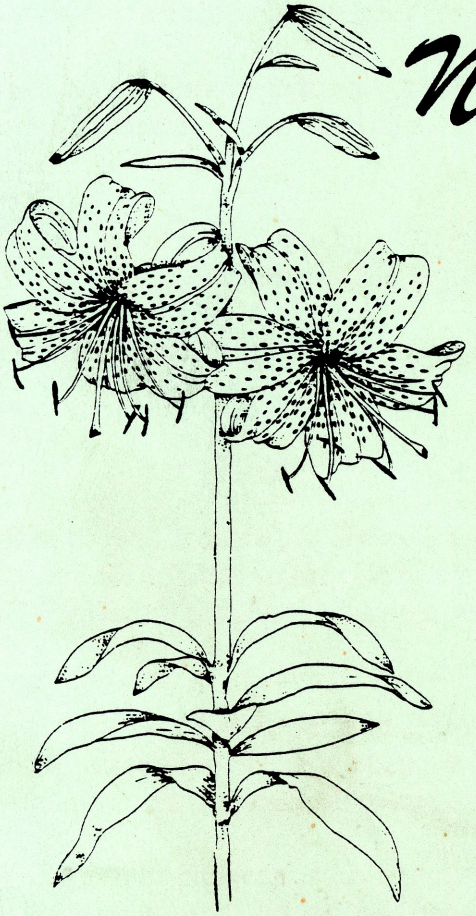
Ontario Regional Lily Society

NEWSLETTER

Affiliated with the North American Lily Society



Calendar of Events for 1996

- *NALS Lily Show, July 11-14 Wisconsin.*
- *ORLS Picnic, June 23, Oakville*
- *ORLS Lily Show, July 20-21, R.B.G.*
- *Bulb Sale/Auction, October 6, R.B.G.*

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Spring 1996

A Message From the President

Garry Snelling

Hello to all our members and a special welcome to our newest ones. I hope everyone has our Lily Show on their mind and is planning a summer outing to the Royal Botanical Gardens this July 20-21. If you've never taken in the show before it's quite a spectacle. Each year a dedicated group of Lily enthusiasts fills the large exhibit hall at the Gardens with a mass of bloom that rivals any floral show. There will be hundreds of cut stems of Lily species, asiatics, trumpets and orientals with an amazing variety of size, shape and colour. There is a decorative competition that attracts some of the best Ontario floral designers. Their fantastic creations will line the walls of the hall. As well there are the lily plantings at the R.B.G. which will be at their peak of colour. The society will be giving field tours of the beds on both Saturday and Sunday. There will be a seminar on growing and propogating lilies, as well on Sunday. Lillie Haworth will be giving a flower arranging demonstration on both days titled, "Designing with Lilies". We were lucky to obtain the services of such a highly rated floral designer who has such respect from her peers. To further entice members to come out we are sending along complementary passes for admission to the show. Once checking in at the Exhibit Hall your ticket entitles you to visit Hendrie gardens which are spectacular in themselves, but come to the O.R.L.S. show first or you will be charged regular admission to the R.B.G. See you there!

THE LILY CLINIC

Although spring has proven to be reluctant to join us this year there are signs that the weather is finally changing. Last
Saturday the temperature dropped to freezing abruptly ending the life of my tomato seedlings in the plastic greenhouse. This Saturday the weatherman predicts a high of 27 degrees Celsius. No one can say that gardening is boring.

I have received only one question for the clinic at this time and would urge people to put pen to paper whenever they come across a problem or discover something useful to gardeners.

104.1 Tom Gratrix is looking for pollen of *l. nepalense* and *l. japonicum.* If anyone has any to share write to Tom at Box 186, Coldwater, Ont. LOK 1E0.

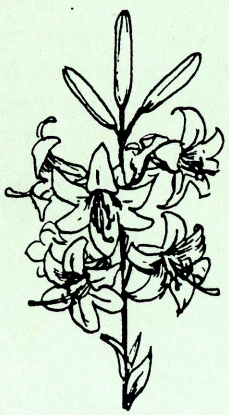
I also have two bits of information that may be of interest to some of the members.

