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FRATERNA

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H. mindorensis Schlechter

INTERNATIONAL HOYA ASSOCIATION

(Formerly Hoya Society-West Coast)

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A Non-Profit Organization
Bulletin published quarterly.

1993 rates for a 1 year membership, which includes our quarterly publication are \$14.00 per year, \$15.00 per year Canada & Mexico, Overseas \$17.00. All publications shipped overseas beginning 1st quarter 1994 will be mailed via surface mail.

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Back Issues

We now have the thirteen original issues of the Hoya Society -West Coast newsletter bound as one publication. The price of this bound text is \$25.00 U.S. and \$35.00 shipped surface overseas. Due to the extra pages and pictures in our new publication "Fraterna", we must, out of necessity, increase our prices for back issues of "Fraterna" to \$4.00 per issue, \$5.00 per issue shipped surface mail overseas.

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EDITORIAL POLICY

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.

Catalogue Requests

The IHA office does not have dealer catalogs available. Please address your catalog requests to the individual dealers, or write to our vice president, John Scoville who will have a listing of mail order dealers available by January 1, 1994. Please send a self addressed, stamped envelope. John's address is 651 Aram Ave., San Jose, Calif. 95128. In some instances there is a charge for these catalogs which is normally refunded with your first order.



Dale Kloppenburg at the podium

OKTOBERFEST

Celebrated by San Diego Hoya Group September Meeting

How to winterize your hoyas was the main topic of the day. A 40-minute group discussion on how to get your hoyas ready for winter was led by substitute moderator Dale Kloppenburg. Ideas like putting on top dressing in your pot, and circling hoyo branches around the top of the pot (to maintain warmth), to plasticizing your growing area, or the use of automatic propane heaters was suggested. One member suggested assembling the most cold-sensitive varieties in the center of your collection to take advantage of the most warmth available.

Lively German music abounded, with German bratwurst sausage, sauerkraut and pretzels (all provided by the club) served by club members wearing authentic liederhosen! 30 feet of table space was needed for the over abundance of food brought by the

members...including a giant German chocolate cake!

66 people attended the meeting (5 new members signing up)...with everyone having a marvelous time. John Scoville gave a report on the happenings of the recent I.H.A. Board of Director's meeting held in Oregon in September. Dale Kloppenburg spent some time autographing his new book "THE HOYA HANDBOOK", and discussed two new publications that he has just completed: "HOYA SECTIONS: A COMPLETE STUDY (w/modifications and additions)", and "Dr. SCHLECHTER'S HOYA SPECIES".

Food themes for 1994 were discussed, with suggestions by members consisting of: cold cuts/salads/desserts to go along with the hoyo auction at the March 6, 1994 meeting; Picnic Theme: bring-your-own steak or fish fry; or: another Mexican Fiesta Theme.

Subjects discussed for future hoyo meetings were: "Why won't my hoyas bloom"; "What are the top 10 easiest-to-grow and bloom hoyas...and why"; and: "Pick a country and talk about the hoyas that come from that area".

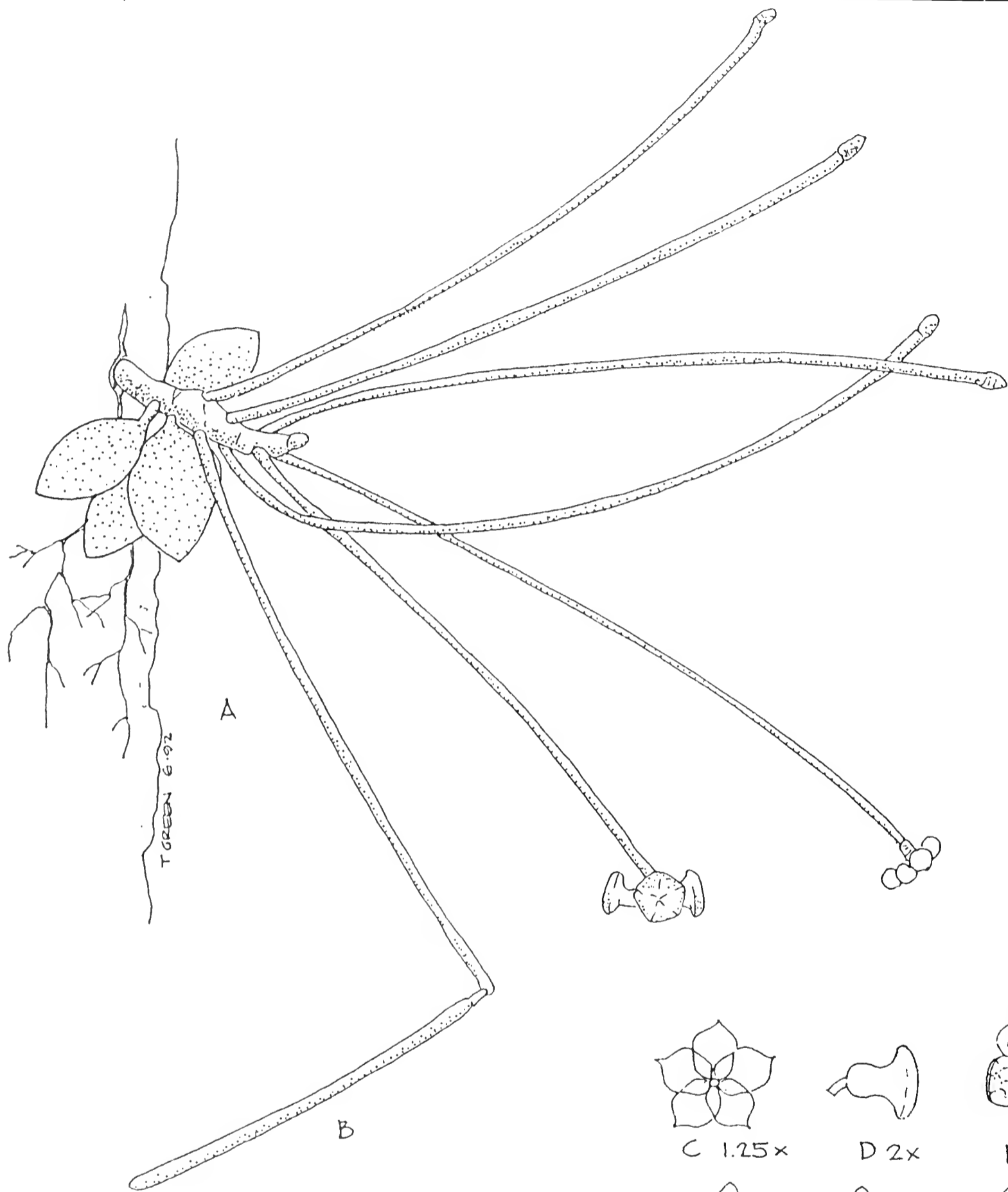
The meeting ended with a raffle consisting of over 250 hoyo cuttings. Anyone wishing to know more about the meeting times for the San Diego Hoya Group for 1994, contact Chuck Everson, 1444 E. Taylor St., Vista, Calif. 92084. Telephone: (619) 758-4290.

Chuck Everson

All Are Invited

Photo sponsored by San Diego
Hoya Group

Photographer unknown



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A

B

C 1.25x

D 2x

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ABSOLMSIA SPARTIODES (Benth) O. Kuntz

A BROOM: *Absolmsia spartiodes* Kuntze

A Hoya Near Relative

Spartiodes, from Greek, means "broom-like". One look at the plant, with its persistent, long, green peduncles, and you know why Kuntze named it so. The long, bunching, peduncles reminded him of a broom.

While collecting hoyas and dischidias in September of 1991 in Sabah, Eastern Malaysia, a very weird and interesting asclepiad was pointed out to me by Anthea Lamb, my hostess and outstanding local botanist. We were collecting in an area that was quite dry and open with low trees, bushes and grass.

