

Volume 13, Number 1







Thirteenth Annual Convention Burlington, Vermont May 31 - June 2, 1984

A publication of THE INTERNATIONAL LILAC SOCIETY Copyright 1984, Editor, I.L.S.

LILACS is the official publication of the *International Lilac Society*. Proceedings published annually. Research publications as received. THE PROCEEDINGS are benefits of membership.

Copies of this publication are available by writing to the International Lilac Society, c/o Fr. John L. Fiala, 7359 Branch Road, Medina, Ohio 44256. Enclose \$5.00 per copy requested.

President: Thomas N. Chieppo Box 220 East Burke, VT 05832

International Lilac Society, William A. Utley, Executive Vice President, Grape Hill Farm, 1232 Tyre Rd., Clyde, NY 14433

Secretary: Walter W. Oakes* Box 315, Rumford, Maine. 04276

Treasurer: Mrs. Marie Chaykowski 4041 Winchell Road, Mantua, Ohio. 44255

Editor: Robert B. Clark Cattle Landing Road, Meredith, N.H. 03253

MEMBERSHIP CLASSIFICATION	
Single annual \$10.00 (J	.S.
Family \$12.50	
Sustaining \$20.00	
Institutional/Commercial \$25.00	
Life \$150.00	

*Mail membership dues to I.L.S. Secretary.

INTERNATIONAL LILAC SOCIETY is a non-profit corporation comprised of individuals who share a particular interest, appreciation and fondness for lilacs. Through exchange of knowledge, experience and facts gained by members it is helping to promote, educate and broaden public understanding and awareness.

Published November 1984

J & J Printing, Inc., Laconia, N. H.

Contents

Contents 1
Editor's Note 1
Members and Guests Attending Thirteenth Annual Meeting 2
Dedication to Lourene Wishart
The Lilac - Taxonomically, Owen M. Rogers
The Chinese "Common" Lilac, Peter S. Green
Riding the Green Wave, Leonard Perry 11
Lilac Culture, Robert B. Clark 14
Lilacs at Vale of Aherlow 21
The Shelburne Museum Lilacs
Auction Committee Report, Hanssen Schenker
Financial Report, May 1984, Marie F. Chaykowski
Awards, May 1984 29

Editor's Note

Each year the Proceedings should provide a transcript of the Annual Meeting plus other noteworthy items of lilac investigation during the preceding year. This year, however, I found it impossible to record on tape and to transcribe an important paper delivered by Trustee Bill Heard and a panel discussion on breeding lilacs by Fr. Fiala, Dr. Rogers, Dr. Erickson and Jack Alexander. Nor shall I attempt to recount the several topics touched upon. Suffice to say that each member who attends these annual meetings receives boundless enrichment in lilac lore and in fellowship. Heretofore each editor has tried faithfully to bring to you the full text of papers presented before the Society. I regret the absence of two worthy papers presented at the Burlington meeting at a session dedicated to new member Sally Johnson of Essex, New York.

This Thirteenth Issue of Proceedings of the International Lilac Society is gratefully and lovingly dedicated to



Photo : Nebraska University Foundation, with permission

Lourene Bratt Wishart Co-founder and first Midwestern Vice President

Recipient of I.L.S. Honor and Achievement Award

Lourene Bratt Wishart

Lourene's maternal grandfather; William Roggenkamp, migrated to Nebraska in the middle of the nineteenth century from Berlin where he received his training in the nurseries of Ludwig Spaeth. He brought with him lilacs which he planted at the homestead at Bennet. Here granddaughter Lourene was born to the John P. Bratts on November 8, 1892. Paternal grandfather Colonel Bratt, U.S. Cavalry, wrote the history of his campaign on the Nebraska frontier. For her education Lourene was sent to New York to the Dana Hall School. In 1920 she married a promising young lawyer from Chadron, Nebraska, who practiced in Lincoln, the State Capital, and who was to rise to prominence in state and national Politics. In 1926 they built a Georgian House at 2140 Sheridan Boulevard which is surrounded by Lourene's garden of roses, lilacs, peonies, daylilies and vegetables. As a member of the Lincoln Garden Club she planted lilacs along the roadside to the airport in Lancaster County. Also she urged Lincoln's mayor in the 1930's to proclaim Lincoln the "Lilac City".

While in New York Lourene became an accredited flower show judge of the National Federation of State Garden Clubs. She had long promoted lilacs by exhibiting them in flower shows, traveling throughout the United States, Canada and Europe, visiting nurseries which feature lilacs: Brand Peony Farms, Faribault, Minnesota, the Sjulin nurseries at Hamburg, Iowa, and the Lemoine nursery at Nancy, France.

In 1962 her beloved "Jack" died. For the next 32 Years she has carried on valiantly the life they had shared for 42 years. Lourene supports the following Nebraska gardening features: Arbor Lodge, the J. Sterling Morton homestead at Nebraska City, the Gerald R. Ford birthplace at Omaha, the Sass Memorial garden at Offutt Airforce Base near Omaha, Maxwell Arboretum and Lied Performing Arts Center on the Nebraska University campus at Lincoln. More, she is a principle benefactor of the University Law Library. She still follows her favorite football team, the Nebraska "Cornhuskers" having attended all games both home and away for over fifty years. The 1982 Nebraska Football Guide was dedicated to her. Finally I need only mention that she is Nebraska's greatest booster, referring to her native state as the "Promised Land where the good life is."

The Lilac --- Taxonomically

By Owen M. Rogers, Durham, N.H.

Taxonomically the family Oleaceae is distinguished by its typically 2-merous flowers; 2 anthers, a 2-loculed superior ovary generally with 2 ovules per locule. Within the family *Jasminum* and two other genera are separated into the subfamily Jasminoideae while the other twenty or so genera are grouped in the subfamily Oleoideae. A number of these are tropical or not widely cultivated but everyone in the temperate zone would recognize names of the olive (*Olea*), the ash (*Fraxinus*), fringe tree (*Chionanthus*), fragrant olive (*Osmanthus*), privet (*Ligustrum*), forsythia (*Forsythia*), and the lilac (*Syringa*).

