## Odontoglossum Alliance Newsletter

November 2001

The Orchids at Longwood Gardens by Lee Alyanakian

Volume 3

**Endangered Hybrids by Robert Hamilton** 

## The Odontoglossum Alliance Program 2002

## The Antique Hybrids and Other Alliance Material Auction 2002



## The Orchids at Longwood Gardens By Lee Alyanakian

Longwood Gardens, a display garden consisting of 1,050 acres including 4 acres under glass, is located outside Kennett Square, Pennsylvania, near the Delaware state line. The property, an original William Penn land grant, was purchased in 1906 by Pierre Samuel du Pont (1870-1954). Construction began on the Conservatory complex in 1919, and was first opened to the public in 1921.

Orchids were a favorite of Pierre's wife, Alice Belin du Pont, and both she and her husband were among the original charter members of the American Orchid Society in 1921. In 1951, Longwood's collection was significantly augmented by the acquisition of the orchid collection of Mrs. William K. du Pont, of Delaware.

Almost 9,000 orchids are grown today at Longwood, representing 230 genera, 725 species, and 3,930 taxa. The display greenhouse is an ever-changing kaleidoscope of 300 to 500 blooming plants exhibited each day year round. Originally a smaller space, this concrete, steel, and glass structure was expanded in 1982. It now encompasses 1,000 square feet and consists of two original bronze and glass display showcases that are kept filled with white and purple *Cattleya* and *Cattleya* hybrids. Custom-made black wrought iron work covers the walls of the rest of the display, allowing for vertical arrangements of potted orchids and ferns, which are changed several times weekly as needed.

Twenty to thirty plants are needed for each orchid that is on display, so approximately 8,500 plants are grown in several different growing areas behind the scenes. These growing areas are split into specific cultural zones



The "Catt" (*Cattleya*) House is a bright intermediate house that is kept cooler in the summer through the use of liquid shading and a pad cooling system. Then activated, water is circulated through a pad wall and exhaust fans draw the cooler air across the greenhouse. This house is filled primarily with *Cattleya* and *Cattleya* hybrids, *Laelia, Brassavola, Encyclia, Epidendrum* and *Schomburgia*.

The "Paph" (Paphiolpedilum) House is an intermediate house with lath shades that can be raised and lowered depending on the season and the different light requirement needs. Orchids here consist primarily of Paphiopedilum, Phragmipedilum, Brassia, Dendrobium, Oncidium, Dendrochilum, Phaius, Gongora, Vanda (in a sunny corner), and many other miscellaneous plants.

The "Phal" (*Phalaenopsis*) House also utilizes roll-down shades for added shading flexibility, and is the warmest of the houses. *Phalaenopsis, Cirropetalum, Bulbophyllum*, and *Vanilla* are primarily grown in this space.

*Cymbidium* are grown outside in the summer in an outdoor shade house, which is automatically irrigated and misted. They are moved inside in late October, where they are grown cool and bright throughout the winter.

The "Cool" House makes it possible to grow plants such as *Odontoglossum* and *Odontoglossum* hybrids, *Masdevallia, Miltonias, Lycaste, Pleurothallis, Disa* and *Stanhopea*. Here in the northeastern part of the country this is no small feat as the summer humidity is often extremely high. Produce coolers were originally used in the 1960's to maintain a maximum temperature of 55 degrees F, but these have been recently replaced with a more efficient and environmentally friendly air conditioning system using a modern refrigerant.

Longwood's Odont's are potted in equal parts of fine fir bark, medium fir bark, and coarse charcoal and are repotted after flowering. They are watered approximately twice a week and occasionally get misted in between during the hottest months of the year. The plants are fertilized with a balanced fertilizer such as 20-20 at 200 to 250 ppm, spring through fall.

