



The

Arizona Orchidist

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NEXT OSA MEETING

The next regular society meeting
will be **Monday, January 7, 2008**
at 7:00 P.M.

Meetings are held at the
Encanto Park Clubhouse
2605 N. 15th Ave., Phoenix, Arizona
North of Encanto Blvd. on 15th Ave.
Phone (602) 261-8993

OSA meetings are open to all
plant enthusiasts
Refreshments will be provided.

Snacks by

OSA Board of Directors
Refreshment Coordinators:
Barbara Parnell (480) 948-0714
Mary Gannon (623) 878-4173

OSA BOARD MEETING

Board Meetings
are open to all members
The next Board meeting will be
Sunday, January 27th at 1 PM
the home of
Harry and Barbara Parnell

GROWER ON CALL

Bob MacLeod
(623) 935-4059

January Program

THE CULTIVATION AND CURING OF VANILLA

Back by popular request are Eric and Patty Elsberry. In 2006, Eric spoke at our May and October meetings, and everyone in attendance at the meetings truly enjoyed the PowerPoint presentations.

In 2004, Eric, and his wife, Patty, started the Arizona Vanilla Company in Mesa, AZ. According to Eric, Patty "was tired of paying \$12.99 for 2 dried up vanilla beans in the grocery store."

Eric is a 3rd generation native Arizonan. He is a graduate of Arizona State University and received his MBA from the University of Phoenix.

For 14 years, Eric had been a consultant in manufacturing and financial systems. He admits that his background is "not exactly a great resume for starting a vanilla company". However, he spent considerable time and energy finding the best suppliers of vanilla.

Eric had contacts in Mexico and used them to find the best Mexican vanilla supplier. He learned how vanilla is cultivated and cured in Mexico and spent time with suppliers in Europe.

Since Eric last spoke to us, his business has grown, and his products are now being sold on eBay and Amazon.com as well as in retail stores and wholesale providers! Also, Patty was featured on Good Evening Arizona!

Welcome back, Eric and Patty!

The URL for Arizona Vanilla Company's website is www.arizonavanilla.com
E-mail: info@arizonavanilla.com Office (480) 396-4552

W. Stimmell

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Julie Rathbun

A New Year has begun, but before I mention a new subject, I need to thank the 2006 board members for their outstanding support and several other members for offering their time to help OUR society. **Jennifer Schmitt** hosted our November 18th board meeting. Thanks, Jennifer! **Doug Baldwin** and **Aaron Hicks** conducted our annual, live December 3rd fund-raising auction. Thanks, guys! Those of you who were unable to attend wouldn't know that Aaron wasn't feeling particularly chipper the night of the auction, but he fulfilled his commitment to help Doug during the auction. Thanks to members who donated plants and/or orchid-related items for our auction. Some of our members are truly dedicated, and for that I am truly thankful. Thanks also to **Barbara Parnell** and **Mary Gannon** for setting out all of the food brought by members to the December meeting. Everything that I sampled was delicious!

During our January 7th meeting, Barbara will pass around a sign-up sheet for refreshments for our meetings in 2008. If you enjoy refreshments brought by others, it's only fair that YOU take YOUR turn.

My message to you for the New Year is simply: OSA is YOUR society. We need more volunteers to help with our various activities. I'm keeping my comments short in this issue because we are including a lengthy, very special article about Gustavo Romero's latest expedition to Venezuela.

See you on January 7th!

Julie

SPECIAL THANKS

To the Following Businesses for Generously Donating Items
for our December, 2007 Fundraiser

COASTAL GARDENS

137 Tropical Lane
Corpus Christi, TX 78408
(361) 882-3380
www.dihcro.com/coastalgardens.html
E-mail: orchidman@dihcro.com

KIM NGUYEN

8100 Hermisillo Rd.
Arlington, TX 76002
(817) 705-3079
E-mail: mikpoppy@hotmail.com

JEWELL ORCHIDS

25 Good Hope Rd.
Colbert, GA 30628
(706) 742-5065
www.jewellorchids.com
E-mail: orchids@jewellorchids.com

OAK HILL GARDENS

P.O. Box 25
Dundee, IL 60118
(847) 428-8500
E-mail: oakhillgardens@sprintmail.com
www.oakhillgardens.com

The Editor's Box

Let me be one of the first to wish you a Happy and Healthy 2008!

