Odontoglossum Alliance Newsletter

Santa Barbara Odontoglossum Alliance Meeting

The Odontoglossum Alliance meeting was held at the Miramar Hotel in Santa Barbara on 11 March 1994. The Board of Directors had met in the morning and the results of their meeting is reported later. The meeting was attended by 40 registrants, of which 2/3 were members of the Odontoglossum Alliance. The balance will be sent applications to join. The meeting commenced with a luncheon. The auction table was filled with plants, flasks, and alliance material all of which was auctioned later in the day.

Following lunch the lecture portion of the program was opened by Alliance President, Bob Hamilton, who after some opening remarks introduced the speakers. Dr. Howard Liebman described the recent progression of miltonopsis breeding with odontoglossum alliance material. He carefully followed the breeding paths from its earliest start up to the present time. His talk was illustrated with slides showing a number of his own crosses. He concluded with a particularly beautiful Odontonia Amethyst Gem, a recent introduction. Jerry Rehfield has already won an AOS award on one clone.

In the more traditional Odontoglossum breeding directions, Bruce Cobbledick reviewed the recent history and current introductions. His discussion was illustrated by a well thought out path of slides. Bruce is the owner of Unicorn Orchids and has made numerous introductions of his own crosses. Professor Steve Beckendorf gave a clear discussion of the fundamentals of genetics and suggested, based on Mendel's Law, paths for hybridists to follow in selection of parents. His talk was illustrated with slides and a handout making it particularly useful.

Dr. Wally Thomas presented the results of his work in growing in perlite. His talk is contained in this newsletter and is a welcome addition to the literature on the culture of the Alliance. Generous auction donations of outstanding odontoglossum alliance material were received from our members. A spirited, at times, auction raised \$1740.00. But most of all a number of really significant plants were obtained by our members. These were plants that just are not normally available. The alliance auction continues to be a wonderful source for people to obtain such material and of course your alliance benefits from the results.

President Bob Hamilton conducted the business meeting. He announced that the Board of Directors had approved the project for the alliance to establish an AOS trophy for Odontoglossum Alliance material. The results of the auction combined with money available from previous auctions produced \$3700.00 toward the \$5000.00 needed to establish the trophy. Elsewhere in this newsletter is a more detailed report on this project. The Board also found it necessary to raise the membership dues. This was the result of higher postage rates and the increase in the size of the newsletter. Dues for U.S. mailing was raised to \$15.00 per year. All other dues remained the same. It also was necessary to increase the cost of the New Zealand Newsletter to \$5.00 per year. While it was regretful to do this, it was felt that the amount was small and the value received justified it. The terms of office for directors was extended to a two year term. This was approved by the members at the general

meeting.

The board approve the scheduling of meetings of the alliance at the Western Orchid Congress, Portland, Oregon in 1995 and at the Western Orchid Congress in Vancouver, British Columbia, Canada in 1996. They also authorized the start of planning for an International Odontoglossum Alliance meeting at the World Orchid Conference in Vancouver in 1999. The alliance meeting concluded with a no host cocktail party while people collected their treasures from the auction. Those present felt that we had a good meeting. They suggested a similar format for future meetings with some improvements in the auction process.

Greater New York Orchid Show and Eastern Orchid Congress Odontoglossum Alliance

Meeting, 24-27 March 1994.

The Odontoglossum Alliance sponsored a set of lectures at the Eastern Orchid Congress on 24 March 1994. The lecture series was attended by 40 people. The program was chaired by Roger Williams, a director of the Odontoglossum Alliance. Mr. Maurice LeCoufle gave a very interesting discussion of the history of growing the Odontoglossum Alliance in Europe with emphasis on the contributions of his own firm, Vacherot & LeCoufle. Readers will find his talk carried in this letter along with a few of the beautiful slide materials used to illustrate the discussion.

Dr. Howard Liebman delivered a repeat of the talk he gave at the Santa Barbara meeting which was reported earlier in this article.

Mr. Jerry Rehfield gave an interesting and well

illustrated discussion of intergeneric breeding. This talk was illustrated with a number of Jerry's own experiences and contributions to this line of breeding. •••

All in all two great meetings of the alliance were held in 1994.

Time for 94-94 Dues

The dues for the period of August 1994 - May 1995 are now upon us. In the past year the combination of the increase in postal rates and the size of the newsletter have caused a necessary increase in the membership fees. The dues for the U.S. mailing must be increased to \$15.00 per year. All other membership fees remain at \$15.00 per year.

The cost of the New Zealand newsletter was more than anticipated. Therefor we must raise the cost of that to \$5.00 per year.

The Board of Directors and Management hope that this increase in dues in necessary and that it remains a good value. It is the intention of your organization to continually improve and do our utmost to hold costs in line with value received. A dues renewal form is enclosed with this newsletter. Return it promptly. We will be mailing out the August newsletter *only* to those who have renewed membership and paid their dues.

If you would like to make a contribution the AOS Odontoglossum trophy the Alliance is working towards, please fill in the amount. You may send a separate check or include the donation amount within your membership check.

New Book Release

Icones Orchidacearum Peruviarum by David E. Bennett, Jr. & Eric A Christenson, Ph.D., the first installment is now available. It is in loose leaf form illustrating 200 orchid species. It is available for \$65.00 from Aurora de Bennett, c/o Eric A Christenson, 1646 Oak Street, Sarasota, FL, 34236.

AOS Trophy to be Established

The Odontoglossum Alliance Board of Directors voted to proceed to establish an AOS trophy for the best Odontoglossum Alliance on an annual basis. The trophy is to be named the Robert Dugger Odontoglossum Alliance trophy. Bob Dugger has devoted more than 40 years to the hybridization of the odontoglossum alliance material. His crosses are sought by growers world wide. Awards granted to his crosses are too numerous to be counted. He his the dean of Odontoglossum Alliance contributors in the American Hemisphere.

It is the plan to establish the award through a meeting with the AOS Committee on Awards at the Western Orchid Congress to be held in Portland, Oregon 26-30 April 1995. This is concurrent with the next meeting of the Odontoglossum Alliance on Friday 28 April 1995 at the same location. If establishment of the award is achieved at that time the first trophy award will be at the AOS Trustees meeting in the fall of 1995.

The endowment requirement for the award is a minimum of \$5000.00 with a maximum allowable amount of \$13,000.00. The Alliance has already raised through its previous years auctions \$3700.00. Thus we need to raise an additional amount of \$1300.00 before the 28 April 1995.

The Board of Directors has suggested a number of ways members may contribute to the establishment of the Award.

1. Direct contributions to the Odontoglossum Alliance specified for the award is the most direct method. These contributions should be mailed to:

Odontoglossum Alliance

P.O. Box 38

Westport Point, MA 02791

2. Members who speak at Orchid Society

meetings are often offered an honorarium. This honorarium may be contributed to the

establishment of the AOS trophy and should be sent to the above address.

3. It is intended that the proceeds of the next Odontoglossum Alliance auction will be devoted to the trophy endowment fund. Members can contribute to this by (a) donating Odontoglossum Alliance material to be auctioned at the Portland meeting in 1995, and (b) participating in the auction to purchase some of the finest odontoglossum material that is seldom available. Further details on this auction will be found in subsequent newsletters.

