

STUDIES IN THE AMARANTHACEAE

I. THE GENUS INDOBANALIA

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In undertaking a revision of the genus Chamissoa, the status of several closely related taxa were also investigated. This was done in order to facilitate coming to a better understanding of the relative phylogenetic position of Chamissoa. Indobanalia is one of several genera in the Amaranthaceae considered to be closely related to Chamissoa, although they are a world apart, geographically speaking. This is the first of what is hoped will be a series of papers that collectively will shed more light upon relationships within the family Amaranthaceae.

Indobanalia (Moquin) Henry & Roy

Indobanalia (Moquin) Henry & Roy, Bull. Bot. Serv. India 10:274 (1968).

Banalia Moquin in A. P. de Candolle, Prodrumus 13(2): 278 (1849), non Rafin., Autikon Botanikon 50 (1840).

Suffrutescent or woody, sprawling or scandent shrubby plants with the branches often becoming vine-like. Leaves alternate, exstipulate, membranaceous, entire, ovate to lanceolate. Inflorescence paniculoid or spikoid, axillary and/or terminal, composed of cymose clusters of 1-5 flowers disposed alternately on the axes. Flowers each subtended by a bract and two bracteoles; sepals 5, subequal, ovate-subulate; stamens 5, with filaments united below and without sterile appendages alternating with them, and with 2-celled anthers; pistil with globose-oblong ovary with erect style about equal to the ovary in length and with linear, revolute stigmas with glandular hairs, & with 1 ovule attached to base of the ovary with an erect funiculus. Utricle globose & somewhat compressed, included within the sepals, membranaceous and indehiscent. Seed exarillate, black & shining at maturity and minutely reticulate, with annular embryo with linear cotyledons, and with farinose endosperm.

A monotypic genus restricted to the ghats and hills of southwestern India. Moquin (1849) described two species in his genus Banalia: B. thyrsiflora and B. brasiliana. The latter taxon was transferred by Fries (1920) to Chamissoa wherein it resided until Sohmer (1976) described a new genus based on that taxon.

Indobanalia most closely resembles Chamissoa subgenus Chamissoa in morphology and habit, but the exarillate seed, indehiscent utricle and bisexual flowers, distinguish it from that taxon.

Indobanalia thyrsoiflora (Moquin) Henry & Roy, Bull. Bot. Serv. India 10:274 (1968).

Banalia thyrsoiflora Moquin in A. P. de Candolle, Prodrumus 13(2): 278 (1849); Wight, Icones 5: t. 1774 (1852); sensu Schinz in Engler & Prantl, DIE Natürl. Pfl.-fam. 3(1a): 101 (1893).

A suffrutescent, sprawling shrub whose branches often develop the habit of a leaning or scrambling vine to 5 m. Leaves with petioles 0.5 - 5.5 cm long, with ovate to lanceolate, membranaceous blades 1 x 4 cm - 7 x 13 cm wide and long, obtuse to round at the base and tapering into the petiole, acuminate to long-acuminate at the apex, with 5 - 7 pairs of lateral veins. Inflorescence paniculoid and either terminal with the leaves of the upper nodes strongly reduced, or truly lateral in the axils of normal foliage leaves, but frequently difficult to ascertain where terminal inflorescence begins, to 30 cm long if terminal, smaller if axillary and then often spikoid, composed of cymose clusters of 1 - 5 flowers alternately disposed on the inflorescence axes, with the younger flowers arising in the axils of the bracteoles of the older ones in each cluster. Flowers bisexual, at anthesis with the 5 ovate-subulate, white sepals 3.6 - 4.2 mm long and with the free portion of the filaments about 2 mm and anthers about 0.2 mm long; pistil at anthesis with oblong-globose ovary about 1.2 mm long, with style and stigmas each about the same length as the ovary. Utricle 1.5 - 2 mm long, indehiscent, but with lower portions of wall very thin and liable to irregular tearing. Seed 1.2 - 1.5 mm long, oblong-lenticular, black, shining and minutely reticulate at maturity.

Type: India: without further data, Wallich 6914a (BM, lectotype). Figure 1.

