

# ROSEDOWN MILL palms & exotics

## Rosedown Mill E-Books (Number 1)

### An Introduction to Cold-Hardy palms

For those of us who live in cold countries but yearn for the tropics, the attraction of growing our own little jungle of palm trees is undeniable. While Britain will never be as warm as Bali or Barbados, it is nevertheless possible to make a little corner of a British garden look surprisingly tropical!

This booklet aims to introduce you to some palms hardy enough to be grown in cold climates. It is the first in a series of exotic gardening electronic books ('e-books') which will be produced by the **Rosedown Mill Palms & Exotics** nursery and which will be made available for download from our Internet Site (<http://www.rosedownmill.co.uk>).



**A grove of mature *Trachycarpus fortunei* in Cornwall**

Rosedown Mill E-Books are produced by **Rosedown Mill Palms & Exotics Nursery** in the UK.

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## Grow a Palm Fringed Paradise (...in your back garden?)

Many people are surprised to learn that there are any cold-hardy palms at all. And yet, in Britain, at least one species of hardy palm, *Trachycarpus fortunei*, has been grown for well over a century. During that time it has shown itself to be reliably hardy in areas ranging from the South Cornwall to the West of Scotland - as well as in other cool-to-cold climates in Europe, North America, Canada and elsewhere.

While *Trachycarpus fortunei* is a lovely palm which deserves a place in every subtropical garden, it is certainly not the *only* cold-hardy palm. Nor is it the *most* cold-hardy or (in my highly biased opinion, anyway!) the most exotic-looking of the cold-hardy palms.

It is debatable which palm is the most cold-hardy palm of all. However, the two American species, *Sabal minor* and *Rhapidophyllum hystrix*, might reasonably compete for that title. These are both rather low-growing, 'shrubby' palms. They don't develop tall trunks to compare with *Trachycarpus*. This makes them an excellent choice for a small garden. They could also be used as 'undergrowth' palms in a large garden.

In common with *Trachycarpus*, both *Sabal minor* and *Rhapidophyllum hystrix* are '**fan palms**'. That means they have fan-shaped leaves that radiate out from a central point. However, when most of us think of the tropics, we probably think first of the so-called '**feather palms**' such as the coconut and date with their tall trunks and leaves with a distinct central rib (just like a feather - hence the name).

### Frozen Dates

The bad news is that Coconut palms are far too tender to be grown out of doors in Britain. Date palms, on the other hand, are a possibility. Even the edible date (*Phoenix dactylifera*) can take some frost, though the limits of its hardiness are relatively untested. The frost-hardiness of the Canary Island date palm (*Phoenix canariensis*), however, is indisputable. Assuming that they have been cultivated in the cold rather than grown in a heated greenhouse, even fairly young (3 to 4 year old) plants can take temperatures down to -5C for short periods.

All the same, *Phoenix canariensis* is still only borderline hardy in most British gardens. The palm

flourishes in the Scilly Isles and it also gets by in the milder coastal areas of Devon and Cornwall. But in areas that suffer prolonged periods (weeks at a time) at -5C or shorter periods at -10C or lower, it would be unlikely to thrive.

Don't give up hope, though. There are some wonderful feather palms that not only look as least as exotic as the Canary Island date palm but also are also much, much tougher. For example, the Chilean Wine Palm, *Jubaea chilensis*, is reported to survive freezes down to -15 degrees Centigrade. With its tall, thick trunk and its spectacular crown of leaves, this really is a magnificent palm though it is notoriously slow growing.

Slightly faster growing are the elegant 'Jelly Palms', *Butia capitata* and *Butia yatay*. Both these species can tolerate temperatures as low as -10 Centigrade, and probably lower, without damage. Either one of these Butias would be form a glorious focal point in an exotic garden.

So while *Trachycarpus fortunei* is likely to remain British gardeners' favourite palm for the foreseeable future, we hope that adventurous gardeners may be persuaded to grow some other palm species too. They should at least help to make

our chilly little island *look* more tropical, even if it doesn't *feel* it!