4. There is a place in your dues request for 94-95 to add a contribution designated for the award. The establishment of the Robert Dugger Odontoglossum Alliance

Trophy is a worthy project for our organization. The Board of Directors and Officers hope you will support this project to the fullest extent possible.

Odontoglossum Alliance Meeting-1995

The next meeting of the Odontoglossum Alliance will be held in conjunction with the Western Orchid Congress and the AOS Trustees meeting in Portland, Oregon. The dates of the Congress are 26-30 April 1995. The Odontoglossum Alliance meeting will be held on Friday morning, 28 April 1995. This time was chosen so as to not conflict with other lectures being sponsored by the Congress.

The meeting plans are:

8:00 am - 8:30 am Coffee and conversation 8:30 am - 11:30 am Four lectures and coffee break

11:30 am - 12:30 pm Wine and lunch

12:30 pm - 1:30 pm Alliance auction

1:30 pm - 1:45 pm Business meeting

Mark your schedules now and plan to attend this meeting. A set of very interesting speakers will be on hand with topics of current interest to all Alliance growers. In addition a large number of Odontoglossum Alliance material suppliers are planning to have sales booths at the Congress.

Newsletter

The orchid show promises to have some of the best alliance material to be seen. Further details of this meeting will be in future newsletters.

Future Meetings.

1996 April 10-14. Meeting to held in conjunction with the Western Orchid Congress and AOS Trustees meeting in Vancouver, British Columbia, Canada. This meeting schedule has been approved by the Board of Directors. Potential Future Meetings. November 1996. Eastern Orchid Congress,

Baltimore, Maryland

March 1997. Santa Barbara International Orchid Show

May 1998. Eastern Orchid Congress, Toronto, Canada

April 1999. World Orchid Congress, Vancouver, B.C., Canada

Odontoglossum Growing in France Since 1886

by Maurice LeCoufle

The Odontoglossum Alliance has been developed in France in parallel with growers and hobbyists of the other countries. Especially Belgium. England and all middle European orchidists from Sweden to Italy and from France to Russia. Long after the discovery of this genus by Humbolt and Bonpland between 1799 and 1804. Reported in their "Voyage to the Equinoxial Regions of the New Continent".

Later, Charles Kunth from Germany dedicated several years to the study of these discoveries and published in 1815 the conclusions of his work in his "Nova Genera and Species Plantarum" and later in his "Synopsis". But it is only when Jean Linden having met Hartweg commissioned one by the Belgium

Society of horticulture, the other by the RHS in London, discovered the Odm. crispum near Pacho a short distance from Bogata, that a real interest for this genus began. In France, Dallemagne in Rambouillet, the Barons of Rothschild in Armainvilliers and in Ferrieres, Charles Maron in Brunoy, Henri Vacherot in Boissy St Leger, Julien Potin in Neuillu Sur Seine, Graire in Amiens and others near Paris, began to collect these exquisite varieties toward the end of the last century and the beginning of the 20th, so that already in 1886 a section was devoted to odontoglossums in Henri Vacherot's first greenhouse, a lean-to which still exists now. My grandfather, the founder of the firm, Vacherot and LeCoufle, was painted in 1943, when he was getting in age, by my mother, Henriette LeCoufle. In Belgium 100 years ago there were many collections made by wealthy gentlemen such as Dr. Capart, MMrs. Cahuzac, Madoux, de La Devansaye, G. Waroque, Comte de Bousies, van Imshoot, and we were in close contact with them to buy and exchange plants. From the very beginning Henri Vacherot got interested in hybridizing and as most growers, his plants were either jungle collected or hybrids from Stuart Low, Sanders, Charlesworth, Mansell & Hatcher or J. and Lucien Linden of Gent and later from Vuylsteke in Belgium. Also some collectors coming from the tropics were visiting the nursery and bringing their findings.

Most orchid growers were dreaming of the exceptional jungle collected species to make hybrids. In these years many orchid hybridists thought that to make a pollination the 2 parents had to be in bloom at the same time. And this has been delaying the advancement of the breeding program for many orchids.

The seeds were, at that period, sown on the humid surface of the mother plant where a finely chopped sphagnum mixed with polypodium was surfaced and maintained very humid by dipping the lower part of the pot in water to leave untouched the whole surface where the root fungus named rhizoctonia grows at the right vigor to allow the seeds to germinate. Then first Noel Bernard developed a method to make the seedlings germinate and grow on an aseptic medium but it was not elaborate enough to facilitate the full growth of the young seedlings. To overcome this problem it was necessary to make the rhizoctonia grow on the surface of a sterilized compost packed in flasks and autoclaved and then to transfer the seedlings half grown on it. That method has been used extensively and has faded out only in the year 1945. After 1925 the medium has been perfected and there was no need to use the rhizoctonia any more, so that already then most growers were raising with asymbiotic methods although good formulas were still to be found.

With the older methods, on the pots, only a few plants were obtained per cross. With asymbiotic methods, first outlined by Noel Bernard and perfected by Knudson, many more plants were raised. Unfortunately our talented discoverer, Noel Bernard, has had only the time to outline the method before he died.

The very first president of the American Orchid Society, the late Mr. Burrage, considered the Odm. crispum the most beautiful orchid and this has been the opinion of many authors, particularly for Mrs. Rebecca Northern in her book "Home Orchid Growing" when she writes "connoisseurs often name this species the most beautiful of all orchids".

Odontoglossums can be cultivated in locations where there are cool nights without bothering too much about the high temperature in the day. Too many think that the day temperature should be kept very cool but this is not the case. A great difference should be made between a moving air and a still air, because when the air does not move the leaves may burn, but if there is a movement of air, they don't because the temperature inside the leaves is lower. The best temperatures are 22 deg C during the day and 12 deg C at night.

According to the following experiment made by Dr. Georges Morel with Prof. Chouard who had at his disposal the phytotron of gif sur Yvette near Paris, the optimum temperatures have been obtained.

After a visit at our nursery in 1965 it has been decided to conduct an experimentation to

determine the best temperatures. A good growing variety was chosen, namely 70 mericlones of Odtna. Moliere 'Lanni' AM/RHS. The mericlones were placed in several sections. All the plants received the same treatment regarding potting, feeding and exposure to light, receiving 15 hours of daylight and 9 hours of darkness. The first group has been exposed at a night temperature of 12 deg C, 22 deg C during the day. The second has been exposed at a respective temperature of 12 deg C at night and 17 deg C during the day. The third compartment was at 18 deg C at night, and 24 deg C during the day. Then the results have been the following: In the first group at 12-22 deg C the plants grew with very strong bulbs and the leaves of 60 cm high (nearly 2 feet). And it should be noticed on this slide that while one is already in bloom from the apex and can produce also stem from the bulb the 2 other groups have no flowers, and the plants are much smaller. Even the last experiment at 18-24 deg C shows that these temperatures are absolutely inadequate. The only temperatures having given the best results are 12 - 22 deg C. The difficulty is, without a phytotron, to let the temperature do down to 12 deg C. It is not easy if you have no special equipment because the temperature outside must be cooler. During the day when the sun warms the air it must be cooled down by an extractor fan, to maintain the temperature automatically down. The best we recommend is an automatic temperature control day and night program.