Syringa has a capsule for fruit which distinguishes it from everything else except *Forsythia* and a tropical genus. There are many characters to separate *Syringa* from those two genera so we can proceed directly to a consideration of the genus *Syringa*.

Syringa is a diverse genus and there have been a number of taxonomic and nomenclatural changes recently. Most of these changes have been long overdue and most, I am happy to say, have come about through activities of members of the International Lilac Society. In this paper I shall follow Pringle's classification and nomenclature (Lilac Newsletter, Vol. 9 (3) March 1983) because I believe it to be the most up-to-date, correct treatment.

Because of the range of distinct and separate forms within *Syringa* it is subdivided into subgenera and, within one subgenus, into series.



Entrance view of Vale of Aherlow showing young lilacs above hedge.

Subgenus Syringa

Series Pinnatifoliae Rehder S. pinnatifolia Hemsley

- Series Pubescentes (C.K. Schneider) Lingelsheim S. julianae C.K. Schneider S. meyeri C.K. Schneider S. microphylla Diels S. patula (Palibin) Nakai S. potaninii C.K. Schneider S. pubescens Turczaninow

Series Syringa

- S. afghanica C.K. Schneider S. laciniata Miller
- S. oblata Lindley
 - var. oblata
 - var. alba Rehder
 - var. dilatata (Nakai) Rehder
- S. vulgaris Linnaeus
- S. x chinensis Willdenow (pro sp.) (S. laciniata x S. vulgaris)
- S. x hyacinthiflora Rehder (S. oblata x S. vulgaris)
- S. x persica Linnaeus (pro sp.) (S. afganica x S. laciniata)

Series Villosae C.K. Schneider

- S. emodi Wallich ex Royle
- S. josikaea Jacquin f. ex Reichenbach

- S. *komarowii* C.K. Schneider S. *reflexa* C.K. Schneider S. *sweginzowii* Koehne & Lingelsheim S. *tigerstedtii* H. Smith
- S. tomentella Bureau & Franchet
- S. villosa Vahl S. wolfii C.K. Schneider
- S. yunnanensis Franchet S. x henryi C.K. Schneider (S. josikaea x S. villosa)
- S. x josiflexa Preston ex Pringle (S. josikaea x S. reflexa)

- S. x Jostnieza Preston ex Pringle (S. Jostnaea x S. reflexa) S. x nanceana McKelvey (S. x henryi x S. sweginzowii) S. x prestoniae McKelvey (S. reflexa x S. villosa) S. x swegiflexa Hesse ex Pringle (S. reflexa x S. sweginzowii)

Interseries hybrid

S. x diversifolia Rehder (S. pinnatifolia x S. oblata)

Subgenus ligustrina (Ruprecht) K. Koch

S. pekinensis Ruprecht

- S. reticulata (Blume) Hara
 - var. reticulata var. amurensis (Ruprecht) Pringle

The Subgenus Ligustrina is very different from the other sections of the genus. In fact it may be more closely related to *Ligustrum* than lilac. However, the dry capsule separates the species from privet and groups it with the lilacs. There are only two species in the subgenus, *S. pekinensis* and *S. reticulata* (formerly *S. amurensis*). Both have very short corolla tubes with exserted anthers and creamy white flowers. Both flower later than other lilacs and this together with their small tree shape makes them prime candidates for use in the landscape. *Syringa reticulata* is the species found in the trade but after the seed distribution of *S. pekinensis* in the Society a few years ago perhaps that will change. With its narrower leaves and softer veining, *S. pekinensis* gives a finer textured appearance compared to the broad, strongly veined leaves of *S. reticula.*

In Subgenus Syringa, the Series Pinnatifolia contains only one species, *S. pinnatifolia*. The name indicates the plant as having a pinnately compound leaf. It is not widely used in cultivation but has been part of the parentage of a curious hybrid, *S. x diversifolia*, which, to my knowledge, is the only interseries hybrid, the other parent being *S. oblata* from the Series Syringa. Neither the species nor the hybrid is widely cultivated but both are of great academic interest for taxonomic and genetic reasons.

The other Series in the Subgenus Syringa are all important and well known. The Series Villosae contains the so-called late blooming lilacs. They all have large, rugose leaves and open loose inflorescenes with a bloom time of from one to four weeks after *S. vulgaris.* All of the species have a terminal bud. This is an important taxonomic character because it will distinguish the Series Villosae from the Series Pubescentes and Syringa. Many of them will cross with one another and the species hybrids have become more important commercially than their species parents. Consider just *S.* x *prestoniae* and *S. josiflexa.* Cultivars such as 'Isabella', 'Coral', 'James Macfarlane' and 'Agnes Smith' attest to the popularity of the hybrids within this series.

The Series Pubescentes is a closely related group with small, pubescent leaves. Most have thin stems and a "willowy" habit. They include some of the most fragrant species in the genus. Also, many are, or can be kept, small (one is tempted to use the word dwarf but that's a relative assessment). There is a place for them in every sunny garden. No species hybrids are listed in this series but crosses can be made among many of them and perhaps this will be the "series" of the future.

I have left the Series Syringa till last because of its importance. It is distinguished from Pinnatifoliae and Villosae by the "double terminal" buds (actually a true terminal bud forms in summer but soon blasts and two auxilliary buds take over.) and from the Series

Pubescentes by their glabrous leaves. Of the four species, *S. afghanica* is not in cultivation and of interest only because of its supposed involvement as a parent of *S. x persica;* and *S. laciniata,* which is also not widely grown but involved in the parentage of *S. x chinensis.*

The two interspecific hybrids involving these species, $S. \times chinensis$ and S. persica are enigmas. Each has been around for many years and been widely accepted; however, neither has known parentage nor can be used as crosses because both are sterile.

