

# The

# Central

# Spine

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CONTENTS:

OBSERVATIONS AND RAMBLINGS OF AN AVID  
HAWORTHIA FAN  
(Courtesy of Elaine Steichman)

BOB WAGNER

HAWORTHIA LEAF PROPAGATION

BOB WAGNER

FROM A SUCCULENT'S VANTAGE POINT

JEANNE-MARIE DENNY

THE PERESKIA

VERA GAMET

## OBSERVATIONS AND RAMBLINGS

### OF AN AVID HAWORTHIA FAN

Back in the late 30's and early 40's Johnson Cactus Gardens advertised a cactus catalog for a dime. Pennies were saved until there were enough to reach the required 10 cents plus the 3 cents postage to speed it on its way. When it finally came, what a catalog! Next came the almost impossible task of saving enough for the minimum order, (I think it was \$2) and this was followed by the seeming eternity it took for my order to arrive. But What Plants! Such curiosities! Of course you know what happened -- the "bug" bit; a new "cactus nut" was born.

Then off to the war. Italy came next, from where more plants were acquired and safely shipped home. Some of the descendants of these plants remain in my collection today. During the years they have been subjected to many moves; at one time they remained packed, without soil, lights, or water, for over 3 months! All the Haworthias came through without one casualty; this helped them to find a special place in my heart.

Although personal contact with other Haworthia fans has been quite limited, I have been fortunate to correspond with people on three continents. Society journals, club newsletters and a few books have been very helpful to expand my knowledge and keep my interest. One of the rewards of corresponding with hobbyists thru the years has been the exchange of ideas about methods of propagation. Most are happy to pass along ideas they have heard or tried, so we all benefit. Only a few, however, apparently believe it is more blessed to receive than to give, but I do not agree with their reluctance to share source names and addresses and other information.

When we realize that only one catastrophe could completely destroy the collection of an entire lifetime, it is only then that we come to realize that we would never stand a chance to ever replace that rarest of rare, if we didn't share it or sell (or even give away) its duplicates. At some future

time we might wish to buy back treasured plants that were lost, and other caring hobbyists would be glad to comply, if it had been propagated.

We owe much to those who have studied in the field, in botanical gardens, or in private collections. Their willingness to share both plants and knowledge with others has made the hobby much more rewarding for us all. Occasionally they may seem to discredit each other, but we need only take into account that their goals may differ. I have found that those who have observed the plants in their native habitat, carefully studied and scientifically recorded their findings, to be the most reliable sources and the most technically accurate. M. B. Bayer serves as a living example.

Accuracy in nomenclature is especially important when buying by mail or corresponding; we hope we are referring to the same variety when we use the same name. How disappointing to order a new plant under a new name, only to receive a puny solitary "pup" which is identical to one you have owned several years that now sports a dozen offsets!

When you have grown Haworthias for a few years you begin to understand why one species is blessed (or cursed?) with so many names. Widely varying conditions can produce plants, even of the same clone, that differ so much that they may appear to be different varieties. For example, *H. cuspidata* grown in the sun is "normal" in size, but offsets from the same plant become giants when grown under lights. Some species will show tints of pink, red, orange or purple in winter sun, but are just plain green when grown in the shade.

Besides light, other conditions that can bring about variations are: potting mixes, fertilizers, water and watering programs, temperature, pH, size and type of container, and the many possible combinations of these.

All my Haworthias are now planted in previously unused clay pots; the planting medium is also the same for all. In no case are "natural" or garden soils used, because they can vary more widely than the artificial

media do. Besides, garden soils (unless autoclaved) are more apt to harbor fungi, or bugs, or weeds, or who knows what! I also try to grow them all in the same area so that light, temperature, and watering will vary as little as possible.

As a result of this consistent treatment, plants with formerly differing characteristics as well as differing names may, after a time, begin to appear to be one and the same. Happily, but rarely, the opposite can happen. Several times I have had plants that came from more than one source that looked alike on arrival, but the names differed. After a year of the same overall treatment, they developed differing characteristics, perhaps deserving the different names.

