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**FRATERNA**

**Official bulletin for  
"International Hoya Association"  
1st. Quarter 1991**

**H. linearis Wall.**



*Photo by Carla Mc Gavran*

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# INTERNATIONAL HOYA ASSOCIATION

*(Formerly Hoya Society-West Coast)*

P.O. Box 5130  
Central Point, OR 97502  
A Non-Profit Organization  
Bulletin published quarterly.

Present rates for a 1 year membership, which includes our quarterly publication are \$12.00 per year, \$15.00 per year overseas. All overseas mail is sent by airmail.

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We have all back issues of our newsletter available at \$2.00 per issue, \$3.00 per issue shipped airmail overseas. There were thirteen issues published, however March-April 1988 was our first issue, and was made up for our membership drive. It is free! and will be sent with all orders for back issues. Because of the extra pages of our new publication "Fraterna", we must, out of necessity, increase our prices for back issues of "Fraterna" to \$3.00 per issue, \$4.00 per issue shipped airmail overseas.

## *Jackets*

Remember, we have some very beautiful jackets available with our 'International Hoya Association' emblem emblazed across the back. These are wonderfully warm, fully lined nylon jackets in a dozen gorgeous colors. We also have tee shirts, and some of the girls are even sporting sweat shirts with our emblem. Colleen Christian is in charge of all jacket and tee shirt orders. Colleen informed me that our price on the jackets has been increased by \$1.50 by the manufacturer, so please write for the latest prices before sending your money. Colleen Christian, 260 Greenleaf, Eugene, Or. 97404

## *San Diego Group*

The sixth meeting of the newly formed San Diego Hoya Group will be held at Rainbow Gardens Nursery, 1444 E. Taylor St., Vista, Calif. 92084, on Sunday March 24th, 1991.

A "Get Re-aquainted Social Hour" will begin at noon, followed by refreshments, cold cuts and salads being served. The meeting will begin at 1:30 p.m. Dale Kloppenburg (President of the International Hoya Association) will be our guest speaker, talking about his recent Philippine trip to collect hoyas in the jungles. Dessert will follow the meeting, as well as a raffle and sales of hoyas brought in from members and nurseries. If interested, please plan on attending!. For more information, contact Dieter Paul at: (619) 432-8640

## *Eugene Hoya Society*

The Eugene Hoya Society will meet at 260 Greenleaf, Eugene, Oregon, 2:00 to 4:00 p.m. on March 17th 1991. Subject to be "Rainforest and its destruction effecting hoyas".

## **Hoya linearis Wall.**

More or less hirsute, with soft sprawling hairs. Stems tufted, pendulous, very slender, flexuous, a foot long and upwards. Leaves one and a half to two inches long, by one-eighth to one-sixth of an inch in diameter, shortly petioled, cylindric, subacute, deeply grooved beneath, dark green. Flowers in sessile terminal lax umbel; pedicel one to one and a half inches long. Calyx lobes small, hirsute, ovate-lanceolate. Corolla half an inch in diameter, white, recurved, glabrous within; lobes short, broad, obtuse. Coronal processes stellately spreading, obtuse, subcylindric, very pale pink.-Botanical Magazine, 6682

This is what the grower of the beautiful plant and flower featured on this months cover picture has to say about H. linearis.

"I don't think H. linearis is difficult but I wouldn't say it was easy either. I have rotted mine off a couple of times, but just watch it so I'm sure to have plenty of cuttings started. Once you get a fair sized plant, it is much easier, and blooms quite easily then. Mine hangs in an east window over my kitchen sink and dishwasher, so it gets some humidity, but I often don't water it until it is limp. I don't do anything special. I feed it once in awhile with a slow release fertilizer like 'Rain Proof'. I root all my hoyas the same way, I put 2 or 3 node cuttings in tepid water, in good light, but no sun, until the first roots are about 1/2" long. I then transfer them to a small pot with my regular potting mix and keep them very moist until I am sure they are well rooted. I always seem to have good luck that way".

Carla Mc Gavran..Oregon

**Editors Note:** I can't resist telling here, a cute story about H. linearis that happened to a friend and I. Several years ago, we went in together and ordered quite a large number of hoyas from one of our overseas dealers. For some unknown reason it took almost three weeks for our order to arrive (it usually takes about 10 days). We were overjoyed to find five or so small cuttings that were simply loaded with what we thought were seed pods. After a few days of planning and conjecture on what we were going to do with all the little seedlings, we took a closer look and discovered our seed pods were the very dried and rolled up leaves of H. linearis. In spite of the terrible dried appearance, these cuttings struck roots very fast and grew happily, until we killed them with kindness.

A.W.

# Questions & Answers

**Question:** What are the symptoms of plant virus in hoyas? I have one plant that has a sickly yellow cast to the leaves, and brown pustule-like spots. The plant doesn't die but loses huge numbers of leaves. Sometimes the new growth will look alright for awhile, then takes on the same yellow color with spots. Any cuttings that I take from this plant grows fine for about six months before beginning the process of spotting and turning yellow again. I've had this plant for about 5 years, and grow it outside for most of the year. J.A.

**Answer:** The symptoms of plant virus's can take many forms. The symptoms you have described are typical for some forms of virus. Usually yellowing leaves, brown pustule-like spots, or brown, black or purple streaking on the leaves. They look very sick indeed, lose huge numbers of leaves, and don't usually live very long. Bacterial leaf spot, and some fungus infections can display many of the same symptoms. The fact that your plant hasn't died after 5 years, and seems to be putting on new growth isn't normal behavior for sick plants, but if it hasn't improved in 5 years, I doubt if it will. Why don't you put it out of its misery. Burn this plant!, also the pot and soil that it's in. Find a reliable dealer and buy a new healthy plant.

**Question:** I've heard that hoyas should never be pruned because all the flower spurs will be cut off. Most of my hoyas are one ugly long stem with very few leaves and have never bloomed anyway. Will it hurt to cut these long stems back? D.W.

**Answer:** Not only will it not hurt them, it's the best thing you could possibly do. As with any other plant, pruning, or cutting the terminal ends stops their forward growth and forces new shoots from the leaf axils. Where you had one long stem, you now have two or more new branches. Your flower spurs will readily form on these new branches, you'll have lots of new leaves, and a much prettier plant. Actually, the more you cut them the bushier and prettier they get. Although you can cut plants back anytime they get out of bounds, I suggest doing your pruning in the fall. The first new growth in the spring will almost always form flowers.

**Question:** I have some hoyas that have not been repotted in the five years I've owned them. I know they must need it, but several people have told me not to move or repot my plants. What do you suggest? What will happen if I move or repot them?. C.G.

**Answer:** I suggest repotting them. I don't know of any hoyas that is so touchy it can't be moved or repotted. I believe if people have trouble with their plants when they repot them, it's because they are excessively rough in removing

them from the old pots and tear the roots, or they put them in too heavy a potting mix, (something that doesn't drain well) or they put them in pots that are too large and proceed to drown them before they have become established. I think you will be pleasantly surprised at the renewed vigor of your plants once they are in fresh potting soil.

**Question:** My neighbor moved away and gave me several large hoyas that she couldn't take. I want to make some cuttings of these plants for gifts but I've never had anything but silk or plastic flowers, and don't know how or where to start. B.R.

**Answer:** Start by making 8 to 12 inch cuttings of mature but not old stems. These pieces can be broken off or cut with scissors or pruning shears. Lay these cutting on a flat surface and slice a quarter inch or so off the end with a very sharp knife or razor blade (you want a nice clean cut) These should have at least two or more sets of leaves. Strip off the two bottom leaves (there will be bare nodes or joints on the stem where the leaves were removed). Some people dip these ends in rooting hormone, some don't. At any rate, any excess should be removed (you only want a very thin coating). Cuttings will root in plain water, vermiculite, perlite, a combination of these two, or plain old potting mix. The trick is to keep them mildly warm, fairly moist and out of sunlight until roots have formed. This usually takes anywhere from 10 days to two weeks. If they have been rooted in water, plant them in potting mix when the roots are about 1/2" long. If another medium has been used you may leave them in until you see some signs of growth, or whenever you get time to repot them. After a couple of weeks you can gradually move them into some bright light (no direct sun). Once you get the hang of rooting cuttings, the rest becomes easy. The hard part is finding room for all the cuttings and new plants you will acquire.

**Question:** Ann, in your picture sets you have a tiny pink and whiter flower labeled #454 (H. parviflora). I haven't seen this number associated with H. parviflora on any plant list. How did you arrive at this identification? M.S.

**Answer:** The number 454 should have read IML 454. It is from David Liddle's catalog list, and is also listed on Hill ~ N ~ Dale catalog as IML #454 (H. parviflora). I'm not positive, but I believe David Liddle identified this plant based on the smallness of the flowers, parvi, meaning small or tiny, and probably from other characteristics as well. The flowers are certainly tiny!. I leave all labels exactly as I receive them, until proven otherwise.

## FINDING HOYAS IN THE WILD

by Mike Van Buskirk

Several years ago I took a "trekking" vacation to Nepal; it was the fulfillment of a long-time dream, and one of the most exciting times I have ever spent anywhere. My reasons for wanting to see this part of the world were numerous, and seeing the high peaks of the Himalaya up close was on top of the list. One of my hobbies is traveling; and as I gained experience and became more seasoned, I came to prefer adventure vacations in remote and mysterious places over something tamer and more controlled. Besides being terminally addicted to hoyas, I'm an overall naturalist, and gravitate towards untouched wilderness areas for all of the flora and fauna. I figured walking a "trek" for several weeks through the mountain valleys of central Nepal would give me an opportunity to see many things that were interesting, but I never expected to find hoyas growing in their natural habitat. It was a wonderful surprise, and still makes me smile almost six years later!

If you've never been to Nepal and trekked, it's a real experience. Before I went, I read a lot and talked to many people who had trekked; learned that it would be rugged, and that there was much uphill and downhill climbing, some at high elevations. My traveling companion and I purposely chose what appeared to be an easy trek; very basic and straightforward. He and I were both office-working people, and while we were in what we considered to be good shape, we didn't want to push the issue. It turned out that trekking was harder than we thought, and stating that we had sore muscles was a mild way of describing what we felt at the end of the first few days. Gaining (or losing) several thousand feet of altitude in just a few miles is standard procedure, and my legs didn't let me forget that at the start.

It was well worth the pain. The beauty of the countryside, the mountains and the people were simply not to be believed. Traveling from the beginning of the trailhead at Pokhara, we wound our way up over 120 miles into the Kali Gandaki River Valley, and on up to the Tibetan Plateau at Jomsom over twelve days. We saw the Himalayas in all of their great beauty, and watched the sun rise at 12,000 feet with an incredible 360 degree panorama of the entire range!. On the winding narrow paths we passed Tibetan traders with their donkey caravans of goods, chatted with local women and children, and camped in picturesque villages all along the way. It was truly remote, there was

no electricity, no radio, television, or telephones. There were no roads, cars, motorcycles, or vehicles of any type once we got into the mountains. The only method of travel was on foot, or donkey back. We were careful; this was not the place to get hurt or become sick. If this should happen, the Nepalese military would send in a rescue helicopter--at \$2,000 per hour, payment in advance.

During the third day we began to walk through dense forests, with trees full of orchids and other epiphytes. We were overwhelmed with excitement. I had never seen so many beautiful plants in their habitat. Some of the tree branches were literally covered with plants. It was not the flowering season for most of the orchids, but there were blooming jasmine shrubs that perfumed the air as we brushed past them, dense tree ferns covering streams with clear pools of water containing rocks so beautiful it appeared that someone had come along before us and arranged them. We saw a whole family of silver and black-faced lemur monkeys foraging in huge rhododendron and oak trees, not more than twenty feet from the path. Some of the rhododendron trees were over thirty feet tall and covered with clouds of scarlet and pink blooms! The overload to the senses was almost too much to take!. Outside of the village of Birethanti, I stopped near a waterfall to photograph a clump of blooming orchids hanging over the falls, and looked up into the branches above my head. I gave a start and yelled! There were clumps of *H. bella*, lots of them!, they were paler and not as healthy looking as the plants one normally sees in greenhouses, but there was no doubt as to what they were. My traveling companion does not share my plant mania, and was not very enthusiastic about these slender pale green branches. As I walked on ahead, I noticed that *H. bella* was common, and although I looked carefully, I could see no other species of hoyas.

Several days later we had crossed a major mountain pass, got caught in a blizzard, and seen the mountains and forests like never before, but I didn't spot any more hoyas. Late on the sixth day we struggled up a rocky slope near the village of Ghara that was determined to wind us--it was dry and hot, and the

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## Notes from New Zealand

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Reprinted from December 1986 issue with permission of Auckland Epiphyllum and Hoya Society

steps were very steep. At the top, we took a well-deserved rest. The topography had changed abruptly; we had come from a dry and sparsely vegetated valley; now we were back into some forest, and the trees were full of orchids again. I sat leaning against a tree during our break and looked down; a hoya vine snaked around the base of the tree and into the leaves and rubble at the base!, it was distinctly thin-leaved like the *H. shepherdii* I had seen in the past. As I ran to get my companion, I looked into a tree that grew out of the cliffside overhanging the valley. A huge hoya clump, obviously still another species, was entwined among the orchids and other epiphytes. There was no time to linger, since we had to get to our campsite before dark, and it was very late already. I took as many pictures as I could but did not collect any of the vines. We were going to be on trek and on the road for several more weeks, and there was no way to keep the cuts. I don't ever remember being so excited and yet so frustrated!

My story does have a somewhat happy ending. At the end of our trek we flew back to Kathmandu from Jomsom, but our porters walked back. I made some detailed drawings of the hoyas I had seen, and asked our friendly Tibetan cook if he would collect some cuttings on his way back. Several weeks later I saw him, and he presented me with a bag full of half-rotted orchids and other plants, and several pieces of *H. bella*. I managed to keep them alive, and they survived, grew, and bloomed well for several years before losing the plant to red spider mites. The magic in these very typical *H. bella* flowers were in the knowledge that they had their beginning, not in some stateside greenhouse, but on a wondrous mountain where I had spent a good part of one glorious summer.

Note: The slides that Mike took of these hoyas in the wild, have been donated to IHA, and we plan to include them in an upcoming issue of "FRATERNA". A.W.

Bud Blast (where even quite well developed buds drop off) can be a problem but I believe it can be minimized by ensuring that hoyas are not subjected to extreme variations in temperatures - either hot or cold - while buds are developing. Temperatures in small unshaded glasshouses can rise rapidly to a damaging degree on a sunny day from October onwards and often plants just don't get a second chance.

Flowers opening close to glass or plastic covering in warm weather do not last nearly as long as those further away. In cold weather it is also the growth nearest the exterior sheathing which sustains the most damage. When training your hoyas keep this in mind.

### Hoya serpens

If you have convinced yourself that you haven't room for another hoya, be prepared for a change of mind. *H. serpens* is the baby of the family. Leaves are almost round and are no larger than a 5 cent piece - dark green in color. Unlike some of its larger relatives which tend to grow one or two leaders, *H. serpens* sends out numerous growths from its base, rapidly making a lovely specimen for a 4" or 5" basket in which I've no doubt it would be happy for years.

Flower color seems to vary slightly from grower to grower - The corolla is a creamy grey-green, the corona of most plants is white with a rusty red center. Each floret is approximately 1 cm. in diameter. Umbels are quite large and numerous for such a dainty little plant.

*H. serpens* is a cool growing species, and one of the earliest "risers" after winter, showing new growth about August and in full bloom in November.

(Please remember, New Zealand winter months are exactly opposite our winters in the U.S.).



## Hoya pruinosa, Mig.

### The Frosty Hoya

In 1856, in New Guinea (District?), Zippelius collected a dischidia-looking plant that he named *Dischidia pruinosa*.

In 1898, 42 years later, at Perak, Malaysia, Curtis made a single collection of a small leaved Hoya that King and Gamble named *Hoya curtisii*.

In 1986, 88 years later, on Palawan Island, Philippines, Ridsdale of Leiden, collected a small leaved epiphyte that looked like a dischidia.

The distance from New Guinea (Vogelkoph) to Perak, Malaysia is about 2,200 miles. The distance from Perak to Palawan, about 1,200 miles and the distance from Palawan back to New Guinea is another 1,200 miles. The seed of this plant probably traveled on the seasonal winds, (or Garuda Airlines).

When I was visiting Ruurd Van Donkelaar in Holland in 1988, he showed me a plant (without flowers) of the thing that Ridsdale collected on Palawan. Eureka! I remembered seeing sheets of Curtis's collection of *H. curtisii* in the Singapore Botanic Garden Herbarium. I also remembered the drawing that Rintz had done from the same herbarium sheets. A "Live Plant" of *H. curtisii*! Good sheets, but Curtis neglected to mention any blotching of the leaves.

Ruurd was cautious, as always, and wouldn't believe me until he saw the flowers this past fall (1990) at a friends place in Holland. At least he got to the *curtisii* stage.

Eureka, again!. While watching "Matlock" or "L.A. Law" and reading Hoya descriptions (my wife thinks I have only 1 oar in the water), I came across *H. pruinosa* Mig. As soon as I read "appearance entirely as *D. nummularia*, or nearly so" and "frosted", it rang a bell. This was Ridsdale's collection of *H. pruinosa* (*H. curtisii*). This plant was also a perfect description of *H. curtisii*, with a slight discrepancy about the blotching of the leaf being on the underside - not the top. Conversely, and just as bad, Curtis did not mention any blotching at all in his field notes. Although Ruurd doesn't agree with me (yet), I believe them to be one and the same.

### Thumbnail Sketch

A description of my living plant would be: A dense, multiple branching (many times from both sides of the node) epiphyte, well rooted at each node. Leaves are 1/2", nearly round with a tip, thick, glandular and heavily blotched white on the upper concave to flat surface (the bottom is convex to flat). The surfaces look crystalline. Its given name, *pruinosa*, L. "covered with frost" comes from this blotching character.

Except for the dense branching and the blotching on the leaves, this plant closely resembles *D. nummularia*.

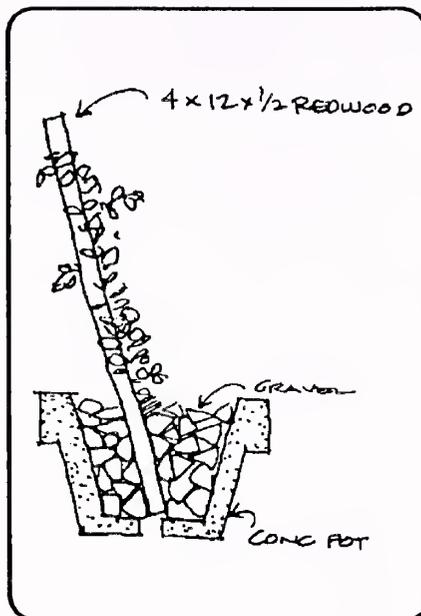
The umbel has approximately 25, 1/2", cream-buff-slightly greenish flowers, with a red spot on the upper-inner portion of the corona lobe. The flowers smell musky-sweet and last for a week.

I do not know if the very short peduncle is usually persistent but this first peduncle has dried up. My plant flowered last month (January) and from the first peduncle. The fact that there are several other peduncles coming leads me to believe that the flowering period might run into early summer.

## Culture

I have found that plants with this type of growth, as the imbricate dischidias, do very well mounted on a support of tree fern, bark or a log. I use a slab (4" x 12" x 1/2") of redwood bark held upright in a 5" cement pot with crushed gravel. I use a bit of New Zealand sphagnum moss to get the original cutting started but no potting material afterwards. This moss eventually rots and falls away.

The plants dry out quickly for they have good drainage and are in a position on the bench where the air movement is good and in 50% sunlight (some of the leaves are reddish from the light). This plant gets watered about 3 times a week with water containing a weak solution of fertilizer (Miracid, 30-10-10 with iron).



Under this treatment, my plant flowered in 30 months from a small 4" cutting.

Remember, here in Kaaawa the temperature is never less than 58 degrees F nor more than 91 degrees F and the humidity is always 50% or more.

## The Pitch

This is an interesting hoyia; another conversa-

tional piece every hoyia collector should have. One thing is sure, this plant will not be lost again for another 90 years or so as it was!

Maybe in another 90 years, I can convince Ruurd that this is the real, in the flesh, *Hoya pruinosa*, the Frosty Hoyia.

By Ted Green  
Green: Plant Research  
Kaaawa, Hawaii

Editors Note: In answer to the many questions we have received concerning this plant: If this is in fact the plant discovered by Zippelius in 1856 and named *Dischidia pruinosa*, it would have become *Hoya pruinosa* upon determination that it was a hoyia and not a dischidia as supposed. It is not surprising that one botanist would describe blotching on the underside, while another made no mention of any blotching at all.

The diversity of foliage in the hoyia genus is remarkable in that it can change very abruptly with different culture. I bought a cutting of this plant from Green Plant Research as *H. curtisii* in 1989. In the two years that I have owned it, I have seen the foliage become solid green, at times, lightly blotched only on the underside, and under extremely good light it can be heavily blotched on both the upper and lower surface. I might also add that I have seen the foliage turn a deep maroon, and become extremely thick in bright morning sun. These are characteristics shared by many species of hoyia. Dr. Harriette Schapiro wrote to me awhile back, and mentioned her plant of *H. serpens* that had become heavily speckled with silver. I have also noticed this trait in *H. serpens* as well as *H. limoniaca* and *H. parvifolia* in my own greenhouse. It appears to be a matter of available light and watering conditions.

Are *H. curtisii* and *D. pruinosa* one and the same?, I honestly don't know. By whatever name, it's an absolute joy to own!

Ann Wayman

# International Hoya Association Interview

Six months ago we sent out questionnaires to 30 dealers who sell hoyas to walk-in trade and by mail order. It appears that Ann Mann of Windermire, Florida has been in the business of growing and selling hoyas longer than anyone, so we will start here.

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**An Interview With Ann Mann,  
9045 Ron-Den Lane, Windermire, FL  
34786-8328, Ph. (407) 876-2625**

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**IHA:** Ann, how long have you been growing hoyas, and how many species do you offer?

**Ann Mann:** I have been growing hoyas for more than 30 years. At present we offer 127 hoyo species as well as 2 dischidias and 3 ceropegias. We also maintain specimen plants of these species in our private collection.

**IHA:** Ann, what other plants do you sell or collect and what percentage of your business do hoyo sales represent?

**Ann Mann:** We also grow and sell Ariods, Bromeliads and Orchids. All of these grow together beautifully with hoyas, and enjoy the same conditions. Our percentage of hoyo sales is less than 7% of our total sales, but is improving steadily.

**IHA:** Do you accept the names the plants have when you receive them? or how do you determine the correct names?

**Ann Mann:** We accept the names they come with if they are from reliable sources, but also check through the literature of Hoya Society International, Hortus 3rd., Exotica, Tropica and through experience. We are very careful with tags so they don't accidentally get attached to the wrong plants.

**IHA:** Do you have a systems for keeping records about your plants? Their growth pattern, when they flower etc.?

**Ann Mann:** Yes, We record the description, and the time of flowering right on the tags of our stock plants. We also keep a photographic record.

**IHA:** Ann, can we get into some of your culture methods? I'm sure our readers would like to know how you root your cuttings. Do you use regular potting mix, perlite, sand, vermiculite or do you have some secret method that you would rather not share?

**Ann Mann:** It's no secret, we tell everybody!. We use HUSKY-FIBER, which is our Registered Trademark for coconut husk fiber, and NZSPHAG, which is our Registered Trademark for the short (not premium grade) New Zealand Sphagnum Moss. We get excellent

results with this combination and have never had to resort to using bottom heat.

**IHA:** What about temperatures, do you try to maintain an even temperature, or just let nature take it's course?

**Ann Mann:** All of the hoyas we grow are agreeable to the lowest of 45 degrees fahrenheit and a high of around 100 degrees.

**IHA:** What is the average summer temperature during the day in your area?

**Ann Mann:** I guess an average would be around 95 degrees in the summer. We protect the area where we grow our hoyas with 8mm Double Skinned Polycarbonate sheets that diffuse the sunlight.

**IHA:** What is the average daily winter minimum in your area?

**Ann Mann:** An average would be around 70 degrees daytime, 60 degrees average for nights. This doesn't mean that we don't have a few nights that can drop to below 30 degrees. We use wood, kerosene and electricity for heat. Our electricity fails often when temperatures drop below 30 degrees, so the backups are a necessity. Our hoyas have never seen temperatures below 44 degrees.

**IHA:** What potting mix do you use? Is it something you mix yourself, or can it be purchased already mixed?

**Ann Mann:** We use combinations of coconut husk peat, mixed with coconut husk fiber and top dressed with New Zealand sphagnum moss. Over the years we have tried many different potting mixes but find this combination to be far superior to all others.

**IHA:** If someone can't obtain or duplicate your mix, what would you recommend as a substitute?

**Ann Mann:** I don't believe anyone should have to substitute, we have HUSKY-PEAT, HUSKY FIBER, and NZSPHAG in ample supply and can ship most supplies to any place in the world.

**IHA:** I've heard that hoyas should be kept in very small pots, do you agree with this, and what sizes do you use?

**Ann Mann:** We start out in small pots, and repot when the plants begin to overrun their present home.

**IHA:** I believe the question we get asked the most is on watering. What would be your advice to our members on watering?

**Ann Mann:** As with most other tropical plants, keep them moist in the summer while they are in active growth, but let them dry out somewhat during the winter.

**IHA:** Most novice growers seem to think that fertilizers are a magic potion, and are constantly trying everything on the market to bring about these marvelous results they read about in the ads. What do you use and suggest for your patrons? Is there any plant food that your plants have had a bad reaction to, and that you would not suggest?

**Ann Mann:** We have tried the spectrum of fertilizers and find that cheapest, is usually best. Our hoyas are orphans to the orchids and hoyas are like little pigs that gobble up fertilizer and grow so well, that we almost have to use a machette to cut our way through them. I haven't noticed any bad response to any plant food when used as directed.

**IHA:** What pests and diseases have you encountered?

**Ann Mann:** Occasionally we see aphids, and some hard scale and mealy bugs. We maintain a very clean greenhouse, so these small problems are easily controlled. We do use pesticide sprays sparingly but never on the hoyas.

**IHA:** Do you treat individual plants only when a problem is discovered, or do you follow a planned pest control program?

**Ann Mann:** We treat individual plants immediately. "Eternal Vigilance", the price of an insect free greenhouse. We have never followed a planned pest control program and consider such a program wasteful and harmful to the environment.

**IHA:** Have you tried natural or biological controls?

**Ann Mann:** No, but we would recommend Safer Insecticidal Soap. We do not handle it, but have used several samples that were sent to us, and would consider selling it if the demand were greater.

**IHA:** Have you seen a definite increase in hoyas sales in the past five years?

**Ann Mann:** There has been an increase in sales since we offered our "Save 50%, Buy 10 or more Hoyas, Dischidias or Ceropogia's".

**IHA:** When you have a problem with your hoyas, who do you turn to for advice?

**Ann Mann:** Hoyas are not problem children, they thrive and enjoy our environment.

**IHA:** Last question ann. Would you like to see hoyas cultivars and hybrids come on the market?

**Ann Mann:** SURE!

The day is done, and the darkness  
Falls from the wings of Night,  
As a feather is wafted downward  
From an eagle in his flight.

I see the lights of the village  
Gleam through the rain and the mist:  
And a feeling of sadness comes o'er me,  
That my soul cannot resist:

A feeling of sadness and longing,  
That is not akin to pain,  
And resembles sorrow only  
As the mist resembles rain.

Come read to me some poem,  
Some simple and heartfelt lay,  
That shall soothe this restless feeling,  
And banish the thoughts of the day.

Not from the grand old masters,  
Not from the bards sublime,  
Whose distant footsteps echo  
Through the corridors of Time.

For like strains of martial music,  
Their mighty thoughts suggest  
Life's endless toil and endeavor;  
And to-night I long for rest.

Read from some humbler poet,  
Whose songs gush'd from his heart,  
As showers from the clouds of summer,  
Or tears from the eyelids start;

Who, through long days of labor,  
And nights devoid of ease,  
Still heard in his soul the music  
Of wonderful melodies.

Such songs have power to quiet  
The restless pulse of care,  
And come like the benediction  
That follows after prayer.

