

Further studies on *Siamosia thailandica* (Amaranthaceae)

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The monotypic genus *Siamosia* was established by Larsen & al., 1987 (see also Townsend 1990). In the treatment of the Amaranthaceae for Flora of Thailand, the author (1992) mentioned that the only species, *S. thailandica* is still imperfectly known. During an expedition in 1995 *Siamosia* was found in abundance in the Kaeng Kra Chan National Park, and a closer study on life-form and ecology could be undertaken. Seeds were collected and brought to germination in the greenhouses of the University of Aarhus. It was also possible to establish the chromosome number. During a field trip in December 1997 the author discovered the species in the Kanchanaburi Province close to the Burmese border.

Life-form and ecology. In the treatment for Flora of Thailand it was not possible to establish the life-form of the species as the available herbarium material was very incomplete, consisting of some flowering top shoots only. It can now be added to the description, that *Siamosia thailandica* is a perennial herb, up to 2 m high, often growing in large populations in shaded and moist habitats. In the Kaeng Kra Chan National Park it was first found in shade on gravelly soil along a small stream. Here the plants reached only about 80 cm. The plants looked short-lived, but several specimens were rooting from the lower nodes. Later it was also observed in abundance along a small path through open, mixed deciduous forest, here growing together with other understory herbs such as Acanthaceae and Urticaceae. This population consisted of specimens 40–60 cm. tall. They were here easily distinguished from the other herbaceous plants by being the only species of which all specimens were attacked by insects inflicting numerous small holes in all the leaves. At Par Tao Dam in the Kanchanaburi province the species was found on a slope in hillside evergreen forest among dense undergrowth of Piperaceae, Commelinaceae and Acanthaceae. The shoots were here up to 2 m, rooting at the lower nodes and with semi-woody base. Also in this population the leaves had the characteristic marks of insect bites. Fig. 1 shows the population from Kaeng Kra Chan.

Cultivation. From the Kaeng Kra Chan population seeds were harvested for cultivation in the greenhouses, University of Aarhus. The seeds were sown in January 1996. Germination was poor, in spite of a large seed sample only two seedlings were obtained.

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This is, however, not unusual with *Amaranthaceae*, known for seeds with a very hard testa. Within five months the plants came into flower. Later, several plants were produced very easily through cuttings. They were grown in a greenhouse where the temperature is kept at about 25° C and with a constantly high humidity. Flowering continued throughout the year and the plants became richly branched with numerous, shoots reaching a length of about 2 m. Living material from Kanchanaburi has been brought back for cultivation at the Queen Sirikit Botanic Garden, Chiang Mai.

Cytology. Root tip mitoses from the plants grown in Aarhus were studied cytologically. The somatic chromosome number was established to $2n = 18$, suggesting diploidy with the basic number $x = 9$. This basic number is found in e. g. *Celosia* in the *Celosieae* and in *Bosea* and *Digera* in the *Amaranthaceae*. Generally diploidy is rather rare in the family. Most species are tetraploid with $2n = 32$ or 36 , and several have an even higher ploidy level.

Distribution. The geographical distribution, so far known, reaches from 15° N to 9° N along the Tenasserim range in Western Thailand or, in other words, from Sangkhla Buri in the Kanchanaburi province to Takuapar N of Phangnga, an area dominated by a mountain chain mainly consisting of mesozoic limestone. The species may have a wider distribution in the western limestone areas of Thailand and in adjacent Myanmar. Due to the inconspicuous flowers it is easily overlooked or mistaken for belonging to the *Urticaceae* or the *Euphorbiaceae*.

Material studied besides the localities in the protologue

Larsen & al. 45440 Phetchaburi province, Kaeng Kra Chan Nat. Park, alt. 400–600 m 12° 48' N, 99° 24' E, 6 Aug. 1995, evergreen forest along small stream and along forest trail.-Nanakorn & al. QBG 10236 Kanchanaburi province, district of Sai Yok, Par Tao Dam, Wang Kra Chae, alt. 300 m 14° 16' N, 98° 44' E, 20 Dec. 1997, hill evergreen forest.

