

*Principes*, 42(1), 1998, pp. 24–29

## Trachycarpus latisectus: The Windamere Palm

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It was Henry Noltie of the Royal Botanic Garden, Edinburgh, who first alerted us to the existence of a strange *Trachycarpus* in Darjeeling, India. He had been in the area during the Royal Botanic Garden Edinburgh Sikkim Expedition in 1992 and had noticed a pair of these trees in the garden of the famous Windamere Hotel. He took photographs and collected herbarium specimens, but our later examination of these at Kew provided no clue as to the identity of this palm, other than that it appeared indeed to be a species of *Trachycarpus*.

Different solutions occurred: Could they be some kind of hybrid? Or were these the “real” *Trachycarpus martianus* of Nepal (Noltie 1994; Spanner et al. 1997), and were those that we had encountered the previous year in Meghalaya, India (Gibbons and Spanner 1994), actually *Trachycarpus khasyana* as they were originally described by Griffith in *Palms of British East India* (1850) who believed them to be a separate species?

There was only one way to find the answers to these questions and that was to visit the palms to see for ourselves. Thus it was that in November 1994 as part of our “*Trachycarpus Asia*” expedition, we simply decided to take a side trip to see whether we could throw any light on the identity of these mysterious palms.

First, we spent a week in Nepal where we saw many *Trachycarpus martianus*, both in the wild and in cultivation. It was clear from a close examination of these palms that *Trachycarpus martianus* and *T. khasianus* are indeed one and the same species, so that particular theory could no longer hold water. So it was with some excitement that we headed off for Darjeeling to see these unidentified palms for ourselves.

Darjeeling is a most lovely town, an old hill station from the days of the British Empire, still with many colonial buildings and much architecture intact, though in many cases, fading. We were travelling by taxi in which we had driven from Biratnagar on the Nepalese border, and after passing through the town of Siliguri, we began to climb. This hilly road is accompanied from bottom to top by the narrow gauge railway line of the “Toy Train,” a true miniature locomotive with carriages, which brings both passengers and goods up to Darjeeling, and down again. The journey, while fun is rather slow and takes eight hours. Our Formula One taxi driver took just two.

We reached the Windamere Hotel at 11 pm, and had high hopes of it, having read the many accolades and complimentary remarks about it in our guide book (“best porridge in India,” for example). Though we had no booking and the hotel was full, a comfortable room was somehow found for us, and we were supplied with hot-water bottles as at this altitude, 2200 m above sea level, it was distinctly chilly, with a slight mist worthy of the lake from which the hotel takes its name. Notwithstanding this, we couldn’t wait for the “boy” who carried up our bags to go so we could explore the grounds and the *Trachycarpus* waiting for us there.

If we had any expectation of being able to identify these two big palms at a single glance, we were much mistaken, and we stood there for some time in the dark, examining them by torchlight. Although a little wind damaged, they were very robust and quite stately looking trees with smooth grey trunks and large leaves, resembling those of some *Livistona* more than any *Trachycarpus* we knew (Fig.1). Eventually we had to

admit that we were stumped—we simply knew everything that they weren't. Further inspection by daylight the following morning after breakfast (the promised porridge, eggs, and bacon) only served to confuse us more and we continued to be at a loss as to what they could be.

During our brief stay in this attractive town we saw many other *Trachycarpus*, both in the town itself and in the rather disappointing and much neglected Lloyd Botanic Gardens. These were, without exception, *T. fortunei*, and despite *T. martianus* having been reported as growing here (Dhar 1994), a thorough search revealed not a single tree.

We left Darjeeling still scratching our heads, and drove to Gangtok in Sikkim, and thence down to Kalimpong. On the way we saw many *Phoenix rupicola* and *Wallichia disticha*, both "special" palms to us and which we were delighted to find.

