Odontoglossum Alliance Newsletter

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ODONTOGLOSSUM - forever in our hearts and publications By Stig Dalstroom

When I first arrived in Ecuador in December 1979, I was on the lookout for odontoglossums. The reason for this was simple. Plants that were called "Odontoglossum" back in those days did well for me on my windowsill in Sweden. The problem was they all came from Mexico or Guatemala (and are not called "odontoglossums" anymore) and I knew that the really interesting ones existed only in the humid Andean cloud forests of South America. So I went there to find them. Another little problem was that I knew nothing about how or where they grew. Our team of three orchid enthusiasts therefore hired an old Nissan Patrol in Quito, which had its best days long gone, and bravely puttered across the high and mighty cordilleras and occasionally plunged right into an *Odontoglossum* lover's heaven. We were also extremely lucky to hit the flowering season for many species. Large plants of *Odontoglossum halli* grew high up in the trees, displaying magnificent flower shows. And when I held my first blooming *Odontoglossum* in my trembling hands I knew that I had been spellbound for life. The absolutely exquisite and sweetly scented flowers were, and still are, the essence of pure beauty.

When we are emotionally engaged in whatever the cause, our judgments may not always work on all cylinders, and we sometimes make poor decisions. At one occasion we were driving along Rio Papallacta when I happened to look across the river and saw something that caught my attention. I shouted to stop the car and was out before the wheels came to a halt. Through my binocular I could see a spike with brown flowers hanging down from a branch on the other side of the roaring river. I knew I had to have it! But how? I looked around and discovered a rusty cable suspended from one side to the other. It was the left-over of an old 'cable-seat' construction that had been used in the past to cross the river. No seat remained though, but the cable looked sturdy enough to carry a small Swede. Full of confidence I grasped the cable and began to 'hand-over-hand' me across the frothing water. There were no other thoughts or images in my head other than that brown-flowered spike on the other side. I faintly heard some shouts behind me from my surprised friends, but the noise from the river drenched the exact words, which was just as well. Half-way across, I began realizing that the bouncing of the cable made it pretty hard on my fingers as I was going up and down a lot. Every time I hit the lower point of the bounce, my fingers stretched out a little more. I cautiously checked the distance to the boulders on the other side and realized to my dismay that it was going to be a tight race. When I was just a couple of meters from the first slippery boulder my fingers just gave up and I splashed into the water. Fortunately, the river was fairly shallow there and I managed to crawl up on the other side without anything but my pride dented. I did find my first blooming *Odontoglossum cristatellum* though, and I even managed to wade/swim across again, with the plant, several hundred meters downstream. Those were the days!

Those were indeed the days when my taxonomic interest in this group of plants sprouted. Good and available literature was virtually non-existent and we had the most difficult time finding names for our discoveries. After having studied one particular plant long and hard without having a clue what I was looking at, I decided that I had to do something about this situation. Thus, *Odontoglossum* became my "pet genus".

Today, January 23, 2014, I can see the light on the other side of the fascinating research tunnel, and it has the shape of a scientific treatment. The manuscript is taking shape after all these years of criss-crossing the Andes in search for plants and clues, together with many great friends who are, or have been, most supportive. This monographic treatment is a collaborative effort together with most of all Guido Deburghgraeve in Liedekerke, Belgium, and Wesley Higgins of Cape Coral, Florida. I also enjoy and highly value discussing species definitions and DNA hypothesis with Steve Beckendorf, of Berkeley, California (and anybody else for that matter). One of the hottest topics is how to interpret the molecular work that has been performed on these plants by Norris Williams, Mark Whitten, Kurt Neubig at University of Florida in Gainesville. This gigantic work has resulted in a 'family tree' of the Oncidiinae, so to speak, and is very useful in many ways in understanding the relationships between plants. A lot of work remains, however, in order to work out the chinks in the system, and how to best utilize the results so that we can create a user-friendly and biologically correct natural classification system. This job has just begun!

Returning to the *Odontoglossum* book, and yes, it is going to be published as a book for one simple reason. I like books! We have yet to decide whether we will include a bonus CD with additional material as well because there is so much that can be said about these fascinating plants. Adventures, plant systematic theories, historic anecdotes, hybridization, cultivation etc. We'll see... Perhaps this is a task for the members of the Odontoglossum Alliance to engage in?

One of the reasons why the book is going to be fairly thick is because the taxonomic History for almost all of the 60-and-some species, plus numerous alleged or proven natural hybrids, is rather complicated and sometimes down-right confusing. But it is necessary to untie these knots in an understandable way in order to explain why *Odontoglossum* taxonomy is difficult and misunderstood, right from day one in 1815 when the genus was created. Rest assured, this is not a unique situation in the controversial world of biology taxonomy of any kind. I am including the taxonomic history for the type of the genus *Odontoglossum* here. This is a good

example of the intertwined opinions and ideas that I have spent more than thirty years of my life to untangle, and probably added some twists of my own along the way. I have enjoyed every minute of it though!

Odontoglossum epidendroides is not only the type species for the genus, and therefore important to study in order to understand the concept of what an *Odontoglossum* really is. It also represents a good example of how complicated orchid taxonomy gets when we misunderstand a particular species concept.