Next, I would like to apologize to the December birthday celebrants who were not listed in the newsletter calendar:

Maria Baisier	December 14th
Alex Arce	December 15th
Doug Baldwin	December 21st
Pam Albright	December 23rd
Janella Bacik	December 27th
Roy Castle	December 30th
Jennifer Schmitt	December 30th

For some reason birthdays after December 9th were lost in cyberspace!

I hope you all had/will have a great day.

Finally, and probably most important, "Let's get Growing", I don't mean just horticulturally, although the New Year is a great time to take a look at your orchid collection, review your growing habitat and practices, do some in depth reading and learn, learn, learn.

What I had in mind was the health and vitality of your *Orchid Society of Arizona*. The very existence of this group depends on YOU. Make this your year to get involved, volunteer to assist at a community service program, introduce a newcomer to this wonderful affliction (orchidmania), help with the show.

In short "Let's get Growing"

ed

MEMBERSHIP RENEWAL

January is the time to renew your OSA membership. Due to space constraints in this issue the renewal form is not included. **Forms will be available at the January 7th meeting, in the February issue, or by emailing the editor.**

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Direct Inquiries to our website at:

www.orchidsocietyaz.org

Or to any of the Board Officers or Trustees:

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The Orchid Society of Arizona, Inc. is a non-profit 501 (C) (3) organization dedicated to community service and the study of orchids. It is affiliated with the American Orchid Society, The Orchid Digest Corporation, the Arizona Federation of Garden Clubs, Inc., and The Nature Conservancy.

August-September 2007 Expedition to San Miguel River, Amazonas state, Venezuela

I am glad to report that our expedition to the San Miguel River was a success both botanically and geographically. The objective of the expedition was to explore the San Miguel River, where we had not collected before, and to continue the orchid inventory of the *Municipio Autónomo* Maroa, one of the municipalities of Venezuela's Amazonas state. It was successful botanically because we documented more than 106 orchid species (five were new to our checklist and many more were photographed successfully for the first time), and geographically because we navigated from the Guainía to the Casiquiare canal. Although many local fishermen and hunters routinely make this journey, for the first time, using a handheld global positional system unit, we geo-referenced the entire trajectory!

Although the San Miguel River is called a "caño" on many maps (a creek or small creek in English), it is actually a major tributary of the Guainía, which it joins at about 2° 40' N. After receiving the discharge of the Casiquiare canal¹, which starts as a branch off the Orinoco, the Guainía becomes the Río Negro, the largest tributary of the Amazon River. In old maps, the San Miguel River is also known as *Conorochite*, *Me* or *Mée*, *Itiwini*, *Itivini*, or *Ytinivíni*, primarily because cartographers confused the name of the main course of the river with the names of some of its major tributaries. I found the first published record of this river in Caulin ([1779] 1992: 82--83, as *Ytinivíni*)² where, according to this famous Jesuit historian, it was allegedly used by the Portuguese to transport native Indian slaves from the Orinoco to the Rio Negro. It was an important waterway from the 1940s to the 60s, because its basin contains large populations of the palm *Leopoldinia piassaba* Wallace, from where the *piassaba*, *chiquichique*, or *chiquichiqui* fiber can be harvested on a sustainable basis. This fiber was important in the making of rope, brooms and brushes, but the advent of nylon made its harvest uneconomical: the many small villages then found along its shores are now abandoned.

As in previous expeditions (see *The Arizona Orchidist* for May 2005, November 2005, May 2006, and November 2006), I traveled from Boston to Caracas, then to Puerto Ayacucho, the capital of Venezuela's Amazonas state, and finally to Maroa, the capital of *Municipio Autónomo* Maroa. Carlos Gómez and I flew to and from Maroa in a Cessna 206 (see the *Arizona Orchidist* for May 2005 for a description of the role of Carlos Gómez in the project). In Maroa we hired José Miguel Aragua (Mr. Sandalio's brother-in-law, who joined us in the first expedition to Cerro Mesaque in July 2005; Mr. Sandalio is our host in Maroa), Carlos' son, Oscar Gómez, and a new member of our team, Emiro Cayupare, who has deep knowledge of the San Miguel River and its toponymy. In this trip we had three different Amerindian ethnic groups in our team: Carlos and Oscar are Baré, José Aragua is Baniwa (or Baniva), and Emiro is Warekena. We also rented a large dugout canoe from Mr. Sandalio, where we installed our Yamaha 15 H.P. outboard motor and where we could fit comfortably all our equipment and crew.