At the beginning of our collection, to compose our collection, we attached lot of importance to breed varieties with beautiful flowers and going through our books, we find that the basic odontoglossums were Odm. crispum 'Premier' from Charlesworth and Odm. pecsatorei and Odm. harryanum. An importation of specimen plants from John Weir in England has been the occasion to acquire more plants including Odm. triumphans and luteo-purpureum which was discovered the year of our foundation in 1886. Some were duplication of natural hybrids, as we found out, in 1890 Isadore Leroy made for the Baron Edmond de Rothschild the Cross of Wilckaenum which is Odm crispum x Odm.

luteo-purpureum. And in 1898 Vuylsteke from Gent in Belgium made Odm. Spectible which is now Odm. crispo-harryanum 'Spectible'. All European growers were making their own crosses reproducing odontoglossums of the first generation hybrids namely Odm. Amabile. Odm. Ardentissimum, Odm. Eximium, Odm. Illustrissimum, Odm. Lambeauianum, Odm. Promerens, Odm. Rolfeae, and others. It is in 1912 that my father, Maurice Etienne LeCoufle who had just joined my grandfather in partnership made his first crossing with Odm. crispum 'Premier' and Odm. Amabile bought from Vuylsteke. This was the beginning of our present day Odm. crispum hybrids. This cross of Jasper was duplicating the first one from Charlesworth in 1909.

In 1913 and after, we made crosses like: Odm. Crispum x Oda. Charlesworthii = Oda. Madeline, Odm. crispum x Amabile = Jasper, Odm Jasper x Oda. Charlesworthii which gave Orion, etc. During the First World War, breeding has been reduced, all activities being limited for the survival of the firm, but as soon as the war was over we started again and found some new lines of breeding. We crossed Illustrissimum x crispum, named Odm. Conqueror, which came out with dark purplish markings.

In 1935 we named Odm. Nabab (Odm. Crispum 'Queen Empress' x Odm. Gloriana). Odm. Conqueror x Nabab Made Odm. Connetable in 1939. From Odm. Nabab, a white, we created the line of Odonts still well known at present: crossed with Milt. Aurora = Odtna. Berlioz; crossed Milt. Babiole = Odtna. Lulli; crossed with Odm. Excella it made Odm. Nabella, crossed with Milt. Hyeana = Odtna. Neride, crossed with Milt. Princess Mary, it gave Odtna. Boussole. This is the variety 'Blanche'. Others are spotted.

In 1941 we found the most exciting vivid red of our Vuylstekearas, Vuyl. Rutilant = Vuyl. Fragonard x Oda. Corail, combining breeding at the same time the cochlioda and the crispum 'Premier'.

Plants of the odontoglossum alliance being prompt to flower have been the first to prove that

meristem grown plants were coming true to originals through the meristem process, and I presented them in the U.S.A., at shows in 1967, 5 identical mericlones all showing the same flowers. So many orchidists had told me they would not come true. And this was the proof of the contrary. Here is a group of 5 mericlones photographed in February 1967. In 1943 we collected the seeds of Odtna. Astrolabe x Odm. Nabella which made the finest odontonias we named Odtna. Moliere, which received at least 6 awards of merit. Odtna. Moliere 'Lanni' AM/RHS, Odtna Moliere 'Elite' AM/AOS. Odtna Moliere 'Psyche' HCC/AOS. Odtna. Moliere 'Polka' AM/AOS-RHS. With Odtna. 'Moliere 'Dyonisos' we made the first meristeming to select the clone having the best distribution of spots, and we named it Moliere 'Polka', sport of Moliere 'Dyonisos', for which we obtained an AM/AOS and then an AM/RHS. Since then it has been reproduced and at that time patented in the U.S.A., France and Holland where it has been mass produced and from there distributed all over the world. Another interesting mutant came out of the Odtna. Moliere 'Etoile' which has color only in the center but a mutant appeared much darker on the petals and sepals and we named it Odtna. Moliere 'Etoile Polaire' as shown on this slide. The vigor of some of these clones of Odtna. Moliere has been such that some plants have given up to 4 spikes per bulb, one on each side and 2 from the apex, altogether 40 flowers. You easily understand that such rewarding varieties have been patented and protected by a P.V.R. our Variety Odtna. Moliere 'Dynisos' was designated as cultivar 'Valecor' for the patent and 'Polka' for the trade mark in France. Other odontoglossums were made crossing Odm. Adrien Lefebvre x Odm. Meissonier, both of dark colors giving Odm. Petit Ami. Horace Vernet x Ardentissimum gave Odm. Koubilai. To create new types we selected very fine white like Odm. crispum 'Xanthotes', a pure white with no color on the back of the flower, and Odm. Ismene which is Connetable x Banella. Odm. Annie Vogel = Almee x Ismene maintaining the Odm. crispum with plants more fertile. Odm.

Tarentaise 'Innocence' which has some coloring in and around the lip, Odm. Arnga (Adrien Lefebvre x Alorcus) with a fine harmonious spotting of brown red dots., Odm. Yellowstone Basin from Beall used for breeding, Odm. Chimene following the breeding from Stuart Low for yellows.

A cross of Odm. Sunmar x Onc. Tigrinum gave Odcdm. Tiger Sum. Odm. Chimene crossed by Milt. Alexandre Dumas came out as Odtna. Diane 'Loriot' PC/RHS which has some interesting crosses with us in California and Columbia. According to its fancy it can have spots or no spots. Making enough meristems of them we obtained some interesting like Odtna. Diane Mutant of 'Loriot' which came out with long stems and rarely spotted, of Odtna. Diane 'Lucie' HCC/AOS interesting for its flower habit in a 5 cm pot and its strong compact flowers. Odcdm. Oberon = Onc. Tigrimum x Odm. Yellowstone Basis a good yellow. To breed further for yellows we used Odm. Ralph Wagner and crossed it with Oda. Rantador giving Oda. Charon which with other yellows breeds yellows.

Another interesting research was made on odontiodas. Several cochliodas of different colors exist, we have chosen a red one, cochlioda noezliana. It gave Oda. Picasso 'Rubis' (Oda. Ariitea x Cda. noezliana) having very fine flowered branches and growing with several leads making a red firework of flowers. Oda. Henriette LeCoufle is issued from (Oda. Balek x Odm. Pacha), Oda. Balek being Oda. Brackenhurst x Odm. Petit Ami, Oda. Brackenhurst = Oda. Charlesworthii x Odm. Eximum and Oda. Charlesworthii is Cda. noezliana x Odm. Harryanum. Oda. Henriette LeCoufle 'Tennerife' AM/RHS a red distributed all over the world and the same with Oda. Henriette LeCoufle 'Javea' AM/AOS-RHS. A red bordered with white and denticulated. Both were so beautiful that they have been chosen for patenting in different countries.