Growing upon the trunks of small, 15 ft. trees, looking very much like a parasite and reminding me of a Japanese painting of Go-matsu (the Japanese 5 Needle Pine), were the plants of *Absolmsia spartiodes*. The most obvious parts of the plants were the long, green, persistent peduncles coming from the grayish stems. There were very few leaves and, what few there were, were close to the trunk of the host tree and looked much like those of a dischidia. It was obvious that the green peduncles were taking the place of leaves. The major roots were not on the surface of the host tree and it led me to think that the plants were parasites, with haustoria inside the tree. After hacking open one of the tree trunks, I found that the major root system, along with 3 zillion, black, biting ants, were within the rotted out center of the 3 to 4 inch in diameter trunks. This ant relationship is typical of many dischidias and a few hoyas and was to be expected.

I did not see the flowers, except in a photo taken by Anthea Lamb, but there were many buds, in multiples of 3, either 3 or 6, at the ends of the narrow, 8 inch peduncles. The flowers are 1/2 inch in diameter, flat and orange-yellow and of heavy substance. The seed pods look like a much smaller



version of the peduncle. The flower could easily be mistaken for a Hoya except the pollinaria are different.

In keeping with my usual practice, I collected only 3 small plants...2 bare rooted and 1 attached to a 3 inch chunk of the host tree (thinking it was probably a parasite). I planted the 3 in New Zealand sphagnum moss (the type used in orchid culture), in 3 inch clay pots. Within the first 3 months, it became apparent that this was not an obligate parasite for all 3 started to grow producing new growth to the stems and throwing additional peduncles...but no buds. Through an error on my part, I lost the 2 smallest, bare rooted ones but the largest plant, with the host material and better roots, has continued to grow producing branching stems, additional peduncles (up to 10" long), and a few leaves. The leaves dropped after a month or so but the peduncles persisted. Still, no flowers.

Culture: I keep my plant, with the original wood wedged into a 3 inch clay pot with N.Z. sphagnum moss, in half shade. I fertilize with MagAmp and soluble fertilizer which is applied about twice a week when I water the orchids, hoyas and other plants.

On my trip to Sabah in January of this year (1993), I brought back another plant, without host wood and with very few roots, but it failed to make it. Being so touchy, I am afraid to try making cuttings of my one good specimen. Maybe next year!

Absolmsia spartiodes is definitely a weird, broom-like asclepiad and a true collector's item, one that I doubt will ever be widely grown, unless I am successful in cloning it in the lab. Even then, it will be another conversation piece.

Ted Green

Green: Plant Research
Kaaawa, Hawaii

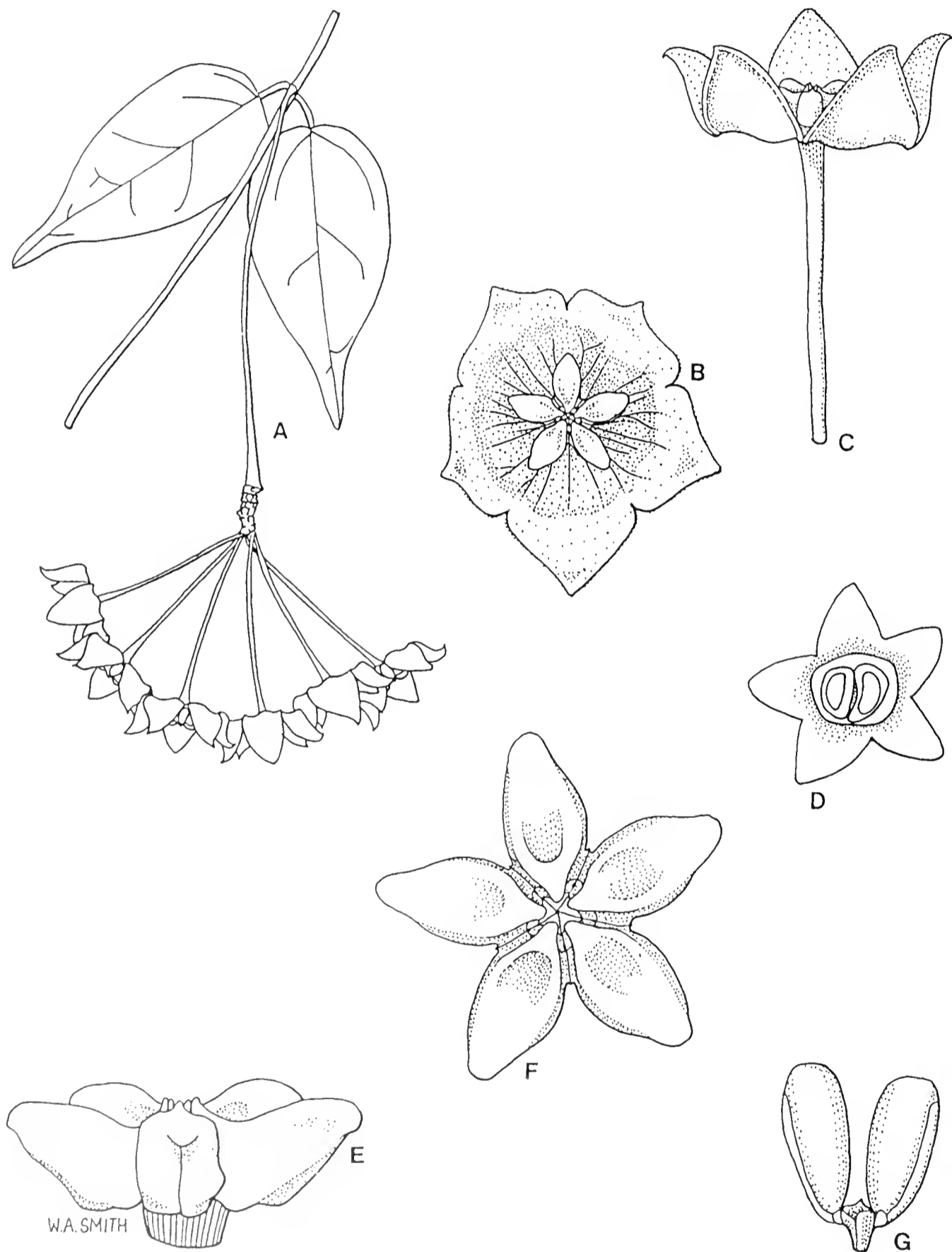


Fig. 1. *Hoya dennisii*: A. habit of flowering stem $\times 0.8$. B. face view of flower $\times 2$. C. side view of flower $\times 2$. D. face view of calyx and ovaries with corolla removed $\times 8$. E. side view of staminal corona $\times 6$. F. face view of staminal corona and column $\times 6$. G. pollinarium $\times 40$. A, Whitmore R.S.S. 6073; B-G, Forster 8714 & Liddle. Del. W. Smith.

Taxonomic studies on the genus *Hoya* R. Br. (Asclepiadaceae: Marsdenieae) in Papuasia, 6¹

Paul I. Forster and David J. Liddle

Summary

Forster, Paul I. & Liddle, David J. (1993). Taxonomic studies on the genus *Hoya* R. Br. (Asclepiadaceae: Marsdenieae) in Papuasia, 6. *Austrobaileya* 4 (1): 51-55. Two new species of *Hoya* from Papuasia (Irian Jaya, Papua New Guinea, Solomon Islands) are described, namely *Hoya dennisii* and *H. flavida*. Both are in cultivation, and the latter is widely known as *H. sp.* 'Mt Gallego'.

Keywords: Asclepiadaceae, *Hoya*-Papuasia, *Hoya dennisii*, *Hoya flavida*.

Paul I. Forster, Queensland Herbarium, Meiers Road, Indooroopilly, Qld 4068, Australia

David J. Liddle, P.O. Box 794, Mareeba, Qld 4068, Australia

Introduction

In this paper we continue our long-term taxonomic studies on the genus *Hoya* R. Br. in Papuasia (Forster & Liddle 1991, 1992). Terminology and format is consistent with the former papers. Two new species, namely *H. dennisii* and *H. flavida*, are described, ahead of accounts of the species groups in which they occur. Both these species are in cultivation and require names for identification and distribution of live material. *H. flavida* is widely known as *H. sp.* 'Mt Gallego'.