Alexander von Humboldt together with Aimé Bonpland found plants of what became Odontoglossum epidendroides during their extended journey to the New World in 1799-1804. The exact locality for their discovery is described as the "Sub-warm region of Bracamoros, between the Amazon river and the urbanization/town of Jaen, alt. 240 hex" [authors' translation]. The altitude given as "240 hex" is the equivalence of 1440 ft. (approximately 460 m), which is a most unlikely altitude for an *Odontoglossum*. The explanation for this apparent mistake is unknown. Perhaps a locally hired collector delivered the plants, as is commonly done, and pointed in the wrong direction when asked for the locality (also common), which in this case logically would be to the west of Jaen towards the mountains and not east towards the "Amazon river" (Rio Marañon). In any case, the dried specimens were brought back to Europe where the two adventurers together with Humboldt's old tutor Karl Sigismund Kunth worked through the collection of more than 60 000 plant specimens and published the new species in their Nova Genera et Species Plantarum in 1815-1816 (Helferich 2004). An illustration of Odontoglossum epidendroides was prepared by the artist Turpin and included in the treatment. This drawing was made from a dried specimen and is therefore rather stylized, particularly the flowers. This is probably the reason why John Lindley misinterpreted the concept of this species and included a collection from Pamplona, Colombia, by Jean Linden (Linden 1261, K-L, W and BR) as "O. epidendroides" in Folia Orchidacea (Lindley 1852). Heinrich Gustav Reichenbach corrected Lindley's mistake two years later when he described Odontoglossum lindlevanum in Bonplandia (Reichenbach 1854). This was in an article dedicated to the plant collector Julius von Warscewicz and the numerous plants discovered by him. No preserved specimens of O. lindlevanum that were collected by Warszewicz have been located, however, in Vienna or elsewhere, and it is possible that Reichenbach used Linden's collection from Pamplona as a type (which he had access to), but honoring Warscewicz by adding him as a coauthor. In any case, Leonore Bockemühl seems to treat the Linden 1261 collection from Pamplona as a type for *O. lindleyanum* in her treatment of the genus (Bockemühl 1989).

Returning to the type for the genus, Lindley did receive a dried specimen of the true *O. epi-dendroides* from the collector Andrew Mathews who discovered it near Casapi in the Huanuco region of central Peru in 1835. This collection corresponds very well with the type of *O. epi-dendroides*, and more recent collections from this general area confirm this. But Lindley did not recognize the specimen from Mathews and described it as *Odontoglossum lacerum* in *Sertum Orchidaceum* (1838). This mistake may also have been based on Turpin's stylized illustration of the type of *O. epidendroides* (see the discussion for Lindley's "*O. lindleyanum*" above). Reichenbach agreed with Lindley in this case, however, and later wrote an article about *O. lacerum* in Gardener's Chronicle (Reichenbach 1874), long after Lindley's death in 1865. Prior to writing this article, Reichenbach identified a specimen from between Baños and Rio Verde in the Tungurahua province of central Ecuador as "*O. epidendroides*". This plant was collected by Hermann Wagener in 1858. The dried inflorescence is deposited in Munich (M), and a single flower of the same specimen can be found in Vienna (W) on sheet 48000,

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together with a flower from the type of *O. epidendroides*, provided by Aimé Bonpland. The specimen in Munich was subsequently misidentified as "*O. hallii*" in 1920 by Rudolf Schlechter, but is more accurately referable to what we today know as the Ecuadorean form of *O. spectatissimum*. This latter taxon may or may not be sufficiently different from the typical form of this species from Colombia and may perhaps deserve a separate name, possibly as a subspecies, questionably justified by minor floral differences and the habit of producing long panicles instead of simple racemes. *Odontoglossum spectatissimum* in a broad sense is very similar to *O. epidendroides* in the floral aspects and obviously a close relative, but sufficiently different to qualify for being treated as distinct. The known distribution ranges do not overlap and are also geographically divided by the known distribution of *O. kegeljanii*.

Bockemühl acknowledges a collection from the Baeza area in Ecuador, identified as "O. epidendroides" by the collector Friederich Lehmann in 1881 (Lehmann 8053, K) as the true "O. epidendroides". This taxon is <u>not</u> referable to the type of O. epidendroides either, but again to the Ecuadorean O. spectatissimum. But since Bockemühl believed that Lehmann and perhaps Reichenbach (see above!) were correct and followed their lead, her concept of O. epidendroides was set on the Ecuadorean plant from Baeza, and she therefore recognized O. lacerum from central Peru as a separate and distinct species. When we compare the localities for the type of O. epidendroides and two collections of O. lacerum cited in her treatment (1989), however, we notice that they converge. A closer examination of the flower morphology of the type of O. epidendroides and the type of O. lacerum also confirms that they represent the same taxon. Odontoglossum lacerum should therefore be treated as a synonym of Odontoglossum epidendroides.

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PHOTO CAPTIONS

- 1: Odontoglossum halli, Selva Alegre, Ecuador (photo by S. Dalström).
- 2: Odontoglossum hallii flowers, Selva Alegre, Ecuador (photo by S. Dalström).
- 3: Odontoglossum cirrhosum, Mindo, Ecuador (photo by S. Dalström).
- 4: Crossing Rio Papallacta, Dec. 1979, front cover for a biography by S. Dalström.
- 5: Odontoglossum cristatellum, Papallacta, Ecuador (photo by S. Dalström).
- 6: Odontoglossum epidendroides, Peruvian form (photo by G. Deburghgraeve).
- 7: Odontoglossum epidendroides, Ecuadorean form (photo by G. Deburghgraeve).
- 8: Odontoglossum epidendroides, Chirimoto, Peru (photo by S. Dalström).
- 9: Odontoglossum epidendroides studies by Beckendorf, Deburghgraeve and Sönnemark, Carpish, Peru (photo by S. Dalström).
- 10: Odontoglossum epidendroides, Carpish, Peru (photo by S. Beckendorf)
- 11: Odontoglossum epidendroides, Carpish, Peru (photo by S. Dalström).
- 12: Odontoglossum spectatissimum, Baeza, Ecuador (photo by S. Dalström).

