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# FRATERNA

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**Hoya andalensis** Kloppenburg  
Photo by Kim F. Yap

# INTERNATIONAL HOYA ASSOCIATION

Administrative Office:  
1444 E. Taylor St.  
Vista, CA 92084  
Phone: (760) 758-4290 Fax: (760) 945-8934  
E-Mail: RBGdns@aol.com  
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**Editor's e-mail address:** [rdk03@cvip.net](mailto:rdk03@cvip.net)

## **President's Message**

**It is with a heavy heart that I must announce the passing of our IHA President, Dr. Harriette Schapiro at the age of 69. Harriette had many health issues to deal with in the last part of her life---allergies, breathing problems, back problems---she even survived breast cancer---all with her characteristic unsentimental touch, and sensible humorous approach. On December 18, 2004, Harriette had dual heart valve replacement surgery. It appeared that things were going to be okay for Harriette, but soon the heart started rejecting the replacement valve, and she died of heart failure on December 21<sup>st</sup>.**

**Harriette was a biology professor at San Diego State University when she was called upon to serve as the President of the International Hoya Association. This was about 10 years ago. Harriette loved hoyas, but that was not all of her interests in life. She was an artist, gardener, bonsai lover, dog lover, avid reader, passionate cook, dedicated churchgoer (serving on the Board of Jewish Education), and quilt maker (she was highly skilled with piecing, quilting, and embroidery---winning many awards at quilting shows)---just to name a few.**

**Harriette shared her life with three dogs in her lifetime. First there was Princess, a miniature collie, who almost seemed to understand Harriette when she was talking to her. Then Tali, a male bulldog---which was her 'baby'. And last, but certainly not least was Abbey, a Welsh Corgi. Harriette carried their photos around with her and told anyone who would listen about their clever antics with much motherly love---which many human beings never get.**

**Harriette was one of the founders of the San Diego Hoya Group---which she helped form about 12 years ago---right in her own home, when she invited a dozen hoyas enthusiasts over for an afternoon. She went on to become the chairperson for 8 of these last 12 years. She was always fond of our little hoyas group because it was not only a time to get together every three months and have a huge pot luck, but also to talk about hoyas and exchange plants. Her idea of a hoyas raffle two times a year has always been the highlight of any meeting.**

**We will miss her nice smile, quick wit and loyalty---both in our little Hoya group here in San Diego, and internationally through the International Hoya Association.**

**Chuck Everson  
President, I.H.A.  
E-mail: [rbgdns@aol.com](mailto:rbgdns@aol.com)**

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## Hoya andalensis Kloppenburg

The plant was sent to me by Paul Shirley, the Netherlands in 2002. It bloomed here in Fresno California 19 August 2004.

As near as I can determine this plant (IPPS 1775) was collected by E. de Vogel / J. Vernaden at Padang, Air Sirah, Sumatra in a young secondary forest. Also as Hoya sp. 24758.

This is a small leaved dangling plant. Leaves opposite small, cupped below, ovate 5.0 x 2.2 cm. mostly uniform, medium flat green color above, below much lighter, most leaf pairs turned to one side of the stem. Many small stubby adventitious roots along the stems, internodes 4.5 - 7 cm. long, mostly 5 cm, ventral surface granulose with some fine hair cells along the midrib, dorsal with some hair cells near the base, otherwise glabrous. Stems green with a fine puberulance. Petioles curved 1 cm. or less long, not grooved above, very small rudimentary glands at attachment to the blade. Peduncles axillary, curved 5 cm. long, first flowerings from stems where leaves have not yet formed, finely puberulent 18 flowers per cluster, not all open at once; clusters flat. Pedicels, pale green curved 1.5-2.4 cm. long in a geotropic cluster.

**Hoya andalensis** Kloppenburg species nova. Typus #20051 (UC). Hoya Section Acanthostemma (Blume) Kloppenburg. Ex hort Fresno, California. Species affinis *Hoya bilobata* Schlechter sed pro parte maxima partitus 2X magni. Coronae lobus interior usa predistinctus, luteus, dorsalis pagina granulosus; subsepartus a coronae corpus; retinaculæ translatori brevis, retinacula parvus, ovatus, differt.

The species is similar to *Hoya bilobata* Schlechter but differs, for the most part the features are twice as large. The inner coronal lobe is distinct, a yellow color with a granulose upper surface and somewhat separated from the main coronal body. The translators are short and the retinaculum is small and ovate.

The name is derived form the ancient name for the Island of Sumatrera (Sumatra). Data supplied by Kim F. Yap, Singapore.

Photomicrographs of the floral parts below:

**Pedicels:** curved, glabrous, terete, lt. green, 0.09 cm. in diameter.



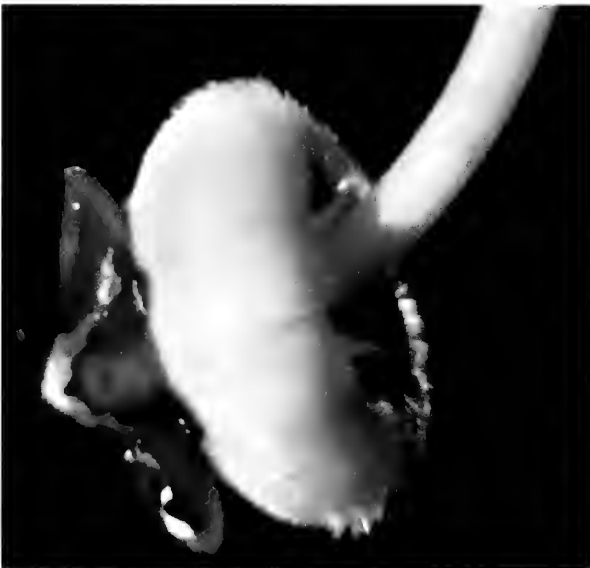
Side view of the pedicel, calyx and ovaries enlarged about 16X. All green in color as shown. Cluster with pedicels of various lengths form a geotropic concave cluster.



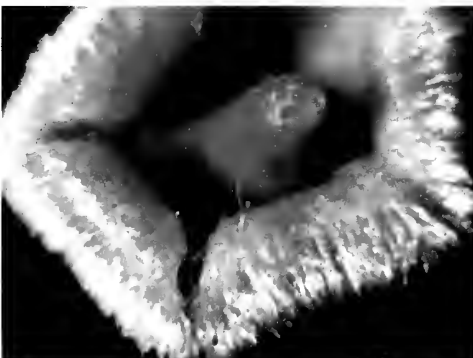
Another close-up of the calyx and ovaries enlarged about 16X. The area near the calyx is granulose as is the outer surface of the sepals. The ovaries are cupped on top 0.11 cm. tall and the base pair are 0.10 cm. wide. surface is glabrous. Color as shown clear lime green.



Top view of the calyx enlarged about 16X. Calyx is small. Sepals are membranous with the central area thickened a little. Edges with an occasional cilia, rudimentary ligules present. The sepals do not reach the corolla sinuses. 0.10 cm. long and 0.16 cm to the center. 0.10 cm. at the widest.

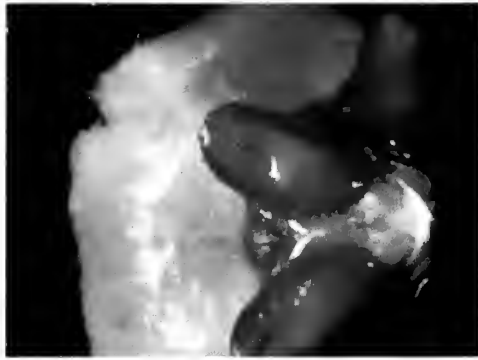


Side view of an individual flower with the pedicel attached. The corolla is tightly revolute and densely pubescent on the inner surface. Crown sits mostly above the corolla. Surface cells are crystalline white and very upright.

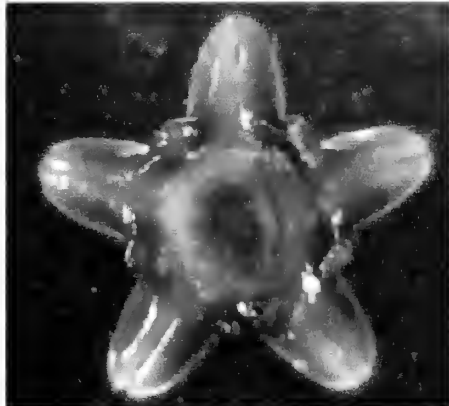


Here again note the revolute corolla with the crystalline, dense pubescence, the apical areas of the inner corolla are, however glabrous. Color a mixed pink and yellow. Measurements flattened.

|                |          |
|----------------|----------|
| Sinus - sinus  | 0.28 cm. |
| Sinus - center | 0.23 cm. |
| Sinus - apex   | 0.35 cm. |
| Widest         | 0.27 cm. |
| Apex - center  | 0.50 cm. |



Top view of the corolla and corona enlarged about 16X. The outer surface of the corolla is glabrous. The lobes of the corona just reach the sinuses of the corolla. The inner coronal lobe is yellow, difficult to see and granulose above. Outer lobe is bifid and fleshy, glabrous.



Bottom view of a corona enlarged about 16X. The central column is thickened and prominent. Bilobes form a channel that nearly reaches the column, the surface is finely sulcate. The anther wings are well developed and extended slightly, all surfaces are glabrous.



Anther wing area below, greatly enlarged to show the unusual protrusion on this surface view. Diagonal sulcations on the lower bilobes forming the sides of the channel are visible especially on the left lobe. Again the center column is prominent.



Top view of the corona enlarged about 16X. The inner lobes do not reach the center, anthers are exposed, membranous and triangular. Inner lobe is 0.04 cm. long and almost distinct from the rest of the scale. Lobe is oval and rounded 0.13 cm. long red in color.

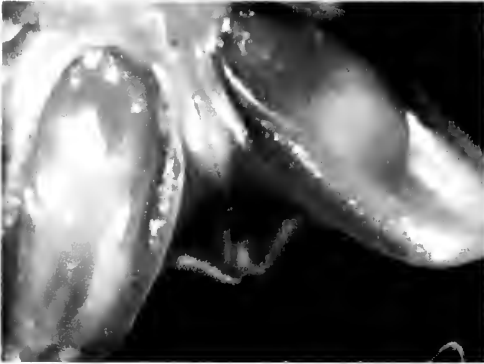
Apex - outer ends                      0.20 cm.  
 Widest                                      0.07 cm.

Overall width including bilobes   0.10 cm.

Outer bilobes are rounded on sides but cleaved inwardly on the inner flat surface. Anther wings well developed and deep.

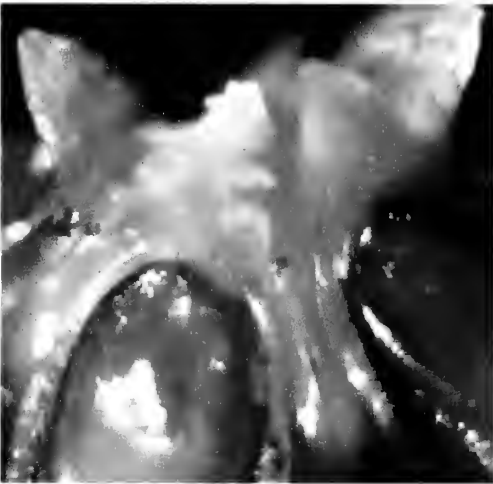


A much enlarged view of the corona dorsal surface. Note that the yellow inner lobes are difficult to distinguish. The upper flat surface of the bilobes are longitudinally sulcate but the lobe itself is not. Anther wings are membranous and meet in the center as triangles. Retinacula and pollinia are visible.

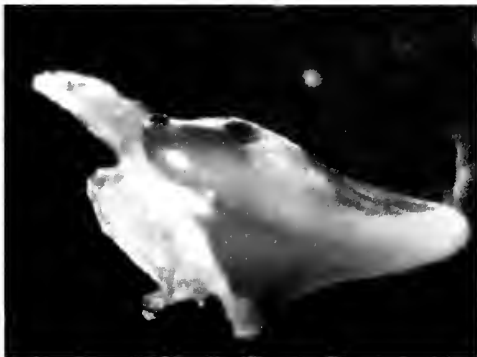


Here another photo showing the top view of the protruding anther wings and the sulcate bilobes and full rounder central coronal scales.

|              |          |
|--------------|----------|
| Ret. - ret   | 0.07 cm. |
| Ret - center | 0.07 cm. |
| Aw. - aw.    | 0.18 cm. |
| Aw. - center | 0.17 cm. |



Stylar crown greatly enlarged. It is in the upper center (bright object) it has a short filamentous head. To the left and right are the pulled back anthers and below to each side the coronal scales. This is really a beautiful distinct small flower.



Greatly enlarged side view of a scale. As you can see the inner lobe is almost distinct from the rest of the scale. The triangular anther wing overtops the inner lobe. Outer bilobes have rounded outer surfaces. I wish I had the space to display all 75 photos of this flower.





Pollinarium picture from a Olympus digital microscope enlarged about 165X. The pollinia are long and narrow with rounded inner apices. The retinacula is very small with horned hear and rounded body. The translator are small and short and the clear supported caudicles are also small with the usual bulbous inner ends.

**Pollinium**

|        |          |
|--------|----------|
| length | 0.59 mm. |
| widest | 0.19 mm. |

**Retinaculum**

|        |          |
|--------|----------|
| length | 0.12 mm. |
| widest | 0.12 mm. |

**Translators**

|        |          |
|--------|----------|
| length | 0.05 mm. |
| depth  | 0.02 mm. |

**Caudicle bulb** 0.09 mm.





**Photo by Kim F. Yap  
Taken in Ted Green's yard, Kaaawa, Hawaii, Fall 2004**

## **HOYA IMPERIALIS ALBA**

The chances of finding an alba in a normally colored population of flowers is, I think, about 1 to 10,000.

In October 1993, I went on a plant collecting trip with David Cumming and his wife, Odette, to Palawan Island, the south-western most island in the Philippines. David is a Scotsman and Odette, Filipina and at the time were living in Brisbane, Australia. He called and asked me go with them and I jumped at the chance!

I like Palawan for the towns are clean, prices are cheap, people are nice, food is so-so AND there are lots of different and unusual plants - tons of Hoyas with the commonest being **Hoya imbricata** and **crassicaulis**. The bad thing is that there are no roads into the mountains, and at that time, even the rest of the roads were pretty bad. For instance, after traveling 50 miles finding a deep waterhole that completely blocked our way!

**Hoya imperialis** is very common on Palawan, as in Sabah, Malaysia, growing at the lowest elevations in and behind the Mangrove Trees. The flower color forms are not just the dark maroon but may be pink and green and as I found out, very rarely white.