From another line of breeding, we have the cross of (Oda. Marie-Antoinette x Kaino), Oda. Marie-Noel Velano trade mark in France 'Bourgogne' protected by cov 4428 which means plant variety right, also patented in Japan. It is one of the best odontiodas for the production of the flowers as well as the pot plant business for the color of the flowers. The first slide; a flowered stem and the second one; with my son Philippe and his wife, Francoise, showing how prolific is the variety. It is a good fast easy grower which gives already at the second flowering a small stem of 8 flowers. And getting into specimen plants very rapidly. Oda. Ambroisie 'Micheline' AM/RHS = (Odm.Daudet x Oda. Marie-Noel) Oda. Intensite = (Oda, Marie-Noel x Oda. Biarritz) Barritz being (Defrence x Ithaque), a very strong plant with flowers of good substance. A very prolific variety.

Using the red Picasso 'Rubis' and the Henriette LeCoufle, we produced the Oda. Baiser with a large number of different clones. Among them Oda. Baiser 'Aubigne' AM/AOS illustrates very well what the variety is with medium size flowers always in the line of dark reds. It received its first AM here in New York. Oda, Baiser 'Velcaina' got also an AM/RHS.

I wish to name also Oda. Carmagnole = (Oda. Marie-Antoinette x Oda. Carnaval), Oda. Pithiviers = (Oda. Picasso x Oda. Picador)AM/RHS), a splendid vivid red, Oda. Framboise de Valec = (Oda. Radiant x Picasso), Oda. Radiant is (Chanticleer x Royal Gem), Oda. Umbriel = Oda. Radiant x Yellowstone Basin, and Wils. Ravissement has given many different clones: Wils. Ravissement 'Recoleine' = Onc. tigrinum x Oda. Esterel: if is an exceptional variety with an AM/RHS. Several other awards have been given to this cross but it is one of the most attractive wilsonaras I ever saw. I left for the end the meristem propagation. In 1960 we conceived the micropropagation when no one had the idea before. Even those having been most interested by the meristem propagation because Dr. Morel had put the accent on the possibility to obtain virus free plants from virus infected ones and therefore rebuilding only one plant out of which cuttings would be made. Looking at the pictures reproduced by Dr. Morel in his article published in 1957 on cymbidiums, it

was obvious that he had already produced several protocorms out of one and this could be done further to produce a quantity. This is what we did between 1960 and 1964 when we announced that we were doing it not only for cymbidiums but also for cattleyas and eventually others. One anecdote can be reported. The firm McClellan & Co from San Francisco sent us a parcel with 2 plants, one cattleya and one vuylstekara. It got lost in the mail and arrived in summer after many weeks delay. the cattleya was dead but the vuylstekara showed a sign of life with a new growth but seemed to be desperate. We excised that growth and raised in a very short time the 1000 mericlones ordered in more or less a year.

The odontoglossum alliance is a fantastic group to work with. isn't it ?

The number of varieties in the alliance with odontoglossums has no limits. That is a good prospect for the future. It is very promising for the future towards better odontoglossum flowers.

Delivered New York, NY 23 March 1994

Available to Members New Stock Available Currently Shipping Orders

Veitch's Manual of Orchidaceous Plants 1887 - The Oncidiinae

We have recently received a new stock of this valuable book. The previous supply being exhausted quickly.

The New Zealand Odontoglossum Alliance has re-printed Veitch's Manual of Orchidaceous Plants - The Oncidiinae. The Alliance is offering this publication for sale. We have received a supply and have filled all back orders for the book. The book is the Oncidiinae section removed and enlarged from A5 to A4 and with the original color maps re-printed in color. It is priced at \$50.00 per copy post paid. This classic work contains 250 pages of cultural, historical and habitat information plus many beautiful line drawings, a glossary of terms and three color maps of where they come from. Orders should be sent to the Editor along with payment. Shipment will be done promptly. Send order and check to: John E. Miller P.O. Box 38 Westport Point, MA 02791 make check payable to: Odontoglossum Alliance

Flowers Seen at 1994 Shows

Illinois Orchid Show 19 - 20 March 1994, by Sue Golan

The outstanding species shown was an Odm. cervantsii owned by Jerry Fisher of Orchids Ltd. It won a blue ribbon, best of class and finally an 85 point AM/AOS. The flowers were round, ruffled and wonderfully spotted. A very dark Odm. cordatum took second place. The outstanding Odm. hybrid was Midnight Miracles Sue G3 HCC/AOS. The best of intergeneric hybrids was a cross of Onc. tigrinum 'Shattler' x Oda. Maroon. The red ribbon went to a beautifully arranged Odnta.Debutante 'Oxbow' AM/AOS.

On February 26, 1994 at the Mid-America regional judging in Glencoe, Illinois, Odcdm. Starbright 'Jenny' won an 80 point AM/AOS for Joe Palermo of Schaghticoke, NY (Odm. Summit x Onc. leuchochilum).

Santa Barbara International Orchid Show 11 - 13 March 1994, by Dr. Wally Thomas

The Santa Barbara Show was once again a delight to visit. While cymbidiums were as usual dominant there were some excellent Odonts to keep the Odont fancier happy. We first came to Orchids of Los Osos to find an Odcdm. Gunter von Knebel with its large striking flowers. Nearby was a well flowered division of the well known parent Odm. Quistrum 'Lyoth Angelo' FCC/RHS, AM/AOS still holding its own against any modern hybrid. Next to it there was a well

grown plant of Oda. Blanca Nieves 'Sun Princess' with 13 large crispum like flowers. Cal Orchids showed a fine branched multiflowered deep crimson clone of Oda. Fireflower 'Firecracker' x Lipperstern. Next to this was a group of Baldwinara Block Party, rich yellow and amber with 20 to 42 flowers on the plants.

B&G Orchids showed a fine Brassia Rex 'Sabata' with three lovely spikes. Adjacent to this was Oda. Klaidoscope 'Psycho' a medium flower with a rich purple pattern and was chosen as the Best Odont in Show.

The Odont. Alliance presented a table with a good variety of plants including a fine Odcdm. Hamburhen and a charming Odm. crispum 'Andersonii'.

The Starbecks had their display based around an excellent centerpiece of an outstanding clone of Milt. Firewater.

Norman Orchids displayed a good clone of Odcdm. Purbeck Gold 'Ontario' which had an excellent clear yellow lip.

Orchids Royale used two well designed triangles to show their Odonts. A clone of Odontocidium Crowborough x Odm. Enchanted Profile 'Royale Daze' won an HCC. It was a large purple with a fine lip and had 13 flowers and 8 buds.

