STEMMA

a pdf magazine devoted to Hoya
culture, history, and photography

Editor: Mark Randal

Volume 1, Issue #2, Spring 2007

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This Issue

Welcome to Volume 1, issue#2 of Stemma. On the cover of this issue is a detail from a painting by San Francisco artist Kevin Mosley featuring ***Hoya archboldiana*** C. Norman. This work is joss paper and acrylic reverse-painted on glass. Kevin is a promising new artist whose colorful works are held in collections in San Francisco, New York, London, Los Angeles, Chicago, Hawaii, and (soon) Sweden. Kevin has volunteered to produce a small painting for each winner of the photography competition for the first year of Stemma. Maggie Alm, the winner of this issue's contest, will receive a painting depicting the lovely ***Hoya wallichii*** (Wight) C.M. Burton that is the subject of her winning photograph. (See page 21.)

You will notice several new features on the contents page for this issue. Several features, such as In Cultivation, the Photo Contest and the Back Page will appear in each issue, but there will be a number of periodic features which will revolve to make way for a larger number of topics to be discussed here.

This issue marks the first appearance of the Technique feature. This first outing, a step by step guide to mounting Dischidia, is written by Antone Jones, who will hopefully make many contributions to future issues of Stemma. Mr. Jones, who collects and mounts these small Hoya relatives, is a resident of the Orlando, Florida (USA) area. Mr. Jones works at Florida's Tropiflora, a large scale nursery which grows a mind-boggling selection of tropical plants, on the web at **www.tropiflora.com.** Mr. Jones maintains a website with many fine photographic examples of his art on the Web at **www.dischidia.com** .

In Cultivation features ***Hoya fraterna*** Blume this time around. The Department of Corrections column will correct mistakes made in the last issue of Stemma and touch on new information regarding past subjects. The Back Page, presented here for the first time, will spotlight new or little known species, forms, cultivars or hybrids. The first plant to be so featured is ***Hoya sp.* IML-0831**.

I would like to welcome the many new subscribers to Stemma, and especially note the many people who have joined through the **EpiForums** website and the many French nationals from the **AFAHO** (Association Francophone des Amateurs de Hoya) who have subscribed.

Mark Randal

In Cultivation: *Hoya Fraterna* Blume

by Mark Randal

Hoya fraterna Blume is intimately associated with two other Hoyas- ***Hoya coriacea*** Blume, to which it is very closely related and visually very similar, and ***Hoya meliflua*** Merr. ssp. ***fraterna*** T. Green, which was mistakenly identified as ***Hoya fraterna*** around 1850, an error which was to remain uncorrected for almost 150 years.

Figure 1: *Hoya coriacea* Blume (L) and *Hoya fraterna* Blume (R). Note the differing coronal lobe shapes- *H. coriacea's* lobes point outwards, while *H. fraterna's* are upright and blunt. Photo of *H. coriacea* courtesy of Bob Ely.

Hoya coriacea was collected in the forests of western Java by Carl Blume, and was described briefly in 1825 by Blume in ***Bijdragen Tot De Flora Van Nederlandsch Indie***. It was more fully described, again by Blume, in **Rhumphia** Volume 4 in 1848.

H. coriacea is a wiry twiner with large , thin, flexible leaves that have the texture of fine, supple leather (hence coriacea, latin for "leathery"). This plant has large heads of chartreuse/yellow flower clusters, often comprised of over 50 flowers to each umbel. In 1849 Blume described a very similar but distinct species, differing in minor vegetative details and coronal* structure (***Hoya coriacea*** has dull leaves, corona segments which curve outwards into a pointed hook, and pale chartreuse flowers, wheras the new species had shiny leaves, coronal lobes that were strongly upright and not curved outwards, and flowers of a deep gold color). Blume gave this new plant the specific epithet* "fraterna", meaning in Latin "brother" or "closely allied", referring to its close resemblance to ***Hoya coriacea***. The description of ***Hoya fraterna*** Blume appeared in ***Museum Botanicum Lugduno-Batavum*** in 1849. It had been mentioned previously in the ***Rumphia*** V.4 publication of ***H. coriacea***, but only in that it grew in the same locales as ***Hoya coriacea***- not enough information to constitute a publication.

In 1850 Thomas Lobb, a plant collector working for the nursery **Veitch & Sons** of Exeter,England, introduced a plant he identified as ***Hoya fraterna*** Blume. He cited the collection locale as Java, but Lobb was notorious for falsifying collection data to throw his competitors off of his track. It was said by Dale Kloppenburg that the actual locale of this plant's collection was possibly the Philippines, according to Lobb's travel records. This plant was very different from what we now know as the true ***Hoya fraterna***. It had long, extremely thick and hard leaves of a very dark green color, and flowers of a pinkish-yellow or buff hue, similar to those of ***Hoya diversifolia*** Blume, which dripped copious amounts of nectar. This plant would be accepted as, written of, and illustrated as ***Hoya fraterna*** Blume for the next 140 odd years.

