2. NYMPHÆA, Linn.

Sepals 4, inserted near the base of the torus. Petals numerous, passing gradually from the sepals to the stamens, inserted on the torus or ovary, the outer petals near the base, the inner stamens almost at the top. Filaments of the outer stamens dilated and petal-like, with small lateral anther-cells, of the inner ones narrow or filiform, with longer anthers opening inwards. Carpels several, immersed in a ring in the fleshy torus, having the appearance of a several-celled ovary, with a conical or globular process in the centre. Styles thick, radiating, free or united at the base, often with an incurved appendage beyond the stigmatic portion. Ovules numerous, pendulous from the sides of the cavity. Fruit a spongy berry, breaking up irregularly when ripe. Seeds embedded in pulp, arillate, albuminous.—Rhizome perennial. Leaves floating, peltate or very deeply cordate. Flowers large, solitary, floating on the surface of the water or slightly raised above it, on long radical peduncles.

The most considerable genus of the Order, chiefly in the northern hemisphere or within the tropics, but represented also in S. Africa.

Nymphaea

1. **N. gigantea,** *Hook. Bot. Mag. t.* 4647. Leaves orbicular or very broadly ovate, very deeply cordate, the basal lobes separated by a very acute angle, or overlapping each other, or united near the petiole, rendering the leaf partially peltate, the principal nerves radiating from the petiole, raised underneath, and in the larger specimens the whole under side covered with raised reticulations; the margin entire or more frequently sinuate, or with short distant teeth. Flowers blue, purple, pink, or rarely white, the petals and stamens usually very numerous. Filaments nearly all filiform, or many of the outer ones flattened, but never very broad and always narrowed under the anther; connective narrow and scarcely projecting beyond the cells. Styles or stigmas thick, radiating, united at the base, either without any or with only a very short terminal appendage.—F. Muell. Fragm. ii. 141; *N. stellata*, F. Muell. l. c. 142.

N. Australia. Lakes and marshes throughout tropical Australia, *R. Brown, F. Mueller.*
Queensland. Wide Bay, *Bidwill;* Moreton Bay, *W. Hill.*
N. S. Wales. Clarence river, *Beckler.*

The species is apparently confined to Australia, unless it be really a modification of the Asiatic and African *N. stellata*, Willd., as appears to have been the opinion of Brown. It varies exceedingly in size. The larger specimens have the leaves about 18 inches across, with much-raised reticulations underneath, the flowers 12 in. across, with exceedingly numerous petals, and above 200 stamens; the smallest have leaves of 5 or 6 inches, not reticulate, the flowers 3 or 4 in. across, and the petals and stamens much fewer, but always more numerous than is usual in *N. stellata*, to which F. Mueller is disposed to refer several specimens. This Indian species may also be distinguished by the connective lengthened beyond the anther-cells into a very prominent appendage, and it appears to me that Caspary (notes in Herb. Hooker) is right in considering all the Australian specimens as forms of *N. gigantea*. In the Kew Gardens the flowers and leaves are very small in the early part of the season, and larger and larger ones are developed as the season advances. F. Mueller also distinguishes the seeds in size and shape, smaller, more ovoid, and more completely enclosed in the arillus in those he refers to *N. stellata*, than in the true *N. gigantea;* but in the true *N. stellata* the seeds are nearly globular, and usually marked with raised longitudinal costæ, not mentioned by F. Mueller. I have not myself seen the ripe seeds of Australian specimens.

The rhizome and fruits are used as an article of food by the aborigines.

Olax

4. **O. Benthamiana,** *Miq. in Pl. Preiss.* i. 228. A glabrous shrub of about 2 ft., usually much-branched and more rigid than *O. stricta*, and not drying so black. Leaves in the ordinary form linear or narrow-oblong in the lower part of the branches, about ½ in. long, terminating in a recurved point, narrowed at the base, rather thick, convex underneath, with the midrib less prominent than in the preceding species, the upper leaves, especially the floral ones, passing into a short broadly obovate form; in a few luxuriant specimens, all the leaves are obovate-oblong, 1 in. long or rather more; in others, all are broadly obovate, cuneate, or obcordate, ¼ to ½ in. long, and not mucronate. Flowers 2 to 3 lines long as in *O. stricta*, but the staminodia are pubescent only, or slightly bearded, and divided to the middle into 2 linear, oblong, or spathulate lobes, nearly as long as the petals. Fruit globular, attaining 4 or 5 lines diameter.

N. Australia. Bay of Rest, N.W. coast, *A. Cunningham.* (A single specimen with small obovate leaves.)

S. Australia. Port Lincoln, *Wilhelmi.* (Specimens with obovate leaves, not seen in flower and therefore doubtful, although precisely resembling some W. Australian ones.)

W. Australia. Swan River, *Drummond, Preiss, n.* 2095, *Oldfield*, etc. (leaves mostly narrow and pointed); Murchison river, *Oldfield* (leaves all obovate or oblong); Gardiner and Kalgan rivers, *Oldfield* (leaves cuneate, emarginate, or obcordate); Swan River, *Drummond, n.* 729 (leaves, especially the floral ones, small and broad, flowers small, the lobes of the staminodia oblong-spathulate and petaloid).

Lopadocalyx uliginosus, Kl. in Pl. Preiss. i. 178, corrected to *Olax uliginosa*, Kl. l. c. ii. 230, from swampy places in the plains between Mounts Melville and Elphinstone, *Preiss, n.* 1210, which I have not seen, would appear, from the very imperfect description given, to be the ordinary narrow-leaved form of *O. Benthamiana.*

NIB

NYMPHACEAE

Ondinea purpurea

den Hartog