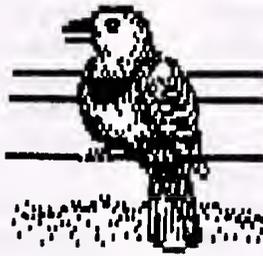
Then read from the treasured volume  
The poem of thy choice;  
And lend to the ryme of the poet  
The beauty of thy voice.

And the night shall be filled with music,  
And the cares that infest the day  
Shall fold their tents like the Arabs,  
And as silently steal away.

---

Henry Wadsworth Longfellow

# Bird Tracks



**Robin #3 Dale Kloppenburg, Calif...** I make my cuttings in the morning, and attach a plant label taped on with masking tape, the point facing the end of the stem that goes in the rooting mix. I then use the fogg-it spray to wash off the plant to try to eliminate mealy bugs and other pests. I line my mailing carton with foil, and usually pack the cuttings with popcorn packing for insulation (especially in cold or hot weather and for long trips to overseas destinations). I fold the foil to make a complete covering. I then seal the package on all seams with cello tape, so no air gets in or out. I like foil, as it is sterile, does not absorb moisture and is a good barrier to air movement. I feel Poly Film (plastic wrap) rots plants, especially if the package gets warm, like it would if sent from the tropics, even Hawaii. Newspaper absorbs moisture from the plants and desiccates them on long journeys. However, I feel it is better to find them dry, than rotted. I have finally convinced my Philippine collectors to use foil and foam. I sent 50+ cuts to Juan Pancho, which took 28 days to arrive, he said they were in great shape, and some had even started to root into the foam insulation.

**Robin #3 Francis Wilkes, Calif...** I have not mailed many cuttings. It is my belief that many hoyas are similar to succulents in that it is good to let the cutting dry or "scab over" before placing it in damp potting mix. For this reason I do not use any moisture or plastic wrap. I wrap each cutting in a couple of layers of paper towel and pack them with more toweling loosely in the box so they do not get crushed.

When I get cuttings through the mail, I usually soak them for half an hour in water with some Vitamin B1 before planting them in the damp hoyas mix. I have found that cuttings I start in the mix appear to grow faster and stronger than ones rooted in water and then potted.

**Robin #3 Joyce Blumenstock, MI...** Before cutting anything, I water the plants, making sure I take no cuttings from a dry plant. Then I prepare them the way I learned from Cathie Perpich, a former seller of hoyas. Pieces of damp paper toweling are

wrapped around the freshly-cut stems, covered by tinfoil so that no moisture leaks out. These prepared ends are placed in a plastic bag--only the ends--The unwrapped sections are left free. Often a label is placed in the bag too and a twistee wrapped around the top of the tinfoil. Since labels sometimes fall out in shipping, a good technique is to write the name of the hoyas on one of the leaves with an indelible pen. This does not hurt the leaf.

I have sent cuttings in bags and boxes with good luck. Only one cutting of the few hundred I have mailed over the years has not survived. At least to my knowledge, that is.

When I receive cuttings, I soak them overnight in warm water, trimming the cut ends under water to remove the sections which cannot absorb water. Usually I dip the cuttings in a mild mixture of 1 TB. Volk's oil spray to one gallon of water before this to eliminate future pests. If the cuttings look healthy, I pot them in a soilless mixture in the smallest pot possible. Otherwise I root them in water.

**Robin #4 Lana Seely, Oregon...** Sometimes in starting cuttings, I put a wad of moss in a small baggie, spray it with water to dampen and stick my cuttings in and tie it off with a bread sack tie or yarn. Most everything that I have rooted this way, roots quicker, and it allows you to see the roots form in some cases. I have damaged new roots of cuttings in the past by tugging on them and breaking them off. Perlite and charcoal is another method I use for rooting cuttings, and it works good too. I have to stick my finger in to see if it's damp, whereas with the moss, I can see when it needs another misting.

**Robin #4 Vickie Graves, Oregon...** I take great pleasure in my hoyas, in that I seldom have to worry about overwatering (keeping them in small pots is a great help). I tend to keep them slightly on the dry side, watering only when the pots feels light.

**Robin #4 Rosemary Peterson, Calif...** My winter care consists of juggling my plants around like most of you, but none of mine come inside my house, except for a few tender seedlings. I've been

trying to cut back on water but the days have been over 80 degrees lately, and they still need it (December). It's been so sunny here that some of my patio plants have been burned. Usually the days are cooler when the sun gets this low, but not this year.

My *H. australis* has several beginnings of seed pods (this little rascal is a champ!) and one is beginning to develop. Last year it developed in the fall but didn't start to grow long until late the next spring. It will be interesting to see what happens next. They should separate into two pods, but last time they just stayed together like a siamese twin, hooked side by side. I've had good luck sprouting the seeds in a damp paper towel sealed in a zip lok bag. They sprout right away in 3 or 4 days, I've saved some as long as 6 months before planting, and they germinated for me as well! What luck!

Robin #4 Jacqueline Pendergast, MN...I was able to get most of the houseplants that spent the summer outside back in and cleaned up (watering with a lysol solution to get rid of unwanted crawly things), but Joey (housesitter) had a mad rush beating the first freeze, bringing in those I didn't. I also forgot to bring in Basil cuttings (some good purple plants just ready to tint vinegar). Now to find a winter home for all, cuz, they are plopped anywhere space permits on our porch and Butch (my husband) being unreasonable, thinks we should be able to sit down in our porch- after all, I did leave one chair plantless!, what more could he want?.

Robin #4 Terry Williams, MD...During winter I have a hard time with all my houseplants. My home is very dry, due to a heat pump.

I try to counter the extreme dryness by misting and keeping small dishes of water near my plants. I also keep them all on pebble trays.

Robin #1 Colleen Christian, Oregon...I just finished moving all my plants into the greenhouse. One more plant, and I wouldn't have made it!!

My hoyas are in hibernation!. I try to keep the greenhouse from getting too cold. 60 degrees nights and 70 degrees + during the day. I have wrapped the outside with clear plastic. The inside I have lined with a pellon like material. It works like a cold barrier. It has really made a big difference in keeping the heat in.

Robin #1 Audry Kantor, Oregon...I haven't shipped any cuttings, but the ones I received from Golden Lake Greenhouses, were 1 cut of each, placed in a large box half full of newspaper, then

covered with more paper and shipped UPS "Blue Label", they came through fine. I cut them all up to one joint, unless they are close, dipped them in rootone and put one to a small pot of potting soil, watered, and put them in flats on top of the water heater under lights. I didn't lose any of them (then, that is).

Robin #1 Lana Seely, Oregon...I have not sent any plants through the mail yet, but when I do, it will probably be in an egg carton wrapped with newspaper and then grocery sacked taped and tied. Almost everyone has egg cartons on hand and if you can't use them yourself, perhaps someone else can.

Robin #1 John Scoville, Calif...The posed question of "how to send hoyas" is easy enough. I clip just after a node, and include as many nodes as possible. This allows the recipient a little choice in trimming to a node with a lateral cut allowing almost horizontal insertion in the new pot. Each cutting has a name tag, or a wrap around masking tape labeled with a permanent marker. All the cuttings go into the deep sink, and are thoroughly washed, and inspected for bugs and problems. Next is the box preparation and paper layering inside of it. Now I spray both the box interior, and the cuttings with a diluted solution of Vitamin B1 and fit the cuttings into the box. More sprayed paper on top, then seal the box with shipping tape. Of course there is sufficient ventilation to afford a supply of air reaching all the cuttings. Wrapping in plastic or sealing too close, means mashed cuttings.

When I receive cuttings, I usually put the stopper in the deep sink and fill to about 2-4 inches of water. I have recently been adding a few tablespoons of sugar to the water after watching Dale do this. Next, I inspect each cutting and spray them with Vitamin B1, and put them in the sink until I round up sufficient pots and potting mix, and get labels made. To make sure the plants are in the sugar water mixture long enough, I sometimes toss down a cold beer and think the entire process over. Now it is time to make the lateral cut somewhere below the node of each cutting that is to be planted, small leaves clipped/large leaves retained. Rootone is next and then nearly horizontal insertion into the dampened potting mix. Now the label, and I am ready for the next cutting.

Robin #1 Mary Welch, OK...When someone asks for a cutting that I need to send, my methods vary according to what I remember when I get around to doing it. I have occasionally just taken the cutting, stuck it into a box in which I've crumpled some damp newspaper or other paper, and shipped it either UPS or priority mail (supposed to be next day

delivery). And it isn't that expensive, depending upon the weight of the box because the cuttings aren't very heavy. Sometimes I remember to put rootone on the end of the cut, wrap it in a wet paper towel, and cover it with foil and "scrunch" the foil around the stem carefully so it won't cut into the stem. I always label the cuttings and use a twist tie to hold the label around the stem. I have used a cotton ball or piece of cotton wet with superthrive mix instead of the paper towel. I think that's a better way because the combination of superthrive and the rootone should give the cuttings a better chance to survive.

When I receive a shipment of cuttings, I just put about 1/4 or 1/2 cup of granulated sugar and some superthrive in the kitchen sink and run lukewarm/tepid water in it and put the cuttings in to soak for an hour or two which seems to rejuvenate them. While they're soaking, I get pots ready to put them in or, if I'm in a bind timewise, I stick the cuttings into opaque containers of water and let them root that way, or stay that way until I have time to pot them. Recently, since I learned about and got some Spray-N-Grow, I have been spraying cuttings with that, especially the cut end, before dipping the end in rootone. We'll see how that works.

## San Diego Meeting Notes

### Christmas Party 1990

Minutes of the meeting on Sunday, Dec. 16th 1990, in the King's Inn, Hotel Circle, San Diego.

The meeting was opened by Chairperson Harriette Schapiro at 2:15 pm by welcoming all present. There were 26 people attending.

Harriette asked for a membership secretary to keep the list of names and addresses current and in order. Dieter Paul volunteered and was appointed.

Harriette asked for somebody to be in charge of advertising, recruiting new members, and keeping in contact with other organizations. Chuck Everson volunteered, and was appointed.

The meetings for 1991 will be in March, June, sometime in the fall, and near Christmas time.

The date and location for the Spring meeting will be at noon on Sunday March 24th at Rainbow Gardens. It will be a pot luck affair. Lina Paul is in charge of co-ordinating the variety of food, a sign-up sheet was passed. The emphasis will be on cold cuts, salads etc.

Harriette spoke about collecting a list of literature that is in the hands of the group members, and that would be made available for exchange between members. As we do not at this time have a library, Joe Kraatz volunteered for this job, and was appointed Library co-ordinator.

A suggestion was made to find out from each member, which species are grown, and how successful he is at growing them.

A volunteer was needed for arranging a listing of the nomenclature. Lee Phelps volunteered.

A letter from Margie Stone, Oregon, was mentioned, and a calendar from the Eugene Hoya Group was offered for \$2.50.

Dieter Paul volunteered to be the photographer for the meetings.

Robert Gushue volunteered to be the official Video Camera Man for the meetings.

Harriette spoke about the costs incurred for mailing invitations to the meetings etc. Since there is no financial fund in this group, she suggested \$5.00 per household, per year, be collected to cover those costs.

Dieter Paul collected \$80.00 from those present. Contributors were: Schapiro, Paul, Everson, Raphael, Causey, Kraatz, Jones, Phelps, Sharp, Wilkes, Beck, Nelson, Kartuz, Varney, Gushue, and Pederson.

Harriette turned the podium over to Chuck Everson who spoke as liaison to the IHA.

He reported that the membership drive mailing in October resulted in 75 new members, the total membership is now over 300.

Dale Kloppenburgs book "Philippine Hoya Species" will be out soon, and the publishers price should be \$14.95.

Dale will be the speaker at our March meeting.

Ted Green volunteered to proof read any Latin published in "Fraterna".

There was a discussion about our group becoming an affiliate of IHA, but this discussion and vote was tabled until the March meeting.

It was mentioned that Dale Kloppenburg had received 150 hoyas from the Philippines within the past year.

Harriette mentioned the calendars Dieter has for sale.

There was a 20 minute break, after which Chuck Everson gave a slide presentation of many different hoyas. The slide presentation ended at 4:00 and we had a drawing for "door-prizes" Rainbow Gardens brought a nice selection of hoyas and the numbers were even recycled so everybody took home a nice plant.

The meeting was officially adjourned at 4:15 pm.

Dieter Paul

---

## Corrections to meeting notes of June 24th, 1990

Certain corrections to the June 24th 1990 San Diego meeting notes are in order. It seems that I misquoted one of our guest speakers, Mr. Ted Green, so let me get the facts together and take this time to present them.

Corrections in 1st paragraph: Ted has not yet had the occasion to visit Borneo, as was stated. In line 9, I placed a question mark after "cuttings from Holland", it should have been a period.

Corrections in 3rd. paragraph: 1st. line should read "The wet/dry conditions of Doi Sutep mountain of Chiang Mai, Northern Thailand". Line 5, Dr. Kerr has not frequented a national park there, he has been dead for many years.

By saying ladies (plural) I would have better stated lady (singular) and mentioned orchids as the plants the price is levied on. It was Dr. Ridsdale in 1986 that collected *Hoya pruinosa* on the Isle of Palawan approximately 100 years after its original discovery in Papua New Guinea.

I apologize to Mr. Green for my errors in reporting. I have the utmost respect for him and all of the many people that strive so hard to take the time to work with hoyas and other plants to gain knowledge and pass this knowledge on to the rest of us. I'm sure our readers join me in enjoying the many informative articles from people of his caliber and hope he will continue supplying us with more.

John Scoville



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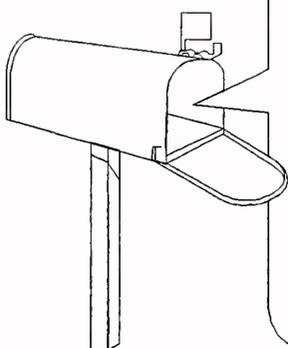
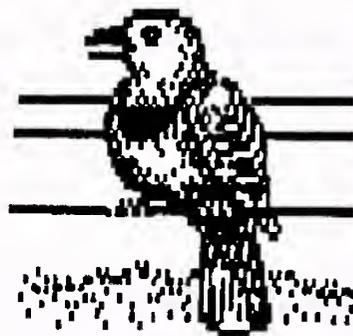
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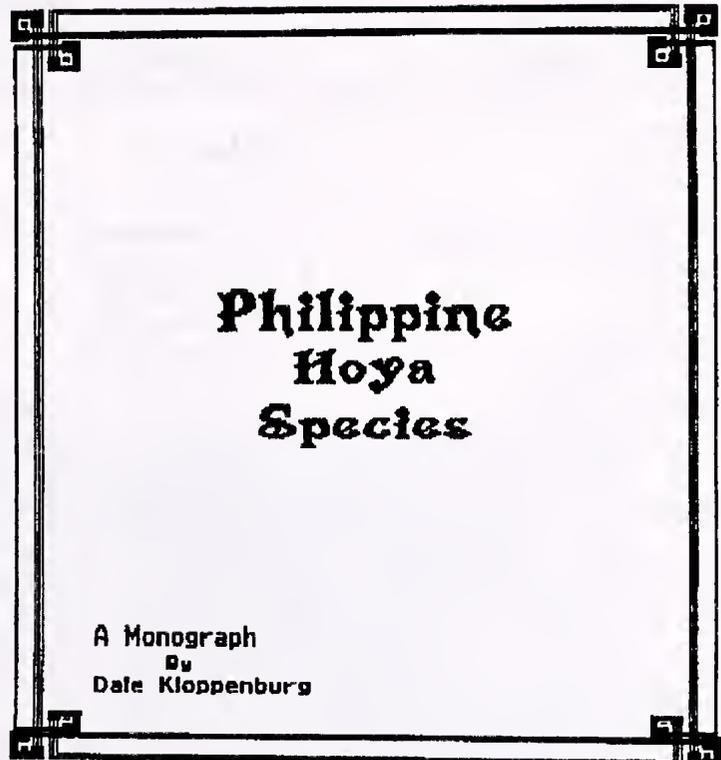
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H. polystachya  
H. acuta (lemon scented)

H. species # CI-1244  
H. species # F-484  
H. species USDA # 354246  
H. pubicalyx Cv. Red Buttons  
H. species (New Guinea Gold)  
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**FRATERNA**

**Official bulletin for  
"International Hoya Association"**

**2nd. Quarter 1991**

**ISSN 1055-4564**



**H. sp. # 557**

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## **Oregon Workshop & Group Meeting**

**May 4, 1991**

The monthly workshop was held at the home of Ann Wayman in Central Point, Oregon. Eight members were present, and as an added bonus, John Scoville our Vice President arrived from San Jose Calif. to conduct the meeting.

About halfway through the plant raffle, Jim Wayman suddenly disappeared, and arrived back a half hour later with Ted Green and his lovely wife Dorothy, who had flown in from Hawaii as a surprise to our members.

Ted brought slides of several nurseries where he had visited, plus slides of his own beautiful Hoyas in bloom. Pizza was delivered, and Audry Kantor furnished huckleberry cobbler and pumpkin pies.

John Scoville and the Greens spent the weekend at our home, and we had a wonderful time.

*Ann Wayman*

*Secretary*

## President's Message

there are many good things happening in our Society. First I want to say how much we appreciate the San Diego Group's support of IHA, and for their vote to formally join us. "Thank you" and welcome to you all.

There has been concern expressed for some time over the large number of persons who had over the years seemingly lost interest in the growing of hoyas, and appeared to have "Dropped out of the scene". It was gratifying to learn that this was not the case, and after making a concentrated effort to contact these people individually to see if we could serve and further their interest in Hoyas, we were overwhelmed with the response. I want to personally welcome the 150+ new members from this group on behalf of IHA. It is my hope that you will each continue to derive pleasure from hoyas and find our new association rewarding and fulfilling.

Next, I want to express my appreciation to the 25 Botanical Libraries and Institutions worldwide that have become paid members of IHA. It will be through the combined efforts of the faculty of these renowned institutions, and the hard work of our officers and Board members that will enable us to gain recognition and grow. Thanks to each of you individually and to your associates. We hope that there are among you those who will want to contribute articles or comments on botanical subjects that may be of interest to our wide and diverse membership. The ISSN number on our cover has been issued to us through the Smithsonian Institute, which means that our bulletin "FRATERNA" has been registered and recognized by the Smithsonian in Washington D.C.

I would also like to take this opportunity to fill you in on the success of my book "Philippine Hoya Species". Most of our members are aware that I have worked on this book for the past four years, and after many starts, stops and bogged down periods while waiting for blooms to examine, it was finished at last, but several of these books went out to individuals before the final proofing with a major typesetting error, that was caught and corrected, not quite "in time". Even so, sales are great and John Scoville laughingly says "Hang on to them folks, they just might be the collectors item of the century".

Finally, I regret I was not able to attend the Oregon group meeting and to visit with old friends. I am sure there will be a report included in "Fraterna" on this and other meetings.

Dale Kloppenburg

President

## SAN DIEGO GROUP MEETING NOTES

**Rainbow Gardens, 1444  
E. Taylor St, Vista, CA  
92084**

**March 24, 1991**

What a wonderful day it was to attend a meeting of the San Diego Hoya Group of "HOYA ENTHUSIASTS". All braved the unusual weather and came from as far away as Hawaii. Our current members and our new attendees numbered well over 50, breaking all of our previous attendance records. Perhaps the break in the unusual weather pattern prompted this large number of people to see what is happening in the world of fellow hoyas interests. Those of us arriving from the north couldn't help but notice the heavy snowfall that actually closed traffic over the Tejon pass near Gorman, over what we call the "grape vine" highway at 4144 feet elevation. Gone was the "brown smog blanket" that normally hides Los Angeles as you descend from the mountains.

The meeting was originally slated to be inside the Bookshop at Rainbow Gardens, because of the impending inclement weather, but was started outside on the patio due to the unpredicted "rolled up shirtsleeve" conditions. It's easy to forgive the weathermen when they don't mention the beautiful sunshine and warm breezes that take the place of their dismal predictions! An hour and a half of excellent conversation and hoyas viewing accompanied lunch prior to the start of the meeting. The members were most gracious in bringing cold cuts, salads, hors d'oeuvres, breads, and refreshments. What a way to start a meeting!

Once the meeting got underway, our chairperson, Harriette Schapiro presented greetings and a narrative of the brief history and rapid growth of our San Diego Group. Paz Kloppenburg displayed her beautiful International Hoya Association jacket in one of the several color motifs that can be ordered through Colleen Christian, and if you don't have one, or at least a nice T shirt, you should! Carry-over business was next, with a vote taken as

to our group becoming an affiliate of the International Hoya Association (IHA) concluded by an overwhelming affirmative response. This group truly loves the hoyas they grow, and the work of the parent group with which they belong. Of course, a final blessing with the IHA Board of Directors and officers is necessary, but our IHA President, Dale Kloppenburg, assured us that there should be no problem with this issue.

More business included a report from the Group Librarian, Joe Kraatz, who reported the donation by Rainbow Gardens Bookshop of six hoyas related books, plus the first two years of IHA FRATERNA bulletins. He also requested any articles or documents that members could lend or donate to allow him to photocopy and keep in the library for the group's use. Photos placed in his trust for membership usage would be most helpful. With the date and location for the next meeting being set at 1:00 p.m., June 30, 1991 at Quail Botanic Gardens (Ecke Building), in Encinitas, CA, business was formally concluded.

Our guest speaker, Dale Kloppenburg, was introduced and wasted no time stating his interest in hoyas started back in 1979 along with his school time chum, Ted Green, and included trips to Australia, Java, Malaya, and other interesting hoyas locals. His recent trip to Luzon, in the Philippines, was rewarding but military and civilian travel arrangements plus a bout with a bug or something took away a lot of valuable time and caused a severe physical strain.

Dale reflected that hoyas collecting is no longer what it used to be when he could forage throughout the forests and mountainous landscapes to his hearts content. Now with worldly troubles, that is impossible!

Dale mentioned some of the work that he put into his new book, "Philippine Hoya Species" but said he has a lot more work to do in the Philippines. This recent effort resulted in approximately 150 additional cuttings from the local area and northward. The unusual characteristics of some of these latest acquisitions were

described, and at least six of these appear to be new species or species for which all documentation has been lost. We will see and hear more about Dale's fine efforts at a later date, I am sure.

The meeting was then moved into the bookstore for a VIDEO presentation (taken by Chuck Everson and Jerry Williams of Rainbow Gardens on their visit last month to Hawaii). The first video was of GREEN PLANT RESEARCH, a hoyas nursery. Ted Green (owner) was present and guided the guests through the beautiful plants of hoyas including *H. archboldiana*, *H. megalaster*, and *H. imbricata* - among numerous others in full bloom! The level of detail that Ted and other members could relate to the various species, complete with comparisons, descriptions, and environmental conditions was extremely enlightening and a real learning experience. Jerry Williams then guided the crowd through the next video - the nursery of RAINFOREST PLANTES ET FLEURS, owned by Michael Miyashiro. Michael has hundred of specimen plants of hoyas, dischidias, cacti, and succulents. Many hoyas were in bloom, including *H. pinkie*, *H. australis*, and even a few of his own hoyas hybrids (of which he has hundred of seedlings growing beautifully!).

The meeting finally ended with a choice of 15 desserts, plus coffee, and a huge raffle of hoyas plants and cuttings. Many members, including our nursery people supplied the large quantity of these hoyas both for sale and for the raffle. Everyone left with many hoyas in tow.

Bob Gushue has been kind enough to preserve the last three meetings on videocassette and the mechanics of providing these tapes to interested members is currently under consideration. Perhaps San Diego with its beautiful climate and current water rationing can be closer than you expected! If anyone out there can reach us here, be assured that you are more than welcome to attend our meetings and enjoy the festivities.

**By: John Scoville with help from  
Chuck Everson**



**H. eitapensis Schltr.**

**Discovered in Northeastern New Guinea in the vicinity of Eitape on trees in the forest, about 20 meters above sea level. August 1909.**

**A darling semi-miniature, with dainty 1 to 2 inch medium green leaves, that turn deep bronze in bright light. The small leaves of this plant grow with an odd twist that makes the plant appear to have been planted upside down. It's an easy plant to handle in a small basket, and does well in any type of fast draining plant mix. It grows nicely in shade, but needs bright light to initiate the lovely 1/2" sparkling white flowers with yellow center. This plant had eight umbels of 12 to 15 flowers at its first blooming, and the flowers lasted approximately six days. As soon as the first batch of flowers fell, new buds formed on the spurs and within eighteen days it was in full bloom again.**

**Most of the mail order hoyo dealers carry this plant in their catalogue. Should you have trouble finding a source, please drop me a card or letter, I will be glad to put you in contact with a reliable dealer.**

**Ann Wayman**

## Notes From Auckland Epiphyllum and Hoya Society

June 1986

### HOYAS: To pot-or not to pot

When a few hoyas enthusiasts get together, sooner or later the question of repotting and/or container size crops up.

It is a fact that hoyas flower more freely when their roots are restricted. However, it is fair to say that restricting their roots also limits the size of the plant. While most of the miniature varieties should be happy in no larger than a 15cm basket, some of the larger growing types will fill a 20cm container in a matter of a few months and have trailers of growth 4m-5m long.

Much depends on the available space, style of training, etc. when deciding on maximum container size but most growers find a 20 cm basket or pot a convenient size to produce a pleasing display.

An indication that plants are unhappy is excessive yellowing of leaves. With my own plants I, at first, put this down to too much light but, after a month or so in deeper shade and no improvement, I repotted and, within a week, the change was astonishing.

Striking the right balance between an unattractive starved looking plant and a lush over-exuberant one which has few flowers is a challenge. A few basic hints are-

1. Repot when plant is actively growing, preferably in late spring or early summer.
2. Examine root system of each plant and, unless it is particularly vigorous, DO NOT

be tempted to use a container bigger than 1 or at most, 2 sizes larger than the existing one. It is better to repot several times as the plant grows.

3. Use a coarse free-draining potting mix.

4. Once a plant has reached the largest sized container you wish to use, do not neglect to feed it regularly to maintain its well-being, using a low nitrogen fertilizer to encourage flowering.

5. Reduce water during winter, keeping plants just damp and do not fertilize until plants show signs of active growth again.

March 1986

### ANTS/MEALY BUGS

In a recent bulletin of the Epiphyllum Society of America, the editor has this to say with reference to mealy bugs.

".....But before you can control mealy bugs, you have to keep the ants away. They are often called man's number one enemy. They transport other insects, including mealy bugs, and they carry diseases and viruses. Malathion and diazinon are recommended to get rid of them, and it seems to be a continuing battle, for as soon as you eliminate them from one place, they show up somewhere else. Be especially alert during the blooming season, they love the flowers, and to see one of our beautiful epis covered with crawling ants makes one shudder. If the ants are there, you can be sure that the plant will be attacked by mealy bugs."

# HOYAS/DISCHIDIAS AND ANTS

By Ted Green

Usually they are found at picnics but actually they are more at home in some of the dischidias and hoyas. I am talking about ants. Many growers never see the wonder of the relationship between some of these plants and ants, for most of the growers keep their plants in closed greenhouses. The plants have to be in the open no insecticides as mine are here in Kaaawa, Hawaii.

Myrmecodial means 'an association with ants'. In other words, a symbiotic relationship between ant and plant, where both profit. The ant gains a place for its nest, usually out of the weather, moist, close to nectar and a place close to its "cows" (aphids). The plant gains from the fertilizer of the dead bodies and waste, moisture from the nest and possibly from the formic acid as a growth stimulator. Nearly all myrmecodial plants live in situations where there are few nutrients, so they utilize an ingenious method to coax needed nutrients to come to them. The ant plants (Myrmecodia spp.) are named after this association and the swollen, chambered stems that house the nests of the ants. Try cutting one open or even shaking one on a tree limb while reaching for that hoyo or orchid.

What interests me is the question: Does the plant attract the ant with a special emission? or, does the ant force the plant to create a home with its formic acid?. To further confuse the issue, what about the plant that creates a "home" and there are no ants to "rent it"?. In Holland I have seen small seedlings of *D. pectinoide*, growing in a rigidly controlled, tight greenhouse produce bullate leaves. Why?.