Human error may account for some confusion in names or descriptions. I have received identical plants in the same package with differing names. Two years later they still look alike. Whoever packed the plants must have made a simple mistake. Typographical errors and misspelling can also produce new names. Some who prepare labels are so rushed that they couldn't care less about spelling. Deciphering handwriting can also be a problem; I especially have trouble with letters from Europe and Africa that are handwritten.

Identifying plants using illustrations, even though mostly helpful, can also be a source for errors. Pictures alone do not tell size or age, and black and white photos do not show color.

Just how much unscientific collecting may have been done through the years is quite difficult to determine. But let us make a hypothetical case. Perhaps 100 years ago a local plant lover may dig up the last clump of a species, thus removing it from natural habitat. Maybe one of its "pups" eventually found its way to a botanical garden on the other side of the world, where it may have finally been given a name but without the necessary data of origin to qualify it as a "valid" species, but where it sits in disgrace (in some collections) being dubbed as a "probable hybrid." But it should not be discarded or thrown away.

Suppose it is of doubtful or unproven parentage; why should a beautiful cultivar be discarded or never recognized just because its ancestors were never proven to exist anywhere in that form in habitat? Many, many outstanding roses, African violets, begonias, etc, are hybrids, and in some cases the most beautiful are of unproven parentage.

The same attention and recognition should be given to Haworthias. If an international society of dedicated people were to be formed to promote the distribution, conservation, cultivation and knowledge of Haworthias, worthy cultivars and chance hybrids could then be recognized and classified on their merits as such, without having to be discarded. Then we "purists" could maintain our purity and we accumulators could just accumulate with carefree abandon -- and a clear conscience!

A final thought: some fanciers attempt to duplicate the natural habitat as much as possible, believing application of knowledge of habitat conditions might solve problems such a growing a shy plant. Perhaps so. Although laudible, I have come to question the value of these efforts for one simple reason: as soon as you limit a plant to a container, you have already modified the habitat.

Now have fun! I hope you enjoy a fascinating interest in Haworthias as much as I do.

Bob Wagner



### HAWORTHIA LEAF PROPAGATION

My initial success with leaf propagation was with leaves from what I call "crown cuts." The first crown cut was made on Haworthia setata. The stem was cut horizontally leaving about two-thirds of the leaves on the top, or crown, and about one-third of the leaves remaining on the bottom, or base, of the plant.

The base was then dusted with Rootone to discourage rot. Water was withheld until the stem of the base appeared to be "healed." Eventually the base produced 6 offsets. Of all other species on which crown cuts have been made, the base has produced at least two offsets.

The crown was dusted and then planted as you would a rooted plant. Bottom watering is recommended, that is, the soil is not kept constantly wet. Before the crown was dusted, leaves were removed from the lower part of the crown. Whole leaves were removed - none of the leaf was left on the stem. After one or two rows of leaves were taken they, too, were dusted and left to dry. After about a week the leaves firmed up and appeared to be ready for planting.

When a leaf takes root, it usually greens up and straightens up, and no longer uses the pot for support. Small new plants have appeared as soon as one month. Although some varieties leaves have stayed alive for longer than one year without producing new little plants, it is not unusual for a leaf to bear several plantlets.

Other crown cuts I have made include H. setata, H. arachnoidea, H. lockwoodii, H. margaretifera hyb., and several offsetting varieties. Both the crown and the base were lost in an attempt to propagate H. serrata in this manner. However, about two of ten leaves responded. After more than a year since the leaves were set, the young plants are less than one centimeter in diameter.

If you hesitate to try this method because your solitary plants are too valuable, I suggest you practice first on the offsetting

varieties that are nearly stemless. You might also like to experiment with simple leaf propagation; you could try it whenever removing pups or repotting a plant. Take off the healthy lower whole leaves. It is doubtful if older leaves will do very well, but there is no reason to throw away a leaf until you are sure it is dead.

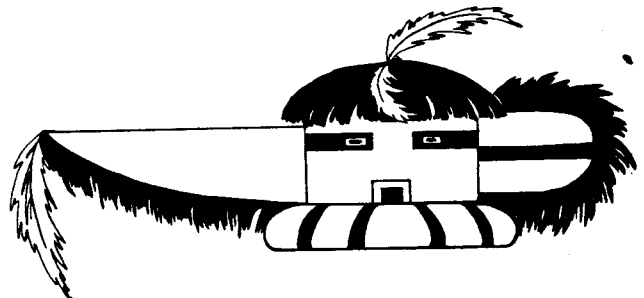
In addition to the above-mentioned species, successful leaf propagation has also been accomplished with the following: H. tessellata (several varieties), H. limifolia (two vars.), H. kewensis, H. schuldtiana, H. xyphiophylla, H. tuberculata, H. setosa, and H. denticulata. A leaf of H. ubomboensis gave me 7 plants.