42 kilometers north of the capital city of Puerto Princesa, Palawan, Philippines there is quite a large Mangrove swamp (which I usually hate for they are dark, dismal and scary with all kinds of small animals and Mud-skippers, and plenty of mud). **Imperialis** loves the edges of

Mangrove swamps for they get started on the lower branches and crotches, where there is debris and the humidity is high, and then grow up to the tops of the trees where they flower. Incidentally, the leaves of the imperialis are very similar to the Mangrove's and it is not easy to separate the two except that the hoyas are clumped and not spaced and the edge of the leaf is wavy. At the time that we were there none of the plants were in bloom.

I found this first alba (93094) as a small seedling, about 4" tall, growing in the crotch of a tree – about 5ft. above the ground., in deep shade. Nearby was a white Phalaenopsis, at eye-level (strange for I always thought that they would be in the high trees with a lot of light and fresh air. Luckily, this seedling made it back and it grew – flowering in October '98. What a surprise!

Yap's beautiful picture that is shown with this article is 93094 and was taken when he stayed with me last month (September 2004). At the time, there were 4 peduncles flowering and, right now, the peduncles are now producing another crop of buds that will open about the middle of November (2004). How is that for production?

I found another alba on the west side of Palawan, at Sabang, on another trip several year later – and once again it was not in flower and had to wait a year until it flowered. Its color was about the same but maybe with a tint of green. Both are winners!

Who wants to go back to Palawan with me? I have been there 3 times but maybe this time we will find a big blue imperialis with yellow dots!

Ted Green  
Green: Plant Research  
Kaaawa, Hawaii



Picture of a mangrove area taken by Ted Green. Notice the dischidia vines hanging down from the tree branch, but watch your step in the mud, and keep an eye out for snakes and other creepy crawly things too!

## More Hoya Favorites

*by Ann Wayman*

### Hoya obovata Decaisne

This Hoya species is medium to large in size with broad, very thick "egg shaped ", or almost round leaves, attached at the narrow end to thick, round and very rigid stems. If given very bright light the foliage of this plant is dark gray green and splashed and spattered with pink and white. The flowering ability of this plant is unmatched. It can and usually does bloom all year long with short periods of rest between blooming. The flowers are rather large, in clusters of up to 25 or more per umbel, and are similar in appearance to *H. carnososa* but somewhat larger. The plant will have as many as five to fifteen umbels ready to open, and they will all open at once over a period of a few hours. Although most pictures portray the flower petals as white, they are actually very pale pink and quite fuzzy. They also have a large, dark cranberry red center. They are magnificent!. The fragrance on the other hand is typical of most Hoya's in that they reek of honeysuckle.

This is a plant that reacts adversely to being over watered and can go for a week or more almost completely dry. I'm not advising anyone to let their plants go dry but at least this is one plant that won't curl up and die if it doesn't get watered on time. About the most serious thing that can happen will be the loss of a few leaves.

I've had this plant for all of the years that I've been growing and studying the Hoya genus and it remains one of my favorites.



## F-484

### Another Hoya of the Otostemma Section

Purchased approximately seventeen years ago from Dale Kloppenburg, this gorgeous plant is a long time resident of my greenhouse and one of my very favorite Hoyas. It was one of my first Hoya purchases other than the common everyday Hoyas that I had been growing for many years and thought I had every one that was available. I believe at the time I had twenty four of what I thought were totally different plants. Little did I know at the time that at least eight of these were just different looking *H. carnosas* and another six or so were just different looking *H. pubicalyx*. When I sent for Dale's catalogue, I had no idea what any of the descriptions meant, I couldn't even visualize what they would look like in person ...so I had to take a 480 mile trip to Fresno to see for myself. I wanted a cutting of everything he had but was forced to be practical by the weight of my wallet. I took my time and looked and looked. When I saw something I couldn't live without, I would hand Dale his pruners. That's how I ended up with this gorgeous plant with the unlikely label of *H. sp. #F-484*. To this day I'm not sure if anyone knows what it is, or even if it is a known species. I am sure that it has some of the most beautiful foliage and flowers in the Hoya genus.

The foliage is fat and oval shaped almost to the tip but gradually tapers to a point. It is healthy and clean looking with bright, very shiny looking dark green leaves. It hangs and drapes beautifully from a small 6 inch basket but can get quite large if allowed to. The blossoms are rather typical of the flowers in this section, looking a lot like *H. lacunosa* Blume but a bit larger and a lot fuzzier. When the petals roll back it makes a perfect little ball of slightly pink fuzz. These individual flower umbels are not long lasting but will last for a few days before falling. The bonus is that they just keep coming for weeks at a time until you think they will surely bloom themselves to death. I love it, and I plan on having it forever.



## Hoya lacunosa Blume

Of all the jewels in the Hoya world, none shine any brighter than *H. lacunosa* Blume. The foliage of the two known varieties being extremely diverse, with the *H. lacunosa* var. *lacunosa* being grayish green and appearing veinless, oval shaped at the base; gradually tapering to a point. It has the feel of soft cardboard, is completely bald (or glabrous) and heavily spotted with white splashes. The *H. lacunosa* var. *pallidiflora* on the other hand is very dark green, with no white spotting and has the feel of soft vinyl. They are described as being ovate-elliptic acute or somewhat acuminate, which only means that they are on the slender side of oval and don't come to a sharp point but are a little more rounded than sharp at the apex (or tip). Both of these varieties have to some extent the dips and indentations in the leaves that give them the name lacunose which translates to "shallow depressions".

Both of these varieties flower with great enthusiasm, even in medium light. They do however grow, keep their nice coloring and bloom much more profusely in very bright indirect light. The dainty, fuzzy white flowers with yellow center of both of these varieties are exquisite, often with as many as thirty to forty umbels consisting of twenty five to thirty flowers per umbel opening in rapid succession over a period of a week or so. These plants will repeat this pattern several times during the spring and summer.

Speaking of varieties, this article would not be complete without mentioning the many plants I have received over the past nine or ten months with the name of *H. lacunosa* tacked onto them. I now have *H. lacunosa* "pink flower" *H. lacunosa* "heart leaf", *H. lacunosa* "tiny leaf", *H. lacunosa* "Malaysia", *H. lacunosa* "Rose", *H. lacunosa* "broad leaf", *H. lacunosa* "purple edged leaf" and yet another heart shaped leaf that is different from the previous listed heart shaped leaf that is so fat and succulent, it looks like it is ready to burst. I don't know where all these plants are coming from, or how they got the name of lacunosa. It will be interesting to see these plants flower and start the fascinating journey of dissecting the flowers to find out if they truly are in the lacunosa family or just species in the Otostemma section.



## Hoya parvifolia Wight

This silver flecked, fuzzy leaved species is the darling of the Hoya genus and a true miniature. There isn't adequate words to describe this adorable plant but I'll try. Starting with the leaves, they're tiny, about 1/2 inch long, oblong or oblong-elliptic and very obtuse (the tip blunt or rounded) shortly velvety (hispid) on both sides and splashed and spotted with silver. The flowers are quite large, at least in comparison to most flowering plants with leaves this small. The petals are pure white on the inside and covered with short velvety hairs. These petals roll back to reveal a large yellow crown.

I tried several times to get this plant to start from a cutting but without any luck. Seems they always died before putting out roots, then I got a seed pod from a lady by the name of Alma Parker. I was scared to death to even try to grow anything but garden plants from seed but she told me to just make sure I drenched the seedling planting mix with a fungicide to stop the fungus that causes "damp-off". I drenched... the fungus never started and the rest is history! This is not a real prolific bloomer but will put on a show if given lots of very bright light. I keep mine in the brightest light possible on all but the sunniest days. It is now November and I have two plants covered with flowers.

This species has been often compared in writing with *H. lacunosa* Blume, however it is in the *Acanthostemma* section where *H. lacunosa* is in the section *Otostemma*. Hopefully Dale will soon write an article on the different sections. I'm sure it will give us all a clearer understanding of how these plants can be categorized to make identifying them a little easier.



All the above photos in this article by Ann Wayman, Central Point, Oregon

## Hoya waymaniae Kloppenburg

It is it any wonder that a plant named in my honor would be one of my favorites? Actually, I believe I would love this plant no matter what its name. It has by nature been granted with beautiful foliage of soft grayish green leaves that have the texture of stiff cardboard but with a velvet touch. Each leaf is wavy or undulate and has a picoteed edge as if someone had crocheted a tiny lace edging around the rim. There is also a lot of pink or rose colored pigmentation in these leaves, as well as being splashed with irregular white streaks. The stems don't branch much and are too stiff and rigid to twine, so they grow straight out from the main stem and grow and grow and grow. Often these long stems will get three or four feet long and just when you decide that they will never get any leaves on these naked stems, and you might as well prune them back to force branching, they will suddenly put on a display of forming leaves, and while they're at it why not form a dozen or so peduncles. These peduncles are not just ordinary peduncles but peduncles with a capital P. The average length of these peduncles are about 6 inches with some being as much as 9 inches long. Fifteen to twenty five half inch, brilliant orange flowers form in umbels. When they open they will roll back tightly into perfect balls of orange flowers with short white hairs and a deep red center. I have never detected any fragrance from these flowers, however some people tell me they have a light citrus odor.

I purchased this plant many years ago from Michael Miyashiro as # 85-1985. It was the only designation that it had for years until it was finally published in 1995 by Dale Kloppenburg. This has not been an easy plant for me to grow but I must have finally got the hang of it because I have five large plants now that bloom faithfully at least twice a year. Recently I have heard that there is a round leaved version...just a different clone of this species, or is it a cross of something? Anyway it is being sold as H. 'Orange Peel'.



Photo by Ted Green Kaaawa, Hawaii



## What's My Name By Dale Kloppenburg

There are rules for naming plants. These rules are established by the ICBN (International Code of Botanical Nomenclature). The latest is the Saint Lewis Code, 1999, and you can go on line and read it or download it if you wish. If a plant is named according to the rules it is legitimate - if not it is illegitimate.

What I have in mind here concerns the name of plants we now call, *Hoya acuta* Haworth, *Hoya parasitica* Wallich etc. In 1821 Haworth described *Hoya acuta* in Latin from a plant he found growing without flowers in the Kew Gardens in 1819. (Acute leaved hoyo). This description was made without an illustration or a type mentioned.

We find that this plant was introduced into the Kew gardens in 1818 and was sent from Calcutta, India by Dr. Wallich under the name *Hoya parasitica*, at that time a manuscript name (mss). This did not qualify as publication. It had been collected in the Delta of the Ganghes (this is a huge area). It was distributed to gardens and nurserymen in the vicinity of London where it was generally known as *Hoya lanceolata*. In John Miller's nursery at Bristol, England it was sold as *Hoya albens*. (supposedly the same species).

In 1826 in the Botanical Register II, Lindley gave a description of this species and showed an illustration #951. This conforms to the ICBN rules and thus is the also valid name for this species. Its name is *Hoya pallida* Lindley. It does not take precedence over the 1821 description.

In 1834 we find the first valid description of this species with the name *Hoya parasitica* Wallich and the type is listed as *Asclepias* #29. Although this is a description with a type sheet it does not take precedence over the 1821 description of Haworth, Roxburgh in Flora of British India in 1834 described the species under the name *Asclepias parasitica* but did not state a type sheet. Some have objected to the name "pallida" as it describes a pale plant and flower. It is no more objectionable than the term "parasitica" as this species is not parasitic. The objections have no effect on the valid publication of *Hoya acuta* Haworth nor do they have precedence over *Hoya pallida* Lindley.

The characteristics from the descriptions of *Hoya acuta* and *Hoya pallida* as valid publications show the following characteristics. From 1821 on we find that it has:

**A native of the Ganghes Delta**

**Leaves ovate lanceolate acuminate, veins scarcely conspicuous above and invisible underneath, two to four inches long and one inch broad, midrib a rather lighter color, trinerved at the base.**

**Petioles very thick and fleshy, short.**

**Peduncles 1/2 the length of the leaf.**

**Calyx leaflets linear, 1/2 corolla length.**

**Corolla glabrous.**

**Corona ovate acute, scales concave.**

**A compact hemispherical umbel.**

The exceptions arise in descriptions in 1883 (after some 18 descriptions) by J. D. Hooker in The Flora of British India. The differences continue for another 19 descriptions. It appears to me these later descriptions are not of the original. Now are the plants in our collections this species and are my assumptions correct ?

From Lindley's Botanical Register (1826) as *Hoya pallida*. Synonymous with *Hoya parasitica*. Note the long peduncle and leaf venation that is not clearly defined on upper surface, obsolete on lower surface, much as early descriptions say. This is the type material (illustration) for this species.



Lindley's BOTANICAL REGISTER, Vol. XI, Tab. 951 (1826)



*H. pallida* Bot Reg x1 1826

**Note:** the small drawing of corolla reflexed, also the globose flower cluster, the peduncle length, here  $\frac{3}{4}$  as long as the leaf; a double rachis, the heavy petioles and the leaf shape and venation. Outer coronal lobes are raised and not ovate or obtuse.

# Photo Gallery Descriptions

Top row left: A seed pod forming on *Hoya crassicaulis* (Elmer) Kloppenburg in late August at Fresno, California. In my location pods seem to form not by being pollinated, rather under environmental conditions suitable for the pods to form. Here in Fresno, sometimes it appears in the early spring. I have pods develop and this year as the weather was more mild this year, I had them form in the fall. Photo by Dale Kloppenburg

Top row right: A small flower cluster on *Hoya vitellinioides* Brink f. This species was originally collected in Batavia, Western Java, on Mt. Tjipoetih at an altitude of 800 meters. This is a blooming in Fresno, California in August 2004

Second row left side: A picture sent to me by Monina Siar from the Plant Breeding Program at the UPLB (university at Los Banos), Philippines via e-mail. This is *Hoya mindorensis* Schlechter. This is a new clone with different flower coloration. It appears that this species is very variable as to color and also variations of the corona. Here the inner lobes do not reach the center as in our "red" clone and the outer coronal lobes are more rounded and sloping slightly downward. The species was discovered by R. C. McGregor on a trip up the Baco River which winds its way down the slopes of Mt. Halcon which is on the north end of the island of Mindanao.

Second row right side: Another clone of the same species (*Hoya mindorensis*) sent via e-mail and photographed by Ann Wayman of Central Point, Oregon. Here there is more magenta coloration and more white near the center of the flower. Again there are differences in the coronal lobes. The foliage on all our clones look similar and the key element is that the pollinaria are almost identical and distinct from most other *Hoya* species. All these clones are easy to grow. They are vigorous and easy to flower.

