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Summary

The distribution of *Cladophora sauteri* (Nees) Kützing f. *toroensis* Kanda in Lake Toro of the Kushiro moor was investigated on 3 July, 1979. Lake Toro, which lies about 20 km north-east of Kushiro in eastern Hokkaido, is a freshwater lake 18 km round and 7 m deep. The alga was collected at four sites in the lake (Fig. 2). Most plants of the alga grow on gravels or stones. Others from free floating aggregations on the bottom of the lake, and their individual filaments attach to coarse sand grains. It is distributed on the bottom between 30 m and 60 m off shore at site A, and between 6 m and 60 m off shore at site H. The amount of the alga was very small and the area where the alga grew was narrow as compared with those of Lake Shirarutoro, which also lies in the Kushiro moor.

○タイ北部で見い出された Sedum Susannae (大場秀章) Hideaki OHBA: *Sedum Susannae* R.-Hamet, a new record from N. Thailand

This paper reports the occurrence of *Sedum Susannae* R.-Hamet at Doi (Mt.) Chiengdao (ca 19°24′N 98°54′E), North Thailand. Doi Chiengdao, a limestone massive, is the second highest mountain in Thailand with ca 2200 m in altitude and situated at the eastern outpost of the Upper Tenasserim Range. From this mountain Craib (Crassulaceae in Florae Siamensis Enumeratio 1(4): 586-588. 1931) and Smitinand (Nat. Hist. Bull. Siam Soc. **21**: 93-128. 1966) recorded *Sedum sarmentosum* Bunge previously known from East Asia (C., E. & N.E. China and Korea; also naturalized in Japan). According to Smitinand, it grows at 1770 m in altitude with numerous temperate species such as *Circaea alpina*, *Boenninghausenia albiflora* and *Aster Benthamii*.

Recently I have had an opportunity to examine several collections of *Sedum* gathered in Thailand. All of them were collected at Doi Chiengdao and are quite identical with *Sedum Susannae* R.-Hamet known from S.W. China. Though I could examine no specimen cited as *S. sarmentosum* from Thailand, that seems to be a misidentification of *S. Susannae*. Surely these two species

are alike in appearence, but *S. sarmentosum* has kyphocarpic (not orthocarpic) ovaries. The sepals of *S. sarmentosum* are free from the base and spurred, while those of *S. Susannae* are basally connate and spurless. In vegetative features, *S. sarmentosum* is different from *S. Susannae* in having long creeping stems up to 30 cm with narrowly rhombic-lanceolate or very narrowly rhombic, usually ternate leaves of 13–25×3–6 mm in size. The leaves of *S. Susannae* are oblong-lanceolate, 3.5–8.5×0.8–2.4 mm in size, and alternate on the ascending or erect stems attaining 2.5–10 cm long.

Having orthocarpic ovaries *S. Susannae* is classified in the *S. Oreades* (Decne.) R.-Hamet group, and is clearly distinguished from the closest ally, *S. Daigremontianum* R.-Hamet by the entire petals, by the stamens which are longer than the half of the petal-length but not exceed the petal-length, and also by the leaf spurs with round or truncate apex. *S. Feddei* R.-Hamet was distinguished from *S. Susannae* by Hamet in having 1) the longer triangular leaves with acute apex, 2) the ovate-lanceolate sepals with acute apex, 3) the obovate-oblong petals, and 4) the narrowly oblong nectar-scales. Examined several specimens including the types of *S. Susannae* and *S. Feddei*, the differences recognized by Hamet between the two are considered to fall into the

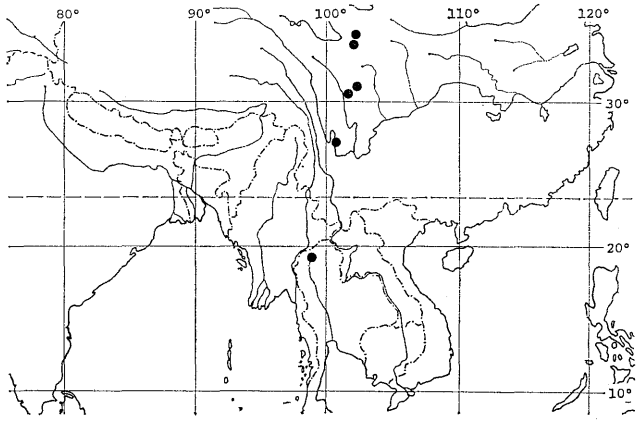

Fig. 1. Distribution of *Sedum Susannae*.

variation range of a single species. Thus, the latter is treated as a synonym of the former. From the description *S. subgaleatum* K. T. Fu would be judged

as a synonym.

S. Susannae is the second species of the *S. Oreades* group found in the tropical region. The first, *S. Kingdonii* H. Ohba, is endemic to Mt. Victoria, Burma and considered to have differentiated from the populations of its ancestral species in the central Asiatic highland during post glacial period (Ohba, J. Jap. Bot. **56**: 206-212, 1981). In *S. Susannae*, the isolate occurrence at Doi Chiengdao (Fig. 1) may also be attributed to climatic changes in glacial period. But during post glacial period the population there may continue to flourish without prominent morphological differentiation from its highland populations in S.W. China.

Sedum Susannae R.-Hamet in Fedde, Repert. **8**: 24 (1910)—Fröd. in Act. Hort. Gothob. **1**: 35 (1924); **6**: append. 62 (1931)—K.T. Fu in Act. Phytotax. Sin. **12**: 57 (1974).

S. Feddei R.-Hamet in Fedde, Repert. **8**: 25 (1910)—Fröd. in Act. Hort. Gothob. **6**: append. 47 (1931)—K.T. Fu in Act. Phytotax. Sin. **12**: 53 (1974), syn. nov.

S. subgaleatum K.T. Fu in Act. Phytotax. Sin. **12**: 56 (1974), versim.

Distr. S.W. China (Yunnan & Szechuan) and N. Thailand (Fig. 1).

Specimens examined. China. Western China (Wilson 3636, P—Holotype of *S. Susannae* R.-Hamet). N.W. Szechuan., Drogochi (Smith 4499, UPS); Merge-Sankar-vou-mâ (Smith 4288, UPS); Taining-Maoniu, Lhaja Gabu La (Smith 12690, UPS); Taché-to-chan jusqu'à Tongolo (Soulié 112, P—Holotype of *S. Feddei* R.-Hamet). N. Thailand. Payap, Doi Chiengdao (Hennipman 3272, L, TI, KYO; Tagawa et al. T4187, KYO, TI; Murata et al. T15290, KYO; Shimizu et al. T21073, KYO).

タイ北部のチェンダオ山に *Sedum Susannae* R.-Hamet が産することを報告した。本種は従来中国雲南・四川両省のみに知られていた。これまで Craib や Smitinand が同山にその産を報じていたツルマンネングサは本種の誤認と思われる。*S. Susannae* はアジア中央高地の東南部に集中的に分布する *S. Oreades* 群に所属する。ビルマ・ビクトリア山の *S. Kingdonii* に次いで熱帯圏で見い出された2番目の同群の種で，氷河期に南下して生き残った遺存的分布と考えられる。*S. Feddei* R.-Hamet は本種の異名と考える。(Department of Botany, University Museum, University of Tokyo)