Taxonomy

Hoya dennisii P.I. Forster et D.J. Liddle, **sp. nov.** affinis *H. chloranthae* Rech. a qua venis secundariis laminae folii 3 vel 4 vix manifestis, floribus minoribus (16-17 mm in diametro), lobis corollae longioribus (circa 7 mm longis), et lobis coronae staminalis majoribus margine exteriori corollam excedentibus et apice labio obtuso producto differt. **Typus:** Solomon Islands, Guadalcanal Province: Kwalo Range, Mt Gallego, eastern ridge, 7 July 1965, T.C. Whitmore R.S.S. 6073 (holo: L!; iso: A!, BSIP!, K!, LAE!).

¹ Christensen Research Institute
Contribution No. 83.

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1992

Epiphytic coriaceous liane to several metres; latex white. Stems cylindrical, wiry, with sparse trichomes, becoming glabrous with age; internodes up to 100 mm long and 1 mm diameter. Leaves petiolate; lamina lanceolate-ovate, coriaceous, up to 72 mm long and 30 mm wide,

discolorous, glabrous, venation obscure; upper surface dark green; lower surface pale green; tip acuminate; base rounded to cordate; petiole 5-7 mm long and c. 0.8 mm diameter, with scattered trichomes; colleters 2, at lamina base. Cyme racemiform, up to 100 mm long; peduncle up to 85 mm long and 0.5 mm diameter, glabrous or with scattered trichomes; bracts ovate, 0.5-0.6 mm long, 0.4-0.5 mm wide, glabrous. Flowers 2-3 mm long, 16-17 mm diameter; pedicels 30-35 mm long, c. 0.6 mm diameter, glabrous. Sepals lanceolate, c. 1.2 mm long and 0.6 mm wide, glabrous. Corolla flattened-campanulate, crimson-pink, externally glabrous, internally with short dense white trichomes; tube c. 5 mm long and 10 mm diameter; lobes triangular, c. 7 mm long and 7 mm wide. Staminal corona purple, c. 1.8 mm long and 4.5 mm diameter, inserted on column \pm flush with corolla; lobes c. 3.2 mm long, 1.8 mm wide and 1.8 mm high, outer edge rounded and somewhat drawn out into a lip not higher than the style-head, inner edge acute. Staminal column c. 2 mm long and 2.5 mm diameter; anther appendages lanceolate, c. 0.8 mm long and 0.5 mm wide; alar fissure 1.0-1.1 mm long. Style-head depressed-globose, c. 0.8 mm diameter. Pollinaria c. 0.55 mm long and 0.46 mm wide; pollinia oblong, c. 0.46 mm long and 0.18 mm wide, with pellucid germination mouth on outer edge; corpusculum oblong-ovate, c. 0.14 mm long and 0.09 mm wide; caudicles unwinged, c. 0.09 mm long and 0.03 mm wide. Fruit and seed not seen. Fig. 1.

Specimens examined: Solomon Islands. Guadalcanal Province: near Gold Ridge Village, 935'S, 16007'E, Jun 1991, Forster 8714 & Liddle (BRI); Summit Mt Gallego, NW Guadalcanal, Sep 1966, Dennis BSIP4630 (BSIP); Popomanasiu, Oct 1965, Corner 156 (K).

Distribution and habitat: *H. dennisii* has been collected only on Guadalcanal where it grows in montane and submontane situations from 650 to 1200 m altitude, usually as an epiphyte in bryophyte mats in rainforest.

Notes: *H. dennisii* belongs to a group of small, wiry stemmed, coriaceous to herbaceous leaved Hoyas that occur in upper montane areas in Papuasia and Melanesia. The group includes *H. venusta* Schltr. in New Guinea and *H. chlorantha* Rech. in Samoa. *H. dennisii* is probably most closely related to *H. chlorantha* but differs from that species in the just visible 3 or 4 secondary veins in the leaf lamina, the smaller flowers 16-17 mm in diameter with longer corolla lobes c. 7 mm long and the larger staminal corona lobes in which the outer edge is raised above the corolla and drawn out into a blunt lip.

Entomology: It gives us much pleasure to name this new species for Geoff Dennis of Honiara, Guadalcanal, former Government Botanist and long-time resident in the Solomon Islands, a plantsman of high repute with a garden of tropical delights. Geoff has been responsible for introducing many of the Hoyas from the Solomon Islands into general cultivation.

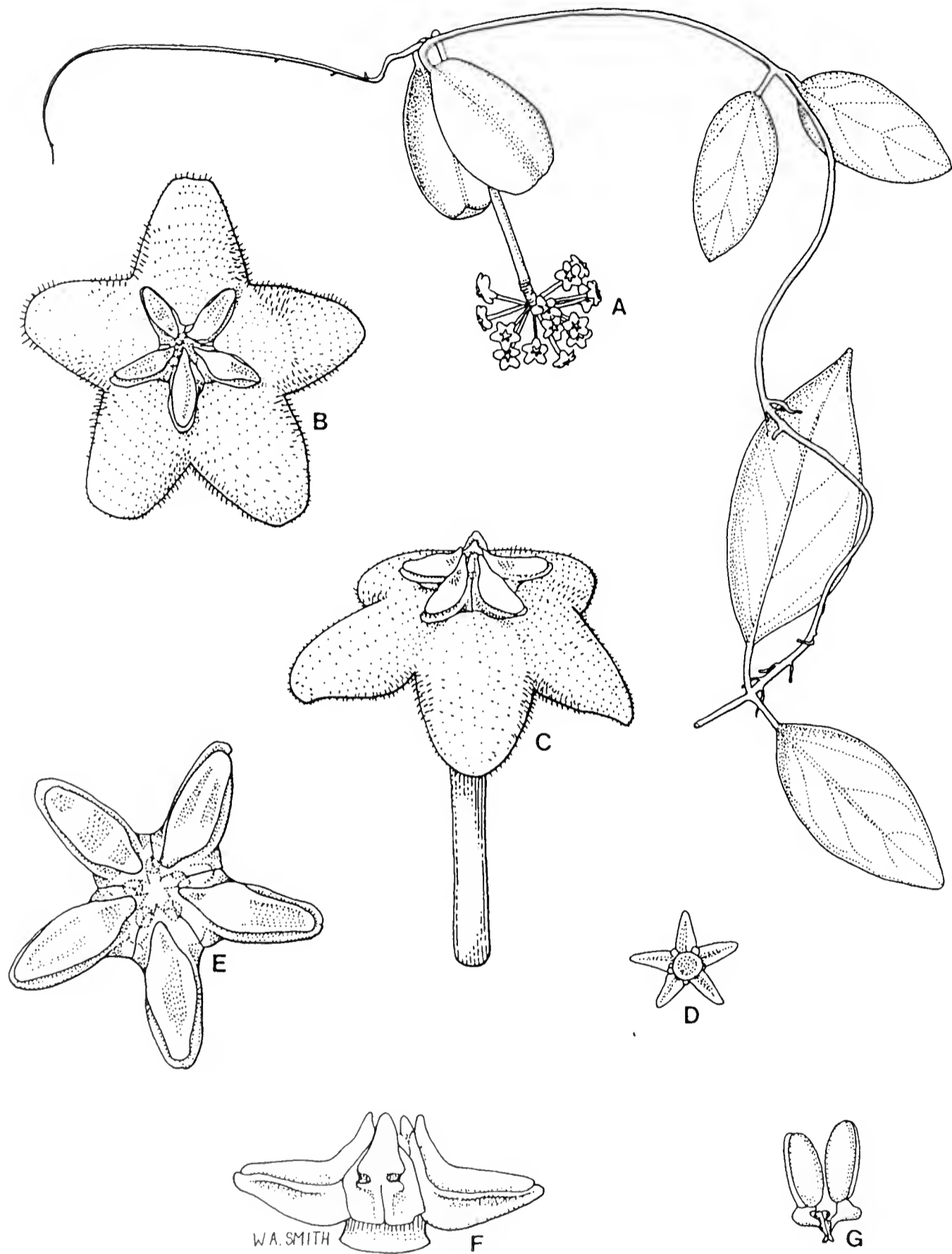


Fig. 2. *Hoya flavida*: A. habit of flowering stem $\times 0.5$. B. face view of flower $\times 4$. C. side view of flower $\times 4$. D. calyx $\times 4$. E. face view of staminal corona and column $\times 8$. F. side view of staminal corona and column $\times 8$. G. pollinarium $\times 40$. All from Liddle IML118. Del. W. Smith.

