



2. Young *Washingtonia filifera* after the winter of 1978-1979 in St. George, Utah.

era, but I have been unable to locate a single specimen anywhere.

Incidentally, I am experimenting with both *Trachycarpus fortunei* and *Chamaerops humilis* here in Ogden. I lost two large greenhouse-grown windmills and one small one in an exposed northern location last winter.

This time, I have two windmills and one European fan palm in a more protected location on the east side of my home. Our winter storms usually come in from the west, but we sometimes get east canyon arctic winds.

I wrapped the three windmills with strips of green burlap last winter, which proved inadequate protection, so this year I'm thinking of covering them with plastic bags with a few holes for air circulation.

We seldom get to 0 degrees Fahrenheit in Ogden, since the Great Salt Lake never freezes and moderates winter temperatures, but last winter was our second worst in history and we slid below 0 several times.

I read in PRINCIPES that windmills

have survived -6 in Georgia and -8 in Maryland, so I'm hopeful that they'll make it here if I can give them enough protection while they're young.

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NOTES ON CULTURE

A New Seed Germinating Chamber

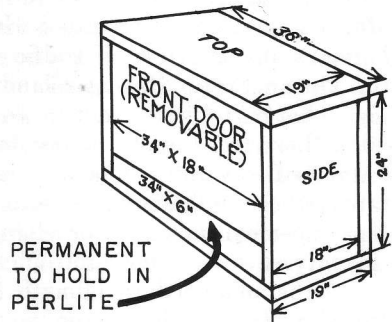
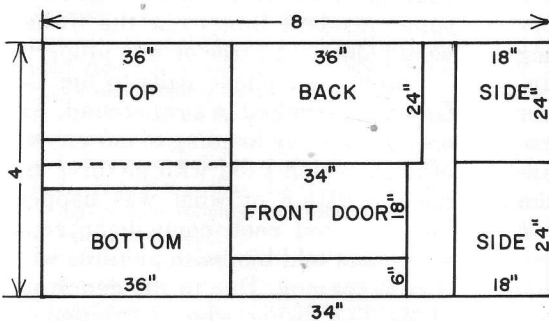
Much has been written in the past about methods of germinating seed, and I have tried a number of them. A couple of years ago I got an idea from Jim Benzie of Laguna Beach, California about yet another way. He had been using an old refrigerator with a small light bulb as a source of heat. I couldn't locate a refrigerator, so, instead, I decided to build a box made of rigid insulating foam. As it turned out, I couldn't have been happier. I've tried heating cables, but they were troublesome and burned out. At this

time, they are relatively expensive when hooked up with a separate thermostat. A sheet of insulating rigid foam 4' x 8' x 1" is under six dollars. The light bulb holder, cement, and wires (electrical), would probably bring the total cost to a little over ten dollars. One of the advantages of a box of this size—36" wide, 26" high and 19" deep—is that, in addition to germinating seed, the white walls are so reflective that there is enough light and heat from even a 40- or 60-watt household light bulb that one can grow plants inside it. It works quite well as a hospital. I use the smaller 40-watt bulb in the summer and the 60-watt in the winter. Temperatures are generally maintained between 70° and 90°F even though the box is kept outdoors here in Southern California about seven miles from the ocean. Winter lows are generally in the 40° to 50°F range. The heat inside the rigid foam box can be regulated by experimenting with light bulbs of different wattage. Holes were burned into the bottom section for drainage. A soldering iron works very well for this. A 2" layer of perlite main-

tains high humidity and can also be used for cuttings if so desired. When the light bulb burns out, it is quite noticeable and is easily replaced. At one time, I had the bulb on a timer so that I could duplicate the day/night cycle, but I found the night temperatures in the winter would drop more than desired. The 24 hours of continous light did not seem to be detrimental to any of the plants I may have had inside the box anyway. I would leave a light bulb on all the time, especially if just germinating seed.

Construction of the box is relatively easy. The sections are cut from a 4' x 8' sheet with a hacksaw blade and glued together with any type of cement that bonds styrofoam. I use 2" nails to hold the walls while the cement dries. A porcelain light bulb holder is attached to the inside center of the top of the box with nuts and bolts. Where the wire emerges from the top, it is caulked. The front door fits snug enough so hinges are not necessary. See diagram below for dimensions.

RALPH VELEZ



LETTERS

I have long been interested in palms and am attempting to contact others who have my interest. Although New Orleans is located at a rather northerly latitude (30°N), the protection afforded by Lake Ponchartrain allows us to

grow many cold-hardy ornamental palms.

The following are the palms that I have seen in the city during 1979–80 with an indication of their relative abundance: *Washington robusta*,