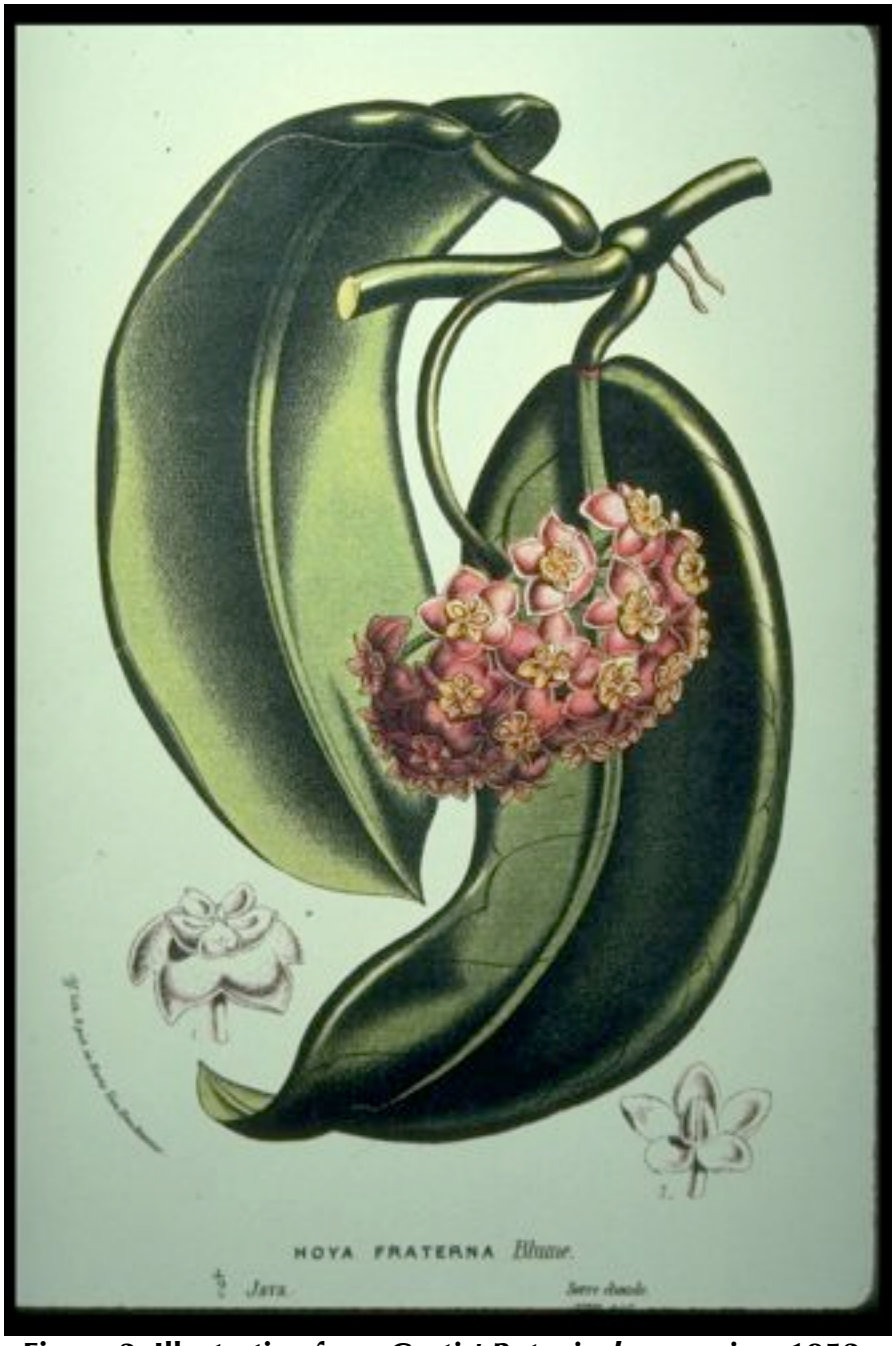


Figure 2: **Illustration from *Curtis' Botanical magazine*, 1852, labelled *Hoya fraterna* Blume, actually representing *Hoya meliflua* Merr. ssp. *fraterna* T. Green.**

This state of affairs was interrupted in 1993, when Tony Lamb recollected the true ***Hoya fraterna*** in Sabah. Initially thought to be a clone of ***Hoya coriacea***, it was later identified as ***Hoya fraterna*** by Ted Green, based on photographs, preserved flowers, and cuttings sent to him from the **Tenom Orchid Center** in Sabah, Malaysia. 6

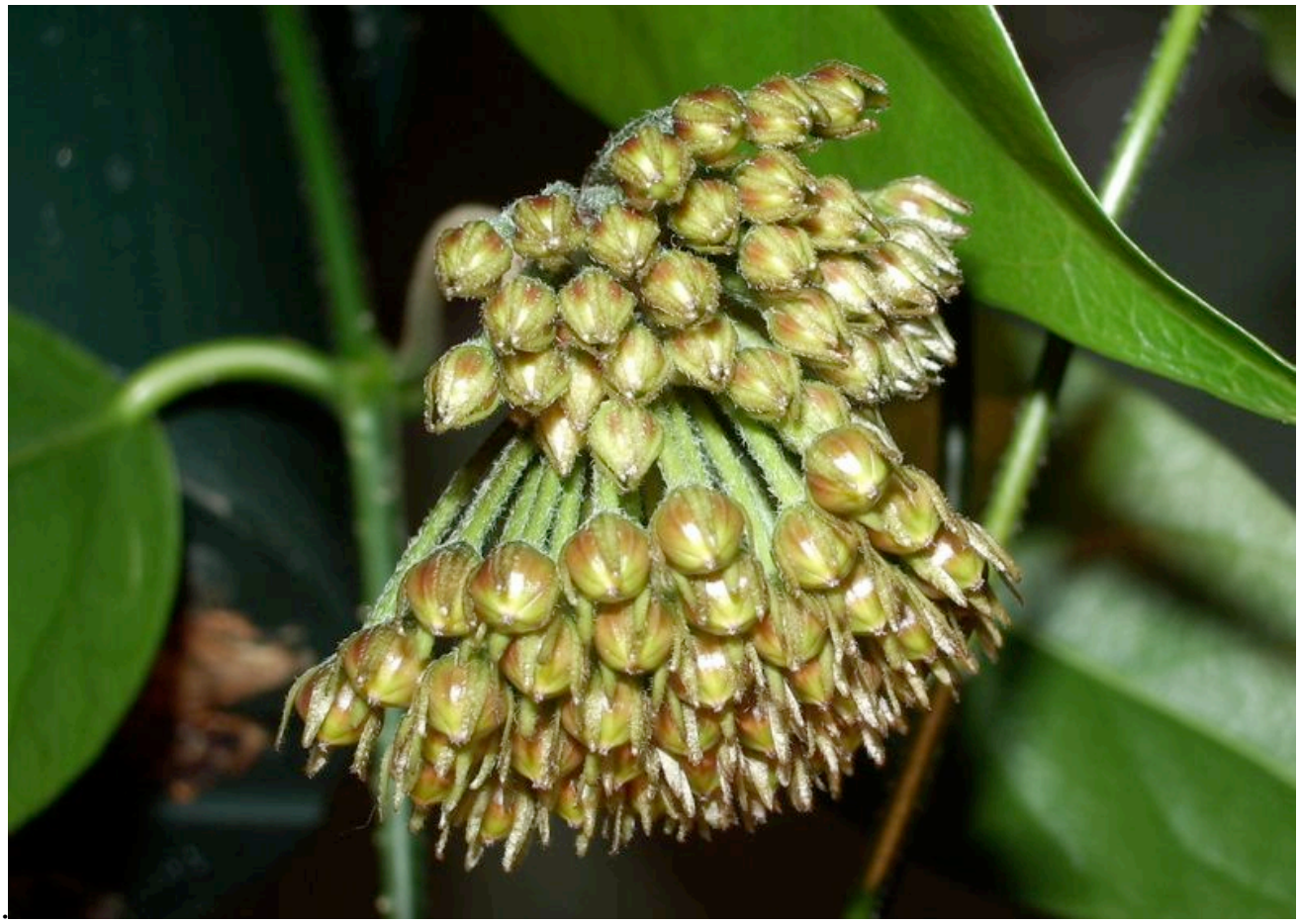


Figure 3: This set of buds of *H. fraterna* is emerging in two stages. Note the upper buds, still encased in their protective jacket of sepals, and the lower buds emerging to reveal the typical round, obtuse buds of the genus Hoya.

