

Rhododendron brachycarpum* in Korea mainland and Ullung island, ssp. *tigerstedtii* and ssp. *ulleungense

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Rhododendron brachycarpum in Korea has larger leaves and flowers, taller size, often a tree-like habit and superior hardiness as compared to the *brachycarpum* growing in Japan. *R. brachycarpum* is found also on the Korean island Ullung (Ulleung-do, Ullung-Do, Dagelet) that is situated between mainland Korea and Japan. Based on morphological characteristics and on publications by Tor G. Nitzelius I have come to the conclusion that the *R. brachycarpum* found on Ullung island differs noticeably from the Korean mainland species and should be treated at least as a separate form, *R. brachycarpum* Ullung form. It may even deserve a subspecies status and could be named as ***R. brachycarpum* ssp. *ulleungense***.

Tor G. Nitzelius published in 1970 the name ***Rhododendron brachycarpum* ssp. *tigerstedtii*** for the *R. brachycarpum* growing in Korea.

Ref. Nitzelius, T. 1970. *Rhododendron brachycarpum* ssp. *tigerstedtii*, eine neue Unterart. Deutsche Baumschule 1970(7):207 -212.

The translation was published two years later in 1972 in the Quarterly Bulletin of the American Rhododendron Society (QBARS - v26n3).

Ref. *Rhododendron brachycarpum* D. Don Ex G. Don ssp. *tigerstedtii*, A New Subspecies (Preliminary Report) Dr. Tor G. Nitzelius, Goteborg.

<https://scholar.lib.vt.edu/ejournals/JARS/v26n3/v26n3-nitzelius.htm>

Tor Nitzelius (1970, transl. 1972):

"The name ssp. *tigerstedtii* was chosen to honor Dr. Tigerstedt, the former owner of the world-known Mustila Arboretum in south Finland. He introduced this *Rhododendron* species from Kongo-San-Gebirge (Kang-wan-do: Keum gang san) in east-central Korea. Dr. Tigerstedt visited me in the year 1955 and brought us an herbarium specimen of the Korean *R. brachycarpum* from his own planting in Mustila. For comparison he also brought an example of the Japanese *R. brachycarpum* from a nursery.

Because of the larger size of leaves and flowers of the Korean plants, I became convinced that it should be considered a new subspecies."

Tor Nitzelius used in his study in addition to the specimen from Mustila three specimens from the mainland Korea and one from Ullung. The Ullung herbarium specimen was from Wilson's collection in 1917. Tor Nitzelius included the Ullung specimen probably because of the geographical relation to Korea even if the specimen differed morphologically from the specimens from the mainland of Korea. Nitzelius had not seen live plants from Ullung until his expedition in 1976.

Wilson's herbarium sample from Ullung-Do:

R. fauriei v. *rufescens* (TNS)! - Kyongsan-Pukto, Ullung-do (Dagelet Island), "on cliffs in woods, common, 900m", June 13, 1917, Wilson No. 8512 (GH, K)! - Ullung-do, July 1, 1948, Chung In Cho (TNS)!

In 1983 Tor Nitzelius wrote in his book "Träd i när och fjärran" about his expedition on Ullung island in 1976. He used the name ***Rhododendron brachycarpum* ssp. *tigerstedtii* 'Ullung form'**.

He wrote that the leaves are convex, averagely wider, usually slightly cordate at the base and with strikingly long petiole, giving plants a deviant appearance. The most striking is the shiny, very dark green color of the leaf surface.

Ref. Tor Nitzelius: Träd i när och fjärran. Äventyr och fynd på botaniska färder. LTs förlag, Stockholm 1983

Tor Nitzelius gave plants to growers in Sweden and southern Finland. Two plants are growing in Robert Rainio's private arboretum in Finland and cuttings of these are growing at Arboretum Mustila (2018).

In 1989 Tor Nitzelius wrote an article in the supplement of the publication Lustgården, "On some plant introductions from the island of Ullung (Dagelet), S. Korea in 1976".

Nitzelius used now the name *Rhododendron brachycarpum* 'Ullung form' and wrote about affinities to the mainland form (ssp. *tigerstedtii*) but also to the form occurring on the mountain Ishizuchi on the SW island of Shikoku in Japan.

Extract from the article:

"An interesting feature of the Ullung *Rhododendron* in cultivation and presumably also in the wild, is the change of the flower colour during anthesis. In the beginning of the so-called "balloon-phase" of the flower-buds and the first phase of anthesis the flowers of my plants (belonging to a progeny of about 200 Ullung *Rhododendrons* growing in my planting) are more or less decidedly carmine but then the colour gradually changes to pure white. This phenomenon is also known from the Japanese species *R. degronianum* Carr. (*R. degronianum* Carr. ssp. *pentamerum* Hara) and *R. yakushmanum* Nakai (*R. degronianum* Carr. ssp. *yakushmanum* Hara). The mainland form of *R. brachycarpum* (*R. brachycarpum* D. Don ssp. *tigerstedtii* Nitz.), which is a large-growing, large-leafed and large-flowered *Rhododendron*, has also other traits, which separate it from other geographical forms of the same species: the flowers are distinctly zygomorphous (and, according to this, most probably distinguished by a differing pollination biology).

