The **Pleurothallid Alliance** News

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Volume I, Number 1 January 1989

Free Pleurothallid Identifications

Carlyle Luer
Honorary Guru,
The Pleurothallid Alliance

I will identify pleurothallids free of charge. My reward will be herbarium specimens. However, I would like to make a few rules.

Specimens without collection data are almost worthless to me. If you send me a specimen for identification without collection data, and I am able to recognize the species, I will send you an identification. If I do not recognize the species, I will not take the time to research the files. Simply the country of origin will help. Do not guess.

Collection data include: the country of origin; province, state, or department; nearest city, town or community, or between which landmarks; altitude; date collected and by whom.

Specimens should be as complete as possible. For *Dracula* and *Masdevallia,* perhaps only a fresh or "pickled" flower and a photograph (color slide) may do. I can always pester you for additional material if necessary, but an adequate herbarium specimen in the first place would be appreciated. For other genera, I would prefer at least two connected stems with some roots, leaves and an inflorescence, plus fresh or "pickled" fresh flowers. The vegetative specimen can be mailed in an envelope with or without cardboard, depending on your judgement. Entire specimens of very small plants can be "pickled." For species with racemes like many *Stelis*, pickle a segment of the raceme with several flowers in situ.

Fresh flowers can be sent in a 35-mm film canister or some other air-tight container. Insert only the flower. Do not add water, cotton, kleenex or anything else. Fresh flowers in such a container will last in good condition about three days, sometimes longer. Water will cause the flower to rot, other extraneous material absorbs water and the flower will desiccate.

"Pickling" is the common term used for preserving material in liquid. Use a water-tight container that will not leak. My mailman gets mad at me when that happens. A screw-on lid is best. The solution can be as simple as just rubbing alcohol, but the well-known Kew Mix without the formalin is best: 55% 190 proof ethyl alcohol; 5% glycerine, and the remaining 40% water. Omit or cut down on the water for weaker alcohol. Be sure to add the glycerine, cheaply obtainable at a drug store. This prevents loss of the flower should the liquid leak or evaporate. It also keeps the flower pliable for examination. Sometimes flowers in liquid without glycerine break into pieces like fragile glass.

Assign each of your specimens a number to be kept in a notebook with copies of

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INSIDE

A History Of The Pleurothallid Alliance

Gary R. Baker
President,
The Pleurothallid Alliance

A detailed account of the history of The Pleurothallid Alliance can be found in the upcoming February 1989 issue of the *American Orchid Society Bulletin*. It seems rather superfluous to repeat everything covered therein, since it is likely that every member of The Pleurothallid Alliance gets the *A.O.S. Bulletin*.

For me, the concept of the Alliance first appeared in September, 1987, when I attended a horticultural meeting in Glencoe, Illinois, where I met Leslie Stern. In fact, I met Leslie in the van taking people from O'Hare to the conference hotel. Those of us in the van, perhaps six people, introduced ourselves, and Leslie asked me if I was the person who had written a couple articles about *Brassia* breeding which had appeared in the *A.O.S. Bulletin*. I confessed, and we went from there.

The next day, he brought up with me the idea of a pleurothallid alliance, eventually asking me if I might head up the organization of such a group. He told me about the plans for Pleurothallid Sunday in conjunction with the 33rd Eastern Orchid Congress in Meadowlands, New Jersey. I didn't agree to attempt the organization for a couple weeks, having returned to Seattle where I gave a lot of thought about just what such a group might attempt, why there might be a need for such an association, who might join, etcetera.

Leslie and I also communicated a few times via phone during this time, during

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The Pleurothallid Alliance

Purpose: Encourage the cultivation, conservation, and appreciation of all orchids of the subtribe Pleurothallidinae; Assist in disseminating knowledge about them; Gather information about habitats; And support horticultural and scientific studies of pleurothallid orchids.

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The Pleurothallid Alliance News is published quarterly as the official newsletter of The Pleurothallid Alliance.

The Pleurothallid Alliance News is produced using WordPerfect 5.0, a Hewlett Packard ScanJet desktop scanner, and a Hewlett Packard LaserJet II printer with HP 33412 AD and HP 33412 AF Soft Fonts.

Printed in the United State of America by Offset House Printing Company, Indianapolis, Indiana.

Dracula Culture

Theresa Hill
Hillsview Gardens

The majority of species within the subtribe Pleurothallidinae can be found at high elevations in the Colombian and Ecuadorian Andes, and this is certainly true for the genus *Dracula*. While a few Draculas are found at relatively low altitudes, the genus has it's greatest development at altitudes of 5,000 to 9,000 feet. During the day warm moist air over the Pacific rises and cools as it rushes over the mountains of the Cordillera Occidental of Colombia and Ecuador to form thick cloud cover almost every afternoon. This in turn brings heavy mists and frequent rains. In such an environment of constant humid, buoyant cool breezes the Draculas have their natural habitat. Duplicating this environment creates optimum growing conditions.

On the West Coast we find it relatively easy to duplicate these conditions, even during the summer. On the East Coast with hot humid summers, evaporative coolers are not as effective as frequent misting of the plants. For this reason we recommend suspending the Draculas under the bench. If this is done you might consider mounting louvers below bench level thereby providing good air movement so beneficial to the Draculas. The potting medium for Draculas is as variable as it is among growers of Paphiopedilums and Odontoglossums. For instance, conditions vary from one greenhouse to the next. Bark mixtures, Guatemalan tree fern, and New Zealand sphagnum moss have been used exclusively with equal success. The Conservatory in Strybing Arboretum, Golden Gate Park, has a fine collection of Draculas. These are all potted in New Zealand sphagnum moss and are vigorous, free blooming plants.

Overwatering Draculas is virtually impossible and one is more likely to underwater. Dilute fertilizer can be used, we recommend watering the plants thoroughly before any application. The Draculas at Hillsview Gardens are grown on the benches in the Paph-house during the Winter and as the spikes begin to form in the Spring we suspend them under the benches where the gravel floor is watered down frequently to raise the humidity and keep them cool during the Summer. We find that like the *Miltoniopsis* the size of the flowers will be larger if the buds are kept heavily shaded and cool as they develop.

Several Draculas produce upright flower spikes, such as *D. soderoi* and *D. quilichaoensis*; however, the majority of species produce inflorescences that are descending or decumbent reminiscent of the Stanhopeas. Because of this it is best to grow the Draculas in wire baskets made from aluminum gutter guard. Many of the Draculas produce flowers in succession from the same spike over a period of months, so it is best not to remove them until they have turned brown. When repotting your plants do not cut through the plants to make divisions. Viruses are so easily transmitted, we recommend you gently pull the divisions from the mother plant, allowing eight leaves per division.

(Note: This article is drawn from a discussion about the genus Dracula presented by Theresa Hill at the 33rd Eastern Orchid Congress, October 23, 1988.)

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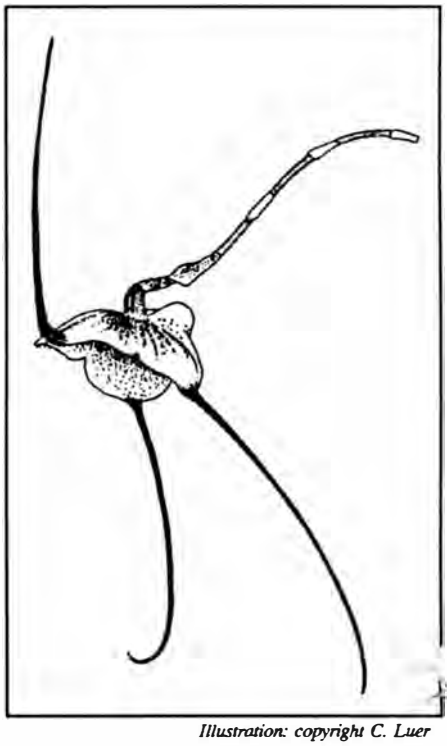

Illustration: copyright C. Luer

Dracula radiosa (Rchb.f.) Luer

Alliance Begins Planning Projects

Wayne Cokeley
Trustee,
The Pleurothallid Alliance

The Pleurothallid Alliance, now a living, growing entity, should run projects for educational and conservation purposes as well as for the benefit of its members. In an ad hoc meeting at the Eastern Orchid Congress this fall the new board decided that ideas for programs should be presented through the newsletter and volunteers would be recruited there. Hence, I introduce several projects which we can begin working on and I hope I can get some volunteers from the membership.

These projects are the end result of about six months research of calling growers, cornering people at shows and idealizing about the potential impact of our group. These are *your* ideas! Now lets have *your* help!

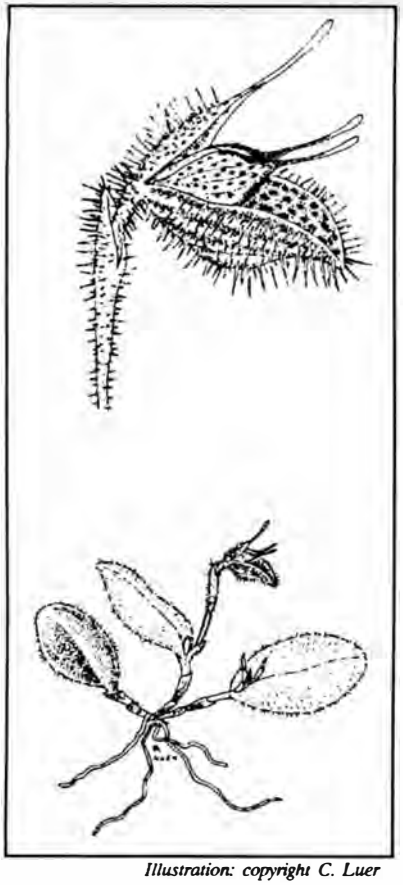

Illustration: copyright C. Luer

Dresslerella hirsutissima (C. Schwf.) Luer

PROJECT 1: A Want List Registry. By far the number one request of all the growers spoken to was a central registry of who is looking for what. The best way to have this would be for a central registrar to coordinate the requests and perhaps publish a combined want list in the newsletter. The mode of surveying the members would be left to the registrar. This person would work closely with the newsletter editor William Rhodehamel either in person or by mail.

PROJECT 2: It would seem to me that major herbaria or museum collections would have a central numerical taxonomy code number for each species, so that exchange of information between institutions could be made more precise. Such a computerized code system is being used by some zoological collections on the East Coast.

I propose that the Alliance look into such a system to see if one is in use by museums today. If not we should develope and introduce a code system. For future projects this code could be adopted as an inventory system to keep track of captive clones of species for conservation purposes.

What we require now is a volunteer who can write letters of inquiry to the major herbaria to see what systems, if any, are used. Who is interested?

PROJECT 3: It was suggested that the Alliance offer an annual prize for the Best Pleurothallid exhibited during that year or perhaps at our Annual Meeting. This prize would be similar to the Nax Trophy or Butterworth Prize and would be awarded by A.O.S. judges. The purpose of the project is to enhance and recognize the culture of pleurothallids by recognizing the superior growers.

We require a committee to set up such an award and especially to deal with the A.O.S. Any volunteers?

These are just a few of the many ideas which the Alliance can develop in coming years. Please feel free to write me with your pledge to help or new suggestions. I look forward to hearing from you.

(Editor's Note: Wayne's address, as well as those of the other officers of the Alliance, can be found in the sidebar on Page 2.)

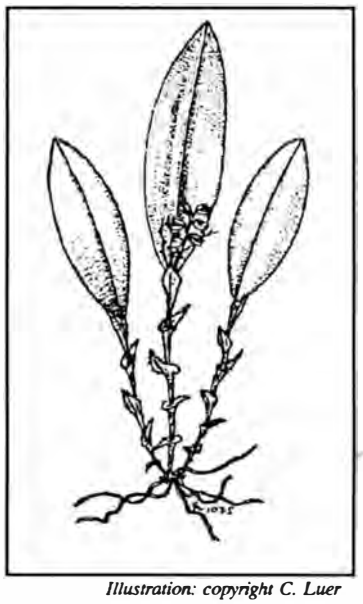

Illustration: copyright C. Luer

Trichosalpinx ciliaris (Lindl.) Luer

Identifications

(From Page 1)

the collection data you submit. Include color notes because the colors are lost in the pickling solution.

Please include a self-addressed, self-stamped envelope for return of your identification.

I am frequently out of town, so if you want to send a fresh specimen, make certain that I am at home (telephone number: 813 953-3435). Pickled specimens, of course, can wait until I return.

Some specimens of *Dryadella, Pleurothallis, Restrepia, Stelis* and *Trichosalpinx*, and most specimens from Brazil may have to sit on the shelf for a long time before I am able to devote time to them. I need some more years to accumulate more drawings. Therefore, known or unusual specimens, or most Brazilian specimens would be welcome additions to the herbarium. Every specimen will eventually be incorporated into the herbarium at MO (Missouri Botanical Garden).

Send material for identification to:

Carlyle A. Luer
3222 Old Oak Drive
Sarasota, FL 34239

The President's Column

Gary R. Baker
President,
The Pleurothallid Alliance

WELCOME TO THE PLEUROTHALLID ALLIANCE!

You are holding and reading a dream come true. *The Pleurothallid Alliance News* is the culmination of numerous hours of work and thought by a number of people.

I feel very fortunate in the individuals who have agreed to serve on our Board: Wayne Cokeley, Ann Lauer Jesup, William Rhodehamel, George Schudel, Gerardus Staal and Lorne Stuart.

Special praise is due two individuals: William Ames Rhodehamel, Editor, and George Schudel, our Membership Secretary/Treasurer.

The selection of Will for editor was a natural, but having George as our collector of monies was a particularly fortuitous decision. Not only did I get someone who would truly throw himself enthusiastically into the job and commit hours of time and effort towards the new organization, I also got his wife, Jeanne, who George maintains does most of the work. Whatever, between the pair, I got a real team of commitment, enthusiasm, ideas and willingness to work!

And of course, without Will Rhodehamel's willingness to put in the many necessary hours, we would never have gotten this first letter, the first of many to come.

To these three people, I wish to publicly state my endless gratitude for their substantial volunteer efforts on behalf of **The Pleurothallid Alliance.**

My only regret is that Leslie Stern can't be with us to relish this wonderful moment.

Alliance History

(From Page 1)

which I pointedly told him that we needed a justification for starting such a group. He agreed, and basically told me to come up with the justification.

Further thought convinced me it was worth a try, especially since Leslie was so gung-ho on my taking it on. This led to my first proposal, a questionnaire which went to a number of people in the Pacific Northwest judging community, plus a few other interested people here. The response told me that I had struck some responsive chords in pleurothallid lovers.

I followed this up with the beginnings of a massive mailing of the questionnaires, to people on a list which Leslie had compiled, to people I know in the San Francisco region who grow pleurothallids, and to other people around the country who seemed likely candidates. As questionnaires began pouring in, as more and more names were suggested to me, and as donations to help cover my expenses built up, I sent out notices to more and more people. A number of potentially interested people were brought to my attention in the returned questionnaires, and these all received notices. Finally, I began sending the notices to many members of the judging community in the west, northeast and midwest. All this resulted in the 90-some responses I received, the people for whom I wrote the two UPDATES.

Finally, the week of the meetings in Meadowlands arrived. I set about selecting six people to assist me in the operation of the Alliance, trying to select as geographically balanced a group as I could. I had several discussions with Wayne Cokeley, who informed me that there had been discussion about a pleurothallid alliance in the New York/New Jersey area for some time. We compared our thoughts about the structure of the group prior to the Meadowlands meetings, and I found that our approaches were somewhat dissimilar. Wayne was far keener on the various projects and long-term goals of the Alliance than I at that point; I on the other hand was obsessed with getting the organization off the ground and functioning, and then worrying about implementing various projects. It was clear that our two views, merged, would serve the proposed alliance well.

It was to that end of getting the Alliance organized, functional and on a firm foundation that I spent many hours in Meadowlands drawing up an agenda for the organizational meeting, picking my Board members and meeting with them, individually and in groups, for over 5 hours.

All that planning paid off handsomely. I approached the Pleurothallid Breakfast fearful that there was simply inadequate time to do everything needed to get the Alliance organized and functioning. I had not bothered to appreciate that I had already done that in those meetings prior to the breakfast. We had thrashed out all the concerns and problems before hand, and I merely needed to inform the 100 or so people at the organizational meeting just exactly what I (with my hand-selected Board) had decided. It was all so simple and easy, and no one even questioned any of the decisions we had made!!! Talk about a piece of cake... What fun!

The rest is history. We finished the organizational meeting at least fifteen minutes before our allotted time had expired! When I told the assembled people that the name of the organization would be The Pleurothallid Alliance, no one raised any objections. Gee, we had spent at least 15 minutes the night before arguing what name we would propose before we finally settled on The Pleurothallid Alliance. We had pounded out a statement of purpose, which got changed several times. I simply read it the next morning and everyone smiled in agreement.

I never knew it was so easy to start a new international organization. Yeah, I know that the reason it all went so well Sunday morning at the organizational meeting was because of the many hours spent before that Sunday preparing for the event, but even now, three weeks later, it still seems like it was remarkably easy.

Maybe I should think about starting a special interest group for *Oncidium* Alliance intergenerics...

Observations On Growing Masdevallias In North Carolina

H. John Barnes
Triangle Orchid Society

"...since a few of them [Masdevallias] are singularly specialized in the conditions demanded, the genus as a whole has obtained the reputation of being difficult to grow. This is not particularly the case, but it should be noted that attention must be paid to the plants needs, or scant success with them can be anticipated." — Hawkes, The Encyclopaedia of Cultivated Orchids

Assuming this statement to be correct, and I believe it is, how does one provide for the plants' needs in order to achieve more than "scant success?" Especially in what might seem to be a rather unsuitable, climate such as occurs in Raleigh, North Carolina. The purpose of this article is to discuss ways in which Masdevallias and their pleurothallid relatives may be cultured and maintained with reasonable success in areas with moderate to high summer temperatures and high humidity. After all, each day we are presented with many opportunities, except they are often unrecognized because they are cleverly disguised as problems. My advice? If you want to grow Masdevallias, do it! Just recognize that you may likely be "presented with many opportunities..."

In general, I believe orchids are among the easiest plants to grow. However, it is much more difficult to grow them well. Best success is considered to result from trying to duplicate conditions, as nearly as possible, where the plants grow naturally. The first step then is to develop a concept as to what are the needs of the plants. Obviously with several thousand pleurothallids the range of optimum conditions for them collectively is enormous. However, if we try to depict a "typical" one, we would probably place it at a moderate to high altitude in Central or South America growing as an epiphyte surrounded by lush mosses, ferns, etcetera. What conditions might be expected to prevail at this hypothetical site and how might they be reasonably duplicated?

We would expect intermediate to cool temperatures especially at night. I personally believe the latter is most important and likely plays a significant role in initiating flowering. Also, temperature is important for general plant health. Those stressed by abnormally high (or low) temperatures are much more prone to diseases. There are several things that can be done to assist in maintaining appropriate temperatures in the greenhouse. Those I use include: a southeast orientation and locating the greenhouse so that it receives morning sun but is shaded in the afternoon and is partially below grade, use of shade cloth (55% – 63%) from April to October, small greenhouse (12' x 18') making it easier to cool, water storage to absorb heat, 30 square feet of evaporative cooling, thermostatically controlled exhaust fan (62° F.), air conditioner (13,500 btu), oscillating and ceiling fans, benches with water-filled trays that the plants sit over, plants double potted in net and clay pots, gravel floor, and frequent mistings. Dividing, repotting, and acquiring new plants are done in fall and early winter. Electric heating is used in the winter with a kerosene heater for emergency standby. Both low and high temperature alarms are relied on during the winter and summer respectively. The latter unit is connected to the telephone. I plan to obtain a small generator to run the fans in the summer if there is a power failure based on a recent experience.

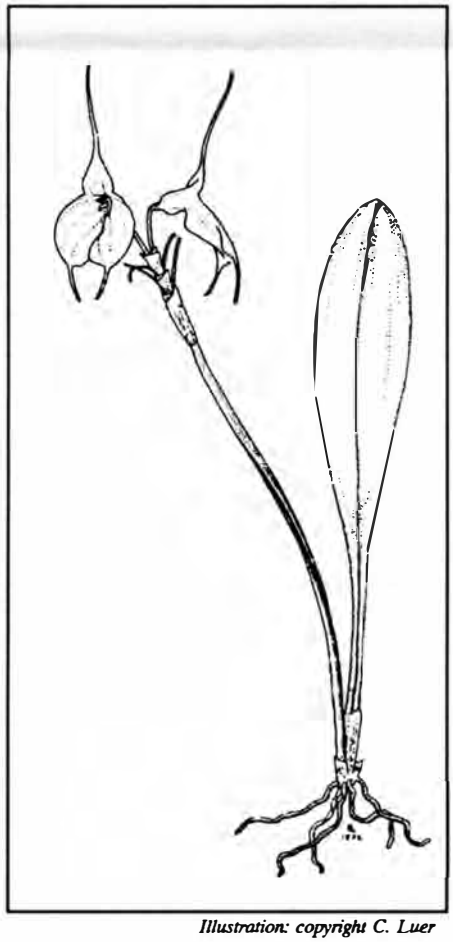

Illustration: copyright C. Luer

Masdevallia tovarensis Rchb.f.