13: *Odontoglossum spectatissimum*, La Bonita, Ecuador (photo by S. Dalström). 14: *Odontoglossum spectatissimum*, Colombia (photo by S. Dalström).



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1.: *Odontoglossum halli*, Selva Alegre, Ecuador (photo by S. Dalström



2. *Odontoglossum hallii* flowers, Selva Alegre, Ecuador (photo by S. Dalström).



3. *Odontoglossum cirrhosum*, Mindo, Ecuador (photo by S. Dalström).



4. Crossing Rio Papallacta, Dec. 1979, front cover for a biography by S. Dalström.



5. *Odontoglossum cristatellum*, Papallacta, Ecuador (photo by S. Dalström)

6. Odontoglossum epidendroides, Peruvian form (photo by G. Deburghgraeve).



7: Odontoglossum epidendroides, Ecuadorean 8. Odontoglossum epidendroides, Chirimoto, form (photo by G. Deburghgraeve) Peru (photo by S. Dalström).







 Odontoglossum epidendroides studies by Beckendorf, Deburghgraeve and Sönnemark, Carpish, Peru (photo by S. Dalström).

10.*Odontoglossum epidendroides*, Carpish, Peru (photo by S. Beckendorf)



11. *Odontoglossum epidendroides*, Carpish, Peru (photo by S. Dalström)



12: *Odontoglossum spectatissimum*, Baeza, Ecuador (photo by S. Dalström).



13: *Odontoglossum spectatissimum*, La Bonita, 14: *Odontoglossum spectatissimum*, Colombia Ecuador (photo by S. Dalström). (photo by S. Dalström).

WHAT'S IN A NAME BESIDES AN FCC

By Russ Vernon New Vision Orchids

Who says the number 13 can't be a lucky number? On January 13, 2013, Oda Helen Dugger 'Dugger's Vision' received a 90 point FCC. This was a first for me and it had been a long while since any Odontioda/Odontoglossum had received such a high award from the American Orchid Society judging system.

The award description reads: "Fourteen well arranged large stately flowers on one inflorescence; flowers cream, sepals and petals irregularly marked with orange-red spots, outlined lavender with magenta picotee; lip overlaid lavender irregularly marked orange-red and white, crest bright yellow, column white with magenta markings; substance very firm, texture crystalline."

Bob Hamilton of San Francisco, CA gifted me a division of this plant. It originally had a clonal name of 'no. 2', but Bob agreed to allow the clonal name to be changed after the award was received.

Now to the interesting history of Oda Helen Dugger. The grex is a story of friendship "across the Pond" as you will see. The parents are Oda Helen Stead and Oda Robert Dugger. When I started to research the history, I guessed that Robert Dugger had made the cross and named it after his wife. It turns out that Robert's wife was named Lillian, so more digging was necessary.

I asked Bob Hamilton what he knew of the grex and he suggested talking with Bruce Cobbledick who at one time owned Unicorn Orchids located in California. Bob also stated that Robert Dugger often visited and was

friends with David Stead and Alan Long who owned Mansell and Hatcher (M&H) Ltd in the UK.

Bruce was able to give me some background on Oda Robert Dugger. He told me that Robert made the cross (Aviemore x Ray Buckman) and gave or traded a flask of seedlings to M&H. Bruce purchased a select seedling of what was to become Oda Robert Dugger and his seedling later received a clonal name of 'Unicorn Ruby' and an HCC/AOS. Bruce asked for permission from Robert to name the grex which he agreed to. Bruce named it after Robert as he thought it was one of Robert's best crosses. 'Unicorn Ruby' improved on future bloomings and received an AM. It also received an AM from the Royal Horticultue Society (RHS) when Andy Easton took a cut inflorescence to London for judging there. Bruce mentions that he and Tim Brydon purchased all the unbloomed seedlings of Oda Robert Dugger that M&H had left.

That cleared up several questions. Why Oda Robert Dugger was registered by Bruce Cobbledick and the originator was listed as Robert Dugger. Also, how it got to the UK.

On the other side of the grex is Oda Helen Stead. John Gay of the UK referred me to David Stead who at one time owned M&H Ltd. David told me that he made the grex Helen Stead by crossing Oda Joe Marshall with Odm crispum. Oda Joe Marshall is an important parent as it is one half of Oda Joe's Drum, a very famous and colorful hybrid which is involved in many equally famous Oda hybrids. David passed on that Joe Marshall was the foreman of M&H when David started working there in 1964, and in David's words, "was a great person." David named the grex of Oda Joe Marshall x Odm crispum after his uncle's wife who was "also a great person who we were all fond of."

David gave me some further background on Oda Robert Dugger: Oda Ray Buckman and Oda Aviemore are the parents. M&H never had Oda Ray Buckman, the grex was made by Charlesworth Ltd (UK). Robert Dugger registered it in 1972 to honor his friend, Ray Buckman, who worked at Charlesworth. Oda Ray Buckman is Odm Stropheon x Oda Lautrix; both products of Charlesworth breeding. M&H did make the grex Aviemore and obviously, both of Oda Robert Dugger's parents found their way to the USA.

Many UK breeders and other as well, followed the Charlesworth "tradition" of combining parts of each parent's name to form a new name for the new hybrid registration. (eg: I named Horseforth x Lautrix, Horsetrix) This is why I erroneously guessed that Robert's wife had been Helen, and got this geneology search started.

The grex Oda Helen Dugger was made by M&H but registered by V. Read. All I know about V. Read is what the RHS registration says: Mrs. Vena Read, 32 Ifield Dr., Ifield, Crausley, West Sussex. She must have bloomed a very nice plant of Helen Dugger to register it.

A final note: David Stead said, "I always regret not taking the time to talk to Ray Buckman about his past. He was very much the link between the pre war Odont world and when the 'youngsters' appeared in the 60's, such as Ray Bilton, Alan Moon, myself and Alan (Long).! He certainly would have had some amazing stories to tell."