While we have a number of the newer species and hybrids of *Odontoglossum*, many of them are quite old and have an accession number beginning with the letter "L", signifying that they were part of the original collection of Mr. and Mrs. du Pont, dating back to 1921. Although our plant records from this time are incomplete, orchids such as *Odontioda* Brilliant, *Oda*. Charlesworthii, *Oda*. Naralda, *Oda*. Valeria, and *Oda*. Viscount Kitchner are recognizable as parents of many of the modern-day hybrids.

Odontioda Allotte and Oda. Ingera cv. Lyoth Time were obtained from Charlesworth and Company in the early 1960s along with Odontoglossum Alport, Odm. Edalvo and Odm. Tontor.

Odontioda First Snow, Oda. Moonglow, Odontoglossum Apollo Eight, Odm. Artic Gold, and Odm. Rich Cove date back to the mid 1960s from the Beall Company in Washington State.

Odontioda Cetargia and Oda. Cetura were obtained from a private collector in West Germany in the late 1960s.

Most of the plants mentioned above exist as single individuals in our collection. They seem to lack the vigor of many of the more modern hybrids and are very slow growing with surprisingly small root systems, and yet they have been long lived for us nonetheless. Special care will be needed if these antiques are to be added to any collection

For further information on Longwood gardens, call 610-388-1000 or visit online at <u>www.longwoodgar-</u> dens.org.

Lee Alyanakian is the Senior Gardener in charge of the orchid collection at Longwood gardens, Kennett Square, Pennsylvania.

Editors Note: Page 15 contains more of our continuing series on the alliance species. These photographs were provided by Stig Dalstrom of the Marie Selby Gardens in Sarasota, Florida

## Program and Annual Meeting Odontoglossum Alliance

The annual meting of the Odontoglossum Alliance will be held on the afternoon of 12 April 2002. This meeting will be held in conjunction with the AOS Trustees meeting and the Illinois Orchid Show 10-14 April 2002. There is a lecture program of four speakers and an evening dinner at a Froggy's, a fine French restaurant. The meeting will be held in the Sheraton North Shore Hotel at 933 Skokie Blvd, Northbrook, IL 60062, Phone number 847-498-6500. Reservations at the hotel may be made through the general Sheraton Hotel reservation number 1-800-325-3535. In the February newsletter there will be information on room rates.

#### Program

#### 1:00 PM 12 April 2002

Session Chairperson: Sue Golan

1:15PM -2:00 PM Larry Sanford, Cincinnati, Ohio;

Title: "Leonore and Milton Are Both Right!"

Some observations and measurements about growing cool Odonts and their warmer growing intergenerics in the Ohio Valley.

2:00-2:45 PM Milton Carpenter, Everglades Orchids, Belle Glade, Florida, **Title:** "Creating Odontoglossum Alliance Hybrids for Tropical and Sub-Tropical Climates"

2:45 - 3:15 Break

3:15 – 4:00 Professor Norris Williams, University of Florida, Gainesville, Florida Title: "Molecular Systematics (DNA) of the Odontoglossum Alliance

4:00 –4:45 PM Stig Dalström, Marie Selby Gardens, Sarasota, Florida

Title: "When One and One Becomes Three, At Least"

A discussion, with slide presentation, about nomenclatural confusion in Oncidiinae; with examples of how miscommunication and misunderstanding lead to synonymy and other unfortunate errors in orchid classification. Also a discussion about distribution and speciation patterns in Odontoglossum and Cyrtochilum.

There will be an evening dinner at Froggy's French Café located at 303 Greenbay Road, Highwood, IL 60040, a ten (10) minute drive from the hotel, phone number 847-433-7080. There is a choice of two entrée's to be made at the time of seating. The cost of the dinner is \$40.00 per person. The total capacity available for this dinner is 50. Reservation may be made by contacting Sue Golan. To make and hold a reservation a check must be sent to Sue Golan.

#### <u>Sue Golan</u>

e-mail Address: sgolan@aol.com Phone Number: 847-234-6311 Fax Number: 847-234-6397 599 Old Mill Road Lake Forest, IL 60045

#### In all case reservations must be followed up with payment to Sue.

A cash bar will be opened starting at 6:00PM

Dinner will be served at 7:00 PM. Following dinner will be the auction of a number of antique Odontoglossum Alliance hybrids as well as a collection of donated fine Alliance material, both mature plants and flasks.