XIX Exposicion International De Orquideas, Columbia, S.A. by Jerry Rehfield

There were 15 AOS awards given including seven to Oncidinae. The awarded plants that impressed me the most was a new species, Comparettia ignea which received a CBR. Brilliant orange with yellow petals, it had a many flowered branched spike. Flowers about 1 1/2 to 2 cm in size. Comparettia Speciosa 'Carito' AM/AOS (84 points) was probably the largest of its type I had ever seen. Odm. spectatissimium CBR was a quite large multiflowered yellow and brown species. Solenidium racemosum CBR had many small yellow suffused with brown flowers. Macradenia brassavolae had many small reddish and yellow flowers. Miltonopsis santanaei (sny. roezlii alba) received an HCC/AOS and was a beautiful pure white with yellow in lip, larger

than many I had seen. Lastly Oncidium mimeticum CBR a small purplish flower so named because it mimics nubigianium. Seen in exhibits were many Odm crispums of the diploid jungle collected type. There are many types, white to lavender, densely spotted to pure color. Also Odm nobile, luteo-purpureum and many other yellow and brown odontoglossum species. The miltonopsis were sensational, hundreds of Milt. phalaenopsis of very good quality. Many vexillaria in various shades including some exceptional pinks. Also Milt. roezlii. There were also many good Oncidium species, brassias and various other minor species - A very fine show.

Cape and Islands Orchid Society Show, Falmouth, MA 12-13 February 1994 by Dr. Tom Gregg.

Intergenerics dominated most exhibiters contributions to this show except for John Miller's group of intensely colored cool growers. Under halogen light the Oda crosses, especially Oda. Joe's Drum x Florispum, seemed much more intensely hued than the other multigenerics. Crossing good hybrids back into species resulted in some excellent and notably vigorous items like Tom Gregg's Onc. harryanum x Wils Tiger Talk and John Miller's Milt spectabilis x Oda Point Lonsdale, both showing great improvement in flower petal width, vigor and size over average parents. I especially liked Beallara Marfitch 'Howards Dream' for huge pointed flowers and good color. For the rest, there were mostly reliable and widely available plants such as Colmanara Ruth Liebman and Wildcat, Oda. Burkhard Holm, Odcdm Walter Jewel, Bur Fashion Show and many Odms like Red Man, Golden Rialto, etc. I hope John Miller will tell us more about his Odm Megoglossum sometime. Large Wilsonaras by Wilford Neptune (Imperial Tiger 'Lyoth') rounded out a lovely display and I am grateful for all that braved the foot of snow and give meaning to cool growers.

ORCHID CULTURE IN PERLITE Wally Thomas and Barb Thomas

For a long time perlite has been known as a beneficial soil conditioner. Starting some 15 years ago at the West of Scotland Research Station, a technique was developed to use pure perlite in growing tomatoes.(1) The technique made use of a water reservoir to maintain a constant fertilizing of the crop by taking advantage of the excellent capillary action of perlite. Studies on tomato culture were carried out comparing production using this perlite technique and rockwool culture. The perlite proved to be superior and much simpler to manage. Since 1988 we have adapted this perlite technique to growing orchids with excellent success. It should be noted that Pierce(2), in 1983, reported excellent results growing *Phalaenopsis* in pure perlite culture even without the reservoir technique.

Perlite is a volcanic rock that occurs worldwide. The two largest deposits are in Greece and in the State of New Mexico in the United States. The raw material is shipped around the world to factories, where it is processed for local consumption. The rock is heated to 1000oC and the small amount of water contained in the rock is turned into steam which expands the rock into a light weight material almost like making popcorn. It is then graded for size, although at the present time there are no internationally recognized standards for size. The grade that is readily available is usually called Horticultural grade and this is what we use.

Table 1 gives a comparison of the horticultural features of bark, peat, rockwool and perlite. Some aspects are of particular importance.

1. Ease of potting - Those who have now tried this technique are in agreement that it is the easiest potting technique they have ever used.

2. The material is free draining and it is virtually impossible to over water. At the same time it maintains excellent aeration. Immediately above a water reservoir the perlite holds 30% of its volume as water, and at 8" (12 cm.) above the reservoir it still has 19%. Thus, it has a combination of both excellent aeration and a continuous supply of nutrients in the water. Being neutral in pH it allows for complete control of fertilization while, at the same time, it is easy to leech out any accumulation of salts.

Two undesirable aspects are:

1. The dust and

2. The occasional occurrence of compaction. Both of these however, are easily dealt with in the following technique.

Horticultural grade perlite is used, (usually the only perlite available), and it is usually packed in 4 cu. ft.(110 liter) bags of plastic or paper. We find that plastic bags provide a better seal for the dust that may be present. There are many suppliers of perlite and it is worthwhile trying to find a manufacturer who produces a 'clean' low dust perlite. We prepare the perlite outdoors (if possible) by pouring 1/3rd of a sack into a garbage tub that is half full of a fertilizer/water solution. The surface is briefly hosed and then the perlite is pushed down into the water. In a short time the fine material sinks to the bottom and with it gone there is no further concern with compaction. What is left floating is a light airy medium that one may scoop out with one's hands into the pots or take out with a colander. Intermittently the fine material that has accumulated in the bottom of the tub is scattered in the garden.

POTS AND POTTING

To take advantage of the water reservoir technique one needs either pots that are made with a reservoir or ordinary pots must be provided with a reservoir. Ordinary pots may be used by cutting a strip of fiberglass window-screening and putting it around the inside at the bottom of the pot, so as to contain the perlite in the pot. Then a plastic container (300-400 ml. size for a 6" pot) may be placed so that when the pot is watered this container will fill with water which will later be available to the roots by capillary action. KORD manufacture both 8 and 10" (20 and 25 cm.) saucerless hanging pots. They have water reservoirs of 300 ml. and 500 ml. respectively. These pots provide aeration from below as well as acting as an insect barrier. Our favourite pots are the 'Cameo Line' made by Haney Pottery (7890 Vantage Way, Ladner, B.C. Canada: Green Arrow, Sepulverda, Ca.). They are made of heavy very long lasting plastic with a detachable saucer on the bottom and are available in 5 and 6 1/2" sizes, (12.5 and 15 cm.). They do however require some screen or pebbles to partially cover the drainage holes which otherwise would allow the perlite to escape. Any plastic container may be converted to a reservoir pot by drilling holes in the side to give a 1-1.5" reservoir in the bottom. The hole size should be 3/8" (0.95 cm.), the size is quite critical. Window-box type plastic containers are also excellent, the Haney product being 7" (18 cm.) high and across at the top, and 6" (15 cm.) across at the bottom and 22" (55 cm.) long. Three holes are drilled at each end about 1.25" above the bottom.

POTTING:

SEEDLINGS

The KORD 8 and 10" (20 and 25 cm.) pots are particularly suitable for seedlings out of flask. The pots are filled to about 1" (2.5 cm.) from the rim of the pot and the seedlings planted. The surface is carefully covered with small pea gravel such that the perlite cannot be seen. The metal hanger is then placed in the appropriate holes in the rim and a cling wrap material is wrapped around leaving an opening at the top much like a teepee. It allows for some aeration, yet maintains a micro environment with suitable humidity. We maintain the *Odontoglossum* seedlings at a minimum temperature of 600F (160C). The containers are bottom watered once a week by dipping the pot about 3" (7.5 cm.) into a fertilizer solution that is 1/2 the strength used for adult plants. i.e. EC of 250-300uS and the EC of the reservoir solution is carefully followed. The cling wrap material is best left on for about 6 weeks, and at this time the fertilizer strength is increased to an EC of 500- 550 uS.