The overall system seems to work well. Evaporative cooling is used in the daytime and the air conditioner used at night. I would like to maintain night temperatures in the low fifties and day temperatures in the low seventies. This is little problem from about mid-October to early April. During this past summer, the highest temperature in the greenhouse was 84° F. except for the incident when the power was off it reached 92° F. At night, the temperature was always 66° F. Apparently this is where the high energy efficient air conditioner is set to turn off. I would like to get a unit that would go lower than this. Outside temperatures were usually in the nineties (except for our 105° F. record) during the day and seventies at night with high to very high humidity especially at night. With one exception no established plants were lost during the summer and they all seemed to have come through in fair to good shape. I would add that don't expect much flowering in the summer except perhaps from some of the warmth tolerant hybrids and species, even the flowers of these are not as good as they will be during cooler periods. It is still a cycle of: fall – recovery; winter/spring – growth; summer – decline; in spite of best efforts to provide good growing conditions year around.

Back to our hypothetical environment, we might also expect: high humidity, perhaps even cloud forests, high air movement, low nutrients and volcanic soils, high ultra-violet light, lowered air pressure, decreased oxygen and clean air and water low in pollutants. There is little practical that can be done to recreate some of these. Humidity can be maintained through watering, misting, and the evaporative cooler. High air movement is possible through fans and by providing ample space between plants. Fertilizer should be applied sparingly and only when the plants are actively growing.

CONTINUED – Next Page

I often put small bits of lava rock in the bottom of the pots to supply possible unidentified nutrients they may need. To help with air quality, I use an ionizing air filter. Personally, I have not noticed any benefit from its use. I plan to install some water filters in the future as its quality is of considerable importance.

I have plants growing in most any orchidaceous medium you can name. I am now using New Zealand sphagnum, but formerly used a mix of fine tree fern, peat, perlite and charcoal. I believe most any mix will be satisfactory if cultural conditions are balanced and take its properties into account. Presence of healthy mosses and ferns growing around the base of the plants is considered indication of good conditions; algae is a bad sign. Unfortunately many ferns get so large they simply overgrow and out-compete the pleurothallids so they must be watched and cut back or removed if necessary. Most pleurothallids grow well mounted but need additional moisture. I prefer tree fern with a pad of osmunda inoculated with a plug of moss. If the moss appears bright and green watering is OK; if dull and shriveled, watering is insufficient.

Lastly, select plants that are most likely to do well. These would include species and hybrids that tolerate warmer conditions. Avoid those plants considered to be difficult to impossible to grow. If you want to try an occasional one, that's fine, but don't be discouraged if it doesn't do well, i.e. "grows in reverse". Most likely some summer day it will head for that great greenhouse in the sky. I also believe it is necessary to commit to growing certain types of orchids in order to maximize efforts to meet their needs; fewer plants grown well are better than a lot grown so-so.

Thoughts about diseases and pests will have to await a future issue. I hope you acquire as much pleasure and satisfaction from growing this fascinating group of plants as I do, and that the above may be of some assistance as you face those cleverly disguised "opportunities" in attempting to achieve more than "scant success" in growing them.

H. John Barnes
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Raleigh, NC 27636

Review of *A Masdevallia Cultural Guide*

George Schudel
Membership Secretary/Treasurer
The Pleurothallid Alliance

Your editor is too modest to tell you, but he has written a very useful book entitled *A Masdevallia Cultural Guide*, with foreword and illustrations by Dr. Carlyle A. Luer.

It is full of practical ideas for raising these plants with some blunt talk that you will not get at the nursery. Some of this is: "I list solariums mainly to exclude them from consideration..." "If the overall temperature in the [growing] space never goes above 77° F. for very long the plants will suffer little heat stress and will grow much better..." and that's for the "warm" ones. "It can be difficult to offer exact recommendations..." and when he doesn't know the answer he says so.

He also points out that you will kill some plants. It is refreshing to find such honesty.

The most important or unexpected piece of advice was to raise the humidity, increase air movement and reduce watering to combat heat stress. So many of us try to cool the roots with extra water for evaporation with poor results as rot sets in.

Other points are the lower light levels, 600 – 1400 foot candles, the high relative humidity, absolute minimum 65%, and the need for uniformity.

The appendices alone are worth the price of the book. One lists the recognized species in the genus *Masdevallia* with altitude and country of origin. There is a list of warm growing plants and another of cool growers, in both the easy and difficult species are flagged. In the chapter on light requirements he discusses the many types of artificial lighting available and the pros and cons of each. The same attention to detail is found in the chapters on temperature requirements and humidity control, potting and watering, problems, both external (scale, mites, virus, etcetera) and internal (heat stress, overwatering, etcetera).

This is an excellent and much needed book. Let us hope it is the first of a series on the culture of a single genus. How about one on Pleurothallis? Stelis?

Reviewers have to prove that they read the book by finding some typos. Will made this easy by putting one in the first paragraph of the first page of the introduction. Thanks!

The book can be ordered from William A. Rhodehamel, P. O. Box 68811, Indianapolis, IN, 46268, for $17.00 postpaid. If you save one plant you will have recovered the cost. After that it is all profit, so how can you lose? But be warned, Will did not expect much of a demand so he had a short run printed. More than half of the copies have been sold. A book review is scheduled in the *Bulletin* for February at which point it will probably be "out of print."

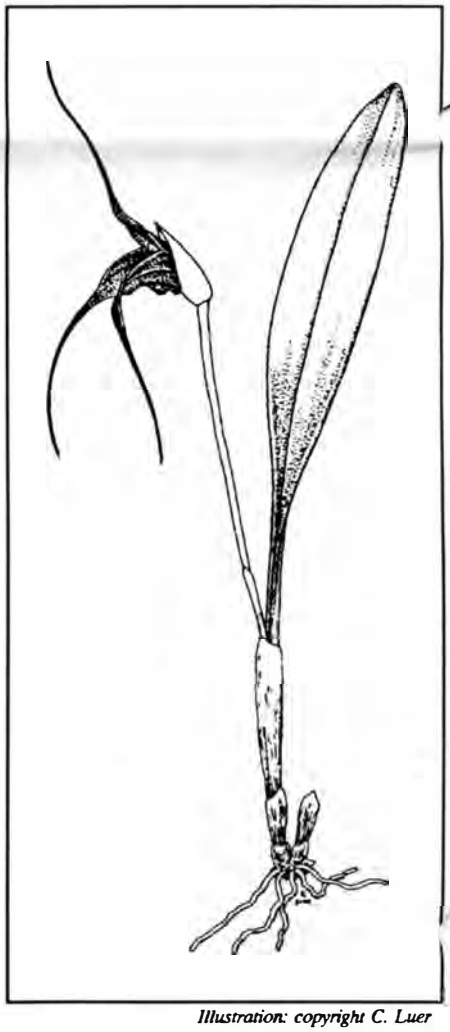


Illustration: copyright C. Luer

Masdevallia cucullata Lindl.

The Editor's Column

William Ames Rhodehamel
Editor,
The Pleurothallid Alliance News

With this inaugural issue of *The Pleurothallid Alliance News*, the members of The Pleurothallid Alliance hereby introduce to the orchid growing world a new group of orchid enthusiasts, dedicated to orchids of the subtribe Pleurothallidinae. And to this newly formed Alliance, I gladly say welcome!

I hope that you and other members enjoy this issue, and all upcoming issues of *The Pleurothallid Alliance News*. I want to encourage you to write me and let me know your thoughts about the newsletter. I hope that, as the official organ of The Pleurothallid Alliance, *The Pleurothallid Alliance News* can serve the Alliance and its membership in many ways.

There are many ideas about the various functions *The Pleurothallid Alliance News* can fulfill. I would hope that the membership would comment on a few of the suggestions I have discussed below. Remember, this is *your* Alliance, and therefore this is *your* newsletter. It can only reach its full potential if *you* participate.

First and foremost, I think we should decide what types of articles and information *The Pleurothallid Alliance News* should contain. This is not an effort to restrict the content of the newsletter, but rather to define and understand the purpose of this newsletter. To my mind, reading the Alliance's statement of purpose (contained in the sidebar on page 2), it seems clear that articles covering the culture, propagation and hybridization, and conservation of pleurothallids would certainly fall within the definition of what this newsletter should become. But should we focus on some of these aspects more than others? And should we consider expanding the list of types of articles that should be contained in *The Pleurothallid Alliance News*? It is up to you, the membership of The Alliance.

I also seems to me that there are a few regular features that we might want to consider instituting within the pages of *The Pleurothallid Alliance News*. In future issues, I intend to include a couple of letters from members as a sort of "Sounding Board" for the membership. We might want to have a regular column on any new species, or on recent awards within the Pleurothallidinae. As a fan of Henry Teuscher's "Collector's Item" column, which ran for almost twenty years in the *American Orchid Society Bulletin*, I think it might be interesting if we could have a regular column focusing on a single species or a few related species. We might want to have a "plant exchange column" based on the want list registry idea mentioned as Project 1 in Wayne Cokeley's article on page 3. These are just a few of the ideas that I have heard mentioned. Again, this is our newsletter: it can become anything we want it to.

Illustration: copyright C. Luer

Brachionidium vasquezii Luer

There has been some (considerable) discussion among members of the board as to whether *The Pleurothallid Alliance News* should accept advertising. If we want advertising, it could take a couple of different forms. We could have unrestricted advertising such as other orchid publications have. Or we could have only a classified section where both commercial and amateur growers could advertise. Advertising could be restricted to members, or to amateurs. I would be interested to hear from the membership on the issue of having advertising in this publication, and, if so, what form it might take.

And, finally, I want to mention that while I think there is nothing this newsletter cannot become if it has the membership's support, there is little potential here if the membership does not offer support. I want to encourage each of you to consider writing for *The Pleurothallid Alliance News*. This Alliance, as well as this newsletter, has unlimited potential if we each give to it just a little of ourselves. If you enjoy and/or grow pleurothallids, you must have opinions about these wonderful plants. I want personally to encourage you to put those opinions down on paper. I can't guarantee that every submission will be included in the next issue of *The Pleurothallid Alliance News,* but I think we have room here for every opinion, and the more material I receive, the higher the quality our newsletter can be. Again, (one last time) this is *your* newsletter: it is *your* responsibility to help to make it the best it can be. Enough said.

I would like to thank those people who wrote articles for this first issue: H. John Barnes, Theresa Hill, and board members Gary R. Baker, Wayne Cokeley and George Schudel. And I would particularly like to thank Carlyle Luer his article offering free pleurothallid identification, and for his kind permission to use his drawings as illustrations for this issue.

I would like to wrap up my first Editor's Column by simply offering my thanks to the members of The Pleurothallid Alliance for the opportunity of serving the organization in my own way. I look to the future of The Pleurothallid Alliance, as well as *The Pleurothallid Alliance News,* with great excitement.

WATCH

The

February 1989

American

Orchid Society

Bulletin

For more information

about

The Pleurothallid Alliance

The Latest Word

As this issue of *The Pleurothallid Alliance News* went to press, exciting events are unfolding behind the scenes.

Membership Secretary/Treasurer George Schudel (with help from wife Jeanne) is organizing membership records with a computer database.

An informal, "get aquainted" meeting of board members present is being planned for the 44th Miami International Orchid Show in March.

The deadline for the next issue of *The P. A. News* is March 31, 1989; Volume I, Number 2 is expected to ship April 10, 1989.

Things are happening!

Membership Information

A One Year Membership in **The Pleurothallid Alliance** is available by sending:

$12.50 for a single membership; or,
$15.00 for a household membership

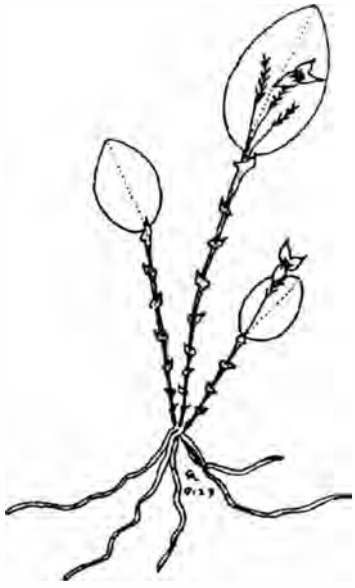
To:

The Pleurothallid Alliance
Route 2, Box 389K
Barnwell, SC 29812

Please send check or money order, payable in U. S. funds through a U. S. bank.

Membership includes a one-year subscription to *The Pleurothallid Alliance News*.

THE PLEUROTHALLID ALLIANCE
Route 2, Box 389K
Barnwell, SC
29812



Lepanthes monteverdensis Luer & Escobar

FIRST CLASS MAIL

ADDRESS CORRECTION REQUESTED

The **Pleurothallid Alliance** News

ACOSTAEA • BARBOSELLA • BARBRODRIA • BRACHIONIDIUM • CHAMELOPHYTON • CONDYLAGO • DRACULA DRESSLERELLA • DRYADELLA • FRONDARIA • LEPANTHES • LEPANTHOPSIS • MASDEVALLIA • MYOXANTHUS • OCTOMERIA OPHIDION • PLATYSTELE • PLEUROTHALLIS • PLEUROTHALLOPSIS • PORROGLOSSUM • RESTREPIA • RESTREPIELLA RESTREPIOPSIS • SALPISTELE • SCAPHOSEPALUM • STELIS • TRICHOSALPINX • TRISETELLA • ZOOTROPHION

Volume I, Number 2 April 1989

San Francisco Conservatory *Masdevallia* Collection

Gary R. Baker

Here on the West Coast, we have a major public repository for *Masdevallia* and *Dracula* species -- the Conservatory in San Francisco's Golden Gate Park.

At present, George Marcopulos reports, there are approximately 300 *Masdevallia* species and 60 *Dracula* species in the collection. I was in San Francisco recently, where I spoke on Masdevallias to the San Francisco Orchid Society. While in that city, I make my third or fourth visit to see the collection. As happened each time in the past, I was deeply impressed.

George, who is in charge of the permanent plant collection at the conservatory, currently grows nearly every *Masdevallia* in New Zealand sphagnum, with outstanding results. He uses both clay and plastic pots, and reports that they serve equally well, with the plastic pots needing less water, naturally.

The plants are not divided as they grow. Rather, the individual divisions are permitted to become quite large specimens, with the result that flower production is truly impressive.

Fertilizer is kept at a minimum. That the plants respond to this regime is evident in the husky, clean plants in the collection.

The San Francisco Orchid Society has been a major supporter of this collection. Private monies have financed the purchase of a significant percentage of these plants. Indeed, several individuals in that society recently contributed $200 each to finance a major purchase of plants from South America. A number of plants have also been donated to the collection.

George emphasized that the conservatory lacks funds to purchase additions to the collection, but he is most open to trading for plants not presently at the conservatory. Anyone who might be able to assist the collection in this regard is urged to contact:

George Marcopulos
Conservatory of Flowers
c/o McLaren Lodge
Fell and Stanyan
San Francisco, CA 94112

George employs an interesting, yet obvious and simple, method to keep down incidence and spread of Bean Yellow Virus. All plants added to the collection from one source are kept together as a block and not intermixed alphabetically with the extant collection. This way, if

See SAN FRANCISCO - Page 5

INSIDE

Growing Pleurothallids In South Carolina

George Schudel

South Carolina is many places with very many different climates. The Piedmont cools off at night while the low country doesn't! Those of us in the low country are jealous as hell of the hill people and they are jealous of northerners in Raleigh, NC, who may freeze to death but their plants look so much better than ours.

Down here the night temperature can stay above 80° F. for weeks at a time. On many days the 60% shaded and cooled greenhouse will hit 100° F.

So how do we grow Pleurothallids under these conditions? Carefully!

The first thing is to pick "warm" growing plants even if their idea of warm is mighty cold by our standards. The second thing is that we place the plants in the blast of a 1/3 HP rotating-belt swamp cooler. It takes months to get Sears to send one into the humid Southeast but since the coolers are in the catalog it will eventually come if you raise enough cain.

The greenhouse is full of fans, both oscillating and ceiling types to keep air moving.

Light is in the 800-1000 ftc. range in the cool end of the space where the Pleurothallids live (and die).

We have potted most of these plants in New Zealand sphagnum in 1", 2", 3", and 4" net pots and 6" net bulb pans. Recently we have started inverting a 1/2" or 1" net pot in the center of the larger pots to provide more air circulation under the base of the plant. This provides excellent drainage, faster drying and

See SOUTH CAROLINA - Page 3

The Pleurothallid Alliance

Purpose: Encourage the cultivation, conservation, and appreciation of all orchids of the subtribe Pleurothallidinae; Assist in disseminating knowledge about them; Gather information about habitats; And support horticultural and scientific studies of pleurothallid orchids.

Honorary Guru
Carlyle A. Luer, M.D.
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The Pleurothallid Alliance News is published quarterly as the official newsletter of The Pleurothallid Alliance.

The Pleurothallid Alliance News is produced using WordPerfect 5.0, a Hewlett Packard ScanJet desktop scanner, and a Hewlett Packard LaserJet II printer with HP 33412 AD and HP 33412 AF Soft Fonts.

Printed in the United State of America by Offset House Printing Company, Indianapolis, Indiana.

March Update: Projects Under Way

Wayne Cokeley
Trustee,
The Pleurothallid Alliance

I am delighted to report that my first appeal for persons to work on committees in the Alliance was a success. As you will recall the last newsletter listed three ideas which had been discussed at the Fall Eastern Orchid Congress as potential projects to be worked on by the Alliance. Of those three the "Awards Project" is now in the hands of Mrs. Margaret Ilgenfritz of Michigan and Gary Baker. They will develop an award or awards in the name of the Alliance and interface with the AOS.

Dr. Mark Wiesman of Minnesota will head up the "Want List" project and will work with Will Rhodehamel. Expect to see something related to this project in future newsletters. My thanks to all of our new volunteers. It is great to see the spirit of the Alliance growing!

I am still seeking a volunteer to work on the Numerical Museum Code project. But if this project does not appeal to you perhaps one of the below will.

Sandra Radimer from New Jersey has suggested that the Alliance construct a portable graphics and transparency display which can be shown as an exhibit in shows around the country both as an educational and recruitment tool. This exhibit would be available for loan by societies with members in the Alliance or by similar venture. She is currently exploring the cost of this idea - but she would like help. Contact me.

It was originally suggested that the Alliance construct a slide and video library which would amass a collection of slides of Pleurothallid species only. These slides would be openly available to members for use in identification of plants or for programs. The setup of this library and the means for obtaining slides is yet to be determined. Any volunteers?

Roger Daniels of the North Jersey Orchid Society was kind enough to videotape the programs presented on Pleurothallid Sunday at the North Jersey EOC in October. He has given us the tape and rights to use it as we wish. Programs include Marguerite Webb of J & L Orchids presenting an excellent program on "Modern *Masdevallia* Hybrids," Walter Teague looking at the "Wild Pleurothallids of Ecuador," Theresa Hill of Hillsview Orchids speaking of "Draculas - Phantoms of the Orchid World," Dave Allison of Species West showing us how the "Masdevallias of Peru" live in the wild and finally yours truly rambling on my favorites "The Restrepias and Their Culture." While I admit the production of this feature will never make MTV and the soundtrack is a bit poor in parts it represents the first ever feature program devoted exclusively to the Pleurothallids. Look for it to be available at your Alliance video library soon. (And thanks Roger!)

With that the Report of the Projects Committee is finished for this month. Please - get involved! This is your Alliance. We want to hear from you!

[Editor's Note: See Mark Wiesman's article calling for submissions to the Want List Registry on Page 8.]

Illustration: Joyce B. Marshall

Masdevallia caudata Lindley

The President's Column

Gary R. Baker
President,
The Pleurothallid Alliance

Well, the first issue of *The Pleurothallid Alliance News* came out on schedule, and it looked even better than I dreamt it would. I heard many positive comments about the newsletter at both the San Francisco and Miami orchid shows. Will Rhodehamel did a superb job on the paper. My public commendations to him!

You will notice that this issue is punched for a 3-ring binder. It seems that when I was in San Francisco for their show in February, I was asked why *The Pleurothallid Alliance News* isn't punched for inserting in a 3-ring binder. I responded that no one had thought about doing it. The idea simply never came up. From now on, we would punch the newsletter so everyone can keep the issues neatly together in a binder. So if YOU have any thoughts that would improve the newsletter, please let Will know!

Elsewhere in this newsletter, you will find a new News & Views column. This is a place for everyone to list things going on, thoughts about Pleurothallid matters, or whatever, things which don't need a full article to list them. Again, send your news items or viewpoint comments to Will, so that the column will not just be things that he and I write! There can be News & Views only if you share things YOU know or think. You will also notice a listing of recent award actions regarding Pleurothallids. Just jot your comments down in a letter or on a post card (still only 15 cents!) and send them in.

South Carolina

(From Page 1)

longer lasting compost. It also means more frequent watering but much better control over soggy conditions.

Some plants do well on small tree fern slabs or cork, others need more water retention. Being lazy we might stick the mounted plant into a pot with sphagnum.

Our water is borderline, coming from a limestone well with about 175 ppm of dissolved salts and a pH of about 7.8.

We use a proportioner with the well water that adds phosphoric acid, very dilute balanced nutrients and a trace of vitamins and hormones. Watering can range from very heavy when flushing to misting. Some water is applied every sunny day if one of us is home.

At times we use reverse osmosis to remove 2/3 of the salts. This water goes to plastic barrels where acid, nutrients, etcetera, are added and the mix is sprayed on the plants with a little sump pump.