Many other species and varieties have recently been set, but it is still too early to report these except that very little rotting or dying has occurred. Many leaves that were set the same day they were taken from the mother plant are doing as well as those that were left to dry for a few days.

I believe good drainage and quick drying of soil are important in reducing rot. This is the reason I use clay pots in this part of Missouri where the humidity is usually over 50% and often up to 85% or more.

Plant names used above are those on the label that came with the plant as purchased. I believe it only adds to the confusion to change the name on the label until one is very sure changing it is correct. Also, old names may come with plants that are actually hybrids of a true species, or, if not a hybrid, a different clone.

Bob Wagner



## FROM A SUCCULENT'S VANTAGE POINT

I am a cheiridopsis inspersa. I belong to the ice-plant family of succulents. I was lucky to be brought home along with a few of my brothers and cousins, by a first time cactus collector. Someone who liked cactus and thought about starting a small collection.

After being chosen from an array of "free-be's", which were provided by some of the cactus club members, (I myself happened to be a young seedling who had been nurtured by the club's president,) I was given a home on a north window sill. Quite nice, actually, for a November window sill. Not too cold or too hot and I had some other species to talk with.

Soon after my northern exposure became too cold I was moved to a very sunny south window. That I liked much better as my species does very well in warm areas---our being from South Africa and all!!

Size-wise, I am not a big species but my family is very large. My sister, cheiridopsis candidissima, can be bigger in size but I have nice long slender succulent leaves that tend to droop noticeably when neglected of water. I stand straight and tall though, for the little plant that I am, when I am properly taken care of and will produce nice leaves during my winter growing period.

My new owner is a very generous person with the water and since moving to the southern exposure, I have to be watched very carefully. I store water very well, but when it is too hot, all the water in my leaves can't make me stand up tall. Most cactus slow down in the winter, but not me. So far I have just been growing like crazy, and even "had" a few new leaves, but I plan to take a rest period during the summer, during which time my owner had better learn to ease up on the water!!

I knew "it" was coming sooner or later and the sooner was just the other day. Lots of us are on the window sills and some are in containers that hang just a bit over the edge. The inevitable happened and I fell---PLOP, CRASH and SQUISH!!!---off came several leaf tips, soil and rock all over and I was really shaken up.

I could have told Little Miss First Time Cactus it would happen. Stories I have heard from the rest of the succulents have confirmed this. Not enough space and too many "treasures." So I got moved again; this time to a table where I hope I will be safe to mend my tips, rest and recuperate for a while.

Keeping tabs on all of us cactus and succulents is no easy task but it can be fun. Most of us have spines or thorns or pretty flowers or some other interesting attributes. Lots of us are smaller than houseplants and, as my owner is trying to do, you can collect a lot of us and we don't take up too much room. We do well outdoors in the summer and some of us can even stand the winter.

My cactus friend tries hard to take care of me and I reward her by keeping healthy and producing new leaves and standing as straight and tall as I can. I like my new home and hope to find more of my relatives here soon. I can put up with all of the moving as long as I get the proper amount of light and sun I need. Spring is coming soon and I can't wait until I am put outside in the fresh spring air. That always helps us to grow, too, you know!! Won't you look into my family and see if any of us can brighten up your day?

by Jeanne-Marie Denny



Most botanists agree that cactus is the youngest plant family in the world, but where did it come from?

Questiona may never be answered about whether certain plants, in regions gradually becoming drier, became cactus by developing drought defensive tactics such as water retention, waxy skins that inhibit evaporation, stomata that opens at night instead of by day, tuberous roots? Or did cactus evolve from plants that wandered afield into increasingly arid regions, and by adapting, evolve into cactus? In either case cactus evolved as the environment changed.