This is true about your generation, David, and Alan Long and Alan Moon. Ray Bilton has passed and your stories should not be lost. We need to hear them.

Most of all, I want to thank all those involved for making the genetic decisions, providing the transportation and sharing the knowledge that made Oda Helen Dugger 'Dugger's Vision' FCC/AOS possible.

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Odontoglossums Column and Comments By Andy Easton

I always enjoy razzing Dr. Howard Liebman and he is unfailingly good-humored when Bob Hamilton and I tag-team our jibes. Many years ago, Howard produced an orchid called Miltonidium Maxine (vexillaria X macranthum) that was stunningly good. Unfortunately that was in the days when diploid hybrids were not treated with colchicine or oryzalin as a matter of course so the plant never went anywhere.

Fast forward to the 21st Century and Howard remade the 1913 hybrid, Odtna Brugensis {Odm. (Cyrt.) edwardii X Milt. (Mtps.) vexillaria} and asked Bob Hamilton to treat the seed with oryzalin. I posted the first to bloom and suggested to Howard that he stick with his day job! But the second seedling to bloom was a tetraploid and had a multi-branched stem of over 60 blooms. Quite spectacular and I might add it seems to be making some seed pods too. In all there were only five registered hybrids from Odtna Brugensis and the most recent was in 1946, obviously there were fertility issues at the diploid level. But remember that Odtna Bragelonne is a Brugensis offspring and Keith Andrew has done some very interesting things with it. Maybe we can look forward to some exciting new lines tracing back to a "rebuilt" old-timer?

But sorry to harp on what has become my mantra of late..... does anyone in the orchid world really care? All the "Kewites" sail merrily on with their stupid and confusing name changes while the number of Odont. enthusiasts dwindle away.



Cyrtochilum edwardii x Mtps. vexillaria

A little different this time:

The following comments to be attached to the picture.

This is a photo made in early January in The Netherlands. It shows a greenhouse at Floricultura around 10.30 am with supplemental lighting for growth clearly evident. At that time of year with daylength of approximately seven hours, plants are boosted with growlights to extend radiant input to around twelve hours. Why? Because the Dutch don't just grow their plants, they make them grow! Is this huge greenhouse of Odont. Intergenerics a commercial production range? Not really, it is a testing greenhouse where seedlings and various clones can be evaluated in a normal commercial production environment before individual plants are commercialized.

You would be blind if you cannot see the quality of the overall culture and believe me it extended over the whole greenhouse. In fact there were probably as many plants here as are finished annually by all growers in the USA. Remember, nearly everything here is new and being tested. There are no facilities of this size anywhere in the USA and when people complain about where have all the new Intergenerics gone, one has to say they are simply not being produced. I see many of the clones coming out of California and Hawaii and forgive me if I yawn in boredom. Enough of Colmanara Wildcat for example, it has been done to death for several decades.

Now think things through logically. It isn't the Rod McLellan era anymore. Is there anyone selling quality seedling Intergenerics in 4" pots in the USA today? If so, I am not aware of them! Would we offer such a product? Not in a million years. But, who is selling quality new Intergeneric clones in 4" pots in the USA today? Keep thinking, it is a real head-scratcher. So if new product is not being produced in commercial quantities, just how are hobbyists and commercial blooming plant vendors going to become exposed to Odont. Alliance product?

I remember that baseball field movie where it was said: 'Build it and they will come". One could extrapolate to today's orchid scene and say that without the "building" of new and improved Intergeneric Odont. Alliance varieties, the market will most definitely be noticeable only in their absence!



A nice pallet of blooming Odont. Intergenerics off to market? Think again. Actually a pallet of culls that have failed as either seedlings or clones to pass the stringent Floricultura selection criteria. The label tags are pulled, a generic care tag is inserted and these plants are sold out through a broker who specializes in small quantity delivery to florists and gift shops. Product priced below \$4.00 wholesale, essentially second rate discards.

Hybrids from Wils. Catatante 'Pacific Sunspots', alba Onc. fuscatum lines with their horrible weak spikes (though pretty flowers!) and other assorted Intergeneric product. We sent a Gerardusara Golden Emperor for cloning and testing with a warning that it needed two more flowers per stem to become commercially viable. My reasoning was that Floricultura are much better growers than we are, so some improvement could be anticipated. But alas, their clones in testing had exactly the same 7-8 flowers per stem that the mother plant had. So a new clone with vibrant yellow/brown contrast and fragrance will likely just fail to make the grade. Are we disappointed? A little but also proud of the sophisticated level of testing which helps ensure that all new Floricultura clones have to pass an objective quality and performance level before they enter the commercial orchid trade. OK, horses for courses and someone will think that this plant would be good for Taiwan or Hawaii or Queensland but that's not what Floricultura is interested in. Their task is to select and propagate

plants that thrive in The Netherland's climate and likely in many other climates around the temperate climatic zone. There is never sophisticated testing like this done in Taiwan etc where reproliferated product is the normal order of business. When I hear of folk in South Africa or Australia being horrified at mutant clones from Taiwan, I remind them that few, if any, of the plants they bought were bred in Taiwan and are likely several iterations away from anything close to a mother plant!

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Let's revisit Vuylstekeara Cambria 'Plush'. I am still in shock at the comment made by a well-known Odont. Alliance member who said he never thought much of Cambria. Never thought much of the most widely-propagated Odont. Intergeneric of all time?? I am incredulous at this statement!

The plant you see here is the uncloned, original mother plant. OK, some of the clones got a bit dodgy when they were clones of reclones but anyone who saw the original Vacherot & Lecoufle or Floricultura meristems with their 3-4 foot high, branched inflorescences, realized that Cambria 'Plush' was one of the most deserving FCC's of all time.