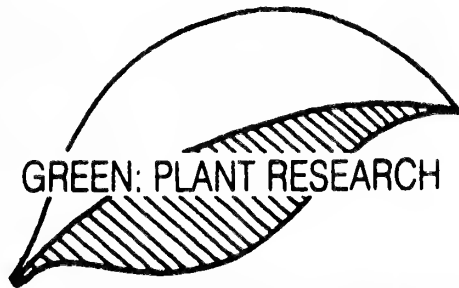
Last row central: *Hoya waymaniae* Kloppenburg. This photo was taken by Ted Green at his home in Kaaawa, Hawaii. This is a very interesting species found in Sabah, Malaysia on a collecting trip in 1997. When we originally collected this species growing in the wild it was growing on the ground in the leaf litter of a sapling forest. Note the very long peduncle in this picture and that it is on the end of a branch. Most of us there speculated this length was probably an adaptation for getting its flower cluster above the leaf litter. Last year Ted Green along with Tony Lamb, David Liddle and others again found this species growing on trees as an epiphyte so maybe our speculation for the long peduncle was not true. This species is not widespread and is difficult to find in Sabah. Its range seems to be somewhat limited. This species is interesting for a number of reasons among which are the unusual orange colored flowers as well as the thick undulant leaves, green on top and usually rusty colored below. It is a real keeper.

# Hoya Photo Gallery





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# FRATERNAL

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Official Bulletin Of The  
Volume 18 #2 INTERNATIONAL HOYA ASSOCIATION Apr. - Jun. 2005

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**Hoya weebella** Kloppenburg  
Photo by Torill Nyhuus

# INTERNATIONAL HOYA ASSOCIATION

Administrative Office:  
1444 E. Taylor St.  
Vista, CA 92084  
Phone: (760) 758-4290 Fax: (760) 945-8934  
E-Mail: RBGdns@aol.com  
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## **Hoya weebella** Kloppenburg

**Hoya weebella** Kloppenburg sp. nova, ex hort. Sweden. Typus #20051 (UC), here designated, affinis *Hoya engleriana* Hosseus sed folia ovata-parabolica non lineara-lanceolata; circa 1/2 longam; plerumque tria ad nodus differt.

*Hoya weebella* Kloppenburg new species, type material grown in Sweden. Holotype #20051 (Univ. Calif.) like *Hoya engleriana* Hosseus but different, the foliage is ovate-parabolic not linear-lanceolate: about 1/2 as long; three leaves at a node for the most part.

This is a Section *Acanthostemma* species from Northern Thailand near the Burma (Myanmar) border. I have had nice plants of this species twice over the years and have failed to keep it living for long. In 1992 I was sent a cutting by Chanin Thorut from Thailand along with flowers. Thought to be *Hoya vaccinioides* Hooker 1883, but not that species. The Type material was grown and flowered in Sweden, pressed material was sent to me by Torill Nyhuus.

Leaves: opposite, midrib prominent below, stem rusty, apparently no leaf gland, a few trichomes along the midrib, few hairs on lower midrib end of blade, upper surface rugose, base rounded (obtuse) tapering (lanceolate) to a narrowly rounded apex. 0.18 cm. long and widest near the base 0.09 cm. apex with small apiculation. Blade dark green, underside glabrous, edges slightly recurved, thin. Above medium green, slight groove down the center above midrib, edges entire, below granulose punctate, glabrous.

Petiole: curved, hirsute, hairs pointing toward the leaf blade, ca. 0.90 cm. long, clean 0.30 cm. in diameter.

Peduncle: 0.90 cm. in diameter, very hirsute all hairs pointing outward.

Pedicels: of various lengths 1.3., 0.08, 1.2, 1.4 cm. in same cluster, from bracts on the end of the peduncle (a leafy base). 0.08 cm. in diameter.

Calyx: did not record measurements. Hirsute outside, narrow and concave inside, apex appeared rounded.

Corolla: outside glabrous, inside puberulose, area about collar very villous.

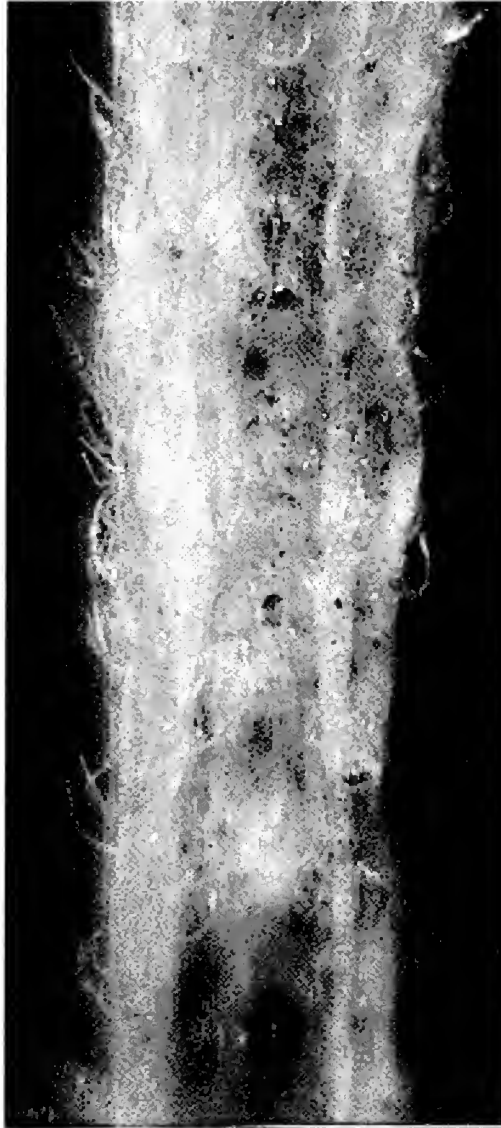
|                 |   |
|-----------------|---|
| Sinus to sinus  | 0.62 cm.  |
| Sinus to apex   | 0.51 cm.  |
| Sinus to center | 0.47 cm.  |
| Apex to center  | 0.61 cm. so flower flattened is 1.20cm in diameter. |
| Widest          | 0.61 cm.  |

Corona: could not record much. Anther wings double. Outer coronal apex (2) like *Hoya rizaliana* Kloppenburg. Thick anther sacks. Stylar apex knobby. (see photos below).

Pollinarium:

See data with pollinarium pictures.

The pictures that follow are from a dry umbel reconstituted with Kew solution:



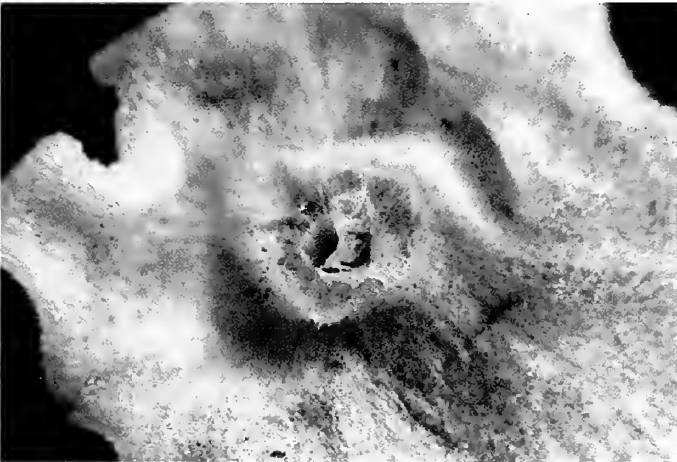
The pedicel enlarged about 48X (30 power on scope). I believe it would be possible to identify this species by the pedicels alone, they are so hairy with long stellate hairs pointing toward the calyx.



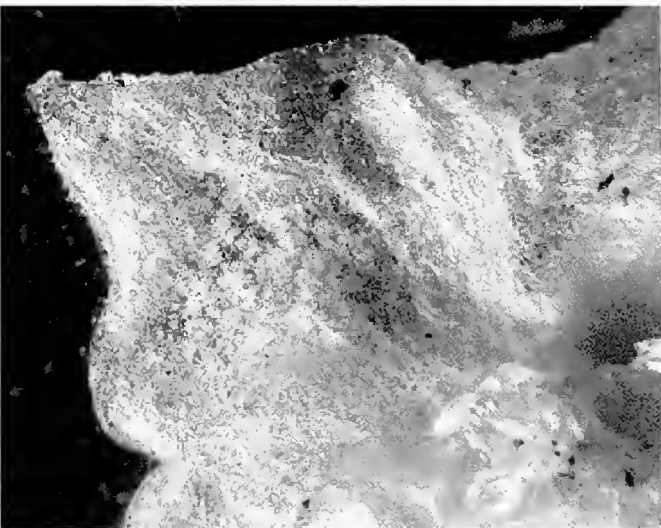
The peduncle (rachis end) with the attached pedicels. Note here that not only are all the outside surfaces covered with these dense long hirsute hairs the pedicels at the base are clasp with ear like bracts, this feature is uncommon and rather unique. The hairs although twisted and curved all essentially point apically. They are rusty colored from a yellowish under-base.



Calyx enlarged about 16X. This one is really hirsute with again the hair cells pointing apically.



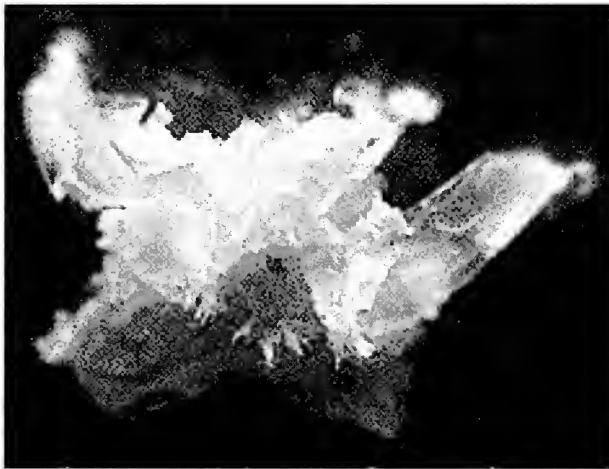
Outside view of the corolla with the calyx removed leaving some hairs surrounding the collar, otherwise this surface, although rough is glabrous. The corolla edges are a little thickened and finely ciliate with small diamond shaped cells.



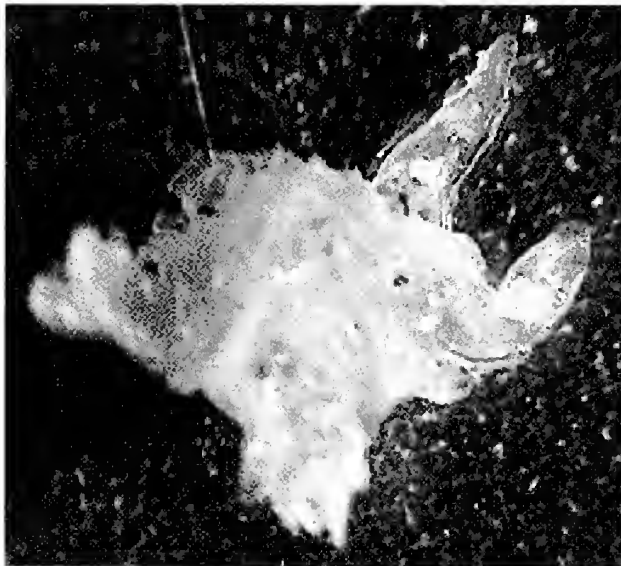
Inside view of the corolla with its ciliate edge and fine pubescence on this surface. The coronal lobes do not show well but do not even approach the corolla sinuses.



Another inside view of the corolla enlarged about 16X. Surfaces as mentioned above, you can see that the corolla lobe apex is acute and is broad as it leaves the sinus. The anther wings are prominent and also doubled on the outer margin. Coronal scale difficult to make out.

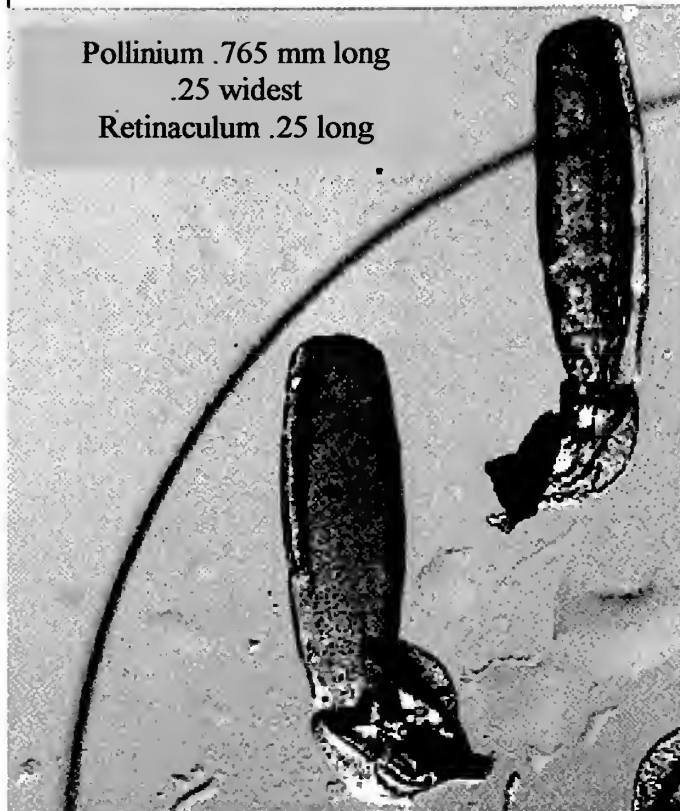


The bottom view of the corona enlarged about 16X. The picture is not clear but the coronal scales are sticking out and around the column are a lot of stiff hairs.



Top view of the corona enlarged about 16X. It has a raised center. The clear yellow anther wings are visible. The bilobed extensions are thin, somewhat translucent and project way beyond the scale apex, they do not cross at the outer apex but have upturned ends. In this character they are like the bilobes found on *Hoya rizaliana* Kloppenburg. The style head is a knobby structure in the center of the pentagonal table. The anther wings are long and doubled at the outer apex. By doubling I mean that the edges that form the channel are then thickened to form another rounded protrusion toward the outer apex (in top view this is like looking at a rather fat "w", the center part of the w representing the end of the stigmatic

channel, into which a pollinia is theoretically placed and can be drawn upward to the stigmatic surface at its terminal end for pollination.



