

Trachycarpus in the wild and in cultivation

A Nepalese population
of *Trachycarpus martianus*

TRACHYCARPUS is a genus of nine species of fan palm. In the wild they grow in a band along the lower Himalayas from north India, then eastwards through Nepal, northeast India, Burma, China, and then down to north Thailand and into north Vietnam.

All species are single-stemmed, dioecious, and small or medium-sized compared to other palms. Their chief attraction for gardeners and palm enthusiasts is their cold hardiness and ease and speed of growth. Some of the new species could even be described as beautiful.

The genus for the most part is historically well-documented. India,

MARTIN GIBBONS
and TOBY SPANNER
have seen the
majority of species in
the wild, giving them
a privileged insight
into how to grow
these palms

Nepal and Burma were British colonies and it was common for army officers stationed there to study the local fauna and flora. They would disappear into the hills with a party of 20 or 30 locals for

weeks at a time on plant-hunting expeditions. Their reports are fascinating and provided valuable clues on our subsequent searches in the same areas.

The species

Seed shape provides a natural subdivision of the genus. The following have reniform (kidney-shaped) seeds: *T. fortunei*, *T. geminisectus*, *T. nanus*, *T. oreophilus*, *T. princeps*, *T. takil*, *T. ukbrulensis* and *T. wagnerianus*. The other two species have ovoid, grooved seeds (shaped rather like a coffee bean): *T. latisectus* and *T. martianus*. In this account the species are dealt with alphabetically.

Trachycarpus fortunei

This, the most familiar species, was introduced into Europe (Holland) from Japan in 1830, and subsequently into England. However, the most famous introductions to the UK were by Robert Fortune some 20 years later. He had seen the palm in China and sent some seeds back from the island of Chusan (now Zhoushan) off the east coast. These seeds would have been from cultivated trees. The Chusan palm's hardiness was not realized for a long time and indeed the first specimen was grown for many years in the Palm House at Kew because it was considered tropical.

The Chusan palm is considered to be a native of central and eastern China, but has been so widely cultivated there for thousands of years, that its precise origins have been obscured. It is possible that no truly wild trees exist anymore. Its popularity in China is due to the usefulness of the trunk fibres which are cut from the tree and used for a variety of purposes. We have seen brushes, brooms and doormats, even a crude kind of rain cape, uncomfortably heavy when wet, but still commonly seen in country districts.

The tree is so well known it hardly needs any description. Suffice it to say that it has a trunk to about 25cm in diameter, reaching 10–12m in height, covered (outside of China anyway) with fibrous old leaf bases. The crown is around 1m in diameter and bears dark green, fan-shaped leaves, usually glaucous beneath, each with 40–50 very irregularly split segments. The flowers are yellow and on female trees produce hundreds of seeds, blue-black with a white bloom, which hang down in bunches like tiny deformed grapes.

Trachycarpus fortunei is widely

planted in temperate and warm-temperate countries worldwide. Its cold hardiness is legendary and, like other *Trachycarpus*, it does not need summer heat to grow well, as do so many other cold-hardy palms. The main enemy is high winds which will soon damage the leaves. In a sheltered spot, or in less windy climates, they look their best and are an easy way of bringing a tropical look to the temperate garden.

The seeds germinate without bottom heat in 8–12 weeks and seedling growth is comparatively fast. Grow them in tubs or, better, plant them out in a wind-free spot when the roots fill an 20 or 25cm pot. They appreciate a rich soil, plenty of fertilizer, and additional water especially in dry areas or seasons. This can make a huge difference to the speed at which they grow.

In favoured localities, with regular watering, the Chusan palm can produce 30cm of trunk a year and reports of twice this growth rate are probably not exaggerated.

Interestingly, growth is fastest at night, and in hot climates *T. fortunei* tends to sulk in the summer, waiting for cooler weather in which to grow. The only maintenance it requires is perhaps an annual removal of dead leaves which, if left in place, can form a 'skirt' in the manner of *Washingtonia* palms.

What has previously been referred to as *T. wagnerianus* is now regarded as a synonym of *T. fortunei*. However, Wagner's palm is quite distinctive in appearance and does need to be distinguished for horticultural purposes. Indeed, it is unmistakable, especially when young. It has small, stiff leaves, less than 75cm across, the leaf segments edged with white woolly fibres. The leaves are so stiff that even strong winds have no effect on them. Thus it is the most suitable palm for windy sites in the



Trachycarpus fortunei is well known for its hardiness

All photographs by Martin Gibbons and Toby Spanner

temperate garden. Additionally, it is incredibly beautiful – neat, tidy, upright and jaunty.

