

# FLOATING ASSETS

Barbara Davies provides an essential guide to the wealth and wonder of water lilies

Over a hundred years ago the plant-hunter Reginald Farrer's dismal advice on building a water garden was "don't". The hardy species *Nymphaea*, native variously to North America, Europe and China, are usually strong on foliage, aggressive growers and relatively shy of flowering. Being an ancient breed, distantly related to magnolia, their often rampant habit ensured their survival in the wild, but failed to endear them to the gardener.

Britain's unsuspecting public are sometimes prey to wholesale growers and dealers in aquatic plants offering the British native species, the white-flowering *Nymphaea alba*, because it reaches a saleable size so rapidly. This, coupled with the recent popularity of gardening with native plants, has increased the threat to shrinking wild populations of *N. alba*, despite legal protection. If you feel you must have this species water lily be sure your plant is nursery-grown from a reliable source.

Hardy *Nymphaea* grow from rhizomes, much like bearded iris, but in an infinitely wetter environment. The rhizome is a swollen, starchy modified stem rather than a true root, and is sometimes referred to as a tuber or root stock. This

convenient food and moisture 'storage unit', developed as a survival technique, allows hardy *Nymphaea* to be transported, stored and sold 'bare root', without soil, for several days, at proper temperature. Growth of stems, leaves, flowers and true roots emerges from bumps, called nodes, on the rhizome's surface, with the dominant growth from the most elongated part of the rhizome. Some lateral nodes develop into new growing points and branch off to create 'sister plants'.

Each growing tip may be cut off the 'mother plant' with from one to five inches (2.5-12.5cm) of rhizome and replanted with no special treatment of the cut. All divisions from the original plant will be genetically identical and perform identically given the same growing conditions. This method of vegetative propagation is favoured by the nursery trade for its speed and reliability.

Despite extensive international micropropagation research, it has proved impossible to keep cell stock and growing medium suitably sterile. Hardy *Nymphaea* can be grown from seed, with variable results. But growing from seed and the attendant hybridising opportunities dramatically changed the face of water gardening.

In the 1840s and 1850s, numerous articles appeared in horti-

Left: drifts of *Nymphaea* 'Virginalis' in the lake at Longstock Park, near Stockbridge, Hampshire, open for the NGS on June 19 from 2-5.



*N. odorata* 'William B. Shaw'

S.E.O. Milliens

cultural journals explaining the science of hybridisation. An article on the hybridisation of *Nymphaea* in a Belgian journal of 1854 inspired Joseph Bory Latour-Marliac, an agriculturist in the French prune-producing region of Lot-et-Garonne, to try his luck. From a respected family of botanists and naturalists, Latour-Marliac had already amassed a large collection of bamboos to which he added hardy and tropical species *Nymphaea*.

He grew his *Nymphaea* in half barrels filled with spring water, emerging at a constant temperature of 12°C, set along the edges of a brook in the village of Le Temple-sur-Lot. His great and enduring first success was the crossing of white-blooming *N. alba* with the yellow flowering *N. flava*, (also known as *N. mexicana*) to produce *N. x marliacea* 'Chromatella'. In Britain this water lily reliably produces clear primrose-yellow flowers, 4-5 inches (10-12.5cm) wide, between June and September. Its oval leaves are a rich, medium green, well mottled with burgundy, particularly so with younger leaves.

An additional virtue of the plant is its ability to adapt to a variety of growing conditions, tolerating somewhat lower light levels than other hardy *Nymphaea*, accepting up to 18 inches (46cm) of water over its crown, or growing tip, in a moderate size garden pool or adapting easily to tub culture. *N. x marliacea* 'Chromatella' received an RHS Award of Merit after its introduction in 1877. Encouraged, Latour-Marliac continued his hybridising efforts, and his nursery went on to create and introduce



#### CULTIVATION

*Hardy Nymphaea* require a minimum of six to eight hours of good light each day to bloom properly. Bare-root rhizomes are planted, crown exposed, into special plastic-mesh planting crates of various sizes and shapes.

The cut rhizome end is put against the crate wall with the crown facing towards the opposite side of the crate and with the cut end about 45° lower than the crown.

Soil should be very tightly packed into the crate and around the rhizome to avoid settling when wet. Top off with a half inch (1cm) of coarse sand or pea gravel to keep soil tidy.

The basket should be filled to within half an inch of its rim.



Stephney Water Gardens Limited

**Bory Latour-Marliac**

For increased flower power add a handful of 'fish, blood and bone meal' fertiliser to the centre of the planting crate while filling it up with soil.