Hoyaflavida P.I. Forster et D.J. Liddle, **sp. nov.** affinis *H. anulatae* Schltr. a qua foliis succulentioribus, corolla campanulatirotata lutea vel flavida lobis ovatis, et lobis coronae staminalis margine exteriore rotundato differt. **Typus:** cultivated at Emerald Creek near Mareeba (ex plant collected on Mt Gallego, Guadalcanal Province, Solomon Islands), 24 February 1992, *D.J. Liddle* IML 118 (holo: BRI (1 sheet + spirit)).

Epiphytic fleshy vine to several metres long, latex white. Stems cylindrical, glabrous; internodes up to 120 mm long and 2.5 mm diameter. Leaves glabrous, petiolate; lamina elliptic-ovate, up to 140 mm long and 45 mm wide, discolorous, secondary veins 4 per side of midrib just visible on both surfaces, tertiary venation obscure; upper surface dark green; lower surface pale green; tip acute to short acuminate; base cuneate; petiole grooved along top, 10-12 mm long and c. 1.5 mm diameter, colleters 2, at lamina base. Cyme umbelliform to racemiform, up to 140 mm long; peduncle up to 135 mm long and 1.5 mm diameter, glabrous; bracts ovate, 0.3-0.4 mm long, 0.3-0.4 mm wide. Flowers 3-4 mm long, 10-15 mm diameter; pedicels 15-22 mm long, c. 1 mm diameter, glabrous. Sepals lanceolate, 1.2-1.4 mm long, 0.5-0.6 mm wide, glabrous. Corolla campanulate-rotate, yellow to yellow-pink, externally glabrous, internally with dense short white trichomes that are uniformly distributed except for on the lobe edges where slightly denser but not forming a conspicuous band; tube 3-4 mm long, 7-8 mm diameter, lobes ovate, 5-5.5 x long, 4.5-5 mm wide. Staminal corona 2.8-3 mm long, 5.5-5.8 mm diameter, inserted on column \pm flush with corolla, yellow-pink; each lobe c. 2.5 mm long, 2.5-2.8 mm high, 1.3-1.5 mm wide, outer edge somewhat rounded-obtuse and not upraised above the level of the style-head, inner edge acute. Staminal column c. 2 mm long and 2.5 mm diameter; anther appendages lanceolate, c. 0.8 mm long and 0.5 mm wide; alar fissure c. 1 mm long. Style-head c. 1 mm diameter. Pollinaria c. 0.32-0.36 mm long, 0.27-0.32 mm wide; pollinia oblong, 0.29-0.33 mm long, 0.12-0.13 mm wide, with pellucid germination mouth on outer edge; corpusculum oblong, 0.09-0.11 mm long, 0.05-0.06 mm wide; caudicles winged, c. 0.09 mm long and 0.05 mm wide. Fruit and seed not seen. **Fig. 2.**

Specimens examined: Papua New Guinea. Bougainville Province: South slopes of Crown Prince Range, Apr 1936, *Voyce* D2 (K). Cultivated. cultivated at Emerald Creek near Mareeba (ex plant collected on Mt Gallego, Guadalcanal Province, Solomon Islands), Feb 1992, *Liddle* IML 423 (BRI).

Distribution and habitat: Known only from Bougainville and Guadalcanal Islands in the Solomon

Islands chain. Plants occur as epiphytes in lowland rainforest. In addition to the plants in cultivation from Mt Gallego, we have also collected plants from the Lungga River area on Guadalcanal that are probably referable to this species; however, they have yet to flower for us to be sure.

Notes: *H. flavida* is a free flowering plant that is now reasonably well spread in cultivation as *H. sp.* 'Mt Gallego'. It is probably allied to *H. anulata* Schltr. from mainland New Guinea and Australia (Forster & Liddle 1990, 1992) but differs from that species in the more succulent leaves, the yellow or yellowish campanulate rotate corolla with ovate lobes; and the staminal corona lobes with rounded outer edges.

Etymology: The specific epithet alludes to the *yellowish* corollas.

Acknowledgements

Figures 1 and 2 were drawn by W. Smith (BRI). Our visit to Papua New Guinea, enabling a visit to the LAE herbarium, was made possible by the award of a Christensen Research Institute Fellowship and we are grateful to M. Jebb, Director of that institute for his support. G. Stocker was of great assistance with our visit to Lae. L.A. Craven (CANB) kindly provided latin translations of the diagnoses. Plants or information on localities were supplied by G. Dennis, B. Ghen and the late P. Tsang. The Directors/Curators of A, B, BM, BO, BSIP, CANB, K, L, LAE, MICH, SING, NY, W and WRSL allowed access to collections in their care, either on loan or on visits to their institutions.

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- (1991). Variation in *Hoya australis* R. Br. ex Traill (Asclepiadaceae). *Austrobaileya* 3: 503-521.
- (1992). Taxonomic studies on the genus *Hoya* R. Br. (Asclepiadaceae) in Papuasias, 1-5. *Austrobaileya* 3: 627-641.

Text and drawings for *H. dennisii* and *H. flavida* reproduced from *Austrobaileya* with permission from: Austrbaileya and the authors.

Our Cover Photo

Featured on the cover of this issue is the very beautiful *H. mindorensis* Schlechter.

This species was acquired in 1991 from a large collection of cuttings that were received from the Philippines.

The collection consisted of many different clones that were thought to be *H. incrassata*. All of the cuttings rooted and quickly grew into strong blooming size plants. Except for a very small difference in the size, shape and thickness of the leaves, all of these plants had the same general appearance when young and appeared to be the same species. The first four to bloom were indeed *incrassata*...no surprises here! The fifth clone to form buds was noticeably different, but never-the-less could still pass for *incrassata*. The small, golf-ball sized umbels were tightly packed together with bright reddish orange stars on each unopened bud. On the morning that these buds opened, the flowers could be clearly seen from 30 feet away. The corolla has a pale orange tinge, but with very long, silky white hairs completely covering the petals. The corona stands quite tall, and is brownish orange and extremely waxy. The tops of the corona scales have narrow, very sharp ridges which are bright burnt orange in color. There were 33 flowers in the umbel in this photo, and the flowers lasted in perfect condition for approximately 1 week. There was 18 umbels of flowers on this plant at its first blooming, and they continued to open their buds through most of the summer, with an all around blooming period of about two and a half months.

These flowers have been meticulously examined through a microscope, and there is

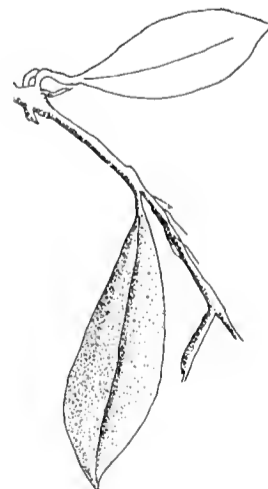
no mistake...this species is unquestionably *H. mindorensis* Schlechter. There are six more clones from this collection to bloom...I'm hoping for a few more surprises.

There is another plant in cultivation labeled *H. mindorensis* from another source whose leaves are shaped a little bit different and is described as having red flowers. I have not seen this plant bloom yet, but it is not an unusual trait in the *hoya* genus to have leaves that are a bit different, especially when grown in greenhouse conditions, nor is flower color a very good guide line to go by. The only sure way to pin down an absolute identification is to match up the reproductive parts of the flowers. Hopefully the wait to see flowers on this second plant of *H. mindorensis* won't be too long. When it does bloom, I will have my camera ready.

This is an easy plant to grow, and blooms at a young age (about 18 months from a cutting). I cannot detect any fragrance from these flowers, but it's possible that they only have a scent late at night or in the very early morning hours, as do many other *hoyas*.

This photo was sponsored by various donations not designated for a particular use.