Pollinium .765 mm long  
 .25 widest  
 Retinaculum .25 long

Here are two pollinaria each with one pollinia missing enlarged about 65X. The pollinia are relatively long with rounded apices, slightly truncate. The translators are well developed and support a large caudicle. The retinacula has a long head area and the translators and caudicle are entering well down at the waist. The top is grooved and the extensions are short. There is a narrow vacuole inside the pellucid edge.

|             |   |
|-------------|---|
| Pollinia    |   |
| length      | 0.765 mm.                                   |
| widest      | 0.25 mm. at the widest.                     |
| Retinaculum |   |
| length      | 0.25 mm.                                    |
| Translator  |   |
| length      | 0.27 mm.                                    |
| depth       | 0.06 mm.                                    |
| Caudicle    |   |
| bulb diam.  | 0.06mm.-0.14 mm.                            |
|             | but also big on the tail ca. 0.18 mm. wide. |



This pollinarium is enlarged about 124X in order to show more detail of the translators and caudicles. Note too that a pollen cell has germinated and a rather large pollen tube has emerged through the vacuole and under the split edge of the pellucid margine. As the pollinia absorbs moisture (honeydew) namely from a small orifice at the base of the pellucid margine the pollen grains swell, splitting the edge away along the pellucid margine allowing the pollen tubes to emerge. In this picture you can see the wedge shape of the translator with its wider concave top (here a darker linear structure) supporting the elongated caudicle. Here the caudicle, which in most cases is clear, has some granular structure to it but not nearly as much as the translator has.



Photo from 2<sup>nd</sup> flower enlarged about 165X. Compare with previous photo and measurement. Here the material is better so measurements should be more precise.

**Pollinium**

length 0.75 mm.  
widest 0.32 mm.

**Retinaculum**

length 0.19 mm.  
shoulder 0.09 mm.  
waist 0.05 mm.  
hip 0.09 mm.  
ext. 0/07 mm.

**Translators**

length 0.28 mm.  
widest 0.07 mm.

**Caudicle bulb** ca. 0.10 mm.

The structure of the caudicle here is unusual since it is an elongate oval shape not round bulbous and pollywog shaped.



Photo from Torill Nyhuus, Sweden. The pedicel, calyx and outside of the corolla.

Pedicel pubescent, calyx linear and does not reach the corolla sinuses.

Corolla outside glabrous.

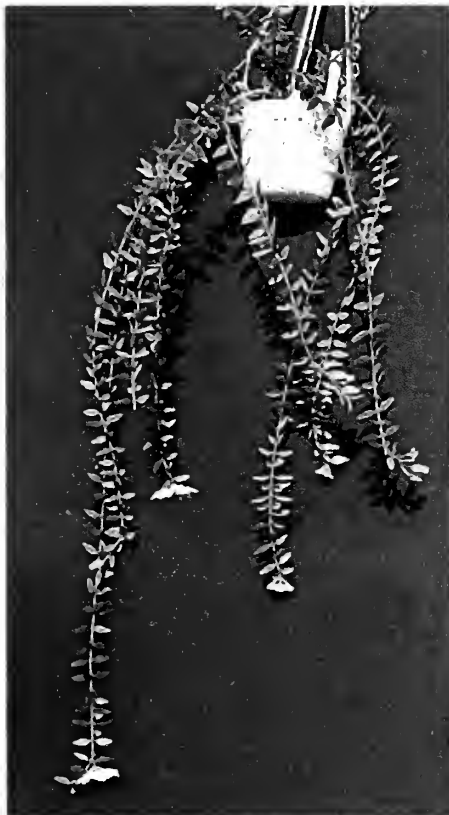




Side view of the flowers, picture sent via E-mail from Torill Nyhuus., Sweden.



Picture of a small rooted cutting of this species taken by Ann Wayman, Central Point, Oregon. "It is difficult to tell from this picture, but these leaves are very tiny, less than 1/2" long and extremely thick and shiny."



A plant of this species growing indoors in Sweden. Picture sent via Torill Nyhuus. A long dangling plant. Note flowering from the terminal ends of the branches.

## Hoya greenii Kloppenburg

Mindanao is the second largest island in the Philippines, (after Luzon) way south, and if you ask anyone in Manila they will tell you not to go there – bad people. Of course there have been a lot of uprisings between the government and the Moros (Muslims) and I think that the Manila people (Catholics) are afraid of the Moros. I have never had any trouble there but I don't go looking for it either.

The highest mountain on Mindanao is Mt. Apo, at about 9,690 ft, and as all of the highest mountains in that part of the world, there are military posts with telecommunication and TV installations. Visitors are stopped about 4,000 ft, at Lake Arco which is a hot spring and a tourist attraction but they aren't looking for Hoyas. There are, however, hoyas there.

I first went there in 1993, with David and Odette Cumming, and then back in February 1997 with Dale Kloppenburg, Eva-Karin Wiberg, Torill Nyhuus, Ed and Monette Gilding. With that mob, the hoyas didn't have a chance, with 12 eyes looking for them!

The trip out of Davao, the capital city, south and then west, didn't yield much but I did find some potted *Spathoglottis* orchids in private yards – but no hoyas. We drove as far as the gate at the military installation at the top (where we were turned back) so we drove back down and parked near the entrance to Lake Arco. Lake Arco is a lake made from the hot spring and a tourist spot. A short walk took us to the lake and we found that we were surrounded by tons of students on an outing, but that was OK. We found hoyas growing on a fence enclosure and small and large trees on the north side of the lake. Mostly non-descript things BUT on a large tree close to the water was my namesake: *Hoya greenii*, scrambling up a big tree. It was found and collected by Eva-Karin and Torill – of course we all got cuttings.

We didn't see any flowers but it was obvious that this was a different Hoya – just by its leaves. And, when it flowered, a year or 2 later, proved to be a new thing. Dale named it after me, but it sure doesn't look like me!

This plant has had its ups and downs in my collection. The first collected cutting flowered and set a seed-pod and then promptly died. The seeds from the pod grew and I ended up with a bunch of them that were sent all over the world. My own seedling that I kept failed to make it and I had to get a piece back from Torill. From that piece, I now have 2 fine plants that are practically ever flowering.

This is an interesting thing and would be an asset to any Hoya collection.

Ted Green  
Green: Plant Research  
Kaaawa, Hawaii



Photo by Ted Green: Left to right. Monette Gilding, Eva-Karin Wiberg, Torill Nyhuus, Our guide and driver. Students visiting the hot springs.



Photo by Ted Green of Eva-Karin Wiberg and Torill Nyhuus holding cuttings of *H. greenii*.

Photos by Kim Yap taken in Ted Green's Yard fall 2004



**Hoya chlorantha** Rechinger is a Samoan species described in 1908 from the island of Upolu in the forests near Tivai climbing in high trees. There are two big islands in Western Samoa, Upolu and the volcanic island of Savaii. This species is a fairly common species with many clones having been collected in various parts of Samoa including American Samoa. It is a dainty vine, easy to bloom with these clusters of lime green flowers, pubescent on the corolla inner surface and mostly around the edges.

On the Island of Savaii it was found in 1929 by Christophersen at the edge of the large Matavanu lave fields at an altitude of 200 meters.



**Hoya paziae** Kloppenburg is a Philippine species collected at relatively high elevations. Blass Harnaez has found it near the summit of Mt. Miquiling (sometimes spelled Mikiling). This is the large mountain south of Manila and it is here at the base that the University of the Philippines at Los Banos is located. This species was originally collected by Dr. Elmer Merrill in Nov. 1906 on a collecting trip up Mt. Halcon on the Philippine Island of Mindoro. On this island it was found at 900 m. altitude in a mossy forest. The material was sent to Dr. Schlechter who named it *Hoya eugenioides* because of the leaf similarity to the *Eugenioides* plant. He never described it. It is fairly easy to identify this species due to the color contrast in the flower. The sepals are ciliate, and the inner coronal lobes are relatively long and narrowly spatulate. The little umbo (mound) near the outer apex of the corona is the clincher, not found in many species. Most often if there is an umbo it is near the inner coronal lobe.

This one is free flowering and a spectacular flower.



This photo of Kim Yap's is of *Hoya siariae* Kloppenburg, another recent species from the Philippines. It has campanulate clusters of these beautiful flowers. This is another species that is easy to grow and to flower. The larger the plant becomes the more abundant its floriferousness.



*Hoya burtoniae* Kloppenburg. Here we have a bilobed corona and revolute corolla species which has been placed in a Section Acanthostemma. This section comprises a large number of species, many from the Philippines as this species is. It was first found on a herbarium sheet at the University of California, Berkeley herbarium with no number (s.n.). Well we have it now in a living plant. It has a ovate cupped fuzzy foliage rusty red on the under side. There is a sister clone with same foliage but all green no anthocyanin (red) pigmentation. These have been mislabeled as *Hoya tsangii* a narrow leaved, glabrous species also form the Philippines.

(Photos on this page sponsored by: P. Szilard, Littleton, Colorado)



***Hoya chlorantha* var. *tutuilensis*** Christophersen. A Samoan species found on Papatele Ridge at 300 m. altitude in 31 October 1929. It differs from the type in its reddish flower color and shorter, oval coronal lobes. In Christopher's drawing of this species he shows the corolla inside pubescent all over but in fact it is only edged with pubescence. The foliage is elliptic, thin with netted pinnate venation.



***Hoya citrina*** Ridley. A beautiful yellow flowered species from the lowland limestone outcroppings in Malaysia. It has thick cordate palmate glossy green leaves, most similar to those of *Hoya polystachya*. This makes a nice hanging basket plant, vigorous and flowers readily.

# Photo Gallery Descriptions

Top row left: *Hoya fraterna* Blume Photo taken at the Tenom Orchid Center in Sabah, Malaysia by Dale Kloppenburg. If you will look at *Fraterna* you will see that this species for a long time was misidentified due to a incorrect drawing in Curtis Botanical Magazine. It is a unique species with unusual flowers with fuzzy corollas and a deep set corona. One that should be in every collection now that it has been properly identified.

Top row right: A close up of *Hoya fraterna*, a photo taken by Ted Green, Kaaawa, Hawaii. I am sure Ted would list this in his nursery catalog. This species and *H. coriacea* were both named by Blume in the eighteen hundreds.

Middle row left side: A photo of *Hoya heuschkeliana* Kloppenburg (the ping form) Picture taken by Ann Wayman, Central Point, Oregon. This is a well foliated small vine well suited to hanging baskets and small quarters. A prolific bloomer for most growers and always sure to please because of its urn shaped flowers. The clusters always remind me of the Manzanita in blossom on the Sierra Nevada mountains. We now have a yellow flowered clone of this species.

Middle row right side: A picture sent to me by Monina Siar from the Plant Breeding Program at the UPLB (University at Los Banos), Philippines via e-mail. This is a photo of the beautiful large flowered *Hoya archboldiana* Norman first named in 1937. We have several different clones in commerce now exhibiting different flower colors. This is a spectacular species certainly deserving a place in any collection. No wonder Monina has it in the plant breeding program.

Bottom row left side: *Hoya incrassata* Warburg. This was taken in Fresno, California last summer 2004 by Dale Kloppenburg. It has a very tight globose cluster of flowers. You can not mistake the sharp spicy fragrance when this is in bloom. It will let you know the first evening and on into the following days that it has bloomed. It has a waxy foliage with plenty of leaves, making a vigorous condensed growth. Put it in an eight inch basket at least as it matures. When it reaches maturity it will continue to bloom heavily year after year.

Bottom row right side: *Hoya chunii* Li. Named in 1984. We had this around for many years as *Hoya reticulate* Schlechter but the name was untenable, having been used previously. This is a beautiful New Guinea species with fuzzy buttery yellow flowers.

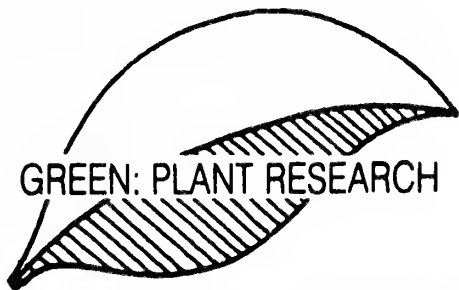
**Correction:** In the last issue of *Fraterna* 18/1 page 10 *Hoya parvifolia* is authored by Schlechter not Wight as stated.

# Hoya Photo Gallery





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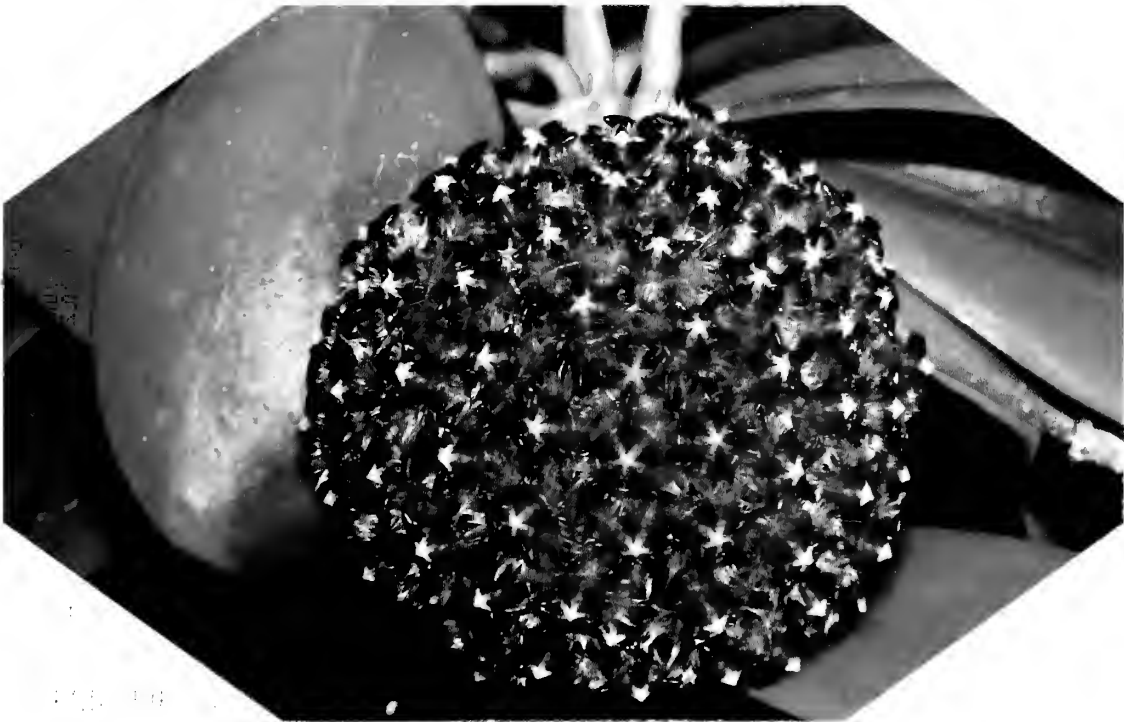
# FRATERNAL

Volume 18 # 3

Jul-Sept. 2005

Official Bulletin Of The

## International Hoya Association



*Hoya mindorensis* subsp. *superba* Kloppenburg

Photo by Ann Wayman

# International Hoya Association

Administrative Office:

1444 East Taylor Street

Vista, CA 92084

Phone : (760) 758-4290

Fax: (760) 945-8934

E-Mail: RBGdns@aol.com

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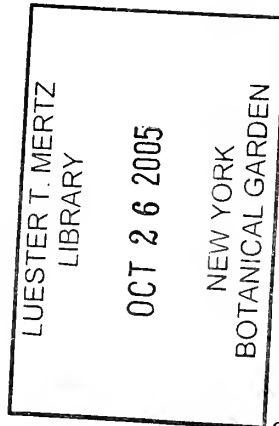
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Errors of fact may occur from time to time in "Fraterna". It is the policy of the IHA to publish corrections of fact, but will not comment on matters of opinion expressed in other publications.

