Pontederiaceae

Kalyanee Boonkird*

Aquatic, erect or floating herbs. Leaves spirally arranged or rosulate. Inflorescences spicate, racemose, panicle or corymb subtended by 1 – 2 spathe-like or tubular leaf-sheaths. Flowers bisexual, 6-merous. Stamen 6,3 rarely 1. Ovary superior 3- or 1-locular. Fruit a 3-valved capsule; seeds minute, ribbed.

KEY TO THE GENERA

1. Perianth segments free, anthers basifixed **Monochoria**
1. Perianth segments partly connate into a tube, anthers dorsifixed **Eichhornia**

MONOCHORIA

Presl, Rel. Haenk. 1 : 127. 1830.

Perennial herbs. *Inflorescences* racemose or sub-umbellate with large irregular bracts, terminal. *Flowers* solitary, subsessile. *Stamens* 1 large, 5 shorter, yellow; the large stamen with a lateral erect tooth on the filament. *Ovary* 3-locular; ovules numerous; style filiform; stigma subentire or 3-lobed. *Capsule* ellipsoid; seeds oblong.

KEY TO SPECIES AND VARIETIES

1. Stem 5 – 50 cm long. Leaves cordate or broadly lanceolate 1. **M. vaginalis**
1. Stem 30 – 100 cm long. Leaves triangular, sagittate or hastate **2. M. hastata**
   2. Leaves sagittate or broadly hastate. Inflorescences corymbose; fertile anther 5 mm long, sterile anthers 3 mm long 2a. **M. hastata** var. **hastata**
   2. Leaves narrowly hastate. Inflorescences racemose; fertile anther 8 mm long, sterile anthers 5 mm long 2a. **M. hastata** var. **elata**

1. Monochoria vaginalis (Burm. f.) Presl ex Kunth, En. 4 : 134. 1843; Hook. f., Fl. Br. Ind. 6 : 363. 1892; Merr., Fl. Man.: 141. 1912; Craib, Kew Bull.: 413. 1912; Merr., Sp. Blanc.: 95. 1918; Ridl., Fl. Mal. Pen. 4 : 346. 1924; Cherfils in Fl. Gén. I.-C. 6 : 818. 1934; Backer, Fl. Mal. I. 4 : 256. 1951; Back. & Bakh. f., Fl. Jav. 3 : 96. 1968 — *Pontederia vaginalis* Burm. f., Fl. Ind.: 80. 1768.

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* The Forest Herbarium, Royal Forest Department, Bangkok 9, Thailand.

Thailand. — All over the country.

Distribution. — Tropical Africa, SE. Asia, Philippines (type?), China, Japan.

Ecology. — In swamps, ditches, shallow pools and especially in Fl flooded paddy-fields.

Vernacular. — Kha khiat ขาเขียด, Nilbon นิลบล, Phak khiat ผักเขียด (Central); Phak pet ผักเบ็ด (South-eastern); Phak phet ผักเผ็ด (Eastern); Phak rin ผักริ้น, (Peninsular); Phak hin ผักฮิ้น, Phak hin nam ผักฮิ้นน้ำ (Northern).

Uses. — As vegetable and medicine. The juice of root and leaves is used to curing toothache and coughs; its bark is eaten for curing asthma.

Note. — The species is polymorphous. Young plants have few-flowered inflorescences and small leaves.

2. Monochoria hastata (L.) Solms in A.DC., Mon.Phan. 4 : 523. 1883; — *Monochoria hastaefolia* Presl, Rel. Haenk. 1 : 128 . 1827; Hook. f., Fl. Br. Ind. 4 : 362. 1892; Merr., Fl. Man.: 141. 1912; Craib, Kew Bull.: 413. 1912; Merr., Sp. Blanc. 95. 1918; Ridl., Fl. Mal. Pen. 4 : 344. 1924; Cherfils in Fl. Gén. I.-C. 6 : 822. 1934; Backer, Fl. Mal. I. 4 : 256. 1951 — *Pontederia hastata* L., Sp. Pl.: 288. 1753

a. var. **hastata**

Thailand. — All over the country.

Distribution. — Tropical SE. Asia.

Ecology. — In fresh water pools, canal banks, ponds, swamps and marshy areas.

Vernacular. — Phak top ผักตบ, Phak top thai ผักตบไทย, Phak pong ผักโป่ง (Central).

Uses. — Leaves and inflorescences edible. The juice of leaves is used for curing boils; rhizome for cattle food.

b. var. **elata** (Ridl.) Backer; Ridl., Fl. Mal. Pen. 4 : 344. 1924; Backer, Fl. Mal. I. 4 : 253. 1951. — *Monochoria elata* Ridl. J. Str. Br. R. As. Soc. No. 79: 99. 1918.

Thailand. — CENTRAL : Bangkok; PENINSULAR : Phatthalung.

Distribution. — Malesia (type).

Ecology. — as var. *hastata*.

Vernacular. — Plong โพลง, Sim phri สิมพรี (Central).

EICHHORNIA

Kunth, En. 4 : 129. 1843. — *Eichornia* Auct.

Floating or creeping aquatic herbs, rooting from the nodes. *Leaves* rosulate; broadly ovate-rhomboid or linear-lanceolate. *Inflorescences* a terminal spike. *Perianth* zygomorphic or subactinomorphic, segments connate at base. *Stamens* 6, 3 long and 3 short, inserted in perianth tube. *Ovary* 3-locular; ovules numerous; style filiform. Fruits a capsule; seeds many.

Eichhornia crassipes (Mart.) Solms in A. DC., Mon. Phan. 4 : 527. 1883; Cherfils in Fl. Gén I. - C. 6 : 825. 1934 ; Backer, Fl. Mal. I.4 : 256. 1951; Back. & Bakh. f., Fl. Jav. 3 : 98. 1968.—*Pontederia crassipes* Mart., Nov. Gen. Sp. 9. 4. 1823.

Thailand.— All over the country.

Distribution.— Native of Brazil (type), introduced and naturalized all over the tropics. Introduced into Thailand from Java in 1896.

Ecology. — In rivers, ponds and on swampy ground at low altitudes.

Vernacular. — Phak top chawa ผักตบชวา, Sawa สวะ, Phak top pong ผักตบป่อง (Central).

Uses. — As animal feed, green manure, cigar wrapper, media for growing mushrooms. Flowers are regarded as a medicine for the skin disease of horses.

Index to collector's numbers

Monochoria

Adisai 162 : 1
Bunchuai 1316 : 1
Collins 1924 : 1
Garrett 229 : 2a
Lakshnakara 33 : 2a, 1021 : 1
Maxwell 71–553 : 1, 72–600 : 1
Nalampoon 3 : 2a
Noi 168 : 1, 243 : 1
Phengklai & Beusekom 1218 : 1
Phengnaren 228 : 1
Piya koruchana 6 : 1
Ploenchit 462 : 1
Prayad 1504 : 1
Put 2330 : 2b, 2339 : 2a
Rahil 74 : 1
Sangkhachand 175 : 1
Shaw 327 : 2a, 405 : 1
Smitinand 535 : 1, 2266 : 1, 8550 : 2b
Smitinand & Abbe 9698 : 2b
Smitinand & Hansen 10974 : 1
Smith 1002 : 1
T.D.B.S. 625 : 1, 4471 : 2a, 4966 : 1, 5779 : 1
Vacharapong 629 : 1

Eichhornia

Kerr 19921
Collins 896