedalem: folia 3-5-pollicaria.

*IXERIS (CHORISIS) REPENS*: caulibus humifusis longe repentibus; foliis petiolo brevioribus trilobis tripartitis trisectisve, nunc pedato-5-sectis raro integris, segmentis obovatis vel rotundatis obsolete denticulatis vel subsinuatis; pedunculis oppositifoliis petiolum superantibus 1-3-cephalis parce bracteatis aut unifoliatis; involucri 20-30-floro; floribus flavis; acheniis oblongis crasse 10-costatis (haud compressis) rostro quadruplo longioribus, costis acutiusculis acie minutissime scabriusculis; pappo pluriseriali. *Prenanthes repens*, Linn. *Chorisma repens*, Don. *Chorisis repens*, DC. *Nabalus repens*, Ledeb. Hakodadi, Japan; Loo Choo Islands; Hong Kong; on the sands of the sea-shore.

*IXERIS RAMOSISSIMA*: glaucescens; caule paniculato ramoso folioso; foliis oblongis argute dentatis nunc runcinatis, infimis in petiolum marginatum longe attenuatis, superioribus basi auriculata vel hastata amplexicaulibus; capitulis numerosis corymbosis breviter pedicellatis 10-12-floris; corollis flavis; acheniis fusiformibus in rostrum breve vel longiusculum attenuatis, costis prominulis obtusis scabriusculis; pappo uniseriali. *Prenanthes hastata*, Thunb. *ex char.* Forma runcinata est *Brachyramphus?* *ramosissimus*, Benth. in *Lond. Jour. Bot.* 1. p. 489. Kagosima Bay, Kiu-siu. — The achenia are similar to those of *Ixeris versicolor*, DC., but not of genuine *Ixeris*; yet the plant is best referred to this genus.

*IXERIS (IXERIDIUM) CAPITULUM 5-10-FLOREM; PAPPUS SORDESCENS) THUNBERGII*: caulibus basi vix stoloniferis foliosis superne parce ramosis; foliis oblongis membranaceis apice cuspidatis, radicalibus longe petiolatis plerisque laciniato-dentatis sublobatisve, caulinis basi lata vel cordata semi-amplexicaulibus infra medium pectinatim spinuloso-dentatis; panicula corymbosa vel fastigiata polycephala; involucri 6-8-phylo 5-10-floro; floribus flavis; acheniis fusiformibus sensim longiuscule rostratis leviter 10-costatis glaberrimis; pappo uniseriali. *Prenanthes dentata*, Thunb. *Youngia dentata*, DC. — Var. *gracilior*; foliis angustioribus subintegerrimis basi nunc ciliato-dentatis. Simoda, Hakodadi. — This and the next must be congeners of *Ixeris versicolor*, DC., and probably of Miquel's *Aracium*.

*IXERIS (IXERIDIUM) ALBIFLORA* (sp. nov.): caulibus gracilibus basi stoloniferis gracilibus unifoliatis laxè 3-6-cephalis; foliis oblongo-lanceolatis integerrimis acuminato-cuspidatis, radicalibus in petiolum gracilem