I have, or have had in my collection: a) Nests at a node, surrounding the petioles and part way up the leaf blade, as *H. australis* or *H. carnosia*; b) nests under a leaf that is cupped and close to the support, as *D. imbricata* or *H. imbricata*; c) nests in a leaf curled or folded nearly into a ball, as *H. darwinii*; and d) nests in a swollen, hollow (bullate) leaf, as *D. major* (*rafflesiana*)

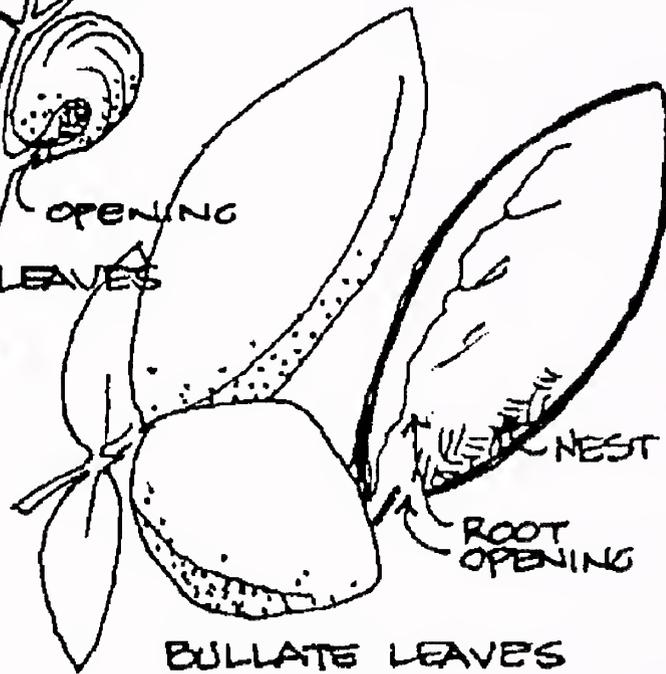
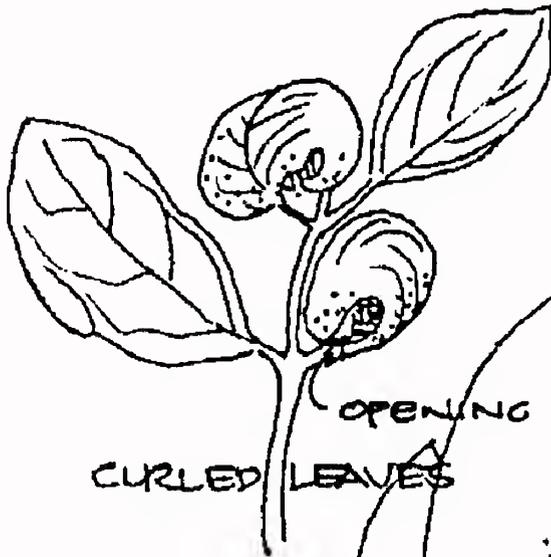
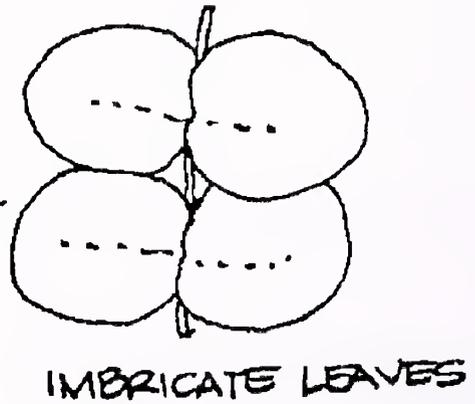
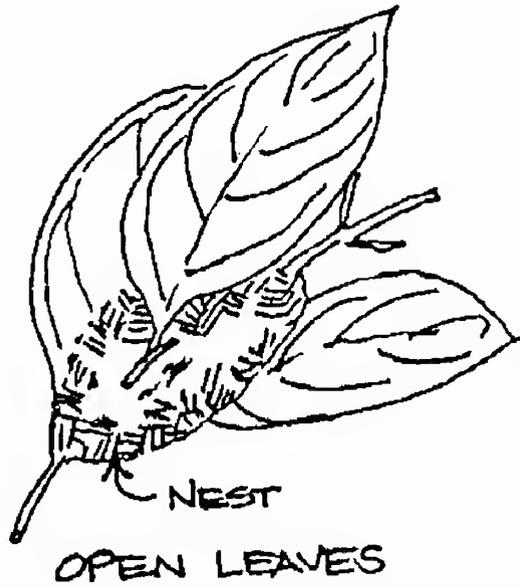
or *D. pectinoides*. I have not seen this yet in the plant I believe to be *H. mitrata*, with its clustered (cabbage like) leaves, but have been told that these also support ant nests.

I have found that the greatest number of nests are under the imbricate (shingle fashioned) leaves and next, the bullate leaves. It has been suggested that both the imbricate leaf and the bullate leaf (both with opening "door" at the base near the stem, serve another purpose: There is a root inside or under that picks up the moisture that condenses within, and helps to sustain the plant even under very dry conditions.



So, if you want to see this weird relationship, put some plants outside for the summer, hold the insect spray, and step back!

# ANT NESTS



Ted Green  
Green Plant Research  
Kaaawa, Hawaii

S. 91

# Questions & Answers

**Question:** I am a new grower of hoyas and keep reading reports of people using alcohol to kill mealy bugs, scale and aphids. Can you tell me how this is used, and what advantage there is in using alcohol instead of malathion or one of the other recognized pesticides?. A.C.

**Answer:** Those who use alcohol have several different methods. Some saturate a cotton ball or cotton swab with alcohol straight out of the bottle, or mix half & half with water, dabbing or sponging each leaf in the case of aphids, or wiping the stems and leaf axils in the case of mealybugs or scale. There are others who use a small, hand held, spray bottle, and spray the entire plant with the half water, half alcohol mixture. If you have only a few plants, or your plants are grown in the confines of your home, such as a window sill, or light garden, the advantages are obvious. Straight from the bottle or mixed with water, it will kill every bug it touches. It is not poisonous to the atmosphere, to people or animals unless drunk. There is no need to wear protective clothing while using, and you can keep a large bottle mixed and stored for immediate use without it losing its effectiveness. There are not many disadvantages but here are a few: (1) Alcohol is really more of a control for pests than an all out exterminator. (2) Alcohol has no residual long range effect, and will kill only insects that it touches at that particular moment. It would also be very expensive if you have more than ten or so plants. Unless the bug situation has gotten completely out of hand, it is worth trying before resorting to dangerous poisons.

**Question:** I am a new grower of hoyas and am having a terrible time with mealy bugs that seem to have arrived with these plants when I purchased them, and reappear overnight after I have cleaned them all off. Can you recommend something to help get rid of these monsters?. G.C.

**Answer:** This question seems to be the all time, number 1 question received in this office. Since you did not indicate how many plants you have, whether they were purchased as potted plants or as cuttings, or what methods have been tried, I'm going to suggest that you first try the alcohol method as described in the previous answer above to A.C. in Nebraska. If you have already tried the alcohol treatment, and/or a pesticide without good results, purchased the plants already potted from an unreliable source (an uninspected nursery) or used soil mix that was either purchased or dug up from your yard without pasteurizing with heat, you might possibly have soil mealy bugs. This form of mealy bug is almost identical to the type we usually find on hoyas, except that they are very tiny, only about half the size of the mealy we are all familiar with. They are extremely destructive to the root system of your plants, causing the entire plant to turn a sickly yellow, collapse and die suddenly. These tiny mealy bugs can congregate by the hundreds in a pot and go completely unnoticed and unsuspected until it's too late. Most regular mealy bugs will be found lodged in the axils between leaf and stem and higher on a plant where there is younger growth. Soil mealy bugs on the other hand are almost always found on the backs of older leaves, very close to the soil line or on leaves that are actually touching the soil. This type of bug is difficult to get rid of, and if the plant is already in poor health, chances are that the roots are too far gone to survive a drench with cygon or other systemics. If you can catch the plant before it is completely dead, take cuttings of mature growth from the outermost ends of your plant, as far away from the soil as possible and start them over in a soilless mix. Burn the old plant, pot, soil and all. While you're at it, check the soil in your other plants. These bugs can travel from one pot to another in water that drains from an infested plant and can quickly spread to every plant you own.

**Question:** I am fairly new at growing hoyas and have several that I am particularly proud of. I water them about every three weeks summer and winter, does this sound right to you? Please answer as I don't want to make any mistakes with them. J.P.

**Answer:** We all make mistakes, and we all lose plants occasionally for one reason or another, usually it's from overwatering. Every three weeks seems to be a long time between waterings, however for your particular type of hoyo, potting mix, pot size and growing conditions it may be just right. The rule is "If they're doing well, don't change anything".

**Question:** I am sending a cutting from a hoyo plant that I purchased about four years ago as *H. bilobata*. It's a good year round bloomer, and has very small, ball shaped, red flowers. In the past year I have visited several hoyo collectors who have this same plant, but each has a different name attached. Can you tell me what the name of this plant really is?. M.L.

**Answer:** The cutting that you sent to me was from a plant that I purchased as *H. angustifolia* Elmer, a name never validly published. I have also seen it labeled *H. sp. DS-70*, as well as *H. bilobata*, and a few other names I can't remember. In a 1988 issue of "The Hoyan" volume 9 #4, Ms. Christine Burton properly described this plant in latin, and published it with the name *H. tsangii* Burton. This is the proper name to use for this plant unless, or until, someone comes along and can prove that this plant was previously published with another name.

**Question:** The first hoyo that I ever owned was a "Hindu Rope" hoyo. I have had this plant for nine years, and it has never bloomed. Recently someone told me that many of these rope type hoyos are sterile and unable to bloom. Should I dispose of this plant and try another?. I don't want to invest another nine years in trying to get a plant to bloom. Is there some way of telling whether a plant is sterile before we buy?. S.P.

**Answer:** I have never heard the word sterile used in connection with a plants inability to flower. In the research that I have done, it appears that sterile is used to describe an inability to set seed, or to set viable seed. This does not mean that a plant is unable to bloom, only that the flowers reproductive parts are defective in some way, and unable to reproduce asexually. A more probable cause of your plant not blooming is (1) not enough light (2) improper feeding (3) extremely low humidity (4) pot size. First try putting your plant in the brightest light available without burning the foliage. Feed your plant regularly with a high phosphorous plant food to which one drop of Superthrive per gallon of water has been added. They seem to require more root room than most, they also bloom better with at least a ten degree drop in nighttime temperature. Anyone who has any doubt about these rope type hoyos ability to bloom their fool heads off, should visit the home of Henry and Elsie Raphael in San Diego. Henry grows them outside year round where they get full morning sun. When I visited last June, he had two or three huge plants hanging under the eaves on the east end of their home. I counted over one hundred umbels open on each plant before I lost count.

Ann Wayman

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## MY WAGE

I Bargained with Life for a penny,  
And Life would pay no more,  
However I begged at evening  
When I counted my scanty store;  
For Life is a just employer  
He gives you what you ask,  
But once you have set the wages,  
Why, you must bear the task.  
I worked for a menial's hire,  
Only to learn dismayed,  
That any wage I had asked of life,  
Life would have paid.

*Jesse B. Rittenhouse*

## **H. erythrostemma Kerr**

**Endemic to Malaysia and Southern Thailand, this species is very common along lowland rivers in Selangor. Dr. R.L. Rintz states in the Malayan Nature Journal that the leaves resemble those of H. parasitica but are not as thick, and the veins are readily visible. The petals on these half inch flowers are pure sparkling "sugar white" and extremely fuzzy. The corona lobes are a startling carmine red, and cover almost the entire top of the corona. This is an easy plant to handle once it is established. It doesn't seem to require any special care, and blooms quite easily in bright light (no direct sun).**

**I purchased this plant as an unrooted cutting from "Rainforest Plantes et Fleurs" in Hawaii. It formed bloom spurs in its first year of growth, but they did not mature and form buds until the second year. This photo was taken at its first bloom when there was only two umbels on the plant. These flowers lasted in perfect condition for eight days before dropping. Since that time (one month ago) the plant has developed ten more umbels that are due to open within a week to ten days.**

**These are surely one of the most beautiful of hoya flowers, and if I could have only one hoya, this would probably be my choice.**

**Ann Wayman**



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# The Philippines 1991

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By Dale Kloppenburg

I would like to comment on my recent 32 day trip to the Philippines. This trip was made in late February through March. It was a most rewarding experience and I have learned much in regard to Philippine Hoyas.

I was able to study at the University of the Philippines at Los Banos, and at the National Herbarium in Manila. I have found a renewed interest in the Hoya genus among the faculty and students at both places. At UPLB they have added many new Hoya herbarium sheets, and I am in the process of photographing flowers from these sheets through the microscope to add to my data bank of collection notes and floral measurements.

Professor Juan V. Pancho recently collected a new clone of *Hoya burtoniae* Kloppenburg at Davao, Del Norte, Mindanao. I have been able to find only one herbarium sheet of this species, it is the Type sheet at the UC Berkeley Herbarium. Previously, member Ted Green of Hawaii, and I collected cuttings labeled # 81084 from Dexter Heuschkel at the Memorial Park in Manila in 1981, it is the clone we are now growing. The subsequent renovation of the Aviary destroyed this plant. What a thrill to possess another clone of this rare species. Dr. Pancho had attached this plant to the trunk of a palm tree near the University, and it was growing contentedly in its new location.

I was able to obtain a clone of *Hoya cardiophylla* Merrill that had been collected on Mt. Baco on Mindoro Island. This is a nice addition to our collection of hoyas species from the Philippines. I also obtained a clone of *Hoya palawanica* Kloppenburg from Palawan Island, three unknown species, and a clone of *Hoya paziaae* Kloppenburg, recollected from the original site on Mt. Halcon in the northern part of Mindoro where Dr. E.D. Merrill originally discovered it. This last species has an unusual frosted leaf and a flower with a red crown. This acquisition is especially appreciated by me, as it was named after my wife. In addition I believe a clone of *Hoya cembra* Kloppenburg has also been obtained. I

need to study on this one a little more before making a determination.

Professor Pancho has also collected a large pubescent leaved *Eriostemma* with upright clusters of large carmine colored reflexed flowers. It is decidedly different from the previously collected *Hoya madulidii* Kloppenburg. Juan and I were each given another plant at the Manila Orchid Show by a plant collector who told us the flowers were "blue"...I thought from the foliage that the plant might be *Hoya mindorensis* Schlechter. We will have to wait for some blooms to see if the flower is actually blue, or if the collector is color blind. I will keep you informed!

Most surprising and gratifying to me is the activity developing in the use of Hoyas in landscaping. *Hoya multiflora* Blume is being widely used. This species grows into a husky shrub over there and is constantly covered with bloom, many plants that I saw were also loaded with seed pods. There is lots of variation in the different clones of this species. I was especially interested in a new and novel way of growing Hoyas for landscape use. Rotted coconuts, husk and all are hung from a wire thrust through the top and made into a hanging loop. The Hoya plants are then planted in circles around the husk and secured with pins. They form 83 beautiful hanging plants. Those of you in Florida, Hawaii and other outdoor growing areas, and where coconuts (husk and all) are available, should try this. *Hoya obscura* Elmer ex Burton and *Hoya merrillii* Schlechter looked great growing in this manner and seemed happy, healthy and were in full bloom.

This is just a short report of all I saw, did and accomplished. I thank all of my friends in the Philippines who have helped me so much and have made my trips worthwhile. I appreciate Dexter Heuschkel more than he will ever know for the many Hoyas he sends to me. The plant collectors who do so much to obtain new species and clones are forever in my thoughts. The contributions they are making in bringing us exciting new Hoyas to grow, and to the future of our organization is something not even realized by them, but appreciated by all of us and our members just the same.

**Editors Note:** I'm asking Dale to make us a drawing of this novel way of planting Hoyas in rotted coconuts for a future issue. I'm finding it hard to visualize what this would look like, and how big it would have to be.

A.W.

## Pick A Number, how about # 557

In the past, many hoyas with the most beautiful flowers and foliage in the plant kingdom have been distributed as unidentified plants, labeled with a number only. Even though the numbers game holds a certain fascination for most of us, we are all a little reluctant to gamble on plants with numbers. This of course doesn't apply to us collectors who are determined to have every hoyas in existence.

Some of the easiest to care for hoyas with the prettiest flowers are still unidentified, but don't let that keep you from buying some of these beautiful numbered plants.

The plant in the photo on our cover is from Borneo, and was purchased two years ago from "Rainforest Plantes et Fleurs" labeled H. sp. nova # 557, which translates to 'new hoyas species # 557'. This does not necessarily mean that it's a new species, only that it's new to the nursery trade. It may or may not have been discovered, named and described many years ago.

I have dozens of these numbered plants in my collection, and the anticipation of watching buds form, and the ultimate thrill of seeing them burst into bloom for the first time, is a joy that can't be described.

This particular flower was especially surprising to me because the buds were very light colored, so I expected the flowers to be pale pink, or even white. When they opened carmine red, I was shocked!. As the flower matured, short, fuzzy, red bristles appeared along the full length of the pedicels. The foliage on this plant is very stiff and has an odd texture, with curious brown and silver splotches (Michael describes it as being "like plastic"). This plant has bloomed intermittently since early spring with up to 45, 3/8" flowers, and four or five umbels open at once. The flowers last in perfect condition on the plant for up to fifteen days before dropping.

It's certainly an easy hoyas to grow with the same care that you would give H. car-nosa. It likes bright light, even a little early morning sun will help to bring out the odd coloring in the leaves that make this such an appealing and different Hoyas. This species grows into a long and stringy looking plant unless it is pruned often. In its first year of growth, I snipped off about 1/4" of each growing tip as soon as they reached 6" to 8" long. This cautious pruning of just the tips, stops the stems forward growth, and forces many side branches with lots of compact foliage. The more branches a plant has, the more flowers you will have. This is a lovely, medium sized hanging basket plant, and a delight to own.

We will be featuring many numbered plants in future issues. If you have been thinking about purchasing some of the plants with numbers only, write to me and let me know which numbers you are interested in seeing. I have literally dozens of photos that I would like to feature but need your input to help me decide.

Ann Wayman

# International Hoya Association Interview

**An Interview With Ruth Grenier,  
15893 N.E. Holladay, Portland, OR  
97230**

**IHA:** Ruth, how long have you been growing hoyas, and how many species do you offer?

**Ruth Grenier:** I have been growing hoyas for eighteen years. I offer 101 varieties of Hoya and Dischidia. In my private collection, I have 120 varieties but all do not have names. Many years ago when I started growing these plants, there were only a few available, and I didn't think it was important to know names, now I do. I'm just now realizing how many plants I have sold over the years with the wrong names before I knew any better.

**IHA:** Ruth, what other plants do you sell or collect?

**Ruth Grenier:** I also grow and sell Orchids, Orchid Cactus, Philodendrons, Alocasias, Anthuriums, Begonias, Jasminoides etc. All of these grow together beautifully with hoyas, and enjoy the same conditions. I do move things around a lot until I find where they are the happiest, either placed higher in the roof, or lower, some I put under the benches if they seem to object to bright light.

**IHA:** Ruth, we have seen hoyas sales increase dramatically over the past five years, what percentage of your sales do you consider to be hoyas sales?.

**Ruth Grenier:** Around 25% would be a close guess.

**IHA:** Do you accept the names the plants have when you receive them? or, how do you determine the correct names?

**Ruth Grenier:** I accept the names they come with if they are from a reliable source. Otherwise I just code them for my own use and hope that someday someone will be able to identify them for me.

**IHA:** Do you have a systems for keeping records about your plants? Their growth pattern, when they flower etc.?

**Ruth Grenier:** Yes, I use my camera for pictures of foliage and bloom, and also record the description, time of flowering etc. on the computer and in a scrapbook. Some I still have just committed to memory.

**IHA:** Ruth, I'm sure our readers would like to know how you root your cuttings. Do you use regular potting mix, perlite, sand, vermiculite or a combination of several ingredients?, and do you use bottom heat for rooting your cuttings?

**Ruth Grenier:** For my own use, I use my regular potting mix. For the rooted cuttings that I intend to sell, I use a special mix, but have never felt that it was necessary to use bottom heat with hoyas or dischidias.

**IHA:** What about temperatures, do you try to maintain an even temperature, or just let nature take it's course?

**Ruth Grenier:** I maintain a temperature of about 68 degrees at night. Daytime can be almost any temperature, though where we live it seldom gets what most people would call hot.

**IHA:** What is the average summer temperature during the day in your area?

**Ruth Grenier:** An average would be around 70 to 75 degrees in the summer, but there is usually a few days in mid-summer when the temperature can climb to 90 degrees and up.

**IHA:** What is the average daily winter minimum in your area, and what do you use for heat?.

**Ruth Grenier:** I don't know, I have never checked into it, but would guess that an average would be 40 to 45 degrees. I also remember winters when we had a solid sheet of ice from the Washington border inland, to the California border south, and on another hundred miles past the Siskiyou Mountain range, and stayed that way for several weeks. We use natural gas for heat and have propane "SUNS" and a generator for emergencies.

**IHA:** What potting mix do you use? Is it something you mix yourself, or can it be purchased already mixed?

**Ruth Grenier:** I use a product called Vita-Mix, but have experimented with many mixes over the years.

**IHA:** If someone can't obtain or duplicate your mix, what would you recommend as a substitute?

**Ruth Grenier:** Anything! Hoyas are among the most agreeable plants I have ever raised, and readily adapt to most any fast draining potting mix.

**IHA:** Everyone says that hoyas should be kept in small pots, what do you say? What size pots do you use yourself?.

**Ruth Grenier:** I usually use a 4" pot to start, then move up to a small 6" round basket with saucer, and repot only if there is a problem.

**IHA:** I believe the number 2 question we get asked the most, right after "how do I get rid of mealy bugs" is on watering. What would be your advice to our members on watering?

**Ruth Grenier:** It depends on the particular plant. Most hoyas respond well to drying slightly between waterings, while others (the desert forms of australis for example) prefer to be kept quite dry.

**IHA:** What type of plant food and/or additives do you use on your hoyas?

**Ruth Grenier:** I use Osmocote, which is a timed release fertilizer, and occasionally use Rapid Grow for an added boost. I have tried many brands of fertilizer over the years, and have not noticed a bad response to any when used as directed.

**IHA:** What pests and diseases have you encountered?

**Ruth Grenier:** Mealy bug is the only pest that gives me any problem.

**IHA:** Do you treat individual plants only when a problem is discovered, or do you follow a planned pest control program? What do you advise your customers to use on their plants?.

**Ruth Grenier:** I spray every seven days, no matter what. I use Orthene wettable powder, Alcohol, Avid, Mavrik, Sevin and insect bombs, changing whatever I am using often so

the bugs don't build an immunity. I always wear a mask while spraying, and use lots of hot soapy water to clean hands and wash clothing when I get through. I advise my customers who usually only have a few plants, to use Alcohol mixed half and half with water, or just plain soapy water and then rinse the plants well with clear water after twenty minutes or so.

**IHA:** Have you tried natural or biological controls?

**Ruth Grenier:** No I haven't.

**IHA:** Have you seen a definite increase in hoyo sales in the past five years?

**Ruth Grenier:** There has certainly been an increase. My sales have tripled in the past three years. I can't keep enough plants propagated in the hoyo family to meet the demand.

**IHA:** When you have a problem with your hoyas, who do you turn to for advice?

**Ruth Grenier:** I've gone through a lot of trial and error in the absence of anyone to talk to. In the last three years I feel a lot more confident since we have our organization based right here in Oregon.

**IHA:** Fortunately hoyas don't present much of a problem, but should a problem arise that our own staff doesn't have an answer for, our organization is also a member of the American Horticulture Society, and they have professional members on their staff whose job it is to find "the answers".

**IHA:** Last question Ruth. Would you like to see hoyo cultivars and hybrids come on the market?

**Ruth Grenier:** Absolutely! I would like to see the whole country crazy over hoyas.

**Interviewers Note:** I have never met Ruth personally, this interview was conducted through the mail. Ruth has been our most active supporter, and has personally brought over twenty new members into our organization in the past year and a half. She has won a lifetime membership with this organization, as well as an enduring, although long-distance, friendship with this editor. A.W.

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## Has anyone moved?

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### Not George French or Carla Mc Gavran.

In the 4th quarter 1990 issue of *Fraterna*, George French was reported as living in San Francisco. I

was informed by Ted Green that he had just visited with George in Point Loma close to San Diego, not San Francisco.

In the 1st quarter 1991 issue of *Fraterna*, Carla Mc Gavran was moved from her home in Renton Washington to the state of Oregon.

Sorry about that folks!

---

## "Round Robin, Round Robin"

### What is it?

(1) It's a fat, red bird. (2) It's a game we used to play as kids. (3) It's a series of letters that goes round and round. (4) It's all of the above.

The answer to this question for our purpose, is of course # 3. It's a series of letters from members that goes, round & round.

We all get wrapped up in our own world of interests, and we pick up jargon along the way that we take for granted, believing that everyone knows what we're talking about. The unreality of this belief came back to haunt me awhile back when one of our members told me she had been approached by a new members with this statement "I hate to ask dumb questions, but just what is a round robin?". We are here to answer your questions, and the only dumb question is the one that never gets asked.

A Round Robin is a group of six to eight members who keep in touch through the mail. These groups usually share growing experiences, they trade cuttings, pass pictures or drawings, once in awhile one of the group will have seed pods to share. In other words, it's a friendly bunch of people who like each other and enjoy being a part of a group with similar interests. There is a route list with the names and addresses that accompanies this packet of letters. Number 1 on the route list writes a letter and sends it to number 2 on the list, number 2 writes a letter, places it behind the letter of number 1, and sends his/her letter plus the one received from number 1 on to number 3, number 3 writes a letter and sends his/her letter plus those of number 1 & 2 on to number 4, on so on down the line, the last letter written always being placed at the end. When the last

person on the list receives the packet of letters, he writes his letter, and sends it back to number 1 who removes his/her old letter and replaces it with a new one and sends it to number 2 who repeats the procedure, and so on and on it goes. Sound boring???. On the contrary, it's almost as much fun as a Sunday picnic, and just as friendly. Many people who never meet personally, become life-long friends. You can acquire a great collection of hoyas that you might not be able to afford otherwise, plus you get the benefit of all that good advise from growers who have found solutions to problems and are willing to share them with you.

If you're interested in joining a round robin group, we have four going at present and will keep adding more until our director; Joyce Blumenstock yells WHOA! We also have a scientific group for those of you who are interested in the more scientific aspect of hoyas growing, and collecting. This group will be working in hybridization, Latin translations, making up herbarium sheets, microphotography, etc. I have been able to make contact with a private foundation who has developed an interest in the Asclepiad family, and hoyas in particular. I'm hoping to bring you more good news about this in the near future.

#### Round Robin

Joyce Blumenstock

30 Moorland Dr.

Grosse Pointe Shores, MI 48236

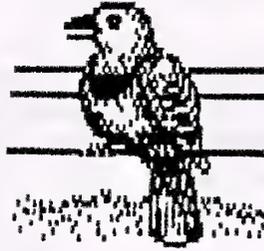
#### Round Robin Scientific Group

John Scoville

651 Aram Ave.

San Jose, CA 95128

## BIRD TRACKS



**R**obin #.. 1 Mary Welch, Oklahoma...When someone asks for a cutting that I need to send my methods vary according to what I remember when I get around to doing it. I have occasionally just taken the cutting, stuck it into a box in which I've crumpled some damp newspaper, and shipped it either ups or priority mail. (supposed to be next day delivery). And it isn't very expensive, depending on the weight of the box because the cuttings aren't very heavy. Sometimes I remember to put rootone **on the end of the cut, wrap it in a wet paper towel, and cover it with foil and "scrunch" the foil around the stem carefully so it won't cut into the stem. I have used a cotton ball or piece of cotton wet with superthrive mix instead of the paper towel. I think that's a better way because the combination of superthrive and the rootone should give the cuttings a better chance to survive.**

Robin # 1.. Colleen Christian, Oregon...Twice a month I get a table at our local flea market. About 1/3 of my sales are hoyas.

Some cuttings I can't keep enough of. I have 4 or 5 regulars that come by every sale to see if I have brought something new.

Robin # 1.. Audry Kantor, Oregon...I have H. odorata in bloom for the second time, only 8 blooms, but 6 in one cluster, all within four days. This is the most in one cluster to be open at a time. H. red buttons has 10 big clusters in bloom and 2 more to open. H. bright one has 4 clusters open, and H. polystachya has so many that one has been in bloom constantly for two months. The flowers are small and plain. The red buttons that I have always has some 4 sided blooms, usually about half, also no two clusters are the same color. The H. latifolia I got from Ann is now beginning to look like my big leafed diversifolia B. and just as spotted. My biggest plant of H. serpens was out in the lean-to all winter, and still is, now has 3 big clusters of blooms, so I guess it can take the cold.

