DISTRIBUTION OF Sarcotheca spp. IN INDONESIA

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Abstract

Sarcotheca is one of the genus Oxalidaceae that spread in West Malesia (Sumatera, Borneo, Ila ya and Sulawesi). According to the data of herbarium collection in the Herbarium Bogoriense there are 8 species out of 11 species (73.73%) exist in Indonesia. It shows that Indonesian region has the majority of the species. This species becomes very important for Bogor Botanical Gardens because there is no any collection until today. All species of Sarcotheca will be discussed in this paper.

Key words: Sarcotheca, Oxalidaceae, distribution, Indonesia

Introduction

Oxalidaceae has 6 genus that spread throughout the world and one of them is Sarcotheca. This genus is distributed in relatively restricted region in West Malesia such as Sumatra, Borneo, Sulawesi and Malaya. According to Chung (1995), Mabberley (1997), and Veldkamp (1967) there are 11 species of Sarcotheca exist in W. Malesia, namely S. celebica Veldkamp. sp nov; S. diversifolia (Miq.) Hall.f.; S. ferruginea Merr.; S. glauca (Hook.f.) Hall.f.; S. griffithii (Planch. ex Hook.f.) Hall.f.; S. glomerula Veldkamp; S. laxa (Ridl.) Hall.f.; S. monophylla (Planch ex Hook.f.) Hall.f.; S. macrophylla Blume; S. ochracea Hall.f. and S. rubrinervis Hall.f. So far there is not many studies have been done in this genus. In Bogor Botanical Gardens itself we have observed that the collection of this genus is not available. Therefore, Sarcotheca becomes very important for Bogor Botanical Gardens since there are not any collections of Sarcotheca in Bogor Botanical Gardens until today.

Methods

The study of distribution of Sarcotheca in Indonesia was carried out using herbarium specimen which disposed at the Herbarium Bogoriense, Botany Department, Center for Biological Research, Indonesian Institute of Sciences. There are total 113 sheet of herbarium collection were analyzed. The data comprises of species, location, number of sheet i.e. BO 1806490, altitude, latitude, longitude, and collector. The sample which were studied were from Indonesian regions only. A literature survey was conducted to support the data.

Result and Discussion

Based on the data of herbarium collection there were 8 species of Sarcotheca. The species are S. celebica, S. diversifolia, S. griffithii; S. glauca; S. ferruginea; S. laxa and S. rubrinervis. The distribution of each species as follows

1. S. celebica : Central and South of South-East Sulawesi
2. S. diversifolia : Central and East Kalimantan
3. S. ferruginea : North Sumatera
4. S. glauca : West Kalimantan
5. S. griffithii : Lampung, Palembang (South Sumatera), Riau and North Sumatera
6. S. laxa : Aceh, Sumatera
7. S. macrophylla : West, Central and East Kalimantan
8. S. rubrinervis : East Kalimantan

From the data above, the majority of this species in Indonesia are spread in Sumatra and Kalimantan. The distribution map of Sarcotheca in Indonesia as shown below:

Figure 1. Distribution map of Sarcotheca in Indonesia.
Until today there is not any collection of *Sarcotheca* spp. collected in the garden, although it was recorded that a Bogor Botanical Gardens expedition team collected the seedling of *S. diversifolia* from Kolaka (South-East Sulawesi) in 1996. The seedling was registered as the collection number 993.VII.446/292 and planted in the garden as a collection on block (in the Bogor Botanical Gardens known as "vak") VI.C.347. Unfortunately in 2006, this collection was reported died. In 2009, another Bogor Botanical Gardens team was succeed collecting the seed of *S. glauca* from Central Sulawesi, and up to now the seedling is still on maintaining process in the nursery.

Based on the fact above that Indonesia has 8 species of *Sarcotheca* out of 11 species in West Malesian regions, shows that Indonesia possesses 73.73% of *Sarcotheca* species in the world. By this number Indonesia region has the majority of this species. Among the 8 species, 4 species were recorded grow in Kalimantan, 3 species in Sumatra and 1 species in Sulawesi. As a comparison, in Sabah and Sarawak, Malaysian part in Borneo, were recorded 5 species of *Sarcotheca* (Chung, 1995). Among those species, 4 species are the same with the ones found in Kalimantan (Indonesian part in Borneo), namely *S. diversifolia*; *S. glauca*; *S. macrophylla* and *S. rubrinervis*. While the species that only exists in Sabah and Sarawak is *S. ochracea*. *S. laxa* was reported growth in Malaya (Veldkamp, 1967), but the data of herbarium collection shows that it was found in Leuser National Park, Aceh, Sumatera.

It is important for Bogor Botanical Gardens to collect and conserve this genus because many habitat of these plants have converted into plantations, farms, etc. One important note is *S. diversifolia* recorded grows only in Central and East Kalimantan. Another note reported by Veldkamp (1967) this species was also found in Sibolga, North Sumatra. As an addition, it was recorded in the Bogor Botanical Gardens that this species was found in South-East Sulawesi.

*S. glauca* according to Veldkamp (1967) is distributed in Sarawak and Brunei, and based on the data of herbarium collection this species was found in West Kalimantan and the new record was found in Central Sulawesi. The distribution data of herbarium collection supported by the sample collection which have collected by Bogor Botanical Gardens team which conducted an expedition in West Kalimantan on February - March 2009.

Regarding the distribution information of *S. diversifolia* and *S. glauca* above, these two species are needed to be studied further and reidentified especially the sample from S.E. Sulawesi for *S. diversifolia* and sample from C. Sulawesi for *S. glauca*.

**Conclusion**

There are 8 species of *Sarcotheca* in Indonesia that spread in Sumatra, Kalimantan and Sulawesi. Indonesia has the majority species of *Sarcotheca* in the world.

**References**