### **Endangered Hybrids**

By Bob Hamilton

"Odontoglossums are the most difficult of all orchids to grow, unless one can devote a special house, expensive equipment and much time to their care; the group is not recommended."

The A-B-C's of Orchid Growing 1903

Watkins

The End of the Natural World

The concept of endangered odontoglossum and odontiodas (henceforth "odonts" for simplicities sake) and odont intergenerics may, on first take, seem absurd. After all, why can't we make orchid hybrids ad nauseam? After all, the number of hybrids already greatly surpasses the number of recognized species.

At this time, a component and often the theme of every major orchid event is conservation. This theme is a natural response to what we all know to be an ongoing ecocide. Intelligent people realize the destruction of the "natural world" is imminent. We have come to the time when human population growth will adversely effect the biodiversity of the planet. The alarming rate of increase can be seen in the accompanying graphs. (See illustration on page xx.)

Long ago, predators ceased to impact our numbers. Two major world wars in the 20<sup>th</sup> century barely put a dent in population increase. Famine and disease have, for the moment, been controlled. The only mechanism currently capable of restraining untenable population growth is artificial birth control and this only in industrialized nations. Given the four methods of population control that come to mind, disease, famine, war and birth control it is a bit depressing that many religions admonish only the last. Thus, the growth curve continues.

A bureaucratic response to natural destruction was to add orchid plants to the CONVENTION ON INTERNA-TIONAL TRADE IN ENDANGERED SPECIES AND WILD FAUNA AND FLORA, also known as CITES. The net effect of CITES is that most orchid species will now be destroyed in their natural settings. Not arguing the merits of this CITES approach to conservation there is some clear insanity to CITES. Insanely, orchid hybrids have also been included in CITES. And no place is this insanity taken to the absurd than the United Kingdom where a further restriction on the importation of orchids has added. United Kingdom subjects choosing to buy

where a further restriction on the importation of orchids has added. United Kingdom subjects choosing to buy orchid hybrids from overseas vendors must first submit a list, in advance of shopping, of the plants they plan to import. Poor chaps, I suppose that is why they are called subjects while Yankees prefer to be called citizens.

The effect of these rules has compromised orchid growing in the UK, which was formerly the center of the orchid and more specifically the odont World. Once preeminent, today English odont nurseries are either closed or relegated to selling Dutch meristems.

#### The Species Nazis

Hybrids face another of problem. The demand for hybrids and the number of orchidists growing them has declined. At present, many growers favor species, considering hybrids passé and déclassé. From my perspective, growing orchid species is a nice hobby. It is akin to collecting coins and stamps. One buys and trades, catalogues them and blooms them. One can even compare whose caudata is bigger.

There is also a species growers' dilemma. Because few growers ever master orchid culture it is necessary to have a renewable species resource, i.e. a tropical hardwood forest. That is where the majority of orchid species grow. CITES hampers these imports which is sometimes good but often results in orchids being burned with the clearing of these forests. Many developing countries are without in fossil fuels and other resources and much destruction results from the need for hardwood as a fuel for cooking and the land food production, meager as this production is. (See the supplemental information for the bad news on population growth.)

Species can be artificially propagated but one must ask are the results still a species? Perhaps these should be more correctly thought of as "artificial species" as the plants most likely to be propagated are the pretty ones in their best colors and forms. Human standards may not be what nature had in mind.

I do not think this will be much of a contribution to conservation. Few orchid collections survive their owners for long. For my part, I enjoy orchid species and have grown them along with hybrids for more than 25 years.