After purchasing a few supplies (primarily *mañoco* or manioc, a flour made from the roots of *Manihot esculenta* Crantz), gas and 2-stroke engine oil in Maroa, we departed late in the morning of August 31. We reached the confluence of the Guainía and the San Miguel some 40 minutes later, and by the early afternoon we had entered the *Emeri*, the first major tributary of the San Miguel. I had observed large black-water lakes along the *Emeri* while examining a detailed satellite image of the area, where I was hoping to find many epiphytic orchids.

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Along the shores of these extensive lakes, however, we found only extensive populations of *palo de boya* (4--5 species in several genera of Apocynaceae, characterized by their light and soft timber), where orchids are hardly ever found. However, we did find, along the lower course of the San Miguel, the following species:

Bifrenaria longicornis Lindl. (most frequently on the trunk of the slender and elegant palm *Leopoldinia pulchra* Mart.);

Brassavola martiana Lindl.;

Cattleya violacea (H.B.K.) Rolfe;

Caularthron bicornutum (Hook.) Raf. (without flowers but vegetatively distinguishable);

Eriopsis sceptrum Rchb.f. & Warsc. (in large clumps often exceeding one meter in diameter);

Galeandra devoniana H. Schomb. ex Lindl. (again, on *Leopoldinia pulchra* Mart. or rarely on rotten tree stumps) and

Scuticaria steelei Lindl. (without flowers but again vegetatively distinguishable).

After spending the night in an improvised camp site along the San Miguel, late in the afternoon of September 1 we reached and entered its second large tributary, the *Itiwini*. We established our second camp site on the western shore of the *Itiwini*, close to its confluence with the San Miguel, in an abandoned place called *Tinaja*, about a hundred meters from an extensive Amazonian savanna (for a definition of Amazonas savannas, please see my essay in the *The Arizona Orchidist*, November 2006). We explored this savanna later that evening. We found several plants of *Cleistes* sp. nov. bearing flowers almost fully opened (the same species we collected last July in Maroa, described as a variety of *C. rosea* Lindl. but soon to be elevated to the rank of species) and a few plants of *Duckeella pauciflora* Garay with damaged flower buds. The next morning the flowers of the *Cleistes* were fully opened. The ephemeral flowers were beautiful: according to my field notes, the sepals were glaucous green, the petals whitish pink, and the labellum white to light pink, with a green callus. It is really too bad that the flowers only last one morning!

We spent the next two days navigating up the San Miguel³, setting up camp first at *Barranco* (September 2), with just enough room for our team, and later in *Bolívar* (September 3), an abandoned village. Along the San Miguel between the confluence of the *Emeri* and *Bolívar*, we found the following orchid species with flowers:

Acacallis cyanea Lindl.;

Catasetum longifolium Lindl. (invariably on the leaf bases of the tall palm *Mauritia flexuosa* L.f.);

Catasetum pileatum Rchb.f. (found both plants with female and male flowers);

Catasetum roseo-album (Hook.) Lindl.;

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Encyclia cf. amicta (Rchb.f. & Linden) Carnevali & I. Ramírez;

Encyclia remotiflora (C. Schweinf.) Carnevali & I. Ramírez;

Epidendrum flexuosum Mey.;

Epidendrum macrocarpum Rich.;

Epidendrum magnicallosum C. Schweinf.;

Epidendrum nocturnum Jacq.;

Epidendrum smaragdinum Lindl. and

Scaphyglottis sickii Pabst.

The pseudobulbs and leaves of the *Catasetum pileatum* plants we encountered (which were obviously mature because they bore several flowers), were surprisingly small relative to the ones we have often encountered farther north, along the Orinoco river and around the *Atures* rapids. Even plants bearing several large fruits bore small pseudobulbs and leaves. The flowers, however, looked identical to the ones we have observed elsewhere.