REPOTTING:

Young seedlings may be moved into perlite at any time, however, larger plants should only be moved into perlite from other media when they are showing new growth. This allows a new and different root system, adapted to the perlite, to develop. The old medium should be thoroughly removed from the roots and all dead roots removed. The plant is then held in position, and the wet perlite scooped into the pot. It is vital that the plant be slightly deeper in this media than with other media, the reason is that sometimes, when the plants have been in the pot for a year or so, the large root system may push the plant up a bit. The perlite is then leveled and gently pressed after which the surface is covered with a layer of pea gravel. The gravel layer has 3 functions.

- 1. It prevents the newly potted plant from moving when it is watered.
- 2. It prevents the perlite from being washed out when watering.

3. It prevents the occurrence of surface evaporation with attendant salt build up.

The smallest pots used are 4" (10 cm.) in diameter as larger sized pots maintain a more uniform environment. Small plants are all grown in community pots. Repotting from perlite to perlite is done by simply lifting the plant out of the one pot and if no trimming is required it may be placed in the second pot with considerable perlite remaining attached. Additional perlite is then scooped in and gravel applied to the surface. This method allows both young and old plants to go from perlite to perlite with virtually no setback. There is no concern about leaving plants in perlite for two or three years as there is no change in the medium (we have never seen compaction) and rot is not a problem. This is of particular value when you pollinate a plant that has been in the pot for 2 years yet you are now reluctant to repot it. Ideally repotting should be done every two years. We use fresh perlite in repotting and use the old perlite for growing strawberries, tomatoes, daffodils and dwarf fruit trees all of which grow very well using the reservoir technique. The used material may otherwise be spread in the garden where it makes a most welcome addition to most garden soils.

PERLITE BEDS:

In order to further simplify the management of perlite we constructed beds that offer a large reservoir volume and reduce the frequency of watering. The beds are 8" (20 cm.) deep and are constructed of plywood on the bottom and 1" by 8" (2.5x20 cm.) cedar sides. A sheet of plywood is conveniently cut into three pieces 32" (80 cm.) by 48" (122 cm.) to make 3 beds. They are lined with double 6 ml. polyetheleyne. Drainage is provided by a plastic 3/4:(2 cm.) through-hull fitting situated on one of the sides 1.5" (4 cm.) up from the bottom. The drainage water may then be readily collected for recycling or use elsewhere in the garden. After checking for leaks a square piece of fiberglass screening is placed over the hole and the bed filled with perlite. The bed must be level and strongly built because when full it will be very heavy.

When potting in the bed the orchids are again set slightly deeper than with other media and covered with a thin layer of gravel. We have had such beds in operation for up to four years and they have shown no evidence of infection in the plants nor any compaction of the perlite. We have grown both seedlings and adult plants in the beds and both do equally well. Unfortunately, one cannot transport the bed to a show. We water beds and pots once a week during the Winter and somewhat more frequently during the Summer. It is important that the reservoirs do not go dry, although the perlite is easily re-wetted. Although initially we flushed out the beds and the pots every two months, during the past 18 months we have been fertilizing at each watering but water heavily to make sure that there is a significant overflow.

In 1988-89 36 matched *Odontoglossum* seedlings were grown in rockwool and perlite. At the end of a year there was no significant difference in their growth as measured by weight and leaf length. The plants in perlite seem to make a slightly slower start but caught up at the end of a year. The root system in perlite is much larger than that in rockwool. We moved our entire collection

into perlite in the spring of 1992. We have had excellent growth with *Masdevallias, Lycaste, Cymbidium* and *Miltonias*. Using this technique others have had excellent results with *Cattleya, Phalaenopsis, Dendrobium and Paphiopedilum*.

Orchids have been grown hydroponically since the early 1930's when

Dr. Burgeff in Germany grew and bloomed Phalaenopsis in beer steins containing only fertilizer solution and at the same time Dr. Eversole in California also grew them and bloomed them in gravel hydroponic culture. Eversole grew Odontoglossums with equal success. Somehow in the ensuing 60 years the majority of orchids have continued to be grown in Osmunda, peat and bark along with a host of mixes and more recently, rockwool. Although rockwool and perlite are 'true' hydroponic media, the others offer very little nutrition to the plant.

WATER:-- Since orchids only require a 1/4 to a 1/6th the nutrient concentration of more rapidly growing plants, it is vital to know the makeup of the water supply being used. The water should have a low salt content. Although rainwater is the best, this may be difficult to obtain and one may have to use a mixture of rainwater and the local water supply, or perhaps put in a reverse osmosis unit.

Investigation of the water supply may be broken down into two parts.

1. The total quantity of salts

2. The qualitative analysis of the salts QUANTITATION OF SALT CONTENT:

A reasonably accurate and very practical means of assessing the salt content of water is to measure the electrical conductivity (EC). Pure water conducts an insignificant amount of electricity, but most salts will allow for conductivity and for these there is a direct relationship between the concentration of the salt and the EC. The conductivity is measured in units that are either called MHOS (this is ohms (resistance) in reverse) or as SIEMEN(S). For orchids the level of conductivity you wish to measure is extremely small and is measured in millionths, called micro and expressed by the symbol 'u'. Thus, one would express a reading of 100 as 100uMHOS or 100uS. In horticulture there is an increasing use of Siemens as the unit of measure. The instrument that is used to measure the conductivity is called a conductivity meter and it operates by passing a small electrical current between two electrodes. Unfortunately, meters may be calibrated in two different ways. Some meters read in Siemens(MHOS). others meters are calibrated to read as Total Dissolved Salts (TDS). The TDS is supposed to be calibrated so that it will give a reading in parts per million (PPM) however this is misleading for salts have varying conductivity (some such as urea do not even conduct electricity). Most of the horticultural papers use Siemens, i.e. the electrical conductivity unit, however some city water works may give their water analysis values in TDS. Such values are easily translated as the two meters are calibrated so that 1000 uS is equal to 666 TDS. It is important, then, to obtain a meter that reads in Siemens and also reads in the range that is suitable for the particular plant that you wish to grow. For orchids a small satisfactory hand held meter is the TDS Tester 3, (Cole Parmer Co. 7425 North Oak Park Niles ILL60714) which reads from 0 to 1999 uS and is ideal. This meter is also calibrated to correct for temperature, as a low temperature significantly reduces conductivity. Test solutions are also readily available to check on the calibration of the meter. This meter, as well as the matching pH meter, runs on a small batteries which are easily replaced.

Since orchids require such a low level of nutrition, it is important that the water supply has a low levels of salts. In Table 2 an assessment of the water rating for orchids is given.

QUALITATIVE ANALYSIS:

Not only should one know the total salt content of the water supply but also the proportions of the various salts that make up the total. All of this information is readily available from the local water authority and the results are given as Parts per Million (PPM)=(milligrams per litre (mgm.L). Providing its members with this information should be a prime function of an orchid society. In many areas, the water is very hard, meaning that it has a high content of salts most often of Calcium and Magnesium and in the form of carbonate. If one is forced to use this water, it may be that the water supply already contains a sufficiently high level of these two salts for orchids and the further addition of them in the fertilizer is not necessary and could be toxic.

