

Flowers usually hermaphrodite. Perianth of 6 segments, 3 outer ones membranous or almost herbaceous, 3 inner large and petal-like. Stamens 6. Ovules solitary in each carpel. Fruit-carpels indehiscent, either about 6 or numerous, arranged in a ring round the depressed axis, or (in species not Australian separated by some into a distinct genus) irregularly crowded in a globular head. Seed ovate or oblong, with a horse-shoe embryo.—Aquatic herbs, erect or in species not Australian floating, with radical leaves on long petioles. Flowers either in a terminal umbel with or without whorls of pedicellate flowers below it, or in a panicle with whorled branches, each bearing a similar umbel.

The genus is widely spread over the temperate and warm regions of the globe. Of the four Australian species one is cosmopolitan, two others are common to tropical Asia, the fourth is endemic. They have all four tall leafless loosely paniculate flowering stems, and the long petioles of the radical leaves often appear jointed from transverse partitions of thickened pith, but this character does not appear to be constant in any one species.

Carpels 15 to 30, in a flat ring. Transverse veinlets of the leaf very oblique 1. *A. plantago*.

Carpels 6 or fewer, rarely 7 or 8.

Leaves deeply cordate with a narrow sinus, the outer primary veins on each side confluent in the auricles, transverse veinlets not very close and more or less connected by reticulations.

Carpels about 3 lines long, hard, often muricate . . . 2. *A. acanthocarpum*.

Carpels under 2 lines long, smooth or tuberculate, the pericarp not very hard 3. *A. oligocoeum*.

Leaves broadly cordate or reniform, the primary veins all distinct, transverse veinlets very numerous and closely parallel. Carpels somewhat drupaceous . . . 4. *A. reniforme*.

8. *A. oligococeum*, *F. Muell. Fragm.* i. 23, viii. 214.—Closely allied to *A. acanthocarpum*. Leaves the same, with the same narrow basal sinus glandular dots and almost pedate venation. Flowers also similar, in a broad panicle with the lower bracts leafy, but smaller or

more slender than in that species. Carpels usually only 2 or 3 perfect $1\frac{1}{2}$ or rarely 2 lines long, very obtuse, the 3 or 4 prominent dorsal ribs smooth or tuberculate but not muricate.—*A. glandulosum*, *Thw. Enum. Pl. Zeyl.* 332.

N. Australia. Upper Victoria River, *F. Mueller*; Port Darwin, *Schultz*.

Queensland. Moreton Bay, *Hill and F. Mueller*; Herbert's Creek and Gainsford, *Bowman*; Rockingham Bay, *Dallachy*.

Also in Ceylon and East India. This and the preceding species may prove to be varieties of a single one. The *A. oligococeum* varies much in stature, some of the Rockingham Bay specimens are not 6 in. high, with small leaves. The larger specimens have loose panicles of about 1 ft. and rather large leaves, sometimes very thin.

NIB

ALISMATACEAE

Caldesia oligococca

2. DAMASONIUM, Juss.

(Actinocarpus, R. Br.)

ALISMATACEAE

Flowers hermaphrodite. Perianth of 6 segments, 3 outer ones membranous, 3 inner larger and petal-like and very fugacious. Stamens 6. Ovules 2 in each carpel. Fruit carpels 6 to 9 or rarely more, laterally flattened, adnate by their broad base to the convex or conical receptacle, tapering into a beak, spreading, when ripe usually breaking off transversely near the base. Seeds 2 or solitary by abortion. Embryo horse-shoe shaped.—Aquatic or marsh herbs, with the habit of the annual *Alismas*.

Besides the Australian species which is endemic, the genus comprises two others from the northern hemisphere, all three closely allied to each other and possibly varieties of one.

NIB

ALISMATACEAE

Dioscorea minor