We left Bolívar early the morning of September 4 and soon after entered several *cerradales* (from the Spanish *cerrado*, closed) where sections of the river spread widely and the navigation channels become quite shallow and not clearly defined. We encountered our old nemesis, thickets of the palm *volador* (*Desmoncus polyacanthus* Mart., a diabolical "thing" mentioned in many of my previous reports), at least two large aroids (*Anthurium* sp. and *Montrichardia* sp.), dense population of *Spathanthus bicolor* Ducke (Rapateaceae) and *Thurnia* sp. (Thurniaceae), as well as fallen tree trunks. By the late afternoon we had reached a narrow navigation channel, no more than 1.5-2.0 meter wide, the sides dense with thickets of an unidentified bambusoid grass, small trees (5--6 meter tall) of *cuajo* (*Virola* sp.), and miscellaneous small plants growing in the shallow, flooded forest. The San Miguel flows from east to west; by mid-afternoon, however, the waters along the channel started flowing in the opposite direction, toward the Casiquiare. We reached a much wider channel with taller trees by the late afternoon and just before sundown we were navigating up the wide and fast flowing Casiquiare! That evening we set up camp in an abandoned village, *Capibara* (or *Capiwara*), named after the largest rodent in the World (*Hydrochoerus hydrochaeris* L.). We had seen the typical excrement of this shy animal in Barranco and in Bolívar, but never saw the creature itself.

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Between Bolívar and Casiquiare we found several additional orchid species:

Campylocentrum fasciola (Lindl.) Cogn.;

Campylocentrum huebneri Schltr.;

Campylocentrum pachyrhizum (Rchb.f.) Rolfe (a new species for our checklist);

Coryanthes senhasiana Gerlach (with several flowers, in two of which we found the pollinator, a beautiful iridescent blue bee, *Euglossa analis* Westwood; prior to this discovery, the pollinator of this species of *Coryanthes* was not known);

Dichaea sp.;

Lepanthes helicocephala Rchb.f.;

Lophiaris nana (Lindl.) Braem;

Maxillaria uncata Hook.;

Maxillaria villosa (Barb. Rodr.) Cogn.;

Sobralia macrophylla Rchb.f. (a new species for our checklist) and

Trigonidium acuminatum Lindl.

Flowering plants of *Acacallis cyanea* were particularly common, a few of which bore dark purple flowers much larger than the common variety.

We spent the next two days exploring several small tributaries of the Casiquiare including one called Caño Cu-pería where, in addition to many of the other orchids we had encountered, we found *Pleurothallis mentosa* Cogn. and *P. picta* Lindl., two species we had encountered elsewhere in the state but never before in the study area. We also observed a large troop of the common squirrel monkeys (*Saimiri sciureus* Humb.), including several females carrying young.

We started our return to Maroa the early morning of Friday, September 7. We reached Maroa around 4:00 PM on Sunday, September 9.

As always, we spent one day exploring the vicinity of Maroa before flying back to Puerto Ayacucho⁴. We found, around the airport, several orchid species in flower, some of which we had not been able to photograph before (e.g., *Epidendrum microphyllum* Lindl., *Octomeria brevifolia* Cogn., and *O. taracuana* Schltr.) and one new record for our checklist: *Orleanesia cf. yauaperyensis* Barb. Rodr. (without flowers but vegetatively quite distinctive).

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Carlos Gómez and I flew back to Puerto Ayacucho Thursday, September 13. The day before flying back to Caracas, during an outing south of Puerto Ayacucho, we discovered a small population of *Habenaria huberi* Carnevali & Morillo in flower, thus considerably extending the geographical range of this showy species, undoubtedly one of the most beautiful members of the genus in the Americas. It was previously thought to be endemic to savannas in the foothills of tepuis in central Amazonas state, Venezuela. Our collection near Puerto Ayacucho indicates that this species eventually should be found in Colombia.

I flew to Caracas on Sunday, September 16, and the next day took a bus to Guanare, Portuguesa state, to visit herbarium Port (Herbario Universitario, UNELLEZ-GUANARE, Programa de Ciencias del Agro y del Mar, Mesa de Caracas), where I searched for orchid specimens previously collected along the San Miguel river and its tributaries. I found collections of only four species: *Cleistes sp. nov.*, *Dichaea trinitensis* Gleason, *Duckeella pauciflora*, and *Rudolphiella aurantiaca* (Lindl.) Hoehne (the latter being the only species we did not encounter in our expedition). A preliminary count indicates that we added more than 90 new records to the known orchid flora of the San Miguel!