That leaves *S. oblata* and *S. vulgaris.* But what a remainder! *S. oblata* blooms earlier and has color in the leaves both spring and fall while *S. vulgaris* has produced the myriad forms that we think of as "the lilac." The hybrid between them, *S. hyancinthiflora*, has also been very successful and, with its intermediate flowering has produced a continuous range of bloom from early *oblata* to late *vulgaris* time.

It is impossible to summarize the genus *Syringa* in a sentence or two. What I have tried to do is to show how the large number of forms can be classified into a relatively small and therefore manageable group of Series. Given this starting place a person can go on to specialize in one group, try crosses within groups or sample from all sections of the rich smorgasbord that is the genus *Syringa*.



Korean "Common" lilac at Birchwood

The Chinese "Common" Lilac

By Peter S. Green, Royal Botanical Gardens, Kew*

The closest relative to the common European lilac is undoubtedly the Chinese Syringa oblata Lindl., which is a valuable subject in one's garden because it normally flowers two or three weeks earlier than the more frequently grown European S. vulgaris and its many cultivars.

Most accounts of lilac species list three varieties within *S.* oblata: var. alba Hort. ex Rehd., var. dilatata (Nakai) Rehd. and var. giraldii (Lemoine) Rehd. (for example, Rehder, Manual of Cultivated Trees & Shrubs, ed. 2, 781, 1940; and Bean, Trees & Shrubs Hardy in the British Isles 4: 535, 1980), and for some years I have wondered whether var. giraldii might not be identical with the originally described McKelvey plant cultivated in Beijing (Peking), and other parts of northern China, or whether it truly constitutes a distinct entity. McKelvey, in her monograph The Lilac (1928) fails to give sufficient and convincing distinctions and a visit to Beijing and nearby Chengde at a time when this lilac was in flower has given me an opportunity to observe the plants grown there and compare them with those I have known in cultivation at Kew and the Arnold Arboretum.

As a result I have come to the conclusion that what has been called var. *giraldii* represents the type variety of the species. The nomenclatural consequence of this, in accordance with the International Code of Botanical Nomenclature, is that it becomes var. *oblata* (Pringle in Lilac Newsletter 9(3):3.Mar.1983).

Here perhaps I may explain and comment in passing that in accordance with the Code the variety which includes the nomenclatural type of the species is named by the repetition of the specific epithet, in this case Syringa oblata var. oblata. Fortunately this practice does not generally need to concern gardeners but its adoption is spreading slowly and examples are becoming more frequent. The reasoning behind the rule is based on the concept that a species must contain within itself all its constituent infraspecific entities, so that, if a variety is distinguished which differs in some way from the species as originally described, it automatically infers that the plant known up till then belongs to a separate variety, the type variety. In the past such type varieties were commonly called var. typica, var. genuina, etc., but by the present International Code of Botanical Nomenclature such names are no longer acceptable and the "type" of the species is automatically distinguished by repetition of the specific epithet - technically such names are referred to as autonyms (for a fuller explanation see, for example, the introduction to Bean (op. cit. 1:98. 1979)).

* Reprinted from "The Plantsman" VI; 12-13. June 1984, with kind permission of its editor.

While in China I was able to see *S. oblata* growing in the Beihai Park, Beijing, in a garden near the Great Wall and, extensively, in a plant nursery at the 18th century Summer Palace of the Qing Emperors at Chengde (Hebei Province). In China this lilac was perhaps more floriferous than when grown in Britain and it is undoubtedly a handsome plant. At Chengde I was particularly fortunate to see several hundred seedlings which had just attained flowering size planted in rows in a nursery associated with the Summer Palace. In this population a certain amount of variation in the intensity of the flower coloration was apparent, some being paler and others deeper, but the many plants all exhibited the typical lilac colour one associates with *S. oblata.*

In an adjacent section of this nursery at Chengde I noticed a lilac with white flowers and although being on my own and having no interpreter with me, I was unable to converse with the gardeners, by means of sign-language and sketches, I was able to confirm that this white plant needs to be propagated vegetatively while the other plants referred to above had been raised from seed. This white lilac was clearly *Syringa oblata* var. *alba* Hort. ex Rehd. (S. *oblata* var. *affinis* (L. Henry) Lingelsh.), a variety which was in cultivation in Britain at one time but may perhaps have been lost in the West, and in need of reintroduction. One suspects that it is entirely dependent on clonal reproduction and is perhaps a cultivar or, botanically, no more than a form.

Another variety of this species possessing considerable merit is also in cultivation, S. oblata var. dilatata (Nakai) Rehd., a native of Korea. This was brought to the West by E.H. Wilson in 1917 (Wilson 9232) and is still grown. This variety has recently been introduced again from South Korea through the Kalmthout Arboretum, Belgium, and seed was kindly sent to Kew where it flowered in the spring of 1983. Var. dilatata is clearly part of S. oblata but the plants whole character is less stiff, and in its growth is more spreading, its leaves have longer petioles and the inflorescences are looser and more open. In the autumn the leaves take on a bronze coloration (a colour also to be seen in the young leaves as they open in spring), and in this may provide an added bonus, when other related lilacs display no real autumnal tints.

Riding the Green Wave

By Leonard Perry, University of Vermont

The lilac is Nature's computer because it integrates all weather factors (temperature, precipitation, wind, sunshine, soil temperatures, etc.) with greater accuracy than any Weather Service prognostigator who publish weather data, compile charts, and prepare forecasts. The reason for this is that we are dealing with microclimate of small areas or particular layers of the atmosphere. Thus riding the green wave northward in springtime using the lilac as an indicator is my topic today.

The science of periodic biological events in the animal and plant worlds influenced by climate and weather is called *phenology*, the the science of appearances: bird migration, hibernation of certain animals, sprouting and flowering of seeds and plants in springtime, maturation of fruits and senescence of vegetation in fall, etc.