Specimens examined:

INDIA: Karnataka (formerly Mysore): Hassan Dist.: Neradi-Somvarpet Road, Ramamoorthy & Gandhi 2611 (US); Markanahalli, Saldanha 12,568 (US); Bisle Ghat, top section, Saldanha 16518 (US); Coorg Dist.: Cameron s.n. Mar 1899 (K). Kerala: Malabar Dist.: Manantoddy, Lawson s.n. Jan 1884 (K, 2 sheets). Tamil Nadu (formerly Madras): Nilgiri Mts: Coonoor, Clarke 10920 (K), Gamble 18365 (BM, K); Nilgiri Mts. without further data, Clarke s.n. (BM), Wight s.n. (K); Palni Hills, without further data, Beddome 6553, 6554 (BM); Tirunelveli Hills, without further data, Beddome 6552 (BM); Madras, without further data, Beddome 6551 (BM), collector unknown (K). INDIA: without further data, Beddome 6555 (BM), Gardner s.n. (K), Thompson 6914 (K), Wallich



Figure 1. Indobanalia thyrsiflora (Moquin) Henry and Roy. Illustration of lectotype specimen, Wallich 6914a (BM). $\times\frac{1}{2}$.

6914a (BM, lectotype), 6914b (BM), Wight 2440 (K).

This species assumes a striking resemblance to Chamissoa altissima, which is from the American tropics and subtropics, in habit. The two species have apparently exploited the same kinds of habitat...open and/or naturally or artificially disturbed situations. Indobanalia thyrsiflora is apparently found mostly in the transition zone between the lower elevation dry, deciduous forests, and the higher, wetter, evergreen forests of the ghats and hills of southwestern India (fig. 2) between about 600 - 1200 m elevation, particularly where the forest has been disturbed. It is an interesting isolated representative of a matrix of species that form a more or less well-defined group within the Amaranthaceae and will most likely assume considerable importance in an ultimate attempt to understand evolution within this family.

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Literature Cited

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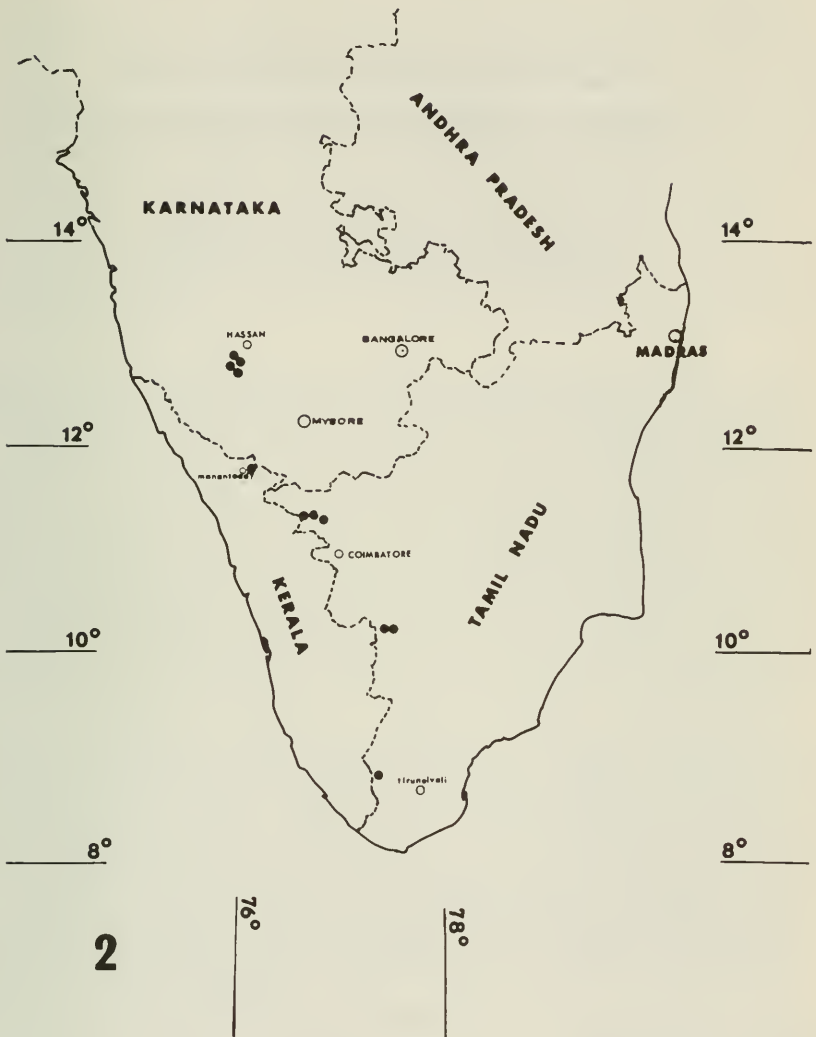


Figure 2. Map of Southern India demonstrating general distribution (black dots) of *Indobanalia thyrsiflora* (Moquin) Henry and Roy.