This summer things got very hot and some plants looked as though a forest fire had gone through the pots there were so few leaves left. At that time we noticed that the warm nutrient broth had been discovered by some fungi so we may have been watering with a fungal culture. At that point we went back to well water, Physan, fogging, and *cooler weather*. Reincarnation took place. When you have three changes you can take your choice of what caused the improvement but the cooler weather probably helped the most.

Fog nozzles under the benches try to maintain 60-70% relative humidity. You can set the humidistat for anything you want and even with the swamp cooler and a naturally humid climate we cannot get 70% on a sunny day due to the solar heat gain in the greenhouse.

By next spring we will have designed and built (we hope) an air conditioned grow light Wardian case. Just because the laws of nature and common sense say we cannot grow Draculas down here doesn't mean that we don't plan to try!

Most important is the list of plants that have not escaped to the compost heap under our miserable conditions. These include:

Pleurothallis antonensis
" *boliviana*
" *cardiothallis*
" *circumplexa*
" *coriacea*
" *gelida*
" *ghiesbreghtiana*
" *grobyii*
" *janetae*
" *latifolia*
" *leptotifolia*
" *mirabilis*
" *minuthalis*
" *minuta*
" *obscura*
" *pachyglossa*
" *parviflora*
" *picta*
" *praegrande*
" *pringlei*
" *pruinosa*
" *pubescens*
" *restrepioides*
" *rowelii*
" *ruscifolia*
" *schiedii*
" *sonderana*
" *stenostachya*
" *stenopetala*
" *suspensa*
" *triangupetala*
" *tribuloides*
" *velaticaulis*
" *14115 from Species West*
" *sp. (36 plants)*

Masdevallia floribunda
" *gutierrezii*
" *infracta*
" *uncata*

Restrepia filamentosa
" *lankestri*
" *sp. (3 plants)*

Stelis sp. (6 plants)

Barbosella durenii
Barbosella landroy
Dryadella edwallii
Lepanthes sp.
Lepanthopsis astrophora 'Stalky' CBM/AOS
Lepanthopsis floripectin
Octomeria tridentata 'Gundlach' CBR/AOS
Platystele stenostachya
Restrepialla ophiocephala

Masdevallia instar versus *Masdevallia triangularis*

Carlyle A. Luer
Honorary Guru,
The Pleurothallid Alliance

I have been asked to explain the differences between *Masdevallia instar* Luer & Andreetta and *Masdevallia triangularis* Lindley besides the differences that can be recognized from across the room. To me the differences are obvious, and I am always surprised when someone cannot see them. Perhaps some difficulties arise from misidentifications of plants in question.

Prior to last year, *Masdevallia triangularis* was known only from the costal mountains and the Cordillera de Mérida of Venezuela, and the adjacent Eastern Cordillera of Colombia. *Masdevallia instar* was known form southeastern Ecuador and northeastern Peru. Last year, *Masdevallia triangularis* was discovered in quantity by Father Andreetta in one area of southeastern Ecuador very near a known locality of *Masdevallia instar*. This is another of several very interesting disjunct distributions that have come to our attention. The flowers are indistinguishable from those found in Venezuela, with only a few intermediate forms between the two species having been seen.

First, the similarities of the two species are many. Vegetatively they are indistinguishable from each other, and both are indistinguishable from numerous other species in subsection *Masdevallia*. Both produce a solitary, long-tailed flower of the same size on a slender peduncle about as long as the leaves. The colors are also similar: yellow sepals finely dotted with purple, white petals, and a yellow lip with a dark purple apex.

Now, the differences. They look different. First, the sepals of *Masdevallia triangularis* are triangular, acute, and deeply connate to near the middle to form a widely spread, flat, triangular flower. The angle between the dorsal sepal and the lateral sepal is broadly obtuse. See Figure 4. The sepals of *Masdevallia instar* are ovate,

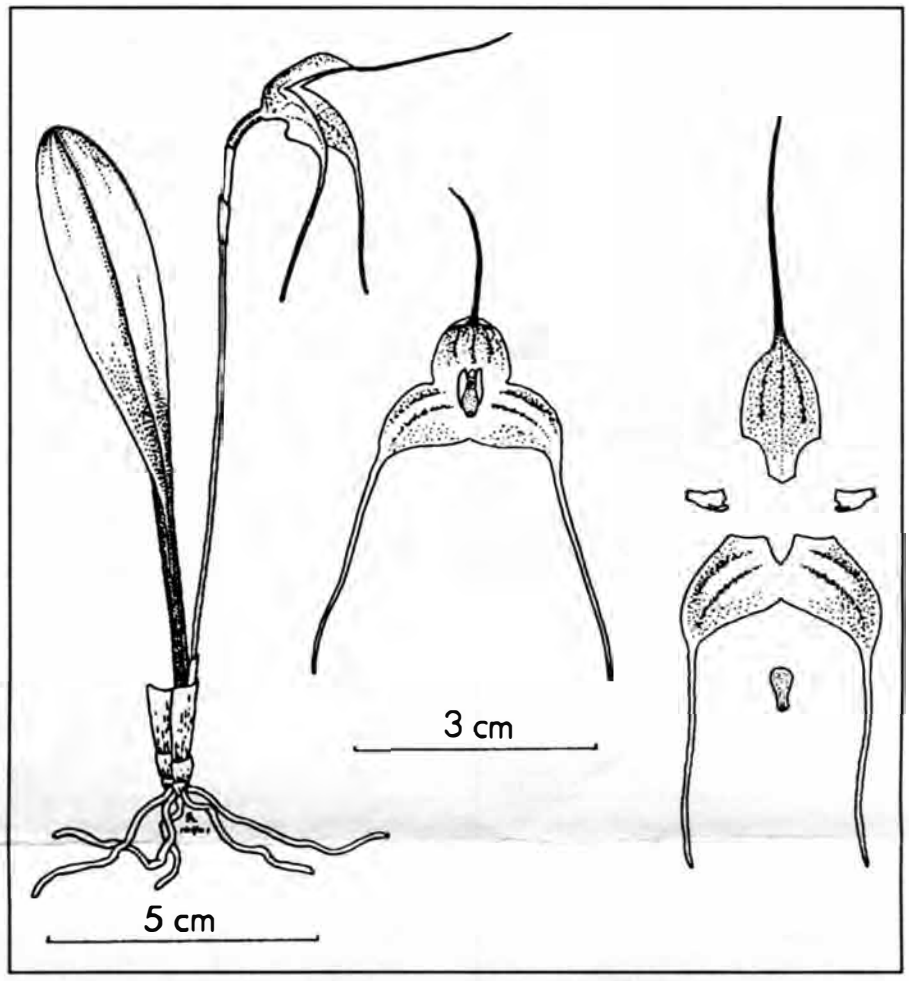


Figure 1 - *Masdevallia instar* Luer & Andreetta

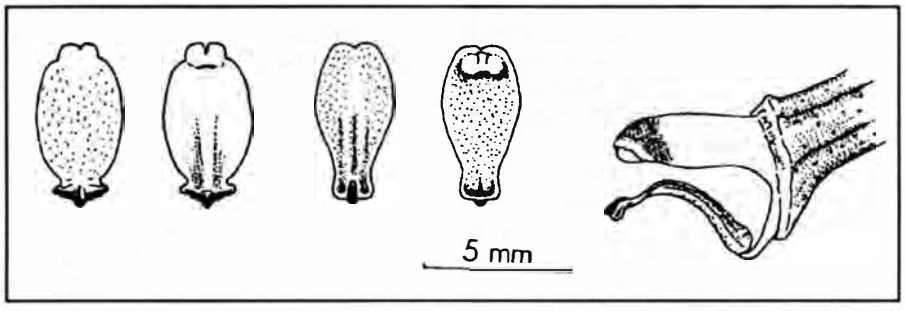


Figure 2 - Lip and column of *Masdevallia instar*

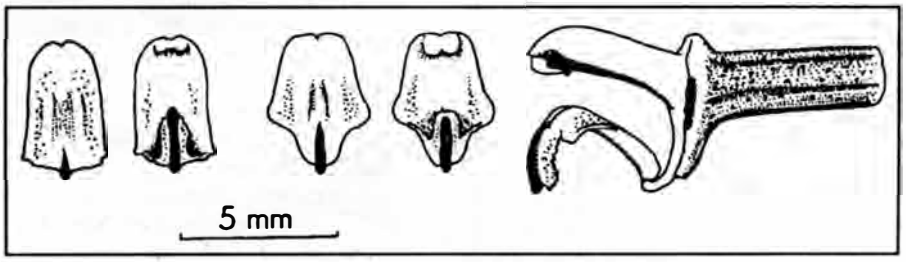


Figure 3 - Lip and column of *Masdevallia triangularis*

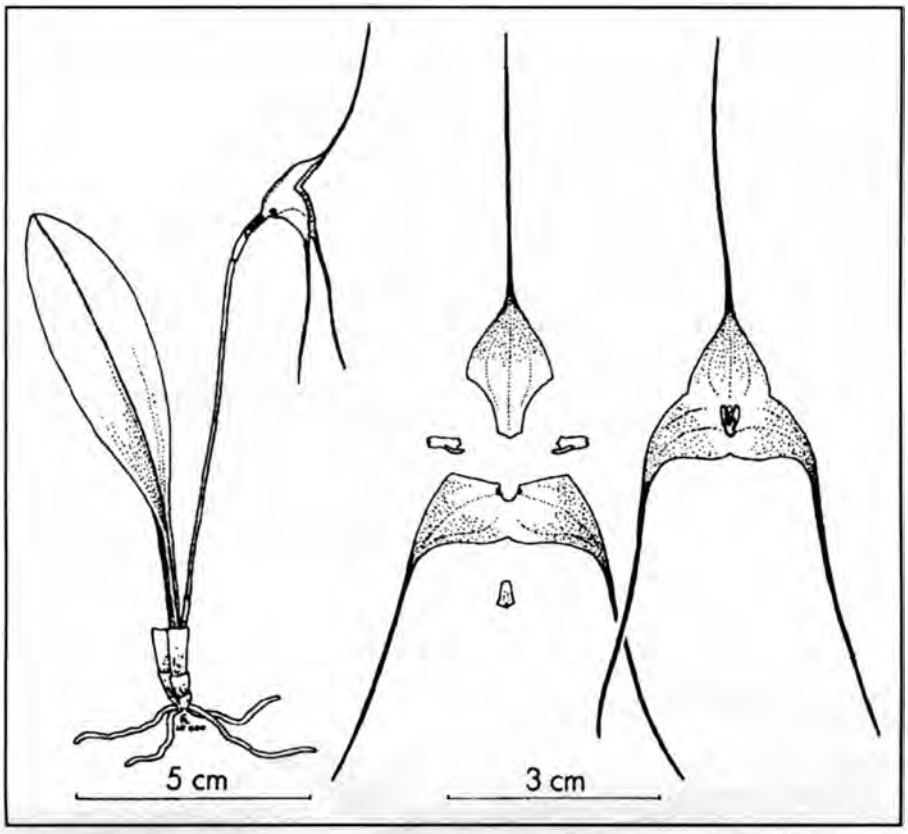


Figure 4 - *Masdevallia triangularis* Lindley

subacute to obtuse, and connate below the middle to form a cupped flower with a prominent secondary mentum. The angle between the dorsal sepal and the lateral sepal is acute to subacute. See Figure 1. Beware of comparing immature or old flowers of *Masdevallia triangularis* that may be partially closed.

Secondly, the apices of the lip are different. All species in subsection *Masdevallia* are characterized by a midline callus near or at the apex of the lip. The apex of the lip of *Masdevallia triangularis* is narrowed into a decurved, denticulate middle lobe with an elongated callus. See Figure 3. The apex of the lip of *Masdevallia instar* is truncate and non-denticulate with only the margin barely recurved if at all, and with a short callus. See Figure 4.

There can be no doubt that the two species are very closely allied, previously thought separated geographically, but now that the typical *Masdevallia triangularis* has been found within the range of *Masdevallia instar*, the concept of two species is strengthened.

San Francisco

(From Page 1)

any newly acquired plant should show signs of Bean Yellow Virus, others plants from the same source are already isolated, so to speak, and can be watched carefully for symptoms of the disease.

Support for the orchid collection has taken many guises. In addition to plant donations and the contribution of funds to purchase needed additions to the collection, in 1984 the San Francisco Orchid Society provided the financial means for the acquisition of a display case for orchids in bloom. The case measures, by my rough estimate, 3 feet deep, 12 feet wide and 10 feet high. Its dimensions permit a vertical as well as horizontal display of plants in flower and species with long arching inflorescences, such as is seen in some Oncidiums, or pendant spikes, as are to be found in Stanhopeas, can be displayed naturally for the enjoyment and education of the public. A second display case was furnished by one of the San Francisco garden clubs.

What is urgently needed now is a display case with appropriate cooling equipment, strictly for the display of these magnificent Masdevallias and Draculas as they come into flower.

When I most recently visited the conservatory, there was a plant of *Masdevallia veitchiana* with about a dozen huge, brilliantly hued flowers open on their 2 foot stems. Imagine a display case for Pleurothallids anchored by this magnificent specimen. Its impact on the general viewing public would be overwhelming, simply because a large specimen of *Masdevallia veitchiana*, such as I saw, is by itself overwhelming.

Imagine what such a display case would do to increase the public's awareness of these orchids, which are as stunningly attractive as they are unusual. This is a matter which I hope The Pleurothallid Alliance can address in the not-too-distant future.

The uniqueness and importance of this major collection should be apparent to all members of The Pleurothallid Alliance. In addition, I do not need to emphasize the beauty of these plants when they flower. The striking aspect of plants copiously covered with their unusual and attractive flowers makes them rival any orchid in sheer beauty and public appeal.

Special mention is due Mary Barnes, General Manager of San Francisco Parks, and Jim Rogers, Superintendent of Golden Gate Park, for their astute decision to permit this collection to be built. May a suitable display case be acquired soon so that the true magnitude of this significant collection can be appreciated by the countless thousands who visit the conservatory yearly.

The Question Pot

William Ames Rhodehamel
Editor,
The Pleurothallid Alliance News

It has been suggested that *The Pleurothallid Alliance News* contain a regular column addressing questions or problems sent in by members. This, and Dr. Luer's article on *Masdevallia instar* and *Masdevallia triangularis*, is the inaugural appearance of that column.

There are a number of types of questions that can be addressed in this format. Questions concerning culture, taxonomy, or problems could be answered. The article by Dr. Luer describing the differences between *Masdevallia instar* and *Masdevallia triangularis* is the first question addressed through this format (that question was raised by Alliance President Gary R. Baker). Questions will be gladly accepted on any subject. We will try to have recognized experts provide answers.

There are a number of questions that have been suggested for us to submit to Dr. Luer (such as the status and definition of *Restrepia antennifera* and related species; also the differences between *Masdevallia amabilis* and *Masdevallia barlaeana*), but we don't want to try Carl's patience or wear him out. There are also a number of cultural problems that could be addressed, such as cultural questions relating to underlights or greenhouse growing, questions about seed propagation techniques, or problems with particular species. The column is only limited to the types of questions submitted by members.

Members are encouraged to submit questions of general or specific interest that could be addressed in this column. Questions will be answered in a timely manner. Questions should be addressed to:

The Question Pot
The Pleurothallid Alliance News
P. O. Box 68811
Indianapolis, IN, 46268.

Even if a question is not addressed in *The Pleurothallid Alliance News*, we will try to answer in a more personal format.

News & Views

Compiled by
Gary R. Baker &
William Ames Rhodehamel

There will be a meeting of The Pleurothallid Alliance at 1:00 PM, October 14, 1989, in Oklahoma City in conjunction with the AOS/SWROGA meetings. No Pleurothallid talks are planned at this gathering. This will be a chance for members to get together, meet each other, exchange ideas and hear an account of the current state of The Pleurothallid Alliance. I hope to see many of you there.

As usual, the San Francisco Orchid Society Show could have been labelled a Pleurothallid show. The recently described *Masdevallia hirtzii* was seen in abundance, in full brilliant flower. As usual, the San Francisco Conservatory put in an impressive display of specimen Masdevallias and Draculas. The Draculas even held up for the duration of the show, so cold was the hall where the show was held! There were several awards given at that show to Masdevallias, including an AM to the finest *Masdevallia* Heathii (Tom Perlite's) I have ever seen. Two *Masdevallia* Angel Glow clones got HCCs, one belonging to J&L (naturally) and the other to Bartley Schwarz. A CBR (provisional) was given to a *Masdevallia hercules* of Pui Chin's. Pat Hill had a plant of *Masdevallia coccinea* 'Dwarf Pink', HCC/AOS, blooming better than I ever recall seeing of this clone. Its large (for this clone) rich lavender pink flowers attracted much attention and inquiries about divisions. Another delightful plant was a well-grown, floriferous plant of *Pleurothallis phalangifera* 'Fox Den', the black-maroon colored clone of this species. Pui Chin brought in *Masdevallia racemosa* in flower, always a standout at the SF show (he brings it in every year!). And all this was just the start of the riches at this show!

The Pleurothallid Alliance had its own display in the recent Northwest Orchid Society Show in Seattle. I did a simple display consisting of baskets filled with Pleurothallids. To cover the pots, dry Spanish Moss was used. Each plant was labelled with a number and these were keyed to names on separate sheets of paper. A list of all the people who contributed plants to the exhibit was provided, and a copy of *The Pleurothallid Alliance News* was taped to the table. Handouts for TPA membership were available. I mention this display as it was set up in limited time and enabled the alliance to present itself before the orchid public. About a dozen people contributed plants to the exhibit.

Volume 5 of *Icones Pleurothallidinarum* is out. It covers the systematics of *Dresslerella* and *Scaphosepalum*. For those of you who might not be familiar with this invaluable series, it is written by Dr. Carlyle Luer, our Honorary Guru (naturally!), and is published by Missouri Botanical Garden. I get my copies from Twin Oak Books. Volume 4 covered *Acostaea, Condylago* and *Porroglossum*. These two volumes covered all the known species in these respective genera. Volume 3 discussed the systematics of *Pleurothallis*, while Volume 2 took up *Masdevallia*. These two volumes detailed classification of these genera, and listed known species in the various sections, subsections, etcetera. The first volume of this series discussed structure of Pleurothallids and gave an overview of the classification in the group. I can't recommend these too highly. They are essential for anyone wanting to know just how many species there are of, say, *Scaphosepalum*, what the names of the species are and what they look like. And they are inexpensive, too. If you don't have them, GET THEM!

Anyone wishing membership applications for TPA can get them from either Will Rhodehamel or Gary Baker. Will has created an attractive, laser-printed form which speaks highly of the alliance. Let either of us know how many you need for distribution.

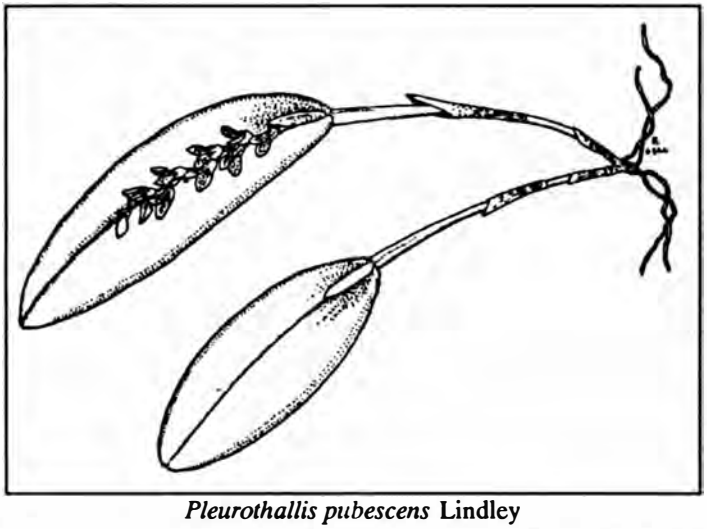
Next spring, The Pleurothallid Alliance

CONTINUED Next Page

will hold a meeting on the West Coast, location not yet determined. We are considering three possible shows where we could meet. Final plans should be in the next issue of the newsletter.

Don Hermann was approached about the potential of us printing information about Pleurothallid awards as they are granted at shows and monthly judging sessions. These would all be provisional, since the work on the awards would not yet be completed. The idea was that this would enable the members of the alliance to keep abreast of just what is being recognized by the judging community, to get an idea of crosses which are producing award quality seedlings, and to keep up with various species being granted CBRs and CHMs. Don gave us the go-ahead to do this, recognizing that this is aiding in disseminating information. Hence *The Pleurothallid Alliance News* will be involved in another educational area. The first awards are listed separately. Do remember that all these awards are provisional, that the plants listed do not yet awards. When awards are complete, they are printed in the Awards Quarterly, as you all know.

Members are encouraged to send items for inclusion in the News & Views Column. Send any informational or news item to News & Views, c/o Gary R. Baker, P. O. Box 23102, Seattle, WA, 98102; or to News & Views, *The Pleurothallid Alliance News*, P. O. Box 68811, Indianapolis, IN, 46268.



Pleurothallis pubescens Lindley

Secretary/Treasurer's Report

George Schudel
Membership Secretary/Treasurer
The Pleurothallid Alliance

Membership is growing rapidly by word of mouth and as a result of the articles in the February 1989 *AOS Bulletin*. At this point (April 1) we have 140 single and 42 household memberships.

Most are in the cooler parts of the world where it makes sense to grow Pleurothallids, but it is nice to know that we are not the only fools trying to grow them where one should not.