The term phenology was coined by Charles Murren, a Belgian horticulturist in 1853 and he is thus known as the father of phenology. However the study of phenology events goes back at least to Linnaeus who in 1751 outlined methods of compiling annual plant calenders of leaf unfolding, flowering, fruiting and leaf fall together with climatology observations to show how regions differ.

Our own backyards actually are excellent laboratories for experimentations. Warren Schultz in "Organic Gardening" (April 1982) listed his correlations for planting: when the crocus blooms it is time to sow pepper and eggplant indoors; daffodil bloom signals tomatoes, cabbage and lettuce; tulip means time for corn; creeping phlox the time for cucumbers and squash indoors, plant lettuce and early cabbage outdoors; lily-of-the-valley set tomatoes out; iris set out peppers, cucumbers and eggplant; peonies plant melons; foxglove signal late cabbage, cauliflower.

Comercially, Montana farmers watch the lilac because ten days later the alfalfa weevil appears. By making the first cutting within ten days they avoid this pest problem. In North Carolina growers await dogwood full bloom before planting cabbages to avoid cabbage maggot damage. On Long Island county agents warn farmers to watch for cabbage maggots when forsythia is in full bloom, whereas in Massachusettes cabbage maggot eggs coincides with full-pink stage of McIntosh apple blossons.

At Purdue University Professor Blair correlated first bloom date of seven perennials with weather data to forecast yields of corn, wheat and soybeans. For instance, using big bluestem grass as an indicator he found at Tippecanoe County, Indiana, that soybean yield could be predicted with 80 percent accuracy as early as six months before official yield estimates; corn with 71 percent accuracy.

Using plant indicators is not new. American Indians taught early settlers to plant corn when leaves of the white oak reached the size of a mouse's ear. Old farmers used verse to remind themselves at planting season: On St. Valentine's Day beans should be in the clay; when elm leaves are big as a farden it's time to plant kidney beans in the garden; when dogwood flowers appear frost will not again be here; etc.

Phenology networks have been organized for 100 years in Germany, whereas data have been collected in several states for varying periods for over 100 years. Professor A.D. Hopkins formulated a bioclimatic law: other conditions being equal, the south to north progression of spring phenophases in the temperate zone of North America is delayed by 4 days for each degree of latitude northward, for each 5 degrees of longitude eastward, and for each 400 foot in elevation.

Phenology merges the sciences of biology and meterology. It is practiced throughout the world often subsidized by governments. Phenological observations supplement weather observations. Networks frequently are densely manned: in Germany before 1939 ten thousand cooperators, mostly volunteer, covered the countryside at the rate of one per 20 sq. mi.

At the University of Vermont Professor Hopp pioneered phenological studies using Syringa chinensis f. Saugeana based upon four easily observed stages of development. Stage 1 comes when the earliest leaf buds unfold. stage 2 occurs when the earliest flower buds open. Stage 3 is full bloom when all florets are open. Stage 4 arrives when blossoms are blowsy and browning. According to Dr. Hopp's observations, cool season crops such as lettuce, root crops and peas should be sown during the lilac's stage 1. Beans, cucumbers and other tender crops should be planted during stage 3. Home gardeners should not however expect to sow seeds with total safety from frost damage on the basis of one-time observation, since a heavy frost can sometimes occur after a full-bloom stage of the dark Rouen lilac which is not native to America. This lilac was chosen because of its adaptation to a widespread region of North America. It has few diseases and insect problems, and also had easily observed blooming stages.

Selected Bibliography

Anderson, Kit, Is the lilac a better tipster? Gardens For All News 7 (4): Apr. 1984

Anonymous, Phenology and the backyard garden. Horticulture. Mar. 1983

(Caprio, J.M.) Instructions for phenology observations. Montana Agricultural Experiment Station Bulletin 607. Sept. 1966.

(Caprio, J.M.) Pattern of plant development in the western United States. Montana Agricultural Experiment Station Circular 250. Sept. 1970

Dube, P.A., L.P. Perry and M.I. Vittum, Instructions for phenological observations: Lilac and honeysuckle. Vermont Agricultural Experiment Station and Laval University Bulletin 692. June 1984.

Hopp, R.J. et al, Regional phenological studies with Persian lilac (sic). New York Food and Life Science Bulletin 17. June 1972.

Hopp, R.J. (editor) Phenology, an aid to agricultural technology. Vermont Agricultural Experiment Station Bulletin 684. Aug. 1978.



Pres. Tom Chieppo



Lumley Walk Plaque

LILAC CULTURE

By Robert B. Clark

Lilacs are easy to grow, especially the French hybrids. They grow almost in spite of the gardener. In fact, they can be neglected; even abandoned and still bloom. However, lilacs respond, as do most plants to *tender loving care* and to seasonal attention. Amy Lowell's lilacs are everywhere, in New England, that is, not alone because they are so greatly admired but because they demand so little. They do however, respond to full sun, fertile well-drained soils, frequent rains and to annual applications of fertilizer in moderation.

The lilac belt extends throughout the north temperate zone in North America between latitudes 38°N to 50°N and at altitudes from sea level to about 3500 feet. They may be grown successfully beyond this range provided moisture conditions can be modified to suit their requirements.

Botanically lilacs (*Syringa* species) belong to the olive family, including golden bells (*Forsythia*), privet (*Lingustrum*), fringe-trees (*Chionanthus*) and ashes (*Fraxinus*), among others. They themselves are subdivided among true lilacs and tree lilacs, the former being again divided into the common lilacs and their kin and the late lilacs.

All lilacs are hardy, being shrubs or small trees with opposite leaves and flowers borne on well situated branchlets of the previous year, that is, blooming in springtime on old wood. In the common lilac four basic colors are recognized by poet and botanist alike -"false blue, white, purple, (and)... lilac". During the past onehundred years more or less these colors have been extended or blended in the so-called French hybrids so that they are difficult both to describe and to classify. Petals too have been modified to various forms of doubling the basic number four. Fragrance sometimes has been lost as blooms have been improved.