Robin # 2.. Mary Jean Sargent, The Dalles, Oregon...I've been determined to get more of my hoyas to bloom this year, and have had some good success. I did not fertilize through the winter and kept them fairly dry. Then in late February as the days got

brighter I put everything in the best light I could manage, kept them root bound (no repotting) and fed them all with 5-50-17 fertilizer (Peters Root-n- Bloom), repeated in two weeks. Since then I have been using Peters Houseplant 15-30-15 or Blossom Booster 10-30-20 every two weeks or so. I have used Peters all purpose 20-20-20 on my foliage plants in my Plant-Care business for several years. As you probably all know, the first number on a fertilizer label is for the percentage of Nitrogen for foliage growth. The second number is the percentage of Phosphorous, for blooms and roots, and the third number is the percentage of Potassium. I've had 6 or 7 hoyas bloom for the first time, and peduncles (bloom spurs) set on that many more.

Last summers Cygone treatment did a great job in getting rid of the mealy bugs. I'm convinced that if you are serious about your hoyas you must really "clean house", move them out and clean all pots, trays and saucers with bleach. Spray plants and drench soil, or dip the whole plant, and repeat. You should probably use a sticker in your spray also. I use some kitchen "dish soap" in mine.

My biggest problem with hoyas right now, is that I don't know what species most are. I've lost labels, or never had them.

Robin #.. 2 Rita Cronlund, Oregon...Joyce Blumenstock talked about putting hoyas outside during the summer. I guess I'm just chicken, because I'm afraid "other bugs" will invade them and I really don't have any other place when it gets cold to house my plants except the living room.

Robin # 2.. Margie Stone, Oregon...It seems you have to be consistent with spraying mealies. At least once a week for six weeks or so, and not just the plants, but if on a stand, you need to spray the stand, clean the walls, trays etc. You should also alternate what you use, maybe alcohol one week, Shakleys Basic H the next and so forth. The best way to do the "hindu ropes" is by dipping plant, pot and all into a tub or bucket to which has been added 1 teaspoon Cygone per gallon of water (have you ever tried the alcohol and Q-tips method with a hindu rope? It's impossible!).

Robin # 2.. Joyce Blumenstock, Michigan...Hoya diptera opened for the first time ever on Mothers Day. I was disappointed that it wasn't fragrant.

Last week I took out all the hoyas that had mealybugs and dipped them in Malathion and then brought them back into the house. It took me most of the day. If the mealybugs recur, I will throw out the plants. I've Had it!. A

professional nurseryman told me that diatomaceous earth mixed in the soil kills and prevents "soil mealy bugs".

If John Scoville lives anywhere near San Francisco, it would be wonderful if he could arrange a meeting in the area when Arthur and I are there in 1992, we could meet many members that way.

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## Editors Note

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Since these robins came in after the Question and Answer column for this issue was finished, I'm going to make a few comments to what appear to be important questions that need an immediate answer.

First for Joyce, Rita and Lorraine Bracco. Rita; don't be afraid to put your plants outside. If you have a tree in your yard, hang them under the tree, they will be shaded from the sun, and you will have less bugs outdoors than you do inside (honest!) There are literally hundreds of types of predatory bugs, not to mention spiders, that will eat your mealybugs and or aphids. Give them a few weeks to get started. Within a day or two the ladybugs and lacewings will have found your plants and will lay their eggs either on the plants themselves or very nearby. it takes a little time for lady bug and lacewing eggs to hatch and start doing their job. Lady bug eggs look like tiny orange footballs, the larvae looks somewhat like tiny lizards with dark brown or black bristles. If you watch closely you will see these tiny larvae gobble up aphids, mealybugs and anything else visible to the naked eye, plus they are cleaning up mites and other pests as they go about their business. Lacewings lay their eggs on the top of what looks like tiny little wires (one egg per wire), they do this because the larvae are so voracious that the first to hatch would eat all their brothers and sisters. The larvae are long, brown and spindle shaped, and like the lady bug larvae, they also have tiny bristles on their bodies. The appetites of these tiny creatures have earned them the nickname aphid lions or aphid wolves. They will also clean up scale, mealybugs and spider mites, plus many other eggs and adults of dangerous pests. DQ Not spray your plants before putting them outdoors (you will also kill the "good guys"). DQ spray them the day before putting them back in the house, using Cygon or some other good systemic. Joyce: If you're going to use Malathion you will probably have to use it every seven to ten days, almost year round. It is not a systemic and does not have a long lasting residual effect. Don't throw your plants out, use Cygon instead. I know this advice sounds contrary to the advice I have

given in the Q & A column, but for anyone so desperate that they are tempted to throw out all their hoyas, it is sound advice!

Lorraine: You mentioned that you had killed many of your hoyas with a pesticide. I have never found that any pesticide hurt my hoyas when used as directed. What on earth did you use?????. A better question might be-- How did you use it?. Maybe a solution that was too strong?, follow directions on the label carefully. Do not mix chemicals! some timed release fertilizers and pesticides do not mix. Wait a few weeks between applications of fertilizer and pesticide. Were your plants dry when you treated them? Dry roots can burn completely off if they are too dry, if a plant is so dry that it is at a point of wilting, spraying or dipping will burn leaves beyond recognition, causing them to completely defoliate. If your plants have been watered and are still quite wet, don't spray your plants so heavy that more water drips into the soil making it wetter, that's inviting root rot. One last bit of advice. Don't spray your plants with anything but water if the temperature is over 80 degrees. Mary Jean: I had a terrible experience many years ago with labels on African Violets, it taught me to write the names directly on the pot. I use black, Maybelline eyebrow pencil, many of my green or black pots have the names written on the sides of the pots (this pencil shows up even on very dark colored pots) but I usually write on the bottom of the white ones. I also use labels stuck inside of my pots, so in case I forget to write on the pot I can always do it later. Most Garden centers carry plastic labels that wrap around stems between the leaves and attach to themselves, (Michael Myashiro of Rainforest Plants in Hawaii has this type of labels on all his plants. You might also consider labels that you attach to the plants with wires. The only reason I feel qualified to give any of this advice is because there is nothing you folks can do to your plants that I haven't done at least once. It's called "learning the hard way".

---

A.W.

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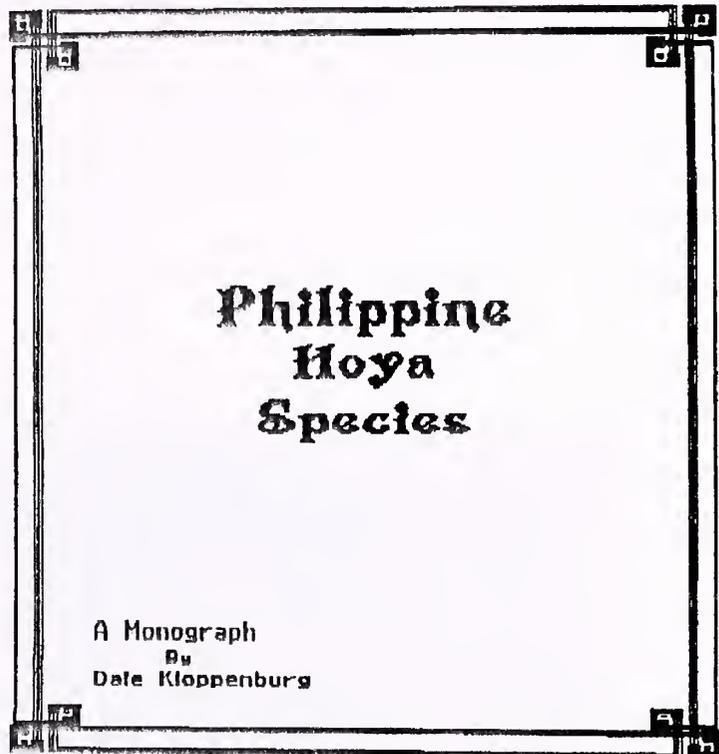
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3rd. Quarter 1991  
ISSN 1055-4564



*H. archboldiana*  
(Pink Form)

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We now have the thirteen original issues of the Hoya Society -West Coast newsletter bound as one publication. The price of this bound text is \$25.00 U.S. and \$55.00 shipped airmail overseas. Due to the extra pages and pictures in our new publication "Fraterna", we must, out of necessity, increase our prices for back issues of "Fraterna" to \$3.00 per issue, \$4.00 per issue shipped airmail overseas.

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## **SAN DIEGO GROUP MEETING NOTES**

*QUAIL GARDENS, Encinitas, CA*

*June 30, 1991*

The meeting started off after the members and visitors had the chance to talk to one another and enjoy the wonderful food and beverages that everyone provided. The setting was San Diego's Quail Gardens, Park and Recreation Area. We had available to us a large meeting facility and the weather was perfect: Couldn't ask for anything nicer!

Harriette Schapiro, the local chair person, brought up old and new business, which didn't take much time, and introduced Chuck Everson for a current report of the San Diego Group status.

Chuck reported that the International Hoya Association had accepted our vote for recognition as a local chapter and the local organiza-

tion shall be called "San Diego Hoya Group". He mentioned the work of Ann Wayman in preparing an index to all HSWC and Fraterna issues. This might be available relatively soon. A membership list provision was considered by having members listed by name, no addresses, phone numbers optional and voted for affirmatively. Chuck said he had heard from Ted Green who must miss the next meeting, due to an upcoming trip to the Philippines, New Guinea, and Australia. Ted is planning to attend our Christmas meeting and will show slides of his trip. It is hoped that there will be slides of David Liddle and his operation in Australia. As an exit, Chuck introduced John Scoville and asked for a report concerning John's trip to Oregon to visit the Central Point chapter and all the good gossip.

John took no time to introduce the nature of his trip up north to Oregon from San Jose, CA: He just wanted to visit the members of IHA in Central Point and also meet his cousin's newest husband of the last twelve years. Turns out he is a real nice person, interest in plants, indian arrowheads, geology, gunsmithing, and hits it off perfect with John's cousin Virginia. Now back to Central Point as John arrived early and caught the Wayman's in their accounting work but it took little time for Ann to show him the Greenhouse where the plants are grown. Well, it used to be a garage but Jim converted it into a GH by boarding up the grease rack and putting in a ceiling of fiberglass, a gas heater, and air conditioning. Yes, it does get warm in Oregon. Next was a meeting of the local group and an explanation of potting mix for cuttings. When John explained this 50-50 mixture of perlite and vermiculite, the audience loudly proclaimed, never in San Diego! John said it worked there and in his San Jose area but did stipulate it took time to analyze humidity, watering conditions, and all else. John took note as to future speakers providing San Diego conditions and promised to cohost local problems versus northern environments. Should be interesting. John concluded by praising the works of the northerners and drew a warm applause for making the journey and reporting what we all already know, hoyas are beautiful!

Our local librarian, Joe Kraatz, was introduced and started by passing out a sheet in-

volving newest pest control methods. This involves using natural vegetable oil and mixing it with water. In San Diego and basically throughout the state this water should not be tap water, but distilled water due to contaminates. Joe read off a list of new library articles and books and it was impressive. More materials are necessary and all members are asked to contribute if possible. Joe stated that he has a few postage stamps (he is a philatelist) that have pictures of hoyas on them. Maybe our members can help Joe with stamps of this nature!

The invited guest speaker, none other than our own respected Henry Varney, was introduced and provided a narrated slide show of his and other plants of the Asclepiadaceae family that included ceropegias, dischidias, huer-nias, carallumas, stapelias, and of course hoyas. Henry pointed out similarities, differences, and other distinctions of the various species and made a point of illustrating naming problems currently in practice. The pictures were excellent and Henry's dialog made it a wonderful presentation that showed his tenacity in growing and learning more about plants in this exceptional family. From all of us, thanks Henry!

With that, the meeting was concluded but not before this recorder got a few photos of the various members. It seems like a pictorial notebook is in order and either a color slide presentation or an album of participants. Normally a video tape is made of the presentation but unfortunately there will be no tape of this meeting.

The next meeting was set for September 22, 1991 to be held at Rainbow Gardens Nursery and Bookshop in Vista, California. Topics will include potting mixes, plant tolerances to cold, and pest control. If you are in the area you are most welcome to attend.

John Scoville

**A note from your editor:** To set the record straight, Gary Raatz gets the Golden Globulosa award for the work on the index to all of our back issues. Ann Wayman didn't have anything to do with it except take the perfectly typed copy to the printer. Love Ya Gary!

Ann Wayman

# Questions & Answers

**Question:** I have 2 Hoya bellas that I have had for a number of years. They are both in full bloom but have suddenly started dropping their leaves in huge numbers. The plants themselves look alright but the leaves that fall off look very pale and withered, can you tell me what might be causing this, and what should I do?. A.G.

**Answer:** This question came in by phone from one of our Idaho members, and after a few preliminary questions, I asked this lady to look closely at some leaves for fine webs. She said she could see webs on the backs of the leaves with the naked eye. Pale, withered looking leaves that fall in huge numbers are a typical symptom of spider mites. The near miracle is that she had owned these plants for six years and this was the first time she had ever had an infestation of these destructive pests. Hoya bellas are notorious for harboring spider mites, and many times plants will be beyond saving before they are discovered. Once diagnosed, give the half water, half alcohol with a few drops of Ivory liquid or other dish soap treatment a try. Spray them thoroughly, including the backs of the leaves with this solution. Rinse off with clear water after thirty minutes, and let dry in a shady spot. It can't hurt and if only a few plants are affected, it's very possible that four or five treatments given every other day will cure the problem. One of the most valuable tools you can own, is a small magnifying lens, (Sherlock Holmes style) that can be purchased for a few dollars from any five & dime or stationary store. A few weeks after the conclusion of this soapy water treatment, look over your plants very carefully with your magnifying glass, if mites are still present, and you want to save your big plant, you will have to get out the "Big Guns", (the miticides), because regular pesticides won't even touch them. I'm sorry I can't give you a brand name of a good miticide, 'Kelthane' was pulled off the market a few years ago, and I'm

not familiar with any of the newer products, consult your local extension service for this information.

**Question:** I have found some horrible looking little brown bugs on my hoyas. I think they might be the crawler stage of scale, can you tell me what baby scale looks like?. J.R.

**Answer:** Yes, I can. They look exactly like mature scale, except they have legs. If you can see them with the naked eye, they are probably not scale. A female scale will have anywhere from fifteen to twenty of these tiny babies either underneath her body or crawling on her back. They can only be seen through a high powered microscope until they reach the stage where they attach themselves to a plant, lose their legs, and begin to grow. Don't be too quick to diagnose every bug you see as destructive, the most horrible looking bug I can imagine is the larvae of our ordinary lady bug, yet they are the most voracious predators we have of mealy bug, scale and aphids. If you seriously want to know what these bugs are, put a couple in a small plastic bottle or film container with a few drops of rubbing alcohol, and send to me in a padded mailer. If I'm not sure of an identity, I will submit them to the entomology dept. of our state university.

**Question:** Can you give me some suggestions on how to get H. polyneura to bloom?. T.P.

**Answer:** H. polyneura has bloomed for me one time only. I have two friends who have them in bloom for several months every year, usually in the spring and early summer. Both of these friends grow their plants in unheated sun porches where they are subjected to very cool temperatures and not much light. I can only conclude from this, that H. polyneura prefers much cooler temperatures than I can offer them, and they don't require the high light that many other hoyas enjoy.

### **H. nicholsoniae IML #37**

A special favorite of mine, is this beautiful golden yellow hoya in the nicholsoniae group. I took a photo of this plant in bloom at Dale Kloppenburgs nursery in 1988. It appears in picture set volume #4 as an unidentified golden yellow hoya with pure white corona. The label from the cuttings of this plant had evidently been lost in route to him. I took a cutting of this plant plus several other nicholsoniae type hoyas, among them was David Liddle's IML #37. The identity of this plant remained a mystery to us until this summer when both this plant and the plant I acquired as IML #37 bloomed simultaneously. The flowers proved to be identical.

This is an easy hoya to grow, the foliage is medium green and very glossy. It requires a loose, fast draining potting mix, and lots of bright light in order to bloom. I feed all of these nicholsoniae type hoyas with a mild fertilizer solution with every watering during the early spring, then switch to feeding with every other watering during the heat of the summer. The foliage on most of them will become a beautiful mahogany red/bronze in winter sun. Cuttings of this plant can be purchased from Hill N Dale Nursery, Vicky's Exotic Plants, or if you're planning an order with David Liddle in Australia, he also has it available.

*Ann Wayman*



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# International Hoya Association Interview

By popular request

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**An Interview With Ann Wayman,  
4057 Carlton Ave., Central Point,  
OR 97502**

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IHA: Ann, how long have you been growing hoyas, and how many species do you offer?

Ann Wayman: I have been growing hoyas since 1971 when I converted my hobby growing to a small commercial greenhouse operation. Back then, we were only aware of three or four different hoyas, I remember having *H. australis*, *H. carnosa*, and *H. bella*. I believe I acquired the silver pink vine that we now know as *H. pubicalyx* around 1975. I didn't get into hoyas real deep until 1986 when I discovered Logee's Greenhouses in Danielson Connecticut. At that time they carried fifteen different hoyas, and I was in seventh heaven thinking that I now had all the hoyas there was, (little did I know!). Next I discovered Hill ~ N ~ Dale Nursery in Fresno, and went hoya crazy. I would make a wild guess and say that I probably now have 100 species, and maybe that many more subspecies and varieties. I don't sell mail order anymore, my greenhouse is open to walk-in trade on the weekends only, because I work full time and am away from home nine hours out of every day. I do sell large 10" & 12" baskets of the common hoyas to several of our local nurseries for resale and they're always screaming for more.

IHA: Ann, what other plants do you sell or collect?

Ann Wayman: I want to grow everything new I see, all plants fascinate me, but in order to remain half-way practical I had to settle on a few types that not only fascinated but captivated me. I love African Violets and always will, though I had to give up most of my violets when I went back to work because they are very demanding and I no longer have the time to cater to their demands. I love orchids and still have several hundred but they just didn't grab me like hoyas did. With hoyas, it was love at first sight, and it's a love that has never dimmed. I have many Epiphyllums, I like *dischidia* and have a lot of

them, I also like *ceropogia*, These are just things I collect, I don't sell them but I share them with anybody and everybody that expresses an interest in them. I can't imagine keeping these beautiful things all to myself, the fun is in the sharing.

IHA: Ann, we all know how dramatically hoyas have increased in popularity in the past five years, what percentage of your sales do you consider to be hoya sales?

Ann Wayman: That's not a fair question for me to answer, as I said, hoyas are just about all I have for sale anymore. When I was still open to the public, about half of my sales were hoyas.

IHA: Ann, do you accept the names the plants have when you receive them, or, how do you determine the correct names?

Ann Wayman: I make new labels using the names or numbers they come with, and note whom it was purchased from, then leave lots of room for corrections, and start doing my research homework. As a rule I purchase plants from places where I'm fairly sure of getting what I order, or as sure as any of us can be until or whenever all this confusion over names can be straightened out.

IHA: Do you have a systems for keeping records about your plants, their growth pattern, when they flower etc.?

Ann Wayman: I use my camera of course, there's hardly a day goes by that I'm not taking pictures of one thing or another. I also keep a written record of who I purchase plants from, or where I acquired them. I also jot down notes in a notebook on a lot of different things that only make sense to me, sometimes I can't remember why I wrote them down.

IHA: Ann, I've heard that you use some rather unusual methods in your growing, what do you do that some growers find so shocking?. We all want to know how you root your cuttings, do you use regular potting mix, perlite, sand, vermiculite or a combination of several ingredients, and do you use bottom heat for rooting your cuttings?

Ann Wayman: I root the *ceropegias* and *epiphyllums* in a mixture of very fine vermiculite and sand, everything else that I grow gets rooted in a half and half mixture of per-

lite and coarse vermiculite. I don't know that there's anything unusual about it, it's worked for me for twenty years. I do use bottom heat, and almost always have roots in four to five days, new growth within two weeks, and they are usually ready to pot into my regular potting mix in a five inch pot within a month. As soon as I pot them up I prune just the growing tips out of my plants, this seems to force strength into the root system and instead of a long stringy plant with one stem, I get a nice bushy plant with loads of foliage and lots of branches to form bloom spurs.

IHA: What about temperatures, do you try to maintain an even temperature, or just let nature take it's course?

Ann Wayman: I try to never let my temperature drop below 60 degrees, though it has a time or two on particularly cold nights. My green house is huge (30x60) and it does have some cold areas. I try to be careful of which plants are hanging in these areas during the winter. *H. polyneura* loves these cooler areas as does *H. globulosa*, *H. carnosas*, *H. arnottiana* and a few others that I can't think of at the moment. Daytime temperatures can climb pretty high under the fiberglass even in the winter. A bearing went out in my swamp cooler on the hottest day of the year a while back and temperatures soared to 130 degrees inside the greenhouse two days in a row. I lost all my flowers and buds but the plants were not hurt at all.

IHA: What is the average summer temperature during the day in your area?

Ann Wayman: An average would be around 80 to 85 degrees but it can get very hot here in Southern Oregon, with temperatures of 110 degrees and up not unheard of.

IHA: What is the average daily winter minimum in your area, and what do you use for heat?

Ann Wayman: Probably close to 40 degrees. Our winters are usually not too severe, and even cold spells don't last but a few weeks. I have natural gas for heat but the blowers are run by electricity, if the power goes out, so does the heat, I keep two small propane heaters in there, just in case.

IHA: What potting mix do you use? Is it something you mix yourself, or can it be purchased already mixed?

Ann Wayman: I do use a product that I buy already mixed, but I add quite a lot of perlite until it feels right.

IHA: If someone can't obtain or duplicate your mix, what would you recommend as a substitute?

Ann Wayman: It doesn't seem to matter to hoyas what kind of mix they're in. I've grown them in everything from African Violet mix to plain old tap water. They do prefer something with a little substance like good compost and leaf mold, but do equally well in a soilless mix if they are fertilized regularly.

IHA: Everyone says that hoyas should be kept in small pots, what do you say? What size pots do you use yourself?

Ann Wayman: I root all my plants in a 4" stubby pot, then pot them up into a 5" basket when they have developed a good root system. All but the very largest plants are perfectly happy for a year or two in this size pot. When they become so root bound that roots are growing out of the top, or I can no longer keep them watered, I will replot into an 8", 10" or sometimes 12" pot, or, if I have seen blooms and have good pictures, I will make cuttings and throw the old plant in the compost heap.

IHA: (I heard a lot of shudders in the audience from that statement). Speaking of keeping your plants watered, what would be your advice to our members on watering?

Ann Wayman: There is no set answer on how to water plants, common sense, and the old finger in the pot method is as good as any. If the plant is dry to within two inches or so of the bottom of the pot, it's time to water it, Pot size, type of potting mix, and the weather has a great deal to do with how often plants will need water. In the summer I water once a week but sometimes the smaller pots will need water in between. During the winter I can usually get by with watering every two weeks, and some of the larger pots and the *Eriostemma* type hoyas get watered once a month, I can usually tell by the weight of the pot whether a plant needs water or not.

IHA: What type of plant food and/or additives do you use on your hoyas?

Ann Wayman: I've used Peter's fertilizers with perfect results for over twenty years and can't see any reason to change. In early spring when I see new growth emerging, I water a time or two with Peters high nitrogen formula (30-10-10), then switch to their African Violet formula (12-36-14) which is used exclusively the rest of the summer unless I'm pushing for bloom, in that case I will feed a time or two with their Root-N-Bloom formula (5-50-17). All of these formulas are

used at the rate of 1/4 (one fourth) teaspoon per gallon of water. I also use Superthrive as an additive (1 drop per gallon of water) and feel that it works near miracles for plants.

IHA: What pests and diseases have you encountered?

Ann Wayman: Green Peach tree aphids are my number 1 headache. I use Cygon as a drench in my plant soil (two teaspoons per gallon of water) every five weeks during the spring and summer and every three months the rest of the year. This poisons the entire plant, so I seldom see mealy bugs or scale except on newly acquired plants that haven't been treated yet. This treatment however doesn't seem to help the aphid situation, so I either have to spray them with alcohol and water, soapy water, or a pesticide which I hate using.

IHA: Do you treat individual plants only when a problem is discovered, or do you follow a planned pest control program? What do you advise your customers to use on their plants?.

Ann Wayman: As I mentioned, I use Cygon as a soil drench, so I guess that would be a planned pest control method, and keep a spray bottle filled with water and alcohol for spot treatments of anything that may have escaped the Cygon. The only thing I tell my customers to use is alcohol and water or soap and water, then rinse the plants well with clear water after a half hour. I found out years ago that if you tell someone to use 1/4 teaspoon of something, many will invariably use four teaspoons, destroy their plants, and swear that's what you said, so I just don't give advice anymore.

IHA: Have you tried natural or biological controls?

Ann Wayman: I put as many plants as possible out in my lath house and on my back porch as soon as the weather warms up in the spring. I suppose that could be considered biological control, as I never see aphids or mealybugs on the plants that are outside.

IHA: Have you seen a definite increase in hoyas sales in the past five years?

Ann Wayman: Absolutely! I used to sell maybe a hundred or so hoyas a year, in 1987 I sold sixteen hundred. I went back to work shortly after that and closed my greenhouse to all but friends, members and weekend

shoppers, so I lost track of how popular they were becoming. I belong to the Chamber of Commerce and my greenhouse is listed with them as a place to visit in Oregon on the weekends, so I have a lot of out of state travelers that come by out of curiosity and many leave with a hoyas plant or two and an application to join IHA.

IHA: When you have a problem with your hoyas, who do you turn to for advice?

Ann Wayman: The inspector for the Oregon State Dept. of Agriculture has been my leaning post for over twenty five years. I feel that I can get expert advice from him on everything from how to get a loan to log timber, to "what do I use to kill mites" he hasn't been able to come up with an answer for the aphids yet, except to tell me to move out of the peach orchard!.

IHA: Would you like to see hoyas cultivars and hybrids come on the market?

Ann Wayman: I can see them in my mind already. I wish I had the time and space to experiment with hybridization. Hoyas are beautiful anyway but I believe there is lots of room for improvement in some of the species. Michael Myashiro of "Rainforest Plantes et Fleurs" in Hawaii has an extensive hybridization program going and I have acquired several of his cultivars and hybrids. I've only seen one bloom so far but it looks very promising, and Michael has assured me that he has many that will "knock our socks off", I can hardly wait to get my hands on some of them.

IHA: Do you grow any of your plants under grow lights, or are you strictly a natural sunlight grower?.

Ann Wayman: I have light units that I used to grow African Violets under, some of the very fancy foliated plants do beautifully under these lights, the foliage remains gorgeous as long as the plants are kept a distance of 18" or more from the lights, if they are too close they seem to develop unattractive red or rust colored spots. I think this is probably caused by heat build up rather than the lights. Many hoyas do bloom under lights, and there is no doubt that they are beneficial if little sunlight is available. I personally like natural sunlight if I want bloom, If I'm after beautiful foliage, artificial light is perfect.

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Interview conducted by Grants Pass, Oregon member, Claudia Ganoung

# BIRD TRACKS



**R**obin #4..Rosemary Peterson, Long Beach, Calif... How about a better name for our Robin??!! My favorite potting mix: 1/2 perlite and 1/2 vermiculite for seedlings. I use a mix of that plus 1/2 sandy cactus mix I buy locally that has a bit of osmocote in it. Then for the things I have in the ground it's just plain dirt, (adobe clay type).

Robin #4..Lana Seely, Scappoose, Oregon...The potting mix I use is peat moss, perlite and charcoal. The peat is locally from some people in Warren, Or.who sell it by the truckload, and is very nice for everything from outside in flower garden to potted plants of begonias, hoyas and others. The people who sell this mix had it analyzed at Oregon State University, and it is 87% organic. It probably should be mixed with 1/3 regular soil, but most of the time I use it alone with perlite and charcoal, it does dry out sooner than some, so I set the pots on saucers or in a squire pan of some sort, water them and pour this same water through again if it drains through pretty quick the first time. The pots aren't so heavy in this mix either. The one thing I haven't done before is add a little bone meal to my potted plants now and then, but I'm going to start doing this. So far I've got a lot more hoyas coming into bloom this year, so maybe I have the right combination at last. I fertilize with fish, then 2 to 3 weeks later I use 0-10-10, then fish again. Maybe I should fertilize every time I water but I don't.

