



# Manitoba Lily Connection

Manitoba Regional Lily Society Newsletter

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*Affiliated with the North American Lily Society*

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## President's Message

It is amazing how fast the years go by as time passes, but what a change from last year. As I look out the window, the whole yard is buried under a deep blanket of snow. What a pleasant change from last year when snow was late in coming; which resulted in many of us losing many of our perennials as well as many lily seedlings.

MRLS continues to function well as many of our members are always willing to give a hand where needed. This is evident from the activity when help is needed at seminars, shows and especially when we get ready for the bulb sales in the fall. A record number of our members enjoyed Frans Officer's presentation at our spring seminar. It was good to see new faces at that event. It is always a good way to socialize after a long winter, buy a few new bulbs and the food was excellent as usual.

The annual NALS meeting will be held in Hamilton Ontario, July 13-17, 2011. It looks like it will be a beautiful venue at the Royal Botanical Gardens. They have planned some fine tours of the Niagara area. Our own plans are coming together to host the 2012 NALS show in Winnipeg, July 10-14. The venue will be at the Polo Park Canad Inn, the same as 2005. Further details will be made available next year. This will give members a chance to meet many new lily friends from around the world.

We wound up the year with our second annual potluck supper and awards presentation. I was unable to attend but I am told that the food was great as usual. Many thanks to all who have worked hard this season to make our society one of the best in North America.

Keep up the good work.

Wishing you all a blessed Christmas and a great New Year.

John Rempel

***Happy Holidays from the Board of Directors***



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## FALL BULB SALES

### **Part 1 – Winnipeg by Ramona Crowther, Sale Committee Chair**

Starting in Winnipeg, the bulb sales were successful again this year. A great team of volunteers helped us set up the St James Civic Centre in record time and we got to enjoy a nice supper and some garden gossip. On sale day, all areas were so well run by the volunteers that there was nothing but smiles and happy customers buying bulbs. The committee cannot say a big enough Thank You to each volunteer who made this all happen.



### **Part 2 - Brandon by Deborah Petrie, Sale Coordinator**

The new venue at Central Community Centre was a great success! Customers and volunteers made many favorable comments and as a result, we have booked the same venue for next year's bulb sale. We finally have a home!



*Customers browse the bulb tables in Brandon.*

MRLS members participated in record numbers this year and volunteers from both **West-Man Gardeners Club** and **Brandon Horticultural Society** were there to lend a hand.

Overall sales were up due in part to a last minute order from Jefferies Nursery. My thanks go out to Wilbert and John for making that possible.

Thanks also to all our customers. We couldn't have done it without all of you.



### **Part 3 - Dauphin by B. J. Jackson, Sale Coordinator**

The Dauphin sale was absolutely amazing this year. Thanks once again to the **Dauphin Horticultural Society** for providing the volunteers and for their enthusiasm. A special thank you to Louise Fiel for doing a lot of the leg work for me in advance of the sale. Thanks, too, to the people of Dauphin and surrounding area for your support. Sales were up over past years and as 2011 will be our 10th anniversary at the Marketplace Mall, there will be special things going on there next fall. We look forward to seeing you all there!



#### **Final Note From Ramona:**

As many of our suppliers receive our newsletter, we also thank them for the great bulbs that we had to offer this year. It makes selling them really easy.

Personally, I also want to say a Big Thanks to each member of the Fall Bulb Sales Committee who share in making the sales so successful.

**Have a Happy Holiday Season from all the Bulb Sales' Committee Members**



*Volunteers Louise Fiel, Marilyn Pawlicki, Gladys Bloomquist And Deb Petrie at Dauphin*



*Nicole Brockie, volunteer and satisfied customer at Winnipeg !*

## Awards Evening and Pot Luck

By: *Deborah Petrie and B. J. Jackson*

What a difference a year makes! Organizers of the first event last year were a wee bit disappointed with member participation but 2010 was an entirely different story! Just about 40 members and friends attended this year's event at the Heritage-Victoria Community Centre in Winnipeg on October 17th. It was quite literally a 'smorgasbord' of food, friends (both old and new), conversation and lilies, of course.