There us no fossil evidence to prove anything as there is in mammalian evolution, but still flourishing in tropical Central America is the primitivetransitional cactus, the genus PERESKIA which is part leafy shrub/vine/or tree and part cactus with areoles, large and clearly defined.

The genus, with some nineteen species, is regarded by most aurhotities as the transition between unknown predecessors and cactus as we know it today. It betrays no hint as to how it got that way.

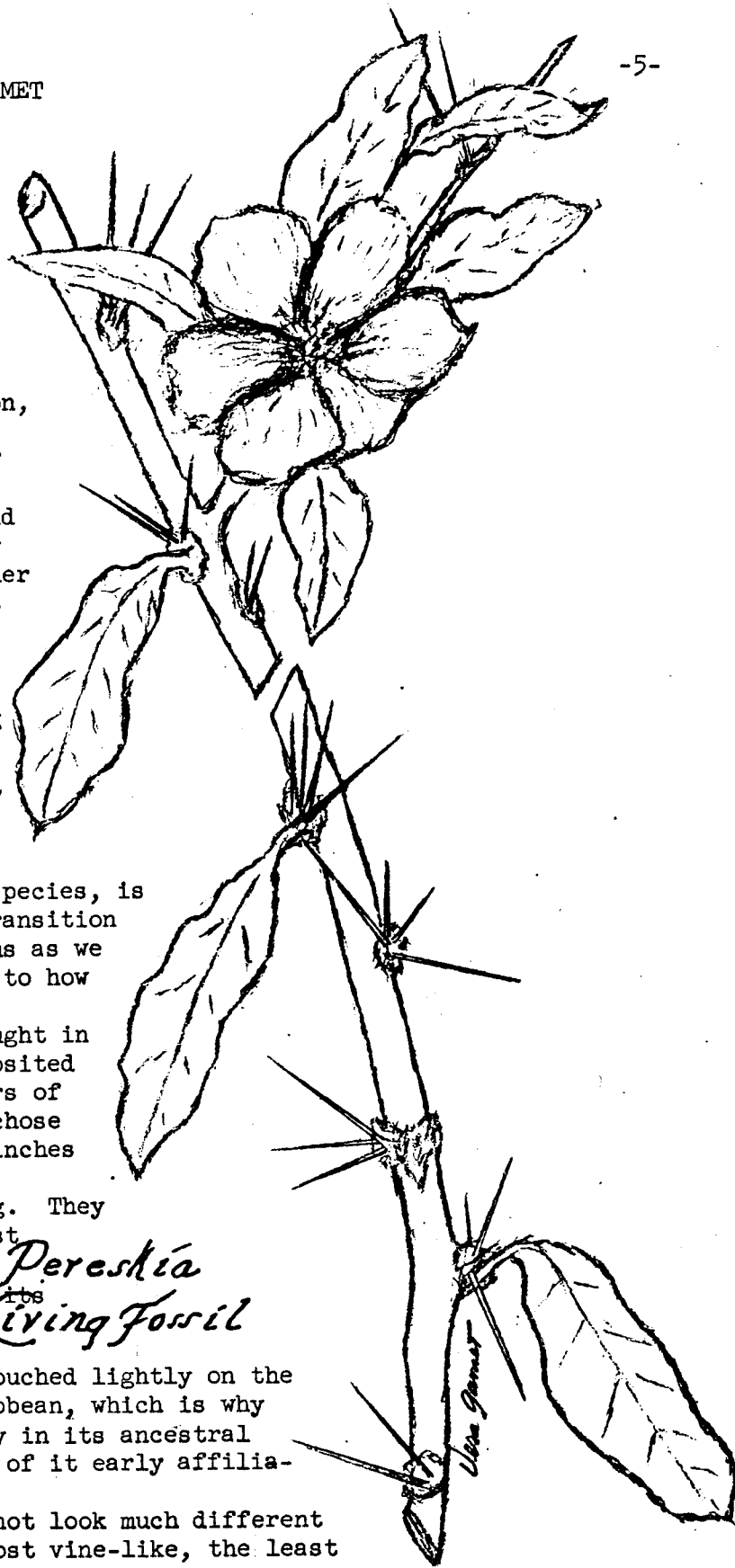
A few weeks ago Bob Moulis brought in several cuttings of PERESKIA and deposited them in the freebies corner for members of the CACSS to take if they chose. (I chose and now have fresh leaves nearly two inches long is every areole.)