The Ullung *Rhododendron* shows certain affinities not only with the mainland form but also with plants belonging to populations of the southernmost known *R. brachycarpum* in Japan, e.g. occurring on the mountain of Ishizuchi on the SW island of Shikoku. But whereas plants belonging to the Shikoku populations, according to reports and photos (and original plants in my planting) always seem to retain their pink flower colour during anthesis, the Ullung plants, as seen in cultivation, always change their colour to pure white. The voucher specimens of *R. brachycarpum* collected on Ullung 1917 by Dr. E.H. Wilson (GH!) have white flowers. Two forms of this species mentioned by professor Lee Duk-Bong (as *R. fauriei* Franchet var. *roseum* Nakai and *R. f.* var. *rufescens* Nakai) which are now considered synonyms of *R. brachycarpum* D. Don, apparently refer to a pink-flowered and a white-flowered form respectively. Possibly the two forms on Ullung only represent two phases of anthesis and were collected earlier or later in May or at different altitudes?"

Ref. Supplement to Lustgården 1989

https://dendrologerna.kultursupport.se/attachments/documents/2016/07/Lustgarden_1989_v04_Supplement.pdf

The Finnish Dendrological Society made an expedition in 2013 to Korea and specially to the Ullung island. *R. brachycarpum* did not seem to be very common on the island as only some of us spotted the species on a steep mountain slope, too difficult to reach. However, we saw in Nari-dong village a handsome potted *R. brachycarpum*, and at Dodong harbor small seedlings could be bought from a tiny shop.

We could observe that the Ullung form of *R. brachycarpum* has markedly convex leaves (as on *R. degronianum* var. *yakushmanum*), leaves are nearly cordate, petioles are long and veins are sunken, and there is thin light brown indumentum on the underside of the leaves.

TinyURL link to photos: <https://tinyurl.com/yav6owj7> and <https://tinyurl.com/ycwgcvvr>

The taxonomy of the *R. brachycarpum* ssp./var. *tigerstedtii* or *R. brachycarpum* Tigerstedtii Group has raised a lot of discussion and the naming is still a controversial issue (2018).

Peter Cox described in his book *The Larger Rhododendron Species* (1979) the plant as *Rhododendron brachycarpum* ssp. *tigerstedtii*.

Scanned extract from the book:

http://www.rhodogarden.com/taxonomy/tigerstedtii_ssp_tigerstedtii_Cox_1979.pdf

Peter Cox wrote in the book that the subspecies status was not recognized by Chamberlain.

Ref. Chamberlain et. al.: *The genus Rhododendron: its classification and synonymy* [1996]

Davidian changed the status of the plant from subspecies to varietas in his book *Rhododendron Species*, Vol. III, 1989.

Davidian described the plant as

***R. brachycarpum* D. Don ex G. Don var. *tigerstedtii* (Nitzelius) Davidian, comb. nov.**

Scanned extract from the book:

http://www.rhodogarden.com/taxonomy/brachycarpum_var_tigerstedtii_Davidian_1992.pdf

Peter A. Cox and Kenneth N.E. Cox changed the status of the plant to ***R. brachycarpum* Tigerstedtii Group** in their book *The Encyclopedia of Rhododendron Species*, 1997.

Scanned extract of the book:

http://www.rhodogarden.com/taxonomy/brachycarpum_Tigerstedtii_Group_Cox_1997.pdf

Donald H. Voss made in 2001 the validation back to subspecies as

***Rhododendron brachycarpum* (D. Don ex G. Don) ssp. *tigerstedtii* (Nitz. ex D. H. Voss)**

in his article "Validation of Botanical Names: *Rhododendron brachycarpum* ssp. *tigerstedtii* and *Rhododendron maximum* var. *leachii*", published in the *Journal American Rhododendron Society*, Summer 2001, JARS v55n3.

Link to the article: <https://scholar.lib.vt.edu/ejournals/JARS/v55n3/v55n3-voss.htm>

Conclusions

Based on morphological differences (and not only horticultural) between the **geographically distinct** Korean and Japanese *R. brachycarpum* there is good ground to claim subspecies status for the Korean mainland *Rhododendron* as ***brachycarpum* ssp. *tigerstedtii*** as validated by Donald H. Voss in 2001.

Based on observations by Tor Nitzelius, Jaakko Saarinen from Arboretum Mustila and me, I propose to use the name ***Rhododendron brachycarpum* ssp. *ulleungense*** for the *R. brachycarpum* form found on the Ullung island. This is not a valid publication of the proposed name. A proper validation of the name *Rhododendron brachycarpum* ssp. *ulleungense* should be published.

Ref. International Code of Nomenclature for algae, fungi, and plants, Nineteenth International Botanical Congress, Shenzhen, China, July 2017

<https://www.iapt-taxon.org/nomen/main.php>

Appendix



R. brachycarpum ssp. *tigerstedtii*



R. brachycarpum ssp. *ulleungense*



R. brachycarpum ssp. *tigerstedtii*



R. brachycarpum ssp. *ulleungense*



R. brachycarpum ssp. *tigerstedtii*



R. brachycarpum ssp. *ulleungense*