Vice-president Deborah Petrie acted as Master of Ceremonies in the absence of President John Rempel. She made presentations to 2010 show winners from both the Martagon Show at the Assiniboine Park Conservatory as well as the 26th Annual Show at Kildonan Place. The presentations culminated with the presentation of the NALS Service Award to Marlene Puls for her years of dedicated service to the MRLS as a member and as Treasurer and Membership Secretary on the MRLS Board of Directors. Congratulations, Marlene, you certainly are deserving of the honor!

And the food. Oh yes, the food. What a feast. The tables were laden with many a savoury treat to suit all palates and showcase the creativity of our members culinary skills. More than one recipe was shared throughout the evening. We really will have to get bigger plates next year since there were so many tempting treats, I did not get to try everything I saw.

An additional treat (outside of the many desserts) was the availability of left over bulb sale lily bulbs for purchase at discounted prices for those in attendance. A long, late autumn ensured that all these new acquisitions were safely tucked into their new homes soon after. And one of our members brought surplus tender bulbs to share with anyone and everyone. Several people went home with them, too.



*Marlene Puls is presented the NALS Service Award for 2010 by Deborah Petrie*

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*Former Presidents Susan Leblanc and Jennifer Bishop along with Susan's mother, enjoy a chat.*

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*Rita Giesbrecht puts the finishing touches on the food table as Gerry Maurice and Len Giesbrecht start the line moving for the pot luck. What a feast!*



## Triumphs and Trials in Lily Breeding

*(Editor's Note: Following is the text of a presentation made by Wilbert Ronald to the North Star Lily Society early in November. Dr. Ronald has graciously provided it for MRLS members to enjoy!)*

The world of lily breeding has been marked by a number of significant events that opened doors to dramatic gains in lily breeding and strong interest in lilies as garden and commercial flower crops. We have heard stories about lily mania in the 16<sup>th</sup> and 17<sup>th</sup> century which likely traced to the early interspecific Asiatic hybrids, sometimes called *Lilium hollandicum*, with their wide color array and upfacing flower inflorescences. These hybrids, which have been further extended by breeders in the past century, formed the basis for much of the cut flower industry right up to the present. A second event of major significance happened about 1930 when *L. henryi* was crossed with the trumpet lilies from China giving the popular Aurelian lilies. Out of this work flowed the colorful Aurelian strains developed by Oregon Bulb Farms and such popular clones as Gold Eagle, White Henryi and Louise developed in Minnesota. While *L. henryi* is sometimes classed as closely related to the Asiatic division, the crossing pattern and later studies show it as more related to Chinese trumpets. These early hybrids, as were the interspecific hybrids in the martagon, such as *L. martagon* crossed to *L. hansonii*, are really crosses between fairly closely related species in one taxonomic group or section of the lilies. These interspecific hybrids in Aurelian and Martagon lilies as well as an extension of the Asiatic lilies by adding *L. cernuum* and other species marked the expansion of lily interest from 1930 to 1960.

The appearance of a new lily called Black Beauty in 1957, which the breeder Leslie Woodriff claimed to be a hybrid of *L. speciosum* crossed to *L. henryi* started an interest in wide crosses known as "interdivisional lily hybrids" which ignited an interest in lily hybridization which continues to push the frontiers of lily breeding. This intersectional hybrid cross of *L. speciosum* and *L. henryi* was not supposed to happen in the eyes of most lily scientists of the day. Woodriff's cross was eventually documented by chromosomal analysis and this strong and outstanding lily created a worldwide interest in wide crosses, tetraploidization and related studies. His accomplishment by conventional crossing and seed germination is a milestone in lily breeding and deserves all the credit it receives.

Woodriff's work has made interdivisional hybrids the most popular garden lilies in recent NALS popularity polls. Derivatives of Black Beauty and Morden introductions such as 'Northern Carillon' and 'Easter Morn' have been in the top ten of the recent popularity lists. With the development of these new lilies has come new terms such as interspecific and intersectional, both terms to describe the taxonomic relationship of the crosses, and terms such as interdivisional, Division 8 hybrids and Oriempets which are more horticultural terms. The term Oriempets indicates the lily is derived from the Oriental lily section (*Lilium auratum/speciosum* lilies) crossed with trumpet derivatives (Chinese trumpet and Aurelians). Gardeners have come to appreciate these intersectional lilies while also being faced with new terms such as LA hybrids, Asiapets, and Easterpets, all of which describe new interdivisional lily hybrids. Lily hybridization prior to 1970 was largely confined to crosses between related species and sub species (Intrasectional crosses). Since 1970 much of the lily breeding work has been to cross distant species in different sections of the genus (Intersectional crosses).

