3. **JUSSIÆA**, Linn.

Calyx-tube not produced above the ovary; lobes 4, 5 or rarely 6, persistent. Petals as many as calyx-lobes. Stamens twice as many as calyx-lobes. Ovary with as many cells as calyx-lobes and numerous ovules in each cell; style short or long or scarcely any; stigma more or less lobed. Capsule terete or with as many or twice as many ribs or angles as calyx-lobes, opening septicidally in valves separating from the persistent ribs or irregularly between the ribs. Seeds usually numerous; testa thin or crustaceous, or thick and spongy.—Herbs, sometimes aquatic, or rarely shrubs. Leaves alternate, entire or very rarely serrate. Flowers yellow or white, solitary in the axils; petals usually broad.

The genus is chiefly American, both tropical and extratropical, a few species also spread over tropical and subtropical Africa and Asia. The Australian species are both of them common in the New as well as the Old World.

Creeping or floating plant. Flowers usually 5-merous, on pedicels longer than the ovary . . . . . 1. *J. repens.*

Erect plant. Flowers mostly 4-merous, on very short pedicels or almost sessile . . . . . 2. *J. suffruticosa.*

Jussiaea

2. **J. suffruticosa,** *Linn. Spec. Pl.* 555. An erect branching perennial, attaining 2 or 3 ft., the base of the stem often hard and woody, either softly pubescent or villous in all its parts or rarely almost glabrous, the stem often angular. Leaves lanceolate or almost linear, acute, narrowed at the base, the larger ones 2 to 4 in. long. Pedicels much shorter than the calyx-tube or ovary, the bracteoles reduced to small glands or wanting. Calyx-tube or ovary usually about ½ in. long when in flower, but soon lengthening out; lobes 4 or rarely 5, lanceolate, broad or narrow, 3- to 5-nerved, 4 to 5 lines long. Petals broad, exceeding the calyx-lobes. Capsule 1½ to 2 in. long, usually above 2 lines broad, tapering to the base, nearly terete, the ribs scarcely prominent.—F. Muell. Fragm. iii. 130; *J. villosa* and *J. angustifolia*, Lam. Dict. iii. 331; DC. Prod. iii. 55, 57; *J. villosa*, W. and Arn. Prod. 336, with the synonyms adduced; *J. suffruticosa* and *J. angustifolia*, Griseb. Fl. Brit. W. Ind. 273, with the numerous synonyms adduced.

N. Australia. Victoria river and Macadam Range, *F. Mueller;* Strangways river, *M'Donall Stuart;* Albert river, *Henne.*

Queensland. Broad Sound and Northumberland islands, *R. Brown;* Lizard Island, *M'Gillivray;* Burnett river, *F. Mueller;* Burdekin river, *Bowman;* Rockhampton, *Dallachy;* Brisbane river, Moreton Bay, *A. Cunningham, F. Mueller.*

N. S. Wales. Clarence river, *Beckler;* New England, *C. Stuart.*

The species is common in most tropical countries. The nearly glabrous forms distinguished sometimes as *J. angustifolia*, seem frequently to pass into the villous ones in most localities. In Australia, the two appear to be equally abundant in Queensland, the villous ones more common in N. Australia, and the more glabrous ones in N. S. Wales.

4. **LUDWIGIA,** Linn.

Calyx-tube not produced above the ovary; lobes 4, 5 or rarely 3, persistent or at length deciduous. Petals as many as calyx-lobes or sometimes none. Stamens as many as calyx-lobes. Ovary with as many cells as calyx-lobes, and numerous ovules in each cell; stigma sessile or nearly so, capitate, furrowed or obscurely lobed. Capsule angular or terete, much longer than broad, opening either in terminal pores or irregularly along the sides between the ribs. Seeds small, numerous, without any tuft of hairs.—Annual or perennial herbs, sometimes somewhat woody at the base. Leaves alternate or the lower ones (in species not Australian) opposite. Flowers axillary, sessile or nearly so, or rarely distinctly pedicellate. Petals usually very small.

The genus is dispersed over the warmer and temperate regions of the globe; the only Australian species is a common Asiatic and African one.

Ludwigia

1. **L. parviflora,** *Roxb. Fl. Ind.* i. 419. An erect or diffuse glabrous annual, rarely above 1 ft. high. Leaves alternate, lanceolate, or, in most of the Australian specimens, linear, entire, 1 to 2 or even 3 in. long, narrowed into a short petiole. Flowers very small, solitary in the axils, sessile or very shortly pedicellate. Calyx-tube (or ovary) at the time of flowering, rarely 1½ lines long, but very rapidly enlarging; lobes usually 4 in the Indian specimens, more frequently 5 in the Australian ones, small and very acute. Petals not exceeding the calyx-lobes. Stamens rather shorter. Stigma large, capitate. Capsule 4 to 6 lines long and 1½ lines broad when attaining its full size, but often ripening much smaller.—Wight, Illustr. t. 101.

N. Australia. Victoria river, *F. Mueller*; Port Essington, *Armstrong*.

Queensland. Endeavour river, *A. Cunningham*; Burdekin river, *Bowman*.

The species is widely spread over tropical Asia and Africa. Amongst the synonyms quoted by Wight and Arnott, Prod. 336, are *L. diffusa*, Hamilt. in Trans. Linn. Soc. xiv. 301, and *L. perennis*, Linn. Spec. Pl. 173. These are copied by Miquel into his Fl. Ind. Bat. i. part i. 629, and observing that one of them is an old name of Linnæus's, he, without further inquiry (except perhaps a glance at Rheede's fig. of *Caramba*, Hort. Malab. ii. t. 49, cited by Linnæus, which is the true *L. parviflora*), adopts this name of *L. perennis* for the species, and Miquel's example is followed by F. Mueller, Fragm. iii. 129. But not only is Linnæus's name wholly inapplicable to a plant so constantly and evidently annual, but so is also his specific character "foliis oppositis floribus pedicellatis," and as to the reference to Rheede's *Caramba*, he expressly rejects it in his Mantissa, p. 332, as pointed out in DC. Prod. iii. 59. Although therefore Linnæus may have confounded this plant with some other, it is certainly not the one he had in view in characterizing his *L. perennis*, and Arnott and others are fully justified in adopting Roxburgh's *L. parviflora*. As to *L. diffusa*, Hamilt., although he also thought Rheede's *Caramba* might be the same, it is in fact quite distinct in the long slender ovary and capsule, and in some measure in inflorescence. It is *L. prostrata*, Roxb. Fl. Ind. i. 420; Wight, Ic. t. 762, and includes the three species of *Nematopyxis*, described by Miquel, Fl. Ind. Bat. i. part i. 630. It has not yet been found in Australia.