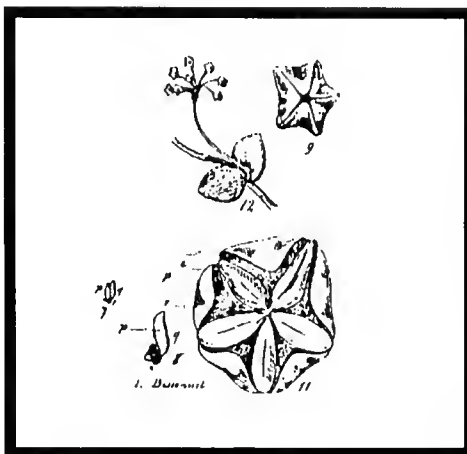
Photo and article by Ann Wayman



H. nummularioides Costantine

For those of us that have grown this pretty little hoya for a long period of time, and purchased it with the label of *H. pubera*, the shock of having to change the name to *H. nummularioides* a few years back was quite traumatic. I know people who resisted the change and still insist on calling it *H. Pubera*. Outside of the fact that the name *pubera* just seemed to fit these dainty little felt-like leaves, all the letters in the name *H. nummularioides* don't hardly fit on any label. Well, so much for that! *H. nummularioides* it became.

Except for the flower, This is a totally different looking hoya than any others we know. The foliage doesn't cascade, it doesn't drape gracefully over the side of its pot, it doesn't dangle and it doesn't twine. Instead, it grows straight up for a very short distance (4 to 6 inches) then starts putting on many densely leaved branches that grow straight out. In time the sheer weight of the numerous, heavily felted, close-set leaves will drag these branches down, but the new growth will still try to grow upwards. The one characteristic that was noted in *Flore Generale Indo-China* (see drawing) that seemed to be missing in the flowers that I examined was the corolla lobes that were supposedly "pointed strongly inward". Even though I finally caught flowers in the act of trying to look identical to the drawing, they only do this after they



have been separated from the plant for several hours. Even then, they do not point strongly inward...instead they fold in the process of trying to close. At this point the corona is still too turgid (stiff) to allow the flower to close, so the corolla petals can only fold as far as the tip of the corona scales. They often stay in this position for several days until enough moisture is lost to allow them to close. It's hard to believe that this is what Costantine had in mind in his written description, but

the drawing in *Flore Generale* would seem to suggest that this is what was meant. Since practically every other characteristic matches the description, I will presume as others have that this is truly *H. nummularioides*.

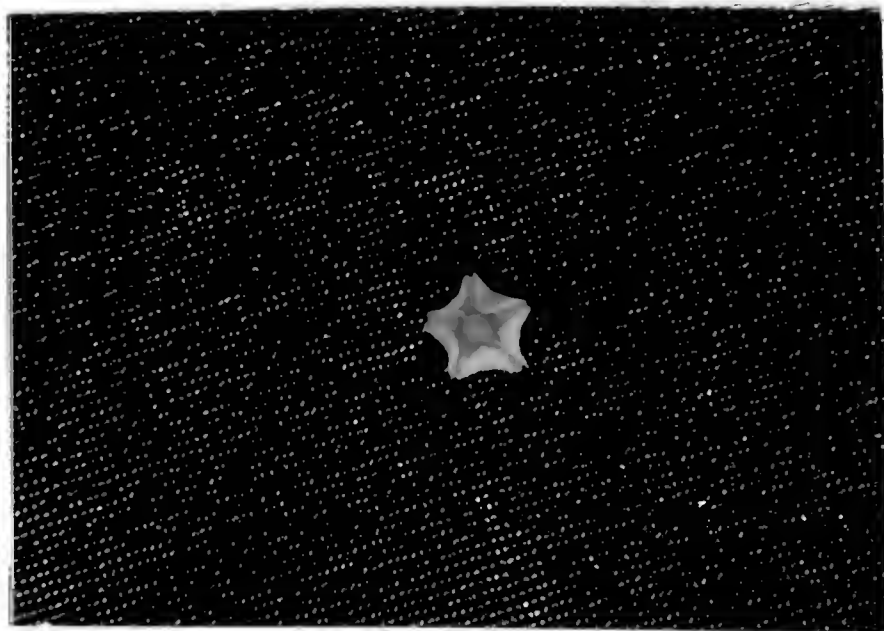
This is a once a year bloomer, blooming only in the fall. However the rewards are many as it will bloom for one to two months from almost every single node. This species is well adapted to drier conditions than most hoyas and loves early morning sun as long as it is not exposed to the hot afternoon sun. Keep this species moist while it is putting on buds and blooming. The rest of the time it can be kept a little drier. I like to add some washed sand to my potting mix for this one to insure excellent drainage.

Article and photos by Ann Wayman

H. nummularioides



Folded corolla



Photo's sponsored by:
Rainbow Gardens Bookshop & Nursery
1444 E. Taylor St., Vista, CA 92084

Questions & Answers

Question: I have a plant labeled *H. chlorantha*, but it does not have the same flower as the one in your picture set # 12. Do I have the wrong plant or do you? J.B.

Answer: Without seeing a flower from your plant I couldn't say whether you have *H. chlorantha* or not. The species *H. chlorantha* has a lovely yellow green flower. The photo in our picture set is also *H. chlorantha* but a variety that had enough difference to warrant a varietal status and was published as *H. chlorantha* variety *Tutuilensis*. Both of these plants have identical foliage and the flowers are very similar with the exception that the variety *tutuilensis* is pinkish mauve in color with darker pink marbling on each petal. I'm sure there are other more obvious differences, otherwise it would have merely been considered a different colored clone instead of a variety in its own right.

Question: You have two different hoyas in your picture sets called *H. diptera*. The flowers look similar but one is yellow with a red center, the other is plain yellow with no red center. Do you have the wrong label on your plants or is the photo mislabeled? J.B.

Answer: Neither...they are both *H. diptera*. Actually I have three different hoyo plants labeled *H. diptera*. Two are absolutely identical except for the coloring of the corona scales. One has very dark red on the outer portion of the corona scales, the other has corona scales that are practically colorless. These are the two photos that are in our picture sets. Please be aware that these small differences in color do not comprise a different species, nor should any characteristic as unstable as flower color be used to identify plants. The third plant that I have labeled *H. diptera* was sent to me by a friend who collected his plant on the island of Fiji, and in the same general area as the others came from. It is slightly different in the flower and distinctly different in its foliage. This difference is however only visible on the surface. Under a microscope the reproductive parts of the flowers are indistinguishable from the other two.

Question: For the past year or so I have been putting my potato peelings, egg shells, and vegetable scraps into the pots with my hoyas. I thought it would be good to give them some added nutrients and help to produce strong healthy plants. All of my plants have been going down-hill for quite some time and look sick enough to die. Could this possibly be a reaction from too much of a good thing? W.W.

Answer: I've heard of mixing vegetable scraps, egg shells, coffee grounds etc. into a bin (even a hole in the ground) with soil, manure etc. and letting them ripen and

rot until the entire concoction turns into a beautiful composted mixture called humus. A certain amount of this humus after being sterilized (or rather pasteurized), makes a wonderful addition to any potting mixture. I have never...until now, heard of anyone putting garbage into the pots with their plants. If this letter is on the level and sincere, I can certainly think of at least a dozen reasons why your plants are "sick enough to die". First, I would imagine that the odor alone from rotting vegetable matter would attract every unwanted fly in the neighborhood and flies lay eggs in the soil that produce grubs called maggots. These maggots can uproot a very large plant in very little time simply by burrowing around in the soil. I'm sure there would be fruit flies buzzing around everywhere that would also lay eggs in your pots, not to mention the ants that would invade and make nests in your pots. On top of the bug problem, there would probably also be bacteria, molds and fungus present that feed on rotting material. It's true that a very strong healthy plant can fight off many fungal and bacterial infections, but plants that have been constantly weakened from having their roots disturbed by burrowing grubs and insects don't stand a chance of surviving for very long under these conditions. Please do yourself and your plants a favor by switching to a good packaged plant food and deposit your garbage in a garbage can where it belongs.

Question: Can you suggest a cure for mealy bugs, I've tried everything!

