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# The

# Central

# Spine

THE CENTRAL SPINE

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ON THE DRY SIDE

by Timothy Chapman

I must have missed Madagascar day in geography class. I guess I was sick. Or some distant relative died, maybe. Yes, I was sick, Aunt Hattie died, and the dog ate my homework. And the sun was in my eyes. At any rate, I decided to learn a little bit about the Great Island recently and thought I'd share some of what I found out with you.

Madagascar is an island, a subcontinent actually, situated in the Indian Ocean just off the coast of Mozambique in Africa. It's pretty big, too. A few football fields shy of a thousand miles long and a little over three hundred miles at its greatest width, it's the fourth largest island in the world, if you count Australia as an island. And why the heck not? Madagascar was formed around 270 million years ago in the late Cretaceous as it separated from Africa as part of the general breaking up of the ancient continent of Gondwanaland.

270 million years. We're talking dinosaurs waving goodbye to Madagascar as it sails away into geographical isolation. That's a lot of time for some pretty interesting biological evolution, and that's the big reason Madagascar is a much more fascinating place than, say, Gilligan's Island, Mary Ann and Ginger notwithstanding. Ninety percent of the island's organisms are endemic, occurring nowhere else in the world. (No, your greenhouse doesn't count.) Add to this the kind of geographical "asymmetry" that creates climatic diversity over the island, and you've got a beautifully unique population of plants and animals, quite

different from that of Africa only three hundred miles to the west. For example, while Africa has several hundred species of orchids, Madagascar can boast several thousand. ~~The aloes of the subcontinent have a flower structure that~~ is different from those on the mainland. There are no "grass aloes" on Madagascar (like A. myriacantha). Nor are any of the Saponariae ("maculate" group of aloes) represented, suggesting that they developed on the African continent after the separation of the island occurred.

And then there are the Euphorbias. While Africa is rich in succulent tree and globular forms, Madagascar has neither. The island Euphorbias tend to be more woody than truly succulent, so you get plants like E. decaryi, E. perrieri, and the whole E. milli complex. Over 150 species are endemic. (There's a good survey of Madagascar Euphorbias by Werner Rauh in volumes III and IV of the Euphorbia Journals).

While I like to stay generally upbeat, I do feel compelled to mention that, like other third world areas and the planet in general, Madagascar is on the ropes and looking bad. Deforestation has replaced native flora and fauna with rice, bananas, and over 10 million zebu cattle. In 1976, 70% of the natural vegetation had been cleared. In 1980, it was 80%. This is very depressing mathematics. There are, thankfully, organizations like the World Wildlife Fund and the International Union for the Conservation of Nature and Natural Resources (IUCN) that are able to help slow the destruction, but whether or not it is reversible remains to be seen, I suppose. Deforestation not only mangles specific and localized areas: huge bare patches actually alter the climate of the entire island, causing potential loss everywhere.

There is a large river in the northwestern region of Madagascar. It's called the Betsiboka. It is said that during the flood season, the eroded soil from its denuded banks causes the river to run blood red....



### SOME OBSERVATIONS ON WINTER

The low temperature on our max-min thermometer this past winter was about 24 degrees F. Both thermometers were slightly sheltered by overhead plastic. We have observed that our minimum is close to 10 degrees colder than the official weather bureau reading as announced on TV. The lowest temperature we have experienced in our 14 years residence in this house was 1978-79 when our low was 18 degrees F. As many of you also experienced then we lost many trees, bushes, etc. some completely, some frozen to the roots.

In 1978-79 we lost our *Cassia artemesioides* which froze completely. However, there were many seeds scattered from that plant and the volunteers have become so numerous I have to pull them out like weeds. Some of the unwelcome volunteers have been sprayed regularly with weed killer and cut down but grow back each time. The cold this winter did not affect the cassias.

Our *Acacia Smallii* (Sweet Acacia) were also frozen back (78-79). They were young trees I was attempting to grow as single trunk standards. I had started them from seeds and they had grown to about six feet. After the freeze all three trees sprouted from the roots as multitrunk large bushes. I haven't gotten around to attempting to make single trunk trees of them. The above also applies to our *Lysiloma Thornberi*.

My timing was not the best last fall when I planted outside some young aloes I had been growing in pots. *Aloes barbertoniae*, *simii* and *ferox* all rotted out completely. Also *barbadensis* (vera) had some frozen leaf tips as did a few of the common ones we have had in the ground for some years. We also lost *Aloe bulbifera* which probably hadn't been in long enough to become established.