Readers might be interested to know what I ate during my expedition and whether I was plagued by insects. We ate lots of fish, especially several species of piranhas (*Serrasalmus* spp.). We also caught two specimens of the red catfish, *Phractocephalus hemiliopterus* (Bloch & Schneider) which weighed at least 50 pounds each! As happens during each of my journeys, there is a biologically interesting and pesky component involved: insect bites! Mosquitoes and black flies are particularly fond of me! Although I wear long slacks and long-sleeved shirts, and spray myself with insect repellent, blood sucking insects are relentless. In heat, when I perspire, insect repellent is quickly rendered ineffective. The best repellents tend to melt or damage anything made out of plastic, including many of the devices used in the field (cameras, UPS units, thermometers, etc.). During this trip, I tested a new type of insect repellent that does not damage plastic. However, it does not last long enough on the skin. The bite of one particular species of black flies was particularly painful, and welts persisted for several weeks. Insect bites concern me, but they do not deter me from my mission!

Next year we look forward to returning to the San Miguel. This time, rather than navigating the waterway to the Casiquiare, we plan to continue exploring the course of the upper San Miguel and reach its headwaters on the western side of the Serranía Cariche⁵, reportedly one of the few sites in the Venezuelan Guayana where one can find sandstone below an altitude of 800 m.

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This trip would not have been possible without the financial support of the Harvard University Herbaria and the Orchid Society of Arizona (OSA) and the logistic support of Venezuela's Ministerio del Poder Popular para el Ambiente in Caracas and Puerto Ayacucho. The Curator and staff of Herbarium PORT (Herbario Universitario, UNELLEZ-GUANARE, Programa de Ciencias del Agro y del Mar, Mesa de Cavacas. estado Portuguesa, VENEZUELA 3350) provided invaluable help during my visit.

Gustavo A. Romero-González

Keeper

Orchid herbarium of Oakes Ames

Harvard University Herbaria

22 Divinity Avenue

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NOTES

¹ Rice, A. H. 1921. The Rio Negro, the Casiquiare Canal, and the upper Orinoco, September 1919--April 1920. The Geographical Journal 58, No.5: 321--344 (including a map).

² Caulin, Antonio. [1779] 1992. *Historia Corografica de la Nueva Andalucia*. Academia Nacional de la Historia, Biblioteca del Nuevo Mundo, Caracas.

³ According to Emiro, our Warekena guide, above the confluence with the *Itiwini*, the San Miguel should be called *Mée* or *Me*, just as the Rio Negro, above the confluence of the Casiquiare canal is called the Guainía River.

⁴ I am happy to report that the plant we reported as a species of *Pelexia* in my last essay, upon closer examination, turned out to be a new species of *Sarcoglottis* Presl. We had encountered this species several times in the past, but never with flowers, and we had tentatively identified it as *P. callifera* (C. Schweinf.) Garay because these two species are vegetatively similar. Likewise, the plant of *Epidendrum apuahuense* Manf. that we found with flower buds last July eventually flowered in the garden of Carlos Gómez in Puerto Ayacucho. Using photographs of the plant taken at the time and a flower preserved in alcohol, this beautiful miniature species has now been illustrated faithfully for the first time (a deformed, cleistogamous flower was illustrated by Dunsterville and published in the second edition of *Venezuelan Orchids, an Illustrated Field Guide*).

⁵ This group of botanically little known mountains, the center of which is at about 2° 53' 33" N, 66° 19' 07" W, drains towards to the Orinoco river to the north, to the Casiquiare to the east, and to the Atacavi and San Miguel rivers to the west and south.

OSA January 2008 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 <i>Happy New Year</i>	2	3	4	5
6	7 <i>OSA Meeting 7PM</i>	8	9  <i>Omar Rios</i>	10	11  <i>Debra Hartill</i>	12
13	14	15	16	17	18  <i>Mimi Brophy</i>	19  <i>Frank Bopp</i>
20	21	22	23	24	25	26
27 <i>Board Meeting 1 PM</i>	28  <i>Kristin Huisinga</i>	29	30	31		



Orchid Society of Arizona

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