On arrival in Kalimpong, another pleasant town, we checked in at the Himalayan Hotel and our surprise can only be imagined when, in the garden, we saw another of the Windamere palms! The answer to the conundrum came in a flash: this was a new and undescribed species of *Trachycarpus*, quite distinct and different from all others. In the following few days we were to see many more, all, it must be said, in cultivation, generally in gardens in and around the town. They were indeed splendid trees (Fig. 2) with slender trunks to about 8 m tall, occasionally even taller. Their numerous, comparatively large, leathery and, for a *Trachycarpus*, shallowly divided, nearly circular fan-leaves are carried on long, robust, unarmed petioles (Fig. 3) and form an upright, open crown. After dying, the leaves hang down in a small skirt below the crown and eventually drop, together with the coarse, fibrous leafsheath, revealing a smooth, light grey trunk (Fig. 4). The leaf is also most notable for its rather wide segments producing a slightly convoluted leaf profile (Fig. 5). Some of the segments in the leafblade, particularly the lower ones, are fused for nearly their entire length, in groups of 2–4 (Fig. 6). Many of the female trees carried bunches of oval, flattened, yellowish-brown and eventually blueish-black fruit. The seeds resembled those of *T. martianus*, albeit slightly larger, proving the two to be closely related.

The *Trachycarpus* from this area were certainly not missed by the early plant hunters and have

been mentioned by various authors, though always under the name of *T. martianus*. We asked ourselves, how could the unique characteristics, which distinguish them from *T. martianus* from early age on, have been missed, when they had been seen by eminent botanists both in the field and later, as herbarium specimens? Under *Trachycarpus martianus*, Beccari tells us in 'The Annals of the Royal Botanic Gardens, Calcutta' (1931) that "... stunted plants have been encountered by Gamble on the Rissom (actually Rissisom; mountain) near Dumsong beyond Darjeeling, at about 1970m, and (by Brandis, in 1879) on the Dumsong Hills at about 2400m." Further, he notes that "C. B. Clarke collected ... a young plant of *Tr. martiana* in Sikkim at Rungbong at about 1,200m elevation." Of these two latter collections Beccari states that "the leaves of the young plants are of a rather herbaceous texture (and) have few segments." Of his own collection, Gamble, in *A Manual of Indian Timbers* (1902) writes, "The writer has once found small plants of what is probably this palm (*T. martianus*) on Rissom, near Dumsong. . . ." It seems clear that these collections were not of *T. martianus* at all but were of the same species as we had now seen in Darjeeling and Kalimpong, and the fact that it was new and different had been missed. However, reading between the lines, it does seem that perhaps they were not 100% convinced of the true identity of the plants they had collected. Later examination of some of their herbarium specimens now at Kew confirmed our suspicions; they were identical to those we had come across in the field.

While we were delighted to find this palm in so many gardens in Kalimpong and were certain about its identity, we felt we really had to try to locate a population in the wild before formally describing it as a new species. This was to take another 12 months, during which it was searched for high and low in Sikkim and in the Kalimpong district.

Just a week before our return trip to India in October 1995, a small population had been found some 20 miles east of Kalimpong, growing on the slope of a steep valley in the Dumsong range of hills near where it had originally been recorded (as *T. martianus*). We travelled back, looking forward with great excitement to what was to be a highlight of the trip.

We had allowed ourselves considerably more time than in the previous year and before our



1. *Trachycarpus latifolius* at the Windermere Hotel, Darjeeling. Photo: David Albon. 2. *Trachycarpus latifolius*. Cultivated tree, Kalimpong, West Bengal, India. 3. The large leaves of *Trachycarpus latifolius* are supported by strong petioles. 4. *Trachycarpus latifolius*. The leaf fibers adhere just below the crown, below which the trunk is bare.



5. *Trachycarpus latisectus*. The large, leathery leaves are unique in the genus. 6. The unique leaf silhouette of *Trachycarpus latisectus* easily distinguishes it from all other species in the genus. 7. *Trachycarpus latisectus*. In its natural habitat the palms grow on steep rocky slopes. 8. *Trachycarpus latisectus* in its natural habitat, Mirik Busty, West Bengal, India.