Distribution by countries, states and provinces is as follows:

Australia 3. Canada: Alberta 1; B.C. 6; Nova Scotia 1; Ontario 4; Quebec 1. Mexico 1. New Zealand 2. Sweden 2. USA: CA 37; CT 8; CO 2; FL 3; GA 3; IL 6; IN 2; MA 4; MD 2; ME 2; MI 7; MN 5; MO 2; NC 4; NH 2; NJ 12; NY 8; OH 4; OK 1; OR 3; PA 8; SC 6; TN 4; TX 2; UT 1; VA 3; WA 20.

By the July issue of *The Pleurothallid Alliance News* we hope to publish a membership list so you can reach like-minded members in your area.

The treasury stands at $3,374.62 as of April 1, 1989, so we are in fine shape.

Award Actions Around The Country

Gary R. Baker

Here is a list of recent judging actions by AOS judges around the country. This information is provided for purposes of education. Please keep in mind that the awards which will be printed are not final; they merely represent the action of judging teams around the country. When you see them in the *Awards Quarterly*, you will know that they have been approved. Until then, regard them as provisional. Is the information provided here adequate? Do you wish more information about the plants? Let me know.

Lepanthopsis floripecten 'J&L'
J&L Orchids CCM
33rd EOC, Secaucus, NJ 10/20/88

Masdevallia Freckles 'J&L'
J&L Orchids AM - 80 pts.
33rd EOC, Secaucus, NJ 10/20/88

Masdevallia Harlequin 'D and B'
Mr. & Mrs. Barry Woodson
HCC-78 pts Dallas, Tx 2/11/89
Described as having very dark symmetric striping on very light lavender background.

Masdevallia lamprotyria 'Faerie Wings'
Pat Pettit CCM
Tacoma, WA. 2/18/89 (has an AM/AOS)

Masdevallia tovarensis 'Puffin'
Conservatory of Flowers CCM
San Francisco, CA 1/3/89

Pleurothallis vittariifolia 'Leon'
Ann & Phil Jesup CBR
33rd EOC Secaucus, NJ 10/20/89

Again, let me emphasize that this information is here for educational purposes. It is *NOT* a record of awarded plants; that you will find in future issues of the American Orchid Society *Awards Quarterly*!

ADDRESS CORRECTION REQUESTED

Pleurothallis janetiae Luer

THE PLEUROTHALLID ALLIANCE
Route 2, Box 389K
Barnwell, SC
29812

FIRST CLASS MAIL

Want List Registry Calls for Submissions

Mark Wiesman
Want List Registry Chairman

The Pleurothallid Alliance Want List Registry is ready to start compiling want lists in preparation for publishing the Alliance Registry. Members are encouraged to send their Want Lists for inclusion in the Registry.

The suggested format for want lists is for members to send their 20 most wanted *Masdevallia* species, and 10 most wanted other Pleurothallid species; or just list the top 30 species or hybrids wanted. Lists should include member's name, address and phone number.

Send want lists to:

Dr. Mark Wiesman
Ark Pet Hospital
Apache Plaza, # 15F
3700 Silver Lake Road
Saint Anthony, MN 55421

Membership Information

A One Year Membership in **The Pleurothallid Alliance** is available by sending:

$12.50 for a single membership; or,
$15.00 for a household membership

To:

The Pleurothallid Alliance
Route 2, Box 389K
Barnwell, SC 29812

Please send check or money order, payable in U. S. funds through a U. S. bank.

Membership includes a one-year subscription to *The Pleurothallid Alliance News*.

Advertising & Conservation News

One of the goals of The Pleurothallid Alliance is the conservation of Pleurothallids in the wild. This can be aided by growing species from seed, buying plants grown from seed, and growing the plants better under our conditions.

To further these goals we would like to compile a list of amateur and professional growers who have individual species available from artificial propagation. If you have flasks, community pots, or individual plants available for sale or exchange, please send this information to: Jeanne Schudel, Route 2 Box 389K, Barnwell, SC, 29812. We will maintain a master list that can be used for publication as space permits. Advertising for such plants will be accepted for future issues of *The Pleurothallid Alliance News*.

The **Pleurothallid Alliance** News

ACOSTAEA • BARBOSELLA • BARBRODRIA • BRACHIONIDIUM • CHAMELOPHYTON • CONDYLAGO • DRACULA
DRESSLERELLA • DRYADELLA • FRONDARIA • LEPANTHES • LEPANTHOPSIS • MASDEVALLIA • MYOXANTHUS • OCTOMERIA
OPHIDION • PLATYSTELE • PLEUROTHALLIS • PLEUROTHALLOPSIS • PORROGLOSSUM • RESTREPIA • RESTREPIELLA
RESTREPIOPSIS • SALPISTELE • SCAPHOSEPALUM • STELIS • TRICHOSALPINX • TRISETELLA • ZOOTROPHION

Volume I, Number 3 July 1989

Masdevallia veitchiana As A Parent

Gary R. Baker

Recent flowering of a new hybrid using *Masdevallia veitchiana* as a parent prompted me to write a short article discussing the various hybrids bred out of this spectacular species. The particular hybrid which inspired this article used *Masdevallia uniflora* as the other parent. Gerardus Staal made the cross.

The hybrid which we recently flowered, with *Masdevallia uniflora* as the other parent, produced a single flower, much like *Masdevallia* Marguerite in form, but of a soft light orange overlaying a pink background color. It got the clonal name 'Beautiful', since that seemed to be the single word most often used by those who observed the flower. Truly, it was beautiful.

Masdevallia veitchiana has been used to produce more hybrids than any other species of this large, diverse genus. The reasons for its usage are many. It bears large, brilliantly colored flowers (intense orange with purple hairs) of exceptionally pleasing form, with quite long stems subtending the flowers. Seed pods are carried with considerable ease, while the large pods frequently have a relatively large number of seeds. Of minor, but not negligible importance, is the fact that the stigmatic cavity is unusually large for a member of the coccinea section of the genus. This contributes to the ease with which these flowers are pollinated. Anyone who has attempted to place pollinia in the stigmatic cavity of one of those species with a tiny cavity appreciates the copious room afforded by the flowers of *Masdevallia veitchiana*.

In addition, as the women at J & L are happy to mention, *Masdevallia veitchiana* is easy to flower in the northeast, whereas the equally beautiful and vastly more varied *Masdevallia coccinea* is difficult to flower for them. Hence, they simply have more flowers of *Masdevallia veitchiana* they can use for hybridizing, with the result that J & L has introduced a number of recent hybrids with this species as one parent.

This is a situation we do not see in the Pacific Northwest, where both species flower freely, leading to a greater use of *Masdevallia coccinea* in breeding here than in the east.

Masdevallia veitchiana has one limitation on its use as a parent: its powerful impact on color. I have heard more than one pleurothallid orchid lover speak despairingly of "all those orange hybrids." To a degree, that is true, though that attitude overstates the situation. While hybrids such as *Masdevallia* Angel Frost and *Masdevallia* Copper Angel are both "orange", so different are the actual colors and forms that these really are vastly dissimilar in appearance.

There is one natural hybrid listed in *Sanders' Complete List of Orchid Hybrids*.

See - VEITCHIANA - Page 4

INSIDE

The Differences Between *Masdevallia amabilis* & *Masdevallia barlaeana*

Carlyle A. Luer
Honorary Guru,
The Pleurothallid Alliance

The biggest difference between these two species lies in the spelling of their names. I really cannot see a good specific difference in the floral characters. In *Masdevallia* the sepals are the largest and most prominent parts of the flowers, and it is by them that we really have learned to recognize a species.

The colors of the sepals of *Masdevallia amabilis* vary from white, through the purples to red, often darker in color along the veins. The color of *Masdevallia barlaeana* is usually red, a color also seen in *Masdevallia amabilis*.

There are other instances in which less similar taxa have been lumped together, sometimes, I am ashamed to say, for convenience. Greater differences exist in the appearances of *Masdevallia calocodon* and *Masdevallia yungasensis*, but we combined these two in *Thesaurus Masdevalliarum*. I am not at all convinced that they are the same species. It has been difficult to be consistent in the handling of so many species over long, interrupted periods of time.

We pondered for a long time the possibility of combining *Masdevallia barlaeana* with *Masdevallia amabilis* in *Thesaurus Masdevalliarum*. One of the reasons that we decided to treat them separately was that they have both been well-known in the trade for over a

See DIFFERENCES - Page 5

The Pleurothallid Alliance

Purpose: Encourage the cultivation, conservation, and appreciation of all orchids of the subtribe Pleurothallidinae; Assist in disseminating knowledge about them; Gather information about habitats; And support horticultural and scientific studies of pleurothallid orchids.

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The Pleurothallid Alliance News is published quarterly as the official newsletter of The Pleurothallid Alliance.

The Pleurothallid Alliance News is produced using WordPerfect 5.0, a Hewlett Packard ScanJet desktop scanner, and a Hewlett Packard LaserJet II printer with HP 33412 AD and HP 33412 AF Soft Fonts.

Printed in the United State of America by Offset House Printing Company, Indianapolis, Indiana.

Pleurothallis cylindrica: A Truly Bizarre Pleurothallid

Wayne Cokeley

Of the plants in my collection which appeal to me most, perhaps the most unique is *Pleurothallis (Physothallis) cylindrica*. Superficially, the plant habit is nothing special. Large, hard, spatulate leaves are held upright on stiff ramicauls. In all, the plant resembles the widely known *Pleurothallis restrepiodes*. However as the flowering season begins each leaf produces a wire-thin spike which grows and grows. After a period of several weeks, a cluster of buds appears at its top and the first of these starts to expand. By this time the spike is a floppy 12" to 18" long and is dangling in space over the plant.

The flowers produced are cream-colored tubes approaching an inch in length. Each corolla has a number of purplish candy stripes, and there is a dark ring surrounding a tiny opening at the end of the tube. I have never detected any scent in these blossoms but the aperture is so small that perhaps only small quantities escape the bloom.

Luer states in *Icones Pleurothallidinarum III: Systematics of Pleurothallis* that *Pleurothallis cylindrica* is one of two species in the subgenus *Physothallis*, the other being *Pleurothallis neoharlingii*. Both species are terrestrial plants from the dry highlands of southern Ecuador. The plant's gross anatomy would suggest that it grows amongst grasses or brush and that the upright, wiry spike rises above this growth to reach pollinators. The long tubular flowers suggest pollination by hummingbirds, but since the flower is not orange or red and apparently lacks any substantial nectar reward, I feel this is unlikely. Perhaps hover flies are the pollinators here, as they are with certain *Ericaceous* plants of similar structure here in the northeastern United States.

As for culture of *Pleurothallis cylindrica*, well, I grow it by the seat of my pants (quite uncomfortable!). I give my plant a shaded southern exposure and cool/intermediate conditions. It is potted in Osmunda and receives a heavy misting daily. Drenching and feeding are weekly events. To date I have put substantial growth on the plant and it has flowered four times in three years. I can't ask for much more.

This species is one which I hope to propagate from seed eventually. So far attempts to pollinate it have been futile, but I keep trying.

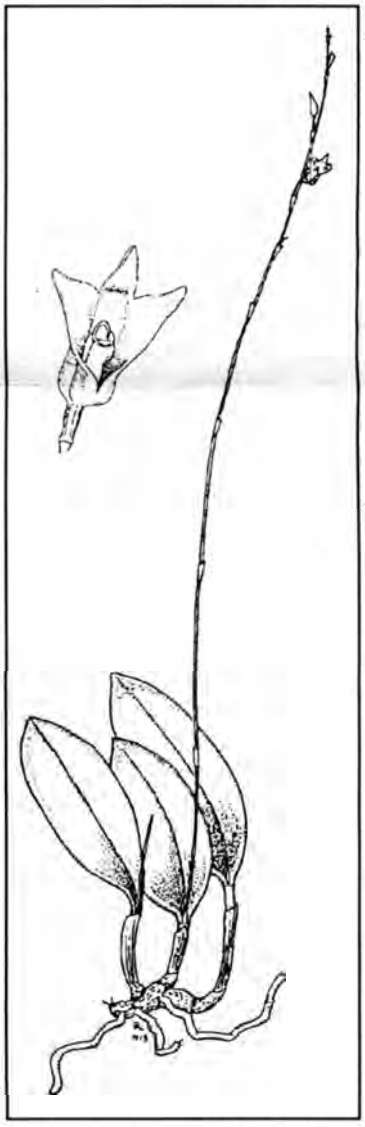


Illustration: Carlyle A. Luer

Pleurothallis neoharlingii Luer

(A closely related species.)

An Andean Resort In South Carolina

George Schudel

William Rhodehamel in his book, *A Masdevallia Cultural Guide*, mentioned that he had heard of cooling systems that used an air conditioner combined with a swamp cooler. He had never seen one, but it would be an expensive and complicated system.

Since sanity and membership in The Pleurothallid Alliance are mutually exclusive such a challenge could not go unheeded, so along with doubtless many others, I went ahead and built the fool thing. It is not quite as bad as it sounds. I did not try it with the greenhouse because our summer sun in South Carolina goes right through shade cloth and everything else. Instead a *compromise was struck and since I still had 8' high-output fluorescent lights from an earlier growing era, a 5' x 12' bench for growing under the lights and a small window mounted swamp cooler most of the pieces were here.

A styrofoam top replaced the wire mesh that had covered the table and this was covered with scrap plywood when we discovered that the styrofoam did not have any strength.

Three foot side and end walls were framed as well as a pair of partitions. One partition cut off a 4' x 5' utility end and the other divided the growing area lengthwise. A 5,000 BTU high efficiency air conditioner was purchased and mounted in the utility end belching its heat into the basement room. This cools and dries the air. The swamp cooler was placed on one side in the partition separating the utility from growing area. The long partition dividing the growing area has an opening in the far end to permit air from the swamp cooler to go down one side and come back on the other. The utility partition is closed with styrofoam on the cooler side to avoid short circuiting and left open on the return side. The cooler puts the moisture back into the air and further cools it.

The utility area is covered with a styrofoam sheet held in place with bricks to provide access to the air conditioner at least until we think we know what we are doing.

The growing area is covered with polyethylene to keep some of the heat from the 8 light bulbs out of the box. For the time being styrofoam sheets are acting as "doors" since this is a low budget experiment. The sides, partitions and bottom are lined with polyethylene. Staging is made of 1" x 2" fencing which also provides hanging areas on the main partition and the ends.

The first test run was without a thermostat. This was a disaster because the air conditioner filled itself with a glacier. A thermostat was stolen from an evaporative cooler in one of the greenhouses and set for 65°F. This cured the icing. To reduce cycling of the air conditioner the thermostat was placed in the path of the return air.

Basically the system works - 66°F and 80% relative humidity and about 500 foot candles of light, so after a couple of months the plants look happy, very happy compared to last summer in the greenhouse.

Of course, changes are in the works now that we can justify raiding the piggy bank. A plexiglass top will replace the polyethylene to make it easier to vacuum off the kamikaze insects that dive bomb the lights and give better insulation. A two step thermostat with a clock will permit the day-night temperature changes that Will recommends in his book. The air conditioner will be moved to an outside window to put the heat outside and a new utility box will be built to connect to the window area. This will immediately give us another 20 square feet of growing area. Have you heard that before? Finally, plexiglass sliding doors will be installed if we live that long.

A few comments:

1. Make the utility box big enough to reduce cycling of the air conditioner.

2. We run the swamp cooler 24 hrs a day and have a door to add about 1 gallon of water per day.

3. In the growing area we are adding a floor of plastic trays to hold water for humidity and catch most of the run-off from watering since we do not really trust the polyethylene.

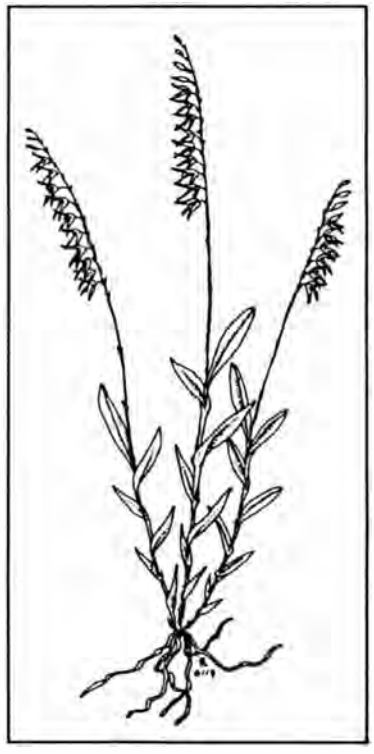
4. You can save electricity by hermetically sealing everything but the plants will do better with some air leaks.

5. We mounted the air conditioner high so that we could pipe the condensate to the swamp cooler. Then we found out that modern air conditioners use their condensate to cool the condensing coil and another lazy man's invention bit the dust.

6. A high efficiency air conditioner has bigger coils and more air movement. This reduces the temperature differential and the tendency to freeze up.

7. The utility area can be under the table if you are young enough to crawl down there for servicing.

8. The blower fans and compressor are rumored to make some noises that can be heard in the bedroom above!



Frondaria caulescens (Lindl.) Luer

Masdevallia veitchiana

(From Page 1)

Masdevallia Parlatoreana, with *Masdevallia barlaeana* as the other parent. I once owned a plant of this hybrid, but it, like a number of fine things, went the way of Bean Yellow. Its flowers were smallish, not much larger than those of *Masdevallia barlaeana*, and of quite a rich coral red color.

Thus the earliest registered hybrids from *Masdevallia veitchiana* are over 100 years old!

The following is a list of the hybrids out of *Masdevallia veitchiana* rearranged by the alphabetical order of the other parent.

Hybrid:	Other parent:
Acis	*abbreviata*
Chelsonii	*amabilis*
Prince Charming	*angulata*
Urubamba	*ayabacana*
Alceste	Asmodia
Kimballiana	*caudata*
Chaparana	*chaparensis*
Falcata	*coccinea*
Hebe	*coriacea*
Bocking Hybrid	*cucullata*
Gairiana	*davisii*
Veitchiane-estradae	*estradae*
Sugar Baby	*floribunda*
Veitchiane-fragrans	*fragrans*
Heathii	*ignea*
Marguerite	*infracta*
Glow Worm	*limax*
Marimba	*peristeria*
Don's Angel	*rolfeana*
Imogen	*schlimii*
Circe	*schroederiana*
Angel Frost	*strobelii*
Angel Tang	*tonduzii*
Amesiana	*tovarensis*
Copper Angel	*triangularis*
Veitchiana-wageneriana	*wageneriana*

Looking over this list, you will observe that 15 of the hybrids were registered by 1903, the year that *Masdevallia* Veitchiane-fragrans was named. Then no further introduction were registered until McLellan named *Masdevallia* Prince Charming in 1979. Ten further introductions have been registered since that one in 1979, seven by J & L, and one each by the Beall Company, Dr. E. Katler and Santa Barbara Orchid Estate. There will be many more to follow, by these and others. I know that Dr. Gerardus Staal (Peninsula Orchids) has germinated a number of new crosses, as have others. One interesting sidelight to this is the fact that a number of these early hybrids were recreated in recent years. I think, first of all, of the remake of *Masdevallia* Falcata by either Fergie Beall or Don Richardson, which the Beall Company sold nearly 20 years ago. Several of these have been awarded, including *Masdevallia* Falcata 'Don Richardson', AM/AOS, which was simply the most magnificent hybrid I have ever seen in this genus. Its colors were absolutely electrically florescent. It received a very high AM on a cut scape sent to New York for judging.

This clone, like all others I have seen in this grex, are very reluctant bloomers. Here in Seattle, we can flower both parents (*Masdevallia veitchiana* and *Masdevallia coccinea*) with ease, yet *Masdevallia* Falcata is one of the most recalcitrant flower producers I know. How do others do this hybrid? Please share your experiences with the rest of us in The Pleurothallid Alliance. Other hybrids out of *Masdevallia veitchiana*, including *Masdevallia* Heathii (with *Masdevallia ignea)*, do not exhibit this negative tendency. A remake of *Masdevallia* Circe, distributed by Baker & Chantry, has garnered a couple awards. The finest were huge, and of quite clear yellow color. The variation in flower size, form and color was most extraordinary for a primary hybrid.

Hybrids registered with *Masdevallia veitchiana* as POD parent:

Hybrid:	Pollen parent:	Registered by:	Date:
Angel Frost	(*strobelii*)	J & L	1982
Angel Tang	(*tonduzii*)	J & L	1986
Don's Angel	(*rolfeana*)	J & L	1982
Glow Worm	(*limax*)	J & L	1988
Sugar Baby	(*floribunda*)	J & L	1988
Veitchiana-wageneriana	(*wageneriana*)	Sander	1898

Hybrids registered with *Masdevallia veitchiana* as POLLEN parent:

Hybrid:	Pod parent:	Registered by:	Date:
Acis	(*abbreviata*)	Hincks	1890
Alceste	(Asmodia)	Veitch	1901
Amesiana	(*tovarensis*)	Sander	1890
Bocking Hybrid	(*cucullata*)	Courtauld	1899
Chaparana	(*chaparensis*)	Katler	1988
Chelsonii	(*amabilis*)	Veitch	1880
Circe	(*schroederiana*)	Veitch	1898
Copper Angel	(*triangularis*)	J & L	1982
Falcata	(*coccinea*)	Lawrence	1899
Gairiana	(*davisii*)	Veitch	1884
Heathii	(*ignea*)	Heath	1889
Hebe	(*coriacea*)	Hincks	1889
Imogen	(*schlimii*)	Veitch	1894
Kimballiana	(*caudata*)	Sander	1899
Marguerite	(*infracta*)	J & L	1982
Marimba	(*peristeria*)	SBOE	1988
Prince Charming	(*angulata*)	McLellan	1979
Urubamba	(*ayabacana*)	Beall	1966
Veitchiane-estradae	(*estradae*)	Hincks	1893
Veitchiane-fragrans	(*fragrans*)	Measures	1903

I have also remade *Masdevallia* Hebe (with *Masdevallia coriacea*), and hope to see some of the yellow color seen in Circe in a few of the hybrids. These should be tolerant of much warmer temperatures than *Masdevallia veitchiana* itself, just as McLellan's *Masdevallia* Prince Charming is, and as I suspect J & L's beautiful *Masdevallia* Angel Frost and *Masdevallia* Copper Angel and Beall's *Masdevallia* Urubamba should be.