Mr. Green looked more closely at the plant known for so long as ***Hoya fraterna*** and determined that it was actually a subspecies of ***Hoya meliflua*** Merr., a close relative of ***Hoya kerrii*** Craib and ***Hoya diversifolia*** Blume. To accommodate this new plant, he created the new combination of ***Hoya meliflua*** Merr. ssp. ***fraterna*** T. green, the subspecies name "fraterna" acknowledging the mistaken name this plant had gone by for so long.

Hoya fraterna was placed by Blume into Hoya section **Physostemma** (now **Physostelma**). The type for this section is ***Hoya coriacea,*** and other members may include: ***Hoya macrophylla*** Blume (and its close relatives ***H. polystachya*** Blume, ***H. clandestina*** Blume, etc.) and ***Hoya cumingiana*** Decne.

Figure 4: The developing buds are a rich buttery yellow, with pink, orange, and copper tones when exposed to direct sunlight.

Hoya fraterna is a tough, vigorous plant which presents no serious challenges in cultivation. Despite its moist forest background, it is quite adaptable and seems equally at home as a houseplant or in a warm greenhouse. ***H. fraterna*** does like consistent watering, and will dry out and wilt more quickly than many Hoyas due to its relatively thin leaves and fine stems. The soil for this plant should never be allowed to dry out completely, and any period of drought will cause desiccation and blasting of flower buds. ***H. fraterna***, when properly sited, will flower on and off throughout the year.

H. fraterna performs well in bright indirect light, requiring no direct sun save an hour or two in the early morning or late afternoon. It will grow lushly in lower levels of light but will not flower as well. This plant grows well in intermediate temperatures (13'C to 35'C **or** 55'F to 95'F), as are found in most homes in temperate to subtropical areas of the globe.

Figure 5: When newly opened, the flowers seem to be rotate.

Since ***Hoya fraterna*** is a vigorous, wiry twiner, it should be equipped with a sturdy trellis or support at least three feet in height. A wire tomato cage or a pair of bamboo "U"s work very well for this plant. Since internodes* are fairly long, the new stems should be wound around the supports horizontally as much as possible to produce a more densely clothed appearance. Since this species is a strong grower, free bloomer, and has such a strong root system, it may benefit from potting up more quickly than most Hoyas. This practice will also reduce watering frequency requirements, as ***H. fraterna*** uses soil moisture rapidly when in active growth.

The leaves of ***H. fraterna*** are from 12cm to reportedly 25cm or more (5" to 10"+). They are a deep shiny green, pinnately* veined with an approximately 1.5cm (2/3") petiole. The texture, as mentioned above, is rather thin for a Hoya, and is similar to, but thicker than, a smaller leaf from a ***Spathiphyllum*** (peace lilly). The internodes are quite long- up to 20cm (8"). Peduncles are green when young and can grow to be 7cm (3") in length.

figure 6: the fully opened flowers of H. fraterna

The flowers, borne in huge clusters of up to 50 or more to each peduncle, are of a less common color for Hoyas- a deep rich gold. The corollas are very hairy, and the pink and ivory corona stands out prominently. The flowers of ***H. fraterna*** are distinctive right from the start- the sepals are very long and pointed, and enclose each developing bud in a pointed green "jacket", initially giving each bud the look of an unopened tulip bloom. The sepals gradually open to reveal developing buttery-yellow buds. The flowers begin to open when the buds are approximately 1.25cm wide, and at first seem to be rotate*. In the course of a day or two the corolla lobes will slowly reflex and point straight backwards. The corolla shoulders* are higher than in most reflexed Hoya flowers, leaving the face of the flower with a flat surface. The fully opened flowers are particularly beautiful when viewed from below, as each flower appears perfectly round and banded in gold.

H. fraterna has little fragrance, perhaps its one drawback in cultivation. Some growers have noted an "overly-ripe peach" scent from the blooms, and this, along with flower color, may vary according to cultural conditions and plant health.

Technique: Mounting Dischidia

By Antone Jones

What are Dischidia and why mount them?

Dischidia is a genus of plants in the Apocynacea family that are closely related to Hoya. Dischidia are found throughout South East Asia and Australia. All are epiphytic vining type plants. Unlike Hoya, Dischidia do not usually have large umbels of fragrant flowers and rather have somewhat insignificant flowers.