Robin #4...Vicky Graves, White City, Oregon...My potting mixture consists of 2 parts soil, 1 part vermiculite and 1 part perlite - but the potting soil I buy already has peat moss and perlite added. I have lots and lots of growth and blooms this year.

Robin #4...Jackie Pendergast, Mahtomedi, Minn...I usually start with a commercial potting mix (for wet-ability) then add perlite, vermiculite and peat to the touch and depending on what is on hand. Not exactly scientific tho - just like Grandma,s recipes!

## A View from the top

David Liddle has given us some suggestions for corrections that should be made to the hoyas identities in our picture sets and those that appear in Fraterna.

Suggested corrections: In picture set volume #5, *H. nicholsoniae* #39 is more correctly, IML 39 *Hoya nicholsoniae* 'Kuranda' Qld.. Fraterna front cover 2nd. quarter 1991, IML 557 *Hoya* species from Sabah. Pictures volume #4 labeled IML 454 *Hoya parviflora* was purchased as Perpich F-454, and should probably be labeled HSI #458 until properly identified. Pictures volume #1, *Hoya australis* R. Brown is more correctly *Hoya australis* sub-species *australis*. Pictures volume #3, *Hoya gracilis* should retain the epithet *Hoya* species from Ceram until identification is proven. Pictures volume #4, *Hoya* sp. USDA #354246 is the plant Warburg named *H. hellwigiana* which is more correctly *Hoya nicholsoniae*. *H. australis* IML 33, *H. australis* ssp. *tenuipes*, collected on the Coen River and not Cohn. Pictures volume #9, *H. sp.* unidentified #BSI-1 should read *H. subcalva*. Pictures volume #10, *H. megalaster* and not *H. macgillivrayi*.

David and Dr. Paul Forster are doing very extensive work in the *Hoya* genus, and David has hinted that some correct identities may soon be forthcoming. We will be bringing these corrections to you as soon as they are available. Ann Wayman

## Sign Up

In order to defray the rising costs of bringing our bulletin to you with 4 to 5 quality photos without raising subscription rates at this time, we have made available to all members and businesses, the "Sponsor a picture program". Only \$25.00 to sponsor an extra picture in "FRATERNA". One of our lovely photos will be displayed with your name as sponsor, your address will be added if desired. Make check to IHA, and send to SPONSOR c/o IHA, P.O. Box 5130, Central Point, Oregon, 97502. Include name and address desired for footnote to the photo.

**Photo IML 37 *Hoya nicholsoniae* sponsored by Ann & Jim Wayman In memory of charter member Fred Hutfletz. \$25.00**

**Photo IML 232 from Kuching, Borneo sponsored by Ann & Jim Wayman in memory of Charles Krause, former member of our Board of Directors. \$25.00**

### **IML #232 from Kuching Borneo**

While we're picking numbers, let's pick a dainty little semi-miniature with white and red flowers. This cute little hoya is very similar in appearance to *H. lacunosa*. It has a very fuzzy, rolled back corolla, but with a cranberry red corona. The flowers however, are significantly larger, and have a different, but very nice fragrance. The foliage, except for being a much lighter color, is practically identical with *lacunosa*, and the growth pattern is much the same. This is a very cold tender plant, and objects to temperatures below 60 degrees. It grows well in any loose, fast draining mix, and likes to be kept evenly moist. It has an aversion to very bright light, and seems to prefer the shadier spots in the greenhouse, or a nice warm bathroom or kitchen window in the house. Frequent, but very light feedings will keep this plant in bloom most of the year.



I have received many requests for sources of where to buy the plants or cuttings of the flowers that appear in our featured pictures. I will be stating whenever possible where I purchased the plants, and other known sources.

David Liddle has agreed to help with identifications of some of our pictures that may not be correct. The pictures in our picture sets and the featured pictures in this bulletin are labeled to the best of our knowledge with the names and/or numbers that were on them when purchased, if these names are incorrect, then we want to remedy this situation. I can't think of anyone better equipped for the job than David Liddle. David is a collector/grower, a lover of hoyas as well as many other plants, and co-author of several books on hoyas.

# Notes from New Zealand

## HOYAS IN DISTRESS

This is the time when most of us are likely to have casualties in the hoya collection. Severe frost damage is obvious and irreversible but I am often asked about plants which lose their sheen, leaves appear limp and leathery and, though not really dead, are certainly not bursting with health. This condition may appear at any time of the year but winter does seem to be the most likely time.

Plants which have been allowed to dry out completely may look like this - in fact it is the "norm" for some species in the "dry season" in their native habitat - but within a few days after a thorough soaking, they begin to show signs of recovery. However when plants have not been subjected to extreme dryness, the condition is much more serious, but definitely not hopeless. First, remove plant from pot and examine roots for root mealy bug. A severe infestation can be the sole cause of plants not thriving. Before repotting, as outlined by Karl Johnson in August talk, make this check. Examine carefully the area of stem immediately above the roots. A gentle scrape with fingernail may reveal the outer skin is loose and the area beneath is brown and spongy. This area may be less than 1 cm long but the plant is effectively ringbarked and cannot receive nutrients from its roots which will still look very healthy. If your plant is suffering from this condition, take a sharp, clean knife and cut stem in sound growth above the rot. You may then re-root the entire plant in its existing situation or cut it up into smaller pieces. Large pieces must be well supported during re-rooting. Naturally these distressed cuttings will take a little longer than healthy cuttings to root but, in most cases, they will recover within a few weeks, especially at this time of year. (I assume Spring) Fresh potting mix should be used. I like to use a little pumice sand alone in the area of the stem end. Mist unrooted plants on warm days, using tepid water with a little phostrogen added. I have successfully resuscitated plants up to 6 months after first signs of distress were noticed.

I cannot pinpoint the exact cause of this condition but once or twice a year drenching of potting medium with fungicide and insecticide will go a long way towards preventing it occurring.

## PLANT PROBLEM SOLVED IN NEW ZEALAND

At a recent meeting, various problems that can effect hoyas was being discussed. A plant brought in by one of our members was examined. Some of the stems were entirely bare and it was suggested that the problem was lack of water. The owner suggested the real reason was that the stems were regularly trapped in the bathroom door, and that for her the advantage of growing the plant there was that, as her family could not stand the smell, they did not loiter in the bathroom.

## Hoya Plants from Leaf cuttings

Is it possible to grow plants from just a leaf?. I have spent twenty one years of my life growing African Violets by this method, so I know for sure that it can be done, at least in the Gesneriad or African Violet family, it is also possible in the Begonia, and Peperomia families. Whether it is practical to try to grow hoyas by this method would be determined by how desperate you were to save a plant. An experiment that I tried with five hoya leaves four years ago, is still in the experiment stage. One promptly rotted, the other four did strike roots after a couple of weeks and the leaves did grow in size. From August of 1987 until now, August of 1991, these same four leaves are just leaves with roots. Given enough time they may form a plant, however, unless I was sure that these were the only pieces of the last plant of their kind on earth, I would question whether it was worth the trouble. On the other hand, I have made what are called mallet cuts, which is merely a leaf that is still attached to a node of the mother plant on one side. Planted sideways or straight up, this type of cutting will usually produce a good sized plant in about eighteen months.

*Leslie Jackson*



## Hoya pubicalyx var. Chimera

**U**ndoubtedly one of the most desirable of all hoyas. This is an easily grown plant, relatively cold tolerant, and a prolific bloomer. It is well clothed with glossy, attractive foliage. An easy plant to start from cuttings, and grows quickly into a mature plant. This chimeral clone, in addition to the silvered leaves of the species exhibits sectional colors in beautiful shades of wine/bronze. The midribs, and often new growth will have the same attractive coloration.

Lets look at variegation and chimeras in a cursory sort of way. Variegation is widespread in the plant kingdom, even in the hoyo genus. Chimeras are a little more rare. Variegation may be either irregular in form, or regular and more or less controlled. As with most botanical phenomenon, this can become a very complex topic. For a very long time we have had variegated hoyas. *Hoya picta* var. *argentea* and *Hoya picta* var. *aurea* referred to in 'Revue Horticole' 1853, page 277 is a variegated species many of us are familiar with. Its regular (?) variegation is such that the lighter colored tissue is exhibited in the central portion of the foliage, with the normal green toward the margins. The opposite of this color arrangement is manifest in the variegated species *Hoya variegata* Siebold, described in *Annales Societe Royal D' Agriculture et de Botanique de Gand* by Charles Morran, 1846, Volume 2, pages 401-402. From the dates of these references,

you can see that these hoyas have been around a long time indeed. As a result, astute growers have made some highly desirable selections from these variegated plants. There is also the same two types of pattern variegation exhibited in the *Hoya compacta* group. In more recent times there have appeared variegated forms of *Hoya bella* Hooker, *Hoya carnosa* var, *Krinkle 8*, and *Hoya australis* R. Brown.

One other type of variegation, not found among hoyas that I am aware of, is the mosaic, or color breaking pattern due to virus. Transmission of variegation from parent to offspring may take place due to nuclear factors or by extra nuclear means such as plastids or cytoplasm. When we get to the point where we can grow out populations of these plants, selfed, or crossed with green clones, we will be able to study the inheritance ratios. This is not far off!

Chimeras are a special type of variegation. Chimeras that arise from seedling populations; as our clone most likely has, are thought to occur between the one celled zygote stage and the many celled chimeral embryo, (In addition to this rather natural evolution, a chimera can be created by grafting). Chimeras in the outer layers of plant tissue are classified as "periclinal", one layer of one genetic constitution overlaying another layer of a different genetic constitution.

Based on microscopic examination and close observation, I believe our beautiful clone is still another kind of chimera; termed a sectional chimera and more specifically a "mericlinal" type. In this type of chimera the leaf may be composed entirely of one genetic type or another, or it may be a combination of types and exhibit overlaps and sections of colors. It is possible to have three to five different genetic layers in one plant.

*Hoya pubicalyx* var. *Chimera* was originally sent to me in 1980 from Manila by the late Peter Tsang. On one leaf in permanent ink Peter had written "Blood Red". I have no knowledge of this clones origin, or if it was recognized as being a chimera. There is no doubt that it is a variation or mutation of a Philippine species, (*Hoya pubicalyx* Merrill published in *The Philippine Journal of Science*, Vol. 13, C5, Page 331). On the several collecting trips I have made to The Philippines, I have not seen this particular type of clone in any garden, or flower show, nor has it ever been sent to me by Philippine native plant collectors.

Being a mericlinal chimera (?), this clone can exhibit various solid colors of flower clusters along with the beautifully marked and varied floral patterns. In addition to the variegated flower clusters, it is also possible to have peduncles of solid colors like "Red Buttons", "Bright One", and "Pretty One". Most striking and interesting are the floral colorations that arise from the mixed layers of tissue where the corollas exhibit sections of different colors and striking contrasts in one crown or even in a portion of one scale. Also of note is the odd, ball shaped corona on about half of the flowers

in each cluster, a striking contrast to the usual star shaped crown of the hoya flower, and added suspicion of a defective or mutant gene.

*By Dale Kloppenburg*

#### DO YOU JUST BELONG?

- Are you an active member, the kind that would be missed,
- Or are you just content that your name is on the list?
- Do you attend the meeting and mingle with the flock,
- or do you sit at home and criticize and knock?
- Do you take an active part to help the work along,
- or are you satisfied to only just belong?
- Do you do your part with your hand upon the stick,
- or do you leave the work to others, then talk about the clique?
- Think this over member, you know right from wrong,
- Are you an active member, or do you just belong?

Dianne McKay

Reprinted from *Auckland Epiphyllum and Hoya Society*



**Variegated flower buds of chimera**

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H. gracilis  
H. pubicalyx (Dark Red Seedling)  
H. laurifolia (this is PNG 4)  
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H. kenejiana  
H. kerrii (Fuzzy leaf)  
H. acuta (Green Form)  
H. pachyclada  
H. obovata

## Volume 4

H. fuscomarginata  
H. species # 454 parviflora (long skinny leaf)  
H. polystachya

H. acuta (lemon scented)  
H. species # CI-1244  
H. species # F-484  
H. species USDA # 354246  
H. pubicalyx Cv. Red Buttons  
H. species (New Guinea Gold)  
H. nicholsoniae IML 37 (Golden Yellow, pure white corona)

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H. cummingiana  
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H. coronaria Form 1  
H. limonaciae  
H. bilobata  
H. Spec. PNG-6  
H. tsangi, Burton  
H. diptera  
H. acuta (bronze)  
H. fungii  
H. diversifolia-B

## Volume 7

H. carnosa cv. "Krinkle 8"  
H. Sp. Saba Malaysia  
H. Sp. WMZ  
H. polyneura  
H. Sp. WMZ (Back of flower & calyx)  
H. pubera  
H. acuta Penang  
H. plicata  
H. carnosa cv. "Dapple Gray"  
H. keysii

## Volume 8

H. purpureo fusca (The real one)  
H. odorata  
H. pottsii

H. Sp. IML 33  
H. picta  
H. pseudo littoralis  
H. nicholsoniae (from Logee's)  
H. micrantha  
H. vitiensis  
H. curtisii (foliage)

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## NEW ITEMS

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## Volume 9

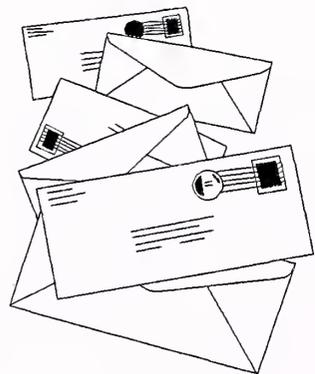
H. sp. USDA # 354236  
H. merrilli  
H. affinis  
H. darwinii  
H. pubicalyx 'Chimeara'  
H. sp. 'Gold Star'  
H. sp. # BSI-1  
H. archboldiana (Red Form)  
H. finlaysonii  
H. naumanii

## Volume 10

H. pubicalyx 'Silver Pink'  
H. rupicola  
H. vittelina  
H. sp. IML # 234  
H. meliflua  
H. engleriana  
H. megalaster  
H. archboldiana (Pink Form)  
H. sp. Bangkok Red  
H. sp. cebu

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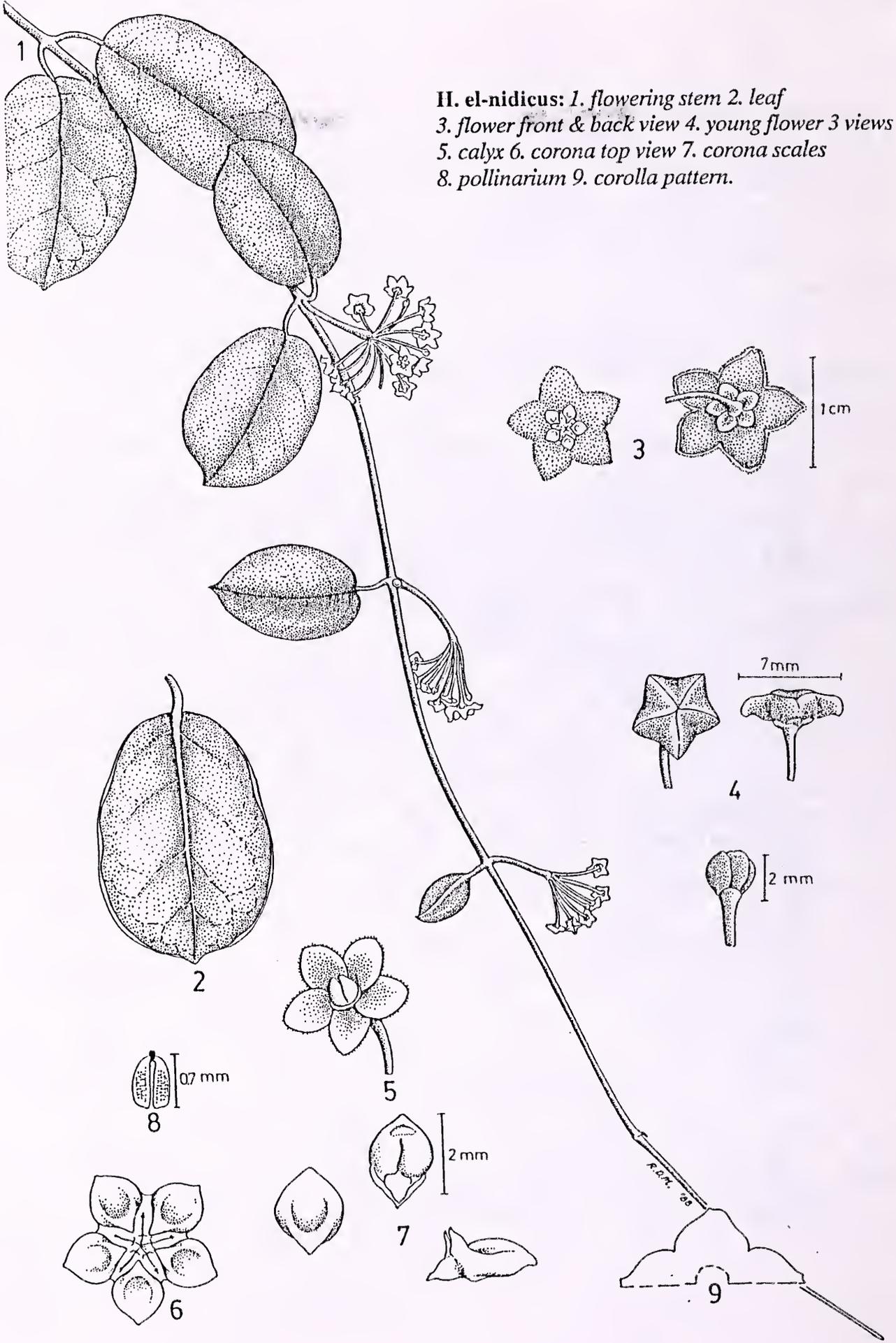


**4**

**NEW HOYA SPECIES**

**FROM**

**THE PHILIPPINE ISLANDS**



***H. el-nidicus***: 1. flowering stem 2. leaf  
 3. flower front & back view 4. young flower 3 views  
 5. calyx 6. corona top view 7. corona scales  
 8. pollinarium 9. corolla pattern.

***Hoya el-nidicus kloppenburg* n. sp.**

Type # 41931 El Nido Rest area, Palawan (northern) Philippines, vine on limestone ledge, collected by Professor Juan Pancho 15 August 1988.

Suffrutex parum ramosus, alte scandens. Rami filiformes, flexuose, laxe foliati, tereste, glabri. Folia patentia vel patula, petiolata, ovata vel obovata, acuminata (apiculata, basi breviter cordata, textura coriacea, utrinque glaberrima. Inflorescentiae umbelliformes c. 6-12 florum, pedunculatae, pedunculo pedi cellisque glabris. Calycis segmenta ovalia obtusissima, margine breviter ciliata, quam corolla multo minora. Corolla rotata, usque infra medium 5-fida, extus glabra punctata, lobis ovatis, subacutis vel obtusis, intus dense et minute papillosa. Coronae foliata patentia, subhorizontalia, superne subconvexa, ovata, antice apiculata extus obtusa vel brevi apiculata lateribus incrassata- rotundata. Pollinia oblique, oblongoidae, translatoribus brevissimis, retinaculo minutissimo rhomboideo.

The accompanying drawing is by R.D. Medina (Botanical Artist) of the University of the Philippines at Los Baños, Laguna, Luzon. It was drawn from live material in 1988.

An epiphytic ornamental vine, with cordlike, loosely leaved branches, with long internodes c. 15 cm. long. Leaves outspread, 8.5 - 10.3 cm. long, at the widest above the middle 5.1 - 6.8 cm. wide, with the petiole round, glabrous, 1.7 cm. long, curved. Inflorescences pendulous, umbel like, thick 3 - 4 cm. long, bare; pedicels c. 1.1 cm. long, greenish white to reddish pink with age, bare. Calyx lobes small, with ciliate margins, 2.7 mm. long 2.5 mm. wide below the middle, papillose outside, glabrous, membranaceous, no ligules seen. Corolla rotate, white, the margins reflexed, patently white, villose along the edges, c. 1 cm. in diameter. Corona scales 5 spreading, pinkish, 3.5 mm. long, apex extending somewhat upward, anthers greatly exceeding the apex, outer end abruptly blunt, turned down, top sides broadly rounded, linearly lined, center above raised, underside shortly channeled. Ovaries stubby.

Among the rotate Philippine species with pubescent inner corolla surfaces and ciliate calyx lobes, the flowers are delineated from *H. pubicalyx* Merrill by being smaller and with the corona scales much broader and shorter. Also the calyx surface on this species is glabrous whereas *H. pubicalyx* Merrill is pubescent, as is that of *H. halconensis* Kloppenburg. The foliage is larger and of a different shape than that of *H. cagayanensis* Burton, and has a much shorter peduncle, like this species the calyx lobes are glabrous with ciliate margins, however this new species has broadly round lobes as opposed to the somewhat linear lobes of *H. cagayanensis* Burton. The flower size is larger, and is distinctive and unique among Philippine *Hoya* species.

This species is named after the international island resort area of El Nido, where it was discovered. This is a very rugged, rocky and extremely isolated area into which Dr. Merrill did not send his collectors.

**Other measurements:**

Sinus to sinus 4.0 mm.

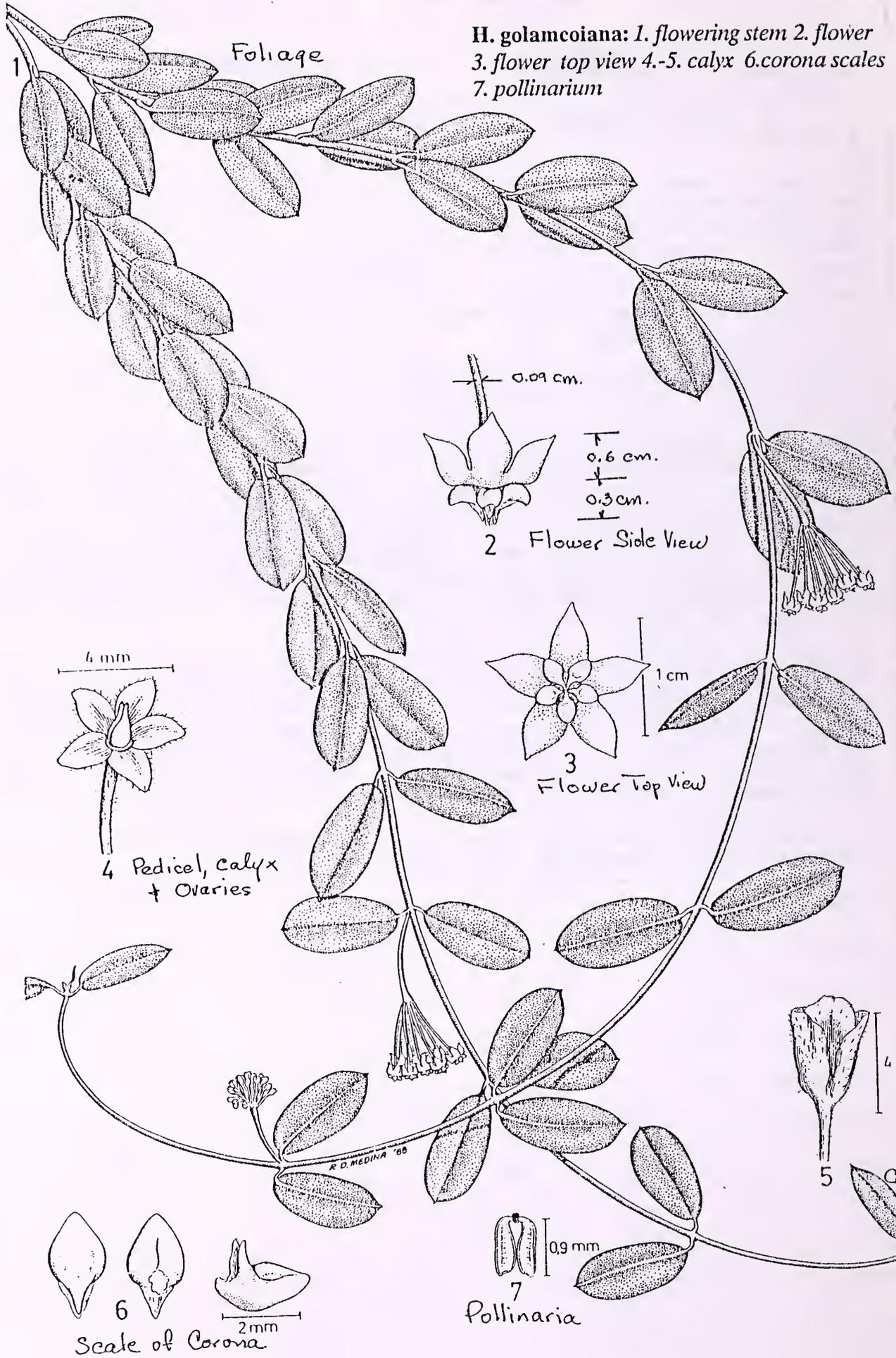
Sinus to collar 3.3 mm.

Sinus to center 3.6 mm.

Sinus to apex 4.0 mm.

Retinaculum 0.3 mm. tall, 0.1 mm. wide.

Pollinia 0.7 mm. long, 0.3 mm. wide at apex.



*Hoya golamcoiana kloppenburg* n. sp.

Type sheet #41930 El Nido Rest Area Palawan, Philippines found by Professor Juan V. Pancho 15 August 1988. Holotypus: CAHUP.

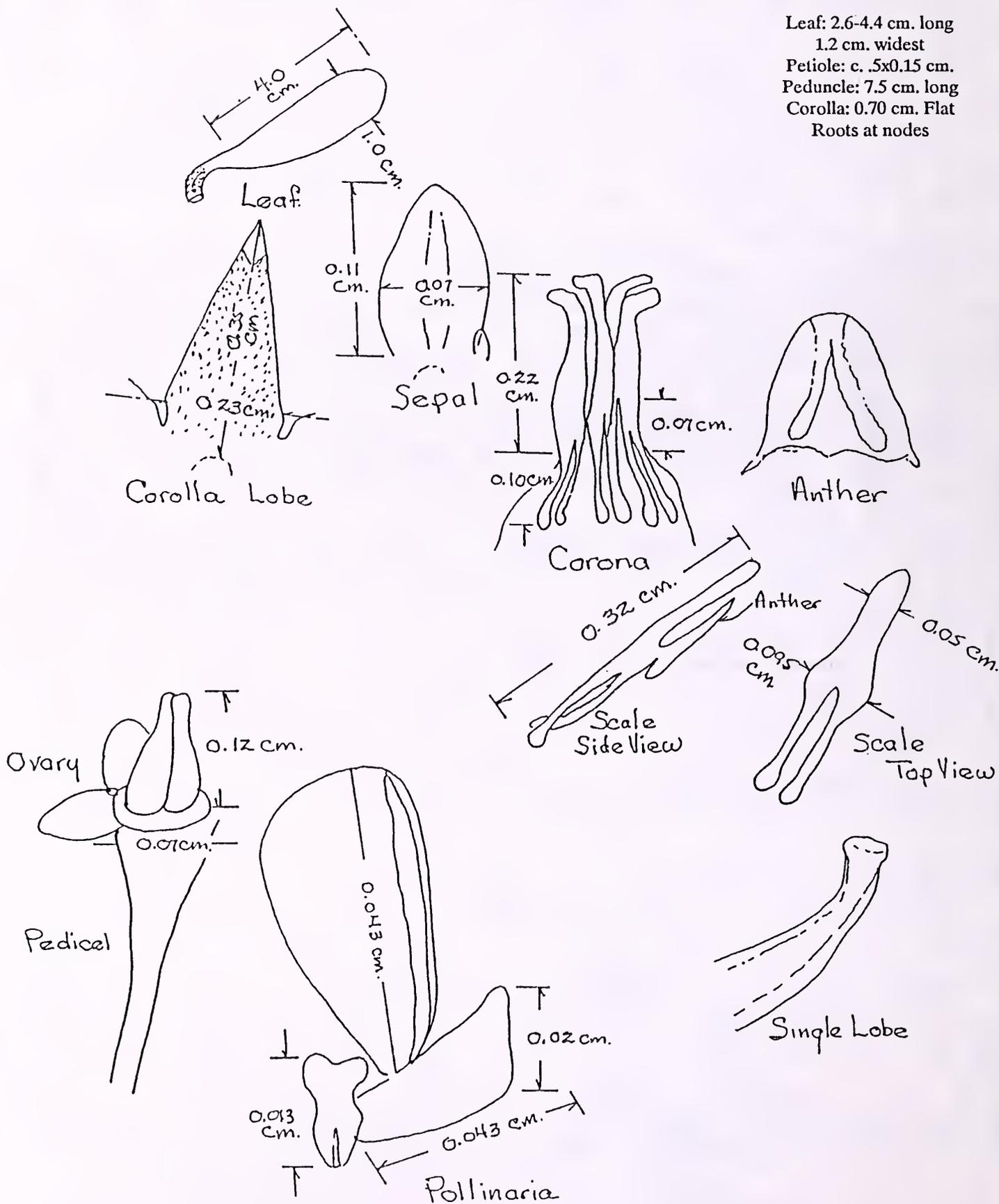
Suffrutex parum ramosus, dependens gracillimus. Rami filiformes, flexuosi, bene foliati, teretes, glabri. Folia laxa, breviter petiolata, oblongo-elliptica, obtusiuscule acuminata, utrinque glabra, petiolo glabro. Inflorescentiae umbelliformes c. 15 florum, pedicellis filiformibus, sparsum pubescentia. Calycis foliola, lanceolato-ovata, subacuta, margine ciliata, quam corolla paulo brevior. Corolla subrotata, usque ad tertiam partem basilarem 5-fida, extus glaberrima, intus sparsum pubescentia, lobus recurvis, acutis. Coronae foliola patentia marginum exteriores versus leviter gibbo obscure ornata, apice apiculata, extus subacuta. Pollinia oblique oblongoidea, translatoribus brevissimis, retinaculo minutissimo rhomboideo.