Although there is speculation as to whether Wagner's palm might still exist in the wild somewhere, in Japan perhaps, hidden on some remote mountain top, curiously it has never been found. If wild populations ever existed they are probably extinct. The original introductions to the West arrived in Italy in the early 1900s. This was when a Mr Winter bought the entire stock imported from Japan by the German horticulturist Albert Wagner, after whom the species was named.

Slow-growing and with irregular shaped leaves when young, after 3 to 4 years Wagner's palm explodes into growth and beauty. If given rich soil and watering it can double its size every year for a few years, ➤



From Vietnam and adjacent China, *Trachycarpus geminisectus* is a low-altitude species

eventually reaching 3–6m in height, and always retaining those small, unique leaves. Just as hardy and as easy to cultivate as *T. fortunei*, the added benefit of wind resistance will ensure its popularity, now that it is more widely available.

Trachycarpus geminisectus

This is the only *Trachycarpus* to grow in Vietnam. It was discovered in 2003 in Ha Giang province, close to the Chinese border, across which it apparently also grows. It is almost certainly at the easternmost end of the range of the genus and grows at lower altitude than most.

It is shorter than other species and its leaf segments are fused along their length into pairs, hence the name, meaning 'twin segments'. The seedling leaves are very tough and leathery and in this respect are quite distinctive.

Cultivation experience is limited but young plants grow well and its needs seem to be as for other *Trachycarpus*.

Trachycarpus latisectus

Only described in 1997, the Windamere palm is almost extinct in the wild. It was named for the Windamere Hotel in Darjeeling, India, where two grow at a side entrance. The name refers to the broad leaf segments, one of its distinguishing characteristics. These are around 5cm wide, very glossy, and of which there are around 70 in total, forming a very large and leathery leaf. It has a bare trunk and its seeds resemble those of *T. martianus*, though slightly larger.

It remains in the wild in just one tiny, heavily degraded location in the Sikkim Himalayas in northeast India. This population is immediately threatened with destruction, but it is cultivated in the towns of Kalimpong and Darjeeling.

In cultivation outside of India it has made quite an impression with palm enthusiasts. It is the only species in the genus which, owing to its wide altitude range of 1,200–2,400m, will adapt well to hotter regions. As with other *Trachycarpus*, *T. latisectus* excels in a rich, loamy



Highly endangered in the wild, *Trachycarpus latisectus* is confined to one small population

but well-drained soil. Young plants are best grown under some shade.

Trachycarpus martianus

This species is held in a few botanic gardens and private collections. The identifying characteristics are the



Low-growing and virtually trunkless, *Trachycarpus nanus* is threatened by goats in its native habitat

very regular splits in the leaves, the leaf segments numbering 65 to 75, occasionally up to 80, the bare trunk and, of course, the seed shape.

It is distributed in two far apart areas, one along the Himalayas in Nepal and into Sikkim, and one in Meghalaya province and further east in India. These areas are separated by several hundred kilometres of tropical lowlands in Assam. At one time the two populations were thought to be separate species. The eastern population was originally described as *T. khasyanus*, but, though there are some subtle differences, they seem basically the same. The Nepal population grows at higher altitude and appears to be a little hardier.

They are rather beautiful palms; slim, elegant, with neat crowns of fine, fan-shaped leaves. As with *T. oreophilus*, the places where they choose to grow in the wild are rather exposed and windy. Cultivated plants look quite different and would sometimes hardly seem to be the same species.

T. martianus was initially reported as growing on limestone hills, but we have actually found them growing on highly acidic soils. This may be why they are sometimes regarded as difficult to grow. Frustrated enthusiasts should maybe change the pH of their soil and try again. Young plants enjoy cool, humid conditions out of full sun.

Trachycarpus nanus

This is the only species not to grow an above-ground trunk, except rarely, and then only to 30cm or so. Native to Yunnan in China, it is under threat in the wild due to degradation of habitat and predation by domestic goats which roam throughout this small plant's entire range. While the leaves are too tough to eat, the young inflorescence

provides a tasty morsel for these pests. This prevents the plants from reproducing because they never grow above the danger level.

This interesting small palm remained in almost total obscurity from 1887, when it was first reported by Pierre Delavay, until 1992 when we mounted a special expedition to relocate it. Seeds have since come out of China and it is now in cultivation in Europe and the US.

It is a pretty species, with deeply cut, sometimes green, sometimes blue leaves, their segments numbering not more than 30. Growing at 1,800–2,300m, it is very hardy to cold and a perfect small palm for the temperate garden. However, it is slow and initially somewhat more difficult than most other members of the genus. It requires a well-drained, heavy soil and a position in full sun to look its best.