I always enjoy puncturing false concepts so I took pleasure at one AOS judging seminar in S. California back in the late 1970's by asking the assembled judges to write down what genus in the trigeneric Vuyls Cambria was responsible for the Cambria lip. Without fail they wrote Miltonia (Miltoniopsis). Wrong I said, to howls of indignation. Of course, as you will see by the accompanying photo of Oda Brewii 4n, an oryzalin-treated remake by Bob Hamilton of the original Brewii, it was the Oda Brewii grandparent and 22%+ Odm. harryanum blood that was largely responsible for the showy Cambria lip and not the measly 13% Miltonia vexillaria!

We continue to use both the original diploid Cambria and a tetraploid mutation and feel it will be one of our best parents for the next decade at least.

Editors Note

As you are aware that the RHS nomenclature committee has changed all odontoglossums to oncidiums. Your alliance tried in it's best way possible to propose a different dna tree organization that would retain odontoglossums with the historic name. Here is a little story that was originated before the odontoglossum/oncidium decision that I thought our reades would cause a chuckle.

A Rose by any other Name...

An editorial by John Dunkelberger

Several months ago I received a bill for an award from the AOS and noticed the genus name had been changed from Odontocidium to Odontozelenkocidium. As I am the originator of the cross and since this particular clone had a previous award I felt that changing the genus name would create unnecessary confusion.

If change is mandatory I felt that to be consistent the name should also reflect the fact that a grandparent in the cross had been changed from Odontoglossum to Cyrtochilum. In correspondence with the registrar of hybrids he indicated only that the taxonomy of the Oncidium group is presently in a state of flux. All this despite the fact that *Cyrtochilum retusum* is now the preferred synonym for *Odontoglossum retusum*. What is the rule? Is the AOS going to change names at their whim and without logic?

Personal communication with members of the COA has led me to believe that an edict was issued that generic names shall be changed to reflect the most modern taxonomic opinion, i.e. preferred synonymy according to the Kew Monocot List. In light of this I reviewed a recent **Awards Quarterly**, Vol. 37 No. 1, pages 1 through 30.

I am certain I did not find all of the problems, but here are some examples:

Page 4 – All awards listed here as Ascocendas actually have *Euanthe sanderiana* in the ancestry as well as various Vandas.

Page 5 et. seq. – Almost all of the BLC hybrids listed here now contain a Sophronitis since Laelia milleri and Laelia cinnabarina and others have been moved to Sophronitis. In addition the presence of Brassavola digbyana in many of these mandates a change to reflect that it is now Rhyncolaelia.

Page 11 – Cattleytonia Why Not should reflect the change of Cattleya aurantiaca to Guarianthe aurantiaca.

Page 11 – Catyclia Plicaboa – since the Cattleya parent in this cross is actually now a Guarianthe, how can it be a Catyclia? Will all, or almost all, that we know as Epicattleyas be changed to Catyclia? If so why is there an Epicattleya Sally Brown on page 20?

Page 17 & 18 – All of these various Doritaenopsis hybrids are actually just Phalaenopsis. E. Christenson has changed Doritis pulcherrima back to Phalaenopsis pulcherrima.

Page 21 – Epidendrum Mabel Kanda is actually a cross of Encyclia x Epidendrum. As such it should be Epicyclia.

Page 21 – Epidendrum parkinsonianum, this species has recently been moved to the genus Coilostylis by Withner and Harding. Although this in not yet the preferred taxonomic status, it will no doubt be changed as the arguments presented are logical and clearly presented. See The **Debatable Epidendrums**, the latest in Withner's series on the Cattleya alliance. Note that most of the Prostheceas defined by Higgins have now been moved to six or seven other genera. These recent changes in taxonomic status are an example of the frequent changes that will be necessary in horticultural names if we insist on using the "**preferred synonym**".

Page 22 – Epidendrum (Hort. syn. Encyclia) Rioclarense. The horticultural name is Epidendrum. The botanical name is Encyclia.

Page 22 – Epilaeliocattleya Don Herman, this hybrid has Cattleya aurantiaca now Guarianthe aurantiaca, and Laelia cinnabarina now Sophronitis cinnabarina, and should be Episophroguarianthe.

Page 25 – Laelia Newberry Glow should be Sophrolaelia since Laelia milleri is now Sophronitis milleri.

Page 25 – Listings of Laelia purpurata and Laelia tenebrosa give two botanical synonyms. Only one can be the preferred synonym!

Page 26 & 27 -- No doubt many of these Laeliocattleyas actually contain Sophronitis, Rhyncolaelia, or Guarianthe.

Page 27 & 28 - How many of these Lycaste hybrids also contain Ida in their ancestry?

Dozens of other errors are apparent. One of the most glaring is that Tolumnia **is NOT** the preferred generic name for triquetrous oncidiums according to the Kew Monocot Synonymy List.

It is interesting to note that Cattleya aurantiaca has been involved in more than 2,500 hybrids. If we change the generic names of all these hybrids we will have a horrible mess.

For over 100 years the nomenclatural system has rested on the basis that once a species has been used in a hybrid the name becomes "fixed" in future horticultural names. Although this system has not worked perfectly it has achieved relative stability.

Changing to a system where generic names can/will be changed every few years will obviously create unending instability.

Stability is the most important value in a nomenclatural system.

In order to eliminate potential cataclysmic results brought on by continuous taxonomic changes, I suggest the following:

List all awards according to their **Classic Horticultural Name**. This will allow a simple complete computer search. Put the correct botanical synonym in parentheses following the horticultural name. If I look up Slc Jewel Box I will find a wealth of information. If I look up Guarisophleya Jewel Box I will find nothing.