This species differs from other known *Hoya* species. Its foliage blades are similar to *H. cumingiana* Decaisne but it is petiolate and on a dangling plant. It was collected by Professor Juan V. Pancho at El Nido rest Area Northern Palawan Is., Philippines growing from cracks in limestone areas. In its preferred habitat it is also similar to *H. cumingiana* Decaisne. The leaves are 5.3 cm. long and 2.7 cm. wide at the widest portion, entire, although in dried specimens the midrib and five pairs of pinnate nerves are visible. It is a densely leaved hanging vine with almost sessile petioles, .3 cm. long. c. 15 white reflexed flowers per umbel. In this respect it also differs from *H. odorata* Schlechter, which has few and larger flowers. Internodes are 3.0- 5.0 cm. long, stems round, 0.3 cm in diameter. Peduncles are 2.7 cm. long, sparsely pubescent. Pedicels are 2.4 cm. long, 0.09 cm. in diameter, sparsely pubescent. Calyx lobes sparsely ciliate about 0.4 cm. in diameter, ligules present, with dark tips. Corolla reflexed, very finely pubescent, 1.5 cm. in diameter, flat. The species is distinctive and attractive. Other measurements and detail can be seen in the accompanying drawing by Ruel D. Medina, botanical artist, drawn from live material in 1988 at the University of the Philippines, Los Banos, Laguna Province, Philippines.

This new species is named in honor of Andres S. Golamco Jr. who has devoted much time and love to Philippine plants and who has done a remarkable job in completing a comprehensive publication on the Philippine orchids.

*Hoya loherii* Kloppenburg sp. nov. s.n. U.C. Herbarium  
 A. Loher Parangtingan Rizal Prov. Luzon, Philippines  
 March 1915

Leaf: 2.6-4.4 cm. long  
 1.2 cm. widest  
 Petiole: c. .5x0.15 cm.  
 Peduncle: 7.5 cm. long  
 Corolla: 0.70 cm. Flat  
 Roots at nodes



***Hoya loherii kloppenburg* sp. nov.**

Holotype sheet s.n. A. Loher (UC) from Paningtingan, Rizal Prov., Luzon collected 15 March 1915. Section Acanthostemma.

Suffrutex, epiphyticus, parum ramosus, scandens. Rami filiformes, flexuosi, laxe foliati, teretes, glabri. Flora erecto-patentia vel patula, petiolata parvula, anguste obovata, obtusa, coriacea, utrinque glabra, enervis, petiolo brevi, superne leviter sulcato, glabra. Inflorescentiae graciliter pedunculatae, umbelliformes 4-8 florum, pedunculo tereti, glabro, pedicellis filiformibus, glabris. Calycis foliola ovata, obtusiuscula, glabra, quam ligulae presenta, corolla multo breviora. Corolla rotata, usque ad tertiam partem inferiorem, 5-fida, extus glabra, intus subinconspicue papillosa, prater apice glabris, lobis ovatis, acutis. Coronae foliola erecta, cylindraceae-columnares, basi versus paululo incrassata, antice oblonga obtusa, extus apicebus manifeste bilobata.

This small flowered, small leafed species is named for the collector A. Loher who did extensive botanical work in the Philippines from 1907 to 1915. He is the author of *Hoya darwinii* Loher. I take special pleasure in naming this unique species after him. It was collected 76 years ago. The species has the most upright columnar corona of any hoyia species I have examined in this section. In addition it is unique in the extremely long bilobed extensions which are about one half as long as the entire scale, fleshy and knobby at the external end. The apex (inner lobe) is flat and upon drying the end bends outward at 90 degrees to the column. The anthers are unusual in being attached well down near the center of the scale and do not extend far up the scale. The pollinia are rather broad with rounded ends, with keels and narrow vacuoles. Translators are winged, retinaculum small, with broad inner apex and blunt and bifid outer lobe.

**Internodes:** about twice as long as the leaf blade, glabrous, round, flexible. Rooting extensively at the nodes.

**Leaf blade:** 2.6-4.4 cm. long, subovate, enervis, glabrous 1.2 cm. at the widest.

**Petiole:** c. 0.5 cm. long 0.15 cm. in diameter, grooved above, bare, rugose.

**Peduncle:** 7.5 cm. long, round, glabrous.

**Pedicele:** 1.2 cm. long, threadlike, round, flexible, glabrous.

**Calyx:** lobes convex, membranaceous, ligules present at base, ovate, 0.11 cm. long 0.07 cm. wide below the middle, apex subrounded, edges ragged.

**Corolla:** diameter 0.70 cm. flat, inflexed in dry specimen, narrowly triangular. apex acute, outside glabrous punctate, inside papillose except for a triangular apex area which is glabrous, lobes 0.35 cm. long 0.23 cm. widest just above sinus, cut 2/3 to 3/4 the distance to the base.

**Corona:** extremely upright like Dodecatheon flower, coronal lobes with very unusual rounded inner apex 0.05 cm. wide, on drying a considerable portion bends outward at a 90 degree angle, overtopping the anther appendage by a considerable distance, spatulate, 0.32 cm. long, outer (lower) lobes divided into extending lobes, fleshy, evidently round with knobby apex. Widest just below the middle 0.095 cm. Anther broad, membranaceous., attached just above the anther wings, low down on the scale. wings 0.07 cm. long, prominent, narrowly elongate opaque yellow.

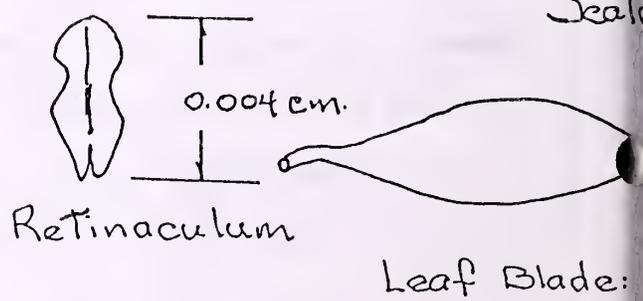
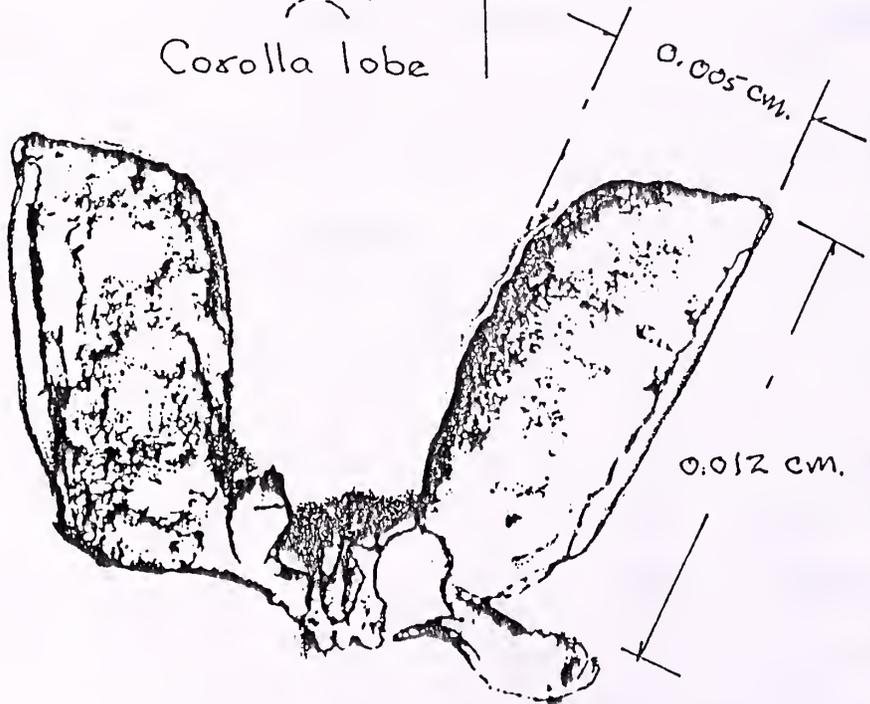
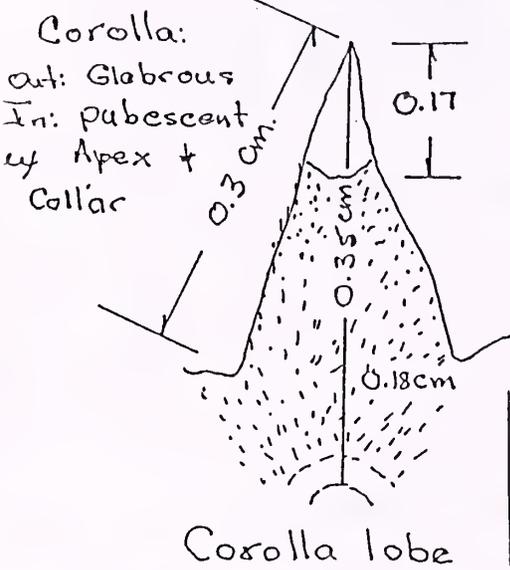
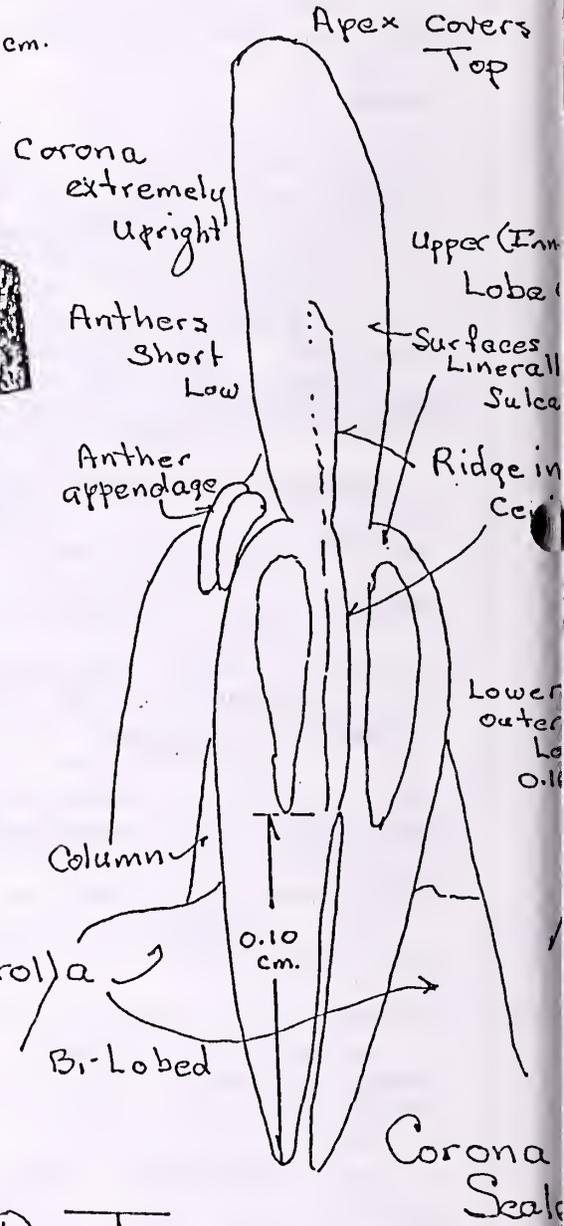
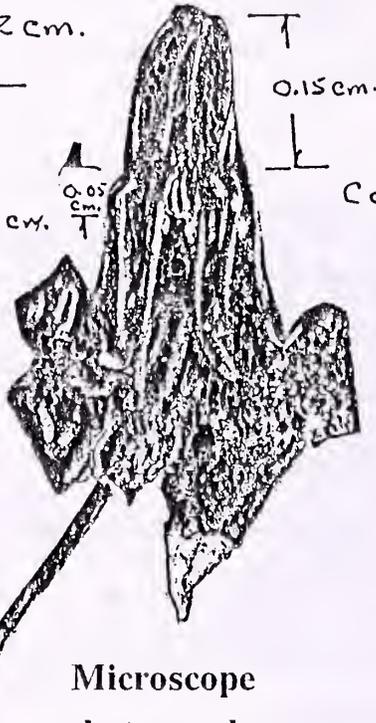
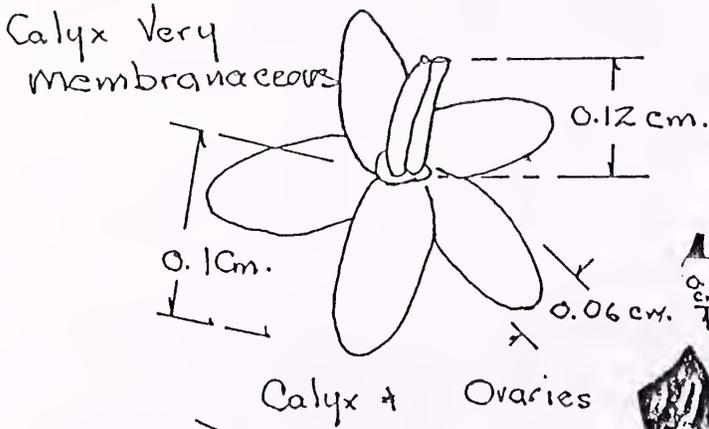
**Pollinia:** truncate, keeled from apex to near attachment to translators, 0.043 cm. long 0.02 cm at the widest.

**Translators:** broad spatulate and winged, 0.02 cm. long.

**Retinaculum:** rounded inside, blunt and bifid outside 0.013 cm. long.

*Hoya rizaliana* Kloppenburg sp. nov. s.n. U.C. Herbarium  
 A. Loher Montalban Rizal, Luzon Philippines  
 October 1909

*Petiole: 1-1.1 cm. long*  
*Peduncle: 9-17 cm. long*  
*Pedicel: 1.0 cm. long*  
*Flowers: Very Small*



***Hoya rizaliana kloppenburg* sp. nova.**

Holotype sheet s.n. A. Loher collected at Montalban, Rizal Province, Luzon, Philippines, in October 1909. Acanthostemma Section.

Suffrutex, epiphyticus, parum ramosus, scandens. Rami filiformes, flexuosi, laxe foliati, teretes, glabri. Flora erecto-patentea vel patula, anguste ovata, obtusa, textura coriacea, utrinque glabra, enerva. Inflorescentiae graciliter pedunculatae, umbelliformes, c. 6-florae; pedunculo tereti, glabro; pedicellis filiformibus, glabris. Calyx foliola angusta ovata, obtusa, glabra, quam corolla multo breviora. Corolla reflexa, usque ad tertiam partem inferiorem 5-fida, extus glabra, intus pubescenta. Coronae foliola dorso erecta cylindraceae-columnares, basin versus paululo incrassata, antice oblonga obtusa, extus apicebus bilobata, columna longa.

This species is of the Acanthostemma section with long thin outer coronal lobe extensions with bilobed extensions. This outer lobe does split on drying and is difficult to recognize as a species of this section. The flower is small, very upright and columnar. The corolla is reflexed and the column is long. The foliage is small essentially ovoid, glabrous and enervis with a short petiole. The small rose colored flowers are borne on glabrous peduncles with flexible and threadlike glabrous pedicels. The calyx lobes are ovate, glabrous and convex due to long outer coronal lobes and consequent reflexed corolla with a long column. The ovaries are relatively long, narrow and slightly bottle shaped. The corolla is parted to below the middle on the five lobes, glabrous outside and pubescent inside with acute glabrous apex, reflexed in the fully opened flower. The coronal processes are very upright, finely lined above. The inner lobe is thin and spatulate with ends turned over the center (stigma apex). The lower lobe is longer, keeled down the center 1/2 in upper lobe 1/2 in lower lobe, the upper surface on either side is cupped. The anther wings are prominent, thickened, buttery opaque yellow. Anther apex is short, not exceeding inner apex. The pollinaria are small, the pollinia wide and truncated, keeled and with a narrow vacuole, attached well in on the flat winged translators. The retinaculum is relatively small. The species is unique and distinct from other Hoya species.

This unusual species is named for Dr. Jose Rizal, former ophthalmologist turned patriot to rid The Philippines of Spanish rule in the late nineteenth century. Captured and shot at Luneta, Manila in 1896, he is now the most revered of all Filipino patriots. It is my pleasure to name this new Hoya species in his honor.

**Internodes:** Twice as long as the leaf blade or more, glabrous, round, flexible.

**Leaf Blade:** 3.6 cm.x 1.2 cm., ovate tapering more toward the petiole, enervis, glabrous.

**Petiole:** 1-1.1 cm. long, round, glabrous.

**Peduncle:** 9-17 cm. long, round, glabrous.

**Pedicel:** 1.0 cm. long, threadlike, round, flexible, glabrous.

**Calyx Lobes:** convex, very membranaceous, ovate, obtuse apex.

**Corolla:** outside glabrous, inside pubescent, reflexed; lobes cut to the center or slightly below, 0.35 cm. long. narrowly triangular with acute apex, rose in color; apex to sinus 0.3 cm, sinus to sinus 0.18 cm..

**Corona:** process very upright, columnar with long column. Inner apex spatulate 0.055 cm. broad. Inner lobe 0.23 cm. long, lower lobe longer, keeled, with a ridge down the center, about 0.06 cm wide and both are linearly lined on the dorsal side. Apex to base of corolla 0.16 cm.. Pollinia 0.005 cm. wide at truncated apex, 0.012 cm. long, keeled with narrow vacuole. Translators broad and flat, attachment point of pollinia well to the center near the small retinaculum.



JAN 27 1992

ANICAL  
GARDEN

# FRATERNA

Official bulletin for  
"International Hoya Association"  
4th. Quarter 1991  
ISSN 1055-4564



*H. imperialis* Lindl. Var. *Rauschii*

# INTERNATIONAL HOYA ASSOCIATION

(Formerly Hoya Society-West Coast)

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November 15 for the December issue

We also accept advertising on a per year basis. You may deduct 10% for the same ad running consecutively in four issues. Payment in advance, Please!

## Back Issues

We now have the thirteen original issues of the Hoya Society -West Coast newsletter bound as one publication. The price of this bound text is \$25.00 U.S. and \$55.00 shipped airmail overseas. Due to the extra pages and pictures in our new publication "Fraterna", we must, out of necessity, increase our prices for back issues of "Fraterna" to \$4.00 per issue, \$6.00 per issue shipped airmail overseas.

## Jackets

Remember, we have some very beautiful jackets available with our 'International Hoya Association' emblem emblazoned across the back. These are wonderfully warm, fully lined nylon jackets in a dozen gorgeous colors. We also have tee shirts, and some of the girls are even sporting sweat shirts with our emblem. Colleen Christian is in charge of all jacket and tee shirt orders. Colleen informed me that our price on the jackets has been increased by \$1.50 by the manufacturer, so please write for the latest prices before sending your money. Colleen Christian, 260 Greenleaf, Eugene, Or. 97404

## THE LORD GOD PLANTED A GARDEN

The Lord God planted a garden  
In the first white days of the world,  
And he set there an angel warden  
In a garment of light enfurled.

So near to the peace of heaven,  
That the hawk might nest with the wren,  
For there in the cool of the even'  
God walked with the first of men.

The kiss of the sun for pardon,  
The song of the birds for mirth-  
One is nearer God's heart in a garden  
Than anywhere else on earth.

Dorothy Frances Gurney

# Hoya imperialis Lindley

**H. imperialis** bloomed magnificently on the patio of Henry & Elsie Raphael in San Diego, California. Always quick with the camera, Henry captured this beautiful photo for our cover.

During the 145 years that this species has been known, much has been written extolling its virtues.

*Hoya imperialis*, Lindley Bot. Reg. sub t. 68 (1846) Malaya.

## INDEX KEWENSIS

Under the section 'New Garden Plant' "This is the most noble climbing plant we have ever seen".

Beautiful specimens in flower have for some months been in our possession, sent from Borneo by Mr. Lowe, Junr.; but we have refrained from publishing an account of them, under the supposition that no living plant had reached England. We are now, however, able to state, that the plant is in the possession of Mr. Lowe of Clapton, who has already begun to put it into the trade. Imagine, then, a true *Hoya*, with woolly stems, leaves six inches long, and clusters of the most magnificent flowers, forming a diadem of ten rays; each flower fully three inches in diameter, and with the delicate texture of the common *Hoya carnosa*, and you will have some notion of this superb species. In Mr. Lowe's letter from Sarawak,

dated January 12, 1846, we have the following account of its discovery. "On the next day, when in the territory of the Gumbang Dyaks, I found another curious plant, belonging to Asclepiads; it is an epiphytal climber; there was but one individual, growing from the decayed part of a tree, also overhanging the river. The flowers are large and in umbels; the leaves are leathery; and the stem abounds in a white, perhaps acrid, juice. The contrast between the purple of the petals and the ivory white of the parts of fructification renders it highly beautiful."

There isn't much that can be added to this, other than the statement that "...this plant requires moderate amounts of water even in the summer, but in winter very little is sufficient" from THE COTTAGE GARDNER, Oct. 4, 1852 page 50.

"*Hoya imperialis* requires a strong rich soil in order properly to bring out its numerous large thick flower-trusses, which are produced from different parts of its twining stem". CURTIS'S BOTANICAL MAGAZINE, Sept. 1, 1848 Tab. 4397.



*Hoya imperialis* Lindl. Var. *Rauschii*

There appears to be two varieties of *H. imperialis*, the variety *Rauschii* which has a smaller, wavy leaf, and the variety that is being sold in trade as "The Bunny Ear". I have grown both of these varieties for a number of years and the longer leaved or "Bunny Ear" seems to be the sturdier plant but very difficult to bring into bloom. Michael Miyashiro of Rain-forest Plantes et Fleurs says that this variety needs to be allowed to dry out almost completely dry for a winter rest, then watered thoroughly to bring out the flowers. The variety *Rauschii* that I have, struggled along for over a year, almost at death's door until I repotted it in a completely lime free mix that I had purchased to repot some Azaleas. I then placed it closer to the furnace where it stays much warmer. It appears to be

growing well, and I hope to see some flowers this next year. I will try the lime-free potting mix on the "Bunny Ear" if I can manage to repot it. It is a very sturdy 4 to 6 foot tall shrub, and probably weighs in at about 40 pounds.

Ann Wayman

Our Cover Photo of *H. imperialis* Lindl. is sponsored by:

HILL ~ N ~ DALE NURSERY

6427 N. Fruit Ave.  
Fresno, CA 93711

# Questions & Answers

**Question:** I have grown hoyas for several years with no problems whatsoever. This summer for some odd reason all my new growth was extremely thin and brittle, and the leaves would break if I barely touched them. As they matured, they became thicker than usual and had the texture of cardboard. The plants looked healthy but the leaves appeared cup shaped and contorted. I continued to feed and water them as usual but had very little bloom. I've never seen anything like this before and wondered if anyone else had ever had this experience. If so, what did they do about it? M. H.

**Answer:** I can't speak for anybody else, but the first thing I would do is to stop all feeding and drench the soil thoroughly with plain water for several waterings. It sounds very much like a fertilizer overdose from too much phosphorous. Check the top of your soil, it will usually have a fine sprinkling of what looks like salt, which is exactly what it is. Periodically, or at least once a month during the summer, drench your plants with plain water until it literally pours out the bottom. This will wash all the accumulated fertilizer salts out of your potting mix and prevent fertilizer burn.

**Question:** Are there some hoyas that don't climb? I have been trying to train a *carnosa* and an *australis* to climb on a trellis. I wind them through the lattice work on the trellis several times but within a few days they are loose and dangling in midair. Someone suggested to me that they might not like cedar, and I'm pretty sure my trellises are made of cedar. Could the cedar be the cause of my hoyas not climbing? S.V.

**Answer:** I doubt it! I grow many of my hoyas in a cedar lath house during the summer and they not only climb all over it but some actually take root in the cedar. It's more likely that your hoyas don't like the direction you're winding them in. Many climbing or twining plants, some hoyas included, will twine counter clockwise, and if you wind them the wrong direction, they will eventually unwind. If left alone they will find something to grab hold of and start twining in the direction that is natural for that particular species. If you don't want them climbing on other plants or around your pictures, try winding them in the opposite direction, and tie them on with a few twist ties or some yarn.

To answer your first question, Yes, there are many species of hoya that don't climb. The beautiful *Hoya bella* is a graceful cascading plant that shows no indication of climbing. The hoya that we know as *Hoya compacta* (or the Indian Rope hoya) hangs in long cascading spirals. *Hoya lacunosa* is a small growing, full foliated plant that drapes daintily over the sides of baskets and shows no climbing tendencies. These are only a few, there are a dozen or more that I can't think of at the moment.

**Question:** Several years ago I acquired a hoya plant from a friend. The plant was labeled *H. archboldiana* green. This hoya has finally started blooming, (and what a bloomer!) over 100 blossoms on five umbels. I was expecting a green flower. These flowers are white on the outside, pink in the

center and have a very dark pink corona. Do I have the wrong plant, or has it just turned a different color under my conditions? (picture enclosed) D.H.

**Answer:** I believe this is the *H. archboldiana* that is called "pink form" in most dealer catalogues. I would make a guess that the green, is probably Ted Green, the dealer that this plant was originally purchased from. In my own collection I have plants labeled with the name the plants were purchased with, then in parenthesis the name of the dealer such as Green, Dale, Michael, Logee's etc. I can see where this would be confusing to a recipient of a plant or cutting that was not familiar with this method of labeling, however it is necessary to keep the dealer name with the plant. It might be a good idea for us all to start writing acq. (as in acquired from) Green, Dale, Logee's, Michael Audry, Mary etc. on all of our labels.

**Question:** What temperature must I maintain to keep my *Hoya Sp. New Guinea Gold* from defoliating (as it has done in the past). I've tried three times to grow and bloom it, but to no avail. They never die, but once defoliated, existing stems never get any new leaves, and never any blooms. I keep them on the dry side in the winter, and at present, the temperature can drop down to 32 degrees fahrenheit in the winter (although I have bought heaters now for my greenhouse that should keep the temperatures above 45 degrees Fahrenheit this winter). J.W.

**Answer:** *H. sp. New Guinea Gold* is a hoya in the *Ereostemma* section. All of these type hoyas have large, or very large flowers, fuzzy leaves and stems to some degree, and all I have seen are very sensitive to being wet and cold. I personally have never lost a single leaf on any of my *Ereostemma* type hoyas, though this is a major complaint from many of our members. I keep my greenhouse very warm (never below 60° fahrenheit). If the *Ereostemmas* get water at all during the winter, they literally have to beg for it. If I see that they are beginning to have that crinkled, dry, leather look, they get watered with tepid or lukewarm water, then they get set on the heat blanket for at least a day. Drastic pruning of these bare stems will usually force new branches to grow from these leafless nodes. Another trick that I learned to prompt any of the fuzzy leaved hoyas into bloom, is setting them under fluorescent lights that are left on at least 20 hours a day. They seem to relish the extra hours of light. It will also help to keep them a little warmer. I'm sure this sounds like a lot of extra trouble to go to, however the rewards of getting these magnificent, waxy, long lasting hoyas to bloom is certainly worth the effort.