Trachycarpus oreophilus

The only species to occur in Thailand is the Thai mountain fan palm. It grows on one mountain range, Doi Chiang Dao, in the northwest of the country near Chiang Mai. It may also occur across the border in Burma. The area where it grows at 1,700–2,150m is almost continually covered by cloud and mist; the specific epithet means cloud-loving. This cool, rather damp habitat makes it a contender for humid temperate or subtropical gardens.

Most of the accessible trees have long since been cut down for building purposes, though there are several hundred growing on exposed ridges and sheer rock faces. The mountain peaks where they grow are exposed and windy, resulting in much damage to the leaves. Those in cultivation have a much more tidy appearance.

Wild trees have a slender, bare trunk, caused by the very short, fibrous leaf-bases soon falling. They



Restricted to one mountain range in Thailand, *Trachycarpus oreophilus* is humidity-loving

have a compact, broader-than-deep, hemispherical crown, and the leaves regularly split into 60 or more segments. The leaves, too, shed quickly on dying.

So far, with the possible exception of *T. nanus*, it has proven to be the slowest of all species in cultivation, taking several years to put out its first divided leaf, though perhaps it will speed up once established. A rich but well-drained soil is recommended.

Trachycarpus princeps

The Stone Gate palm grows on the Salween River near to where the border of China (including Tibet) meets Burma. It is named after the translation of Shi Men Guan, the gorge where it grows. This part of China is closed to foreigners and politically something of a hot-spot. In 1994 we undertook an exciting trip to find this palm.

We hitch-hiked west from Kunming as far as the Mekong River which we crossed by a footbridge. ➤

Ahead of us lay a mountain range exceeding 4,000m. Since there appeared to be no road crossing it we had no alternative but to climb it, in the company of three Chinese peasants who offered to guide us, for a fee which increased with altitude. We began with much enthusiasm and energy, losing both after we had been going for a few hours.

That first night we slept, exhausted, in a hovel surrounded by a sea of mud in which cows, goats and children were slithering. The next day we continued up through different zones: a thicket of dense bamboo, a forest of *Rhododendron* trees on mossy ground, a beautiful wetland area with stunted, bonsai-like conifers, and a broad zone strewn with rocks the size of small cars. A second night in another hovel, an early start and we headed again towards the summit. Emerging above the tree line we came onto a grassy meadow, in which were growing thousands of gentians of the most intense blue. By the time we actually reached the summit, at 3,900m, we were so tired we were almost hallucinating. It really was the most physically exerting thing either of us had ever attempted. Down the other side then, our legs feeling like rubber.

That night, we finally we made it to the valley bottom, crossed the Salween River by footbridge and sneaked into a small town. Our attempts to maintain a low profile proved useless, we were soon surrounded by the entire population, most of whom had never seen a European before. So remote was this town that the police officer there did not realize that we were seriously off-limits and the next day, simply helped us on our way. At that point though, our luck ran out. A further 65km up the road, so close to our goal, we were arrested for real and sent, with a police escort, all the way

back to Kunming. Back in Europe, we had to wait a whole year while our official application was considered. On payment of \$2,000 for 'logistical support' we were allowed up there again, in the company of a Chinese professor and an official interpreter. Finally, we found our palm.

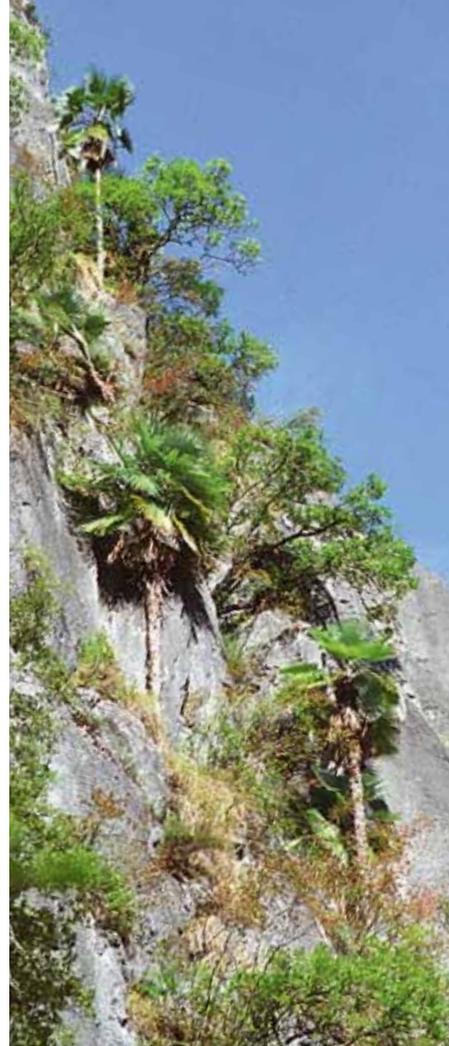
Perhaps the most beautiful of the genus, the underside of the leaves of *T. princeps* is covered with a silver-white waxy substance, thick enough to be scratched off with a finger nail. This easily differentiates it from its closest relatives. It grows in an area of incredible natural beauty in a deep gorge on the north-facing cliffs of a 300m-high divide in the mountain range, which the Salween River has cut out of the limestone over the millennia.