*Butia yatay* (with *Chamaerops humilis* in smaller pot)

<b>Palm Profile</b>	<b><i>Butia yatay</i> - the "Yatay Palm"</b>
<b>Origin</b>	South America
<b>Size when mature</b>	Height: 12 metres.
<b>Growing conditions</b>	In Sun. Prefers well-drained soil.
<b>Plant Details</b>	This is a superb cold-hardy feather palm from Argentina and Uruguay. Very similar in appearance to <i>Butia capitata</i> , it is reported to grow rather taller (to 12 metres). At present few people in Britain have tried growing this palm in their gardens and it is, therefore, impossible to say quite how cold-hardy it is. We have grown a juvenile (still trunkless) <i>Butia yatay</i> outside for several years now and it has shrugged off occasional freezes and temperatures down to about -6C without any sign of leaf browning. In theory, this palm likes sandy, well-drained soil. In practice, it seems quite happy in Devonshire clay and the eternal winter rains of North Devon winters!

## What Is Cold Hardiness, Anyway?

Look in most gardening books and they'll tell you about the zones in which each plant can survive. But is that all the information you need to know in order to grow them successfully? We think not..

### The Great Zone Myth

The most widely used system of categorising climate is the United States Department of Agriculture (USDA) Plant Hardiness Zone System. This defines eleven Climatic Zones based on the average minimum Winter Temperatures, as shown in the table.

### USDA Climate Zones

These Zones, however, should be taken with a large pinch of salt. After all, according to this system, my garden in North Devon (South-West England) shares the same Zone (9) as much of coastal California and northern Florida, it is slightly warmer than Madrid (8), considerably warmer than

Dallas (7 to 8) and almost tropical by comparison to Santa Fe in New Mexico (6). Let me tell you, from personal experience, North Devon is not quite the sub-tropical paradise its Zone might suggest!

Zone	Centigrade Minimum	Fahrenheit Minimum
1	Below -45	-50
2	-45 to -39	-50 to -40
3	-39 to -35	-35 to -30
4	-35 to -29	-30 to -20
5	-29 to -23	-20 to -10
6	-23 to -18	-10 to 0
7	-18 to -12	0 to 10
8	-12 to -6	10 to 20
9	-6 to -1	20 to 30
10	-1 to 4	30 to 40
11	above 4	above 40

### Lies, Damned Lies and Statistics!

The Zoning System does not tell the whole story. Over the months of winter, the temperature in North Devon varies over a fairly small range above and below freezing. In desert regions of Nevada or New Mexico, on the other hand, the daytime temperatures may be high while night-time temperatures fall dramatically. When you take the average of the temperatures, North Devon surprisingly gets the higher zone classification. And yet, the 'colder' zones of Nevada and New Mexico get all the heat and sun while here in North

Devon we suffer months on end of unremitting cold and rain. *Rain*... now, that's another factor. ...

North Devon in winter is *very* wet. Many palms and exotic plants can survive desert-dry freezes easily whereas they will keel over in dank, wet European winters..

In short, don't be misled into thinking that you can just match the Zone number of your region with the Zone number of a plant and expect it to flourish. Life isn't that simple!

### European Climate Zones

Incidentally, just to confuse matters further, you may also see plants categorised according to other, incompatible, zoning systems. Some people divide the USDA Zones into sub-categories (Zone 7a, 7b and so on). Then there is an older Zoning system called the Sunset Zone which is apparently still used by some nurseries in the USA.

In Europe, a completely different Zone system is sometimes quoted in horticultural books. The European Zones are shown in the chart that follows. If you see a Zone quoted in a European book, be sure to check which system it is using!

### European Climate Zones

Zone	Winter Minimum C	Winter Minimum F
1	about 0	about 32
2	-2	28
3	-5	23
4	-8	17
5	-11	12
6	-14	7
7	-17	1
8	-20 or less	-4

### Fighting the Frost

So what can you do, to improve your chances of growing sub-tropical and 'borderline' plants in your area? It turns out that there are several ways in which you can help exotic plants survive and thrive in cold climates.

## **Check Your Facts**

First, check the requirements of the plants and try to match them with your climate. If the plant comes from a dry, desert region, it is unlikely to thrive in an area with high rainfall. If it comes from sub-tropical wetlands, it probably won't like cold, drying winds.