If any system which allows frequent changes of generic names were to be adopted it will require an updated system of computer searches annually. Who will do this? Who will pay for it? WHY?

LOOK FORWARD:

Paphs are already subdivided into several sub-genera – Parvisepalum, Brachypetalum, etc. Will these someday become separate genera?

The spade lip Cattleyas will no doubt someday be raised to generic level.

Dendrobiums could easily be divided into four, perhaps five genera.

There is a very simple and irrefutable reason for not adopting all of these new genera. Each time a new genus is added to a breeding group, the potential number of man-made hybrids **doubles**. In the Epidendrum group of the Cattleya alliance there have been seven/perhaps more new genera added in the last fifty years. If that alliance had the potential of, let's say, fifty man-made genera in 1955, it now has the potential of $50 \times (2)7$ or $50 \times 128 = 6,400$ man-made genera.

THE MOST IMPORTANT PART OF ANY NOMENCLATURAL SYSTEM IS STABILITY!

THE SECOND MOST IMPORTANT PART OF ANY NOMENCLATURAL SYSTEM IS AN AGREED UPON SET OF RULES!

If the above concepts are not adhered to we will continue to be forced to put up with the bastardized gemisch presently being used in the **AQ**, which must be the laughing stock of the orchid world. It rather reminds me of the fable of *The King's New Clothes*.

This was written in mid July, 2006 using some generic names in vogue (preferred synonyms) at that time. By the time you read this they may have changed. John A. Dunkelberger, Jr.

Odont Growing Tips - Nutrients By Robert Hamilton

I recently received a call from John Miller asking if I'd update a piece I wrote a few years back on PPM (parts per million) and conductivity meters. One in the same gadgets, with different scales, that are useful in measuring the strength of fertilizer in water. To be honest, I don't remember what I wrote then and I didn't keep a copy. Rather than review past Newsletters searching for that article I'll start from "scratch" and broaden the scope.

At the outset let me share that I am not a remarkably good odontoglossum grower. I am also not a professional horticulturist so some of what I write I describe as a member of a laity, in my own language. Noting this, I encourage members of the Odontoglossum Alliance critique what follows, fill in gaps or correct false assumptions. Forward these remarks to our editor, John Miller. My growing is not bad; however, note colleagues like Andy Easton and Howard Liebman often show me first blooming's of my crosses a year sooner than I bloom them. I attribute this in no small way to the "wild" conditions of my rented greenhouse, located on a cold part of the Pacific Coast and shaded during the winter months by a monstrous cypress tree. The good news for me is I am in the process of moving to a much better greenhouse.

Odonts come from the cool cloud forests of the Andes Mountains. All vascular plants transport nutrients from their roots to their leaves by capillary action via a force that results from a "vapor pressure deficit" created by transporation, the act of gas exchange performed by leaves. Odonts have evolved the physiology to perform this task under the humid conditions of a cloud forest. Odonts also grow in an environment where they get relatively pure water from frequent rainfall and condensation. They suffer when there is an excessive of salts (fertilizer) concentrated at their roots, i.e. a high "salt-index" reduces the amount of water and nutrients available to the plant and leaves. In a greenhouse situation the conditions of low humidity and the mix drying out exacerbates this problem; as water leaves the substrate the ratio of the salts increases raising the salt index. Experience has proven odonts, like many other orchids, grow best with relatively low amounts of fertilizer compared to other plants.

Like most epiphytic orchids odonts benefit from a good air at their roots. Actually, benefit is too mild a term. Odonts will perish if they do not have air at their root. It is essential their roots have air and are not choked by wet conditions. Odonts should not remain too wet and also not allowed to excessively dry out, particularly in hot, dry weather.

Likely, the overwhelming numbers of Odontoglossum Alliance member's grower grow their plants in a barkmix. Having said this Philip Altmann, in Melbourne, Australia grew great plants in New Zealand moss mixed with Styrofoam and Alan Moon, when Curator of Orchids at the Eric Young Foundation, shamed the rest of us by their superb culture. It is widely acknowledged the EYF set the world-standard for odont culture. They grew in a mix of two types Grodan rockwool, a mix of a repellent and an absorbent grade. While their plants were always wet their Grodan mix inherently maintained a significant amount of air.

The important thing in any mix is maintaining a ratio of moisture and air. This requires a mix (more correctly called a substrate) to have a large amount of open area. A. C. Bunt's 1988 tome, <u>Media and Mixes for</u> <u>Container Grown Plants</u> defines this parameter as the "air-filled porosity". From my experience using medium bark this requires about 50% of the mix to remain open space. Open space can be measured using a sim-

ple method: a known volume, a measuring cup, is topped off with mix and water is added (I use a piece of screen to keep the mix from floating away) to overflowing. The water is then decanted in a container, the mix discarded and then the water is measured. Dividing the amount of water measured by the full cups volume gives the mixes air percentage.

Over my growing years I have witnessed lots of mixes that amount to "brews". Bark, moss, perlite, charcoal, lava rock, sand, walnut shells, diatomaceous earths, oyster shells and a plethora of other ingredients being used to make some voodoo mix with purported magical properties. After trying just about every combination I've learned to keep it simple. The mix that works well for me is 50% Ochiata "Power" (equivalent to medium sized bark. Orchiata uses bizarre terms to describe their barks size) bark and 50% of a local porous landscape rock called "lava rock". In mixing different materials it is critical to choose material of about the same size as the bark so the open space remains large. Mixing objects of different size will result in less open area. A couple of other advantages of using lava rock are it is heavy, which keeps small pots from tipping and it is much cheaper than bark. Comparing growing in 100% Orchiata with this 50/50 mix shows about equal growing results. Let me add I have never had good results using only inorganic mixes, i.e. 100% perlite or rock does not work for me. I have also abandoned charcoal (way too messy and invariably a mix of sizes), perlite (too light, high fluoride content and hard to get in a size similar to medium bark), rockwool (not great if you can't monitor and adjust feeding conditions real-time) and all the other stuff. NZ moss is great but I'd be broke if I used it.