During the winter I accompanied my neighbor to the Aylmer Flea Market where she hoped to find buttons to add to her collection. Instead she stumbled across an old volume of 'Lilies for Every Garden' by Isabella Preston, copyright 1947. The book cost me a Loonie and has proven an interesting read.

It is amazing how far we have come since the book was written; how few cultivars were available then. One item that caught my eye concerns the lily beetle and I thought I would let you see it: 'In the summer of 1945 specimens of this insect, Liloceris lilii, were sent to the Division of Entomology of the Dominion
Department of Agriculture at Ottawa, Canada for identification. They were found attacking *L. candidum* and *L. regale* in several gardens in the neighborhood of Montreal. It is closely allied to the asparagus beetle and is very destructive. It can be controlled by dusting the adults and larvae with a derris dust containing 75% Rotenone. This was the first occasion on which this species had been recorded in North America.'

My second piece of information concerns the cultivar *Casa Rosa.* It was thought to be unregistered but according to an article in the 1992 NALS Lily Yearbook written by Mr. Matsumoto of Dailchi Seed Co. Ltd. of Japan, *Casa Rosa* is registered under the name *'Roter Horn'* Supplement 9, page 25. It is known in Holland as *Casa Rosa.*

Do you have any questions or answers or information to share? Please send it to:



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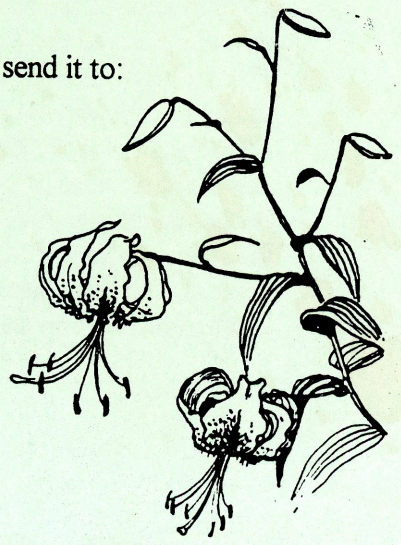


O.R.L.S 31st LILY SHOW

Every member will receive a poster advertising our upcoming show. We ask that you display it at your local garden center or some appropriate place where it might be appreciated. Please don't just file it away but make an effort on the society's behalf to let others know about this wonderful event.

Lillie Haworth could use some lily stems for her flower arranging demonstration on Saturday and Sunday and the 'Decorative' arrangers would appreciate stems as well. If you have some to spare please bring them in on Friday evening or early Saturday morning. Thanks!

First time exhibitors should be aware there is a major award in the Novice Class. Read your show schedule carefully and the article in this newsletter about stem preparation. Bring your lilies to the rear service entrance in the back of the R.B.G. where there will be a flurry of activity as people rush in their stems in all type of container and vehicle.

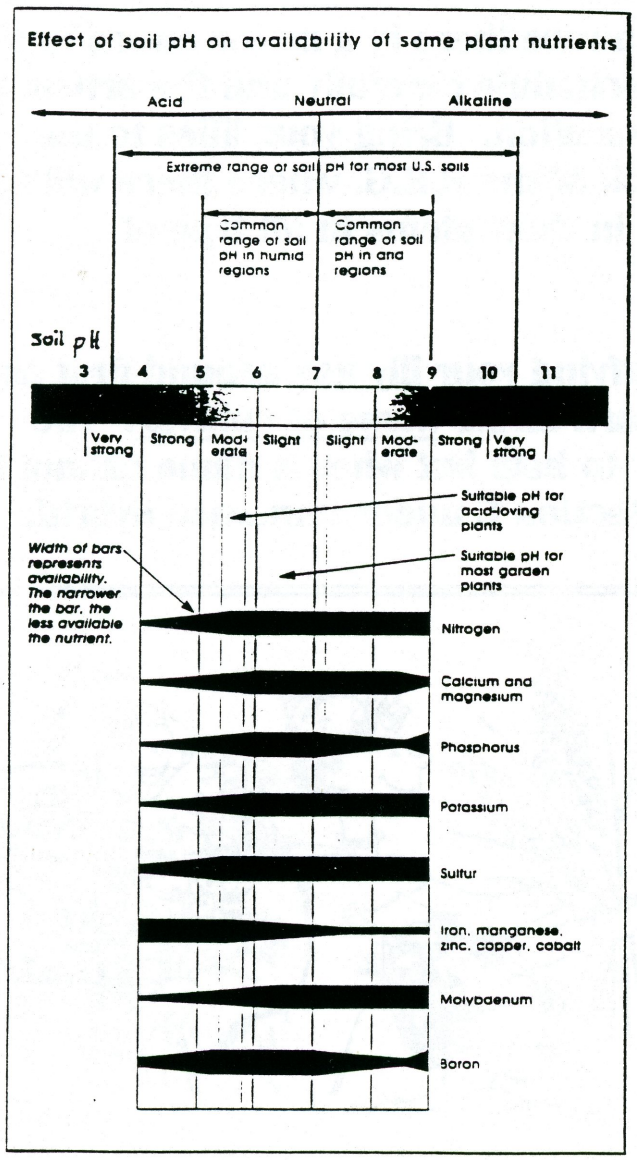
If you have had no luck in identifying your lily ask around first and if necessary leave a question mark under name of cultivar. The classification committee will try to help but when a name cannot be found your stem will be put in Section C under unnamed hybrid.