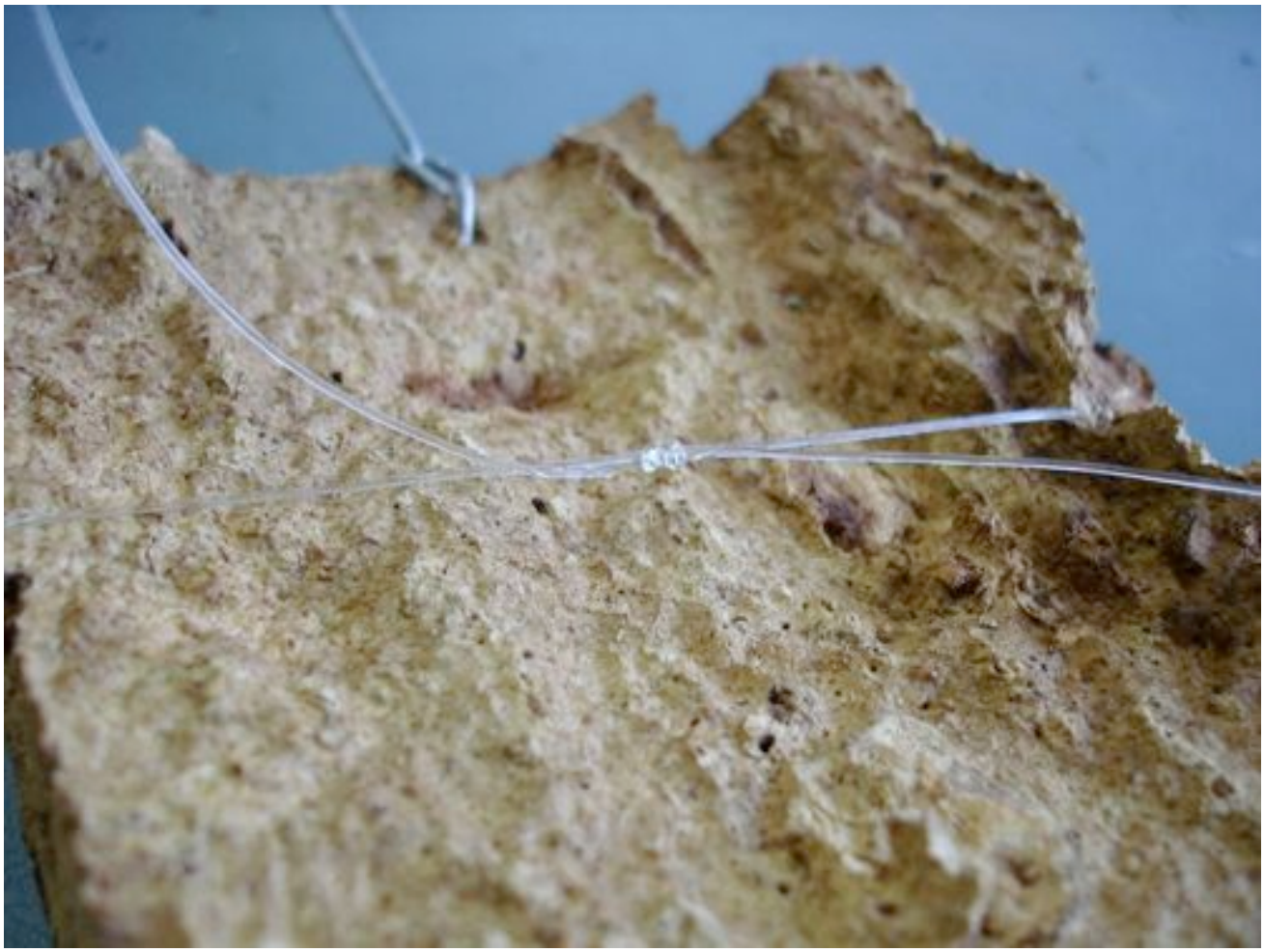
Being that Dischidia are epiphytic, they grow quite well when mounted. Mounting these plants gives the grower an opportunity to try something new as well as enjoy the fun of watching a mount fill in with a beautiful plant. Furthermore, pots take up quite a bit of space and finding a small area on a bright wall to hang a Dischidia mount is quite easy and space saving.

Getting Started

In order to mount Dischidia, you'll need a few basic things that are easily obtainable.

- Damp long fibered sphagnum moss
- Plant specimen (here we have ***Dischidia ruscifolia***)
- Needle nose pliers
- Orchid basket wire (for the hook on the mount)
- 40 lb test fishing line
- Cork, driftwood or a tree fern slab

First, I like to soak the sphagnum moss in a very dilute solution of a good orchid fertilizer. This will provide the plant with some nourishment as soon as it roots and help ensure you get good strong growth. Also make sure to use a good quality long fibered moss. Nothing is more annoying than having to try to mount Dischidia with a multitude of tiny pieces of moss. The nice long strands make this task a breeze.