The scientific studies that led to recent breakthroughs in lily breeding came in the late 1960's and early 1970's. Before talking about these breakthroughs in pollen tube growth, embryo culture etc., I want to refer to one other seminal event, that of Comber's (1949) classification of the lily genus into related sections and subsections. Comber's classification was based on many morphological and physiological traits that linked related species. This classification has stood the test of time and apart from the realignment of *L. henryi* in with the Chinese trumpet group where its bulb form and breeding affinity lies, there have been few other major changes proposed and brought into cultivation. As I have said, Woodriff's Black Beauty lily raised all kinds of questions about wide crosses in lily hybrids. The sterility of B.B. certainly showed it was a wide cross and reinforced the difficulty of sterile F1 interspecific hybrids.

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In the 1960's an interest in pollen tube growth in the relatively long styles of lilies led to pioneering studies in Japan and at the University of Wisconsin. These studies on both self and cross pollinations opened the door to truly scientific lily crossing. For example breeders could know that the styles of *L. longiflorum* rejected the pollen of related Aurelian and Oriental pollens while in the reciprocal cross the *L. longiflorum* pollen grew happily down the styles of trumpet species and Aurelians. In cases where pollen tubes grow slowly but rather normal, the use of cut styles became an accepted way to aid the pollen tube in its path to fertilization. At the same time as these pollination studies there also developed a strong interest in the culture and rescue of small embryos from interspecific crosses. This work at the Scottish Horticultural Institute and University of Minnesota later followed by Morden Research Centre, Sun Valley Bulb Farm, Oregon Bulb Farms and in Holland in the 1970's opened up the path to the wide crosses we have become familiar with today.

The trials in lily hybridization that I refer to in my title have to do with the sterility of the hybrids in these wide crosses. This sterility, seen so evidently in the Black Beauty wide cross has to do not with pollen tube growth blockage but with actual pollen and egg cell inviability. The use of triploids and tetraploids has done much to restore the gamete viability. In fact with Black Beauty the use of tetraploids has helped breed numerous progeny and the sterility has largely been overcome by working at the tetraploid level. It is impossible to overstate the impact of polyploids on the world of interspecific lily breeding. This term polyploidization most often refers to tetraploids but also includes triploids which are very common place in wide crosses. Tetraploidization's effect in restoring chromosomal pairing and high fertility is seen in many wide cross hybrids from Black Beauty onward. Whether or not you are enthused about tetraploids as horticultural plants, those of us who breed lilies realize that the pioneer work of Emsweller, Freimann, and Greisbach is critical to restoring fertility and reaching the next generation with many of the widest interspecific crosses. Thus we have seen a progression in breeding from Woodriff's Black Beauty (1957), Aschers pollen tube study (1968), embryo culture, and tetraploidization (1970's) in breeding during the last 30 years of wide crosses.

Perhaps you are wondering why we are interested in wide species crosses especially the interdivisional lilies. To some they are a confusing mix that offer challenges to the show classification committee and even more perhaps to the lily registrar. My answer is that it is only by breeding that we can combine disease resistance, fragrance and hardiness of selected lilies into new types. For example we in the northern U.S. plains and Canadian prairies have a hard time growing Oriental lilies for more than a year or two. However the hybrid Orienpets do very well, outperforming both the Oriental and Trumpet parent. Easter lily x Trumpet hybrids can move the culture of Easter lily quality into lilies several zones colder than its normal range. Many of the interspecific hybrids have unusual disease and insect tolerance that make them exceptional garden lilies. Breeding for fragrance in the Asiatic lilies will likely come from interspecific hybrids with trumpets, Easter lily and Oriental lilies.