## Fraterna

Fraterna is the official bulletin published by the International Hoya Association. The administrative office is located at 1444 E. Taylor St., Vista, CA. 92084-3308.

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Editor's E-Mail address: [rdk03@cvip.net](mailto:rdk03@cvip.net)

Co-ordinating editor: [hoyaannie@aol.com](mailto:hoyaannie@aol.com)

## ***Hoya mindorensis* subsp. *superba* Kloppenburg**

*Hoya mindorensis* subsp. *superba* Kloppenburg subsp. nova Typus here designated # 2005 (UC) ex Hort. Central Point, Oregon, USA by Ann Wayman. Affinis *Hoya mindorensis* Schlechter, Philippine Journal of Sci. (1906) 302, sed coronae foliolis nihil attigens centor, antherae expositus et coronae foliolis non horizontalibus, differt.

Near *Hoya mindorensis* Schlechter but different in that the coronal lobes do not reach the center, the anthers are exposed and the lobes of the corona are not horizontal.

The flowers of this new species are larger than those of *Hoya mindorensis* Schlechter 1.60 cm vs. ca. 0.90 cm in diameter: the pedicels are 3.0 cm. long vs. 1.5 cm. for the latter.

My material for this study came from Ann Wayman in Central Point Oregon. It was from David Liddle, Merebe Australia. It was listed as IML 768 first designated *Hoya incrassata* Warburg, then later as *Hoya mindorensis* Schlechter. Stated as collected by Arden Dearden at Dept Village, Luzon, Philippines. David Liddle noted it flowered in Feb. 1988. The pollinaria of this species is similar to that of *Hoya pimenteliana* Kloppenburg, *Hoya mindorensis* Schlechter, *Hoya bordenii* Schlechter, *Hoya erythrostemma* Kerr, *Hoya pauciflora* Wight, *Hoya uncinata* Teijsmann & Binnendijk, and *Hoya solaniflora* Schlechter. There are clones that vary somewhat in flower color.

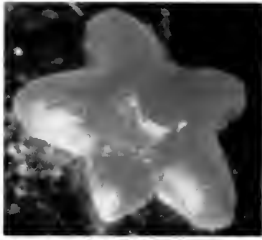
Photomicrographs from flowers sent by Ann Wayman in the year 2000.



Pedicel enlarged about 16X. They are long, purplish colored, curved, 0.25 cm. long, terete, glabrous, enlarged slightly toward the flower, with a few lenticels, 0.25 cm. long, 0.10 cm. in diameter.



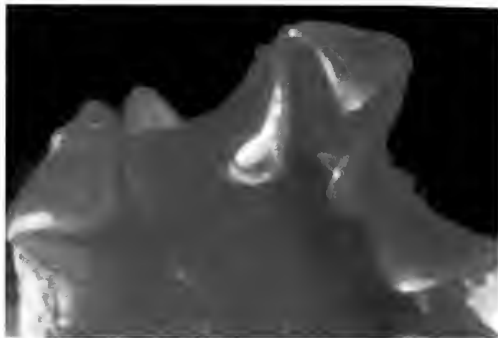
Pedicel, calyx and ovaries side view, enlarged about 16X. Ovaries are glabrous, short, dome shaped 0.10 cm. tall and the base pair 0.17 cm. wide.



Outside view of the calyx enlarged about 16X. The sepals are ovate and centrally thickened (more so than most hoyia species). Surface is glabrous, granulose and the edges are ciliate.

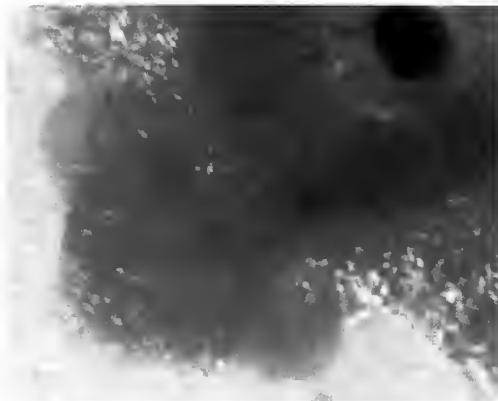


Inside view of the calyx enlarged about 16X. Sepals overlap about halfway. Ligules are present. Surface glabrous, edges ciliate. Sepals 0.20 cm. long, 0.19 cm. at the widest at the overlap.

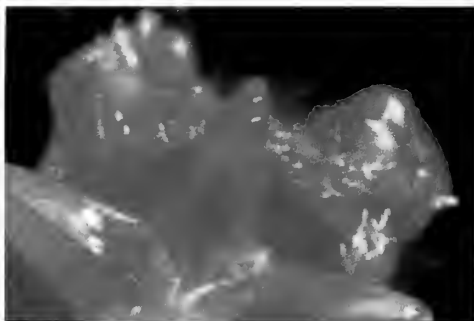


Outside view of the corolla enlarged about 16X. Note the reflexed apex of the corolla lobes and the sides of the broad lobes also rolled under, conduplicate. The corona lobes above also exceed the corolla sinuses, the apex inside and corolla outside is glabrous and relatively smooth.

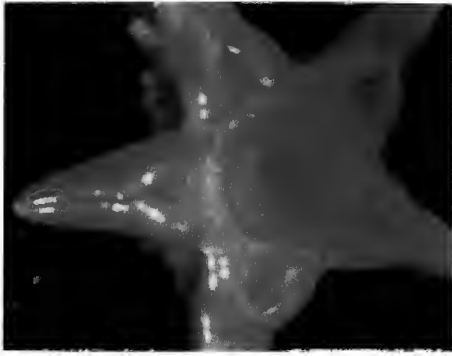
|                 |          |
|-----------------|----------|
| Sinus to sinus  | 0.50 cm. |
| Sinus to center | 0.50 cm. |
| Sinus to apex   | 0.51 cm. |
| Apex to center  | 0.80 cm. |
| Widest          | 0.58 cm. |



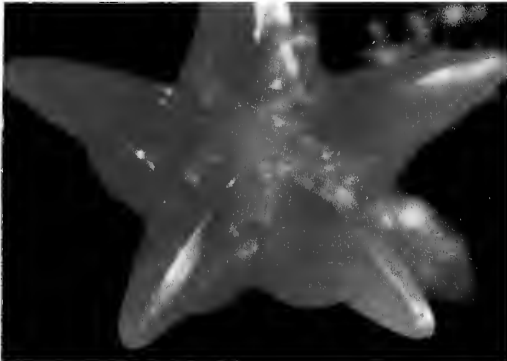
Inside view of the corolla center and lobe, enlarged about 16X. The surface is densely villous except for a glabrous apical area and broad side lobed areas. The central collar is thickened and raised slightly.



Top view of a flower enlarged about 16X. The coronal lobes exceed the corolla sinuses. The corolla is very villous around the corona. The lobes dorsal surface is sharply keeled.

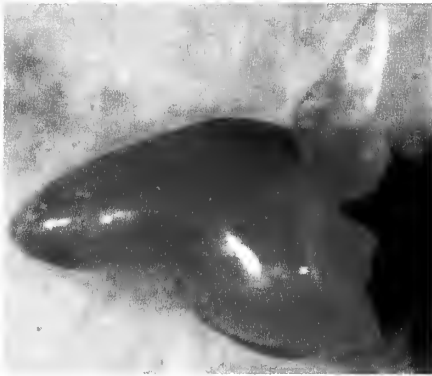


Bottom view of the corona enlarged about 16X. The lobes are channeled only a little over halfway to the thick, central column. This column is tapered at the top and bristly hirsute, lobes are fleshy and not sulcate, appear smooth and waxy.



Top view of the corona enlarged about 16X. Lobes are sharply keeled, fleshy, glabrous. Inner lobe is shortly dentate and does not reach the center. Outer lobe is tapered to a narrow oval point. Anthers at the center are creped and prominent.

|                |          |
|----------------|----------|
| Apex to apex   | 0.39 cm. |
| Apex to center | 0.48 cm. |
| Ret. to ret.   | 0.17 cm. |
| Ret. to center | 0.20 cm. |
| Aw. to aw.     | 0.23 cm. |
| Aw. to center  | 0.30     |



Side view of a corona scale enlarged about 32X. The lobes are fleshy and waxy, the anthers are large and crepe like. Here the short inner lobe is hidden by the anther. Anther wings on lower right side are just slightly curved. Dorsal surface of the outer lobe slopes downward. The scale is 0.18 cm. in depth.



Pollinarium enlarged about 65X.

| Pollinia:        | Retinaculum:           | Translators      |
|------------------|------------------------|------------------|
| Length: 0.68 mm. | nearly round: 0.40 mm. | length: 0.18 mm. |
| Widest: 0.30 mm. | Widest: 0.44 mm.       | width: 0.02 mm.  |
|                  | extensions: 0.16 mm.   |                  |

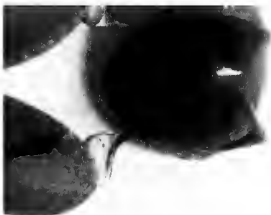


Photo to left is enlarged area of the translators and clear caudicle bulb attached from the dark, round retinacula to the pollinium. (Caudicle bulb diam.: 0.09 mm.)



*Hoya mindorensis* subsp. *superba* Kloppenburg

Photos by Monina V. Siar, Director of Plant Breeding, UPLB College, Los Banos, Laguna, Philippines

## Growing Hoyas In A Highrise Apartment

The reason my small hoya collection is flowering so profusely this year is manifold:

I have noticed that my hoya plants have not been performing well the past 2 years. That was after moving to a 4th floor apartment of an HDB block at the western part of Singapore. I set about making corrections. In the process, I discovered many factors retarding the growth and development of the hoyas.

First, I needed to create an “ecological niche” in the midst of a hostile “concrete Jungle” it should be a reasonably humid and shaded environment suitable for growing hoyas, denizens of the rainforests by (1) crowding the potted plants together, (2) placing pebbled trays of water under the plants (treated with Abate, a mosquito larvicide), (3) wetting the corridor during the hottest part of the day when humidity falls below 40% and (4) misting the plants.

My front corridor faces 20 degrees East of North. From the month of September to the end of February, the sun is at the back of my

apartment. This period coincides with the wet monsoon season. The front corridor is cool and bathed in bright light but no direct sun. Humidity rises to near saturation. From March to the end of August, the sun moves to the front corridor. Humidity drops drastically to below 40%. The setting sun comes into the corridor with scorching intensity. The hoya foliage is burned to a cinder. It breaks my heart to see this happening!.

Secondly, I had to shade the hoyas hanging from the ceiling and the ones sitting on the shelves below. So, Saran shade (a green mesh netting to cut out about 30% of the searing afternoon light) was duly installed. This done, what was the next thing I needed to remedy?.

Thirdly, growing a mono clone crop and crowding them together is not a good practice. It gives rise to pest and disease outbreaks. Supplying the expanding human population with food and material comfort has become the, prime directive for many agricultural countries.



Destroying the forest is not a good thing, at least not lots and lots of it. In the natural environ, there is always a system of "check and balance" taking place constantly. Therefore, you seldom ever have pest outbreaks in a rainforest. When you clear up large tracts of jungle and replace the original diverse inhabitants with, say, oil palm, what then happens after a while? Outbreaks of destructive nettle caterpillars, bagworms or a fungal disease attacking the fruit, bunches hit the plantation crop. Why is this taking place? Man, a highly destructive and intensely greedy animal, has upset the balance of nature by removing the check and balance. The pests no longer have any of their natural food supplies, so they descend on the "next best" food source- the oil palm. Their natural enemies are no longer there to keep them in control. Population explosions take place. Is this bad? I honestly don't think so, not for the nettle caterpillars, bagworms or the Marasmius fungus. The rascally humans took away their natural food supply. They have no alternative left but to eat what the humans grow. This has always been a big and expensive problem in agriculture. Destroy nature and she will come back at you with a vengeance!.

I had to eradicate the peskies by setting up a regimen of chemical pest and disease control. It is either the plants or their enemies. No other way.

The fourth, is that plants need food. In the wild they eat nutrients obtained from decaying detritus and minerals washed down by the rain. They are epiphytes (plants living on other plants for support only). Their roots attach themselves to trees to climb up to the sun's energy for photosynthesis. In uprooting them from their natural habitats and transplanting them to the alien surroundings of an HDB apartment corridor require much compromise and adaptation by the displaced hoyas. They are adaptable provided you are able to proximate their conditions for growth. I have done this quite successfully. So far, so good!.

Potting: You have to pot the hoyas so as to confine their roots in a suitable mixture. This allows you to feed the plants easily. You will require a soil that will not become waterlogged; since in Nature the roots are in the nooks and crannies of the bark or in leaf detritus among rocks and sometimes on the soil too, moist but not sopping wet constantly. To create a condition similar to this, I need to have a mixture that will retain enough water and fertilizer to last at least 7 to 10 days. The reason?, I can go away happily "jungle bashing" for a week to 10 days, knowing that my hoyas will not wilt permanently and die. I have done this with much juggling of sand, peat based potting mix, bone meal for pH correction and a fungicide to prevent mold from proliferating in the soil mix.

Feeding: I use a high nitrogen fertilizer for growing the rooted cuttings. When they have attained flowering size, I change to a high phosphorous formulation to induce flowering. It usually works!. I get my hoyas to bloom, from cuts to adults, in 2 to 3 years or earlier, providing I get no setbacks from pests and culture. Use a dilute feeding with every watering.

Watering: In the warm season, about once every 10 to 15 days. Hoyas are succulents and do not need a lot of water. Saturate the soil thoroughly and allow it to dry before the next watering. The softer-leaved arboreal species need more water.

Conclusion:: Most problems are surmountable. The human mind is inventive. Applying it to the limit, all problems can be solved. The breaking of the genetic code, the digital revolution, The usefulness of binominal mathematics, biotechnology, pushing back the frontiers of medicine, new knowledge and understanding of our environment; all these and more point to the endless application of the human mind.

