CARDIOPTERIDACEAE (H. Sleumer, Leyden)

1. CARDIOPTERIS


Sinistrorsely twining herbs with white milky juice. Leaves spirally arranged, simple or lobed to varying degrees, cordate, palmatifurled, long-petioled, glabrous as is the stem, estipulate. Flowers bisexual, or polygamous (andromonoecious), small, subsessile, in unilateral repeatedly forked cincinni, composed of loose axillary panicles, ebracteate. Calyx deeply (4-)5-partite, lobes imbricate in bud, whether or not slightly accrescent in fruit, persistent. Petals (4-)5, caducous, lower half forming a widely funnel-shaped corolla, lobes imbricate in bud. Stamens (4-)5 inserted on the upper part of the corolla tube, alternate with its lobes; filaments very short, glabrous; anthers medifixed, introrse; pollen grains oblate, triangular in polar view, tricolporate. Disk absent. Ovary oblong-ovoid, subquadrangular (rudimentary in 5), 1-celled; styles 2, one with a deep longitudinal groove, and two unequal ovate rather obtuse distal divisions, accrescent in fruit and becoming linear and succulent then, the other short-curved, capitate at apex, deciduous; ovules 2 (often one of them aborted), pendent from apex of cavity, anatropous, with dorsal raphe. Fruit indehiscent, compressed, with 2 longitudinal broad and transversely striate stramineous wings, obovate-elliptic to orbicular in outline, apex emarginate, crowned by the columnar accrescent soft and green stigma, base very shortly or hardly (Mal.), sometimes elongately contracted into a kind of stipe. Seed 1, linear, sulcate; testa thin; embryo minute, conical, in top of granular fleshy albumen.

Distr. Two spp., one in SE. Asia and W. Malesia, and one in E. Malesia.

Ecol. Climber on edge of (mostly secondary) forest and thickets, in open places as limestone rocks.

Uses. The leaves are eaten as a vegetable.

Taxon. Cardiopterus was conceived as type of a moneneric family by Blume (1847 or 1849) and R. Brown (1852); it was considered to constitute a subfamily of the Icacinaeae by Engler (1893) and Post & Kuntze (1904), and again as a distinct family within the Celastrales by King (1893), Williams (1915, as Peripterygiaceae), Gagnepain (1910, 1911), Sleumer (1942, as Peripterygiaceae), Hutchinson (1959) and Takhtajan (1966).

The pollen of the genus shows no distinctive features against Icacinaeae and resembles very much that of the Afro-Malagazine genus Cassinopsis Sonder.

Note. The family name Cardiopteriidae is derived from the original spelling Cardiopteris used by Wallich and later by Blume and others. Engler changed the name to Cardiopteryx, which would be more correct as an allusion to the winged fruit, a substitute name, however, which cannot be used according to the Code; for this reason, the family name 'Cardioperigyaecae', proposed recently, has not been used.
Fig. 1. Cardiopteris moluccana Bl. a. Habit, with ♂ inflorescence, × ⅓, b. ♂ flower, corolla and stamens, × 15, c. ♀ flower, corolla and ovary, × 15, d. flower, lateral view with calyx and corolla, × 7, e. flower calyx, × 10, f. infructescence, × ½ (a-f BLUME).

Much branched with twining terete stems, which often preserve their freshness after the fall of the leaves and are loaded with fruits then, 2–5(–9) m. Leaves widely spaced, polymorphous, broadly ovate in outline, with a cordate base, generally ± deeply or irregularly 3–5(–9)-lobed, apex generally acutish, lateral lobes acute or obtuse, very rarely entire or almost so, herbaceous, caducous, pale green, (4)–6–12(–17) by (3)–4–7(–16) cm, main nerves 7–9 radiating from apex of the petiole, slightly raised beneath, veins rather obscure; petiole (3)–5–12 cm. Panicles solitary on 3–5(–10) cm long peduncles, 1–2(–3)-forked, cincinni rather few-flowered, glandular-puberulous or almost glabrous, 5–10 cm, accrescent in fruiting stage. Flowers distant from each other along rachis, on short pedicles (1 mm, accrescent to 5 mm in fruit). Calyx lobes 2 mm. Petals white, 2.5–3.5 mm. Fruit obovate-elliptic in outline, the wings included, apex emarginate, base cuneate and suddenly contracted to a kind of foot up to 2 mm, on the very base of which the persistent calyx is found, wings glossy yellow or light stramineous colour, tipped by the accrescent style which remains green and fleshy for a long time.

Distr. SE. Asia (W. Bengal and Assam to Burma, Thailand, Indo-China and Yunnan); in Malesia: N. & NE. Sumatra, Malay Peninsula (Kedah, Perlis, Perak), SE. Borneo (twice found), Java (incl. also Bawean & Kangean Is. and Madura), Lesser Sunda Is. (Lombok, Sumbawa, Sumba, Alor), Celebes (incl. also Saleijer Is.), Moluccas (Tenimber Is.).

Ecol. Primary and secondary (also seasonal, deciduous) forest edge, scrub jungle, bamboo forest, hedges around villages, open waste places, even on open limestone rock, generally at low elevations, rarely up to 1000 m, scattered.

Uses. Locally the leaves are used as a vegetable. Vern. Angi anginan, iri iri, kanjar kawang, parianom, rindengan, serintil, sobowengi, wiwi wiwo, J, oke oke, Mad., gambas kawaong, ritu ruruan, saburung, 5, sokrah, Alor.

Fig. 2. Distribution of Cardiopoteris. 1. C. quinqueloba (Hassk.) Hassk., 2. C. moluccana Bl.
FLORA MALESIANA


Leaves ovate-cordate, entire, acutely acuminate, base ± deeply cordate, firmly chartaceous, edge often slightly recurved in dry specimens, up to 24 by 22 cm. Panicles generally 3- or more-forked, cincinni rather rich-flowered, flowers usually close together. Otherwise as C. quinqueloba.

Distr. Malesia: Celebes, Philippines (Luzon, Panay?, Negros, Samar, Bohol, Catanduanes, Mindanao), Moluccas (Buru, Ambon (type), Ternate, Ceram), New Guinea, and New Britain (Gazelle Peninsula).

Ecol. Climber in tall rain-forest or forest edge, also in secondary vegetation and in native gardens, generally in the lowland, ascending to 1460 m in New Guinea, scattered.

Uses. A decoction of the stem is used against hepatitis in Ternate. The leaves are eaten as a vegetable.

Vern. Matta matta, tamatta, Makassar, telin tell, Menado, uge jabba, Ternate, uta lala, u. turi, Ambon: Philippines: bangogan, Bik., gurisan, sagumati, Bag., lila, Buk., tagulaual, P. Bis.; New Guinea: foyomangeni, Wapi (Miwaute), kehunghe, Mekeo (Maipa), swalow, Buang.

Note. According to Miquel also in Bali, which is apparently erroneous.