#### The Case for Endangered Hybrids

Odont hybrids have been around for slightly more than a century. The first odont hybrids were made and bloomed in the last decade of the 19<sup>th</sup> Century. These early hybrids were often breed from the crème de la crème of the species in the collections of private growers and commercial nurseries. Photographs and illustrations from this period show significant improvements in flower size and shape attained in these early hybrids. Orchidists of that period were surprised when most of these primary hybrids proved fertile. Speculation was primary orchid hybrids would be "mules" (sterile) and breed no further.

The late Don Wimber, PhD who spent much of his life studying the chromosome numbers of orchid hybrids including cymbidiums, paphiopedilums and toward the end of his life odonts told me an observation. Wimber noted that many early white odontoglossum hybrids were polyploid, i.e. they contained more chromosomes than the normal diploid set of 56 chromosomes found in jungle plants (for more information on "ploidy" read the subsequent attachment). He noted he did not see this polyploid pattern appear in the early cymbidium hybrids.

For Odonts, the annus mirabilis was 1904. The first intergeneric hybrid between Odontoglossum nobile x

Cochlioda noezliana, Oda Vuylstekeae was shown at the 1904 Temple Show in London. It caused a sensation. Oda Vuylstekae was shown by its maker, Vuylsteke of Belgium who would go on to make more than 45 additional odont hybrids. Color and pattern entered the odont hybrid picture. Many of us odont growers came to them because of the dazzling colors and patterns displayed by these intergenerics.

A couple of decades of trying to make good odont hybrids has shown me the task more difficult than I initially thought. At the recent World Orchid Conference in Vancouver, British Columbia I decided to present some of the obstacles I've come across. The theme of that conference was (you guessed it) conservation. I put together a topical talk, Endangered Hybrids, about my breeding efforts. Included were the dead ends, wrong assumptions and a shrinking odont hybrid market — shrinking numbers of growers!

Just before presenting I ran into a high-profile orchid colleague in the hallway in front of the seminar hall.

"Good to see you Bob. Glad to see someone's talking about saving antique hybrids. Pity I can't make your talk. Got to go. Tah-tah old chap".

Well, hello, I must be going! This comment caught me off guard for my talk wasn't about old odont hybrids but about hybrids and the pitfalls they present! Yes, I've got some of those antiques and I enjoy growing them but I am an active breeder of odonts as are some of my friends and I was presenting topical information. There are problems ahead for us.

Let me share some of them.

What's In Hybrid Bank (Gene-bank)

The genepool or palette odont breeders have to work from consists of hybrids and species which remain in cultivation. The genepool in most of our hybrids comes from the collection of superior species sought out and grown toward the end of the 19<sup>th</sup> century. These superior forms were culled from vast imports of species. It is unlikely such fine representatives now exist in what's left of the wild and less likely they will be imported. Thus, this precious hybrid genepool, once lost, is gone forever.

The most difficult odont breeding plants to find are ones that were once the most common, i.e. the superior, white, pure odontoglossum hybrid crispum-types. These are finicky growers which demand cool, buoyant evenings in the 10-12 C range (52-55F) all year long. It is only with this kind of culture can the potential of these magnificent hybrids be manifest. Fortunately a few, regrettably aging growers hold collections of these plants. Some of the best are in the UK at the Eric Young Foundation, Isle of Jersey. There are also great plants in the North America (mostly on the West Coast), South America, Australia, Japan and South Africa. Still, in all I am talking about only handfuls of growers.

Another group of plants which are around in slightly greater abundance are the primary hybrid odontiodas made with Cochlioda noezliana. It is in this group that we find genes for red color and exotic patterns. When visiting odont collections on the Eastern Coast of the United states one finds few of the big whites but a fair collections these odontioda primaries turn up. This is a testament to the hardiness of the primary of this odontioda. Much of this hardiness seems to be lost when these primaries are continuously breed back to the big crispum types to gain size and shape.

There are also the big, bold-patterned odontiodas, bred throughout much of the last century, mostly from the 1930's onward. These, like the crispum types, can be difficult to culture.

Regrettably, in all these groups the selection criteria for raising and keeping plants has been shape, size and color. Factors like "growability" have not been deliberately breed for. Plants with this characteristic survive because they are pretty as well as hardy.