Five Ways to Obtain Lilacs

You can bring lilacs into your garden in five different ways: as suckers or off-shoots, as rooted cuttings, as container grown plants, as balled-and-burlaped specimens, and as bare-rooted shrubs. My purpose is to tell you how to provide them with *tender*, *loving care* until they reward you with their colorful bloom.

(1) Off-shoots or suckers

The simplest way to acquire true-to-name lilacs is to dig up suckers from the base of an established own-root plant. This process is called propagation by division because it involves separating a rooted shoot from the parent plant by simply cutting a

segment from it. The best tool to use is a sharp spade, sharp enough to sever the shoot without injuring the parent plant. For small suckers, a pocket knife will also serve the purpose. This technique produces a new plant which must be nurtured in a nursery row for a few years before being set out in a permanent location.

(2) Rooted cuttings

Freshly rooted cuttings are by nature tiny and in need of nursery care from the outset. They will come in a prepared potting soil, nowadays often sterile, therefore requiring regular feeding by liquid fertilizer in addition to normal watering. When the young plant shows signs of vigor, such as bright green foliage and a sturdy shoot, you will want to line it out into the nursery row. You are confronted with the task of weaning the plant away from the unnatural potting soil and getting it established in garden soil. Take clean "kitty litter" and mix it with equal parts of garden soil for the backfill in planting. The transition will better be made in this way than in trying to get new roots into garden soil directly, for the roots resist this stubbornly. Alternatively, you may wish to grow your cuttings in pots instead of lining them out. When you repot them into largersized pots, use a mixture of soil and "kitty litter" so that the roots will grow out of the artificial medium.

(3) Container-grown lilacs

Nurserymen often grow lilacs in gallons or larger-sized containers. When you buy them they are ready for planting in their permanent location, but, since they may still be in an artificial growing medium which requires liquid feeding, you must wean them away to grow in soil, just as in repotting procedure (see above). Another thing to look for is the condition of the roots themselves. Container grown roots grow in circles at the bottom of the can and should be freed from this habit by spreading them out lest they continue to grow in such a circular fashion and become a girdling factor which can eventually cause the death of the plant.

(4) Balled and burlaped lilacs

B & B lilacs are dug from the nursery row with a ball of soil wrapped in "burlap" or plastic mesh. Such plants are ready for permanent planting. Handle gently by the ball, not the stem, so that the soil ball remains intact, and the feeder roots undamaged. Place the ball in the prepared hole and remove, or at least loosen, the burlap, so that the roots may more easily grow into the surrounding soil. Backfill soil should be fertile and free of debris and roots. Tamp it firmly about the ball using your heel or the D-handle of spade or shovel. Some gardeners prefer to fill the hole with water before setting the lilac in place; others add water after the plant is firmly in place. Both are acceptable practices. The main thing is to avoid air pockets about the roots.

(5) Bare-rooted lilacs

Field-grown lilacs handled in quantity are usually shipped bareroot and dormant, that is, without leaves. Also, they are called cold storage plants for having spent the winter in temperature-controlled sheds and shipped at an ideal time for spring planting. Unpack as soon as they arrive, and soak the roots overnight. Cut back the tops to about a foot and line out in the nursery for a year or two before permanent planting.

Selecting the site: nursery versus permanent location

A small lilac needs careful attention especially with respect to its water requirements, larger lilacs need moisture too, but their needs are not so easily overlooked. Therefore small plants are best kept in nursery rows where they can be monitored more closely. Small plants will not withstand competition from overpowering trees or even vigorous rooted grasses and weeds, neither will they tolerate blistering sunshine the first few days after they are set out, nor strong concentrations of chemical fertilizers at their roots. *Tender loving care* (mentioned in the opening paragraph) now needs to be defined. Imagine, if you will, what type of environment the yet tender young lilac plant requires for survival: light, warmth, nutrients and water. Provide these as best you can *in moderation*.

Consider next what your garden affords or how it can accomodate your new lilac. Of prime importance is exposure: does the garden have an opening where the sunshine reaches the ground much of the day? Lilacs require full exposure to sun in order that they may set flower buds for the following spring. In that opening allow adequate space for the lilacs to spread their canes. The "French hybrids" usually spread as wide as their height, which is from eight to twelve feet. Their planting distance should equal their spread plus a couple of feet to allow good air circulation as well as to allow walking between plants. Secondly, choose a spot which is well drained since lilac roots cannot cope with soggy soils. If your garden soil is poorly drained, construct raised beds, outlined by railroad ties or weathered rocks, filling the bed with friable fertile garden soil. Closely linked to drainage is the nature of the soil itself. Cultivated lilacs grow well in aerated fertile soils which are buffered with organic matter, chemical reaction seems not to matter, however, plant growth is usually promoted in circumneutral soils. (pH 7.0, or from 5.5 to 7.5).

Tips for helping you decide where to plant your lilac:

Drive a stake or crowbar or even a shovel into the ground where you think the lilac would look best, then stand back at various vantage points, including principal windows, and imagine the lilac as full grown and in full bloom. Seldom do you find that

your first attempt will be the precise location, that's why you should take the trouble to go through these maneuvers. It might even be better to place the stake in position the day you first consider moving the lilac, then you can take time to decide whether you actually like the spot you have selected for your special lilac.

Planting (including transplanting)

Having decided upon a suitable site for the new plant and having brought together the necessary tools and ingredients, you are faced with the actual mechanics of planting. Whether or not you elect to plant the lilac in the ground or in a raised bed, you must dig a hole. The hole's dimensions vary according to the size of the root system or ball, its depth upon the ball's height. The object is to have the plant at or about the same depth that it grew in the nursery, even for grafted lilacs. The hole should be sufficiently wide to accomodate your heel or the D-handle of the shovel so that you can tamp the backfill firmly about the root ball. There are two techniques regarding watering the newly set plant. Some gardeners prefer to puddle it in by make a slurry in the hole before setting the plant in place; others, usually with nursery training and who wear work boots, set the plant, being careful to orient it to best advantage, and tamp dry soil in place in such a manner that no air pockets are left, and only then do they bring out the hose to saturate the soil leaving a saucer-shaped berm to hold enough water for the initial watering. Supplemental irrigation could include a starter solution which is highly concentrated crystalline nutrients dissolved in usually a gallon of water. The newly planted lilac bears watching during the first season in place to check against too intense sunlight, not enough, (or even too much) water, etc.