Answer: I can suggest a control for mealy bugs...there doesn't seem to be a cure for them. You will need to keep ahead of them with regular spraying. This means spraying every seven to ten days with whatever you are using. If you have just a few plants (under 15), this isn't hard to do, and alcohol sprayed on with a sprayer (not dabbed on with a cotton ball or Q-Tip) or even plain soap and water will serve the purpose. If you have acquired many as most of us "plant nuts" do, you will need to take more drastic action, maybe even resort to using a pesticide. I don't however advise any hobby grower to use a pesticide until all other means have been tried. There are dozens of ingredients in the average home that can serve as a deterrent to chewing or sucking insects. Several hoyo growers are experimenting with a solution made from red hot peppers, others are trying onion and garlic spray, still others are having a certain amount of success with a solution made from light cooking oils. The ideal solution would be to find a plant that mealy bugs absolutely detest and grind up a very thin chowder to spray on our plants.

Ann Wayman

Translated from 'Die Sukkulente' - 1892

By Theodor Rumpler

HOYA

Page 239

2. Kind-Hoya Linn. Waxflower

The small cup has five partitions with egg-shaped lancet-like divisions. The crown is fleshy, wheel-shaped, five-fold split and has a valve-shaped position of the buds. The five scales of the crown are fleshy, grown onto the pollen leaf tube and standing out star-shaped, thick, grooved-above, and often provided with a protruding extension, finger-shaped, which comes out of an upper recess. The filaments form a short tube; the sacks lean over the scar and come together ending in an upright inward-curved skin. The lines of pollen are upright and single in each partition. The fruits are pointed and smooth.

The waxflower plants are creeping shrubs or with their roots attached to trunks with fleshy or leathery leaves. The umbellar-shaped flower clusters are found in the axis of a pair of leaves.

This class or family contains 50 to 60 varieties which grow in the eastern part of Asia, particularly in the Malayan Archipelago; also in tropical and sub-tropical Asia.

Key for the different varieties

A. Leaves without lateral sinews.

a) Leaves not more than 3 cm (2 1/4 in.) in length; of the consistency of boxwood leaves. Crown of flowers white, crown amethyst colored. 1. *H. bella* Hook. fil.

b) Leaves not less than 8 cm (3 in.) in length, thick and fleshy.

a) Leaves the length of a finger; flower crown whitish or tending toward reddish. Crown reddish. 2. *H. carnosa* Rob. Brown.

b) Leaves length of a span (spannenlang); crown of flower dark-brown, crown white. 3. *H. imperialis* Lindl.

B. Leaves clearly of 3 nerves or sinews; flower crown greenish-yellow; crown, purple red. 4. *H. cinnamomifolia* Hook, fil.

The name originated from the English culturist Thomas Hoy.

1. **Hoya bella Hook. fil. Dainty waxflower.** It is one of the neatest varieties even though not pertaining to the winding plants, but rather suited for hanging baskets because of its hanging twigs. Leaves very numerous of the size of myrtle leaves with a consistency less fleshy, more like that of boxwood leaves. Flowers white with a dark purple crown resembling such as it was well pointed out by "Botanical Magazine", an amethyst in a silver setting.

Imported from interior India by Lobb and flowering first in 1848 with Veitch and Sons in Exeter (England). *H. bella* budded on *H. carnosa* develops a strong growth and flowers much more profusely than when grown on sticks. Seedlings easily die of root rot if not treated very carefully during spraying.

2. **Hoya carnosa R. Brown Fleshy Waxflower.**

The cylindrical stem, felty during youth, reaches a height of from 50-70 cm (20-28 in.); leaves egg-shaped, pointed, very heavily fleshy, bald and bright green. Blossoms pale carmine red, crown velvety felty. The blossoms have an exquisite aroma. From the crown drips a white sweet honey sought after by an army of insects native to the island of Hongkong and the nearby part of China proper. One of the very favorite indoor plants. It flowers easily from May until autumn. (Fig. 133)

ILLUSTRATION Fig. 133 *Hoya carnosa* R. Br. Fleshy Waxflower.

In succulent collections one finds under the name of *Hoya variegata* de Vr. two very beautiful forms of rich variegated colors. One which bears the name, *H. picta argentea* has wide, white leaves, while the other (*H. picta aurea*) has a narrow yellowish sometimes reddish border. Both very likely belong to *H. carnosa*. These as well as the *picta* varieties are planted in light ground mixed with sand; kept indoors or in the greenhouse at from plus 8 to 15 degrees R. (50 to 60 degrees fahrenheit) during winter with little watering, particularly during winter. During summer they prefer shade and much air. They look best on a circular-shaped trellis. They are easily multiplied in a manure hotbed.

Fig. 134 *Hoya cinnamomifolia* Hook. Cinnamon leaved Waxflower.

3. *Hoya imperialis* Lindl. Imperial Waxflower.

The long, ramified cylindrical shoots are felty during youth. The leaves grow beyond a span; they are of an oblong lancet shape, pointed abruptly, fleshy, and with a short stem. The long-stemmed loose umbel consists of 8-10 blossoms, whose crown is dark brown, while the wax-like crown is white.

It grows in Borneo and Java and was discovered on the former by Low, flowering for the first time in 1848 with Lucombe, Pince and Co. of Exeter. Lindley considers it the most beautiful of all climbing plants.

4. *Hoya cinnamomifolia* Hook. Cinnamon leaf Waxflower.

Stem long, ramified, winding. Leaves opposite each other, fleshy, at the same time leathery, big, egg-shaped, pointed at the edge, bent back on short very thick stems; - on somewhat longer stems and congested to a dense, half-ball shaped umbel. There are numerous blossoms with pale green-yellow crown and purple-red crown. (Fig. 134, page 241)

Indigenous to Java, brought to England by Lobb, bloomed first in 1847 with Veitch and Sons. While the first two varieties are excellently adapted to home indoor culture, the latter two require a hothouse or better, orchid conditions where they are under an average temperature of from 18 to 20 degrees R. (70-80 degrees fahrenheit), at night somewhat lower. They are kept in the ground or in wide pots with a mixture of clay, peat, and leafmold and sand in equal parts mixed with lumps of charcoal. The shoots are trained below the windows; however, protected against the burning sun and should never be disturbed in their position or location, if one does not want to experience seeing the buds drop. The old flower stems should not be cut. *Hoya imperialis* flowers only at a mature age.

Careful cultivation of the waxflower brings much enjoyment. The reason why it is found less in nurseries and flower shops now than 20 or 30 years ago seems to be because of the domination of the tyrant, fashion.

Editors Note: This very old translation from *Die Sukkulanten* was sent to one of our members who passed it on to me. I find this old language entertaining as well as fascinating. Even though I feel that some of the original text must have been mistranslated, I thought it might be fun to reprint it in its entirety exactly the way it was written 101 years ago.

A.W.



H. dennisii Forster & Liddle

What a wonderful surprise to learn that one of the prettiest hoyas to appear on the scene in a long time is a brand new, never before discovered species.

I received this plant from Rainforest Plantes et Fleurs in 1990 labeled merely H. sp. Gold Ridge # 3. It was a lovely and delicate little twining plant with exceptionally pretty leaves. As a rule plants that have very thin stems and leaves tend to take forever to get established and grow. This one however didn't seem to suffer any setback from being shipped and grew happy and strong. The only problem that I had with it was with aphids, they loved my plant with a passion and needed to be washed off every morning. As soon as the plant was growing well I added some systemic pesticide granules to the potting mix, and began a regular spraying program using half water and half alcohol, which solved the aphid problem.

As with all plants that come to us without names, we are all inclined to believe that these plants certainly must have been discovered and named at one time or another, and so begins the search for similar leaf and growth patterns among the hundreds of written descriptions and in some cases the beautiful line drawings done by Dr. F.R.R. Schlechter and others. By the simple process of elimination we usually have at least a vague idea of what certain plants may be based on where the plant was discovered, and the leaf size and

shape, as well as the overall general growth pattern of the plant. The final determination is of course made when the plants develop buds and flower for us.

