HAEMODORACEAE (C. G. J. van Steenis, Leyden)

Perennial, caulescent, rhizomatous herbs with fasciculate, fibrous roots, sometimes stoloniferous, rarely with rounded tubers. Leaves radical, equitant, linear or ensiform, strongly laterally compressed (Iris-like), with an open or closed amplexicaulious, sheathing base, closely striate-nerved or plicate-nerved. Flowers ♀, in Mal. spp. actinomorphic, paniculate. Perianth-segments 6, 2-seriate, free. Stamens 3, epipetalous; filaments ± free; anthers 2-celled, basified or versatile, introrse, splitting lengthwise. Ovary superior to inferior, 3-celled. Style simple, usually filiform, stigma punctiform. Ovules ∼ 2 per cell, on axile placentas. Capsule loculicid, 3-valved. Seeds with abundant endosperm and a small embryo, often flat, sometimes winged.

Distr. About 9 or 16 genera, mainly in Australia, less in S. Africa and N. and tropical America, in Malaysia one native sp. of an otherwise Australian genus and one American ornamental.

Note. The delimitation of the family has been rather different in different handbooks, but since several genera have been assigned to the Liliaceae, Amaryllidaceae, or other families, the circumscription has been narrowed down to a rather homogeneous group (cf. PAX, Pflanzenfamilien ed. 2, 15a, 1930, 386–390, and HUTCHINSON, Fam. Fl. Pl. 2, 1934, 164).

KEY TO THE GENERA

1. Sheathing leaf-base open, blade 4–5 mm broad, tough. Flowers red to blackish. Ovary inferior, half-superior in fruit. Ovules 2 per cell ....... 1. Haemodorum
1. Base of leaf-sheath closed, blade 2–3 cm wide, not tough. Flowers white. Ovary and fruit superior. Ovules ∼ in each cell ....... 2. Xiphidium

1. HAEMODORUM

J. E. SMITH, Trans. Linn. Soc. Lond. 4 (1798) 213; BENTH. Fl. Austr. 6 (1873) 418.—Fig. 1.

Erect, glabrous, tough, perennial herbs; stem-base or rhizome thickened and enclosed in the persistent, sheathing (but open) leaf-bases; roots fibrous, densely covered with hair-roots, looking spongy, often red. Stem (inflorescence) mostly branched, noded, with reduced leaves. Leaves flat (or terete), entire, linear, amplexicaulious; sheaths open. Inflorescence terminal on the (mostly solitary) stem, paniculate, (head-like contracted or spike-like,) nigrescent; branches subtended by stem-clasping, bract-like reduced leaves. Pedicels mostly provided with 2 often scarious bracteoles. Flowers usually fragrant, red, black, or greenish. Perianth persistent, rather erect. Filaments often enclosed by the inrolled margins of the inner tepals and coherent with them at their ultimate base, persistent!; anthers sagittate at the base, versatile. Apex of the ± obconial ovary truncate, often slightly bulging between the stamens. Style filiform. Ovules 2 per cell, laterally attached to a protruding, thickened placenta in the upper part of each cell. Capsule semi-inferior, ± 3-lobed, opening with 3 radial, apical slits. Placenta much thickened in fruit, bearing on each side a large, winged, peltately attached, flattened seed.

Distr. About 20 spp. in Australia (most in the N. half), one in Tasmania, in Malaysia: one sp. in New Guinea.

Ecol. Mostly plants of dry savannah land.

Notes. In both editions of the ‘Pflanzenfamilien’ it is copied from ENDLICHER (Iconogr. t. 98) that the flower of H. spicatum R.Br. possesses 3 ovules per cell. In the flowers I examined of this species there are only 2; I assume that ENDLICHER mistook the placental knob, on which these 2 ovules are laterally attached, for a third ovule (fig. 1 d–f).
Fig. 1. Haemodorum corymbosum Vahl. a. Habit, × 2/3, b. flower, × 5, c. inner tepal and stamen, × 7, d. section of ovary, e. insertion of ovules in longitudinal section, f. placenta in fruit, g. fruit with concrescent perianth and persistent filament, cells dehisced on top, that in front ± abortive, × 3.—h. Seed of H. planifolium R.Br., × 3 (a–g after Brass 8384, h after Constable 5266).