When you decide to move an established lilac into a new location in your garden, or from a nursery row into its permanent site, you are faced with the problem of digging the plant and removing it. In order to reduce the exposure of roots to air during the operation, first open the hole in the proposed site and have suitable backfill and water standing by. Before digging the lilac, study it for best aspect and tie a plastic ribbon onto a convenient branch as a marker. Tie up the several canes to make it easier for digging and to avoid breakage. Ring the soil with a spade thrust to its depth to establish the size of the root ball. You will also discover where rocks and roots are located. Try to pry loose any rocks without breaking the ball or injuring the precious roots, soon you will succeed in prying loose the entire plant. If it is not too large for a wheelbarrow or cart, you may be able to lift it to the new site without bailing it or otherwise wrapping the roots. Having arrived at the chosen site, find the marker ribbon or tag and orient the root

ball so that the lilac faces its most advantageous prospect. Ease the plant into place and proceed as above (planting).

Watering

All living things need water, some more than others. At certain times every creature receives water in abundance. The following two paragraphs describe how to assuage such wants according to the season and relative conditions.

(1) Post-planting

Once the lilac is in place the first choice is to dowse the soil with water, often a bucketful, if lugged, or letting the hose run until the soil is saturated. Subsequent waterings depend upon the weather and the plant's need for a drink. If post-planting weather is hot and dry, the gardener should not hesitate to supply another dose as often as needed. Regular amounts at stated intervals is NOT the rule; however, sufficient amounts at frequent intervals is only common sense. Keep in mind that overwatering can be just as harmful as inadequate watering. *Plants can drown*.

(2) Droughts

During drought periods watering is a must if you wish to carry the plant through such crises. Once established the lilac is able to cope with dry spells, especially so if mulch is applied during the growing season. The sign to watch for in water deficiency is the attitude of the leaves, wilting leaves indicate the plant needs water. Folded leaves (folding like the pages of a book) also are stress signals, nevertheless in late summer the lilac is able to withstand drought because of its "dormant" state.

Fertilizer and lime

Lilacs are reputed to be heavy feeders, that is, they respond vigorously to regular and liberal amounts (one to two handfuls) of 5-10-5 granular fertilizer (soluble materials are too quickly leached and not then available to the plant over as long a growing period as granules). Apply chemical fertilizers in late winter before growth has begun. Broadcast it directly on top of the soil, distributing it evenly around the root zone. You may scratch it in or leave it for the rain to dissolve naturally. Slow-release or organic fertilizers may be applied at any season. Also lilacs benefit from mulches, if your garden provides organic materials. Mulches regulate soil moisture, not winter soil temperatures. The dressing of soils with dolomitic or pulverized limestone (available at garden centers) is beneficial in regions of high acidity (pH 3.5 to 5.5) DO NOT use slaked or masons' lime which is *caustic to living roots*.

Pruning and winter care

Any warm day in late winter is a good time to inspect your lilacs with an eye for improving flowering quality. At that time you can see the naked branches and judge the quality of wood. Eliminate twiggy growth which shows progressively shorter shoots, fewer and smaller flower buds. Optimum growth for the common lilac is to have pencil-like shoots with a pair of plump terminal buds. Once lilacs become about twenty years old they begin to decline in quality of flower production. The best blooms are borne on vigorous young wood, therefore you should strive to keep new wood constantly developing. This is best done by regular pruning after the shrubs have reached eight feet in height. To restore your lilac's capacity to produce quality bloom you must reduce the number of growing points (overwintering buds) thus directing ascending nutrients into fewer buds and consequently stronger growth. In the process you will sacrifice a goodly number of flower buds, but the ultimate effect is better flowering production another year. Four "rules" are all you need:

(1) Remove dead or broken canes or branches, obviously.

(2) Eliminate all weak or suppressed branches. Trace these branches back to a strong shoot (sucker) and with a single cut take out the entire unproductive growth. You can do this anytime during the dormant season, the optimal time, because at this season alone you can see what you are doing. Don't wait until after blooms are spent, the usually suggested time, lest you defer pruning indefinitely.

(3) So that you can see, admire, even caress your lilac blooms, cut back your skyrocketing canes to breast height or even to a few inches above the ground. Vigorous roots will soon produce robust shoots, and you will enjoy your lilac blooms in a year or two once again.

(4) Cut to the ground (or dig out entirely) surplus suckers.

Uncommon conditions and how to correct them 1. Non-flowering or sparse blooming

Lilacs which produce few flowers in succeeding years or cease to bloom altogether are under stress from neighboring trees, either by overpowering shade or from competing roots. Plants increase in mass each year thereby gradually exerting profound changes in environment. Either cut off offending branches and/or roots, or move the lilac.

High nitrogen fertilizers inhibit flower bud formation. Lawn fer-

tilizers should not be used for lilacs. Superphos (0-20-0) will counteract such imbalances.

2. Wilted or pale green foliage

Water stress induced by competition from neighboring tree roots or by drought. Supply water as needed.

3. Deformed leaves

Usually the result of nutrient deficiency or by pollutants. Seek advice from your County Agricultural Agent.

4. Roughened or grayish twigs or branchlets

Scale in variety (usually oystershell). In late winter choose a calm morning when temperatures hover around 60°F of such a day as the temperature is forecast NOT to go below freezing that night, and apply a superior grade oil. This is the best control especially if your garden contains euonymus and rosaceous plants. Alternatively in early summer you may spray with Sevin to control the crawling larvae which you must watch for and repeat at ten day intervals.