*Ann Wayman*

# INTERNATIONAL HOYA ASSOCIATION

Board meeting notes, September 14, 1991

The meeting was convened with all officers and board members present except for Paula Lake and Gary Raatz who supplied proxies to Dale Kloppenburg and John Scoville, respectively. Officers included Dale Kloppenburg, John Scoville, and Ann Wayman and the board members included William J. (Jim) Wayman, Lina Paul, Wayne Scott, Chuck Everson, and Rudy Bachmann.

Jim Wayman started off the meeting with the current financial report, and stated that, even though there is not an abundance of funds available, IHA is operating in the black. With our membership roles increasing it is anticipated to have still more coverage in our bulletin "Fraterna", including more photos and articles, with no increase in membership rates at this time.

Jim clarified the by-laws and opened the floor to any possible changes but all board members believed the current procedures should remain in effect. To complete the technical points, the board members whose terms were expiring, were re-appointed by President Dale Kloppenburg to their new specified terms. A discussion took place concerning new board members, especially from foreign sources, as our overseas membership is increasing tremendously. More on this later as it is an action item and worthy of more review.

Nominations were called for to elect a chairman of the board and two board members were nominated. Since all board members and officers were either present or represented by proxy, the election took place with a show of hands and by a very close vote, Chuck Everson will assume this role. All members should feel free to contact Chuck on business matters but any and all board members, including those in your specific geographical areas might be able to deal with any problems and/or questions more easily while still continuing communication with the chairman.

Lina Paul mentioned her upcoming trip to Germany with husband Dieter and will attempt to promote membership with her friends and acquaintances there. It is a fact that there are many cactus and succulent fanciers there as well as much of the other parts of Europe.

Fraterna articles were discussed and future issues will include: Chuck Everson: His latest trip with partner Jerry Williams to Hawaii including visits to the nurseries

of Michael Miyashiro (Rainforest Plantes et Fleurs), and Ted Green (Green: Plant Research). Lina Paul: Favorite hoyas and her Germany visit. Rudy Bachmann: A special visit on Hoya linearis. John Scoville: Special hangers for hoyas. Harriette Schapiro: San Diego Chapter panel discussion.

Other sources of articles were discussed and these should be seen in future publications of Fraterna. Look for more new material being presented along with informational reprints that have been overlooked. A special article concerning growing under lights might be supplied by Gary Raatz.

IHA is looking into the feasibility of obtaining private foundation grants to continue research and other work in the field of hoyas. Our secretary, Ann Wayman has been attending grant research and grant writing classes, and now has some experience in this field. Ann will keep us up to date and informed of our progress in this endeavor.

Advertising income and expenses were discussed but little was resolved. This too was made an action item and progress will be reported in future updates.

The "slide library" concept was brought up and the title of "Film Librarian" was awarded to Lina Paul. IHA has through its membership many beautiful and informational pictures that should make fine slide library material. Please expect details on this as well as requests for members photos in the immediate future.

The San Diego chapter has certain videos on VHS of local meetings and this might be included on the IHA level for those that might appreciate the South Western contingent of the association. Not only great material but footage of the various participants in action.

Wayne Scott and John Scoville are looking into new membership promotion and a possible local chapter in the San Francisco Bay area. Even though small compared to the local chapters in Medford, Oregon and San Diego, California it would be nice to see a North Bay and South Bay chapter group and an occasional dual meeting. Wayne and John are working on this, and positive results are in the making.

of a loved one, a birthday, an anniversary or any other reason that comes to mind. A price of \$25.00 per entry was suggested and met with enthusiasm. More details on this project will be made available and it is a chance for members to become even more a part of IHA.

The round robins were discussed and can you believe we actually have four robins flying (now 5) currently and more anticipated? The round robin groups give members a chance to become involved in learning more about hoyas, more about geographical conditions, and so much more about the individual members than you would ever learn by just belonging to an organization. Many become close friends for life through the mail, so if you really want to get involved, this is for you.

John Scoville suggested a specific round robin for board members to keep them informed of all happenings and also for them to respond to their feelings of issues posed to them. The scheme is for John to include all items of interest within IHA to pass through the board members and accept the outcome for action with the officers. All actions complete with individual inputs will be circulated and board members will be informed and up to date. Envisioned is a special report of board member inputs as well as the questions presented to them.

Dale Kloppenburg stated he would like to see more color photos of his article material for clarity and this would be wonderful if controlled within cost constraints. If material could be supplied in black and white (what's that?) the costs could be minimized and more descriptions supplied. John Scoville's upcoming article on hoyas hangers will include at least one photo in black & white, it will be interesting to see the results of this by membership response.

To conclude the meeting Chuck Everson and Jerry Williams graciously extended an invitation to attend the next board meeting at Rainbow Gardens in Vista, CA at a time to be supplied later in the middle of September of 1992.

Dieter Paul made this event one to remember with a nice pictorial presentation of all in attendance. Nice people, nice event, and bigger and better things to come within Fraterna and the entire International Hoya Association.

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**From the notes of the moderator and recorder,  
John Scoville.**



Board of Directors & Officers of IHA, pictured from left: Jim Wayman, Ann Wayman, Wayne Scott, Lina Paul, Chuck Everson, Rudy Bachmann, President Dale Kloppenburg kneeling on the left, Vice President John Scoville on the right.

This Photo is sponsored by the "San Diego Hoya Group". Write or call IHA for information if you would like to join this group.

# SAN DIEGO GROUP MEETING NOTES

Rainbow Gardens, 1444 E. Taylor St, Vista, CA 92084

September 22, 1991

Another gorgeous day and a delightful time for the meeting on the patio at Rainbow Gardens. Members showed up carrying baskets of entrees, salads and other "goodies". The buffet table was a culinary experience by itself but the hoyo table with its many potted hoyas, plus the large number of cuttings donated by members for the upcoming raffle, made a scene of its own.

San Diego Group chairperson, Harriette Schapiro called the meeting to order and presented a short introduction stating highlights of previous meetings, what was planned for today, and what the future could bring. Dieter Paul gave a cheery treasurer's report. The next get-together, (our Christmas fling), was determined to be held on Sunday, December 15th, 1991 at King's Circle where the last Christmas meeting was held and everyone had such a nice time. The presence of IHA president Dale Kloppenburg of Fresno is anticipated along with that of Ted Green all the way from Kaaawa, Hawaii. Both will have much to say! Dale will explain his latest literary efforts. Ted plans a slide presentation from his recent trip to Borneo, Australia and other exciting places he has visited over this past year. Ted has made the statement that he has acquired numerous hoyo cuttings from his travels, and believes many are either new species, or species not currently in circulation.

It appears that Ben Hardy is over visiting in Australia, Henry and Elsie Raphael are vacationing, and Mario and Diane Sharp are touring nurseries in Oregon so there should be some good reports from all of them as well. Bill Herrera, with his wife Luanne described their visit with John Scoville in San Jose. They were attending the nearby Gilroy, Calif. garlic festival and dropped in to see John's San Jose hoyo growing efforts.

Chuck Everson gave a detailed report on the "housekeeping" meeting for the IHA board of directors held the previous week in Fresno at the home of president Dale Kloppenburg. See "Board Meeting Notes, Sept 14, 1991" in this issue.

Bob Gushue was praised for his work with the video recording of this meeting and several previous ones, and a contribution of \$25.00 was voted to help promote his

fine work. An article is due soon to explain how IHA members can view these VHS tapes in their own living rooms for the cost of postage alone.

The highlight of the meeting was a panel session concerning hoyo considerations from guest panelists Carol Causey, Michael Kartuz and David Jones, and moderated by Jerry Williams. Jerry introduced the panelists and each gave a description of their individual hoyo work. Jerry further explained the topics and a question and answer session followed involving mealy bug control, overall bug control, soil mixtures, special garden products, and the list goes on. Since this discussion will be covered separately for our members, it should be closed by saying it was most interesting and the members learned a great deal through the interactive session with these knowledgeable members. Jerry Williams did an excellent job of transferring information to the proper sources and, on occasion, did a few technical assists as well.

There will be more meetings that involve other panelists and with the video library all IHA members will have the chance to view the happenings. It was interesting to note the presence of eleven new attendees to this meeting, illustrating the increase of popularity in the hoyo genus. It is nice to see our favorite plants achieving increased attention.

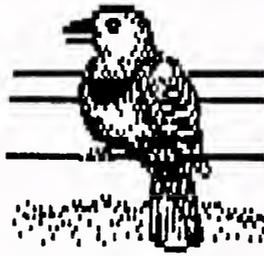
If you are in the neighborhood, make plans to attend our next, or any future meeting. You are always welcome, and we hope to see you there.

John Scoville

## Treasure Hunt

We are conducting a treasure hunt for old maps of Southeast Asia for our literature library (mid 1800's to early 1900's). Individual maps or an old World Atlas are welcome. Dig around in your attic and see what you can come up with, "NATIONAL GEOGRAPHIC" maps are especially useful. We will swap rare Hoya cuttings for maps of this region in good condition. Up to \$100.00 worth of cuttings for an Atlas. Write: Ann Wayman Secy, IHA, P.O. Box 5130, Central Point, OR, 97502. Or call (503) 664-6808.

# BIRD TRACKS



**Robin #1-Audry Kantor, Oregon, June, 1991...**I have doped all my hoyas that were on my front porch with Cygon. It took three days to do them all. I take them out on the lawn, water them first then in a few hours I dip them, pot and all, and hang them to drip overnight. Next morning I wash them off with the hose to remove dead bugs, dirt and honeydew, then let drip dry before taking them back inside.

**Robin # 1-John Scoville, Calif. July, 1991...**Last month, Dale Kloppenburg and I motored down to San Diego together for the local chapter meeting of IHA. Before leaving I asked Dale to explain hoyá pollination and he showed me, under the stereo microscope, exactly how it is done. I have a stereo microscope that went for over \$1,500.00 but well worth it as I can see hoyas! I have spent the past six months with the text books and scope and have viewed a disaster of plant parts.. Dale extracted the dual pollinaria with a needle and shared it with me under the microscope and then inserted it where it should be inserted, also with the microscope, and it was quite a performance! Now I must work on the principle and pose it as an article for *Fraterna* and await interpretations.

**Robin # 1-Joyce Blumenstock, Michagan. August, 1991...**A suggestion to everyone who sends out cuttings: Use your permanent marker to write the name on one of the leaves (underneath). It doesn't hurt the leaf. Someone sent me a cutting two or three years ago labeled this way, and the leaf is still on the plant.

**(Note from Ann:** Suggest you write name on pot after potting up also, just in case crickets, slugs, or caterpillars etc. destroy your leaf, or the leaf is lost to some other disaster.)

**Robin # 2-Margie Stone, Oregon, November 1991...**Some hoyas, they say, need to be mature to bloom. We have had people report at our fair booth, that they had hoyas 5, 10 and even 20 years before they bloomed.

**(Note from Ann:** Five years may be mature. Ten and twenty years is ancient. If a hoyá hasn't bloomed within five years, I would be very suspicious of my own cultivation methods. Some hoyas need an extended

cool period in order to bloom, some need more, or less light, some need more humidity. Suggest they try experimenting. Sometimes a move of just a few feet, and a light feeding or two with high phosphorous fertilizer can make all the difference in the world).

**Robin # 3-Gary Raatz, Wisconsin March 1991...**The one aspect that I have to watch for is low humidity. Plants that aren't in the light garden in the basement or near turtle aquariums have to be kept bunched together in the kitchen. South windows near the kitchen sink and the dishwasher all help. Some species are growing well while others are waiting out the winter. Last year I learned a lot about the younger plants in my collection as far as when they put on new growth and flowering time. As an example, *H. diptera* did not do a thing in the house but after I put it on the front porch it grew and flowered and is now a nice three foot hanging basket.

**Robin # 3-Francis Wilkes, Calif. April 1991...**I was able to buy some "No Pest Strips" at the Savon Drug Store this March and so far have no aphids, although there are some in the lath house.

**Robin # 3-Dale Kloppenburg, Calif. April 1991...**I am of the firm belief that we have rushed to put names on specimens without first gathering a full range of wild specimens. I am slowly accumulating an in depth range of specimens. I can see that we are getting things not well studied and that are new. I think we see similar types of foliage and assume they are our same old species, when in fact, on close examination, they are proving to be very different. My young friend in Baguio, Philippines is collecting some very interesting hoyas for me. I see so much to be excited about!

**Robin # 3- Benigne Dohms, Florida June 1991...**Two of the first hoyas I ever bought are finally going to flower for me; they are both *carnosa* types. My other senior citizen puts forth a shower of pink several times a year, and then takes a rest before the next burst. Early in the year I made the commitment to better feed and water all my hoyas, and to improve the potting mix.

# THE TURBANED HOYA

## Hoya mitrata Kerr

I never make mistakes!!! I have always said that hoyas will not flower in deep shade - grow there, Yes, but never flower. That's what I said. Well, now I know at least one exception, *H. mitrata* and I suspect that *H. darwinii* may be another. Usually, with hoyas, the plant growing in shade will not flower until it grows into the light. My recent collecting trip to Northern Borneo (Sabah) proved me wrong.

Although I have had *H. mitrata* in my collection for several years, mine would not flower and was even reluctant to grow into a robust plant - too much light I have found out. I was sure that my plants were *mitrata*, comparing the leaves to the various herbarium sheets that I have seen, but without flowers I couldn't be positive. Rintz's drawings of its leaves and general growth differed from the herbarium sheets and my plants. Now I know why - it has 2 types of leaves, those on the running vine (with wide spaced internodes) and the "cabbage set" (with close internodes). The runner leaves are oblanceolate and the cabbage leaves are ovate. I believe that Rintz could not have seen this plant alive and definitely not in bloom for the peduncle and umbel are upright (not pendant as drawn) and the flowers are presented with the corona up.

Kerr in his description of *mitrata* said it was rare but he was seeing it in Southern Thailand, at its northernmost point of its distribution. In North Borneo they are not rare, in fact, quite common in the small trees of the podzolic forests. It was quite easy, once your eyes became adjusted to the shade and knowing what to look for, to find 50 plants in an acre, in all stages of growth. I can't

believe that this plant was not seen (and named, in some other genus?) by Beccari when he was in Borneo about 1885, years before Kerr collected it in Thailand.

The growth is very interesting: Apparently, the seed sprouts at the base of a small (15'-20' tree), makes several "running type" leaves on a short vine, then develops a clump of "cabbage type" leaves to create a home for ants, then produces another running vine for 5 or 6 feet and another "cabbage set" and so on. The peduncle may be developed from the top of a "cabbage set" or a strong running vine. It is true that by this time the uppermost part of the vine is closer to the light and air movement but still in low light intensity.



Photo by Ted Green

Sponsored by  
Rainbow Gardens Nursery & Bookshop  
1444 E. Taylor St.  
Vista, CA 92084

A thumbnail sketch of *Hoya mitrata*: *Mitrata* in Latin means turbaned - from the appearance of the prominent, upright corona. *H. mitrata* is a modest, shade and high humidity loving vine with 2 types of pinnate veined leaves. A normal one, about 5" x 2", which is oblanceolate with an acuminate tip and auriculate base, is found on a running vine; an abnormal type which is ovate, boat shaped, 5" x 4", and with short internodes produces a "cabbage - like" cluster; the axillary peduncle is produced at the top of a cabbage cluster or along the running vine and bears 6 to 15 flowers on short, thick pedicels. The flower is about 3/4 inch in diameter and equally as tall due to the prominent, elongated, upright corona and turned down corolla. I have not seen the seed pod, so cannot give a description at this time. The greatest concentration is probably in Northern Borneo, then through Malaysia, Sumatra to Southern Thailand.

Ruurd van Donkelaar and I have discussed the relationship between **H. mitrata** and **H. darwinii** and it is obvious that they are closely related in flower and growth. The **mitrata** possibly being a tetraploid of the **darwinii**, with a few differences thrown in for the botanists to argue over. The flowers are practically identical and for a comparison of the similarities and differences:

1. Both kinds of leaves and the stems identical, except those of **darwinii** are smaller, half the size and with a generally weaker growth, with slender stems.

2. Corona of **darwinii**, spreading, 45 degrees, 1/4" tall; whereas, corona of **mitrata**, upright, 3/8" tall.

3. **Darwinii's** modified leaf, tightly rolled or cup shaped; whereas, the modified leaf of **mitrata** is loosely overlapped and boat - shaped.

4. **Darwinii** plant runs and hangs loose from the host; whereas, **mitrata** stays close to the host. A photo of **H.**

**darwinii** is being presented here for a pictorial comparison of the two species. I have not not seen **darwinii** growing in the wild so my observations are from plants under cultivation. I do know that from my own experience and a comment made by Iris Liddle, that **darwinii** seems to grow into a large, flowering plant and then dies back. It must be started over from cuttings.

Now that I better understand its growth requirements, *mea culpa*, I hope that my plants really perform and we can populate the world with **Hoya mitrata** for it is a very interesting conversation piece and should be in every collection.

Maybe, even for the coffee table, complete with ants, mosquitoes and remember, shade!

Ted Green

Green: Plant Research

Kaaawa, Hawaii

### H. darwinii Loher



Editor's comment: I believe this plant will be offered by Green: Plant Research in the near future. If you would like to be included in a mailing list to receive this catalogue, send your request with your name, and address to Ted Green, Green: Plant Research, P.O. Box 735, Kaaawa, HI 96730.

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## MEET THE PROFESSIONALS

In an attempt to recognize those professional botanists whose work impinges upon or aids in our endeavor to learn more about Hoyas, the following is presented. With great reluctance on the part of Professor Juan V. Pancho, I have finally persuaded him to submit his resumé and accomplishments to me. I know this modest man would prefer only a short paragraph be printed, or nothing at all. Let me say personally that I have found Juan to be reserved, knowledgeable, and an extremely kind and helpful person. He has great concern for his students, and especially those working for and with him, and even for me, an outsider. He has assisted me in every stage of my Hoya work since 1981. He has gone out of his way to obtain Hoya species for us, to give me easy access to the Herbarium at the University of The Philippines at Los Baños, and to recommend me to Dr. Domingo Madulid at the Philippine National Herbarium in Manila. He introduced me to botanical artist Ruel Medina, whose drawings have proven invaluable to me. In addition, his introduction to collectors Maximo Wayet and Blas Hernaez is greatly appreciated and benefits us all.

I thank Professor Juan Pancho for his guidance and friendship and present the following works of this man's prestigious accomplishments.

*Dale Kloppenburg: President IHA*

### PROFESSOR JUAN V. PANCHO - A RESUMÉ

**Professor Juan V. Pancho** is one of the few Filipinos who holds the distinction of being a world class plant systematist.

His unparalleled dedication toward the enrichment and promotion of Systematic Botany has been the hallmark of his career, spanning 40 years.

Professor Pancho took up agriculture at the University of the Philippines Los Baños majoring in botany (systematics). He consistently pursued systematics in his graduate studies and has since demonstrated his competence and authority in this field as evidenced by the five books that carry his byline, either as sole author or co-author; five handbooks, no less than 122 scientific papers published in national and international journals. Likewise, his work resulted in active participation in scientific congresses worldwide.

The books he authored or co-authored are being circulated worldwide and have received rave reviews. **The Worlds Worst Weeds** (1977) alone has been favorably reviewed by weed scientists from all over. W.C. Shaw of the U.S. Department of Agriculture said: "book of such quality...lends stability to weed science and assures its continued growth and success in the future." Prof. Edward B. Radcliffe of the University of Minnesota "...this book is an impressive achievement....it is simply magnificent...." Dr. L.J. Mathews, weed scien-

tist of the Food and Agriculture Organization of the United Nations, concurred by saying: "It is an excellent publication." Rochecouste tersely noted: "A wonderful contribution to weed science." Dr. Yasuo Kasahara echoed the observation: "(The) book is very wonderful and has leadership in our weed scientists."

Dr. J.T. Swarbrick commenting on the **A Geographical Atlas of World Weeds** (1979) said: "...a major reference book for anyone concerned with weeds and their control and will become a well-thumbed companion to weed scientists throughout the world". (cf. *Australian Weeds*, Dec. 1981).

Prof. Pancho's **magnum opus**, **The Vascular Flora of Mount Makiling and Vicinity** (Luzon: Philippines) Part 1 (1983) established him as **the** leading authority on the botany of the legendary Mt. Makiling in Los Baños, Laguna, Philippines. This is now a milestone in the plant sciences and undoubtedly the most extensive coverage of Philippine flora especially when the whole series shall have been published. Dr. C.G.G.J. van Steenis, editor, **Flora Malesiana**, said: "The author is to be congratulated for his excellently printed and admirably illustrated achievement." While Dr. Dan H. Nicolson, senior scientist, Smithsonian Institution, Washington, D.C., U.S.A. "...the book promises to be the most useful work for identifying Philippine plants since Merrill's **Flora of Manila** (1912)."

Prof. Pancho discovered various **Bougainvillea** cultivars, three of which have been granted Plant Patents by the U.S. Department of Agriculture, Maryland, U.S.A.

In recognition of his body of work and his continuing devotion to the enrichment of systematics in particular, and the advancement of science in general, Prof. Pancho has been the recipient of no less than 13 awards in the Philippines and overseas. In 1980, the Philippine government awarded him the **Rizal Pro Patria Award** "for outstanding international achievement in systematic botany." This is the highest award for any Filipino scientist. Furthermore his colleagues in systematics have honored him by naming the following species after Prof. Pancho: *Telaranea panchoi* del Rosario, a hepatics; *Clastobryum panchoi* Tixier, a moss; *Lipothymus panchoi* Wiebes, a figwasp; and *Hoya panchoi* Kloppenburg, an asclepiad.

Fifteen years earlier (1965-66), he was a John Simon Guggenheim Memorial Foundation Fellow in systematic botany that brought him to the U.S. National Herbarium, Smithsonian Institution, Washington, D.C.; and Gray Herbarium, Harvard University. Lately he was a British Council Awardee (1987) to the Kew Herbarium, England, to study Philippine plants deposited at the herbarium.

Professor Pancho's achievements in systematic botany at this point in time already constitute a major body of scientific knowledge. Likewise his dedication to science and his productive output mean a continuing enrichment of systematics, an important field of science that forms the foundation of our highly technologized world society.

**Hoya mindorensis Schlechter in Philippine Journal of science, Vol. I  
Supplement (1906) page 302  
Synonym Hoya erythrostemma Kerr**

The following relevant material gives the reader the background for understanding the above Synonymy.

**Hoya mindorensis Schlechter sp. nov.**

*Epiphytica, pauciramosa, caulibus ramisque radicanibus, teretibus, glabris, lax foliatis; foliis patentibus patulisve oblanceolato-ellipticus, breviter acuminatis, glabris, textura coriaceus, 9-12 cm. longis, supra medium 3.5-4.5 cm. latis, petiolo teretiusculo carnosio, 2-2.5 cm. longo; cymis pedunculatis, umbelliformibus, multifloris, pedunculo tereti, glabro, circ. 2 cm. longo, pedicellis gracillimis filiformibus glabris, circ. 1.5 cm. longis; floribus in genere mediocribus; calycis segmentis ovatis, obtusis minute ciliatis, circ. 1.5 mm. longis; corolla circ 0.9 cm. diametiente, recurvata, usque infra medium 5-lobata, extus glabra, intus dimidio inferiore puberula, lobis pilis sparse hispida, ovatus, obtusiusculis, basi utrinque obtuse auriculatis, apice auriculatisque reflexa; coronae foliatis horizontalibus superne anguste ellipticus, apice anteriore acuminatis, apice posteriore acutis, medio longitudinaliter inter apices carina angusta donatis, subtu longitudinaliter foveolatis; anthera apicem folioli paululo excedente marginibus cartilagineis valde falcatus; poliniis oblongoideis, translatoribus linearibus, fere triplo brevioribus, retinaculo rhomboideo, lateraliter compressa, translatoribus paulo brevioribus.*

Mindoro, Baco River (332 McGregor) April- May, 1905

The species is very remarkable in the two auricles that exist between the corolla lobes. The pollinia too are rather unusual for the genus.

Translation of the above Latin by Dale Kloppenburg from the: Philippine Journal of Science 1906, vol. I, Supp. p.302

**Hoya mindorensis Schlechter sp. nov.**

Epiphytic, few branched, with the stems and branches putting forth aerial roots, round, glabrous (without hairs), loosely leaved; with the leaves spreading or more or less outspread oblanceolate-elliptic, shortly acuminate, glabrous, leathery textured, 9-12 cm. long, above the middle 3.5-4.5 cm. wide, with the petiole somewhat rounded, fleshy, 2-2.5 cm. long; with the cymes pedunculate, shaped like an umbel, many flowered, with the peduncle round, glabrous, about 2 cm. long, with the pedicels thin, threadlike, glabrous, about 1.5 cm. long; flowers within the genera midsize; segments of the calyx ovate, obtuse minutely ciliate, approximately 1.5 mm. long; corolla about 0.9 cm. in diameter, broadly recurved, 5-lobed all the way to the middle, outside glabrous, inside with the lower part puberulous, with the lobes pilose sparsely hispid, ovate somewhat obtuse, with the base on both sides obtusely eared, and with the eared tip reflexed; scales of the corona horizontal, above narrowly elliptic, with the anterior tip acuminate, with the outer tip acute, narrowly keeled in the middle lengthwise between the two tips (ends), minutely pitted lengthwise below; anther tip a little extended with the margins cartilaginous (flexible but firm and tough) very scythe shaped (curved); with the pollinia oblong in shape, with the translators linear, nearly three times smaller, retinaculum rhomboid, laterally compressed with the translators somewhat smaller.

Other citations:

Leaflets of Philippine Botany vol. X., Art. 131, p.3586  
Philippine Hoya Species 1991 pp. 68-69

Herbarium sheets:

McGregor #332 (B) Typus, Baco River, Mindoro April-May 1905; Elmer #10267 Dumaguete; Fenix #2822; Ramos and Edano #45454 (UC) May 1925, Casiguran, Tayabas, Luzon; Wayet #5303 (CAHUP) April 1990, Baguio Village, Querino, Luzon.

**Hoya erythrostemma** kerr (*Asclepiadaceae- Marsdenieae*); species *H. ellipticae* Hook f. affinis, foliis majoribus acuminatis, corolla villosa, inter alia, differt.

*Frutex volubilis; rami subquadrati, sat gracilis, dispersim radicanes. Folia elliptica, basi acuta, apice leviter acuminata acuta, usque 10 cm. longa, 4 cm. lata, siccitate papyracea, glabra, costa cum nervis lateralibus et transversis utriusque pagina praecipue supra prominulis, nervis lateralibus 5-6 paribus e costa angulo 60° abeuntibus et nervo marginali a margine 3-6 mm. distante conjunctibus; petiolus sat robustus, glabra 3-6 mm. longus, supra angustissime canaliculatus. Inflorescentia lateralis, umbellata; pedunculatus glabra, cinter 14 mm. longus; pedicelli graciles, glabri, 12-14 mm. longi. Flores albi, corona sanguinea (ex Kloss), explanati circiter 10 mm. diametro. Calyx 5-partitus; lobi ovata, acuti, glabri, margine minute erosi, 1-5 mm. longi. Corolla 5-lobata, subrotata, sub anthesin reflexa, supra praecipue ad marginem et lobos sat longe villosa; tubus explanatus, circiter 2 mm. longus; lobi late ovati, breviter acuminati, circiter 3 mm. longi, 5 mm. lati. Coronae segmenta cartilaginea, nitentia, lateraliter valde compressa, 3 mm. longa, basi 1.75 mm. alta. apice exteriore acuta, apice interiore antheris paulo breviora. Segmentis caput umbelliforme, apice umbonatum. Folliculi desunt.*

Translation of the above by Dale Kloppenburg.  
Kew Bulletin 1939, p. 460

**Hoya erythrostemma** Kerr (*Asclepiadaceae-Marsdenieae*); related to the species *H. ellipticae* Hooker f. with larger acuminate leaves, corolla villous, among other differences.