Marguerite Webb informed me that a remake of *Masdevallia* Bocking Hybrid is on the way in New Zealand. Anyone who has seen a slide of this magnificent hybrid should find that exciting news.

One intriguing aspect of all this is the true status of *Masdevallia welischii*. The thought that this might be a natural hybrid is given some support by the flowering of the first seedlings of Dr. Gerardus Staal's sibling cross of the taxon. I saw one of these in San Francisco this past spring, and it certainly looked as if it were a second generation hybrid out of *Masdevallia veitchiana*. The hairs were distributed in a pattern much more reminiscent of that species than in the parent plants of *Masdevallia welischii*. I understand some of these seedlings have come quite yellow, lending support to the hypothesis that *Masdevallia welischii* is a natural hybrid, possibly between *Masdevallia veitchiana* and *Masdevallia davisii*, which Veitch registered as *Masdevallia* Gairiana in 1884.

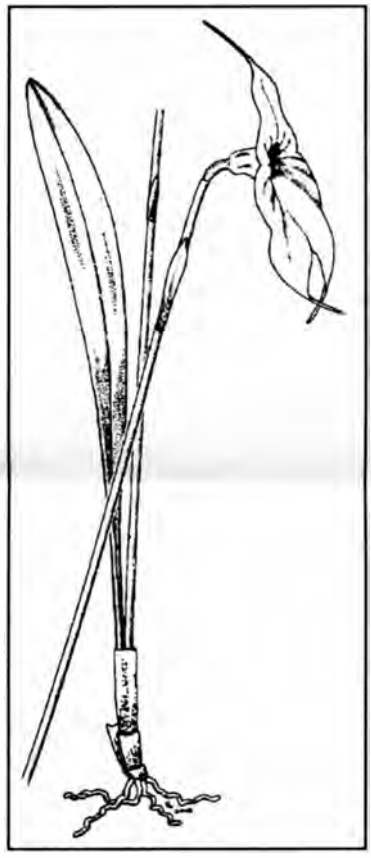
In preparing this short article, I went back to Miss Florence H. Woolward's magnificent book from 1898, *The Genus Masdevallia*, which was: "issued by The Marquess of Lothian, K.T., chiefly from plants in his collection of orchids at Newbattle Abbey; Plates and descriptions by Miss Florence H. Woolward; with additional notes by F. C. Lehmann (German Consul in the Republic of Colombia)." As you are possibly aware, there were only 250 copies of this book produced, but the reprint has made it available to everyone with a spare couple hundred dollars.

Herewith is a somewhat lengthy quote from Miss Woolward's book, from the description of *Masdevallia veitchiana*:

"Several hybrids have been artificially raised between *M. Veitchiana* and other species of *Masdevallia*, viz:

"*M. Chelsoni* Rchb. f. Gard. Chron. 1880, pt. I, p. 554; an artificial hybrid between *M. amabilis* and *M. veitchiana;* colour, orange-red, more or less closely set with minute crimson hairs.

"*M. splendens* Rolfe, Gard. Chron. 1889, pt. I, p. 619; an artificial hybrid between *M. Veitchiana* and *M. amabilis*, the reversed cross of the above; colour, brilliant orange-crimson, with amethyst hairs.



Masdevallia veitchiana Rchb.f.

"*M. Gairiana* Rchb. f. Gard. Chron. 1878, pt. II, p. 38; an artificial hybrid between *M. Veitchiana* and *M. Davisii*; colour, orange-yellow, with crimson hairs.

"*M. splendida* Rchb. f. Gard. Chron. 1878, pt. I, p.493; colour, orange-scarlet, with purple hairs.

"*M. Parlatoreana* Rchb. f. Gard. Chron. 1879, pt. I, p. 172; colour, brilliant orange-scarlet, with crimson-purple hairs.

"The two last-mentioned hybrids are especially interesting as having been found growing wild in the habitat of *M. Veitchiana*. Professor Reichenbach, on examining wild specimens of *M. splendida*, suggested that the plant might be a natural hybrid between *M. Veitchiana* and *M. Barlaeana*, or between *M. Veitchiana* and *M. amabilis*. His opinion was afterwards confirmed, a plant exactly identical with the wild specimens of *M. splendida* having been raised by Mr. Seden, in the establishment of Messrs. Veitch, by fertilizing flowers of *M. Veitchiana* with pollen from flowers of *M. Barlaeana*. *M. Parlatoreana* has been proved to be the result of the reversed cross, and has larger and more brilliantly coloured flowers than *M. splendida*."

Note that I have retained Miss Woolward's spellings for a number of words. In addition, in accord with the custom of the time, species names derived from people's names are capitalized.

This is but a brief survey of the hybrids which have been registered with *Masdevallia veitchiana* as a parent. No second and third generation hybrids are discussed and most of the current work (much of it in flask, I am certain) is not covered. Nevertheless, I hope you get a feeling for the glorious variety that can be found in the remarkable hybrids from this splendid species.

As the saying goes, "You ain't seen nuthin' yet!"

The President's Column

Gary R. Baker
President,
The Pleurothallid Alliance

As The Pleurothallid Alliance heads into the second half of its first year, I feel constrained to point out a critical matter. This organization can become only as good as the members wish it to become, and only as good as the input from the members makes possible.

What I am getting at is the need for articles from you for the newsletter.

Let's face some practical matters. This organization can't hope to succeed if the members are not willing to take the time to contribute to its success. Those of us who have done the work to bring you the first three newsletters will eventually burn out without your input! That is not a threat. It is a simple statement of fact, which all of you surely can recognize.

We need **your** short articles, **your** photographs or illustrations, **your** comments on various shows, **your** comments on new hybrids blooming, **your** comments of what **you** get to grow and where, **your** comments on how **you** bloom *Masdevallia coccinea* in the east, **your** comments on growing under lights, **your** comments on disease and pest control, **your** comments on species you saw growing in their native habitats, **your** comments on heat tolerant species, **your** comments on what **you** think makes up an awarded quality plant, **your** comments about fertilizer, **your** comments on growing outdoors, **your** comments on growing media, **your** comments on variation in species, **your** comments on any of a million things regarding Pleurothallids.

This newsletter needs **your** comments and **your** articles and **your** help for it to remain vital and interesting.

It cannot remain a vital publication if a small handful of people do all the writing. The newsletter will lack the variety and contrasting opinions that are essential for its continued success. In addition, you surely don't wish to read just my comments and those of two or three other people, do you?

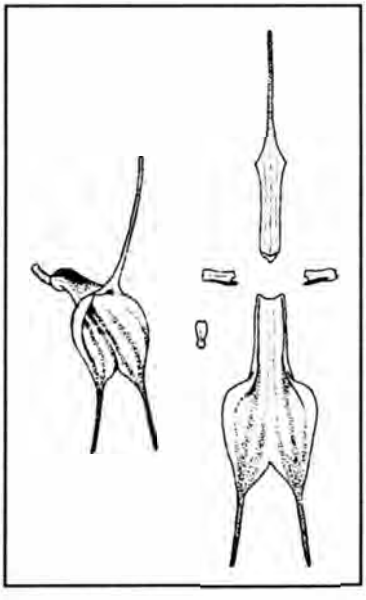
One suggestion which any of you can do is to write a short plug for some species (or hybrid) you happen to be particularly fond of, as Wayne Cokeley did for *Pleurothallis cylindrica* in this issue. What is your favorite *Masdevallia* species? What tiny *Barbosella* do you find particularly fascinating? Is there a *Dracula* to which you feel some particular attachment? Do *Platystele* species loom large in your interest? There are a million possibilities. I want to read about **your** favorites, not just mine.

Please, all of you who expressed willingness to write, do so. The Pleurothallid Alliance needs **your** contributions!

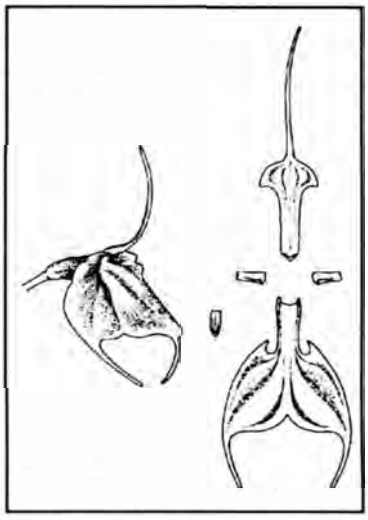
Differences

(From Page 1)

hundred years, that they are well-established in the minds of hobbyists and professionals, and that they exist separately in the herbaria of the world. The fact that we already had two watercolors paintings could not possibly have influenced our thinking (I keep my fingers crossed for the last sentence).



Flower and Floral Parts of *Masdevallia amabilis* Rchb.f. & Warsc.



Flower and Floral Parts of *Masdevallia barlaeana* Rchb.f.

In *Thesaurus Masdevallianum* Part 9 the slight difference is explained: The apices of the sepals of *Masdevallia amabilis* are acute, but they may be either abruptly or gradually narrowed into tails that vary considerably in length; the angle between the blades of the lateral sepals is acute. The sepals of *Masdevallia barlaeana* are widely expanded beyond the sepaline tube, and the apices are obtuse and abruptly contracted into comparatively short tails; the angle between the blades of the lateral sepal is obtuse. There are no specific differences in the petals and lip.

Also according to *Thesaurus Masdevallianum*, *Masdevallia amabilis* occurs in the mountains of northwestern Peru while *Masdevallia barlaeana* inhabits the mountains of southeastern Peru, in the area where *Masdevallia davisii, Masdevallia veitchiana* and *Masdevallia welischii* are also found. I have recently examined a specimen from the department of Libertad in northwestern Peru that fits *Masdevallia barlaeana* perfectly, so I suppose that the idea of geographical isolation can be discarded. That leaves us with the variable apices of the sepals. Take your choice. You may change all your *Masdevallia barlaeana* labels to *Masdevallia amabilis*, or you may leave them as you like them. You cannot go wrong.

News & Views

Compiled by
Gary R. Baker &
William Ames Rhodehamel

There will be a meeting of The Pleurothallid Alliance at 1 PM, October 14, 1989, in Oklahoma City in conjunction with the AOS/SWROGA meetings. No pleurothallid talks are planned at this gathering. This will be a chance for members to get together, meet each other, exchange ideas and hear an account of the current state of The Pleurothallid Alliance. I hope to see many of you there.

From a letter from
Isaias M. Rolando,
President of the Peruvian Orchid Society

This is to introduce myself as Isaias M. Rolando, an ophthalmologist formally re-elected President of the Peruvian Orchid Society. We would like to congratulate your Alliance and at the same time let you know of our interest to participate in you activities.

We would like to inform you that our Society and a private, non-profit group are running a Project to establish the first National Orchid Reserve in the Macchu Picchu area. This is a Conservationist project that is going to make safe our best Peruvian specimens, between them mainly Masdevallias and Draculas, which are in danger from native areas. We wonder if it would be possible for you to participate in this project as an advisor and also in the propagation of our seeds of the best Peruvian Masdevallias and other pleurothallids.

During September through November I'll be visiting Sarasota and will contact Dr. Luer, so if your Alliance would be interested in further information, please contact me at the Selby Gardens since I will be glad to participate in your activities.

From Gary Baker

At the recent show in Everett, Washington, hosted by the Mount Baker Orchid Society, a specimen of *Masdevallia veitchiana* entered by Harry Evans of Victoria, B. C., received an AM of 87 points. This clone was sufficiently different in several aspects to merit a short comment. Its flowers were borne on much shorter scapes than is normally seen in this species, which, quite frankly, added to the appeal of the plant. *Masdevallia veitchiana*, as most of you realize, can produce unwieldy tall-stemmed flowers, a feature this clone happily avoided. Since the plant was large and quite healthy, it was clear that the short scapes were genetic in nature. But it was the flowers' form which really captured attention. The entire flower was much more blocky than is normal for this species, with the sepal tails not so long as usually seen. In addition, the flower's breadth was considerable, creating a flower which were visually distinct from the elongated form seen to perfection in the color picture of *Masdevallia veitchiana* 'Mem. Mary Chantry' FCC/AOS, in the Awards Quarterly. Neither flower seems to be preferable; they are different and both desirable. In addition, this clone had a much more subtle contrast between the area of the flower with hairs and the area without hairs. This attracted positive attention by the judges.

From Michael Harrington:

I would like to make a suggestion for a series of articles that could be written by someone or more than one person. In the title bar on the first page of *The Pleurothallid Alliance News* are noted twenty-nine genera that make up the pleurothallid alliance. Upwards of two dozen of the genera I have not even heard of even though I have been an A.O.S. member for some twelve years.

Could articles be written about each genera or group of closely allied genera? The article should include cultural information as well as a brief description of where it is found in the wild. An illustration of the type species or two would be most welcome in the article. In some cases perhaps, a reprint of an A.O.S. article could be used.

This would help me to become more acquainted with the plants that make up the pleurothallid alliance.

I enjoyed Gary Baker's article about the San Francisco Conservatory *Masdevallia* collection. However it did leave me with two questions so I wrote to George Marcopulos. I feel that the answers would be of interest to others who grow Masdevallias or Draculas.

My first question was, "How often is the New Zealand sphagnum moss replaced?"

George answered that he places growths of 4 to 5 leaves in a 2" pots with a styrofoam peanut at the bottom of the pot. As it grows he moves it to larger pots and adds more peanuts to the bottom. He does not remove any moss as he pots on to the larger pots, but instead carefully and loosely wraps a new layer of moss around the older root ball. If the moss is wrapped too tightly it will begin to decline which leads to root rot. Practice is needed to wrap loosely enough, yet provide stability in the pot.

The process of potting on and adding peanuts continues until the pot size reaches about 5". At this time some of the older moss at the center of the root ball is removed and replaced with the styrofoam peanuts. By the time that the division is about five years old the center of the plant begins to die out. When this happens the plant is divided into growths of 4 to 5 leaves and the process is repeated.

My second question was about Gary's comment that "The fertilizer is kept at a minimum." George related that he fertilizes once a month with 16 ounces of 18-18-18 per 100 gallons of water. This is applied with a Siphonex Hozon siphon device, they are rated as mixing at a rate of 16 to 1. That produces a strength of 1 ounce per 100 gallons or 1/100 ounce per 1 gallon. He notes that he prefers to fertilizer at one half that strength every other week. Once a year, usually in the spring or early summer, he uses Calcium Nitrate (15½-0-0) at no

CONTINUED - Next Page

more than 8 ounces per 100 gallons of water.

His final comments were that he felt his success was mostly due to the growing conditions. The collection is housed in a 20' by 60' greenhouse with four 18" exhaust fans and five 12" fans circulating the air. There is also a high pressure fog machine that keeps the humidity at a minimum of 60%. The temperatures are 72°F. days and 55°F. nights. Warm growers are housed with a night temperature of 62°F.

This information, along with Gary's article, should give anyone all the cultural information to successfully grow Masdevallias.

(Note: Gary's article on the Conservatory's collection can be found in Volume I, Number 2 of The P. A. News.)

From George Schudel:

The July issue of the *A. O. S. Bulletin* has an interesting article by Phil Cribb on the Barbara Everard Trust for Orchid Conservation.

This trust is not intended to save the native habitat, but a down-to-earth program to save plants that are within our control. Too often a wonderful collection expires when the owner cannot fulfill his obligation to the plants or when a new director at a botanical garden has other interests. The program consists of coordinating the activities of volunteers when the plants need help.

With this issue of *The Pleurothallid Alliance News* we are enclosing a membership list. This is the first tool needed to organize local groups that can help save the orchids when the "plant sitter" needs help during the owner's vacation, business trip or illness.

With no pseudobulbs the pleurothallids are far more susceptible to neglect than traditional orchids. Why not invite nearby growers to meet your plants and go and meet theirs.

Prepare a notebook outlining your culture and listing the names and phone numbers of the growers in your cooperative culture group. Keep the notebook in a conspicuous place in the growing area.

In many cases a phone consultation with a member of the family or sitter can save the plants. In other cases a house call may be needed.

From Dr. Mark Wiesman:

The Full Moon Pleurothallid Society of Minnesota had its first meeting May 20, 1989. Items discussed were: future meetings, a name for the group, exchanges of cultural and other orchid information, and various and sundry other topics unrelated to orchids. Many amazingly rich chocolate cookies were consumed along with coffee and Dubuque Star beer. A good time was had by all four of us.

The Pleurothallid Alliance Want List Registry is compiling want lists in preparation for publishing the Alliance Registry. Members are encouraged to send their Want Lists for inclusion in the Registry.

The suggested format for want lists is for members to send their 20 most wanted *Masdevallia* species, and 10 most wanted other Pleurothallid species; or just list the top 30 species or hybrids wanted. Lists should include member's name, address and phone number.

Send want lists to:

Dr. Mark Wiesman
Ark Pet Hospital
Apache Plaza, # 15F
3700 Silver Lake Road
Saint Anthony, MN 55421

(Editor's Note: Mark reports that so far he has received only 2 want lists. Let's all send our want lists to him so we can get this project off the ground.)

Members are encouraged to send items for inclusion in this column. Send items to Gary R. Baker, 1833 13th, # 201, Seattle, WA, 98122; or to News & Views, *The Pleurothallid Alliance News*, P. O. Box 68811, Indianapolis, IN, 46268.

The Editor's Column

William Ames Rhodehamel
Editor,
The Pleurothallid Alliance News

Summer is here. It is a time of relaxation and outdoor activities for many of us, but often a stressful time for our plants. I hope you and your pleurothallids are doing well this summer.

First and foremost, I want to apologize to the members of The Pleurothallid Alliance for the tardiness of this issue. When I agreed to edit this publication, I agreed to put it out regularly on the 15th of January, April, July, and October. A fledgling organization such as ours needs the newsletter to be on time. I apologize. I intend all further issues to be on time.

In explanation for this regrettable delay I can only offer the outdoor activities I have been involved in for the last two months: I have been building greenhouses and office space for a commercial orchid greenhouse. We are starting a business here in Indianapolis, and my schedule has been hectic. And now that construction is winding down, and the business starting up, I hope my time will be a little less in demand. You can certainly expect to receive the next newsletter in October.

We have been able to expand this issue of *The P. A. News* to ten pages. I hope to expand the newsletter further in the next couple of issues, perhaps to sixteen pages. (See Gary Baker's "President's Column" in this issue for more information on that.) I would be interested to speak with anyone who would be willing to provide illustrations or photographs for future issues. Dr. Luer has been very kind in allowing us to publish his drawings (Thanks again, Carl!), but I would like to have others contribute material. We can include photographs easily, although color is still a little beyond us, I think.

With this newsletter we are enclosing the 1989 Membership Roster of The Alliance. We have more than 200 members as of July, which I feel is a real tribute to the popularity of the plants we all share.

Award Actions Around The Country

Gary R. Baker

Here is a list of recent judging actions by AOS judges around the country (and world!). This information is provided for purposes of education. Please keep in mind that the awards which are printed are not final; they merely represent the actions of judging teams around the country. When you see the awards listed in the *Awards Quarterly*, you will know that they have been approved. Until then, regard them as provisional.

Dracula houtteana 'Vivaldi'
Conservatory of Flowers
HCC - 78 pts. San Francisco 4/4/89

Masdevallia agaster 'Pepe Pierre'
Fran & Alvin May
CBR Cincinnati 11/5/88

Masdevallia Angel Glow 'Angel'
J & L
HCC - 77 pts. San Francisco 2/24/89
Hybrid of Angel Frost and Marguerite. Natural spread 4.0 cm. horizontal, 14.2 cm. vertical. Rich tangerine color. Sepals covered with magenta hairs.

Masdevallia Angel Glow 'Peter'
Dragoni Orchids/Highland Trop.
HCC - 75 pts. San Francisco 2/24/89
Natural spread 4.0 cm. horizontal, 14.0 cm. vertical. Orange color, light purple flushing. Central portion of flower covered with fine purple hairs.

Masdevallia ayabacana 'Maharanjah'
Taylor Orchids
AM - 86 pts. Okemos, MI 2/25/89
Vertical spread - 30.0 cm., horizontal spread - 3.5 cm. Flowers cream background, inner part of sepaline tube heavily spotted deep burgundy, edge of tube and dorsal sepal base mocha. Caudae mahogany. Wish I'd been there!

Masdevallia chontalensis 'Clargreen'
Clargreen Gardens
CCM - 84 pts. Ann Arbor 2/18/89
50 flowers, 32 buds.

Masdevallia coccinea 'Red Moon'
Santa Barbara Orchid Estate
AM - 85 pts. Santa Barbara 4/6/89
One flower, one bud. 5.8 cm. horizontal spread. Intense cerise, fuchsia veining vertically, throat gold.