Finally, there are the myriad on oncidinae species and combinations that can be combined with odontoglossums and odontiodas to make that wonderful group called "intergenerics" (correctly, odontiodas are intergeneric).

Like most growers I began growing odonts by buying blooming plants. This progressed to gambling on some seedlings, then flasks and finally making hybrids. It all seemed so simple. Cross the best with the best and hope for the best. Why simple, 6<sup>th</sup> grade genetics inferred one could simply cross a cold grower with a warm grower and then cross siblings to get a generation of warmth tolerant hybrid. Imagine; in one short step we could segregate warmth tolerance and grow enough of these and there should be some pretty ones. The problem is it hasn't really happened. Why? What's Wrong? After a century of breeding where are the "warmth tolerant" hybrids that display the glory of odontoglossums?

#### The Polyploid

As noted earlier, Wimber noted polyploids appeared early on in odontoglossum hybrids.

These polyploids in turn became the parents of choice because with their increased chromosome numbers came bigger size, denser color and rounder shape. In breeding these are the improvements we often seek. There are additional traits we may aim for. For instance, in addition to traits for bigger, rounder and more color we may also want high flower count, fragrance and long-lasting flowers. How about will it grow in Iowa or maintain a good root system or something fundamental like does it resist diseases and insects. A problem with using polyploids to segregate such traits was first pointed out to me by Prof. Stephen Beckendorf.

To illustrate, let us make a hypothetical cross to produce an albino population. We cross our rare, mutant albino parent with a nice species. Most of us know the resulting population will not manifest albinism because albinism is a recessive trait and when paired with a dominant gene the results are colored progeny. So we do what we are taught and sib the resulting seedlings and now we should see some albinos in the grandchildren. Gregor Mendel showed the actual percentage was predictable at 25%. Now suppose we start out with polyploid 4n parents and try to segregate the same albino trait. Because it only takes one dominant gene in each progeny to annihilate albinism the number of plants we need to grow to see a reasonable number of albas hugely increases. To make matters worse, if we want to try to simultaneously segregate more than one trait in a cross we must now grow a huge numbers of these polyploid seedlings to recover these traits. The accompanying table (see page ZZ) illustrates numbers for expressing one trait, two traits and three traits in 2n and 4n populations. To isolate and grow on traits it is better to work with diploid stocks.

Now the catch! What have we been collecting and propagating all these years? Those big, round, award winning polyploids, of course. There are regrettably few diploids around made from that magnificent turn of the century stock. There is also no way at the present time to convert our hybrid polyploid stocks back to diploid.

I've had the opportunities to visit orchid clubs throughout the US and abroad. Sadly, most of the memberships are aging with little new blood. Given the decreasing numbers of growers who raise large numbers of seedlings it is difficult to make significant improvements using polyploid parents because there is no one there to buy huge numbers of seedlings.

Fortunately, we can continue to produce these polyploid lines. The Eric Young Foundation in the Isle of Jersey is doing outstanding breeding of this type. Fortunately Alan Moon, the progenitor of these hybrids has made some of this material available. Much of the success of the Eric Young hybrids is the result of a collaboration of Alan Moon and the late Don Wimber.

Where Did/DO The Polyploids Come From

Moon knew the tremendous value Wimber added to cymbidium breeding via his work in counting chromosome numbers and identifying 2n, 3n and 4n cymbidiums Wimber even went on to convert some 2n's to 4n's. Wimber contributed the knowledge needed to make tremendous advances in cymbidium breeding possible. (It is no coincidence that Alan Moon's background is in cymbidiums). Seeing this success I decided to count chromosomes and use these counts to improve my odds in odont breeding. I received encouragement from Alan Moon, Don Wimber and guidance from Beckendorf. I also decided it was time to use some biochemical tricks to double the chromosome numbers of some diploid odonts. Having grown up in the 1960's I often played amateur pharmacist. This was a time before I knew of the pitfalls of all polyploid stocks.