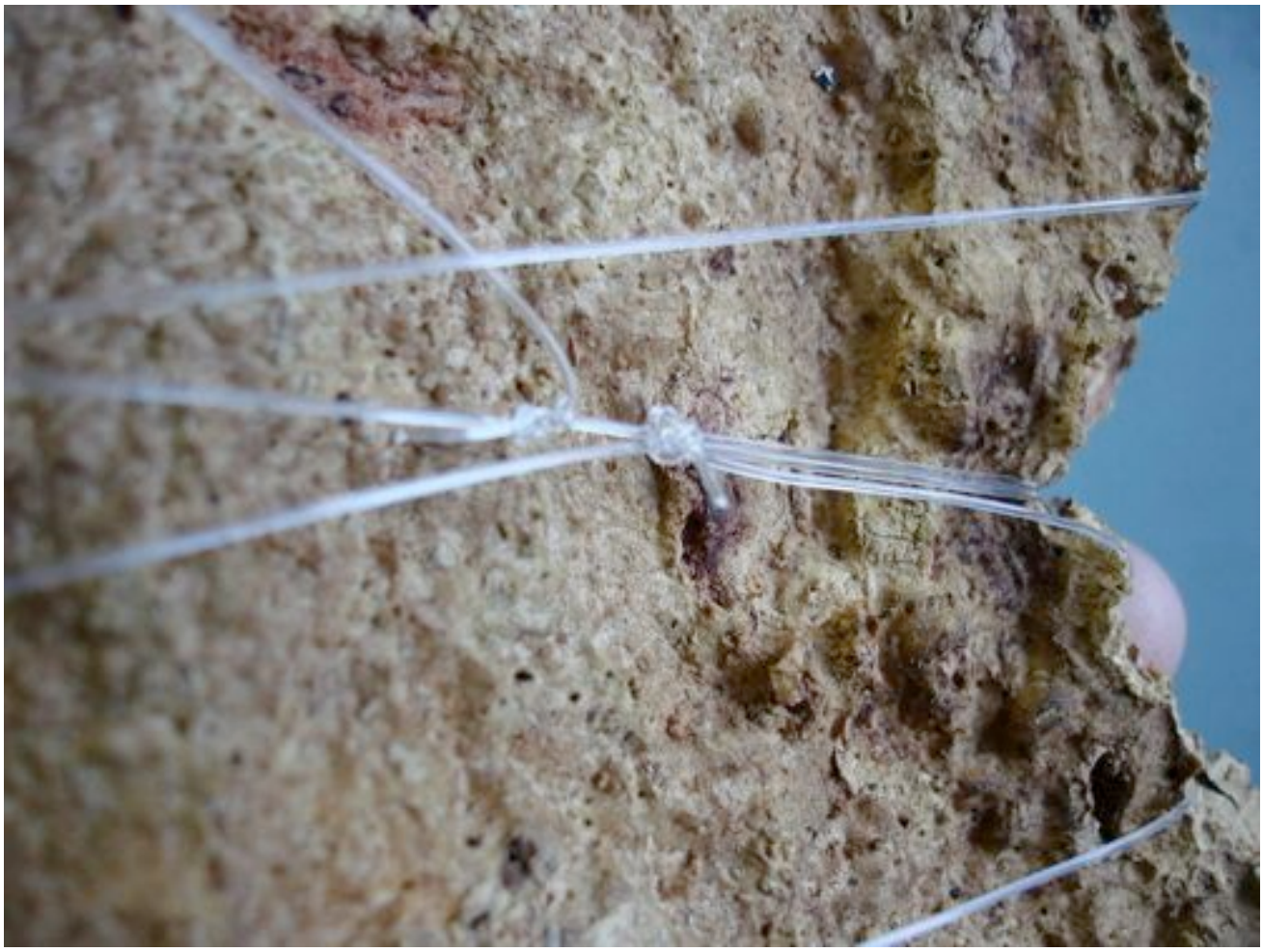


Next, take whatever medium you chose to mount to (here I chose cork bark) and tie the fishing line around the back with a good strong knot. Using 40 lb test is important here because if the line is too thin, you run the risk of cutting straight through the plant when its time to tighten everything down. If the line is too thick it becomes somewhat difficult to tie the knot.

After the knot is tied, flip over the cork and place the moss on top. Place a good amount so that it will be easier to keep evenly moist but not so much that it stays too wet for too long. I also like to trim the moss on the sides of the mount to keep it looking clean and nice.

After the moss is secured, place the cuttings on the mount in a nice orderly fashion. It is nice to have the tops of each cutting flush with the moss so that you can take advantage of every node possible.

Once you've lined the cuttings up begin to wrap the fishing line around the cuttings. Always make sure to secure the line around the nodes. You don't have to wrap line around every single node but it is good to do at least ¼ of them. I like to get as close to the node as possible. As we know, the node is where the nutrient-obtaining roots come from on these plants and doing this ensures that the plant will have a good chance at nice healthy growth.



When you've finished wrapping the cuttings, tie another knot on the back of the mount to secure it all. Make sure it is snug but not overly tight or you risk breaking the line or damaging the cuttings.

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To make the hook, create a small hole at the top of the mount. If you're using cork or driftwood, you may have to use a small drill or a Dremel tool to create a hole. Insert the wire through and wrap it around creating a sort of clasp that will hold the wire in place. At the top of the wire, bend it to make a hook. That is where it will hang from.

That's it! You're done. All there is left to do now is find a nice spot with bright shade or filtered sun and hang the mount. Make sure to keep the moss damp but not wet and in about 5 weeks it will root and you should see some new growth. The sphagnum only lasts about 1 or 2 years so you may have to replace it every now and then.

Some More Mounts

Here are some additional photos of other Dischidia mounted. Don't be afraid to experiment! Some Hoya also make great mounting subjects. ***Hoya curtisii***, ***H. retusa***, ***H. wayetii, H. lacunosa*** and ***H. picta*** do quite well mounted.

Photo Contest

The first winner of the Stemma photo contest is Maggie Alm of Sweden.

Maggie's photograph is of the lovely ***Hoya wallichii*** (Wight) C. M. Burton (referred to by some as ***Hoya campanulata*** Blume). Maggie maintains a website at **www.hoyor.net** in both English and Swedish. There is an extensive collection of Hoya photographs represented there- an excellent source of information and a pleasure to view. (cont. on pg.22)

For Maggie's winning photograph, she will receive a small painting based on this image by Kevin Mosley of San Francisco. A reproduction of this painting will be shown in the next issue of Stemma.

Entries for issue #3's photo competition should be sent to **markroy68@yahoo.com**. File sizes of 300K or over in a jpeg format are best. Watermarking is encouraged, but please locate the watermark so as to not obscure the subject of the photo.

Letters to the Editor

Letter 1: This letter is from Sylvia Healey of South Africa.

Hello Mark,

Thank you very much - this is exactly the sort of information I have been looking for, for a very long time, so please do keep going. I was most interested to read the item by Carol Noel about the seed, and was wondering if it would be possible some time to have an item on growing Hoyas from seed?

Here in South Africa they are not well known at all, and very hard to come by either plants or information.

I have been fascinated since I was a little girl (long ago!) and my granny had a carnosa plant growing in her scullery which produced flowers the same as those on my Sunday school hat. I still have a plant growing from that cutting although my granny is long gone, and have managed to obtain a few others.

They do quite well here on the Highveld. Except that our soil is on the acid side generally and it took me a long time to find out that this was a problem. I have been making up my own food, so am quite relieved that you will be dealing with that aspect too. Those that originate in SE Asia seem to tolerate our cold dry winters, although I do bring them inside just in case we have frost.

We took a trip to SE Asia and Borneo last year at this time [ed.-February], and I was hoping to find out more about them, but the people that I did come into contact with did not seem to know them by the name Hoya, although I did spot quite a few around, and am sure that a few more lianas and creepers I saw were also Hoyas, but not knowing enough about them was unable to do much about them.

We did see a Rafflesia in flower in Borneo, which was the high-light of the trip for me. Had to struggle through the jungle as, unfortunately, as a result of a motor accident a couple of months before we left was still on crutches. Amazing what one can do with determination.

I am now agitating to go back, to Borneo in particular, and am sure I will do a lot better now that I can almost walk again normally. I know I will be fine if I get a lot more exercise.
Thank you once again and I will look forward to the next edition eagerly.
Regards, Sylvia

Thanks for the kind words, Sylvia. I have been planning a special all-propagation issue, perhaps for the Fall issue of Vol. 1, with short articles from many different growers on different propagation techniques. I'll make sure to include at least one involving growing Hoyas from seed.

Letter 2: In response to my statement that ***H. waymaniae*** D. Kloppenburg "has long peduncles (up to 20cm (8") peduncles have been reported)", David Liddle wrote in and supplied this photo of a ***Hoya waymaniae*** peduncle that is 380mm in length (38cm or 15"). The picture is reproduced sideways in interest of conserving space. Mr. Liddle also mentioned having heard of instances of ***H. waymaniae*** producing peduncles as long as 45cm ! (18")

photo of Hoya waymaniae with 38 cm (15") long peduncle by David Liddle.