visit to the palm's habitat we spent a day examining in greater detail many of the palms in the town, becoming increasingly optimistic about their attractiveness and suitability for cultivation in other temperate climate areas of the world. Then, finally, the great day arrived and we set off by jeep to see them in nature. We travelled east for some 15 miles, then turned off the "main" road onto a narrow and extremely bumpy track through villages and rice and millet paddies. Finally we could drive no further and proceeded on foot. It wasn't long before we saw the first of a good number of *Trachycarpus* palms, loosely scattered over a rather steep grassy slope and cliffs overlooking the Relli River, always inhabiting the most precipitous places (Figs. 7, 8). Whereas the day before the weather had been cool and misty, today there was hardly a cloud in the sky, and the leaves of our palms were brightly glistening in the mid-morning sun. The palms themselves seemed rather stunted compared with those we had seen in cultivation and their habitat much degraded. We soon learned that the entire slope had once been densely covered with monsoonal forest of which now only a few crippled trees remain. It needs no great imagination to realize that the palms' habitat used to be much more humid and calm, protected, at least in part, under a canopy of larger trees. Without this canopy the site seems too dry for them to successfully set seed and for seedlings to establish. Even with this grim reality, it was a most exciting place to visit and we were soon scrambling up and down the slope, taking photographs and measuring the palms. After a happy day we returned to Kalimpong, leaving soon after, and with regrets, for the return trip to Europe. The whole area, and that of Sikkim proper is a rich one for palm enthusiasts and we will certainly return.

The following description of this new species was first published in *The Edinburgh Journal of Botany* (Spanner, Noltie, and Gibbons 1997) and is reproduced here in a slightly adapted version to bring it to the attention of a wider audience. Growers and enthusiasts might like to note that seeds and seedlings of this species have been distributed as *T. "sikkimensis"* in the recent past (see below):

***Trachycarpus latisectus*** Spanner,  
Noltie and Gibbons

Solitary, unarmed, dioecious fan palm to about 12 m tall; trunk slender, erect, bare, light

grey, obscurely ringed, (10–)14–17 cm diameter, clothed in persistent, fibrous leaf-sheaths for 0.6–2 m below the crown. Leaves (8–)15–25, forming an erect, open crown, some leaves reflexed, marcescent leaves numerous, forming a small skirt below the crown; leaf-sheath fibrous, 30 cm long or more, coarse, abaxial surface covered in pale tomentum, broadly triangular towards the apex, not breaking down into threads; petiole (50–)120–140 cm, slender (about 2.5 cm wide and 1.2 cm high near the middle), flat above, slightly keeled towards the leaf-blade, broadly triangular to rounded beneath, margins smooth, sharp-edged, base very thick and robust, about 3.8 cm wide and 2 cm high, covered in pale tomentum; hastula less than 1 cm long, broadly triangular, slightly crested; leaf-blade palmate, 3/4 to completely orbicular, 65–85 cm long from hastula, 110–135 cm wide, leathery, dark green above, with thin whitish tomentum along the folds, slightly glaucous beneath, with clearly visible cross veinlets, nearly regularly divided for less than half its length into 65–75 stiff, linear segments with two inconspicuous longitudinal folds on either side of the midrib, tapering towards the apex from their broadest point, arranged at slightly differing angles, producing a slightly convoluted leaf profile; central segments 65–80 cm long, 3.5–5 cm wide at middle, with a prominent midrib beneath, lateral segments gradually more narrow and shorter, to about 21–45 cm long and 1 cm wide, the more lateral segments joined for nearly the entire length in groups of 2–4, apex of central segments acute, notched, of lateral segments acuminate, bifid for 1–3 cm. Inflorescences 3–6, solitary, interfoliar, branched to three orders. Male inflorescence 60–100 cm long, spreading; peduncle short; prophyll two-keeled, apex acute; peduncular bract single, keeled, base tubular, inflated distally, about 7 cm wide in the distal portion, apex acuminate; rachis bracts 3, similar to peduncular bracts; rachillae short, about 2 mm diameter, yellowish; flowers globose, 2.5–3 mm diameter, yellowish, arranged in groups of 2–4 on short pedicels; sepals ovate-triangular, joined into a fleshy base for lower 1/4; petals nearly orbicular, minutely triangular-tipped, 3 times as long as sepals; stamens 6, slightly exceeding petals; filaments ventricose; anthers broadly ovate-sagittate, blunt; pistillodes less than half the length of the stamens. Female inflorescence 100–150 cm long, stiff, spreading; peduncle