5. Frass (sawdust-like castings)

Borer. You will first notice frass clinging to twigs or lying in tiny mounds on the ground near the stem. Look for tiny holes up and down the main stalk or cane. Use a pliable wire to probe the tunnels, then apply a few drops of Malathion into the hole and seal with glazing compound or a cud of chewing gum.

6. Stunted growth (witches' broom)

A virus disease which is best controlled by eliminating effected canes.

7. Wilting shoots at blooming time

Bacterial blight. Cut off branchlets well back into healthy wood, dipping shears into household bleach (1:3 pts. water) between cuts. Use liquid fertilizer to stimulate new growth.

8. Gray foliage

Powdery mildew following humid or wet weather, usually in late summer. You cannot anticipate such attacks, which are not serious to health of plant, just unsightly.

Lilacs at Vale of Aherlow

On Saturday afternoon the Society visited Vale of Aherlow, the mountain home of our president, Thomas and Alice Chieppo, at East Burke, Vermont. Owing to hospital confinement Alice was unable to serve as hostess. In her place son John catered a delicious picnic lunch for guests who gathered on the lawn enjoying food, fellowship, the superb view of Burke Mountain and the lilacs at the edge of the greensward set off by spruce, fir and pines. Only the early hybrid lilacs were in bloom because of the late season and the high elevation.

First plantings were made in 1963 mainly of Lemoine hybrids. On the lawn above the pond a boulder bears a plaque to the memory of Professor Albert E. Lumley of Amherst College who was Tom's mentor and whose love of lilacs inspired him to plant this collection. The idea of displaying lilacs along 20-foot wide pathways was taken directly from Al and Buddie Lumley's Lilacland plantings, except on a grander scale, where in another ten years the whole hillside of lilacs will provide a wondrous display in late May or early June. Even today the collection has the aspect of a syringetum with other lilac species and their cultivars being added every year. Memorial bays consisting of personal lilacs commemorate Phil Hodgdon and Raymond Baker. The Vale of Aherlow lilac collection each year becomes a living memorial to notable contributors to lilacdom.

Lilacs at Vale of Aherlow, East Burke, Vermont, 1984 EARLY

oblata 'Cheyenne' var. dilatata x hyacinthiflora Assessippi Blue Hyacinth Buffon Catinat Clarkes Giant Doctor Chadwick Esther Staley

Fraser

Jewel

Lamartine

Gertrude Leslie

Montesquieu Nokomis Pocahontas Scotia Sister Justena Swarthmore Sunset Tom Taylor Vauban White Hyacinth

SEASON

rhodopea

vulgaris

- f. alba
- f. purpurea "French Purple"

f. violacea Adelaide Dunbar Aline Mocqueris Alphonse Lavallee A.M. Brand Ami Schott Anne Shiach Belle de Nancy **Big Blue** Bleuatre Blue Delft Capitaine Baltet Capitaine Perrault Caroline Mae Nelson Charles Joly Charles Nordine Charles X Charm Chiffon Chris Clara Colmariensis Condorcet Congo Crepuscule Cynthia Daphne Pink Decaisne De Miribel Descanso Giant Diderot D. Nehru Duc de Massa Edith Cavell Edmond Boissier Edward J. Gardner Emile Lemoine

Erzerhog Johann Etna Etoile de Mai Firmament Frank Klager Geheimrat Singelmann General Pershing General Sheridan General Sherman Georges Bellair Georges Claude Gloire d'Aalsmeer Glory Hallelujah Helen Agathe Keesen Helen Schloen Henri Martin Henri Robert Hippolyte Maringer Hugo de Vries Hugo Koster Hugo Mayer India Jan van Tol Jean Mace Jules Ferry Jules Simon Katherine Havemeyer Kosmos Krassavitsa Moskvy Lavender Lace Lavender Lady Lavoisier Le Printemps Leon Gambetta

Lewis Maddox Macrostachya Marechal Foch Marechal Lannes Marie Finon Marie Legraye Messena Maurice Barres Maud Notcutt Maximowicz May Day Mechta Michel Buchner Miss Ellen Willmott Mme. Antoine Buchner Mme. Casimir Perier Mme. Charles Souchet Mme. Florent Stepman Mme. F. Morel Monge Mons. Maxime Cornu Montaigne Mont Blanc Monument Mood Indigo Mount Baker Mrs. Calvin Coolidge Mrs. W.E. Marshall Nadezhda Night Nike Oakes Double White Ogny Dombassa Olivier de Serres Partizanka Pat Pesata Paul Deschanel Paul Thirion Pink Cloud Pink Fawn Pink Lace x chinensis f. Saugeana

Pink Spray Pol Robeson President Carnot President Fallieres President Grevy President Lincoln President Loubet President Poincare President Roosevelt Primrose Prince of Wales Priscilla Professor E.H. Wilson Prophesy Reaumur Ruhm von Horstenstein Saint Joan Sarah Sands Sass seedling Saturnale Sensation Snow Shower Souvenir d'Alice Harding Sovietskaya Arktika Spring Song Sweet Charity Thunberg Todmorden Vestale Victor Lemoine Violetta Virginia Becker Viviand-Morel Volcan Waldeck-Rousseau White Swan Wittbrod variegated W.T. Lee Zulu Baker seedlings (as "unknown")

LITTLELEAF LILACS Julianae "Hers variety" laciniata Meyeri 'Palibin' microphylla "Daphne Lilac" patula 'Miss Kim' x Skinneri

LATE

Josikaea x josiflexa Enid Royalty Jesse Hepler UNH "green" x Henryi 'Summer White' x Nanceiana 'Floreal' Rutilant Komarowii reflexa x Prestoniae Agnes Smith Hiawatha James Macfarlane Maybelle Farnum Nerissa Olivia

Romeo Tigerstedtii Wolfii ''argentea''

unclassified: Dancing Druid

TREE reticulata

The Shelburne Museum Lilacs

Friday June first was a rare day, sunny, breezy and warm. You couldn't choose a better day to visit the spacious grounds of the Shelburne Museum with its lilacs and pruned maples which constituted the landscape plantings. Some forty nineteenth-century buildings in a parklike setting housed early American folk art and crafts. The Shelburne Museum represents the lifetime hobby of Electra Havemeyer (Mrs. J. Watson) Webb who as early as 1913 began to see the value of preserving specimens of early American craftsmanship and ingenuity. The Museum itself was established in 1947 by Mr. and Mrs. Webb and upon their deaths in 1960 devolved to their son Watson who directed its development until his retirement in 1977. It is now operated as a non-profit educational institution by a board of trustees assisted by a professional staff.