Letter 3: Also regarding ***H. waymaniae***, Ted Green wrote in to say that the color of the flowers of this plant shown in issue #1 were uncharacteristically pale, and that the flowers of ***H. waymaniae*** are generally a much more saturated pumpkin-orange. Mr. Green sent in this photo, and noted that the horizontal position of the peduncle may be more typical than a pendant position. (Picture shown on page 24.)

photo of Hoya waymaniae by Ted Green

Letter 4: This is an excerpt from a letter from Maggie Alm of Sweden:

Hi Mark,

Thank you for a great magazine. It was very informative and I'm really looking forward to the next issue. However, if I may address you with some, hopefully, constructive criticism. The font was not the best for reading long masses of text. Although I find ordinary book fonts, such as Times New Roman, utterly boring, they are much easier to read. Comic sans makes my eyes tired after a while. Also, the bright colors on text here and there were a bit confusing to the eye...

Maggie

Thanks for the input, Maggie. The font used in Stemma, Comic sans, has been a bit controversial. People seem to love it or hate it. I selected it for a number of reasons- ease of reading and informality being the two chief ones. However, as some have found it not-so-easy on the eyes, I have changed the font for this issue to Optima, which seems quite readable. I would like to encourage readers to e-mail me and let me know their opinion on the font and the colored text.

Department of Corrections

by Mark Randal

Note: This section will appear regularly in Stemma as needed to correct misstatements or further discussion, but it will not (hopefully) be so long as in this instance.

Part 1: I incorrectly stated in the article on ***Hoya waymaniae*** D. Koppenburg that "This species was first collected in the late '80s by Arden Dearden in Sarawak". It appears that I was wrong here, and that this was not ***H. waymaniae's*** first verifiable collection. A more correct statement would have been:

"***Hoya waymaniae*** was collected, possibly for the first time, by Dr. Ben Wallace around 1980."

This error was first brought to my attention by Christine Burton (see DOC part two), who stated, referring to Stemma V1, #1 and your editor:

"The first glaring error I found was on page 3 where he said, "This species was first collected in the late 80's by Arden Dearden."

FACT: This is not true. I KNOW that I had this species before the late 1980s and I know the source of my plant. The plant which was later published by Kloppenburg as Hoya waymaniae was collected by a team from the Marie Selby Botanical Garden of Sarasota, Florida, which distributed it to various other gardens and to some of us hoya sellers NOT in the late 80s but in the early 1980s. I don't know that theirs was the first time it was collected or not. It was sold by many hoya sellers long before the late 1980s as ***Hoya sp. 85-1981***. Two of the men on that collecting trip were Steve Ingram and a man named Atwood. Don't know his first name but his wife, Donna spent a day entertaining me the last time I visited Selby. It was Steve Ingram and Harry Luther who gave me my first start of this plant and also a herbarium specimen of it. I gave the specimen to the herbarium at U. of CA-Berkeley as a token of my appreciation for their lending me their hoya herbarium specimens. If you live near there or near Sarasota, FL, I feel sure you'd be allowed to view specimens of this species which was collected by these men. I do not question that the hoya grown by Wayman was collected by Arden Dearden. I KNOW, however, that this species was growing in my greenhouse long before the late 1980s and I KNOW it was collected by a team from Selby. I also KNOW that the 85-1981 is a Selby Accession number. I know that because they gave me a copy of their Hoya accession list and asked me look it over and make corrections if I thought there were wrong names on it."

I next heard from Ted Green of Hawaii, who supplied me with this information:

In 1980 Ben Wallace of the Sydney Bot. Gardens visited Tony Lamb in Sabah and they went collecting. Duplicates of all of the things that they collected Ben took back to Sydney, where I saw them and got a bunch of cuttings (some of my things with a collection number beginning with an 80- were things that Ben gave me). That was about in 1982. Ben also shared with the Marie Selby Gardens and later I saw the ***waymaniae*** there and told them what it was, as I did many of their other things."

As can be plainly seen, these are two quite different stories, but they share a connecting thread: the **Marie Selby Botanical Garden (MSBG)**, so I began my search for corroborating evidence there. I contacted several staff members and received this first relevant bit of information from Rosalind Rowe, the Plant Records Keeper at **MSBG**. She had this to say:

"Well, a puzzle…

Our plant accession #85-1981 is a fern collected from Ecuador .

The ***H. waymaniae*** we have in our current records (#1995-0401) was obtained from the **Sydney Botanical Gardens** in 1995; in the computer records, B. Wallace is cited as the original collector of the plant material and Borneo is cited as the location of origin.

Per oral discussion with other MSBG staff, herbarium specimens from Ingram and Atwood are probably from the MSBG living collection."

A good beginning, but the accession date seemed off, and the accession number supplied by Ms. Burton didn't fit in. Since Rosalind seemed to be hinting that there may be more data to be had in the **MSBG** Living Collection, I next wrote to that department and found that the Curator of Living Collections was none other than Harry Luther, the source Ms. Burton cited as supplying her with plant material and a herbarium specimen of ***H. waymaniae.*** His response cleared up several points, and is as follows:

"Dear Mark; we still have the plant, the Selby # is 95-401; the other # you have is the **Sydney Bot. Gard**. 851981. The plant came to us from Sydney via Dr. Ben Wallace from the **Sydney BG** in 1985 or 86, Orig. from Borneo, the Tenom Orchid Center. Why the plant was not accessioned here until 1995 I cant say. It's in the SEL herbarium as SEL 66041, Stephen W. Ingram 1123, 23 Sept. 1991. I believe this is clonotypic material. The plant is a finicky grower, its lost its roots again and is re-growing but is probably safe. Im sure we gave cuttings to several growers over the years. HEL"

As can be seen, this supports Mr. Green's response and explains the wrongly attributed accession number supplied by Ms. Burton. Since the **Sydney Botanical Garden** is also mentioned as a link in this chain, I next contacted them about the matter. They confirmed the accession number and collector (Ben Wallace) of this plant material, and supplied me with the accession data for the plant. It is as follows:

Hoya sp.
Family: Apocynaceae
Accession: 851981
Internal Record Number: NSW4054336
Collection Location: Near Nabawan, on road to Labuan River.
Country: MALAYSIA Sabah
Collector: B.J. Wallace
Collector's number: 84302
Date: 05 Jan 1984
Notes: Tall open rainforest, well developed with a low and tall shrub layer, and a dominant layer c. 20-25 m high. Podsolic sandy soil. Epiphyte on small tree trunk, c. 15 cm diameter, at c. 2 m height. Margins crinkly, brown blotching above.