FERTILIZER:

We are slowly ascertaining the fertilizer needs of orchid plants, although there are many on which we do not yet have certain information. All plants need Hydrogen, Oxygen and Carbon, as well as 12 or 14 other nutrients. They obtain the first three from the atmosphere, but the other nutrients are largely absorbed by the roots. Table 3 shows in PPM at an EC of 600 uS the macro nutrient levels used (A) at the Eric Young Foundation (B) by ourselves and (C) the levels given when using 7-9-5 DYNA-GRO Table 4 gives the similar figures for the micro elements. These figures are given assuming the natural water supply level to be zero.

The problem in supplying all of the nutrients is that if the Calcium of

Calcium Nitrate, and the Sulphate, of Magnesium Sulphate meet in a concentrated solution, Calcium Sulphate will rapidly precipitate out. Hence, it is important that these salts only come in contact when they are diluted so that this reaction is slowed. (The commonly available fertilizers such as 20-20-20 and 30-10-10 contain neither Magnesium Sulphate nor Calcium, and thus are incomplete and, by themselves, are unsuitable for hydroponic growing.) Thus, the salts may be divided into two groups, the group containing the Calcium (usually Calcium Nitrate), and the remaining salts including the Magnesium Sulphate. These salts may be put together either by:

1. diluting them in a suitably large volume of water to give the EC required and then using a pump to water the plants.

2. diluting concentrated solutions of the two groups of salts with in-line injectors in the watering mechanism. Two Dosmatic units may be used in series and they give accurate dilutions at varying pressures. We use ours at a dilution of 1/100. Two Hozon units may be used in parallel but the EC at the nozzle will vary according to the water pressure, making it vital that the EC of the final outflow be monitored. For example, raising the end of the nozzle 4 or 5' (1.5 m.) may result in a decrease of fertilizer concentration of 30 or 40 %.

Table 5 shows the <u>tentative</u> EC values suggested for a number of commonly grown orchids.

pH:

Perlite is neutral and therefore the fertilizer solution determines the pH. The pH may be measured by a meter similar to the EC meter (same source) although it requires more frequent calibration. The pH meter also corrects for temperature even though the reading is only minimally affected by the temperature of the solution.

Our management of fertilizing at present consists of the use of one part Calcium Nitrate by weight and two parts of 7-11-27 (PLANT PROD) (Peters 5-11-26 would probably be equally good). These are diluted in-line as described above and applied at an EC of about 550 uS at each watering and at ambient temperature. During the ensuing week, the EC usually rises to a little over 600 uS in the pots, but less in the beds. A careful check on the EC of random pots is made to make sure that the EC does not go over 600uS. Our water supply has an EC of 10 to 30 uS and a pH of 6.4. Using the above fertilizers at an EC of 550 the nozzle pH is 5.7 to 5.8. The pH goes down in the reservoir water over a period of months, and a similar fall occurs in other media and with other fertilizers although the plants seem to thrive even with a pH as low as 4. We currently have this observation under review.

A small quantity of fertilizer may be made up by thoroughly dissolving 1/2 tsp.(2.5 ml.) of 7-11-27 and 1/3 tsp(2 ml.) of calcium nitrate in a 2 gallon (10 L) bucket and using it immediately. If you have no access to an EC meter you should leach out the pots with plain water every 4 - 6 weeks.

There are a number of fertilizers now available that contain all the necessary nutrients in one salt mixture. The liquid product, DYNA-GRO, is currently being used by many orchid fanciers and a comparison of its salt composition is given in Tables 2 and 3. We used this product in a small trial of seedlings over a period of nearly a year. Growth compared favorably with our regular fertilizer. For a small quantity use 3/4 tsp.(3-4 ml.) 7-9-5 in 2 gal. (10 L). Check the 7-9-5-container from time to time to make sure that the salts have not crystalized out.

SUMMARY:

Perlite has many advantages as a media for growing orchids. The most important features are total fertilizer control, ease of potting, simplicity of management, maintainence of excellent aeration for one cannot overwater. The roots are easily washed clean for scientific examination and analysis or for agricultural inspection. No other media encompasses so many outstanding qualities. We are currently investigating the effect of watering frequency, additives to simplify fertilizing methods and ways to control long term pH levels.

In addition to our excellent growth with this technique we have reports of excellent results from a number of fanciers covering all of the major orchid genera.

References

Hall, D.A. et al. 1988 Perlite Culture, ISOSC Proc. p177.
2.Pierce, J.W. 1983 Perlite Culture of Orchids, Amer. Orchid Soc.
Bull 52:(8) p806.

TA	BL	Æ	1

	BARK	PEAT	ROCKWOOL	PERLITE
pH OF MEDIUM	SL ACID	ACID	SL ALK	NEUT
FERT. CONTROL	GOOD	GOOD	GOOD	v-GOOD
LEACHING	EASY	FAIR	FAIR	v-EASY
AERATION	GOOD	FAIR	FAIR	v-GOOD
DISPOSAL	EASY	EASY	PROBLEMS	EASY
HEALTH HAZARD	CARE	CARE	CARE	CARE
STERILITY	NO	NO	YES	YES
ENVIRONMENT		OVERUSE	DISPOSAL	
MANAGEMENT	f-EASY	f-EASY	f-EASY	v-EASY
SIMPLICITY	FAIR	FAIR	FAIR	V-SIMPLE
WEEDING	f-EASY	f-EASY	f-EASY	V-EASY
AVAILABILITY	GOOD	vGOOD	FAIR	vGOOD
COST	VAR	VAR	VAR CON	MPETATIVE
EASE OF POTTING	GOOD	GOOD	GOOD	v GOOD
REPOTTING TIME	1-2 yr.	1-2 yr.	1-2 yr.	2 yr. +
NUTRIENT	MIN.	MIN.	NIL	NIL
OVERWATERING	YES	YES	YES	NO
REWETTING	FAIR	FAIR	POOR	EASY
CAT ION EXCHANGE	YES	YES	NO	NO
BUFFERING	SL	ACID	NO	NO
	PA	RTS PER MI	LLION	

PARTS PER MILLION

			ARTS PER MILLION	-
		Eric Young	(1) Ca NO ₃ (2) 7-11-27	7-9-5 Dynagro
•	N	50	49	61
•	Р	20	16	30
•	К	70	76	37
	Ca	50	42	17
	Mg	15	14.5	4.5
	S	20	18.5	.39

Table 2

	Co	omparisons at EC of 600	u S
	Eric Young	(1) Ca NO ₃ (2) 7-11-27	7-9-5 Dynagro
Fe	0.5	0.35	0.875
Mr	n. 0.5	0.28	0.43
B	0.2	0.09	0.22
CL	1 0.03	0.0035	0.43
Zn	0.25	0.1	0.43
M	o 0.05	0.05	0.004
CI	5,0		0.875

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Table 3

WATER	RATING FO	OR ORCHIDS
uS	<u>Rating</u>	<u>TDS</u>
10-50	Excellent	6-30
0-100	Good	30-66
00-200	Fair	66-130
Over 200	Poor	Over 130

Table 4

EC (Micro Seimens) (Micro MHO's)	ORCHIDS
2ע 400 2ע 600 2ע 800	Lycastes Masdevallias Odontoglossums Oncidiums Miltonias
	? Cattleyas ? Paphiopidelums
800 nS 1,000 nS	Phalaenopsis Cymbidiums

Table 5

Editorial - The Apiculus, "Where are the crispums"?