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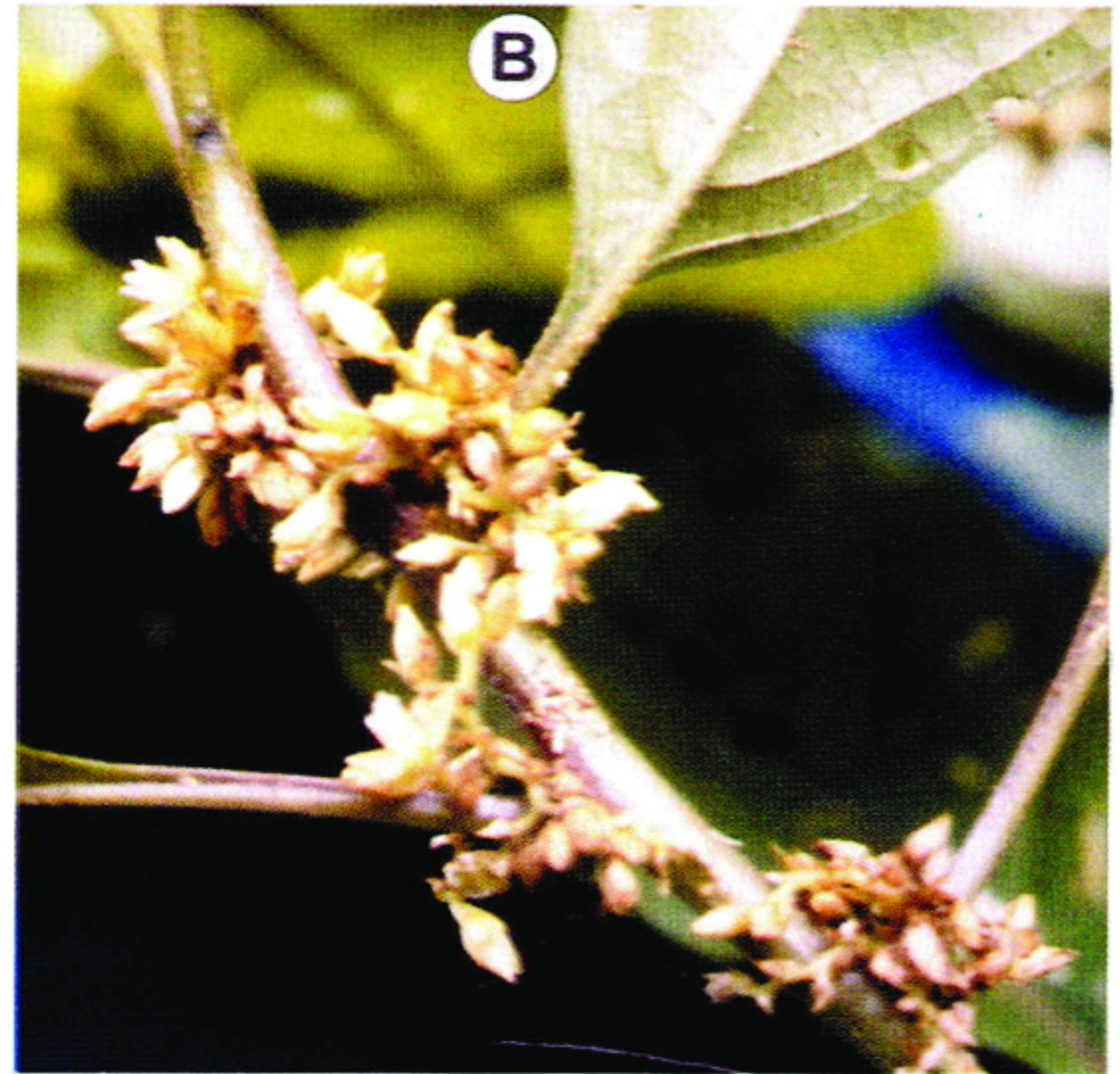


Figure 1. *Siamosia thailandica* A-B. Plants from natural habitat at Kaeng Kra Chan, Larsen et al. 45440; C-D. Plants from the greenhouse at AAU grown from seeds from the Kaeng Kra Chan population.