In the fall of 1992 H. sp. Gold Ridge #3 developed 1 peduncle with 8 perfectly formed buds. All was going well until the heat exchanger went out on my gas furnace and the temperature in my green house dropped below 55 degrees fahrenheit. Leaves on most of my hoyas fell like rain and I even lost 4 plants completely. The big surprise was that the species from Gold Ridge retained all of its leaves but lost all but 1 bud which did eventually open to flaunt the gorgeous blossom shown here in this photo.

The biggest surprise came when it couldn't be matched up with any of the available literature, and was ultimately determined by Dr. Paul Forster and David Liddle to be a newly discovered species. This new species has been named H. dennisii in honor of Geoff Dennis of Honiara, Guadalcanal.

A limited number of rooted cuttings of this beautiful little semi-miniature species should be available by late Summer of 1994. Watch your Fraterna for notice of dealers who have these cuttings for sale.

Photo and article by Ann Wayman

BIRD TRACKS

Robin # 5..July, 1993...John Scoville..California..You bring up a major point in the milkweed family, Asclepiadaceae, as one common denominator is the fact that there are always two ovaries, each capable of producing a fertile seed pod. I have never seen or heard of a hoya producing two seed pods from a single blossom even though it is technically possible! The idea of hoyas growing mostly in trees is somewhat misleading. In certain areas that are of rainforest origin, hoyas can root in the ground and climb up trees that compete for the uppermost layer of sunlight. By accident or otherwise, the stem can break, still leaving the hoya to live in the rooting medium but the upper part that broke off seems to be able to grow with adventitious roots drawing moisture from condensation. Even in my small greenhouse I have two dischidias that grow this way. I grow many hoyas on redwood bark but they definitely grow roots into it. When growing this way make sure to mist often with nutrients. Ann, the two plants that I got from you are doing fine. From what little technical data I have available it seems that *H. coronaria* "Form 2" is closer to being coronaria than "Form 1" The large leaves, pubescent underneath is there on 2 but not on 1. Where am I going wrong?

Robin#5...August, 1993...Chrisilla Rezai..California..I have yet to have a real problem with mealybugs. It may be that I spend time daily with my plants and if I do see one, I destroy it. More than one and I get out the alcohol and Q-tips. The yellow aphids which I learned were called Oleander aphids at the last meeting are easy to destroy, I just run my fingers down the stem and squash them dead. It was suggested that this was not necessary because they cause no damage but I am not willing to take the chance. I am noticing that certain plants seem to attract the mealies and aphids more than others.

Editors Note: I would like to comment on a couple of Johns statements that appeared in this robin. My hoyas do not set seed pods here in Oregon, however, several

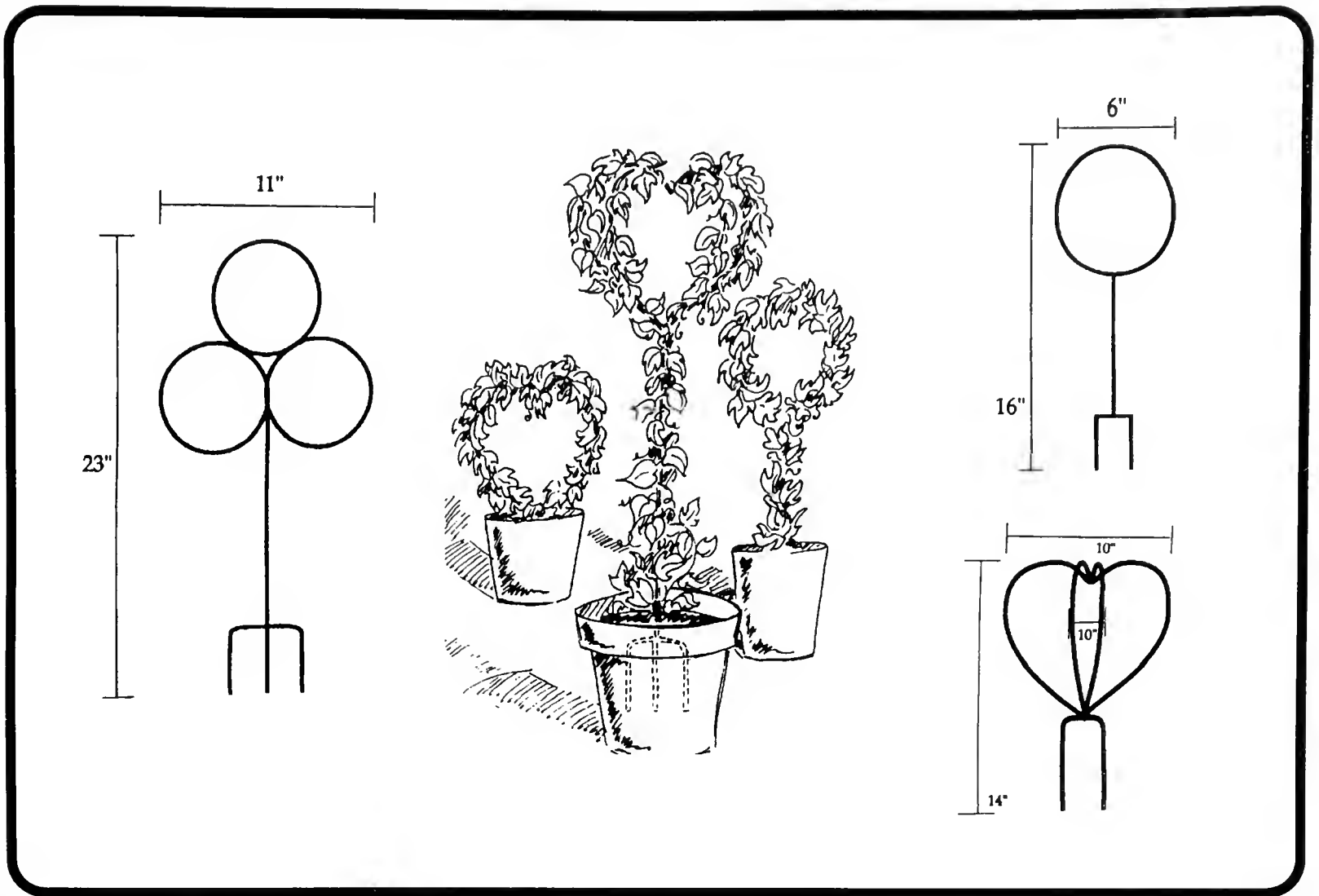
We have heard from Leo Pickoff, and he wants to make a correction to his article that originally appeared in *Asklepios* and was reprinted in our last issue of *Fraterna*. Leo says: "I would like to correct a minor error in my article "Propagating Hoyas" reprinted in the 3rd quarter issue of *Fraterna*. I stated that Burpee's Planting Formula was no longer available. Actually, Burpee lists several mixes under the broad category of Planting Formula. Lillian uses Burpee Seed-Starting Formula for rooting cuttings of all kinds. It's in their catalog".

Harriette Schapiro is our new Robin Director. If any of you would like to participate in the round robins, please direct your requests to: Harriette Schapiro, 5217 Cassandra Lane, San Diego, Calif. 92109.



years ago I received a large shipment of rooted cuttings from Michael Miyashiro of Rainforest Plantes et Fleurs, and over half of them had flowers and/or seed pods. Many of these plants were in the *H. australis* complex and most of them held two seed pods to each pedicel...which means that seed pods had developed from both ovaries.

To set matters straight on the *H. coronaria* puzzle...Neither one of the plants being sold in commerce as *H. coronaria* Form 1 nor *coronaria* Form 2 are actually *H. coronaria*. The *H. coronaria* Form 1 has a small *H. australis* type flower, and appears to be practically identical to *H. keysii*. The *H. coronaria* Form 2 has been identified as a sub-species of *H. calycina* and was published by Dr. Paul Forster and David Liddle as *H. calycina* subsp. *glabrifolia*. The true *H. coronaria* is in the *Eriostemma* section of the hoya genus, and there are precious few in cultivation in this country at the present time. A.W.



TAMING THE TINY TWINERS

For many plant collectors the miniature and semi-miniature forms in all types of plants are irresistible. Hoyas are no exception, and are certainly among the most appealing for growing on a window sill or in a light garden.