Masdevallia garciae 'Babe'
John Barnes
CHM - 85 pts. Atlanta 12/10/88

Masdevallia Heathii 'Gina'
Golden Gate Orchids
HCC - 75 pts. San Francisco 4/4/89
Hybrid of *ignea* and *veitchiana*. 4.8 cm. natural spread. Orange with slight red orange lines. Matte texture void of hairs found in *veitchiana*.

Masdevallia Heathii 'Golden Gate'
Golden Gate Orchids
AM - 82 pts. San Francisco 2/24/89
Natural spread 5.0 cm. horizontal, 13.0 cm. vertical. Tangerine orange, minute fuchsia hairs, concentrated on sepal tips creating deep red coloration. Dorsal unusually erect for breeding.
Note: I was on the judging team, and this is clearly the finest Heathii I have ever seen!

Masdevallia hirtzii 'Sonoma Orange'
Petite Plaisance
HCC - 77 pts. San Francisco 2/24/89
Natural spread 7.1 cm. vertical, 2.3 cm. horizontal.

Masdevallia hoejeri 'Thomas'
Padre Angel Andreetta
CBR Medellin, Colombia 3/8/89

Masdevallia lucernula 'Helga'
Colomborquideas
CHM - 83 pts. Medellin 3/8/89

Masdevallia Marimba 'Marie'
John Barnes
AM - 83 pts. Raleigh, NC 4/15/88
Hybrid of *peristeria* and *veitchiana*. Flowers held well above foliage on erect scapes. Sepals bright terra cotta orange, concentrated along longitudinal ribs, giving fuchsia glow.

Masdevallia patriciana 'Chieri Petite'
Pat Pettit
CBR 33rd EOC - Secaucus, NJ 10/20/88

Masdevallia pumila 'Cuenca'
Albert L. Gugeler
CCM - 85 pts. Ann Arbor 2/18/89

Masdevallia roseola 'Mem. Luis Carollio'
Padre Angel Andreetta
CHM - 83 pts. Medellin, Colombia 3/8/89
Claret red, tails orange at tips.

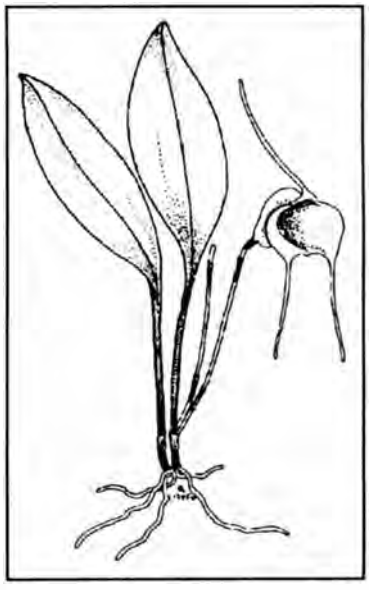
Masdevallia Teresita 'Mem. Amos Ignacio'
John Ignacio
HCC - 75 pts. San Antonio, Texas 3/26/88
Hybrid of Heathii and *floribunda*. Flowers lemon-yellow, sepal tips light orange.

Masdevallia velifera 'La Merced'
Marta Posada de Robledo
AM - 84 pts. Medellin, Colombia 3/8/89

Porroglossum portillae
Padre Angel Andreetta
CBR Medellin, Colombia 3/8/89

Scaphosepalum collection
Colomborquideas
JC Medellin, Colombia 3/8/89
Grouping of 18 different species, all specimen size, all well-flowered.
WOW!!! Wish I had been there.

Again, let me emphasize that this information is here for educational purposes. It is *NOT* a record of awarded plants; that you will find in future issues of the *Awards Quarterly*!



Masdevallia hirtzii Luer & Andreetta

ADDRESS CORRECTION REQUESTED

FIRST CLASS MAIL

THE PLEUROTHALLID ALLIANCE
Route 2, Box 389K
Barnwell, SC
29812

Porroglossum lyckinum Luer

By-Laws Being Readied

Gary Baker, President of The Pleurothallid Alliance is presently readying proposed By-Laws for the Alliance.

Present plans are to incorporate the Alliance as a not-for-profit organization in the state of Washington. The proposed By-Laws will be submitted to the membership for approval. Upon approval of the By-Laws, legal steps will be taken to give the Alliance official status.

We are presently planning to include the proposed By-Laws with the next newsletter, scheduled for October 1989.

Also scheduled for inclusion with the next newsletter is a survey of member's collections and growing conditions. The information drawn from these surveys will be published in upcoming issues. More about this project in the next *The Pleurothallid Alliance News*.

Membership Information

A One Year Membership in **The Pleurothallid Alliance** is available by sending:

$12.50 for a single membership; or,
$15.00 for a household membership

To:

The Pleurothallid Alliance
Route 2, Box 389K
Barnwell, SC 29812

Please send check or money order, payable in U. S. funds through a U. S. bank.

Membership includes a one-year subscription to *The Pleurothallid Alliance News*.

Advertising & Conservation News

One of the goals of The Pleurothallid Alliance is the conservation of Pleurothallids in the wild. This can be aided by growing species from seed, buying plants grown from seed, and growing the plants better under our conditions.

To further these goals we would like to compile a list of amateur and professional growers who have individual species available from artificial propagation. If you have flasks, community pots, or individual plants available for sale or exchange, please send this information to: Jeanne Schudel, Route 2 Box 389K, Barnwell, SC, 29812. We will maintain a master list that can be used for publication as space permits. Advertising for such plants will be accepted for future issues of *The Pleurothallid Alliance News*.

The **Pleurothallid Alliance** News

ACOSTAEA • BARBOSELLA • BARBRODRIA • BRACHIONIDIUM • CHAMELOPHYTON • CONDYLAGO • DRACULA DRESSLERELLA • DRYADELLA • FRONDARIA • LEPANTHES • LEPANTHOPSIS • MASDEVALLIA • MYOXANTHUS • OCTOMERIA OPHIDION • PLATYSTELE • PLEUROTHALLIS • PLEUROTHALLOPSIS • PORROGLOSSUM • RESTREPIA • RESTREPIELLA RESTREPIOPSIS • SALPISTELE • SCAPHOSEPALUM • STELIS • TRICHOSALPINX • TRISETELLA • ZOOTROPHION

Volume I, Number 4 October 1989

Monotypics For The Pleurothallid Nut

H. Phillips Jesup

Through a somewhat circuitous route (Editor William Rhodehamel to George Schudel to my spouse Ann to me) I have learned that an article about one of the "minor" genera in the *Pleurothallidinae* would be in order. It sounds like a covert operation of an underground rag of a twilight organization headquartered in the Andes. I'd better watch what I blurt over the phone.

In retribution for the term "minor", which to me can only mean *numerical* in this group of "majorly" interesting genera and species, I have resolved to expound on not one but three genera, all (as of today) monotypic. While we have in our collection one species of each genus (we could hardly have more!), I don't know a great deal about each and since time is surely limited (the result of too many orchids and the necessity of not totally ignoring other aspects of existence), hopefully it therefore won't take long to write this paper.

My contribution to the literature on these genera/species will not be noteworthy, because the truly important material, being the botanical descriptions and reasons for erection of separate genera, has already been published. My observations will be based upon personal experience, and in some cases there isn't an awful lot to say.

I. *Barbrodria miersii*

My acquaintance with this minute, mat-forming plant occurred about eight or nine years ago when I acquired a piece from J & L Orchids as a "*Barbosella* special". This wasn't too far off, for this Brazilian species was included in *Barbosella* until Dr. Carlyle A. Luer segregated it in 1981. If you like 'em small, this one is bound to please you. The 3 mm. leaves are strung in lines with 2 mm. of rhizome between and resemble unusually small duckweed marching in lines. Their shape is like that of tiny eggs with points at their ends (I'm sure there is a more botanically exact term, but it escapes me at the moment). Each leaf, in turn, with little regard for season, sends up (once) a rigidly straight 5 mm. hairlike inflorescence bearing one 2 mm. pale greenish-white flower, vaguely resembling free lateral sepals (I almost said "un-connected") and a broader dorsal sepal. The flower sort of looks like a beacon on a filiform pole over the mat, and when the mat has reached some size there are usually several beacons shining at any one time.

Our culture for this species is to grow it in intermediate temperatures on a small (2.5 cm.) diameter, horizontally-aligned piece of sassafras. No pad of living

See MONOTYPICS - Page 2

INSIDE

The Mite And The Mold

Gerardus B. Staal

The following tale is probably not specific for Pleurothallids, but an awesome lot of them were involved, so some relevance is there. An aggressive fungus and an arthropod carrier suddenly started threatening our hitherto successful flasking operation with total destruction in the spring of 1989. Does one really have to be a combination of a professional entomologist, a semi-professional plus amateur mycologist and a pleurothallid propagator to run into the rather fantastic combination of circumstances that nearly wiped out our entire collection of replate seedling flasks, which was running close to three thousands? Well, probably not, but it has helped identifying the problem and finding a solution. In spite of the above mentioned credentials, it has taken the help of professional mycologists to identify the mold, of another professional mycologist to suggest that the mold needed a carrier to walk from flask to flask, and finally from a professional acarologist to identify the carrier as a microscopic mite.

The facts: In March of 1989, a first few flasks showed a devastatingly fast growth of a cottony mold that rapidly embraced and killed the hapless seedlings inside. Indeed, once touched by the mold, the seedlings were beyond rescue on planting out, which suggested something more serious than the occasional grey molds and other microorganisms that occasionally slip into a few flasks and from which plants could often be rescued. The mold in our newly-affected flasks in all cases appeared to come in over the side walls of the flasks on which thin mycelium strands appeared to progress

See MITES & MOLD - Page 5

The Pleurothallid Alliance

Purpose: Encourage the cultivation, conservation, and appreciation of all orchids of the subtribe Pleurothallidinae; Assist in disseminating knowledge about them; Gather information about habitats; And support horticultural and scientific studies of pleurothallid orchids.

Honorary Guru
Carlyle A. Luer, M.D.
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The Pleurothallid Alliance News is published quarterly as the official newsletter of The Pleurothallid Alliance.

The Pleurothallid Alliance News is produced using WordPerfect 5.0, a Hewlett Packard ScanJet desktop scanner, and a Hewlett Packard LaserJet II printer with HP 33412 AD and HP 33412 AF Soft Fonts.

Printed in the United State of America by Offset House Printing Company, Indianapolis, Indiana.

The President's Column

Gary R. Baker
President,
The Pleurothallid Alliance

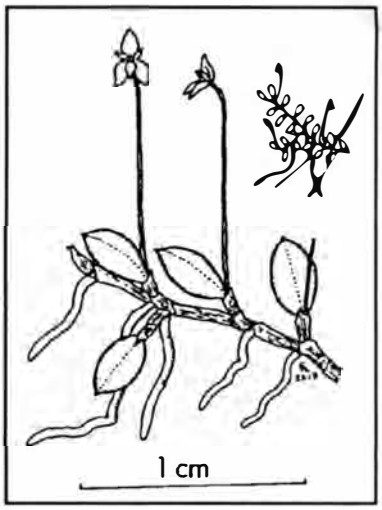
Do you realize that currently The Pleurothallid Alliance is approximately 1% the size of the AOS? Not bad, eh what, for a specialty organization just one year old!

Kudos to Will Rhodehamel for the wonderful membership roster he got out with the last newsletter. It is very professional looking, and really gives The Pleurothallid Alliance an air of stability and permanence. Here I am president of the group, and even I was surprised at the distribution of our membership. We had members, as of the time of the roster, in 31 of the 50 states (!) and in a total of 12 countries. In this country, our membership blankets the nation. There is no region not represented on our roster, including most southern states, where Pleurothallids are not the easiest orchids to grow. I strongly urge you just to look over the membership roster; you will surely be as impressed as I.

The Bylaws, which were originally intended to be completed by now, have taken a back seat to my recuperation from bypass surgery in July. It isn't that I haven't had the time — I have had more time than I have known what to do with — but I am afraid that such things as the Bylaws were not things I could motivate myself to pursue. I have had the time but not the "mental energy" for much except resting. I trust I will have them ready before the next newsletter . . . but no promises are being made, either.

Wasn't the October issue of the *American Orchid Society Bulletin* wonderful? All those gorgeous Draculas. Yummy. Now watch for the February issue of the same publication!

'Til next issue.



Barbrodria miersii (Lindl.) Luer

Monotypics

(From Page 1)

moss is used because even with the creeping rhizomes, this minuscule orchid would be quickly swamped, buried, submerged and drowned in moss under our conditions, in which moss grows with abandon. High humidity results in good growth of *Barbrodria* in our set-up even without moss. Although certainly not unchallenged for the title, *Barbrodria miersii* is in respectable competition for the world's smallest orchid.

II. *Condylago rodrigoi*

This very interesting genus/species was described a few years ago in *Orchideologia* (the Colombian Orchid Society publication) by Dr. Carlyle A. Luer. It is also covered in detail in Volume IV of the "green books", *Icones Pleurothallidinarum* by Dr. Luer. Volume IV deals with the three genera which possess "trap lips": *Acostaea, Condylago,* and *Porroglossum*. The three genera apparently evolved along separate paths and are apparently not closely related, each having its own type of lip mechanism.

The vegetative habit of *Condylago rodrigoi* closely resembles that of a "typical" *Masdevallia*, and it bears successively-flowered inflorescences arching well

above the foliage which are nearly always in bloom, reminiscent of *Scaphosepalum* scapes. An unusual and interesting characteristic not mentioned in the botanical description is that the first pedicels on the inflorescence are very long (3.5 cm.) and become progressively shorter with each flower until they stabilize at 3 mm. I know of no other Pleurothallid with this habit, which defies (my) logic as to the impetus behind its evolutionary origin. The flower itself superficially resembles *Pleurothallis flexuosa*, as does the plant vegetatively. The dark brown sepals are densely covered with white pubescence, and the clamshell-like petals guide the pollinator to the trap.

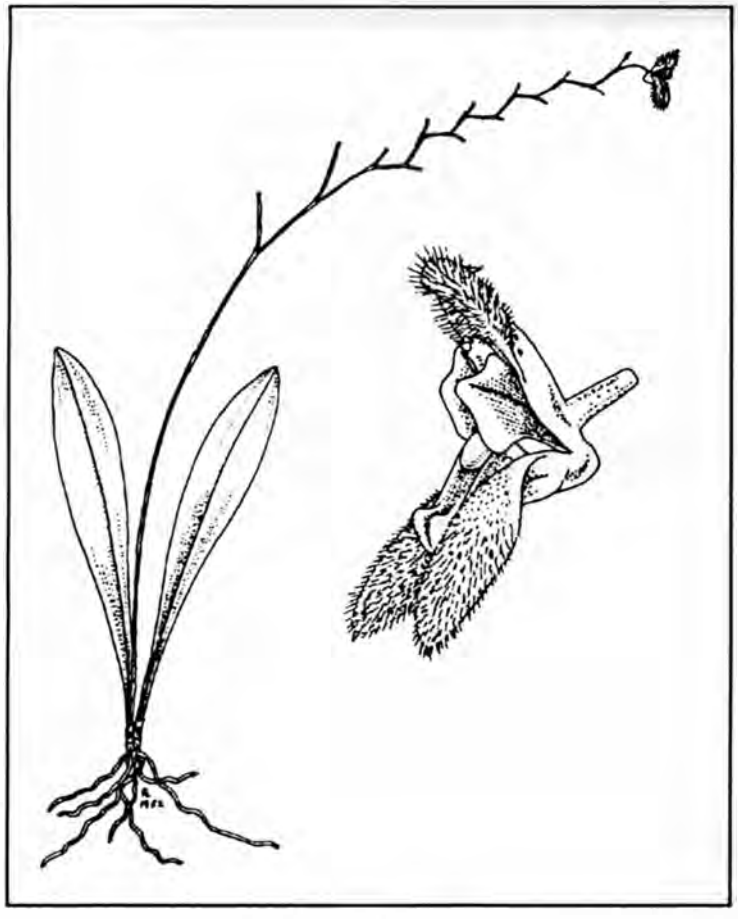
I was planning to quote from the "green book" by Luer to convey the amazing aspects of the lip trigger mechanism, but the description goes on for 2/3 of a page. Better to purchase the book (and its companion volumes) which no one interested in Pleurothallids should be without.

Cultural practices for cool-growing Masdevallias seem to work with this Colombian monotypic. No related species have as yet been found.

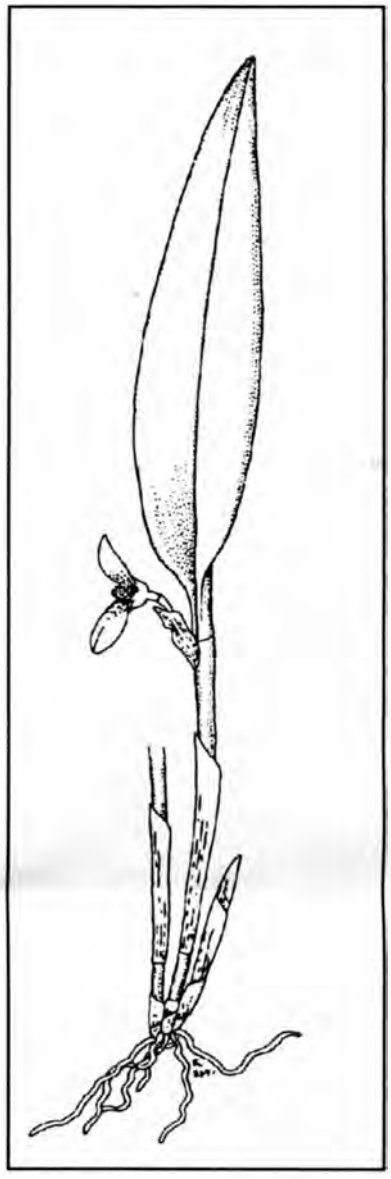
III. *Restrepiella ophiocephala*

Long harbored in the polymorphic genus *Pleurothallis*, this geographically widespread species has been elevated to monotypic genus status. It is not to be confused with *Restrepia* or *Restrepiopsis*. Its range is from Southern Florida to Mexico and parts of Central America.

It is a good-sized, heavy-leaved species ("stout" as they say), growing (in the four plants I have) about 35 cm. high, the ramicaul and the lance-shaped leaf each being about one-half the total respectively. Gaping flowers appear in periodic flashes, primarily in the winter for us, in singles, twos or threes from the juncture of the leaf and ramicaul, much in the manner of *Octomeria*.



Condylago rodrigoi Luer



Restrepiella ophiocephala

Flowers are reasonably large and showy, depending in part on the color form. Ours is a selected clone heavily spotted rose-red so that the appearance is red; other forms are yellowish to cream with some spots. The sepals are rather densely fuzzy (a fifty cent word for pubescent or hirsute). As can be expected, a species as widespread as this shows considerable variation between populations.

For years this species was lodged in *Pleurothallis* and at one point in *Restrepia*. Garay and Dunsterville chose to segregate it along with several others in *Venezuelan Orchids Illustrated*, Volume

CONTINUED - Next Page

4, mainly based upon the number of pollinia (4 compared with 2 for *Pleurothallis*). Luer subsequently isolated it as a monotypic by erecting *Restrepiopsis* for all of the others originally included.

Cheer up, *Cattleya* fans with a secret hankering to grow a Pleurothallid. This species does well under *Cattleya* conditions of light, temperature and watering, unlike most Pleurothallids. It will also grow just as well in the cool house, and with less light and more water. In other words, it's a tough and adaptable species and has thrived for us since acquired in the late 1960's.

The object now is to relieve the taxonomic lonesomeness of these three monotypics by finding another taxon in each genus - before it is destroyed unseen, unsung and unclassified. Such a find might bring important insight into the evolution of the concepts and would be exciting acquisitions for the lunatic fringe horticulturalist.

H. Phillips Jesup
182 Fox Den Lane
Bristol, CT 06010

Award Actions Around The Country

Gary R. Baker

Here is a list of recent judging actions by AOS judges around the country (and world!). This information is provided for purposes of education. Please keep in mind that the awards which are printed are not final; they merely represent the actions of judging teams around the country. When you see the awards listed in the *Awards Quarterly*, you will know that they have been approved. Until then, regard them as provisional.

Brachionidium capillare 'Fox Den'
Mr. and Mrs. H. P. Jesup
CBR New York City 4/19/89
Miniature creeper, hundreds of 0.5 cm. oval to nearly orbicular leaves with naturally pitted surfaces borne on wiry horizontal rhizomes. Flowers borne just above the foliage; spidery, translucent, non-resupinate, with reddish veining on all the filiform segments. 40 flowers, 30 buds, 77 inflorescences.

Dracula amaliae 'J. K.'
Ken and Jacqui Holladay
CBR Oakland 4/18/89

Dracula dalstroemii 'Dian'
Dr. Ron McHatton
CHM - 83 pts. New York City 2/18/89

Dracula hirtzii 'J & L'
J & L Orchids
CHM - 81 pts. New York City 1/21/89
Nat. spr. 10.0 cm. high, 28.0 cm. vertical; cream background with profuse mahogany concentric spotting, becoming solid dark mahogany along the edges of the sepals. Dark color continues into the caudae, then becomes lighter at the tips. Erect inflorescence.

Dracula woolwardiae 'J. K.'
Ken and Jacqui Holladay
CBR Oakland 7/18/89
Nat. spr. 11.1 cm. horizontal, 19.0 cm. vertical. Creamy yellow overlaid with dark maroon spotting, becoming linear and then solid at tips of sepals. Tips of petals black, giving the appearance of eyes.