A twining shrub; stems somewhat (a little) square, moderately thin, here and there with aerial roots. Leaves elliptic, with the base acute, with the tip slightly acuminate acute, up to 10 cm. long, 4 cm. wide, in the dried state papery, glabrous, midrib along with the lateral nerves and above on the other side, the transverse surface slightly raised, lateral nerves 5-6 pairs leaving the midrib at a 60 degree angle, joining marginal nerves 3-6 mm. from the margin; with the petiole moderately robust, glabrous, 3-6 mm. long. inflorescence laterally (fixed near the side) umbellate; peduncle glabrous, approximately 14 mm. long, pedicels narrow, glabrous, 12-14 mm. long, dull (not glossy) white, corona blood-red (from Kloss) (herbarium sheet #6909 from Tazan), flattened (spread out) about 10 mm. in diameter. Calyx 5-parted, lobes ovate, acute, glabrous, margins minutely erose (irregularly toothed or apparently gnawed) 1.5 mm. long. Corolla 5-lobed, somewhat rotate, at flowering reflexed, above moderately long villous (shaggy hairs) especially near the margins and lobes: tubes outspread, nearly 2 mm. long; lobes broadly ovate, shortly acuminate, about 3 mm. long, 5 mm. wide. Segments of the corona cartilaginous, polished, very compressed laterally, 3mm. long, with the base 1.75 mm. tall, exterior tip acute, interior tip with the anther somewhat shorter. Stigma head shaped like an umbel, with the tip rounded (having a rounded projection). Follicles not seen.

References:

- Kew Bulletin 1939, p. 460  
Florae Siamensis Enumeratio, W.G. Craib & A.F.G. Kerr 1951, p.36  
Malayan Nature Journal vol. 30, 1978 pp. 507-9

Herbarium sheets:

Kloss #6909 Typus, Thailand, Surat, Chumpawan, Tazan (K); Parkinson #1680 Thebyu Chaung, South Tenasserim, Malaya; Rintz #88 1978, Malaya. Although this was not designated as a new species a type sheet was designated in 1951 Kloss 6909 by W.G. Craib & A.F.G. Kerr in Florae Siamensis Enumeratio p. 36, (1951).

After the study and comparison of live flowers from these species and the comparisons of several herbarium sheets, involving extensive photo micro graphs of this material, I could come to no other conclusion. The two species are synonymous. All variations are minor and lie within natural limits. It is remarkable that the Pollinaria of all specimens examined are almost precisely identical lending further credence to the value of this structure as an essential taxonomic tool. The pollinarium of this species is very distinctive and unique. The drawing of Dr. Rintz #88 (Malayan Nature Journal Vol. 30 Sept. 1978 Fig. 22) is an excellent rendition. The translator arms are spoon shaped and the pollinia are attached to the outer end of the spoon. The lower

edge of the translator arm is thickened and appears to be an extension of the retinaculum. It is assumed that Dr. Schlechter took his description of **H. mindorensis** Schltr. collected by McGregor on the Baco River from dried specimens. The auricles mentioned by him that exist between the corolla lobes are clearly visible on some herbarium pressed flowers. The tip of the corolla lobe turns under as does the side lobes adjacent to the corolla sinuses (see the photo from sheet #45454). As mentioned by Dr. Kerr it appears the petioles vary in length in this species and I have found this to be true in the specimens examined. The most unique visible feature of this species is the very narrow, laterally compressed corona scales with the longitudinal ridge. This ridge is narrow, almost sharp edged. Note the photo #2 with the corona scale laid sideways by the pressing but the sharp edge plainly visible (see also photo #4 and #6 for comparable live material). Leaf wise this species is similar to **H. acuta** Haw. Its vegetative likeness to this species has led to its being overlooked by collectors of the species in Malaya where **H. acuta** Haw. is so common. It is not as strong or rampant a grower as is **H. acuta** Haw. and as a consequence, under most conditions I have found, slower to come into bloom.

I thank Maximo K. Wayet for supplying me with fresh flowers of **H. mindorensis** Schltr. and Michael Miyashiro for fresh flowers of **H. erythrostemma** Kerr.

By Dale Kloppenburg

Photo 1. **H. erythrostemma** Kerr - Retinacular structure. Note the horn shaped, reinforced edge of the translator arms (a cup shaped structure). 100X magnification.

Photo 2. **H. mindorensis** Schltr. - Top view of crown. Notice unusually narrow top ridge of corona scales. Pickled specimen at 10X magnification.

Photo 3. **H. mindorensis** Schltr. - Bottom view of corona. Pickled specimen at 10X magnification.

Photo 4. **H. erythrostemma** Kerr - Bottom view of corona. Fresh specimen at 10X magnification.

Photo 5. **H. mindorensis** Schltr. - Two pollinaria from a fresh specimen at 40X magnification. Note the same retinacular reinforcement of the translator arms as on those of **H. erythrostemma** Kerr. The pollinia and retinacula are the same size on the two species studied.

Photo 6. **H. erythrostemma** Kerr - Taken from the line drawings of Dr. R.L. Rintz, MALAYAN NATURE JOURNAL, Vol. 30, Sept. 1978, figure 22. Note the very distinctive, stubby retinaculum, and the reinforced edges of the translator arms that joins this structure to the pollinia (f). It is identical to **H. mindorensis** Schltr. of photo # 5. Notice also Dr. Rintz's drawing (c) of the full face view of **H. erythrostemma** Kerr which is identical to **H. mindorensis** Schltr. of photo # 2.

Photo 7. **H. mindorensis** Schltr. - Bottom view of corona from sheet # 45-454 Ramos & Edano U.C. Note that this is practically identical to **H. erythrostemma** Kerr of photo # 4.

Photo 8. **H. mindorensis** Schltr. - Sheet # 45-454 Ramos & Edano U.C. Shows the two auricles that exist between the corolla lobes referred to in Schlechter's description of **H. mindorensis** Schltr. and are the turned under edges of the corolla. The tip also turns under.





Photo # 1



Photo # 2



Photo # 3



Photo # 4



Photo # 5

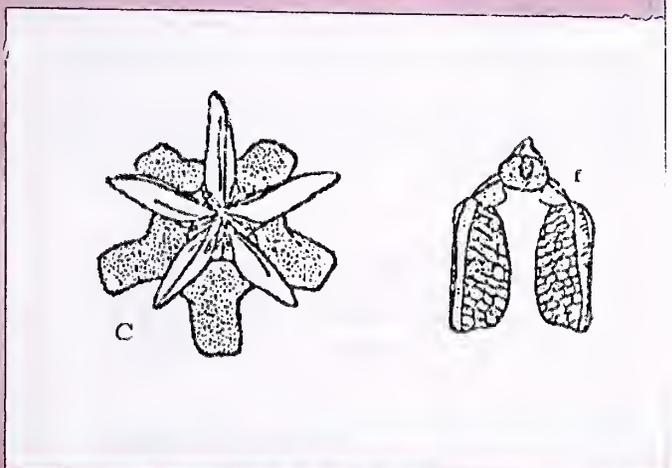


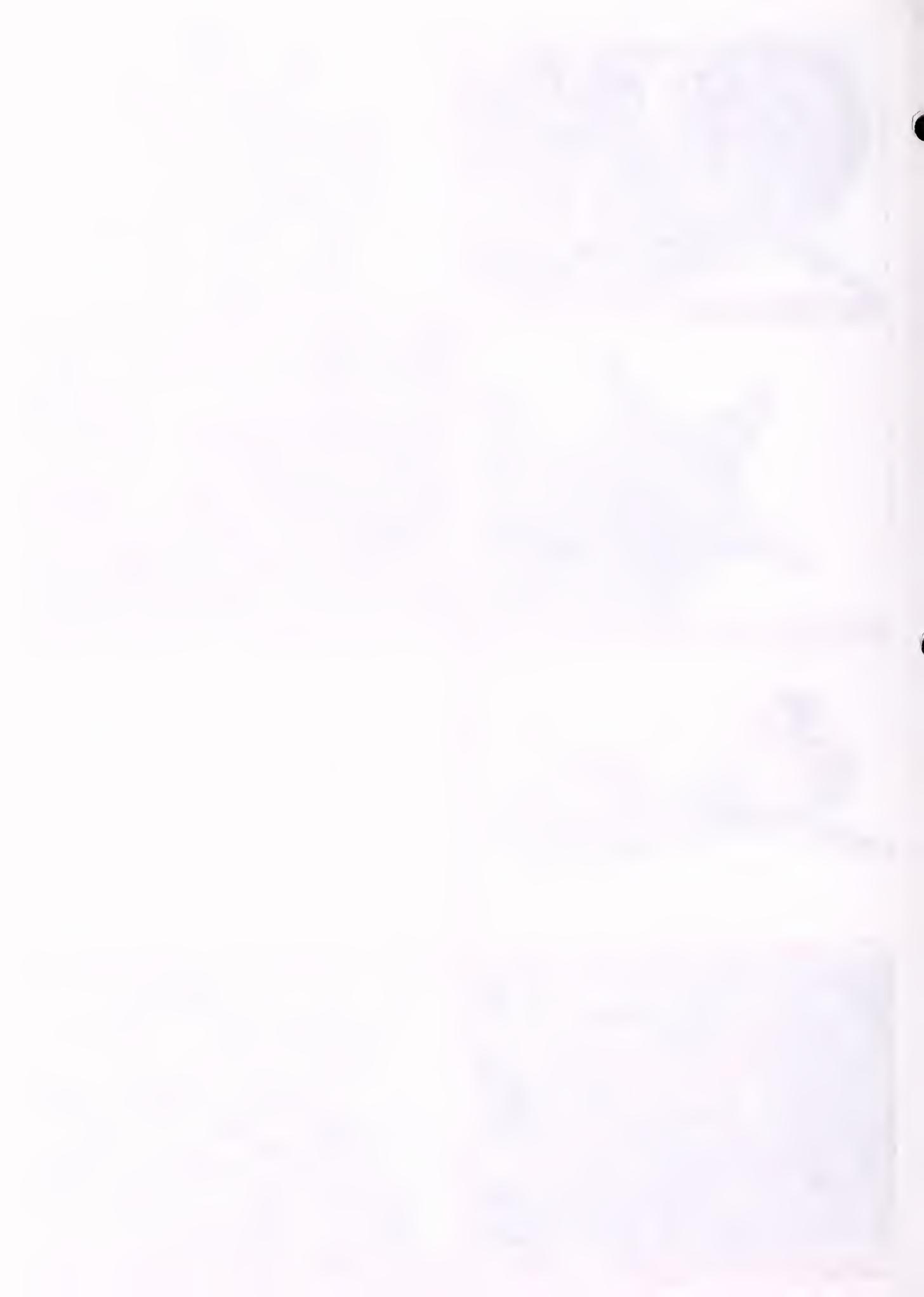
Photo # 6



Photo # 7



Photo # 8



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H. multiflora  
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H. obovata (Foliage)  
H. Globulosa (Foliage)  
H. meredithii (Foliage)

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H. 'Mini Belle'  
H. latifolia  
H. sp. Chiange Mai  
H. variegata  
H. compacta  
H. obscura  
H. pubicalyx 'Bright one'  
H. bella  
H. shepherdii  
H. polystachya (Foliage)

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H. cinnamomifolia  
H. gracilis  
H. pubicalyx (Dark Red Seedling)  
H. laurifolia (this is PNG 4)  
H. arnottiana  
H. kenejiana  
H. kerrii (Fuzzy leaf)  
H. acuta (Green Form)  
H. pachyclada  
H. obovata

### Volume 4

H. fuscomarginata  
H. species # 454 parviflora (long skinny leaf)  
H. polystachya  
H. acuta (lemon scented)  
H. species # CI-1244

H. species # F-484  
H. species USDA # 354246  
H. pubicalyx Cv. Red Buttons  
H. species (New Guinea Gold)  
H. nicholsoniae IML 37 (Golden Yellow, pure white corona)

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H. neo-ebudica  
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H. Spec. PNG-1  
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H. limonaciae  
H. bilobata  
H. Spec. PNG-6  
H. tsangi  
H. diptera  
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H. fungii  
H. diversifolia-B

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H. Sp. Saba Malaysia  
H. Sp. WMZ  
H. polyneura  
H. Sp. WMZ (Back of flower & calyx)  
H. pubera  
H. acuta Penang  
H. plicata  
H. carnosia cv. "Dapple Gray"  
H. keysii

### Volume 8

H. purpureo fusca (The real one)  
H. odorata  
H. pottsii  
H. Sp. IML 33  
H. picta  
H. pseudo littoralis  
H. nicholsoniae (from Logee's)

H. micrantha  
H. vitiensis  
H. curtisii (foliage)

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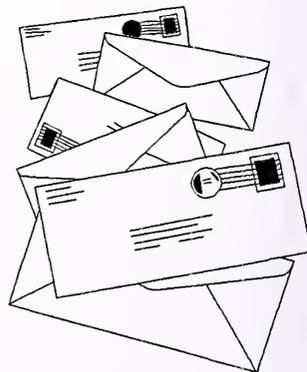
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H. affinis  
H. darwinii  
H. pubicalyx 'Chimeara'  
H. sp. 'Gold Star'  
H. sp. # BSI-1  
H. archboldiana (Red Form)  
H. finlaysonii  
H. naumanii

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H. pubicalyx 'Silver Pink'  
H. rupicola  
H. vittelina  
H. sp. IML # 234  
H. meliflua  
H. engleriana  
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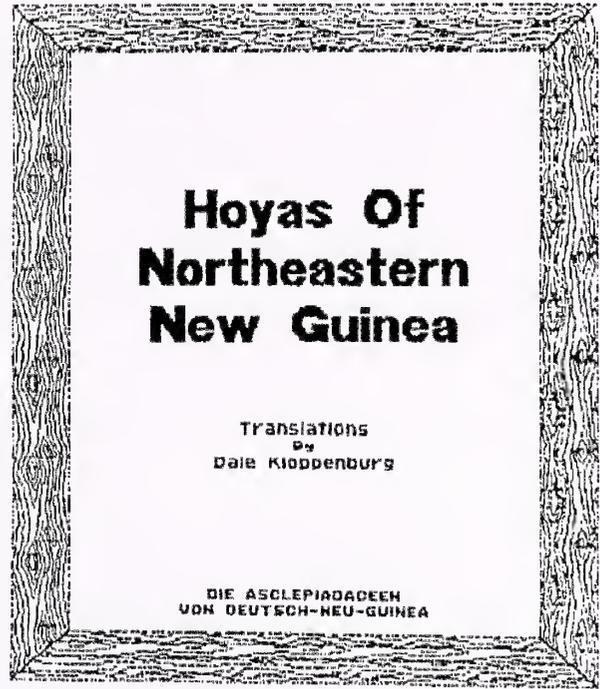
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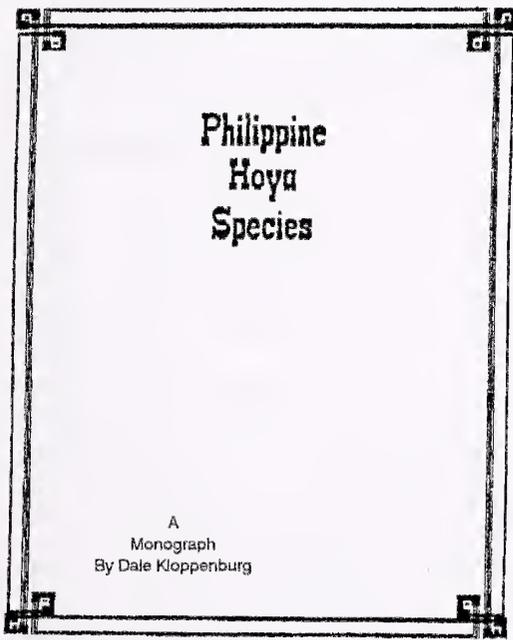
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## Corrections

The following two pages are replacement pages for (Roman numerals) numbers I and IV from "Fraterna" 3rd quarter 1991.

In order to make these original publishings valid, we are asking you to Please remove and destroy page I and IV from your 3rd quarter 1991 "Fraterna" and replace them with these corrected pages.

Thank You  
Ann Wayman (Editor)

***Hoya el-nidicus* Kloppenburg n. sp.**

Type # 41931 (CAHUP) El Nido Rest area, Palawan, (northern) Philippines. a vine on a limestone ledge, collected by Professor Juan Pancho 15 August 1988. Holotypus: CAHUP.

Suffrutex parum ramosus, alte scandens. Rami filiformes, flexuose, laxe foliati, tereste, glabri. Folia patentia vel patula, petiolata, ovata vel obovata, acuminata (apiculata, basi breviter cordata, textura coriacea, utrinque glaberrima. Inflorescentiae umbelliformes c. 6-12 florum, pedunculatae, pedunculo pedicellisque glabris. Calycis segmenta ovalia obtusissima, margine breviter ciliata, quam corolla multo minora. Corolla rotata, usque infra medium 5-fida, extus glabra punctata, lobis ovatis, subacutis vel obtusis, intus dense et minute papillosa. Coronae foliata patentia, subhorizontalia, superne subconvexa, ovata, antice apiculata extus obtusa vel brevi apiculata lateribus incrassata-rotundata. Pollinia oblique, oblongoideae, translatoribus brevis simis, retinaculo minutissimo rhomboideo.

The accompanying drawing is by R.D. Medina (Botanical Artist) of the University of the Philippines at Los Banos, Laguna, Luzon. It was drawn from live material in 1988.

An epiphytic ornamental vine, with cordlike, loosely leaved branches, with long internodes c. 15 cm. long. Leaves outspread, 8.5 - 10.3 cm. long, at the widest above the middle 5.1 - 6.8 cm. wide, with the petiole round, glabrous, 1.7 cm. long, curved. Inflorescences pendulous, umbel like, thick 3 - 4 cm. long, bare; pedicels c. 1.1 cm. long, greenish white to reddish pink with age, bare. Calyx lobes small, with ciliate margins, 2.7 mm. long 2.5 mm. wide below the middle, papillose outside, glabrous, membranaceous, no ligules seen. Corolla rotate, white, the margins reflexed, patently white, villose along the edges, c. 1 cm. in diameter. Corona scales 5 spreading, pinkish, 3.5 mm. long, apex extending somewhat upward, anthers greatly exceeding the apex, outer end abruptly blunt, turned down, top sides broadly rounded, linearly lined, center above raised, underside shortly channeled. Ovaries stubby.

Among the rotate Philippine species with pubescent inner corolla surfaces and ciliate calyx lobes, the flowers are delineated from *H. pubicalyx* Merrill by being smaller and with the corona scales much broader and shorter. Also the calyx surface on this species is glabrous whereas *H. pubicalyx* Merrill is pubescent, as is that of *H. halconensis* Kloppenburg. The foliage is larger and of a different shape than that of *H. cagayanensis* Burton, and has a much shorter peduncle, like this species the calyx lobes are glabrous with ciliate margins, however this new species has broadly round lobes as opposed to the somewhat linear lobes of *H. cagayanensis* Burton. The flower size is larger, and is distinctive and unique among Philippine *Hoya* species.

This species is named after the international island resort area of El Nido, where it was discovered. This is a very rugged, rocky and extremely isolated area into which Dr. Merrill did not send his collectors.

**Other measurements:**

Sinus to sinus 4.0 mm.

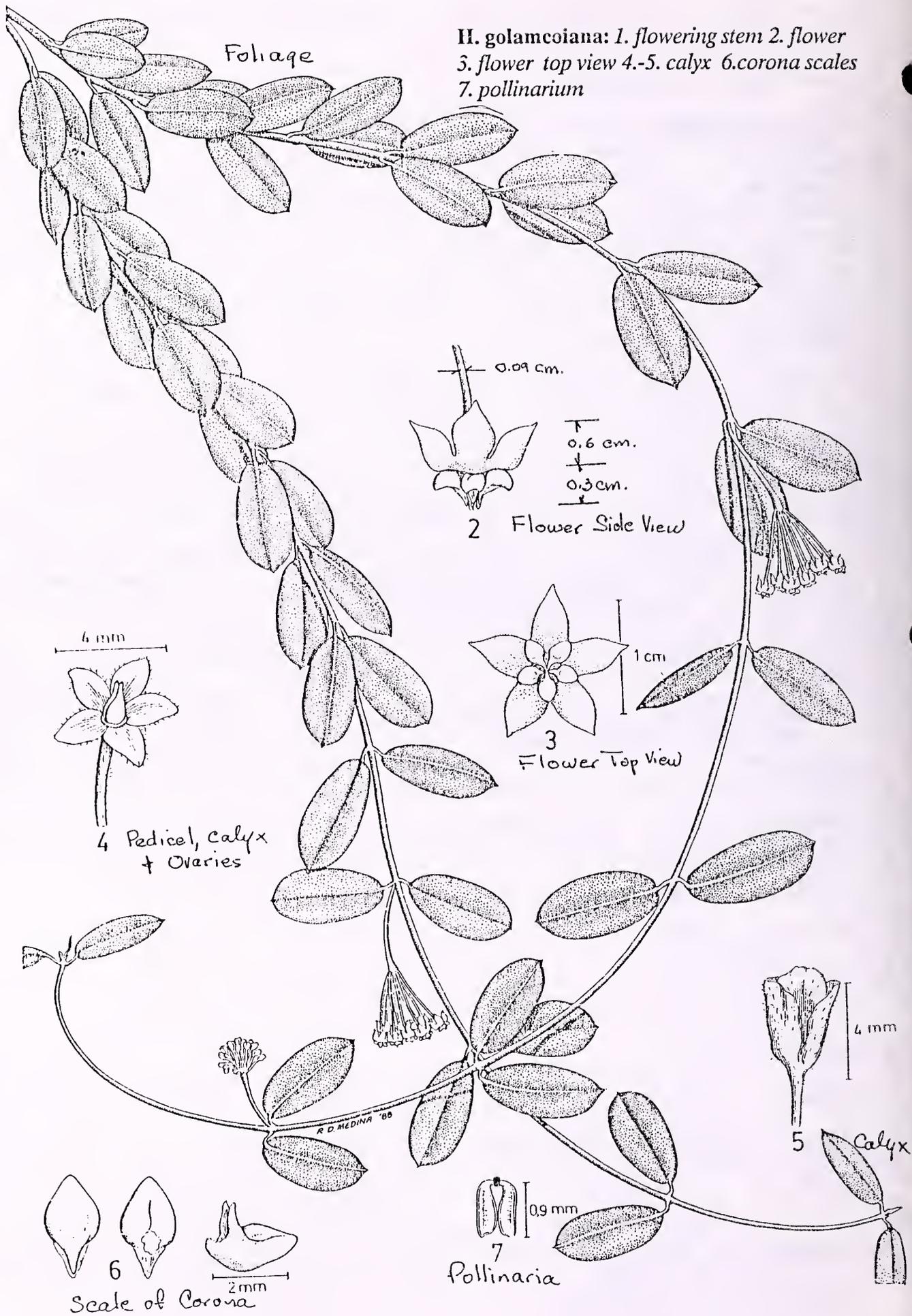
Sinus to collar 3.3 mm.

Sinus to center 3.6 mm.

Sinus to apex 4.0 mm.

Retinaculum 0.3 mm. tall, 0.1 mm. wide.

Pollinia 0.7 mm. long, 0.3 mm. wide at apex.



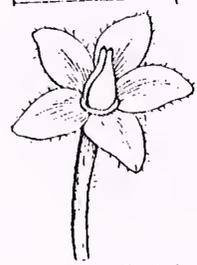
Foliage

*H. golamcoiana*: 1. flowering stem 2. flower  
 3. flower top view 4.-5. calyx 6. corona scales  
 7. pollinarium

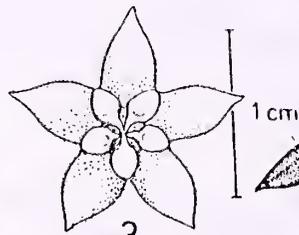
0.09 cm.  
 0.6 cm.  
 0.3 cm.

2 Flower Side View

4 mm

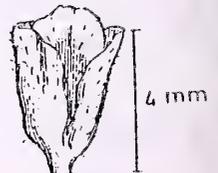


4 Pedicel, calyx + Ovaries



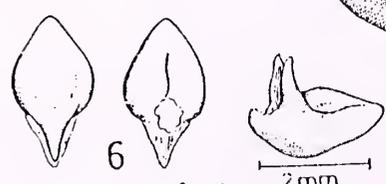
3 Flower Top View

1 cm



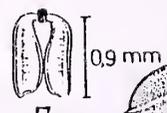
5 Calyx

4 mm



6 Scale of Corona

2 mm



7 Pollinaria

0.9 mm

R. D. MEDINA '88

***Hoya rizaliana* Kloppenburg sp. nova.**

Holotype sheet s.n. (UC). A. Loher collected at Montalban, Rizal Province, Luzon, Philippines, in October 1909. Acanthostemma Section.

Suffrutex, epiphyticus, parum ramosus, scandens. Rami filiformes, flexuosi, laxe foliati, teretes, glabri. Flora erecto-patentea vel patula, anguste ovata, obtusa, textura coriacea, utrinque glabra, enerva. Inflorescentiae graciliter pedunculatae, umbelliformes, c. 6-florae; pedunculo tereti, glabro; pedicellis filiformibus, glabris. Calyx foliola angusta ovata, obtusa, glabra, quam corolla multo breviora. Corolla reflexa, usque ad tertiam partem inferiorem 5-fida, extus glabra, intus pubescenta. Coronae foliola dorso erecta cylindratae-columnares, basin versus paululo incrassata, antice oblonga obtusa, extus apicebus bilobata, columna longa.

This species is of the Acanthostemma section with long thin outer coronal lobe extensions with bilobed extensions. This outer lobe does split on drying and is difficult to recognize as a species of this section. The flower is small, very upright and columnar. The corolla is reflexed and the column is long. The foliage is small essentially ovoid, glabrous and enervis with a short petiole. The small rose colored flowers are borne on glabrous peduncles with flexible and threadlike glabrous pedicels. The calyx lobes are ovate, glabrous and convex due to long outer coronal lobes and consequent reflexed corolla with a long column. The ovaries are relatively long, narrow and slightly bottle shaped. The corolla is parted to below the middle on the five lobes, glabrous outside and pubescent inside with acute glabrous apex, reflexed in the fully opened flower. The coronal processes are very upright, finely lined above. The inner lobe is thin and spatulate with ends turned over the center (stigma apex). The lower lobe is longer, keeled down the center 1/2 in upper lobe 1/2 in lower lobe, the upper surface on either side is cupped. The anther wings are prominent, thickened, buttery opaque yellow. Anther apex is short, not exceeding inner apex. The pollinaria are small, the pollinia wide and truncated, keeled and with a narrow vacuole, attached well in on the flat winged translators. The retinaculum is relatively small. The species is unique and distinct from other Hoya species.

This unusual species is named for Dr. Jose Rizal, former ophthalmologist turned patriot to rid The Philippines of Spanish rule in the late nineteenth century. Captured and shot at Luneta, Manila in 1896, he is now the most revered of all Filipino patriots. It is my pleasure to name this new Hoya species in his honor.

**Internodes:** Twice as long as the leaf blade or more, glabrous, round, flexible.

**Leaf Blade:** 3.6 cm.x 1.2 cm., ovate tapering more toward the petiole, enervis, glabrous.

**Petiole:** 1-1.1 cm. long, round, glabrous.

**Peduncle:** 9-17 cm. long, round, glabrous.

**Pedicel:** 1.0 cm. long, threadlike, round, flexible, glabrous.

**Calyx Lobes:** convex, very membranaceous, ovate, obtuse apex.

**Corolla:** outside glabrous, inside pubescent, reflexed; lobes cut to the center or slightly below, 0.35 cm. long. narrowly triangular with acute apex, rose in color; apex to sinus 0.3 cm, sinus to sinus 0.18 cm..

**Corona:** process very upright, columnar with long column. Inner apex spatulate 0.055 cm. broad. Inner lobe 0.23 cm. long, lower lobe longer, keeled, with a ridge down the center, about 0.06 cm wide and both are linearly lined on the dorsal side. Apex to base of corolla 0.16 cm.. Pollinia 0.005 cm. wide at truncated apex, 0.012 cm. long, keeled with narrow vacuole. Translators broad and flat, attachment point of pollinia well to the center near the small retinaculum.