Rootstock woody, red in section. Leaves tough, drooping, fine-striate, 30–60 cm by 4–6 mm, those on the stem (inflorescence) all amplexicaul on the nodes, gradually reduced in size upwards, upper ones sustaining the branches of the inflorescence bract-like. Stem (with inflorescence) 50–100 cm high (of which the unbranched part occupies 30–70 cm). Flowers red, numerous, in dense cymes forming a compact, corymbose, large or depauperate panicle. Pedicels 2–10 mm, mostly 2 appressed, scarious, lanceolate, 1-nerved, very acute, 3–4 mm long bracteoles inserted at unequal height. Tepals oblong-lanceolate; outer ones thickened and subaccate at the base, 5–6 by 1½–1⅔ mm; inner ones narrower, 6–7 by 1⅓–1¾ mm; all lengthwise 5-nerved, apex blunt, margins slightly scarious. Filaments nearly as long as the inner tepals, linear, flat, ⅓ mm broad, slightly broadened at the base, apex filiform; anthers elliptic, flat, 3 by 1 mm, incised to c. ½ by ⅓ from the base, blunt at both ends; connective minutely apiculate. Style filiform, 7–8 mm. Capsule roundish, enveloped by the erect, somewhat accrescent tepals, c. 8–10 mm through, by abortion sometimes only 2–1 cells developed. Seeds not seen.

Distr. Australia (tropical parts of the Northern Territory and Queensland), in Malaysia: S. New Guinea (Mai-Kussa, Wassi Kussa, Okaba, Merauke area).

Ecol. In grass-fields and in Melaleuca and Banksia lowland, coastal savannah forest; common on sour, grey, clay soil, hard packed in the dry season and an inch to ankle deep in water during the wet, together with Schoenus, Rhynchospora, Drosera, Thysanotus, Tricyrone, Velleta, etc. (BRASS, l.c.); J. July–Sept., fr. Dec.

The perianth of this and other spp. is apparently never wholly expanded during anthesis and is, therefore, not very conspicuous. The whole plant is provided with a red coloured substance in its tissues, to which the generic name alludes. The leaf-sheaths form a tunica round the rootstock, thus providing an excellent protection from fires in the dry season.

Uses. The roasted rootstock is eaten by Australian aborigines. In Australia a strong fibre is made from the long, tough leaves; also bags are plaited from them. The plant is bitter and reputed poisonous to stock in Queensland (F. M. BAILEY, Queensl. Agr. J. 5, 1899, 41–42).

Vern. Scarlet blood root, Queensl.

Notes. The type of this species is the BANKS & SOLANDER specimen on which J. E. SMITH apparently based his generic description and to which VAHL gave the specific epithet. An allied species is H. planifolium R. BR.

2. XIPHIDIUM


Distr. Monotypic, tropical America and the West Indies.

Note. The generic name Xiphidium is sometimes credited to LOEFLING, Iter Hisp. (1758) 179. Mr EXELL informs me that in this work Xiphidium is published in synonymy under the Iridaceous genus Ixia.


Perennial, erect, but stems often nodding, 40–70 cm. Leaves fan-wise arranged, rather densely set, linear-lanceolate, (incl. the closed sheath) 30–50 by 2–3 cm; sheaths only amplexicaul at the base, somewhat narrower than the blade; blade remotely minutely toothed especially at the posterior margin. Panicles 6–25 cm excluding the 15–30 cm long stem (peduncle), rather dense; branches patent, densely short-hairy. Bracts ovate-triangular, inconspicuous. Flowers ± purple, white, base sometimes greenish, 1–5 mm pedicelled. Tepals oblong, white, creamy or the inner side bluish, sparsely pubescent, obtuse, 6–9 by 2⅓–3 mm, inner ones broadest, all 4–5-nerved. Filaments flat, short, c. 2 mm; anthers yellow to orange, 1½–2 mm. Style longer than the stamens. Capsule orange to dull-red, finally purple black, c. 7–10 mm. Seeds subglobose, wartiy.

Distr. Native of S. America, in Malaysia sometimes cultivated in gardens in the lowland and hills.