Below is an image of a plant that has excelled itself. It surprised me!. The Hoya coronaria is a clone from Johor, West Malaysia. The plant and the scentless flowers, lasting for 10 days, are velvety (puberulose). \* It belongs in the Hoya Section:: Ereostemma. A hanging pot of 2 plants carried 11 ivory white flowers, each one measuring 4.5 cm in diameter. The total number included the "piece de resistance", a short peduncle of 4 fully -opened blooms. Another pot of a single plant, flowering for the first time, carried a peduncle of 2 open flowers and 2 buds.

My efforts have been amply rewarded. All this points to good husbandry; irrespective of whether you are growing hoyas or other horticultural plants.

K.F. Yap, February 9, 2005- Year of the Rooster

*\* Editors Notation: This species is now in the Genus Eriostemma Kloppenburg & Gilding.*

Addendum (February 19, 2005)

Hoya coronaria was first discovered by C.L. Blume in 1825 in the forest of West Java. He

named it in 1826 (*Eriostemma coronaria*). Thomas Lobb, a plant hunter, working with Veitch of the Exeter and Chelsea Exotic Nurseries, introduced it to Europe a little later.

It is still abundant in West Malaysia and other nearby countries. It occupies a unique habitat in West Malaysia, a difficult to get at and a dangerous place to visit. When you find the habitat, you find plenty of this "Crown Flower".

*It is extinct in Singapore, Ridley, 1923 recorded it as being very common in Jurong, Kranji, Serangoon and Pulau Tekong.*

### **Hoya coronaria Blume**



**May Li (an acquaintance of Kim Yap's) admiring a plant of H. Multiflora, at the "Hanging Garden of Sukhavati"**



## **4 Things About Hoyas by Ted Green**

*I discovered 4 things this year that i would like to pass on to Hoya growers*

### Hoya imbricata

Years ago, I attached 2 different clones of H. imbricata to 2 Manila Palm Trees in my yard. The palms are straight trunked, about 25-30 ft. tall and growing in full sun. The imbricatas get watered by the occasional rain and supplemented by my hose watering (which contains soluble fertilizer), they drain quickly and sometime during the day get FULL sun. These plants are truly xerophytic.

The 2 imbricatas have grown very well, running up the palm trunks and flowering nearly all year round. Of course the plants are infested with ant nests under each leaf. The ants lead a symbiotic life with the plant. I do not spray to kill them for they are helpful in some way that I do not know.

About 6-8 months ago, something happened and the plants defoliated by at least 90%. I still don't know what caused it. Anyway, the plants are now sprouting out despite being burnt by the sun and minimum watering. The thing I found out is that a small piece of the hoya that was broken off the mother plant, about 20 feet up the trunk and in full sun most of the day, is thriving with no supplemental water, no fertilizer and no TLC. How about that?

I am pointing out the xerophytic nature of these for several people have told me that they have trouble getting H. imbricata started- even in a terrarium. Maybe that's the trouble! They like it dry and with ants!



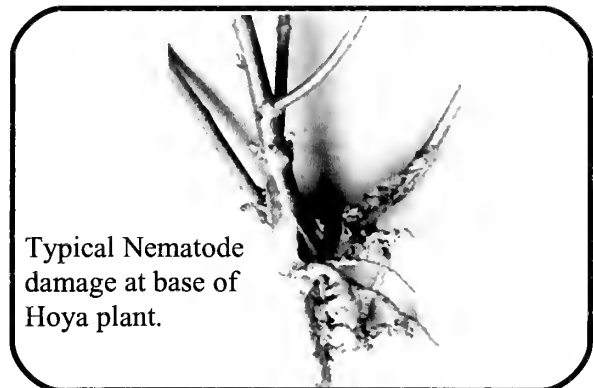
Arrow (photo on left) points to *H. imbricata* in top of Palm tree. (photo on right) A different species to the left on branch.

## Hoya Nematodes

Hoya growers in Southern Florida (and possibly other parts of the state) may wonder why their plants are infected and damaged or killed by Nematodes, even if the plants are grown in baskets or well above the ground.

Tim Anderson of the Palm Hammock Nursery (with a large Hoya collection) in Miami (who I think is, was, or acts like an Agriculture Extension Agent) has the answer!. Their public water system that comes from wells carries the Nematode eggs. So, no matter where the plants are kept they become contaminated.

I asked him if he used the strong nematicide V-Ydate and he said no, for it is now banned. There doesn't seem to be a good substitute available so his only recourse is to periodically make tip cuttings. This is not a real money-making nursery practice so he is in doubt about keeping his dwindling Hoya collection.



Typical Nematode damage at base of Hoya plant.

# Yellow Leaves

Yellow leaves can be deceptive. Most times it is indicative of a nutrient deficiency but many of my plants, growing in high light intensity, have yellowish-green leaves (some with purple speckling) but have high levels of carbohydrates. The purple speckling is potassium in the presence of sunlight.

If the choice were mine I would pick the yellowish leaved one for it has a greater chance of rooting in a hurry. Another person might think that it is chlorotic or symptomatic of a disease.

For instance, about 18 months ago a woman received a cutting of *Hoya imperialis alba* from me and complained about its “sickly condition” and sent it back for replacement. I replaced it with a “healthy” green leafed on and she was happy!.

I potted up the one that had been sent back, gave no special treatment, and put it back out in the bright light. It didn’t die but took off like a rocket and you can see the growth it has made in 18 months.

The first *H. lasiantha* I collected was in Ketambe, Sumatra, so I didn’t know if there would be other forms. Last years collection on the east coast of Sabah, Malaysia at Sepilok. proved that they can really be different.

The Ketambe plant was found in a shady part of the forest, has leaves that are about 2 inches wide by 5 inches long and the flowers are a dark orange, flowering three to four times a year. Several umbels of flowers are open at a time. The whole plant is moderate in size. The flowers of this one are shown on my web site.

The Sepilok plant is much more robust than the Ketambe one with leaves twice the size (4 inches wide by 9 inches long). The Sepilok plants were growing in the open or bright shade and looked very healthy. There were many seedlings coming up all over the place.

***Hoya imperialis alba***



***Hoya lasiantha***





Kim Yap and Dorothy and Ted Green at Green Plant Research Lab in Kaaawa, Hawaii

## An Important Notice

*All Current members renewing your membership for a 3 year period, and all new members joining for a period of 3 years will earn a boxed set of 12, beautifully embossed 8 ½ by 11 inch, handcrafted, half fold note cards with matching envelopes. Each of these cards were individually designed by Ann Wayman and display a gorgeous hoyia photo from Ann's private photo collection including some beautiful prints by Ted Green. Each one is different, each one is exquisite!.*

*In order to give everyone a chance to earn a set of these beautiful cards FREE, with postage paid, this offer will be extended for the remainder of 2005, through 2006.*

*For those not wishing to take advantage of the 3 year membership offer, these cards are available for sale at US \$25.00 per set, sent via media mail, postage paid. All foreign orders will be shipped surface mail postage paid, unless airmail is specified, in which case their will be an \$8.00 postage charge.*

Contact Ann Wayman at E-Mail address, [hoyaannie@aol.com](mailto:hoyaannie@aol.com)

*Or U.S. Mail: Ann Wayman, 4057 Carlton Ave, Central Point, OR 97502*

# My Secret Garden

By Margie Stone

Recently while heading out of town one Saturday morning, I was listening to the local gardening show. Their guest speaker was telling about a new book SUNSET has out. It is about having a secret or hidden garden in your yard. A small space with a chair, maybe a table, hidden from the rest of the yard. Perhaps in the middle of a flower bed. I thought this was a neat idea, but didn't think I had any place like that in my yard. A few days later while heading to the greenhouse, I passed a small area between a low retaining wall and the rock garden. Small, but it might work. By now I'll bet you're wondering what all this has to do with hoyas!.

In my rock garden I have a plant stand with cool growing hoyas and a piece of pipe between a couple of posts where other hoyas hang. Several types of evergreen trees line the fence at the back of the rock garden and provide shade. Rhododendrons and azaleas laced with fuchsias make up the rest of the rock garden. On the upper level where a retaining wall is located, sits a gazebo covered with a summer blooming climatis and hanging fuchsias. I have an adirondeck chair and footstool that fit perfectly in this spot but something was missing..Solution: A small plant stand now sits on the retaining wall and I have placed cool growing hoyas that are in bloom on the stand. Now I can enjoy them while reading, working on the laptop computer or just taking a break while having a glass of iced tea or lemonade. Other times I have enjoyed sitting in the midst of my hoyas having a cup of coffee while reading the morning paper or eating an evening meal. I change the plants often as new ones bloom. My secret garden gets bright outdoor light but the harsh rays of the sun are filtered through the branches of the trees, so remains cool and refreshing most of the day. An added bonus to this outdoor setup is that the overwhelming fragrance of some hoyas are diluted down to a soft scent. Another thing that was missing was the soothing sound of running water. My solution to this would be a small waterfall that can be purchased at any garden store. A small, rigid plastic pool, complete with artificial rocks that simulate a water fall, and equipped with a pump to circulate the water up from the pool and down over the rocks. Well, that project will have to wait until next spring.

When temperatures reach 85 degrees or more here in the Willamette Valley of Oregon, we start whining and complaining about the heat and start looking for a cool spot to spend some leisure time. I have found my "secret garden" to be my cool, pleasant area where I can daydream, listen to the birds sing and watch the butterflies. take a short nap or a long one if I want to.

## Editors Note

Anyone else have a secret garden? We would love to hear about it!. No need to write an article unless you want to. Just send us the details of where your secret garden is located and the particulars of trees and plants in the area, and any furnishings that make up the garden spot. We have some excellent ghost writers that can make an intriguing story out of even the smallest details.

E-Mail to [hoyaannie@aol.com](mailto:hoyaannie@aol.com) or U.S. mail to Ann Wayman, 4057 Carlton Ave., Central Point, OR 97502

# PHOTO GALLERY DESCRIPTIONS

## Top row left

Hoya subquintulinervis Miquel 1856.

A photo of the foliage and a flower cluster taken by Kim F. Yap in Singapore, from a plant collected at Ta Phrom, Cambodia. Nice, clean foliage that is elliptic;; ovate with a broad base, nerves are almost invisible. Clusters of 15-20 flowers about ¼ inch in diameter with reflexed corollas and waxy starry crown.

## Center row left

Hoya erythrostemma Kerr 1939.

Photo by Kim F. Yap, Singapore. Sent in May 2004. This species ranges from Thailand down through Malaysia. Note that the crown is narrowly keeled, nearly flat on top and that the inner lobes touch in the center. The corolla is reflexed and densely pubescent. In addition to the really nice flowers. The foliage here is also outstanding with distinctive anastomosing nervation.

## Bottom row left

Hoya blashernaezii Kloppenburg 1999.

This is a beautiful flowered hoyo with campanulate flowers in gorgeous, apricot-pink tones. It is distinctive for its narrow foliage, the raised coronal lobes are also narrow. A relatively new discovery, found by Blas Hernaez. It was a pleasure to name this species for him as he has tirelessly collected many species over the years.

## Top row right

This is one of Ed Gilding's beautiful Eriostemma hybrids. Ed has been carrying on a continuous hybridization project whenever he is home from his college career work. He has selected many superior forms of the species he is working with. Especially nice are the new forms and colors from the Genus Eriostemma, which he can grow in full sunlight in Pearl City, Hawaii. The photo was sent to me by his mother Monette in late 2004.

## Center row right

A second photo of Hoya erythrostemma

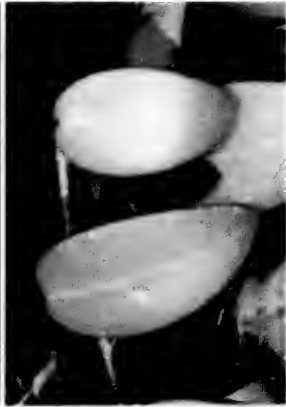
(I have labeled it Angie Halton). As you can see there is some color variation in this species. I have placed it in synonymy with Hoya mindorensis since the coronas are identical and the pollinaria are nearly identical. The subspecies named in this issue has a slightly different corona and there are at least two color variations of this subspecies, but again, the pollinaria are very similar.

## Bottom row right

Dischidia parasitica Not a hoyo but a close relative. A Philippine species with dark red (almost purple) flowers. Dischidias have tubular, closed corollas. The plants are usually very vigorous. They seem to be more rugged than hoyas and most species are easy to grow. While on a collecting trip to the Solomon Islands with the late Geoff Dennis, and on our way up the Tenaru River, we found a species with emerald green flowers. To me it looked identical to this one except for the flower color.



# Hoya Photo Gallery



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# FRATERNAL

Official Bulletin Of The  
Volume 18 #4 INTERNATIONAL HOYA ASSOCIATION Oct. - Dec. 2005



**DISCHIDA OVATA** Bentham, THE WATERMELON DISCHIDIA,  
A beauty from the Mangrove swamps of Northern Australia

# INTERNATIONAL HOYA ASSOCIATION

Administrative Office:  
1444 E. Taylor St.  
Vista, CA 92084  
Phone: (760) 758-4290 Fax: (760) 945-8934  
E-Mail: RBGdns@aol.com  
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6262 E. Killdee St.  
Long Beach, CA. 90808  
e-mail: [rsmmary940@aol.com](mailto:rsmmary940@aol.com)

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## Editor's e-mail address:

"Ann Wayman" <[hoochymama007@hotmail.com](mailto:hoochymama007@hotmail.com)>

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## GUEST EDITOR Who am I and What am I doing here?

My mother liked the plants in her garden. I like plants, all plants, in gardens and potted up. Mostly I like Hoyas and Orchids, despite the fact that I am a landscape architect.

I have accepted the job of being the guest editor for this quarter's issue, and maybe a couple of others if you are nice to me and you can stand my dictatorial style. This is my greatest fault!, but now I have a chance to say some things that have been on my mind, and present my ideas of what a magazine should be. What you would like to see, and what would reach the greatest number of readers, beginners and old timers alike.

### Remember In Omar's Rubaiyat?

Ah love, could you and I with him conspire  
To grasp this sorry scheme of things entire,  
Would not we shatter it to bits, and then  
Remould it nearer to the heart's desire?

Here is my attempt

Ted Green

## **STOP THE PRESSES**

### **New Slate Of Officers**

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Editor: Ann Wayman

## DISCHIDIAS, HOYA'S POOR RELATIVES     Ted Green

Dischidias get no respect! - even though they are very interesting and a real conversation piece. Weird, a poor relative but I like them.