## **Down The Drain**

Most palms and many other exotic plants need very good drainage. Prepare the planting hole thoroughly. Dig in lots of well-rotted manure, compost or peat, plus lots of coarse gravel or grit. In very heavy soil, it is also a good idea to plant them on raised ground or a slope if one is available.

## **Good Position Wanted**

It is generally best to plant palms in a fairly sunny position facing toward the sun - i.e. facing South in the Northern Hemisphere, facing North in the Southern Hemisphere.

## **Mulch Ado...**

Mulch, mulch and mulch again. In other words, put a good, thick 'top-dressing' on the soil around your

plants. Shredded bark or coarse grit make good mulches. A mulch has many benefits. Any mulch will help suppress weeds. A coarse gravel (I use 1 inch chunks, delivered from a quarry) also has the benefit of keeping the base of the plant well drained. It's a good idea to have the base (the point at which the trunk joins the roots) of exotic plants just on the surface of the soil, then heap the mulch around it. This can help prevent rotting at the base in cold, wet winters. A two inch-layer of mulch is a reasonable minimum.

## **A Bad case of Wind**

Often people get so obsessed about protecting plants from the cold that they forget that wind can be just as damaging. A cold wind can dehydrate a plant, producing an effect called 'wind burn'. Some people protect plants by placing a layer of horticultural fleece over them or by tying up the leaf crown of palms and Cordylines thereby making them look like old-fashioned brooms. Both these solutions may be effective but they are also ugly. I prefer to place tender plants in the shelter of hardier plants. Bamboos are my favourite natural wind-breaks. There are plenty of tall, fast-growing, very hardy

bamboos which look great in an exotic garden. I suggest you take advice on the appropriate species from a specialist bamboo nursery, as some (but not all) varieties can be quite invasive.

## **A Warning To The Wise**

**...don't be optimistic. Be realistic!**

Those of us struggling to recreate equatorial jungles in cold climate often tend to be over-optimistic. We all desperately want to believe that a palm that has briefly survived a touch of frost in a dry area such as Las Vegas or a warm area such as Queensland is going to be able to thrive through months of freezing winds and torrential rain in Bude, Birmingham or Barnsley.

Yes, it's great to be optimistic. But I can tell you from personal experience that there is nothing quite so depressing as seeing your beautiful palms gradually turning into a brown and mouldy mush as the endless months of winter take their toll. So while optimism may be all well and dandy, I'd say that realism is better if you (and your palms) want to live a long and happy life!



### **Palm Profile**

#### **Origin**

*Sabal minor* - the "Swamp Palmetto"

North America

#### **Size when mature**

Height: 2 metres. Spread: 3 metres.

#### **Growing conditions**

In Sun. Moist conditions .

#### **Plant Details**

One of the most cold-hardy of all palms. Quite a small 'shrub', it thrives in wet conditions. In his book, *Palmen*, Frank O. Steeb, claims that mature specimens of *Sabal minor* are able to withstand fiercely cold temperatures as low as -24C. Growers in Canada report that it survives down to -18C. The RHS Encyclopaedia of Garden Plants, on the other hand is more conservative and considers *Sabal minor* to be 'frost tender'. Our plants have survived down to -6C without any sign of damage.

## **Nowt So Queer as Folk-Tales...**

Treat statistics with caution. There are a lot of persistent but misleading 'folk tales' in gardening. For example, I've read that *Phoenix canariensis* can take freezes as low as -18 degrees Centigrade. Well, maybe some *Phoenix canariensis* have survived -18 Centigrade at some time. But how long did the freeze last? Was it a minute? A day? A month? And how big were the palms at the time? A foot? Ten feet? Thirty? Were they in the middle of a desert, in sandy soil? Or were they in your average, muddy British garden?

## **True or False?**

And in any case, how can I be sure that the quoted temperature is correct? Who measured the temperature? A reputable horticultural scientist with a top-of-the-range digital data-logging device? Or a deranged, maniacal half-wit with a cheap plastic thermometer that he won at the fairground in Blackpool back in 1955?

Then again, how can I be sure that the quoted temperature isn't just a misprint - maybe someone accidentally hit a 1 on the keyboard just before they

hit the 8? I've been a professional journalist for most of my adult life. It's my experience that, once somebody in a book or a magazine makes a mistake, that mistake often takes on a life of its own. Other people repeat it. The more often it's repeated, the more it starts to take on the air of truth. If it's a particularly attractive-sounding mistake (and we all *want* to believe in super-cold-hardy palms, after all) the more often it will be repeated.