My current mix is forgiving, grows well and lasts at least a couple of years. Let me add I do buffer it with a small amount of ground oyster shell which is a source of calcium and helps maintain a reasonable pH.

OK, so far it's simple. I'll add my watering schedule which is adjusted by season, typically one to two times a week during the Pacific Coast summers (I am in a relatively cool greenhouse) and during the winter, when the day and night temperatures remain at their minimum, I heft a few pots and don't water until I feel them getting light. This sometimes means watering every few weeks. It is always better to stay a bit too dry and use the turgid-ity of the bulbs as indicators than to overwater.

Obviously plants require water, air, nutrients and sunlight to grow. Air is the source of CO2, water vapor and O2. The carbon in CO2 becomes the bulk of a plant's mass and the carbon source is the CO2 in the atmosphere. There are some who believe plants can benefit from another carbon source, namely methyl alcohol as a carbon source, added at about ~50-100ppm in the feed. I have one friend who swears by it and another friend, a PhD. plant physiologist who designed fertilizers for Fisons (later acquired by Sun Gro) reporting extensive review of methanol as a supplement did not find any benefit).

The overwhelming amount of nutrients reach the plant via the root system using two entry mechanisms, passive entry (diffusion) and active-transport, i.e. complex chemical reactions, within the root membranes that decompose fertilizer to grab specific nutrients. There are adherents of another entry route, i.e. "foliar-feeding". I think this idea is now mostly shot-down by the "hop-heads" who grow hydroponically where the leaves never get any nutrients except via the root. I'd bet on the roots being the predominant and probably only significant way an odont gets nutrients.

This leads to a few questions. What fertilizer is the best one and at what strength do odonts need for good growth? How do we measure and provide the right amount? Too little limits growth and too much will harm the plant. What tools do we have to help us?

A bag of fertilizer will have a set of numbers on it such as 17-5-24. These numbers represent the ratios of nitrogen, phosphorus and potassium. The bag also usually notes what types of nitrogen are present, i.e. ammoniacal and nitrate nitrogen. There are also lists of trace elements, elements needed in very small amounts. The good news is a premium orchid fertilizer has these chemistries well sorted out and we don't have to be chemists to get good results. The ratios get argued about. The term balanced is often applied to a ratio like 20-20-20. My friend the plant physiologist laughs and says this is equivalent to saying a balanced diet is a pound of sugar, a pound of butter and a pound of meat. In recent years it has been proposed that soil-less mixes, like bark, do not require large amounts of phosphorus. It is an element that gets bound up in soil but not in soil-less mixes and therefore adding high amounts when using a soil-less mix needlessly raises the salt index. The best ratio provides the plant all of the elements it needs, in the right proportion and not in an excess amount. This lessens stress on the plant as the mix dries and the salt index increase.

I have had good luck with 17-5-24 and good luck with 20-20-20. The only comments I can add is I began using a calcium buffer (oyster) only a couple of years ago with lots of other variables going on. It seems calcium buffers will react with phosphorus and form the insoluble Calcium phosphate and therefore the plant will be cheated. Following this idea I am switching from my current 17-5-24 to 20-20-20. My guess is a grower will get good results from most commercial fertilizers and one does not have to worry too much about the numbers.

One does have to worry about the concentration of salts in the watering program. This will invariably be the sum of the salts that are in the water when it arrives from the mains or a well plus the salts we add as a fertilizer. The numbers are typically stated in parts-per-million (ppm). Unfortunately there is no hand-held gadget that can tell us the real ppm of our watering-program. But wait, what about the ppm meters sold in catalogues? Don't they measure ppm? Actually, they do not. These meters actually measure the conductivity of a solution and are correctly called EC meters. These gadgets come scaled in units such as the Siemens (the International unit of conductivity, named in honor of Werner von Siemens). Actually, an EC meter is scaled in micro or milli Siemens, uS or mS as these smaller units are typical of drinking water and water with fertilizer added. Noting this, many EC meters get scaled in approximate ppm. Why do I say approximate? This is because every type of salt has a different conductivity. A gram of Sodium chloride in water does not have the same conductivity as a gram of ammonium phosphate.

The good and the simple of these meters is it does not make a significant difference which one you buy. The fact that my solutions and your solution contain different ratios of salts has only a small effect on the EC readings. If you buy an EC meter scaled in Siemens you will want one ranged in uSiemens. If you buy one in ppm you will get an EC meter that reads out in an approximation of ppm, i.e. the manufacturer has applied a conversion factor that approximates ppm. As long as you find the numbers that work best for you it does not matter which type of meter you buy. You can find these meters at hydroponic stores, tropical fish stores and online. I do recommend you buy one that is water proof and with auto-shutoff. These meters typically use coin-cell batteries and leaving one on will cost you in these expensive batteries.

Now, what numbers work with odonts? I have found that an EC of about 800 uS works well in my continuous feed program. This does not exceed the salt stresses my odonts can take. If I used a ppm meter instead of my EC meter it would read about 450-500 ppm (using the common conversion factor: $.6 \times uS = ppm$). It is important to keep in mind the final strength of a watering program is the sum of the water's intrinsic salt content plus the fertilizer you add. If you have a water supply with higher salt content you cannot add the same amount of fertilizer as someone who starts with purer water. This is why it is bad practice to match someone else's fertilizer schedule based on weight or volumes and why these meters are useful.