First of all, how do they differ from Hoyas when both are tropical plants and grow under practically the same conditions—sometimes together? The Dischidias are all vines and never shrubby as some Hoyas and the biggest flowers of the Dischidias are never over 3/8" and shaped like an urn.

To separate the 2 genera, Hoya and Dischidia, the easiest way is to look down at the flower. The Hoyas are usually open (with the exception of *Hoya heuschkeliana*) and the corona is easily seen – not so with the Dischidias, in fact, one **D. cleistantha**, is always closed. The coronal lobes of the Hoyas are not divided at the tip; whereas, the Dischidias are; hence the name Dischidia, which means cloven (as a goat's foot) in Greek. Sometimes the tip looks like an anchor or a club.

Dischidias may have alternate leaves when adults, but not Hoyas. Seedling Hoyas start out alternate leaved but then change to opposite as the plant matures. No Hoya has bullate (swollen and hollow) leaves but some Dischidias do – complete with roots inside, a hole for ventilation (moisture) and ant access (for they love ants and live symbiotically with them).

Dischidias seldom have very many flowers in an umbel – usually 3 to 6, and yet Hoyas can have over 100 – usually, 10 to 20! The only exception I have seen is when a plant of **D. diphylla** had about 30—a one time deal!

Most Dischidias are small to modest plants but the exceptions are **D. nummularia** and **D. major**, in that by their sheer weight and bulk alone can break branches off trees in Malaysia in Indonesia.

Dischidias are really succulents, whether growing in the dense forest or on seashore trees, and will survive when other plants die from lack of water. The ones growing in the dry, Aru Trees on the beach get so dry that the bullate leaves rattle when shaken. Because of this, in Australia the **D. major** is called Rattle Skulls. Even the shingle-like leaves of some of the species can stand the worst drought and yet recover and start growing with the first rain.



**D. melanesica** growing on a Coconut Palm, on Guadalcanal, in the Solomons. There are tons of ants too!



Unusual, large number of flowers on **D. diphylla**. Or is it several peduncles crowded together?



**D. lancifolia** with its usually single (seldom 2), orange flower and handsome leaves

These with bullate leaves or leaves closely attached to the support have a clever angle. There is an opening, usually at the base and out of the rain, where the ants and air can enter so when the moist night air enters it gets to the roots that are under or in the leaf. The bit of moisture is sucked out of the air and lets the plant survive the worst conditions. A flat leaved Dischidia does not have this advantage.

Culture:

Every *Dischidia* I have seen is epiphytic so if one is brought into cultivation it must be on a surface that drains quickly. Baskets are good, but pot culture isn't for them. To satisfy this demand I suggest that the cutting be attached to the bottom of a slab of cork or rough wood and then hung up. The water drains to the bottom and then the plant will grow up, toward the top.

If you choose to use a basket, forget sphagnum moss for it retains too much water (and salts)

Since these are all tropical plants, they should be kept warmer than 50° F (10 ° C), watered regularly but kept on the dry side, and give them light.

The one thing that you probably can't provide, unless they are growing outside (even during the summer), is ants. They all grow with ants and might not show the typical growth if they are missing.

There is no reason for these should be less than Hoyas for they are really interesting. Give them the respect they deserve.

Ted Green

Green: Plant Research

Kaaawa, Hawaii



***D. singularis***, the only *Dischidia* with lobed leaves. This one was growing from a crack in a tree trunk, on Doi Sutep, Thailand.



***D. vidalii* syn *pectenoides***, showing bullate leaves and seed pods. This one grows on old bamboo, in the Philippines.



**D. benghalensis**, a widely distributed scrambling Dischidia



**D. nummularia**, one that drapes over branches in sunny, dry locations.



**D. cleistantha**, showing the closed flowers—which means that it must self pollinate or no seeds.

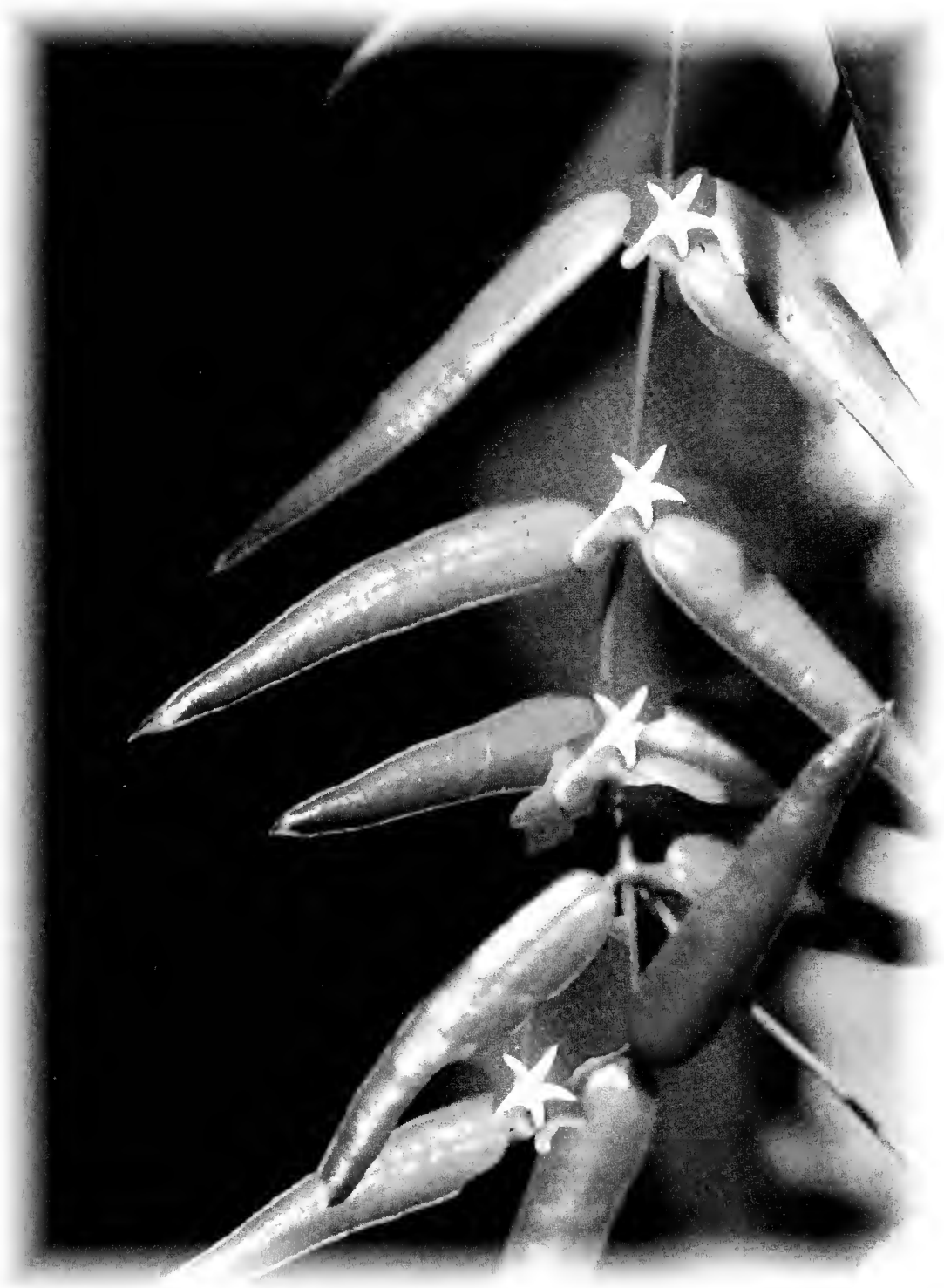


**D. acutifolia**, one of the large, flat leafed species.



Seed pods and seed of **D. collyris**. When the seed is dry, they are blown off into the breeze. This one is from the Philippines. The one on the side is **D. ovata**.





***Dischidia dolichiantha Schlechter***

**A vine that scrambles over low trees and shrubs in Sumatra and Sabah.  
The leaves are 1" long**



**I have an *H. lacunosa* that has dull, leathery, droopy leaves and doesn't look good. What's wrong?**

*It sounds like a root problem to me (water & nutrients aren't getting up to the leaves). If only a vine or two show this dry leathery look, search for a wound or damage where the dryness starts. If the entire plant is suffering, tip the plant out of the pot and check the roots. Start at the far end of the roots and 'snip' towards the plant. Stop when you hit healthy roots. If you haven't found healthy tissue by the time you get to the main stem, you have lost that plant. However, with hoyas, lost, is seldom lost forever, as they are one of the most congenial (easy to get along with) plants. Just start the plant over again using the*

*healthiest part of the plant, soak it in luke warm water for several hours with some sugar or a drop or two of Superthrive added, then propagate as usual, misting often.*

**I bought a very healthy looking *H. kentiana* at our local Big Box Store and when I brought it home it started to die. I watered it and everything. What happened?**

*Some growers who sell to the Big Box Stores put 'wetting crystals' in their soil, knowing the store probably won't water them well. This causes a problem for buyers who are used to watering their hoyas well. I tend to water more than I should, so I could kill anything with a wetting agent. If you are like me, repot your new plant and shake as much of the old soil off the plant as you can. Use a loose soil, like Orchid or Cactus mix when repotting.*

**My hoyas seem to be dying right and left. I water faithfully just once a week, none of them are sitting in water. Am I watering too often?**

*Quite the contrary! Letting hoyas "dry out between waterings" is often misunderstood. When the top inch or so of the soil feels 'dry to the touch', it is dry enough. If hoyas get too dry the roots can start to die, then when they do get water, those dying roots start rotting, and that rot can quickly spread through the stem to the main part of the plant and the entire plant can be lost. There are a few hoyas such as *H. multiflora*, *H. lacunosa*, *H. obscura* and many of the Philippine hoyas species that thrive on lots of water, but on the other hand, in a collection of hoyas or any other plant, pots will dry out at different speeds depending on: size of pot versus size of the plant, the species that is being grown, looseness of soil and the air temperature in the plant area. It is the plant and its environment that determines the watering schedule. In the watering department, plants don't know a week from a year.*

**What would you suggest that I use as a potting soil for my hoyas?**

*THIS is a loaded question! I grow hoyas in a greenhouse and outdoors. We get about 150 inches of rain per year. My basic potting soil is equal parts of #3 Perlite, volcanic black cinder, fine orchid bark and coarse peat. This is the mix that I use for the plants that I hand water in the greenhouse. For the hoyas that grow out in the elements, I use much less peat moss and mostly cinder and fine bark. This is what works for me. I don't mean for it to be a suggestion for others to follow. Hoyas are tropicals and the basic recipe for growing tropicals is: A loose growing medium with some organic matter, water and WARMTH.*

## **Is the care for hoyas the same, regardless of where you live?**

*YES and NO. The needs of hoyas remain the same regardless of where we live. That is the one constant!! What we have to do to give them what they want may be different in Arizona than it would be in Wisconsin. We have to adjust to their needs, not the other way around. There are many ways we can do this! To provide the average 80% shade, I may need less shade cloth than someone in Arizona, and more than others. Some may need to change theirs seasonally. I grow my hoyas in high light, and those needing a lower level of light, grow under the benches. I am perfectly aware that most lovers of hoyas are hobby growers with less than 100 plants. They are grown on dining room tables in front of large windows, in window wells, glassed in porches, under fluorescent lights and every other manner that can be devised. We have to move them around to insure that they get enough light as the days get shorter in the winter, and they will need much less water and a lot more artificial heat to keep them happy. BUT, give them what they want, and they are the happiest plant I know.*

## **What are the most common pests associated with hoyas? How do I treat them?**

*Mealie bug, scale and aphid seem to be the biggies. Of these three, mealies are the most common. They show themselves as little sticky bits of cotton-like fluff on the backs of leaves, in the axils, on the stems and even in huge masses between the buds on forming flower umbels. Spider mites are another really bad pest and are obvious when their `webs' are visible. Spider mites are not spiders (which are usually `good guys' there are no vegetarian spiders)! but are actually in the mite family and feed on plant juices by puncturing the leaves and sucking out the juice, which causes the thin leaved plants to have a pale, sickly gray, stippled look and the thicker leaved plants to look like ironed plastic.*

*The treatment for all these pests is basically the same, a spray with 70% rubbing alcohol followed by a good hosing off with a hard spray of water done every 5 to 7 days will do wonders to control them all. Get rid of any ants that are `farming' the critters, and if all else fails you may have to resort to a systemic drench which will also take care of any mealie bugs that are living in the soil. I have found that Imidocloprid sold under the trade mark MERIT works wonders. Mites can be suffocated with a spray of Neem Oil done every 5 to 7 days for about a month. Scale is a real tough one to get rid of because the mother has a domed back and a convex or hollowed out belly which the babies run under and hide at the first sign of danger. The mother will die but the babies remain safe and sound under her belly to terrorize us another day. To make sure that all the babies are killed also, take a wad of cotton balls soaked in alcohol and wipe every stem until no more mother scale bugs are present. This may have to be done several times.*

## **Is there a set time frame as to how often hoyas should be repotted?**

*Hoyas can go a long time between repotting. However, as the roots become more tightly bound in the pot, less water is able to get to the roots in the soil so you must water more often or a potting up one size is in order. My rule of thumb is when the roots are growing out through the drain holes and a squeezed plastic pot doesn't give...it's time.*

## **What are some of the best hoyas for beginners?**

*Keep it small and simple. The addiction will grab you soon, then the skies the limit.*

## PHOTO GALLERY DESCRIPTIONS

### Top Row Left to Right

H. cv. Monette: A beautiful hybrid cross between *H. lauterbachii* and *H. coronaria*. Both species in the *Ereostemma* section. *H. lauterbachii* lent its beautiful, dark, rose red coloring and large size, while *H. coronaria* seems to have imparted the greenish yellow center and nice fragrance.

H. cv. Ruthie: A winning hybrid cross between a hybrid labeled *H. cv. MM* and *H. sussuela*. The first successful cross of Ed Gilding. The outer tips of the petals are greenish yellow, while the main portion of the petals are pinkish orange. The center of the flower is greenish yellow and the crown is also greenish yellow with dark, pinkish orange coronal petals.

A hybrid cross between *H. onychoides* and *H. archboldiana*. To my knowledge, this cross has not been named as yet. I also don't know who made the cross but suspect it is one of Ed Gilding's beautiful crosses. The foliage on this plant is spectacular with huge, heavy textured, dark green (almost black) leaves. The large flowers (3 inches across) are just as spectacular with a hint of the claw shaped petals of *H. onychoides*, dark red (almost purple), and the wonderful Jasmine fragrance of both of its parents.

### Center Row Left to Right

H. cv. optimistic: A hybrid cross between *H. ciliata* and a hybrid cross labeled *H. cv. MM*. This cross resulted in a huge, robust plant with two tone yellow and orange sherbert colored reflexed flowers. A great bloomer, but no detectable fragrance.