I personally wouldn't regard *Phoenix canariensis* as being much more than half-hardy. I'd be delighted to be proven wrong. But for the time being, I am not planning on planting a *Phoenix* jungle in my own garden. I would suggest that you should take a similarly sceptical view of *all* claims of palm hardiness - yes, mine included! - until you have verified to your own satisfaction that those claims have some connection with reality.

## **The Protection Racket**

By all means try growing palms of debatable cold-hardiness such as *Phoenix*, *Washingtonia* and *Livistona*. But do so with caution. Try one or two plants at a time, not ten or twenty. And pamper them

- especially while they are young. If you are unsure of the level of a palm's hardiness, think about growing it in a pot at first so that it can quickly be brought indoors if it seem to be suffering.

You might also want to give it some extra protection too - shelter it from the wind, wrap its trunk in Hessian sacking material or bubblewrap during the coldest weeks of winter, maybe even put a little rain-shelter over it in wet areas.

### **The Eternal Pessimist?**

While I would not suggest that you should always take the most pessimistic assessment of a palm's cold-hardiness (these are just as misleading as over-optimistic assessments), I would suggest that you don't believe everything you read. A writer who claims that such-and-such a palm can shrug off the worst an arctic winter can throw at it *may* be telling the truth. Or then again, he or she *may* just be repeating one of those gardening folk-tales.

In short, if you start out as an optimist, and you may soon be horribly disappointed. But start out as a pessimist and you may be pleasantly surprised!

*Good luck!*

### **PALMS WORTH TRYING**

Based on our own experiences and reports from palm growers around the world, we suggest that the following list of palms may be worth trying in gardens prone to winter freezes of -8 Centigrade or lower. Bear in mind that this is not a comprehensive list. New cold-hardy species are being 'discovered' all the time as more gardeners experiment with species that were previously thought to be more tender than they really are! All the following palms are worthy of serious consideration...

- *Butia capitata*
- *Butia yatay*
- *Chamaerops humilis*
- *Jubaea chilensis*
- *Nannorhops ritchiana*
- *Rhapidophyllum hystrix*
- *Sabal mexicana*
- *Sabal minor*
- *Sabal palmetto*
- *Trachycarpus fortunei*
- *Trithrinax acanthacoma*

In addition to this list, there are several other fairly widely grown palms in colder climates. These include:

- *Brahea edulis*
- *Brahea armata*
- *Chamaedorea microspadix*
- *Washingtonia robusta*
- *Washingtonia filifera*
- *Livistona chinensis*
- *Livistona australis*
- *Phoenix canariensis*

...and several species of *Sabal* palm.

Many of these palms are not particularly hardy when young, however, and some of them may need special treatment to ensure that they thrive in the garden. We would not, therefore, recommend these to the newcomer to subtropical gardening in a cold climate.



**Palm Profile**

**Origin**

**Size when mature**

**Growing conditions**

**Plant Details**

***Trachycarpus fortunei* - the “Chusan Palm”**

China

Height: 12 metres.

In Sun. Dry or moist conditions. Prefers well-drained soil.

The most widely grown hardy palm in Britain. Popular since Victorian times and reliably cold-hardy. When collectors first sent seeds of the Chusan Palm to Kew Gardens in the early 19th Century, it was assumed to be a tropical plant and it was therefore grown in a greenhouse. It was some years later that the famous plant hunter, Robert Fortune, obtained some of these palms which he had first seen on the Chinese island of Chusan (Chou-shan ). On his recommendation, they were planted outside in Kew where they were found to be quite hardy. Even young plants are tolerant of fairly hard frosts. Mature specimens can take temperatures down to at least -10 degrees C. Indeed, Chusan Palms are reported to survive cold snaps of -20 degrees C or lower! This palm is sometimes erroneously sold under the name, *Chamaerops excelsa*. The genus, *Chamaerops*, actually contains a single species, *Chamaerops humilis* (the European Fan Palm), which is also pretty cold-hardy.

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This e-book was written by Huw Collingbourne.

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