From late 1971 to mid 1974 I was able to study in the lab of Dr. Peter Ascher at the U of Minnesota. Ascher had completed his Ph.D. in Wisconsin on lily pollen tube growth in both interspecific and intraspecific crosses. When I arrived Julius Wadkamper had completed his Masters thesis on hybrids of Aurelian and Easter lilies. Some basic interspecific work with Easter lily and Aurelians had been started and the first Asiatic x *L. longiflorum* (LA group)/hybrids in the world had been obtained at the U. of Minnesota based on Ascher's earlier pollen tube studies. With a much wider species collection, Ascher and I were able to extend the pollen tube growth studies to give fuller information on the potential crossibility of many species. We soon found out that Chinese Trumpet species, particularly one clone known as 'Damson', was an excellent female parent in crosses to Orientals, Easter lily and Asiatic lilies. It produced large interspecific hybrid embryos which cultured well and grew quickly.

Let me now turn to specific work with lily crossing and make reference to work with the Black Beauty diploid clone which really started my interest to learn more about the limits of interspecific hybridization in lilies.

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Working together in Ascher's labs I was able to show that the diploid form of '**Black Beauty**' could produce a very few small embryos in crosses to both trumpet Aurelians and Oriental lilies. One such similar hybrid with 'White Henryi' is the new Northern Beauty introduced by the Morden Research Centre in the early 1990's. These findings encouraged me not to give up when sterility was seen in many wide cross hybrids.

Extending our work to the Orienpets at Morden Research Centre where I worked on lilies from 1974 to 1982 resulted in numerous Aurelian x Oriental lilies. 'Damson' x *L. speciosum rubrum* 'Tornado' produced the Starburst Sensation cultivar one of the best of the F1 Orienpets and winner of the best lily in show in the 1997 Boston show. One other F1 full sib was named Northern Magic. 'Starburst Sensation' soon showed unusual female fertility and was successfully crossed to both Aurelians and Oriental lilies. Northern Sensation and Northern Carillon are sister crosses of Starburst Sensation to the trumpet 'Moonlight'. They are strong hardy lilies in our cold climate but also do well as far south as Arkansas. Starburst Sensation and its derivatives, because of their good fertility, are being used around the world by breeders to develop newer Orienpets. The Orienpets with strong stems and high bud count often take top awards in lily shows.

Damson also proved a good parent in crossing to Easter lily and from this work has grown the Easterpet lilies. Two have been named, the first generation (F1), Easter Dawn and a backcross to Aurelians known as Easter Morn. Easter Morn is a remarkable garden lily in that it grows in gardens from Florida to the Canadian prairies. The Easterpets are worthy of additional work by lily breeders due to their fragrance, disease resistance, and vigour.

Finally, Damson crosses well with Asiatic lilies and has given rise to the 'Canadian Belles' series of lilies. Several have been named including the triploid 'Firey Belles' which is a semi fertile lily from a backcross to Asiatics. The Asiapets are good garden lilies albeit not as showy as the Orienpets. Very little fragrance comes through into these hybrids even though the Damson and other Aurelian parents are highly fragrant. The Canadian Belles are early flowering lilies that bloom midway between the Asiatic and Aurelian parents. Having Asiatics as a parent means they are exceptionally winter hardy lilies.

Our recent work with lilies has been directed at adding more color ranges into the mostly pink and white Morden lilies. We have crossed in some more colorful Griesbach lilies and have introduced 2 of the best of his yellow colored lilies as Northern Dazzle (R 76) and Northern Delight (R 276).

With each year we are seeing greater fertility in each of the 3 groups we have worked with as we see the effects of natural triploids. The fact that some of the hybrid lilies have moved to natural triploids has naturally benefited fertility. Easter Morn, Firey Belles and Northern Carillon all show a measure of female and/or male fertility. This has enabled us to make progress at combining the groups.

I want to talk a little about our latest work. Tetraploid strains of trumpets from Robert Griesbach's work have proven very fertile and useful in breeding. They have successfully crossed to Easter Morn and hybrids are quite fertile. They are also vigorous garden plants as the photos show. Some of the recent work I want to talk about includes crosses of Easter Morn x N. Dazzle (Orienpet). These crosses have bridged two of the main three groups that have occupied my interest. Easter Morn (Easterpet) x Firey Belles (Asiapet) has given a few progeny and this wide cross can, I believe, give fragrant Asiatic type lilies. It is a very interesting cross and if we can expand these crosses it will be very helpful for the coldest zones of lily culture. We are working on Orienpet x Asiapet and do not believe we have certain hybrids as yet, but I think it's just a question of time.