Lepanthes gibberosa 'Christian Fernando'
Hermuth Fernando Ibanez
CBR Coban, Guatemala

Masdevallia cacodes 'J & L'
J & L Orchids
CBR New York City 9/17/86

Masdevallia caudata 'Annette'
Species West
AM - 83 pts. New York City 4/12/89
Nat. spr. 3.3 cm. Colors particularly clear and striking on a flower with very good size and form.

Masdevallia coccinea var. *alba* 'Joy'
Harry Evans
AM - 83 pts. Everett, WA 5/12/89
Flowers clear matte white, pale yellow sepal tips. Form very pleasing. Nat. spr. 4.8 cm. wide x 10.0 cm. high.

Masdevallia datura 'Laval'
Mr. E. Dreise
CCM - 82 pts. Ottawa 4/22/89
6 flowers on 6 inflorescences.

Masdevallia dynastes 'Jupiter'
Conservatory of Flowers
CBR Oakland 5/16/89

Masdevallia hercules 'Laval'
Egon Dreise
CBR Toronto 5/13/89

Masdevallia oscarii 'Erotica'
Conservatory of Flowers
CBR San Francisco 4/4/89

Masdevallia picea 'Sunset Midnight'
Steve Gettel
AM - 80 pts. Oakland 5/17/88
Nat. spr. 7.0 cm.; exterior of flower glossy reddish maroon, interior same but matte and granular. Pale green deep within throat.

Masdevallia pumila 'Cuenca'
Albert L. Gugeler
CCM - 85 pts. Ann Arbor 2/18/89
100 flowers on 100 inflorescences.

Masdevallia veitchiana 'Betty'
Harry Evans
AM - 87 pts. Everett, WA 5/12/89
Nat. spr. 5.3 cm. wide x 14.9 cm. high; this clone was discussed in the last issue of the newsletter.

Pleurothallis aphthosa 'Zephyr'
Lucy Mae Nursery
CBR Tampa Bay 3/28/87

Pleurothallis grandis
Lic. Gonzalo Gallegos J.
CBR San Jose, Puerto Rico 9/16/88

Pleurothallis saurocephala 'Emly'
Emly Siegerist
CBR St.Louis 5/6/89

Scaphosepalum verrucosum 'Tyler'
Mr. and Mrs. H. H. Morgan
CBR Venice, Florida 2/4/89

Stelis oxypetala 'Aracely'
Helmuth Fernando Ibanez
CBR Guatemala City 2/15/89

Again, let me emphasize that this information is here for educational purposes. It is *NOT* a record of awarded plants; that you will find in future issues of the *Awards Quarterly*!

Mites & Mold

(From Page 1)

rapidly before reaching the prize target: rather fresh and nutritious orchid seedling agar. Once there, the fungus rapidly developed into a dense 1 - 2 cm. thick pad of white cottony mold with a very characteristic reddish-colored fringe close to the agar. The identification of the fungus was the next step. It turned out to be *Fusarium poae*, which is a fungal disease of grasses, cereals and the cause of a bud rot disease in carnations. One has to notice here that orchids are more closely related to grasses than to other flowering plants, being monocots (at least the fungus appears to be well aware of this). This fungus has one pleasant aspect among many negative ones: on opening the flask, one smells a delightful peach aroma, which also serves as one of the diagnostic marks. It was noted much later that flasks with older seedlings started showing different symptoms, namely a brown rot and decay of the seedlings with a less conspicuous fungal growth, which may be related to sugar depletion of the agar medium.

At this stage, a feeling of helplessness set in with a now rampant epidemic that engulfed entire series of fairly recently made flasks. A fungus so aggressive that it rapidly could move from flask to flask through the air in spite of what I thought were adequate precautions (swiping 10% Physan around the screw threads of the flask bottoms before closure and the same material drenching the outside of the cotton plugs) was nothing less than flabbergasting, particularly after using the same type of flasks in the same flask house for three years without any difficulty.

It was rather rapidly established that the infections only occurred in the replate flask house and were not the result of a defective laminar flow hood, since we used and still use securely taped petri dishes as mother flasks and had no problems in that department (this is the reason that very few of our many very promising and novel pleurothallid crosses got lost entirely, and that we expect to have fully recovered our losses by the end of 1989).

Further enlightenment came with the statement from a colleague mycologist that mites are usually the vectors in this type of epidemics. Only then did microscopic examination reveal the incredible abundance of an army of dust speck sized mites in all of the affected flasks. If there is one excuse to make as an entomologist, it is that this mite is beyond any macroscopic perspective and needs high power optics to be recognized. The mites have long and very flat bodies and move readily over dry as well as wet surfaces. They seem to be at ease on mycelium clad walls as well as on brown dead orchid leaves. The acarology expert identified the mite as *Siteroptes avenae*. Mites of this genus are known to be vectors for fungus diseases by carrying spores around (in specialized spore pouches!) on their grass hosts (and to orchid seedlings on agar as we were so unfortunate to find out). Since the fungus mycelium is part or all of their daily sustenance we may therefore classify the relationship as a mutually beneficial symbiosis.

The biology of the mite becomes very fascinating once on observes that only adults inhabit the flasks. Where were the immatures if this is not the long sought for "spontaneous generation"? The literature indicated that the female keeps the developing eggs inside its body, which under the strain of the growing embryos inflates to balloon like "*hysterosoma*", 500 times the normal adult body volume, during which process the mother finds good reason to expire before full term development of her offspring. The young adult mites mate while still in the hysterosoma and before emergence, which raises some interesting morality questions. Armed with this knowledge, one easily recognizes the whitish hysterosomae on moist surfaces such as flask walls and dead leaves, from which water is absorbed during the larval development.

We would have preferred to blame our problems on such things as the weather, the visit of an UFO, excessively fluctuating temperatures and therefore air exchanges in and out the flasks, our poorly cared for lawn close to the flask house, or perhaps even a compost heap with lawn clippings, but in the end we probably had only ourselves to blame. It is now clear that we were not closing the screw tops of these otherwise magnificent Australian plastic flasks tightly enough. In affected flasks, I found not only countless mites drowned in the Physan residues around the screw threads but also several that succumbed only in the relative tightness of the rim contact well. Only one of this legion of besieging mites had to make it inside to start the rapid demise of the contents and this is apparently what happened in nearly all of our flasks.

The moral? Never become too complacent even when something seems to work well for a long time!

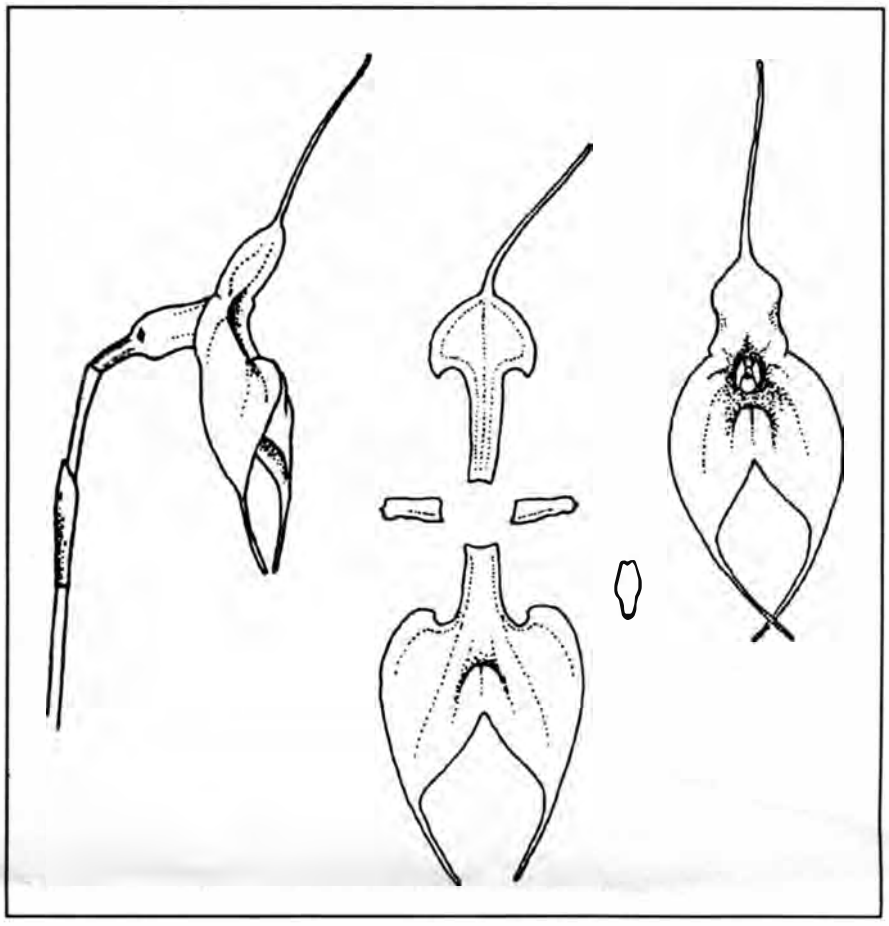
The solution? We now dispense with a syringe a few drops of *undiluted* Physan, which has a somewhat syrupy consistency, in the well of the lid (enough to let it run all around) and screw the lid on very tightly. The result of this is a physical as well as a chemical barrier because the Physan dries out to a resin-like consistency. We also apply an alcoholic solution of the disinfectant and probably repellant picric acid to outside of the rather tightly fitted cotton plug. Picric acid is not easily available and requires careful handling because it is a powerful explosive under certain circumstances, particularly when dry. It could possibly be replaced by other residual disinfectants. This set of precautions has entirely eliminated new infections even when new flasks are placed next to infected ones and thus in areas of high mite pressure. This allows us to remain faithful to the Australian 250 ml. flasks that we keep cherishing for their many good qualities! Although our mite invasion probably originated from an outside source, proper precautions are able to prevent problems even in a not-so-well isolated flask holding area.

Gerardus B. Staal
Peninsula Hybrids
635 Marion Avenue
Palo Alto, CA 94301

The Mystery Of *Masdevallia splendida*

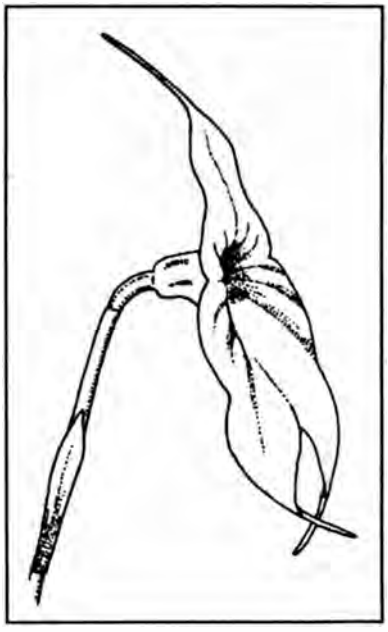
Carlyle A. Luer
Honorary Guru,
The Pleurothallid Alliance

In 1878, Professor Reichenbach described as *Masdevallia splendida* a plant he had received from Harry Veitch, of the Royal Exotic Nursery at Chelsea. No information concerning the origin of the plant was given, only that it had been supposedly imported "from a certain place in the Western South American Andes." Hybridization among species of *Masdevallia* had become a respected practice at Chelsea, so it is not beyond possibility that Harry Veitch had sent Reichenbach a garden hybrid, either intentionally or unintentionally. Later in *A Manual of Orchidaceous Plants* Messrs. Veitch state that the plants had been received in a shipment of mixed plants of *Masdevallia veitchiana* and *Masdevallia barlaeana* from their collector Walter Davis in the Peruvian Andes near Cuzco.



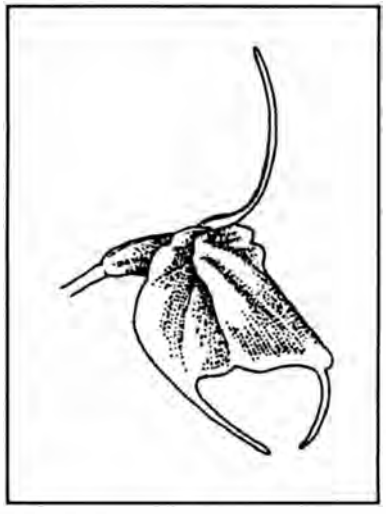
Masdevallia splendida Rchb.f.

In his comments at the time of his original description, Reichenbach strongly suspected the possibility if the plant being "a mule between *Masdevallia veitchiana* and *Masdevallia barlaeana*." In her monograph of 1896, Florence Woolward lists *Masdevallia splendida* unequivocally as an artificial hybrid between *Masdevallia veitchiana* (as female) and *Masdevallia barlaeana* (as male). The reverse pollination produced *Masdevallia parlatoreana* which had been described by Reichenbach in 1879 from another plant of unannounced heritage from Chelsea. Both taxa were characterized by the iridescent capitate hairs on the inner surfaces of the dorsal and lateral sepals similar to those of *Masdevallia veitchiana*.



Masdevallia veitchiana

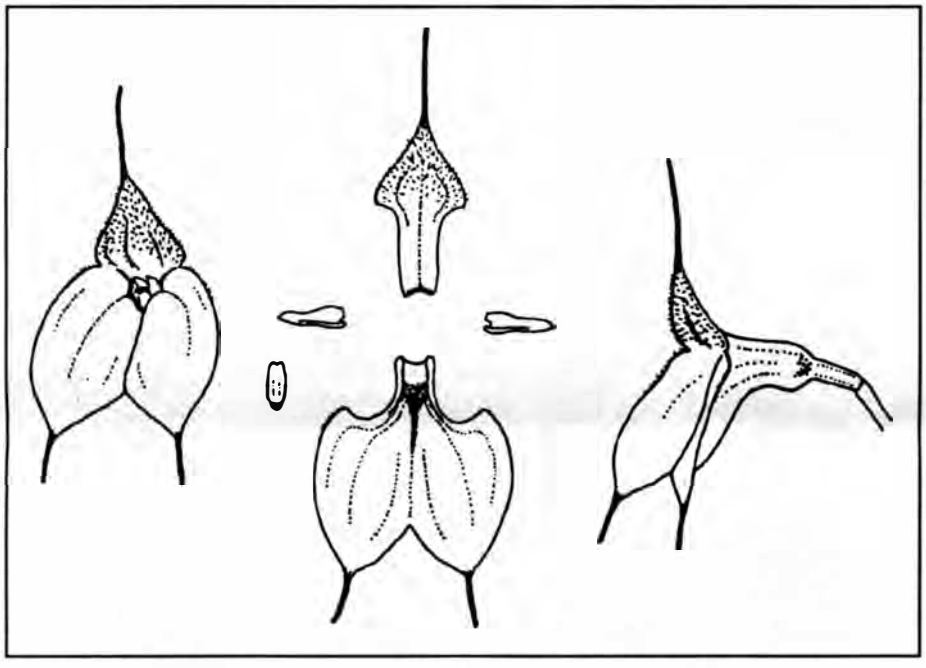
Prior to 1978, *Masdevallia davisii*, a bright yellow species from the highlands of southern Peru, had been a much-sought species that had been lost from cultivation for nearly a century. Independently David Welisch of San Francisco, California, and Berthold Würstle of Spielberg, West Germany in 1980, were successful in re-discovering this species. Incidentally, the market subsequently became flooded so that *Masdevallia davisii* is no longer a coveted rarity. A byproduct of Welisch's search was another, still unreported species, which now bears the name of its late discoverer. At the time of its discovery in 1979, the possibility of its being a hybrid, either *Masdevallia splendida* or *Masdevallia parlatoreana*, was considered. The lateral sepals of



Masdevallia barlaeana

Masdevallia welischii are bright orange, short-tailed, and devoid of the capitate hairs that are produced in profusion on the dorsal sepal. Reichenbach's type-specimens of *Masdevallia* were still sequestered at AMES where all requests to see them were denied. Nevertheless, I was reasonably certain that *Masdevallia welischii* was an undescribed species, but until the types could be examined personally, a lingering doubt remained.

Reichenbach's specimens were returned to Vienna in 1983. Examination of the flowers of *Masdevallia splendida* and *Masdevallia parlatoreana* reveal capitate hairs on the lateral sepals with tails considerably longer than those seen in *Masdevallia welischii.* Also, I saw a remake of the cross by Gerardus Staal between *Masdevallia veitchiana* and *Masdevallia barlaeana* which flowered last July in San Francisco. In my opinion it is indistinguishable from *Masdevallia splendida*, thereby erasing any doubts about the specificity of the beautiful *Masdevallia welischii*.



Masdevallia welischii Luer

Alliance Planning Book Projects

William Ames Rhodehamel

The Pleurothallid Alliance is completing the planning stages of sponsoring and publishing a series of brief books covering the culture of various genera of pleurothallids. It is hoped that these books will help to fill a gap in the cultural information available about pleurothallids.

Present plans are for the books to be written in sections by different authors. Each book will comprehensively cover various aspects of culture of the plants, both in the greenhouse and under lights, as well as problem control, propagation, and hybridization. We hope that the books will also be able to cover each species in the genus, as well as some information about where and how the plant grows in the wild.

Now in the works is the first book of the series, which will cover culture of *Restrepia.* By the time you read this, Wayne Cokeley and the Jesups will have begun to coordinate the effort, and other contributors are expected. Watch the next newsletter for more about this exciting project!

Stelis crescenticola

Gary R. Baker

One of my very favorite pleurothallids (and I know half of you say that for me to talk about a *favorite* pleurothallid is truly an oxymoron!) is the easily grown and highly attractive *Stelis crescenticola*. There are many features about this species which commend it to the collector.

It is very easy to grow. In addition, it produces short internodes on the rhizomatous stem, so the ramicauls are produced close together. In other words, it doesn't ramble all over the place, as some species of this genus are wont to do.

It blooms profusely, and is in full flower as I write this in early July. This is not its only flowering time, however. There was a plant in full flower in Orlando, Florida, at the time of the EOC meetings there in October, 1987.

The flowers are attractive, which says a lot about a *Stelis*.

The plants form compact, dense clumps, with the ramicauls and leaves totaling about 6 inches in height, rather equally divided between the two. It grows vigorously and rapidly, too, soon forming specimen clumps. It seldom, if ever, produces keikis.

The erect inflorescences are nearly 5 inches tall, and bear up to 50 enchanting, miniature flowers, all of which can be open at one time. The flowers themselves are dark, nearly the color of the so-called "black" tulips. Each flower is just under a quarter inch tall. The segments are nearly twice as long as wide, being something on the order of an eighth of an inch long and a sixteenth of an inch wide. The result is that the flowers resemble dark, lustrous jewels, or miniature black-wine, three-pointed stars.

I have grown plants in four inch pots with at least 50 inflorescences in full sway simultaneously. Gorgeous.

Here is a miniature which attracts the attention of even those people who think that only cattleyas are true orchids.

Bean Yellow Mosaic Virus Infection Of Orchids

John Hammond
Research Plant Pathologist
Floral and Nursery Crops Laboratory
U. S. Department of Agriculture

Bean yellow mosaic virus (BYMV), a member of the potyvirus group of plant viruses, was first reported on *Calanthe* orchids in Japan in 1972. A closely related virus, clover yellow vein virus, has recently also been detected in Japanese *Calanthe*. Turnip mosaic virus is also related to BYMV, and has been detected in several genera of orchids in Germany, including *Aceras, Anacamptis, Barlia, Ophrys* and *Orchis*; and in *Calanthe* in the USA. A similar potyvirus was detected in *Cypripedium* in Germany; Dendrobium mosaic virus from *Dendrobium* in Japan, and another potyvirus in *Vanilla* species grown on South Pacific Islands.

Over the past few years increasing concern has been expressed over the occurrence of BYMV infection in orchids. In 1984 the virus was reported from Germany in over 20 species of *Masdevallia* imported from the United States. These plants showed varying degrees of symptoms; some did not show any obvious sign of infection, while others had a chlorotic streak mosaic on young leaves and an irregular surface on older leaves. The virus was identified as BYMV by inoculation to a number of diagnostic indicator plants, by electron microscopy, and by serology.

Since that time BYMV infections have been detected in many orchid collections, and in some other Pleurothallid species. Some *Dracula* and *Stelis* species in particular have been found to be infected.

The severity of the symptoms of BYMV-infected plants appears to be related to the growing environment. A few plants of *Masdevallia coccinea* from one collection showed a particularly strong mosaic (Figure 1). However, when divisions of these plants showing strong mosaic were grown on at Beltsville, newly produced leaves did not develop prominent symptoms, although the virus could be detected in the new growth. The growth conditions that lead to strong symptom formation have not been established, and may be a combination of temperature, light and nutritional status.

A high proportion of a *Stelis* seedling population was found to be infected with BYMV. Initially these plants were symptomless, but over the course of their third year, some symptoms began to appear in a few plants. In some leaves, there was a chlorotic mosaic, with a sunken appearance of portions of the leaf surface. Some leaves were also noticeably curled downward. A more severe manifestation of the disease was the occurrence of irregular black or brown line patterns, typically along the length of the leaf. On some leaves multiple lines and small spots of this necrotic (dead) tissue appears. This type of symptom became more prevalent with time until in the fifth year most of the plants show at least one leaf with necrotic dot or line markings. No symptoms are apparent in the flowers, although BYMV does induce colorbreak in the flowers of gladiolus and bulbous iris, which are among the other ornamental plants infected by this virus.