The date supplied here is the **Sydney BG** accession date, not the collection date, so this does not verify the year of collection as 1980, but as Mr. Green's other information proved to be entirely true I see no reason to doubt his claim that the year of collection was 1980.

Part 2: I want to thank Christine M. Burton for taking the time to throughly critique the first issue of Stemma (see DOC part 1). Copies of this critique should be available through her MSN forum at:
www.http://groups.msn.com/HoyasRUs/_whatsnew.msnw

Ms. Burton made several important corrections to my text, which I will note here first, and several points which are dubious, which I will address after.
1- I was horrified to find, thanks to Christine, that I had misspelled the word "etiolate" as "etoliate" not once but twice, in the text and the glossary. I suppose that is what comes of editing ones own work! My apologies.
2- The original collection site of ***Hoya bella*** was cited incorrectly as "the Tuang Kolo mountains" in the last issue of Stemma. Ms. Burton also incorrectly cited this location in her correction as "Tuang Kola Mountain". The correct citation from the original publication is "Taung Kola Mountain". Third time's the charm?

3- The most serious error was quite a large one. I incorrectly cited the author references for the two hoyas in the longest article in the magazine. The title of the article ran "***Hoya Lanceolata*** Wall. ex Don and its subspecies ***bella*** Hook". As Ms. Burton points out, the author citations should be written thus- ***Hoya lanceolata*** Wall. ex D. Don and it's subspecies ***bella*** (Hook) D. H. Kent. The difference is important-the addition of "D." to the "Don" reference distinguishes between the (at least) three Dons who have worked as taxonomists or botanists. The addition of D.H. Kent to the citation for ssp. ***bella*** and the placing of Hooker's name into parenthesis indicates that the rank of the plant (from it's original place, determined by Hooker) was changed (by Kent). Again, my apologies, and my thanks to Ms. Burton.

The rest of Ms. Burton's critique adds some interesting points in several places, particularly in regard to the identity of the Hoya known as ***Hoya weebella*** Kloppenburg or ***H. dickasoniana*** Li. However, there are several places where I believe she erred, or brought up points which require explanation. I'll address four of those points.

1-Ms. Burton states that "Randal said (of ***Hoya lanceolata***), "it was published by Nathaniel Wallich" which is not true. Wallich put that name on a couple of herbarium specimens and mentioned it in correspondence, but he did not publish it."

She later states, in pointing out that D. Don did little to add to the description, "One can hardly call David Don's publication of it as fully described but I suppose adding "more" in front of it is technically correct, since Wallich didn't describe it at all.

I was aware of all this at the time I wrote this article, and the point is technically correct. I chose not to delve into the veracity of the author citation for ***Hoya lanceolata*** for the following reason: **H lanceolata** Wall. ex. D. Don is the accepted name and author citation for this plant. It can be found, as well as in many other places, in the Index Kewensis' IPNI that Ms. Burton refers to in her critique. It is written as such almost universally, and indeed was written as such by Ms Burton in her preceding point in this same way. I felt, and still feel, that it would be irresponsible to attempt to discredit the currently accepted author citation without a lengthy, well-documented presentation and a follow-up petition to Index Kewensis and any other reference source for plant names to change the author citation. I didn't want to open up this particular can of worms in Stemma, and feel that it will only lead to a great deal of confusion over the identification of this plant. As long as we accept this citation (in order to avoid confusion), we must respect the author citation of Nathaniel Wallich and David Don.

I will admit that this was a judgement call on my part, and it may be that I should have chosen my words more carefully, to indicate that the accepted author citation is doubtful but generally accepted.

2-Ms. Burton states :

"Mr. Randal says, "the plant initially known as Hoya paxtonii, represented by herbarium sheet Wallich 8164B also is being looked at closely, as it may be a distinct species." I wonder where he comes up with such statements. No where has there been a single publication that even suggested such."

My source for this speculation is David Liddle, an Australian plantsman who has worked in Hoya taxonomy for over 20 years. He has been looking at this plant as possibly being a distinct species, and told me that I might attribute the thought to him. I was attempting to hint at the idea in the article, but did not want to commit more to the idea myself, as David Liddle has done the research and hard work, not I, and he will hopefully publish his findings at some point.

3- Ms. Burton states, referring to your editor and Hoya lanceolata:

"He said, "The publication was based on two herbarium sheets – Wallich 8164A from Nepalia (Nepal) and Wallich 8164B from Sylhet.

FACT: **NOT TRUE**. David Don's publication mentions only 1 (one) specimen, sans number and says it is from "Napalia **(sic)**." NO WHERE is there a publication citing the Sylhet specimen as being a type specimen of this species."

In point of fact, the text of David Don's publication in ***Prodromus Florae Nepalensis*** does not cite **any** herbarium sheet at all. It does say "Hab. in Nepalia. Wallich." which I take to mean "Habitat in Nepal. Wallich", and at a stretch one could interpret this to refer to the sheet from "Nepalia", but no sheet is mentioned by name. The two sheets mentioned above, Wallich 8164A & Wallich 8164B were both associated with the name "Hoya lanceolata" at this time, and a specific sheet was not mentioned until 1834, when Robert Wight described this species further in ***Contributions to the Botany of India***. Since I was referring specifically to the publication by David Don here, and not later works which cited the Wallich 8164A sheet as this species' type sheet, both sheets must be considered as possible sources for Don's description.

4- Ms. Burton takes exception to my use of several words in Stemma V1, #1. I won't go into all of them here, but I will explore one comment.

Ms. Burton states:

"On page 11. Mr. Randal says, "The corona segments of our H. lanceolata are narrowly terete,* while those of Hoya bella are cymbiforum **(sic)*** (boat-shaped)."

"Fact: All he has told you is that he doesn't know the meaning of the word "terete".