The path ahead will continue to stress wide crosses in lilies and restoration of fertility. I believe we will see further great improvements in disease resistance, hardiness of tender species and fragrance as we recombine the intersectional lily hybrids. The future is what we dream and then bring to pass by dedicated lily breeding.

Enjoy!

## **The Greying of Lily Societies and Garden Clubs**

### **“A call to service”**

*By: John Rempel*

Have you ever noticed that members of garden clubs, lily societies, etc. are mostly senior citizens? Canada is entering the time when BABY BOOMERS are retiring and many seniors will increasingly be unable to serve on committees. As I go to functions at various organizations, I am struck by the lack of young people present. I have spoken to various presidents of lily societies in Canada and all lament the fact that there are few younger people to take charge and carry on the work. MRLS is one of the larger lily societies in North America but we suffer from much of the same problems.

So what is my point? At our spring seminar we will need to elect 6 members to the board of directors as well as a new Vice President. This time only, there will be 3 positions for one year and 3 positions will serve the usual 2 year term. Three of the incumbents are able to serve one more term. I would like to see some new blood, young or middle aged to volunteer to run for these positions. The society needs your input to give on-going guidance and keep our society strong.

The nominating committee consisting of Ted Sobkowich, Jennifer Bishop and Nigel Strohman would love to hear from anyone who is willing to contribute to keeping MRLS the best lily society there is. You may also contact me and I will pass on your name.

The board of Directors and the Executive meet 4 times a year, once a quarter for about 2 hours, 10AM – Noon. We meet at Jeffries Nurseries where Wilbert has generously allowed us to use his board-room. Many people carpool to cut down on driving and expenses.

So, why not let your name stand to join the new team for 2011?

## **2012 NORTH AMERICAN LILY SOCIETY ANNUAL SHOW AND CONFERENCE CANAD INN POLO PARK, WINNIPEG, JULY 11-15 HOSTED BY THE MANITOBA REGIONAL LILY SOCIETY**

The Manitoba Regional Lily Society is pleased to announce that we will be hosting the 2012 North American Lily Society Annual Conference and Show. It will be held at the Canad Inn Polo Park in Winnipeg, Manitoba from Wednesday, July 11<sup>th</sup>, 2012 to Sunday, July 15<sup>th</sup>, 2012 inclusive.

A theme has not been decided on at this time. Our Meeting Co-Chairs are Fran Wershler and Ted Sobkowich, and our Show Chair is Sandy Venton. If you have any ideas for a theme, please contact any one of us. Fran may be reached at [fransays@mts.net](mailto:fransays@mts.net), Ted may be reached at [ts23@mts.net](mailto:ts23@mts.net), and Sandy may be reached at [felix1@mts.net](mailto:felix1@mts.net). We look forward to hearing from you.

We are planning several tours. The main tour will include Jeffries Nurseries in Portage la Prairie where Wilbert Ronald has been continuing his hybridizing efforts with orienpets, asiapets and other interspecific crosses and which will be our first stop, and then on to The Lily Nook in Neepawa where Barrie Strohman reigned as the “Lily King”. There will also be various self-guided tours of the gardens of the MRLS Executive and members for those who are interested in seeing what we can grow in our Zone 2b area.

We are very excited about hosting the 65<sup>th</sup> Annual Lily International Show and Convention, and hope to see everyone there!

## NOTICE

The Ontario Regional Lily Society and Royal Botanical Gardens invite you to **NALS 2011**, July 13 - 17 at the RBG in Hamilton ON. Saturday tours include Niagra Parks School of Horticulture, Niagra-on-the-Lake and Brian Bergman's fields. Sunday tour is to S-W Gardens, home of Peter Schieman and Sandra-Pat Willis. A pre-convention tour is also being offered – "Wine Tasting in the Niagara Peninsula". "Tourists" will visit a number of scenic and award-winning local wineries, and yes, tasting will be on the menu. For more information contact **Brian Bergman**, Show Chair, at [bgberg@rogers.com](mailto:bgberg@rogers.com).

## MRLS Membership Renewals Are Now Due

If you receive a renewal notice with this edition of the newsletter, your membership will expire at the end of December so it is time to renew.

We think we have finally worked out the expiry date problem for those who get their newsletter electronically. You should see your expiration date in the Subject Line of the e-mail from Nigel.

Please let us know if there is a problem with either method of delivery.

## OFFICERS AND DIRECTORS – 2010

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