In the course of ascertaining chromosome counts of some intergeneric hybrids I discovered a pattern in these chromosome counts. In many diploid x diploid crossings, where one would expect to see more diploids to result, the progeny were in fact triploids.

Some examples:

<u>Oda Keighleyensis</u> (2n) x Cochlioda beyredtiana (2n) = Oda Star of Jersey (3n)

<u>Odcdm Tiger Butter</u> "Feline" (2n) x Brassia verrucosa (presumed 2n) = Mclna Pagan Love Song (3N)

Mtssa C.M. Fitch "Samantha" (2n) x Odm hallii (jungle, presumed 2N) = Dgmra Hani "Star of Unicorn" (3n)

Recalling the similarity of every McLellenara Pagan Love Song I had seen, I e-mailed this anomalous 2n + 2n = 3n observation to Don Wimber with speculation. Was I seeing diploid primary hybrids that failed to produce the expected haploid (1n) gametes (sex cells)? In the sexual reproduction of diploids each 2n parent produces a 1n gamete (pollen or ovum). When pollen and ovum combine, a 2n zygote (embryo), i.e. a new 2n plant.

The late Gary Baker referred to this breeding anomaly as "unreduced" gametes. In correspondence, Don Wimber corrected this to the term "restitution nuclei". The problem for the plant breeder is these restitution nuclei do not go through normal gamete production (meiosis) and do not independently assort traits. Thus they breed with virtually identical traits. Our miltassias, odontocidiums and other manmade combinations may not allow us to segregate traits.

In further Wimber correspondence, it was postulated that early odontoglossum hybrids may have been made

from parents which were really not that closely related. Hybrids here to for considered straight odontoglossum. For instance Odm crispo-harryanum may be more correctly an intergeneric hybrid. Harryanum is nothing like crispum and crispo-harryanum was extensively used to create progeny with square lips.

Another anomaly worth pointing out. Alan Moon has pointed out that combinations of triploid odonts with diploids sometimes result in tetraploids, the diploid producing the normal 1n gamete (sex cell) while the triploid producing restitution 3n nuclei. Thus 3n x 2n can yield 4n. Is this how our 4n's came to be?

#### The Intergeneric

It has been the hope of the intergeneric cross that we could make combinations which have all the traits we want. For instance the size of the odont, the color of the cochlida, the warmth tolerance of the miltonia. As mentioned earlier a century of breeding has not produced many with progeny with these results. The intergenerics that have been the greatest successes are those which have relatively few combinations. I believe this is because progeny end up with greater and greater sets of chromosome. The parents used in their chromosomes, coming from very different species cannot pair and reduce in the normal fashion. Plants which end up with more than four sets (4 n) of chromsomes are notoriously poor growers.

Many breeders of intergenerics get swept up in a numbers game of how many genera can I combine and how complex a plant can I produce. Invariably, as these generations continue the fertility of these crosses take a dive along with the growability of the plants. There is wisdom in KISS (keep it simple, stupid)!

Where is the promise of those multigenerics? How many survive today?

#### Conclusion

Future odont hybridizing is best served by maintaining diploid stocks made from turn of the last century parents. These are endangered because the number of odont hybrid growers is in decline.

The loss of natural habitat drives many new orchidists to species.

Polypliods have the lure of awards but regrettably are difficult to use to isolate traits.

Intergenerics can "lock up" genes in such a way individual traits can never again be segregated.

Endangered Hybrids was not a talk about collecting and growing antique plants. Pity my herbarium colleague took off down the hall without a chance to hear it. He might have learned something.

#### Illustrations

Graphs which show population growth figures. Page 14

#### Slides:Pages 14 and 15

Odontoglossum Colossuem, painted to size by Bolas in 1912. Lateral measurement is 105mm. By todays standards this would be an outstanding hybrid. It was likely a polyploid.

Bar Graph representing the numbers of plants that must be grown in diploid vs. tetraploid populations to express 1, 2 and 3 traits.