Despite the difficult location, some seeds have come out and young plants are occasionally available from specialist nurseries. Its cultivation requirements seem to be the same as for others in the genus, but it is slower and more difficult to grow.

Trachycarpus takil

Rare and only recently in cultivation, the Kumaon fan palm has been the subject of much confusion over the years. It required a special expedition to India by us in 2005 to solve the mystery. We found that the small, nearly extinct, wild populations are found in Kumaon division in Uttarakhand, central north India, where it grows at altitudes of 1,800–2,400m or more, suffering frost and snowfall in the winter. It is probable that they also grow across the border in extreme western Nepal, closed, alas, to the independent traveller.

Trachycarpus takil was discovered in the 1850s by Major Madden of the British army, who took it to be *T. martianus*. He sent seeds and plants to London, from where they were distributed around the UK and



Trachycarpus princeps grows on steep cliffs high above the Salween River in China

Ireland to nurserymen. There are no records of what happened to them, and there do not seem to be any survivors remaining today.

It was the Italian botanist Odoardo Beccari who realized it was a new species and named it *T. takil* (from the Indian mountain on which it grows). Madden's accounts tell us that 150 years ago there were huge numbers of mature trees up to 12m in height in the wild. Now, most have been cut down, apparently for the trunk fibres. However, small numbers of seeds from the dwindling wild populations are now finding their way into cultivation.

It is a handsome tree, with broad,

grass-green, fan-shaped leaves with of up to 60 segments, atop a solitary trunk, clothed with tightly clasping fibres. These eventually abscise naturally, leaving a bare trunk.

We hope this species will gain popularity as it becomes more widely available. It is likely to be the hardiest in the genus but experience from cultivation is still very limited.

Trachycarpus ukbrulensis

Described as recently as 2006, this species is from Manipur in extreme northeast India. Also occurring in the mountains of Nagaland and neighbouring Burma, it is likely to be the same palm that Frank Kingdon Ward wrote about in *Plant Hunter in Manipur* (1952): 'I had hoped to get an uninterrupted view into Burma

from the top [of the cliffs]', he wrote, 'besides a close-up of the palm trees, which were almost the only trees growing on the naked sandstone. They grew isolated or in small clumps and rows, stiffly, often leaning far over the edge, and had a curiously unfinished appearance, as though they had been left over and forgotten from an earlier geological age'.

It is a very attractive plant, with waxy, white, leaf undersides. It successfully made its debut in cultivation a few years ago through seeds distributed as *T. sp.* "Manipur" or *T. sp.* "Naga Hills". Botanically, however, there seem to be no meaningful differences from *T. oreophilus*, and it is most likely just a local form or perhaps variety of it. This question will have to wait until

further study is undertaken in its very remote habitat, or perhaps from cultivated plants.

Conservation

One of the significant things about several species of *Trachycarpus* that we have studied in the wild is the small size of their populations, in terms of both area and numbers. All the species, apart from *T. fortunei*, are more or less seriously threatened, some close to extinction in the wild. It is not unlikely that some will only survive in cultivation.

Trachycarpus latisectus, *T. oreophilus*, *T. princeps* and *T. takil* all grow in very small populations, or in areas that could so easily be missed were they not known about. While this may be frustrating, it also has an exciting aspect to it. There may well be several more species just waiting to be discovered, even in areas apparently well documented.

Since we became interested in this genus we have discovered four new species along the '*Trachycarpus* trail', who knows where it may lead next?

Conclusion

Interest in exotic gardening shows no sign of abating. *Trachycarpus* are one of the most useful and dramatic plants that can be planted to create the effect, so much so that they could even be called 'essential'. The more obscure species are only slowly becoming available and it is hoped that they will take their place when they are more widely known.

MARTIN GIBBONS owns The Palm Centre nursery in Richmond, Surrey, where he holds a National Plant Collection of *Trachycarpus*.

TOBY SPANNER runs rarepalmseeds.com in Munich, Germany.

Together they have spent 20 years studying *Trachycarpus*, visiting all the species in habitat.



From northern India, *Trachycarpus takil* might be the hardiest of the genus