Soils, Mending and Amending (part two)

We have looked at altering or amending soil texture to improve drainage and nutrient content. The other important factor in growing good lilies is getting the pH right. As mentioned there is a high toleration on the part of a lot of lilies to grow in a variety of conditions as long as you offer good drainage. Problems begin when a gardener wants to grow lilies not ideally suited to his/her soil type and to bring them to a peak of show condition.

Soil pH is a logarithmic measure of the hydrogen ion concentrations in soil water (solution of water and dissolved substances). The composition of the soil water will be affected by both water and soil properties. Simply it is the measure of alkalinity and acidity on a scale of 0 to 14 with 7 being neutral, 0 extremely acidic and 14 extremely alkaline (basic). A logarithmic scale means that for example a reading of 4 is 10 times more acidic than a reading of 5 and a measure of 3 is 100 times more acidic than 5. Thus acidity and alkalinity is more extreme the further from 7.

The importance of soil pH is that it affects the availability of nutrients plants utilize for growth and health. Between pH 6 & 7 most nutrients are available and this range in the scale is usually considered neutral. This diagram from Fine Gardening illustrates nutrient availability in differing soil pH.



A number of important minerals become less available as acidity increases and in strong acid soils iron, zinc, copper, manganese and aluminum become too available and reach toxic levels. Importantly iron and phosphorus become less available in too alkaline soils.

A plant's individual character is an important factor when discussing pH. One cannot expect to grow all lilies to their potential in a neutral soil as species have developed preferences over centuries to a specific range of acidity or alkalinity and passed these on to their offspring. The intake of minerals by the plant is a complicated process involving cation and anion exchanges at the molecular level. Positive and negative charged ions are replaced or exchanged in the soil and by the roots.

Some lilies that were found growing in calcareous (limestone) soils of slight alkalinity pH 7-8 include; l. candidum, monadelphum, pyrenaicum, szovitsianum, hansonii, chalcedonicum, some martagons and henryi. It stands to reason the hybrids of these lilies will do best in an alkaline soil. I can attest to 'June Fragrance', several martagon hybrids and henryi variants doing extremely well in this type of soil but I've had no evidence of Aurelians thriving. L. henryi crossed with the acid loving l. speciosum to create 'Black Beauty' seems to do well in both soils.

Lilies native to acid (sandstone, granite) soils with a pH of 6-5 include; l. speciosum, auratum, japonicum, alexandrae, rubellum, superbum, canadense, and most 'American' species. Thus we find 'Orientals' and 'Americans', like the Bellingham hybrids prefer acid conditions.

A majority of the species were found growing in neutral soils or just slightly on the acid side. The large group of Asiatic and trumpet hybrids do well in slightly acid soil 6.5-7.