A matrix showing the isolation of a recessive trait in a 4n crossing.

Bursts in the activity of breeding odonts. These bursts can represent the work of a few odont breeders responding to demand. The demand for odont hybrids is on the decline.

## Odontoglossum Alliance Auction To Be Conducted at the Annual Meeting 12 April 2002

Speaking of the auction this is the time for our members to start putting aside divisions of fine material, seedlings, and flasks for donation to the auction. The auction provides the resources for your Alliance to have interesting and exciting meetings with prominent speakers. It also provides he resources to enhance the newsletter, particularly to have the color pages included with each issue and to conduct special programs to encourage the growing of the Odontoglossum alliance material.

Lee Alyanakian's article on "The Orchids of Longwood gardens" lists a number of the very early Odm and Oda. Hybrids. Lee has graciously donated to the Odontoglossum Alliance a number of divisions of some of these plants. The divisions donated are:

L1694 Odontioda Vesta registered in 1921 by Charlesworth and Company (Oda. Charlesworthii x Odm. Prince Albert)

L1685 Odontioda Naralda, registered in 1921 by Charlesworth and Company (Oda. Bradshawiae x Odm. Doris)

591454 Odm. G. (Odm. Crispum x Odm. Talluha) may not be registered.

L1689 Odontioda Red Riding Hood, Registered by F. M. Ogilvie, The Shrubbery, Oxford in 1913

940314 Odontoglossum hortensiae, This is now Rhyncostele, formerly Lemboglossum, similar to cordatum and is an intermediate grower preferring warmer temperatures than cordatum and is found in Costa Rica.

971188 Odontioda Keighleyensis registered in 1908 by Charlesworth and Company (Cda. Noezliana x Odm. Cirrhosum)

These plants will be auctioned at the Odontoglossum Alliance meeting and dinner schedule for 12 April 2002.

The program for this meeting is in this newsletter.

The Odontoglossum Alliance has a number of members who have generously contributed plants to Longwood gardens in exchange for Lee's generous act.

We have had some more generous contributions for the antique auction to be held at the Odontoglossum Alliance dinner on 12 April 2002.

#### From Bob Hamilton

Oda. Zephyr = Cda.Noezliana X Odm. Wilckeanum (R.G. Thwaites 1911) Oda. Cooksonae = Cda. Noezliana X Odm. Ardentissimum (N.C. Cookson 1909) Oda. Charlesworthii = Cda. Noezliana X Odm. harryanum (Charlesworth 1908) Oda. Brackenhurst = Oda. Charlesworthii X Odm. Eximum (J. Gurney Fowler 1914) Oda. Picasso 'Rubris' = Oda. Ariiea X Cda. Noezliana (Vacherot & LeCoufle 1973) Oda. Red Flame = Grenadier X Lambeauianum (Armstrong & Brown 1937) Oda. Chanticleer = Oda. Cooksoniae X Cda. noezliana (Vuylseke 1911) Vyl. Cambria 'Plush' (Odm. Rudia X Odm. Clonius (Charlsworth 1931) (This piece is believed to be from the original cross not from a meristem)

#### From Tim Brydon

Odm. Ascania 'Jester' = Antinous X Georgius Rex (Charlesworth 1925) Odm. Quistrum 'Lyoth Angela' FCC/RHS = Nubia X Pescatorei (Charlesworth 1938) Oda. Chargia 'Victor' = Argia X Charlesworthii (Charlesworth 1943) Oda. Bradshawiae = Cda. Noezliana X Odm. crispum (Charlesworth 1907)

From John Miller

Oda. Arlington = Chanticleer X Grenadier (Sherman Adams 1937)

### British Odontoglossum Alliance

We have received notice from John Gay that the British Odontoglossum Alliance had to be disbanded purely due to lack of support. John was the secretary of the organization. They have generously decided to transfer to The Odontoglossum Alliance the total amount of their funds which is approximately \$1600.00 with the proviso that we retain L500 in reserve for should there be a future British Odontoglossum Alliance. If after 2004 there has been no restoration of the British Odontoglossum Alliance, then these funds would be available for our general purposes. The balance of the funds have been designated by John to be used for our own benefit.

