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Spatholirion ornatum (Commelinaceae) in Thailand

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ABSTRACT

The distribution and biology of *Spatholirion ornatum* Ridl. are discussed and the chromosome number 2n = 20 reported for the first time.

INTRODUCTION

The small genus *Spatholirion* Ridl., consists of two species, *S. ornatum* Ridl., the type species, and *S. longifolium* Gagnep., from Southern China and N. Vietnam (Tonkin). When Ridley (1896) described the genus, he based his description on a collection from the Narathiwat Province in southern Thailand: Tomoh (To Mo), near the Malaysian border. In 1959, the first author, working in the Kew herbarium, found two further collections almost 1600 km north of the type locality. These were published by Forman (1962) in his paper on a new and allied genus of Commelinaceae, *Aëthiolirion*, also from Thailand. Since then more collections have been done by the authors and others in Northern Thailand, which seem to be the main distribution area of the species.

Collections

Kerr 3617. Northern: Lampang, Pang Puai (Pang Pue), alt. 420 m, May 24, 1915 (K).—Kerr 20573. Northern: Lampang, cultivated in Bangkok (K).— Larsen 2762. Northern: Chiang Mai, along the road Fang–Chiang Mai. In shade among limestone boulders, alt. 400 m (AAU).—Larsen *et al.* 43586. Northern: Nan, 1992 (AAU, BKF,PSU).—Machado s.n.: Peninsular: Narathiwat, Legeh at Tomoh (K, SING).— Put 4010. Northern: Lampang, Ngao (Muang Hgao), Sept. 1931 (K).— Sangkhachand 92. Northern: Lampang, Ngao, Mae Huat, or rocks, alt. 350 m (BKF).

Morphology

Ridley described the species from a plant brought to Singapore from Thailand. This transplant flowered, but did not produce any ripe fruits. From our observations we can add the following to his description: The roots are thick, with a swollen apical part acting as starch and water reservoir. The population from Chiang Mai deviates in the larger size of the leaves, which have petioles up to 20 cm and lamina up to 25x14 cm. Furthermore rosettes

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of new plants are borne in most of the leaf-axils. This we have not seen from other localities, but Ridley describes *S. ornatum* as a "stemless plant, which can be propagated by offshoots from the base". These are, however, not figured on his plate. Ridley described the flowers as having pink sepals and white petals. Sangkachand notes "flowers purple". All the populations we have studied had pure white flowers. The fruit has not previously been described. The capsules are oblong trigonous, ca 15x7 mm, pubescent, triloculae with 2 rows of seeds in each locule. Seeds 12–16, gray, trigonous.

Cytology

The second author studied the chromosome cytology from mitosis in root tip fixed in the field from Larsen 2762. The somatic number 2n = 20 was found in several good metaphase plates (Fig. 31). The chromosomes are of medium to large size. This is the first time *Spatholirion ornatum* has been studied cytologically. The same chromosome number was found by Zheng *et al.* (1989) in *S. longifolium* from southern China. The chromosome morphology is also similar in the two species.

Ecology

Little is known of the ecology of *Spatholirion ornatum.* From studies on the population at Nan, we have noted that the species is perennial. It grows in shaded, humid lowland forest, and is found in limestone rock-crevices. Flowering occurs in the rainy season from the end of May to September, after which the plants wilt away. The Chiang Mai population was found under the same ecological conditions. The Nan population was visited on November 16, 1993. At that time the plants had died away totally.

Distribution

The species is at present khown from southern Thailand (Narathiwat province), Northern Thailand and Northern Vietnam (Tonkin). The exact locality of Tomoh, the type locality, is uncertain. Ridley calls it the Pattani circle. To the knowledge of the authors there are two places with the name Tomoh, both situated in Narathiwat Province. It would be interesting to refind it in S. Thailand and study the life-form under the more humid climatic conditions here.

Figure 31. *Spatholirion ornatum* Ridl.
Metaphase plate from root tip showing 2n=20 (Larsen 2762.—x1450.

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