"No way could anyone correctly call the corona segments of Hoya lanceolata , terete, and be right. Definition of terete: "Circular in cross-section, used, for example, of a plant stem." This definition can be found on page 404 of the Concise Oxford Dictionary of Botany.

*The word Ms. Burton is referencing is actually "cymbiform".

This is a rather fine point. Ms. Burton is certainly correct regarding the definition of "terete", and it was my understanding that the corona lobes of H. lanceolata were indeed rather (but not perfectly) round. I have not examined the corona segments of ***Hoya lanceolata*** under magnification personally, and so can not vouch for the exact cross-sectional shape, but there are several precedents for the use of this term to describe the corona lobes of ***H. lanceolata***.

Here is an excerpt from Douglas Kent's 1981 paper ***Notes on HOYA in Cultivation (1):***

Table 1. Comparison of Hoya lanceolata and Hoya belle.

Feature	H. lanceolata	H. belle
Stems	Pendulous, flaccid, shortly puberulous.	Arching, flexuous, densely puberulous.
Leaves	Medium green, becoming purplish sickly yellow in strong Ovate-lanceolate or elongate-trapezoid, acuminate at apex rounded at base Lower halves of juvenile leaves reflexed Midrib often obscure. Nerves obscure, brown to purple. Nerves obscure, widely spaced, 3-4 pairs.	Dark green, becoming pinkish or in strong light. Very variable in shape lanceolate to rhomboid-lanceolate or elongate-trapezoid, acuminate at apex, narrowly rounded at base. Lower halves of juvenile leaves not reflexed. Midrib prominent, narrowly spaced, 6-7 pairs.
Cymes	3-7 (-10)-flowered	8-9 (-11)-flowered.
Corolla	Snow white, stellate, lobes variable in size, up to 6 mm long x 4 mm broad at base, acuminate at apex, flat or slightly incurved, obtuse at apex, flat or slightly reflexed, pubescent within.	Whitish, spreading, lobes, variable in size up to 7 mm long x 7 mm broad at base, pubescent within.
Corona-	Rose-red to amethyst-violet, segments terete (reminiscent of those of H. linearis).	Amethyst-violet, ovate to cymbiform.

Here Mr. Kent is presenting a chart delineating the differences between ***Hoya bella*** (Hook) D. H. Kent and ***Hoya lanceolata*** Wall. ex D. Don. The relevant portion is the description of the corona of ***Hoya lanceolata***. Note that Mr. Kent refers to the corona of ***H. lanceolata*** as being "terete". There is further precedence, as the word "terete" was also used to describe the corona lobes of ***H. lanceolata*** by J. D. Hooker in ***Flora of British India 4*** (1883), wherein he states that the corona segments of ***H. lanceolata*** are "terete, with a short flat area above".

However, other sources have agreed with Ms. Burton's comment that "terete" does not adequately describe these tiny structures. The term "canaliculate"* has some merit, as the coronal lobes of ***H. lanceolata*** have several grooves or canals running longitudinally along their length, but this does not properly describe the shape of the lobe in cross-section, as "terete" attempts to do. I will leave it to those with the equipment and technical expertise to assign a more precise description to the coronal lobes of ***H. lanceolata***.

Botanical terminology is important to the discussion of any taxon of plants, and Stemma will strive to be as correct in fact and usage as possible. Criticisms of Stemma's usage will be addressed as appropriate, and as space allows. Stemma does like to hear from its' readership, so please send any corrections or criticisms to **markroy68@yahoo.com**.

Source Materials

for In Cultivation - ***Hoya Passport Series***, Dale Kloppenburg, 2005; ***Museum Botanicum Lugduno-Batavum***, C. L. Blume, 1849-1851, ***Bijdragen Tot de Flora van nederlandsch Indie***, C. L. Blume, 1825; ***Rumphia*** V.4, C. L. Blume, 1848; ***The Hoyan*** V.4 pgs 63-66

for Department of Corrections - ***The Flora of British India*** V.4, J. D. Hooker, 1883; ***Prodromus Florae Nepalensis,*** David Don, 1825; ***Notes on HOYA in Cultivation (1)***, Douglas Kent, 1981; ***Contributions to the Botany of India***, R. Wight, 1834

Glossary

Author citation -in nomenclature, the citation following the species or taxon name consisting of the name(s) of the individual(s) who described a species or taxon or transfered it from one rank to another.

Canaliculate- channelled: excavated longitudinally, with a concave line or row of lines.

Corolla shoulders-the inner portion of the corolla (as seen from above when the flowers is pointed upwards), when the corolla is reflexed, so that the inner portion of the corolla is higher than its outer tip.

Corona-the central potion of a Hoya flower consisting of fused male and female reproductive organs (androecium and gynoecium).

Coronal- of or pertaining to the corona.

Internode- the section of stem between two leaf nodes.

Pinnate-the arrangement of veins or leaflets within a leaf so that secondary veins (or leaflets) all lead off of a main vein (or midrib) in more or less parallel rows. Similar to the structure of a feather.

Reflexed- bent sharply backwards or downwards

Rotate-wheel shaped. In a flower, the petals are rotate when they extend perpendicular to the axis of the flower. Neither reflexed (bent backwards) nor campanulate (bent forwards and cupped).

Specific epithet- the second part of a binomial species name, where the first part represents the genus and the second part the species.

Terete- round in cross-section or curled from the margins to form a cylinder.

Back Page: Hoya sp. IML 0831
(pictured on page 34)

Synonyms: **DMC-1622**.

Country of origin: Philippines.

Related/similar species: ***Hoya benquetensis*** Schltr., ***Hoya bordenii*** Schltr.

Flower color: corolla- pale orange/corona-red.

Flower size: corolla is 1.5 cm in diameter when fully open, before reflexing.

Flower form: reflexed.

Scent: little to none.

Leaf size: up to 4.5 cm wide, up to 15 cm in length.

Collector: David Cumming.

Temperature range: intermediate-13'Cto 35'C (55'F to 95'F)

Watering requirements: regular watering, never let dry out.

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Light requirements: part sun to very bright indirect.

Cultivation notes: "**sp. IML 0831** appears to be very resistant to mealies, fungi and other routine greenhouse pests. It grows well in various conditions...doesn't sulk when it doesn't have perfection. It blooms early and often. My plant outside blooms all year! It is very forgiving. I give it lots of water and keep the pot small. Temperatures down to the upper 50s (F) don't seem to phase it in the least." - Carol Noel