John reports that there were very few 'Odont' growers and that even when he offered to give flasks of plants away 'free' there were very few takers. Currently the funds are in the process of being transferred to our bank account.

It is disappointing that there is not more interest in Britain in the Odontoglossum Alliance. Britain has been the home of the generation and enthusiasm of the Alliance for many years. In testament to their contribution read over the list of plants being donated to our upcoming auction in 2002. The transfer of funds has been most generous on the part of the now dissolved British Odontoglossum Alliance. We welcome all the current and former membes of the British Odontoglossum Alliance to join our Alliance. Any former British Odontoglossum Alliance member who joins before August 2002 will receive, for \$15.00 US membership for begining with receipt of payment membership through May 2003.

# AMERICAN ORCHID SOCIETY

Providing Global Leadership in Orchids For 80 Years

16700 AOS Lane Delray Beach, FL 33446-4351 Tel: 561-404-2000 - Fax: 561-404-2100 Email: The AOS@aos.org Web: orchidweb.org

September 6, 2001

The Odontoglossum Alliance PO Box 38 Westport Point, MA 02791

Dear Friends of the Society,

On behalf of the AOS's Trustees, Officers and members, I would like to extend my sincere thanks and appreciation for the Odontoglossum Alliance's generous donation of \$900.00. Per your direction, your gift will be utilized to further fund the endowment monies of the prestigious Dugger Award.

Words simply cannot adequately express how much your members' support means to our nonprofit organization. Without it, our endeavors to reach the high standards of service demanded by our members, the greater orchid community, and the South Florida cultural fellowship would be for naught. The end result of such generosity is, of course, an increased capability of <u>exceeding</u> your expectations of enhanced programs and services from the AOS. And that, I assure you, is our ever-present goal, as well.

To accommodate tax-related matters, allow me a few keystrokes to assure you that the entire amount of the Alliance's gift will be held in accounts tied to your specific designation, with none of these funds, nor goods or services, enuring back to you in whole or in part, for the above-noted donation. Your contribution will, of course, be acknowledged in a future issue of *Orchids*, our award-winning monthly magazine.

After 80 years of providing global leadership in orchids, this is truly an exciting time for us, and we solely have patrons such as you to thank. Our organization's blessings are many, but at the very top of that list is, unquestionably, the ongoing support we receive from our generous and valued members, from our Affiliated Societies and Judging Centers, from orchid regional and specialty groups, and from our business and community partners.

Therefore, there is a certain special tingle that comes with finding myself extending a <u>very</u> special thanks on behalf of future generations of Dugger Award winners, all of whom will benefit by your group's marvelous generosity. We're honored that the Odontoglossum Alliance's members have once again put such faith in the AOS, and, on behalf of our volunteer leadership, I pledge to justify your tremendous support. In closing, please know that — always — we will continue to seek ways to complement our partnership by serving you more effectively. I invite you to contact me personally if either my staff or I can be of any service whatsoever in the future, and I hope your members will visit the International Orchid Center at your earliest convenience.

With appreciation for your support,

Lee S. Cooke Executive Director American Orchid Society

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## Longwood Gardens Odontoglossums



Odm. Edalvo



Odm. ALport



Odm. Valerie



#### BOX 1





Odm. Colossuem painted by Bolas 1912



Plants grown, diploid vs. tetraploid to express 1, 2, and 3 traits

#### November 2001

#### Volume 39



Matrix of the Isolation of a recessive trait in a 4n crossing



Onc. reichemii



Otoglossum coronarium



Breeding of Odontoglossums Activity

![](_page_14_Picture_10.jpeg)

Osmoglossum pulchellum

![](_page_14_Picture_12.jpeg)

Palumbina candida