A hybrid cross between *H. cv. Ruthie* and *H. fraterna*. Not much is known by me of this cultivar. The photo depicts a rather large two tone flower

with mostly attributes of *H. cv. Ruthie*. I don't know who made this cross, but hope to bloom it myself soon in order to give a better account of it.

Another hybrid cross and is reported to be a cross between a species from The Solomon Islands that I know only as BSI-1 (I do wish someone would either figure out what this species is or give it a name), and an *australis* species. The only thing that I know for sure about this plant is that it is one of the most beautiful of all the hybrid crosses that I have seen, but then, so is the BSI-1 parent.

### Bottom Row Left to Right

A hybrid cross between *H. archboldiana* and *H. macgillivrayi*. One of the beautiful crosses made by Michael Miyashiro between these two outstanding species. It appears to have every good quality of both parents. Color, size, fragrance and all.

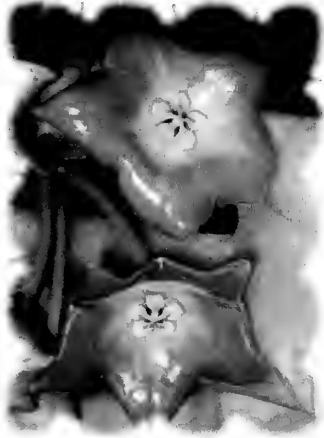
Last: A hybrid cross between *H. Albiflora* and a plant that I have known for the past 18 years only as WMZ. The flowers have good substance and are huge (up to 3 1/2" across) and also have the huge calyx of the WMZ parent. The fragrance is fantastic!.

All pictures in the Photo Gallery in this issue are sponsored by Rosemary Peterson in memory of our past president, Harriette Schapiro who passed away in late December of 2004.

By Ann Wayman



# Hoya Photo Gallery



# HOW I GOT STARTED IN HOYAS

By Carol Noel

My name is Carol. I am a Hoyaholic. This is my story.



It all started very innocently 20 years ago with a *Hoya carnosa*. I didn't even know it was a hoyo. I over potted, it died!.

Then later, much later, I found a *Hoya australis*. Then I found another. Both were sold under different names (*H. Coronaria* and *H. Keysii*), but I didn't care. The gorgeous foliage, the beautiful flowers, I was HOOKED! I began cruising the internet, spending money like there was no end of it..my clothes closet should be so lucky!

So begins my story. Four years ago I became obsessed with Hoya. We had moved to Hawaii and the first thing I did was campaign for a Master Gardener course at the University of Hawaii at Hilo. It happened, there was no turning back! Then the greenhouse, then???

With 12 acres of tropical rainforest to plant and my obsession with Hoya, my learning curve went straight UP (there are no gradual curves in my life)! I plunged into Hoyas with every waking moment, joined forums, bought books and met people. And so, on and on it went. I was very lucky to meet GOOD people, those who were knowledgeable and willing to help me learn. Among them were Ted Green, Ed Gilding, Dale Kloppenburg, David Liddle, Ann Wayman and so many others.

I began my collection with some of the easier to grow hoyo. Carefully, without letting anyone onto the fact that I was obsessed and totally smitten. I also didn't have a clue what I was doing. Caught in the web of sp./aff./cv./ssp I went from ecstasy to despair and back again on a minute to minute basis. We ate frozen chicken pot pies and burritos as I had no time for anything but..HOYAS.

## **Some of my first successes:**

*H. diversifolia*: Nothing short of a nuclear attack could hurt this hoyo. A real 4 wheel drive plant. Perfect for me. I could only succeed!

*H. lacunosa*: All the clones. What a dear plant! Like my favorite Labrador Retriever, it only wants to please, perfume the air with blooms and make me happy.

*H. heuschkeliana*:: I have two plants hanging in my shower. Their buttery, vanilla scent is glorious and they always look so happy. Loving water and being wet, they get a shower too.

I stumbled, I fell. I hit bottom and rose again to try other species. In the various forums I met MORE hoyo growers. The majority of hoyo growers I have met have been wonderful folks with few exceptions.

few exceptions. We shared stories. We shared problems, AND we shared cuttings. My collection began to grow and grow. The identifications were often quite tricky.

I tried different potting mixes, fertilizers, fertilizer combinations, growing conditions (more light/ less light, more water/ less water etc.). I tried different forms of propagation: in water (doesn't work for me), Oasis Cubes (disaster!), perlite/peat moss (messy, lots of work). Now, except for the tender ones (I use sphagnum moss for those). I propagate in the same mix I grow in: fine orchid bark, black cinder, # 3 perlite and coarse peatmoss. I do use heating mats in the winter for the warm loving hoyas, our nights gets very cool.

If I could condense what I have learned (so far) I would say: loose potting mix, lots of water, average light and GOOD air circulation. Some have more specific needs, some cruise through disaster.

I did have a 'heart stopper' earlier this spring when I found some of my hoya leaves had strange discolorations in the midrib area, and distorted leaves (all gnarled and twisted) especially H. BSI-1 aka subcalva, H. Naumanii, H. Ischnopus. Fearing the worst (a virus), I sent leaves to the University Extension Service for tests, along with soil analysis. Reports came back negative for fungii and 14 different families of virus including the mosaic viruses. In the meanwhile, I halted all shipping and notified my customers of my concern over a possible problem with some of my plants. I followed all the advice I could get: flushed with tons of water, flushed with calcium/magnesium, lit candles, did dances, anything I could think of.

Remembering those same weird leaves in a nursery where one of the workers had OVERdosed the hoyas with too much fertilizer, I talked to the owner of the garden supply store where I bought all my 'chemicals'. I told him that all I was using to fertilize was HIS concoctions of a Seaweed 'Whiz bang' fertilizer that he had suggested, as being a complete additive that supplied all the needs for a healthy plant (this statement was also written on the label). Come to find out, it is only micronutrients, to be used in combination with a good balanced top dressing fertilizer. The OVERDOSE of micronutrients displayed the same signs as deficiencies. BIG lesson learned! I now top dress with triple 14 slow release fertilizer and feed DynaGrow intermittently. WHEW. Dodged the big bullet there!

The one constant, I find, IS that MOST hoyas are tough. They survive MOST anything. Animals eat them, step on them, poop on them, birds nest in them, loggers cut them down and yet, they survive. And flourish.

There isn't a hoya I don't like! Even H. Linearis and H. Hypolasia took on healthy growth when I threw them out in the bush and ignored them. However if you live in Minnesota, don't try this.

My name is Carol Noel.

I am a Hoyaholic and that is my story.

## A Weird but Wonderful Plant

(*Hoya retusa* Dalzell)

By Ann Wayman

This is a Hoya species that I have acquired many times over the past seventeen years. It has been a difficult plant to grow, being rather a problem just to get roots to form. In the early spring of the year 2004, I received a small rooted cutting from Debbie Armstrong, a friend in Oklahoma who grew and photographed this beautiful plant pictured on the left. It was immediately potted into my soil mixture, placed in a brightly lit spot in my greenhouse, kept barely moist and within weeks, had started to put on new growth. It's a small plant, at least mine is. I have seen pictures of this plant grown in Sweden that are 3 feet long and absolutely covered with masses of flowers (How do those Swedish growers do it)?.

Barely 18 months later, I was thrilled beyond belief when I saw one rather large flower form on this tiny plant. The next day I saw a few more flowers, and every day after that more and more flowers became apparent. I really thought most if not all of them would fall off without ever opening...they didn't!, and even though they had formed over a period of several days, they all opened at once within a few hours.

This species does not appear to form peduncles as we know them, but instead the single flowers seem to form at the very ends of thin pedicels (flower stems). It is very close in appearance to the species *H. Pauciflora* Wight.





# Why I Crossed The Plants That I Crossed (To Get The Cultivars That I Cultivated)

By Edward Gilding

I feel that a little background information would help to explain why I did what I did, when I did it. Let me begin with my collection (and obsession) with Stapeliads. As many of you already know, I am attracted to the weird sort of plants that are not beautiful in the classic sense.

When I was 13 and starting to grow cacti and succulents I attended a Cactus and Succulent meeting for the first time. At each meeting, a lecturer would give a presentation regarding anything from potting Euphorbias to the metabolism of sugars in native Hawaiian Portulacas. The first presentation I ever saw was by Maureen Fitch, about the pollination of Adeniums, which are in the sister family of Apocynaceae. I made the connection between the structure of Adenium flowers, as well as all other Apocynaceae, and that of the Stapeliads that I grew. I thought that maybe I could adapt what I learned about Adenium pollination and use it to pollinate Stapeliads and other Asclepiads. "Obsessed" would be a good way to describe how I felt about doing this. I would spend hours trying to remove pollinaria without bruising the flowers, then trying to place them into the right orientation so that I could learn how to pollinate the Stapeliads. It never worked!. There was something missing from my method. My interest waned, and so did my Stapeliad collection, thanks to an excess of rain one year.

Next came an obsession with Hoyas, which re-ignited my plans to finally pollinate an Asclepiad. I decided to work with the larger flowered species and after reading "Vegetable Breeding for the Home Gardener" by Carol Deppe, realized that I should choose closely related species for my first attempts at crossing. Reports in the magazine Asklepios speculated that Asclepiads might not be able to self pollinate and that since many of the plants in cultivation are genetically identical, it would be better to attempt an interspecies hybrid than to try to self pollinate a plant in bloom.

My collection of Hoyas grew from the newly rooted cuttings I got from Ted Green and people in the CSSH into full sized plants with blooms. The first of the "difficult" to bloom Eriostemma group that flowered for me was a plant labeled merely 'MM'. This tiny, two foot long plant formed a flower umbel. I was very impressed!. This plant continued to bloom non-stop from that point on.

The hybrid 'Ruthie' is a cross between 'MM' the female progenitor and a different species that I have or had labeled as *H. ariadna* (aka *sussuela*). *H. ariadna* is a seasonal bloomer, and tends to flower once in the spring and once in the fall. The peduncles also bloom (spring or fall but not both) with all of the flowers open simultaneously. After blooming the peduncle falls from the plant. *H. 'MM'* blooms sequentially and repeatedly from the same peduncles, year round. I use the term 'rebloomer' for this behavior. I was very impressed with the show of burnt orange 2 inch blooms that *H. ariadna* displayed but disappointed that it did so only twice a year. All this time I'm thinking, why not cross a big but shy blooming beauty with a precocious non-stop bloomer like *H. 'MM'*. With that thought, I went into action and obtained my first successful pollination of an Asclepiad. I was thrilled beyond words! While in the process of pollinating the flowers, I realized what I was doing wrong and managed to move the pollinaria where it belonged "between the guide rails". Seems I had been trying to control the pollinaria

too much. The follicle (seed pod) matured and I collected 250+ seeds. All were carefully planted, babied and coaxed along, but only sixteen of the strongest and fastest growing plants were saved. The first to bloom was the cultivar released as 'Ruthie', and what a beauty she has turned out to be!

During this learning process, I also realized that *Eriostemma* flowers could be used to make the beautiful Hawaiian flower necklaces called lei, and, that blooms that have reflexed corollas are more likely to remain open after picking due to their structure. *H. ciliata* is a wonderful lei flower and I decided to use it as a parent with the aim of producing a few floriferous reflexed rebloomers. I crossed *H. ciliata* with *H. 'MM'* (female) and the plants that resulted were robust plants that thrived in the sun. The most beautiful of the seedlings that I saved has two tone yellow and fruit-punch orange flowers that are strongly reflexed. This is the seedling I have named 'Optimistic', partly because I was so optimistic about what these seedlings had to offer, and partly because of a song by the band Radiohead..(how teenage but what the hey...!).

Next I tried to cross more things with *H. ciliata* to get a wider variety than the seedlings of *H. 'MM'* and *H. ciliata*. The cultivar *H. Blackstar* is a cross between *H. ariadna* (the female) and *H. ciliata*. In terms of flower color and form these seedlings showed great variation for a cross between two species. It is troublesome to propagate because the stems are very succulent and rot sets in easily, much like *H. imperialis*. This cultivar is not one of my favorites, and neither is *H. 'Girlie'* which is a cross of 'Ruthie' (the female) with *H. ciliata*. *H. 'Girlie'* is like a larger flowered, more floriferous version of *H. Optimistic*.

*H. lauterbachii* arrived on the hoyas scene about 1997-1998 and caused quite a stir with American collectors when they first started to bloom these plants collected from Papua New Guinea. Lei flowers are great but what about corsage flowers? *H. lauterbachii* opened up this possibility. There are, however, two drawbacks to *H. lauterbachii* for its use in a corsage. First: the plant flowers once a year, twice if conditions are perfect. And second: the flowers stink of baby vomit. Oh well, just for kicks, I decided to cross *H. lauterbachii* with the REAL *H. coronaria* (lowland form as the female parent), to see if that would get rid of the awful smell and which would win out, the cup flowered form or the reflexed flower form. *H. coronaria* is a species that has a pleasant night time scent that I was hoping would be conferred to the offspring. The first seedling to bloom was named 'Monette' after my mother. The blooms of this cultivar are heavy and somewhat pubescent on the interior. The plant is a rebloomer and the flowers are bowl shaped with reflexed lobes. A second reblooming seedling was chosen and named 'Margaret' and has the same grandmother as 'Girlie' but this plant is far superior, with pastel pink and green radar, dish like flowers. Neither one of these plants smell like vomit. YEA!!!

***Eriostemma sussuela* aka  
*ariadne***

The male parent of *H. cv. Ruthie*,  
and pollen parent of several of  
Ed's other beautiful hybrids.





A full umbel of Ed Gilding's beautiful cultivar 'Monette'. Taking full advantage of the sun and rain outdoors in Keaau, Hawaii, this plant has grown to huge proportions. Taking its cue from the male parent (*H. lauterbachii*) these flowers are in the giant class, being up to 4 inches across. The beautiful dark pink coloring of the flower petals are also a trait of the male parent.

Though this was a hybrid cross within the *Ereostemma* section, a rather difficult "sister member" section in the *hoya* family, these crosses seem to be more agreeable to growing and blooming in warm greenhouses. (Photo by Monette Gilding)

By Ann Wayman

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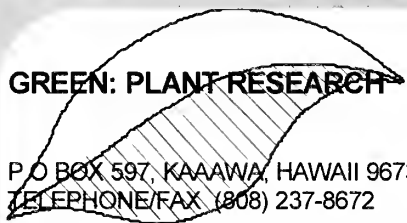
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All proceeds, except for actual cost of production is being donated to "The International Hoya Association".

For information on these offers, contact Ann Wayman or Jerry Williams. Addresses on masthead, page 2.

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