By Bob Hamilton

An extraordinary window into the history of Odontoglossums exists in <u>The Orchid World</u>, a series of six volumes published between 1910-1916. The editor, J. Gurney Fowler was an illustrious collector, grower and hybridizer. <u>The Orchid World</u> ceased publication in 1916 because of World War I and never resumed following the war. Because Odonts were amongst the most popular orchids grown in those years there is an abundance of articles about them. By 1916, complex hybrids existed and clearly some of these were polyploid.

Recently, Philip Altmann owner of Warrnambool Orchids in Victoria, Australia visited. I handed him all six volumes to peruse. Philip asked me if I had ever read the article in Vol. VI on Odontoglossum pescatorie (nobile). I had not. Reproduced for your review is that article. It will provoke some controversy. Namely, where are the crispums? Every modern crispum I have seen has fits the description of a nobile hybrid. There was one exception, a plant purchased from Columborquideas -- this was a crispum without an apiculus!.



Odontoglossum Pescatorei.

21

ODONTOGLOSSUM PESCATOREI.

\O anyone unacquainted with the practical results of the hybridist it may appear strange that Odontoglossum Pescatorei is ever utilised when there is an apparently much finer flower in O. crispum. It is wise to state apparently, for O. crispum has had such a long run of popularity that the mere suggestion of doubting its right to the highest position of honour in the genus seems a little absurd. One presumes that any special qualifications possessed by Pescatorei would have made it famous contemporarily with crispum, but it has fallen to the lot of the hybridist to discover the various means by which Pescatorei has proved itself of remarkable value in the making of many of our present-day popular hybrids. While some hybridists are of opinion that crispum and Pescatorei deserve equal recognition for the part they have played in recent years, there are others who assert that crispum comes first, with Pescatorei a close rival, and with this latter opinion most readers will probably agree.

Before discussing the artificially raised hybrids, mention must be made of O. excellens (Pescatorei × triumphans), one of the natural hybrids for which high prices were paid; in the year 1886 Knox's variety of excellens realised £165, and many other instances could be given of the value then set upon examples of this hybrid. O. elegantius (Pescatorei × Lindleyanum) is another rare natural hybrid, and, like excellens, was accounted meritorious by reason of its bright yellow colour. Although excellens and elegantius derive this yellow from triumphans and Lindleyanum respectively, the brightness and clearness of it, as seen in the above hybrids, is entirely due to Pescatorei.

In almost all hybrids containing crispum and Pescatorei in their parentage it has been noticed that the greater the proportion of Pescatorei so much the whiter and clearer is the background of the flower, consequently the blotches and spots stand out in a decisive manner. On the other hand, crispum encourages the formation of a rose-tinted ground, which is, nevertheless, quite as much appreciated by the majority of amateurs, and rightly so. Both sections are fast becoming quite distinct.

In May, 1900, M. Vuylsteke showed O. Rolfeæ (Harryanum × Pescatorei), which at once opened the eyes of the hybridist to the immense future possibilities of increasing the interest in Odontoglossums, no matter whether scientific or commercial; as events have since shown, these expectations have been fully realised.

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O. Pescatorei obtained a considerable amount of notoriety through the raising of O. ardentissimum (crispum x Pescatorei), first seen at the Temple Show, May, 1902, when exhibited by M. Vuylsteke under the name O. crispum ardentissimum. Blotched crispums were then realising high prices, and it may have been due to this fact that M. Vuylsteke made the attempt, and succeeded, in producing what were in some respects blotched forms of crispum, although they have ever since been recorded under the name ardentis-In other respects these hybrids simum. resembled blotched varieties of Pescatorei; but the combining of this species with crispum produced an unexpected violet tinge in the flower, which has proved so characteristic of ardentissimum that it has always been the chief means of distinguishing it from a blotched crispum.

In O. eximium (ardentissimum x crispum) are to be seen some of the best shaped flowers yet produced, and the fact that they are, on the whole, better than crispum proves the beneficial influence in this respect of Pescatorei, contained in the former parent. Although the individual flowers of Pescatorei are smaller than those of crispum, their chief means of making these round flowered hybrids lies in the base of the D-shaped petals. Reference to the accompanying illustration will show how these basal edges almost meet one another just above the column; in typical forms of crispum this is by no means so apparent, the petals being more \bigcirc shaped.

A marked character of Pescatorei is the pandurate or fiddle-shaped labellum, which is more or less inherited in all its progeny. It is a somewhat remarkable fact that in the majority of Pescatorei hybrids the whole of the broad front blade of the labellum is white, or at least much lighter than the other segments. The back of this blade is keeled and furnished with an apiculus, or spur-like organ, which may generally be detected in the hybrids; the presence of this apiculus assists in proving the inclusion of Pescatorei in hybrids of doubtful origin.

Another distinguishing point of Pescatorei

is the prominent crest on the base of the labellum; the side wings of this crest are more fully developed than in crispum, and they thus assist very considerably in determining the two species. There is often considerable difficulty in distinguishing certain varieties of Odontioda Bradshawiæ (C. Noetzliana × O. crispum) from Odontioda Vuylstekeæ (C. Noetzliana × O. Pescatorei), but an examination of the crest on the labellum will generally give sufficient evidence to bring about a decision.

RENANTHERA COCCINEA .--- One of the most interesting plants included in the sale of Sir Trevor Lawrence's collection is Renanthera coccinea, eight leaves, described as "part of the original plant imported in 1816 and probably one of the first imported species brought to this country." This recalls how Mr. Bateman first became interested in Orchids through seeing a plant of this species not many years after the above date. In a letter to Messrs. Veitch he thus describes the incident: "When at Oxford I stepped into a nursery situated where Keble College now stands and kept by the veteran Fairbairn, who had been gardener to Prince Leopold and Sir Joseph Banks. This sealed my fate. Presently Mr. Fairbairn drew my attention to a curious plant with a few leathery leaves and several stout roots feeling their way amongst a number of small pieces of wood to which it was expected they would become permanently attached. 'Here,' he said, 'is a piece of the famous Chinese airplant, Renanthera coccinea, which flowered under my care when gardener to H.R.H. Prince Leopold, at Bushey Park.' Of course, I fell in love at first sight, and as Mr. Fairbairn only asked a guinea for his plant it soon changed hands and travelled with me to Knypersley when the Christmas holidays began. I had caught my Orchid, but how to treat it I knew not." This was the beginning of the collection formed by Mr. Bateman, who subsequently assisted Mr. G. Ure Skinner in the introduction of many fine species, including Cattleya Skinneri, of which further particulars are included in this issue.



Henri Varerot 1963







Odm. Dryads February 1952



Oda. Henriette LeCoufle 'Java' AM/AOS



Madame Le Coufle 1955



Odtna. Moliere 'Polka'



Odtna. Boussloe 'Blanche' 2 Years out of flask