In summary, odonts are relatively light feeders. Too much fertilizer will result in leaf tip burn and reduce growth. When a mix dries out the salt index increases placing the plant under greater stress. If a mix is kept too wet the roots will die and the plant will shrivel because without roots it cannot take up water. Keep a good amount of open area in a mix by keeping the mix simple and using components of about the same size. Remember, the open area will decrease as the mix decomposes. An EC or a ppm meter is a useful gadget to

measure feed strength and adjust the amount of fertilizer being used if the water supply varies in salt content during the year.

All of the above is based on my experience living in a moderate climate and having good quality municipal water supplied by our water district. I have it pretty easy. It would be great to hear from growers who have to deal with lower quality water and broader temperature swings. I encourage a dialogue via our newsletter.

Bob Hamilton January 2014

Special Request

Paul Bland is lookoing for a copy of "Creating Oncidinae Intergenerics" by Goodale Moir. Please advise price to: flashfotos@y7mail.com

Odontoglossum Alliance Meeting to be Held in San Francisco 20-23 February 2014

The next meeting of the Odontoglossum Alliance will be held in San Francisco at the time of the San Francisco Orchid Show 20-23 February 2014. The Preview Party is on Thursday night, 20 February 2013. We are having a joint meeting with the Pluerothalid Alliance on Friday 21 February.

The meeting will be held in the Firehouse at the Fort Mason Center. I have included some material on the location in this newsletter. The joint Cool Growers Dinner, lectures and auction willbe held in the Fort Mason room C362 (building C third floor). This is the same floor as previous meetings, but a different room. The room is available for setup at 5:00 PM. Featured wines will be served with dinner following. The menu will include choices of roast beef, turkey and vegetarian lasagna. Members of both Alliances living in the area will contribute by providing a variety of specialty dishes. All in recognition of the economic climate to make it as attractive as possible for members to attend. Two talks are planned: One by each of the Alliances (OA and PA). As usual there will be an auction of fine material from both alliances. I expect to see some premium Odont divisions available in the auction.

Steve Beckendorf will be our speaker. Here is a synopsis of his talk

Synopsis:

Peru is a huge country, relatively underexplored for orchids. By targeting remote areas in the Andes, my friends and I have been lucky to find a variety of unusual orchids, especially odontoglossums, cyrtochilums and masdevallias, including several new species. This talk will highlight orchids seen in the last four years, emphasizing those from 2012 and 2013.

We will see if several local greenhouses can be available for touring on either or both Saturday and Sunday. Later in the newsletter is some material on local motels close to Fort Mason.

Several venues were considered and the overriding factor was the current economic climate. It is hoped this decision will be attractive to many of our members and that we will have a good turnout.

Tickets to the Preview Party and the show can be obtained over the internet. The address for the web site where these can be ordered is found is:

http://www.orchidsanfrancisco.org/poe.html

We expect the cost of the dinner at the meeting to be reasonable. We look forward to a good crowd. In this February newsletter are some details on the meeting. This includes suggestions as to hotel locations close to the show.

The San Francisco Orchid Show is the best show in North America to see Odontoglossum alliance material in the show. The sales area is huge with many opportunities to acquire high quality material.

A good web site to look for hotels is: <u>www.sftravel.com</u>. The specific page is <u>http://www.sanfranciscovisitor.com/bgt.html</u>. A selection of hotels picked from the web site follows.

Lombard Motor Inn (415) 441-6000 1475 Lombard St.

Francisco Bay Motel (415) 474-3030 1501 Lombard St.

Redwood Inn (415) 776-3800 1530 Lombard St.

1990 Domourd St.

Town House Motel (415) 885-5163 1650 Lombard St.

Star Motel (415) 346-8250

1727 Lombard St.

Cow Hollow Motor Inn* (415)-921-5800 Lombard Street

S F Motor Inn (415) 921-1842 1750 Lombard St.

Coventry Motor Inn (415) 567-1200 1901 Lombard St.

Ramada Limited (415) 775-8116 1940 Lombard St.

Buena Vista Motor Inn* (415) 923-9600 PO Box 475517 San Francisco, CA 94147 Chelsea Motor Inn (415) 563-5600

2095 Lombard St San Francisco, CA 94123

Motel Capri (415) 346-4667

2015 Greenwich St.

Hotel Del Sol (415) 921-5520

3100 Webster St.

These hotels are within a couple of blocks of Fort Mason. These appear to be clean and comfortable, but not elegant. The web site offers reviews of the hotels. The ones marked with an * I have stayed at for previous meetings and shows. They are clean, neat, not elegant, reasonably priced and with parking. I often walked to the show from these hotels.

The meeting to be held on Friday evening will be in the three story building which is the second one down from the show in the Fort Mason Complex. The address is:

Fort Mason Center

Landmark Building C

Room C362 3rd Floor

San Francisco, CA 94123

Phone 415-345-7500

Request for Auction Material

One of the more interesting and entertaining events at our Odontoglossum Alliance meeting is the auction of fine odontoglossum material. We have had many donators who have brought in fine material. Much of this material has been of plants that are awarded, hard to find species or well know hybrids. Occasionally we have some of the Nellie Roberts watercolors or other fine old orchid illustrations. The results of our OA auction have been used to keep our dues down and provide resources that allow us to increase the size and color content of our newsletters. This newsletter is typical of what can and is being done. I urge all our members whether you plan on attending or not to donate to the auction. If you are not coming so you could bring the material to the dinner, you can mail it to Steve Beckendorf, Steve will get it to the meeting and auction.

So look over your material and find something or if possible a couple of things and get them to the auction and meeting.

Mailing address

Steve Beckendorf

576 Vistamont

Berkeley, CA 98704