The question arises as what to do if we have a neutral or slightly alkaline soil and wish to grow 'Orientals'.
Perhaps the first course of action is to increase the organic content of your soil. Humus rich soil can help plants tolerate a wider range of pH than normal because of the presence and better availability of nutrients. Compost is slightly acidifying as is peat moss but should always be balanced for drainage which might mean raising a bed or adding sand. The type of organic material added to the soil can affect acidity. Muck from swamps, cottonseed meal, oak leaves, sawdust, ground bark, pine and spruce needles etc. are all acidifying. This must be added on a regular basis as the main determining factor in soil pH is the mineral content of your soil derived from weathered rock, be it limestone, dolomite, granite or sandstone etc. You might end up with an small island of acid soil surrounded by an ocean of soil almost 100 times more alkaline and be watering from a local well with a high lime content. Julius Wadekamper of Minnesota is growing Orientals in raised beds on a slope and using a 50% mix of peat and black loam (usually more acidic). He lines his beds with granite fieldstone (again an acidic material) and adds 10 lbs. ammonium sulphate and 10 lbs. slow release fertilizer to a 12 x 20 ft. bed on a yearly basis. He has felt quite gratified with his results in both size and strength of stems and survival rate for cold Minnesota winters.

Sulphur or one of it's compounds is often recommended as a quick fix for acidifying soils. To lower the pH number one degree the rate of application can vary from 1/2 to 1 lb. of sulphur per 100 sq. ft. of soil or 2-5 lb. of sulphate whether it's aluminum, iron (ferrous) or ammonium. Application variation occurs depending on the organic content of soil as more loam requires more sulphur (there will be less

leaching in an highly organic soil). It also depends on your current pH. As discussed the scale is logarithmic so the amount of sulpher required to change pH 7 to 6 is much less than that required to change 6 to 5. The disadvantage of using aluminum sulphate is aluminum can build up in the soil and too high a level can be toxic. Iron sulphate has an advantage in that it can often deepen pale green foliage quickly. Fertilizers are available with an acidifying element (usually a sulphate) in them and one can buy chelated iron as a powdered additive. Chelation is a natural process whereby organic matter makes trace elements more available to plants at the molecular level by bonding ions of metals to organic molecules. Thus 'chelated' iron makes nitrogen more readily available for the plant. I have had good success with this product as a quick fix but the product is somewhat expensive. Sulpher bought at your local farm supply is the most economical additive but one should be more cautious in it's application as it is more potent.
One might check with some local authority or do several soil tests per year.
I will add that 'organic' farmers feel an oversupply of sulphur can result in too many bacteria that feed on the fungi which are necessary for the decomposition of organic matter.
In 'Observations of a Lily Grower' Charles Robinson says, "Mineral fertilizers should only be applied to soils having a good moisture content. The nutrients contained in the fertilizer can then become dissolved in the water and thus be absorbed by the lily roots. It can be said that the amount of nutrients available to the plant is in direct proportion to the soil moisture content." Later he says, "A GIVEN DEGREE OF ACIDITY IS LESS HARMFUL IN MOIST THAN IN DRY SOILS, AND CONSIDERABLY LESS HARMFUL IN THE PRESENCE OF ORGANIC MATTER."

If one desires to raise the pH of his/her existing soil the usual practice is to add lime, either finely crushed or hydrated limestone. The former is cheaper and courser while the latter is powdered and more expensive but stronger requiring 3/4 the amount. Again application rates can vary. To raise pH one degree on sandy soil use 3 lbs. of limestone per 100 sq. ft. and for clay soil up to 12 lbs. Limestone has the advantage as mentioned before in improving soil texture in sandy and clay soils but will leach more readily in light soils with low organic content. Dolomitic lime includes a good portion of calcium magnesium carbonate and is used in some areas to raise pH and amend a magnesium deficiency.
Wood ash can have good results but be certain to spread it out as you should with limestone. I have personal experience with a bucket of fireplace ashes my wife dumped over some 'Fireking' asiatics. These lilies do well in my alkaline soul and this lot came up with an enormous inflorescence on thick stems but twisted as a licorice stick and each with at least one big crook.

I began this article not claiming to be a soil expert and still make no claims. I am a student with an interest developed out of necessity, buying a piece of land with poor fertility and very alkaline in nature. Perhaps foolishly, I wonder if I could grow those beautiful Orientals or Lilium canadense to perfection. I have also wondered about the effects of acid rain on the soil but have yet to look into it.....perhaps an article for someone else.

Garry Snelling