We try to put brown supermarket bags over the cereus-type cactus when a frost is predicted. We didn't have many cacti in the ground in '78-79 and the few we had, *Trichocereus spachianus*, *Lemaireocereus stellatus* and *L. pruinosis* came through with growing tip damage. We haven't noticed tip damage this year except on some *Espositoas* which had not been in long enough to become established.

Among the other succulent plants we have in the ground we were pleased to see the tiny bluish *sedum dasyacantha* thriving (slowly). Also the *sedum* known as "baked beans" didn't mind the cold or rain. They grow under a palo verde with a *haworthia*, *bulbine*, *manfreda*, leafy *euphorbia* sp. and some aloes. The plants in this area in the ground went through the cold o.k. However, I had left a *Beaucarnia recurvata* in a gallon sized pot

under the same tree. One night the bag we had placed over it for protection blew off and the growing tip froze, losing all the leaves. When the weather warmed and growth began on this plant I ~~was delighted to see 7 or 8 branches. I'll be watching this~~ plant to see what it does. I have repotted it but it is still outside under a tree.

I suspect maturity of a plant and length of time in the ground to become established have a lot to do with how well some plants survive. However that doesn't apply to the large pad opuntias like ficus-indica and tomentosa. After the freeze this year large pads and whole branches fell from these plants endangering smaller things growing in their vicinity. Last summer there were so many fruit on the ficus-indica that large pads and branches broke off from the added weight. I think we will eliminate this prickly pear from our garden because of the above. We have two other large opuntias, quimillo and robusta, which were not affected by the cold and have not dropped branches.

We will continue to try desert plants in our yard as we find it gratifying when they do well and a challenge to see what will grow and what we can do to help them.

JEAN SKIRVIN.



Drawings by Lorraine Jones

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"...the vast rapidity with which the deserts and forests of the interior of this country are peopled have led patriots to fear lest the nation grow too fast for its virtue and peace."

Ralph Waldo Emerson 1823.

## TRICHOCEREUS

~~A trichocereus gets no respect!~~

We often take them for granted---these tall columnar cactus. They are common landscape plants. They are so tough and undemanding that no care is required, so none is given. They survive from one decade to the next, perhaps becoming ugly from neglect and broken limbs from wind storms that ruin the original beautiful symmetry of the plant.

Their spectacular brilliant white tubular flowers are nocturnal and spread their long pointed petals to a diameter of seven to nine inches. A ring of stamens is adherent to the delicate yellow throat. The throat of the flower is long and slender and scaly with dense hair but without spines. It is short lived. As soon as the sun reaches it, it begins to droop, never to open again. They appear in early summer.

Tricho describes the hair-like outgrowth on the epidermis of the throat, and cereus, of course, to a columnar cactus.

Sometimes called the "thread cactus", their scientific name comes from the Greek, "thrix" = hair, referring to the hairiness of the flowering parts.

There are about forty species, most of them nocturnal, rarely diurnal and then the flowers are blood red. All are native to South America. A lot of Germans plant hunting in South America in the early days of the cactus craze discovered and named many species.

The lower part of the stems are very spiny but higher up the spines become less threatening, shorter because they are no longer needed to protect the plant from browsers and predators.

Trichocereus grows well in ordinary cactus soil, requires some moisture and some fertilizer during the growing period. In winter they should be kept cool and dry and will tolerate some frosty nights. They grow well in large pots but even better out in the ground. They require plenty of sunshine but seem to flourish in partial shade, as when set out under a palo verde tree.

Propagation is usually by cuttings but reproduction by seed is possible.

Trichocereus is often preferred for grafting stock

You couldn't ask for a more carefree or tougher cactus for your collection.

Three or four years ago there was some excitement about travelers seeing saguaros blooming in Peru. Pictures were published in the paper. They were trichocereus.



"The only possible force that could be motivating the efforts to preserve natural areas is the moral conviction that it is right---that we owe it to ourselves and to the good earth that supports us to curb our avarice to the extent of leaving a few spots untouched and unexploited."

Starker Leopold.

"Basically my concern is very simple. Whatever problems---we do have problems of all kinds---the economic recession, inflation, racial problems, unemployment, ghettos--- everything becomes totally academic if your home is unliveable. And the Earth is our home. If it becomes unlivable, what in hell do all the other problems mean? They become meaningless by comparison. I don't think anything is more important than the ecological problem."

JACH LEMMON in an interview in CALYPSO LOG, COUSTEAU SOCIETY  
DECEMBER 1979.