Thereafter press aquatic fertiliser tablets well into the plant's root zone, two or three times each growing season. Divide and replant each three to four years.

Latour-Marliac's code for planting depths has never been bettered.

Miniature and small varieties, suitable for containers and small pools, prefer four to five inches (10-23cm) of water above the soil. Medium varieties do best with from six to 18 inches (15-76cm) of water cover, and vigorous varieties with from nine to 36 inches (23-92cm) over their crowns.

over 90 per cent of the hardy *Nymphaea* varieties with us today.

A charismatic personality helped Latour-Marliac's marketing efforts, but his first and second generations of hybrids, based on crosses between *N. alba*, *N. flava*, *N. odorata* var *rubra* and a series of fertile hybrids, earned him first prize in 1887 at the Universal Exhibition in Paris, an RHS Veitch Memorial Medal in 1898, a series of gold medals at horticultural exhibitions



Andrew Lawson

*Nymphaea* 'Virginia'

throughout Europe and the enduring friendship of William Robinson, who dedicated the 44th volume of *The Garden* to him. Latour-Marliac's son-in-law Jean-Maurice Laydeker and his family continued hybridising and introducing new varieties to the present day.

Latour-Marliac's most garden-worthy water lilies are many, and nearly all of them are deliberately infertile to retain purity. A list of favourites must include *N. odorata* 'Sulphurea', producing four inch (10cm) diameter, canary-yellow blooms late into the autumn, a characteristic shared by all the *odorata* hybrids. It has beautifully scented flowers and deep green foliage, mottled with burgundy patches. This must not be confused with *N. odorata* 'Sulphurea Grandiflora', a beautiful yellow, but very vigorous variety suitable only for large lakes. In the United States, 'Sulphurea Grandiflora' is commonly sold as 'Sunrise'.

Latour-Marliac's introductions are praised for their incredible range of flower colour, nowhere more

Right: *Nymphaea odorata* 'Alba'.





Andrew Lawson

*Nymphaea* 'Froebeli'



Andrew Lawson

*Nymphaea* 'James Brydon'



S & O Mathews

*Nymphaea* 'Fabiola'



#### DISEASE

*Leaf-spot and Crown Rot are two fungal infections to look out for. Leaf-spot, usually triggered by sudden, summer temperature changes or very wet summers, is ugly but not serious, and plants survive.*

*Crown Rot is another matter. The leaves yellow dramatically, stems blacken and rot to the point where they break loose from the rhizome, and the crown of the plant gives off a putrid stench. No fungicides are licensed for the treatment of Crown Rot, which spreads rapidly to other *Nymphaea* in the same pool, with fatal results. Take particular care to check imported water lilies which are most likely to be infected, and destroy any affected plants as soon as you notice there is a problem.*

*On the positive side, because water lily leaves block the sunlight from the pool, *Nymphaea* go a long way towards controlling algae growth.*



*Nymphaea* 'Attraction'



*Nymphaea* 'Pink Sensation'



*Nymphaea* 'Mrs Richmond'



*Nymphaea* 'Escarboucle'



*Nymphaea* 'Charles de Meurville'



#### WATER LILIES FOR LAKES

Choose medium to vigorous hybrid varieties. Plant into plastic-mesh planting crates and set in shallows for about a month before moving to the desired location. Alternatively, acquire a mature container-grown plant and gently tip it out, crown uppermost where you want it to settle. Leaves and blooms can be damaged by falling or fast-running water so plant out of the fall of a fountain or only in the shallows of a stream.

#### RECOMMENDED VARIETIES:

*Nymphaea odorata* – see main text. N. 'Charles de Meurville' – 4½ inch (12cm) garnet red blooms suffused with vermilion and streaked on outer petals. N. 'Norma Gedye' – enormous, soft pink flowers. N. 'Brackleyi Rosea' – 3½ inch (9cm) shell pink blooms N. 'Colossea' – named aptly for its eight-inch (20.5cm) white blossoms.



#### FISH

Goldfish, shubunkins and other small ornamental cold water carp are an ideal addition to a garden pool to help control the relatively few insect pests which attack hardy *Nymphaea*. They will do no damage to the pool plants.

Golden orfe and golden rudd shoal attractively near the surface, but they require higher oxygen levels than the small carp, so must be reserved for lakes, larger pools or where fountains or waterfalls are operating constantly. Koi carp and tench are best suited to pools specially adapted to their culture or for lakes, as they root up plants and muddy pool water. In all cases, the number of fish stocked should be no more than two inches of fish body length for each square foot of pool surface.