PERESKIA is an unusual offering. They are living fossils, relicts from a past 10,000 or more years ago, when the last Ice Age receded and released its cold arid grip on much of the Northern Hemisphere.

The harshness of the Ice Age touched lightly on the tropics of South America and the Caribbean, which is why PERESKIA survived and flourishes today in its ancestral habitat, still retaining the features of it early affiliations.

At first glance PERESKIA does not look much different from any other large woody shrub, almost vine-like, the least cactus-like member of the family, with long rangy branches clambering over walls and boulders in the tropics. A few species attain a tree-like height of 25 feet or more.

The leaves are broad, soft textured and abundant, elliptical with short sharp



*The Pereskia  
A Living Fossil*

tips, two to five inches long and about three inches across. They emerge from areoles, large and conspicuous, along with three to five strong straight spines without glochids. The flowers are as simple and charming as a wild rose, red, white, or pink, to most people pleasingly perfumed, offensive to others.

PERESKIAS are not hard to grow. Patrick Quirk in the October 1978 issue of SAGUAROLAND offers some fine guidelines.

Pereskias are frost tender, some species more than others, and should be given protection. They lose their leaves if the temperature falls below 50 degrees. They should be kept on the dry side in winter during their period of dormancy. Rot and frost damage will occur with over-watering.

On the other hand, during the summer they can take more water than is usual for cactus. In fact, if the drainage is good PERESKIA can be treated as a woody shrub, which it is in part.

Pat advises the addition of organic material since the soil of tropical America is richer in organic content than the sandy soil of the desert.

PERESKIAS also need some leafy protection from the direct afternoon summer sun.

PERESKIA cuttings should not be dried as with other cactus but rooted in sand immediately. They take root quite readily.

They can also be grown from seed, providing the seed is planted as soon as it is mature. Contrary to many of our xerophytic seeds--which require rough treatment--scoring and soaking to break the seed coat, the testa on the shiny black Pereskia seed is thin and brittle, so moisture reaches the nucleus easily and germination can take place shortly after the seed is set.

The flowers of the PERESKIA are showy, appearing singly, in clusters or in panicles. They are one to two inches broad with petals separate and spreading, not joined in a tube as with most cactus flowers, wheel-shaped, with a single style bearing two or more slender linear stigmas, surrounded by multiple stamens. True to the cactus side of their lineage, they open in the morning and close by afternoon.

The fruit of the PERESKIA is an edible yellow berry, about the size of a marble, delicious when juicy, often called the Barbadoes Gooseberry.

PERESKIA is widely grown for its fruit throughout Tropical America, and the succulent leaves are reported to be used as a potherb and seasoner in Brazil.

As a vine it climbs like a blackberry on recurved thorns, sometimes with unrestrained exuberance, over fences, boulders, into trees, making a tremendous show at blossom time.

PERESKIAS are native to the West Indies, Central America, parts of tropical South America, and are found as escapees in Florida and Mexico.

They are cultivated in Arizona and Mexico as specimen plants, and may be procured from a few nurseries.

PERESKIAS were probably the first cactus Columbus saw when he made landfall on the island he called San Salvador. Prior to this expedition no white man's eyes had ever seen a cactus. It was probably among the specimens Columbus took back to Spain.

Interest in these fantastic plants was immediate and contagious, and probably started what would become a near world wide passion for collecting cactus.

By 1696 PERESKIA was in cultivation in the Royal Gardens of Hampton Court, fifteen miles from St. Paul's Cathedral in London. The Royal Botanic Gardens at Kew outside of London, one of the most complete botanical gardens in the world from the time of its inception, had PERESKIAS in its collections in 1762.

The PERESKIA clan was named in honor of Nicolas Claude Fabray de Peirese (1580-1637) who was a gentleman, and a scholar to the final degree. He was able to debate astronomy with Galileo and knew enough about biology to verify Harvey's discovery of the circulation of the blood. He introduced many exotic plants into France; realized the value of collecting coins, medals and other antiquities. He made his vast library his collections and himself available to other scholars. Incidentally he introduced to France the Angora cat, eider down quilts, and other elegant indulgences.