about 50 cm long, oval in cross section, 4.2 cm wide, 1.8 cm high; prophyll two-keeled, about 30 cm long, apex acute; peduncular bracts 2, keeled, long, tubular, about 4.5 cm wide, apex acuminate; rachis bracts 3, similar to peduncular bracts; rachillae 5–18 cm long, 1–2 mm diameter, yellowish-green (in fruit); flowers globose, about 1.5 mm diameter, yellowish, usually in pairs, subsessile, sepals briefly connate into a distinctly swollen base; petals oblong-orbicular, twice as long as sepals; staminodes 6, slightly exceeding petals; carpels with a very short, conical style, stigma punctiform. Fruit shortly stalked, oblong-ellipsoid, flattened on one side, 16–18 mm long, 11–13 mm wide; epicarp thin, yellowish-brown when ripe, turning bluish-black; mesocarp thin, fibrous; seed oval-oblong, flattened or shallowly depressed and grooved on one side, 13–16 mm long, 8.5–11 mm wide; endocarp very thin, with a crustaceous sand-like layer of light brown, small, irregular scales; endosperm homogeneous with a deep, lateral intrusion. Germination remote-tubular, eophyll simple, plicate, to 2 cm wide, glabrous.

The specific epithet *latisectus* (with wide segments) was chosen for this species' unusually wide leaf segments, a characteristic through which it usually can be easily identified from other members of the genus.

*Distribution and conservation status.* INDIA: in the foothills of the Sikkim Himalayas in extreme northeastern West Bengal (Kalimpong) and southern Sikkim between about 1200m and 2440m elevation (Gamble 1902, Cowan and Cowan 1929, Beccari 1931).

In Sikkim and two locations in West Bengal, it has apparently not been recorded for at least 60 years and could not be relocated to date. It is under immediate threat of extinction in the wild with only about 50 plants surviving in what may be its last remaining site on a steep, deforested slope on rocky soil at Mirik Busty on the Relli River between 1300 and 1400 m, where it is unable to reproduce. Unless immediate action is taken, the chances for its survival in the wild seem bleak.

*Vernacular names and uses.* The following local names have been recorded: talaerkop, punkah, tarika, purbung, and bhotay kucho. The stems have reportedly been used in construction.

*Cultivation.* *Trachycarpus latisectus* is a frequently cultivated ornamental in Kalimpong and environs and its future in cultivation there seems

fairly secure. Young plants are commonly encountered. Being cold-hardy as well as fast and easy to grow, it has good prospects of becoming a popular ornamental for temperate and subtropical regions. Seeds from cultivated trees around Kalimpong have been distributed to many growers around the world during recent years as *Trachycarpus* "sikkimensis", a provisional name of no botanical standing, relating to the area of its historical distribution being floristically and geographically known as the "Sikkim Himalayas."

Although many growers and enthusiasts may have become familiar with the name *T. "sikkimensis"* in the meantime, we have decided for a number of reasons not to use this name as the specific epithet of this new species and hope we will not have added too much to the confusion already surrounding this genus.

Note: There is no recent taxonomic treatment of the genus *Trachycarpus* (but see Beccari 1931, Kinnach 1977, and Gibbons 1996). Relationships of *T. latisectus* will be dealt with in a conspectus of the whole genus, which will appear in a later publication.

### Acknowledgments

We would like to express our appreciation to Henry Noltie of the Royal Botanic Gardens, Edinburgh, co-author in our formal description of this species in the Edinburgh Journal of Botany. Very special thanks are due to Dr. John Dransfield of the Royal Botanic Gardens Herbarium, Kew for his unfailing enthusiasm and encouragement and for his critical review of this manuscript.

### LITERATURE CITED

- BECCARI, O. 1931. Asiatic palms: Corypheae. Ann. Roy. Bot. Gard., Calcutta 13: 272–286.
- COWAN, A. M. AND J. M. COWAN. 1929. The trees of Northern Bengal, pp. 138.
- DHAR, S. 1994. Hunting out the *Trachycarpus martianus*. The Palm Journal 118: 26–30.
- GAMBLE, J. S. 1902. Manual of Indian Timbers. Calcutta, pp. 418.
- GIBBONS, M. 1996. *Trachycarpus* on parade. Chamaerops 24: 16–18.
- AND T. SPANNER. 1994. *Trachycarpus martianus*. Principes 38: 89–94.
- GRIFFITH, W. 1850. Palms of British East India. Charles A. Serrao, Calcutta.
- KINNACH, M. 1977. The species of *Trachycarpus*. Principes 21: 155–160.
- NOLTIE, H. J. 1994. Flora of Bhutan. Vol. 3, part 1. Edinburgh.
- SPANNER, T. W., H. J. NOLTIE, AND M. GIBBONS. 1997. A new species of *Trachycarpus* (Palmae) from W Bengal, India. Edinb. Journal of Botany.