Tiny they may be, but the truth is that even though quite small, most of these plants still have a tendency to climb, creep, twine and in general make a nuisance out of themselves by constantly having to be untangled from plant neighbors, drapery cords, picture hangers and everything else close enough for them to latch on to. The ideal solution is to start their training while they are young.

How do we go about training a plant? As a first step, I would suggest heavy pruning while the plant is very young. Yes, it will restrict flowering for awhile!...maybe six months to a year, but instead of having two or three spindly stems with a few umbels of flowers on the ends, you will have a beautiful compact plant with lots of branches and very dense foliage. When these plants begin to bloom, you will have many times more flowers than you would have otherwise. A second step would be

to find a source for small topiary to train those runaway stems around. When we think of topiary, we usually picture shrubs or hedges out in our yards that have been pruned and trained to grow into weird and unusual forms, usually the shape of animals. In some instances this is true, but topiary can also be constructed from various materials in small graceful forms, just perfect for training all types of climbing plants to a beautiful and manageable shape. Envision if you can some of our gorgeous little miniature or semi-miniatures hoyas twining gracefully around the handsome topiaries pictured above, and blooming happily on your window sill.

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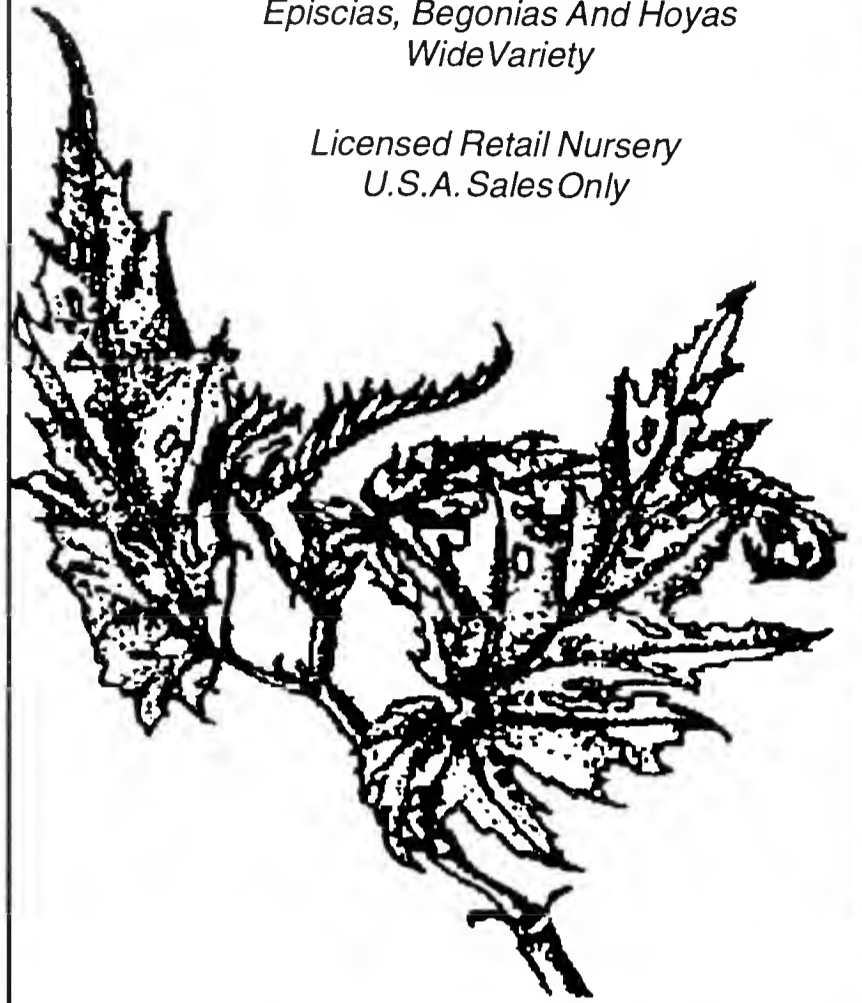
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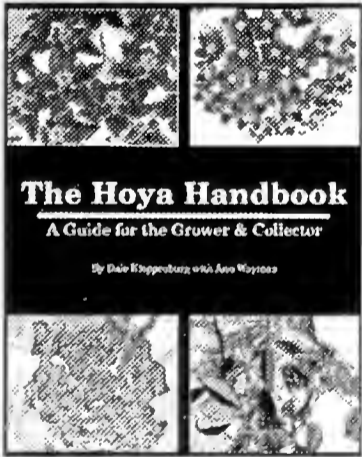
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FOLIAGE PHOTOS

For those of you interested in the over-all appearance of the many hoya species including foliage and general growth pattern, we have a nice selection of foliage shots in full color. With the exception of a few very new acquisitions, these are large, fully mature plants in 5" to 12" pots or hanging baskets. Although not intended for identification purposes, these photos can be of great value to both the novice and the experienced hoya grower when contemplating a plant order, or to keep from duplicating plants already in your collections.

- | | | |
|--|--|---|
| 1. <i>H. vaccinioides</i> | 24. <i>H. parviflora</i> | 47. <i>H. pentaphlebia</i> |
| 2. <i>H. thomsonii</i> | 25. <i>H. leucorhoda</i> | 48. <i>H. australis</i> (variegated) |
| 3. <i>H. cardiophylla</i> | 26. <i>H. scortichinii</i> | 49. <i>H. loheri</i> |
| 4. <i>H. phylura</i> | 27. <i>H. sp. tanna</i> | 50. <i>H. finlaysonii</i> (nova) |
| 5. <i>H. parvifolia</i> | 28. <i>H. dennisii</i> | 51. <i>H. sp. bilobata</i> "Ben Hardy" |
| 6. <i>H. ovalifolia</i> | 29. <i>H. lacunosa</i> var. <i>lacunosa</i> | 52. <i>H. plicata</i> |
| 7. <i>H. sp. 85-1981</i> | 30. <i>H. meliflua</i> | 53. <i>H. obscura</i> |
| 8. <i>H. lacunosa</i> var. <i>pallidiflora</i> | 31. <i>H. nummularioides</i> | 54. <i>H. obovata</i> |
| 9. <i>H. sp. IML-272</i> | 32. <i>H. micrantha</i> | 55. <i>H. australis</i> ssp. <i>rupicola</i> |
| 10. <i>H. schneei</i> | 33. <i>H. camphorifolia</i> | 56. <i>H. pubicalyx</i> |
| 11. <i>H. mindorensis</i> | 34. <i>H. krinkle 8</i> (variegated) | 57. <i>H. tsangii</i> |
| 12. <i>H. filiformis</i> | 35. <i>H. purpureo fusca</i> | 58. <i>H. benguitensis</i> |
| 13. <i>H. erythrostemma</i> | 36. <i>H. pauciflora</i> | 59. <i>H. bordenii</i> |
| 14. <i>H. litoralis</i> | 37. <i>H. kerri</i> | 60. <i>H. heuschkeliana</i> |
| 15. <i>H. sp. IML-453</i> | 38. <i>H. polystachya</i> | <hr/> This collection consists of 60 3 1/2" x 5" photos, all labeled with names and a short description. The price is \$24.00 postage paid in the U.S. For overseas orders, please add \$2.40 to the above price for surface mail or \$5.00 for airmail.

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| 19. <i>H. cinnamomifolia</i> | 42. <i>H. calycina</i> ssp. <i>glabrifolia</i> | |
| 20. <i>H. flavescens</i> | 43. <i>H. mitrata</i> | |
| 21. <i>H. marginata</i> | 44. <i>H. carnososa</i> | |
| 22. <i>H. sp. IML-557</i> | 45. <i>H. eitapensis</i> | |
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H. bella
H. shepherdii
H. polystachya (foliage)

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H. pubicalyx (dark red seedling)
H. sp. PNG 4
H. arnottiana
H. kenejiana
H. kerrii (Fuzzy leaf)
H. acuta (Green Form)
H. pachyclada
H. obovata

Volume 4

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H. # 454 (unidentified Hoya species)
H. polystachya
H. acuta (lemon)
H. species # CI-1244
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