S & O Matthews

#### PESTS

Turn summer plagues of blackfly or water lily aphid into fish food by spraying them off the leaves with a hose. The china-mark moth larvae cut pieces of lily leaf and use them to secure their bodies to its underside. Eventually these become free-floating, oblong cases which can be gathered in a net and the affected leaves destroyed. Alternatively, use biological sprays, based on *Bacillus thuringiensis* bacteria. Caddis fly larvae also make free-floating cases but these are quickly eaten by fish while the leaf-mining midge, the aquatic equivalent to the leaf miner, can be controlled by removing damaged and skeletal leaves.

Froebel in Zurich, with abundant, 3½ inch (8.5cm) claret-red blooms and restrained growth, suitable for all but large lakes. About this time *N. 'Moorei'* appeared from the Adelaide Botanic Gardens, sporting 5½ inch (14cm) sulphur-yellow blooms with orange-yellow centres and occasionally the leaves were mottled with bronze.

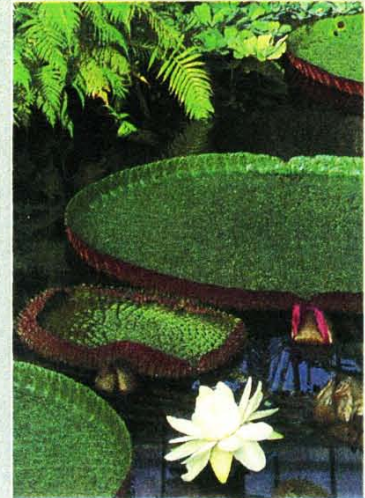
Dreer Nursery in Philadelphia introduced the unmistakable, enduring favourite *N. 'James Brydon'* in 1899. The intensely rich, deep rose pink of these semi-double, cup-shaped flowers look much larger than their 3½ inch diameter (8.5cm). In 1913, Helen Flower of Shaw's in Washington D.C. introduced *N. 'Rose Arey'* with nearly five inch (12cm) candyfloss-pink stellate flowers.

After the First World War, interest in water lilies waned and while the French and British are now turning their attention to breeding water lilies once more, the real hotbed of activity is the USA. Two hybridisers in particular, Professor Kirk Strawn of College Station, Texas, and Perry D. Slocum of Franklin, North Carolina, are producing rafts of distinctive introductions. Most of their hybrids are still being evaluated for international garden worthiness by The International Water Lily Society trials, but some are available now.

*N. 'Nigel'* bears many-petalled, 4 inch (10cm) vibrant pink blossoms, *N. 'Peter Slocum'* is also nearly double, with baby-girl pink, 4½ inch (12cm) blooms. *N. 'Pink Sensation'* is somewhere between these other two hybrids in colour.

The goal of all contemporary hybridisers is for small to medium sized plants, producing great numbers of large flowers for a longer season, in a new range of colours. Exciting breakthroughs are being made with 'sunset' pink and red tones. However, no one has yet cracked the mystery of producing a hardy blue *Nymphaea*. ☞

Turn to page 120 for a water lily special offer.



John Colver

#### The giant water lily

##### DISPLAYS OF WATER LILIES

Two acres of lakes, with over 80 varieties of water lilies, at **Burnby Hall Gardens**, Pocklington, near York. Tel 0759 302068. Open daily 10-6. A good show of plants in the ponds at the RHS garden at Wisley, Woking, Surrey. Tel 0483 224234. Open daily, 10-dusk. The giant water lily, *Victoria regia* can be seen at **Staunton Country Park**, Middle Park Way, Havant, Hants. Tel 0705 453405. Open daily 10-5.

##### SPECIALIST NURSERIES

Nearly all serious aquatic nurseries offer a mail order service.

**Bennett's Water Lily Farm**, 19 Putton Lane, Chickerell, Weymouth, Dorset DT3 4AF. Tel 0305 785150, fax 0305 781619.

**Kenchester Water Gardens**, Church Road, Lyde, Hereford HR1 3AB. Tel 0432 270981, fax 0432 342243.

**The Waterplant Farm**, Woodholme Nursery, Goatsmoor Lane, Stock, Essex CM4 9RS. Tel 0277 840204.

The world's largest collection of water lilies on show and many new hybrids for sale at **Stapeley Water Gardens**, London Road, Stapeley, Nantwich, Cheshire CW5 7LH. Tel 0270 623868, fax 0270 624919. Summer daily 10-6 (weekends 7pm).

Right: water lilies at Giverny