BYMV is mechanically transmissible, which means that it can be transferred from plant to plant by handling, and especially during operations that cause small wounds, such as trimming of leaves and stems, or repotting. Because of the thick waxy cuticle on most orchid leaves, leaf to leaf contact alone is not likely to play a significant role in transmission, but unnecessary plant handling should be avoided. BYMV, like all other typical potyviruses, is also aphid transmitted, and this is a major means of infection of field crops such as beans, peas and clovers. While aphids do not often form colonies

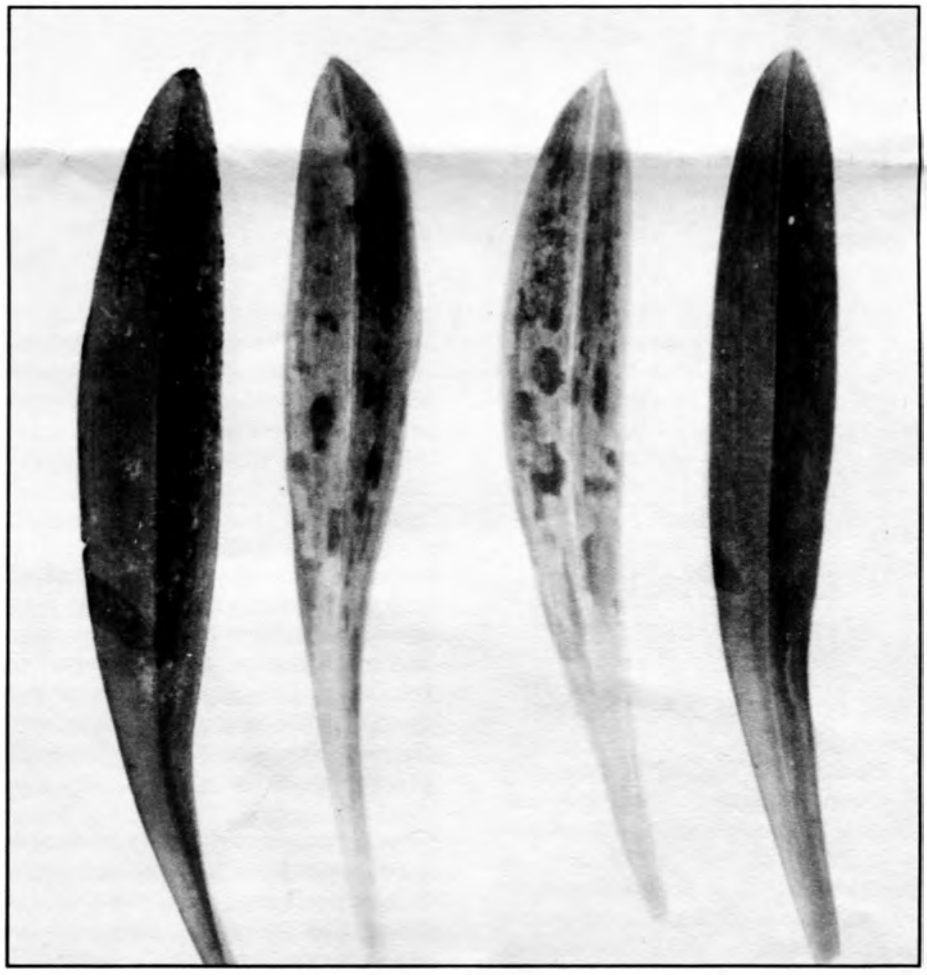


Figure 1: Leaves of two plants of *Masdevallia coccinea* infected with BYMV, showing variability in symptom expression. The center leaves show strong mosaic, while the outer leaves show very mild symptoms.

of significant size on orchids, they will feed on flower spikes and occasionally on the youngest foliage. Although BYMV has long been known to be aphid-transmitted, it is only recently that aphid transmission from orchids has been demonstrated. After failing to show transmission with aphids fed on detached leaf pieces of BYMV-infected *Masdevallia* and *Calanthe*, we raised colonies of virus-free aphids on Chinese cabbage plants, then allowed them to feed on BYMV-infected *Stelis* plants in a plexiglass cage. After the aphids were established on the *Stelis*, healthy seedlings of *Nicotiana benthamiana* were also placed in the cage. Some aphids moved from the *Stelis* to the *Nicotiana* seedlings and colonized them. These plants were then sprayed to kill the aphids, and observed for BYMV symptoms. Several *N. benthamiana* plants became infected (confirmed by serological testing). This was the first conclusive proof that aphids can transmit BYMV from orchids, and presumably between orchids.

Identification of BYMV infection in orchids can be made in a number of ways. While symptoms similar to those described above are an indication of virus infection, they are not necessarily caused by BYMV. The identification of the virus can be confirmed by bioassay on indicator plants, and by serological assay using antiserum specific for BYMV.

Bioassay is the simplest means of assay and currently probably the most sensitive means available to anyone who does not have a well equipped laboratory available. A piece of suspect leaf tissue is ground with a mortar and pestle in a small amount of buffer solution, and rubbed gently on the leaves of indicator plants. A fine abrasive such as carborundum dust or Celite can either be mixed into the sap extract or dusted onto the leaves of the test plants. The abrasive makes small wounds in cell is on the leaf surface, through which the virus gains entry to the cells, and the wounds heal. If the wounds are too large the cells die and the virus does not become established. My own preference is for Celite, and I use a solution of 1% K2HPO4 in deionized or distilled water to grind the leaf pieces. I mix a pinch of Celite with the tissue being ground and then add about 20 volumes of buffer (20 ml per gram of tissue). The extract is then gently rubbed over the leaves of the indicator plants. Suitable indicator plants for BYMV include peas (*Pisum sativum*), French beans (*Phaseous vulgaris*), New Zealand Spinach (*Tetragonia expansa*), *Chenopodium quinoa, C. amaranticolor*, and *Nicotiana benthamiana*. The most readily available seed are those of pea, bean and New Zealand Spinach, which can be bought at garden centers or from seed catalogs. Seed can be stored dry in a sealed container in the refrigerator for several years and maintain good germination.

Peas react to BYMV infection with a systemic mosaic. Beans produce necrotic local lesions (small areas of black dead tissue) on the inoculated primary leaves; these lesions may spread along the vein, and depending on the variety of bean a systemic mosaic may develop. New Zealand Spinach develops chlorotic (yellowish) local lesions on the inoculated leaves; these may enlarge to 4-5 mm diameter. *Chenopodium quinoa* and *C. amaranticolor* both produce chlorotic or reddish local lesions on the inoculated leaves; these may spread long the veins. *Nicotiana benthamiana* produces a systemic mosaic and leaf distortion, although the first signs may be vein-clearing (a pale net-like appearance of the veins) at the base of newly expanding leaves. The time taken to develop symptoms depends partly on the virus concentration and partly on the growing environment in which the plants are kept. In general symptoms show in 1-3 weeks, with low virus concentrations in the inoculum taking longer to yield symptoms.

Serological testing from the symptomatic indicator plant is a useful confirmation of the virus identity, as other viruses can also infect these plants. Serological testing from the indicator plant is more likely to yield good results than testing directly from the orchid, as the virus concentration will be higher in the bioassay plant than in the orchid.

There are several types of serological assays that can be used for these confirming tests, but few are suitable for direct detection in the orchids. This is because the concentration of BYMV in *Masdevallia* and *Stelis* leaves is apparently very low. It is typically much harder to find virus particles (by electron microscopy) in sap extracts of these orchids than from other hosts of BYMV, including *Calanthe*. Thus types of assay that are sensitive enough for reliable detection in other BYMV-susceptible plants are not very reliable in these orchids. However, in general, the more obvious the symptoms in the orchid, the easier serological detection will be.

Indicator plants can be successfully tested by any of the standard methods, including serologically specific electron microscopy and various types of enzyme-linked immunosorbent assay (ELISA), using either polyclonal or monoclonal antibodies. The only serological method that I have found to be reliable for the detection of BYMV in these orchids is a type of ELISA carried out on nitrocellulose membranes, using a monoclonal antibody that reacts with BYMV (and also other potyviruses). This antibody is commercially available in the form of kits for virus detection from laboratories, who also offer a testing service. *(See Editor's Note - Page 10.)* The current form of the kits is suitable for testing the bioassay indicator plants to confirm the diagnosis from symptoms.

Another potential method of detection that has not yet been applied to orchids is nucleic acid hybridization. Complementary strands of RNA and/or DNA hybridize (to form a sequence-specific double-stranded structure) under appropriate conditions in solution. One of the strands (the target) can be applied to a solid phase such as a nitrocellulose membrane, and the complementary strand (the probe) supplied in solution. After incubation to allow hybridization to occur, any unbound or non-specifically bound probe is washed away so that only specific hybrids between the probe and target remain. If the complementary probe strand is radioactively labelled, then the presence of the specific hybrid can be detected by autoradiography of the membrane with X-ray film.

BYMV contains RNA as its genetic material, and clarified sap extracts can be spotted on a membrane. The membrane is then baked to fix the RNA, incubated in a solution containing radioactively-labelled complementary DNA, and exposed to X-ray film. The

CONTINUED - Next Page

pattern of radioactivity detected by the film indicates which samples contained the viral RNA (and hence were BYMV-infected). We have cloned DNA complementary to BYMV RNA in bacteria, but have not yet tested orchid extracts by hybridization for detection of BYMV.

There is another use of the BYMV complementary DNA which is being applied to orchids. When a plant is infected by one virus, it becomes relatively resistant to infection by closely related viruses. This phenomenon is called cross-protection, and is due at least in part to the presence of the viral coat protein. With recombinant DNA technology it is possible to introduce only the viral coat protein gene into plants so that the plant produces the viral coat protein in the absence of virus infection. Several groups have demonstrated that this concept of coat protein-mediated virus resistance has a practical level of effectiveness in that the plants expressing the coat protein gene are at least partially resistant to the virus from which the coat protein gene was derived. Thus tomato and tobacco plants with a degree of resistance to tobacco mosaic virus, and potatoes resistant to potato virus X, are among the plants that have been produced.

We have identified and cloned the BYMV coat protein gene, and the American Orchid Society is sponsoring research to produce orchids that express the BYMV coat protein (see *American Orchid Society Bulletin*, Vol. 58, No. 3 (March 1989), p. 271-273). Methods are currently being developed to introduce the BYMV coat protein gene into orchids, as the methods used successfully for tobacco, tomato and potato are not directly applicable to orchids.

It should be cautioned that even if this method is proven completely successful, it will not be able to protect the current collections of orchid hobbyists. This method will be most important in creating new breeding lines or hybrids which are resistant. Older hybrids could be protected by recreating the hybrid using resistant parents. Species could be protected by selfing or sibbing resistant lines. The best approach to maintaining a healthy orchid collection remains good sanitation, and disposal or quarantining of any infected plants. Do not ignore minor aphid infestations, but control them as soon as they are noticed to prevent transmission of BYMV or other aphid transmitted viruses. Sterilization of tools and washing of hands between plants should be routine practice when repotting or handling orchids.

John Hammond
Floral and Nursery Crops Laboratory
Agricultural Research Service
United States Department of Agriculture
Beltsville, MD 20705

Editor's Note:

One of the sources for virus testing kits and testing services as mentioned in Mr. Hammond's article is:

Agdia, Inc.
30380 County Road 6
Elkhart, IN 46514
(219) 264-2014

Some Notes On *Scaphosepalum* Species Available In The United States

Mark Egger

For that esoteric few among the growing throngs of Pleurothallid enthusiasts that are devotees of the small-flowered but elegant species of the genus *Scaphosepalum*, the publication of Volume V of *Icones Pleurothallidinarum, Systematics of Dresslerella and Scaphosepalum* (Missouri Botanical Garden, 1988) by Dr. Carlyle A. Luer, was an historical event. Every page was read and re-read, the precious information savored and reflected upon, the illustrations viewed with the awe and appreciation of one stepping out onto a new continent for the first time.

Now that a comprehensive and authoritative review has been published for *Scaphosepalum*, I believe that it is time that the commercial and amateur orchid collections in the Untied States (and around the world) be carefully relabeled to correct what has become a frightful hodge-podge of misidentified and synonym-ridden plants. We owe it to ourselves, to the plants, and to Dr. Luer to remedy this taxonomic mess. Well cared for plants of this genus flower easily and prolifically, and proper identification is a simple matter with the fine key, text and illustrations provided by Dr. Luer. We no longer have any excuses, so let's get out those new tags and indelible ink!

To this end, I have prepared the following notes on the species of *Scaphosepalum* that are or have been available in the commercial trade in the Untied States. Dr. Luer has informed me that the other species may be available from Colomborquideas in Colombia, but I would be very interested to hear from any of you that may have other species available for sale or trade.

While I have traveled in the tropical forests of Panama and Ecuador, I am not a professional collector, and my interest in this genus is personal and biological. I have been cultivating *Scaphosepalum* species for about 6 years now, and all of my plants have been obtained from commercial propagators in the U. S.

My plants are cultivated in a 10' x 15' attached greenhouse managed to maintain intermediate to cool temperatures, high humidity (greater than 65%, and usually higher), and abundant fresh air with excellent circulation. My plants are potted mostly in a fairly fine grade of light-colored pumice available in the Northwest, but recent experiments with potting in pure Sphagnum moss seem to be very successful. Like so many other Pleurothallid enthusiasts, I am gradually repotting into Sphagnum, with a layer of coarse pumice or plastic "peanuts" at the bottom to enhance drainage and intra-pot air movement. Let's hope that this fine moss does not become depleted in the wild and can soon be cultivated for orchid growers, so that its exceptional qualities will continue to be available!

The following is a list of those species which I am growing and flowering. For each species I have included annotations as to the commercial sources for the plants in the U. S. of which I am aware, the taxonomic confusion and identification problems existing in the trade, and my own, sometimes tentative observations on growth in cultivation. All identifications have been made to conform with Dr. Luer's revision of the genus.

Key to commercial sources referred to:

B&C = Baker & Chantry Orchids
P. O. Box 554
Woodinville, WA 98072

J&L = J & L Orchids
20 Sherwood Road
Easton, CT 06612

SBOE = Santa Barbara Orchid Estate
1250 Orchid Drive
Santa Barbara, CA 93111

SW = Species West
25825 104th Avenue
Kent, WA 98031

Scaphosepalum anchoriferum

From B&C, labeled as "*Scaphosepalum endresii*", a synonym. Flowers best with cool conditions and high humidity, but with a not overly moist growing medium. Flowers produced singly and somewhat intermittently on each raceme.

Scaphosepalum antenniferum

From J&L, as "*Scaphosepalum pulvinare*" (1985) and again as "*Scaphosepalum rolfeanum*" (1986). However, **neither** of the plants from J&L are true *pulvinare*! Comparison of plates 5 and 33 of Dr. Luer's text make this distinction of species clear. To add to the confusion, I have a third plant from SBOE that was sold as "*Scaphosepalum reversum*". This is a robust and freely-flowering plant, which tolerates intermediate and cool conditions and a wider humidity range than many other species. Always in flower.

Scaphosepalum beluosum

From B&C. Requires cool and humid conditions to flower and seems to do so only intermittently. Seems to be one of the more difficult species to flower, at least until well established.

Scaphosepalum breve

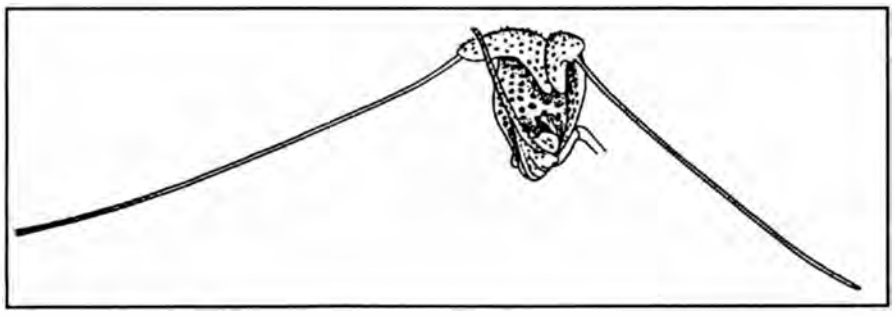
Two very distinct color clones, one a larger purplish flower, the other a smaller yellowish flower, both form B&C, both mislabeled as "*Scaphosepalum verrucosum*". This lovely species flowers easily and for long periods, but it does best with cool, humid conditions. Seems to thrive in fresh air. Occasionally rests from flowering in winter.

Scaphosepalum lima

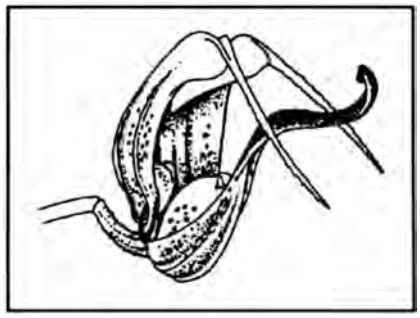
From J&L (but no longer in their catalog). Same comments as for *Scaphosepalum breve*. This species has a lovely mauve colored flower.

Scaphosepalum microdactylum

A purplish clone from SBOE (properly labeled), and a yellow-brown clone from B&C, sold out of flower as "*Pleurothallis* sp." Fairly free flowering, but individual racemes flower intermittently. Appears to do best on the cool side of intermediate.



Scaphosepalum swerifolium Luer



Scaphosepalum breve

Scaphosepalum rapax

From J&L. Fairly free flowering, but needs high humidity and coolish temperatures.

Scaphosepalum swerifolium

Two distinct clones from B&C; SW incorrectly spells this species "*swertifolia*". Also available from J&L. High humidity and cool temperatures seem to be essential to production of good flowers. Even then, flowering is single and intermittent. Lower humidity results in stunted flowers without the fully developed sepaline tails that make this an extremely attractive species.

Scaphosepalum verrucosum

Two distinct clones form B&C, on with a creeping habit. This species is universally misnamed in the trade (by B&C, SBOE and SW) as the synonym, "*Scaphosepalum octhodes*". As noted above, *Scaphosepalum breve* is mislabeled as *Scaphosepalum verrucosum* by B&C. Perhaps the most tolerant and freely flowering species, this does well with both intermediate and cool temperatures, and it accepts a greater humidity range than most of the other species. However, cool and humid conditions again produces fine results. I have one plant that has flowered continuously for at least six years.

Mark Egger
9521 49th Avenue NE
Seattle, WA 98115

Membership Renewal Information

Membership renewal forms are enclosed with this mailing of *The Pleurothallid Alliance News*. On the reverse of the renewal form is a membership survey form. We hope you will take the time to fill this survey out and send it back today!

With the information from this survey, we hope to get a better idea of just exactly how The Pleurothallid Alliance can best serve our members. Information from the survey will be used to help set priorities for projects, editorial agenda for the newsletter, and will be extracted for use in future articles in the newsletter.

Membership includes a full volume subscription to *The Pleurothallid Alliance News*. Please make the choice to renew your membership today, and send your renewal form to:

The Pleurothallid Alliance
Route 2, Box 389K
Barnwell, SC 29812

Want List Registry Calls for Submissions

Mark Wiesman
Want List Registry Chairman

The Pleurothallid Alliance Want List Registry is compiling want lists in preparation for publishing the Alliance Registry. Members are encouraged to send their Want Lists for inclusion in the Registry, which will be published in an upcoming issue of *The Pleurothallid Alliance News*.

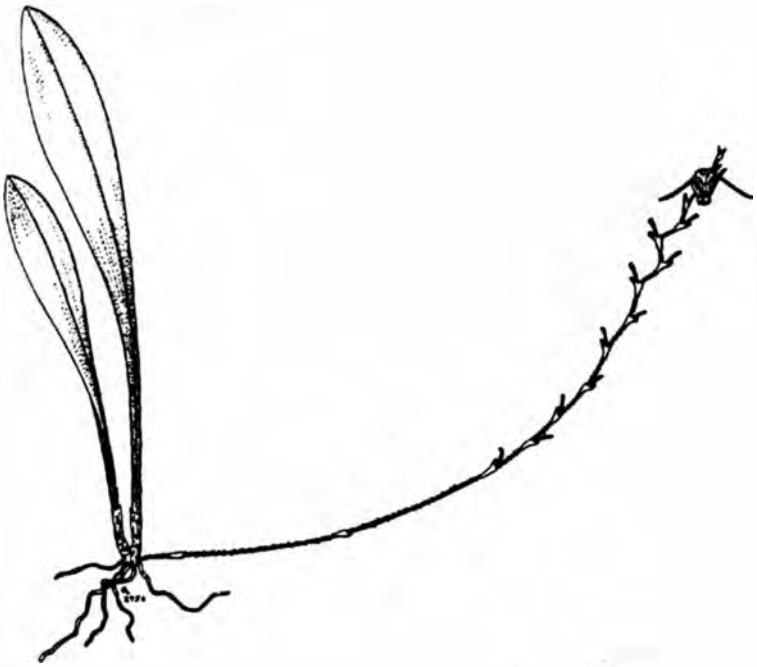
The suggested format for want lists is for members to send their 20 most wanted *Masdevallia* species, and 10 most wanted other Pleurothallid species; or just list the top 30 species or hybrids wanted. Lists should include member's name, address and phone number.

Send want lists to:

Dr. Mark Wiesman
Ark Pet Hospital
Apache Plaza, # 15F
3700 Silver Lake Road
Saint Anthony, MN 55421

THE PLEUROTHALLID ALLIANCE
Route 2, Box 389K
Barnwell, SC
29812

FIRST CLASS MAIL



Scaphosepalum breve (Rchb.f.) Rolfe

ADDRESS CORRECTION REQUESTED