Our visit focussed on the large collection of mostly Havemeyer and Lemoine hybrid lilacs (Electra was a niece of Theodore A. Havemeyer, and is commemorated by the single reddish 'Mrs. Watson Webb'). This collection is planted on the lawn of the Greek revival memorial house containing furnishings and art from the Webb's New York apartment. The lilacs were in excellent condition, many in full bloom. The plants were just over eye-height. Outstanding was Skinner's early hybrid 'Pocahontas' which was covered with purplish flowers over a shrub ten feet in spread. Then throughout the village common or old-fashioned lilacs were planted and in bloom during our visit.



Gertrude Hodgdon

Auction Committee Report

One hundred forty-four lilacs and lilac related items were donated by Agriculture Canada, Ottawa: Royal Botanical Gardnes, Hamilton, Ont.; Holden Arboretun, Mentor, OH; Bill Horman, Detroit; Gertrude Hodgdon, Randolph Center, VT; Bill Heard, Des Moines; Fr. John Fiala, Mentor, OH; Dr. Owen Rogers, Durham, NH; Sally Schenker, Freedom, NH; and Bill Utley, Clyde, NY. The Society's treasury was enriched by \$1,214.50.

The Committee wishes to thank all those who contributed time, talents and plants to the success of our auction. Walter Eickhorst and John Carvill were most helpful in organizing and distributing lilacs to successful bidders. Our Treasurer Marie Chaykowski assisted by Pauline Fiala and Elsie Kara did their usual superb job in handling the money. Charles Holetich's colored slides of lilac cultivars offered were worth a thousand words. Sally Schenker's complete notes made reporting much easier. And of course the spirited bidders made the 1984 auction a great success.

Plan to attend next year's Annual Meeting and Lilac Auction at the Brooklyn Botanic Garden, and bring some plants for the auction. Please send me a list of lilacs you are donating so that we may exhibit them properly.

Respectfully submitted, Hanssen Schenker, Chairman and Auctioneer.



FINANCIAL REPORT MAY 6, 1984

Balance Brought Forward		\$10,467.49
Membership	\$ 3 765 00	
John Wister Memorial	75.00	
Liston Scran Book	180.00	
Denation - Volume 3 & 4	100.00	
Listen Seran Book (Arch McKean)	2 000 00	
Convention Deturn	2,000.00	
Dublications	244.00	
(Duoral: Bagistor Chack list)	64.50	
Denotion Debott Clock (ISI)	04.50	
(Dressedings on C.C. Clork)	500.00	
(Proceedings on C.C. Clark)	1 457 00	
Auction	1,457.00	
Interest	1,547.41	
	\$ 9,833.47	\$ 9,833.47
EXPENDITURES		\$20,300.96
Mailings (Proceedings, Special		
Issues (JF) 1982)	\$ 205.00	
500 Dues Receipts, 500 Letterheads		
(W.O.)	52.61	
Photocopy & Postage (J.A.)	19.38	
Photocopy & Postage (J.A.)	15.00	
Postage (W.O.)	70.14	
Nominating Committee (E.K.)	32.00	
Merks Trophies	585.10	
Convention Advance (T.C.)	500.00	
Mailing Advance (J.F.)	500.00	
Weston Nurseries		
(S. Pubescens and 'Sister Justena')	103.95	
National Council of State Garden Clubs	15.00	
Refunds on Lilac Sales	67.00	
Weston Nurseries		
(Booted Cuttings 42-'82 85'-83)	200.00	
Alexander Nurseries		
(Packing Shipping Postage)	78.44	
Jack Alexander Nurserv	50.64	
Nancy Emerson (Copies of Slides)	144.15	
	0 0 000 11	\$ 2 638 M
	\$ 2,638.44	\$ 2,030.44
TOTAL ALL ACCOUNTS		\$17,662.52
TO THE HEE HOODONTO		
CASH BALANCE RECONCILIATION		
Life Membershin	\$ 2,600.00	
Legal	350.76	
By-Laws	210.25	
C.C. Clark Fund	500.00	
Unton Scran Book	4.546.73	
Han Conried Memorial	50.00	
Education Research	3.260.45	
John Wister Memorial	95.00	
Operating	6,049.33	
	047.000.50	
TOTAL	\$17,662.52	
Respectfully Submitted,		
Marie F. Chaykowski, Treasurer		





Burke Mt. from Vale of Aherlow







Three VIPs with lilac



May, 1984 The Honors and Achievement Award

Highest Award of the Society

presented to

Dr. Owen M. Rogers, of the

University of New Hampshire, Durham, N.H.

For his many contributions to the Society and to the Lilac over the past years -

Especially for his outstanding work as President of the International Lilac Society for the past several consecutive terms in which he gave creative and progressive direction to the Society -

For his work as a member of the Board of Directors of the Society -

For his singularly outstanding work in bringing to print the TEN-TATIVE INTERNATIONAL REGISTER OF THE CULTIVAR NAMES IN THE GENUS SYRINGA and for his authorship of numerous scientific and practical articles on the Lilac -

For his research work in creating new and outstanding cultivars of the late-blooming lilacs -

For his guidance and direction to students in horticulture especially regarding work with lilacs as an outstanding professor and horticultural advisor.

The President's Award

presented to BIRCHWOOD GARDENS and its founder, Professor Robert B. Clark Cattle Landing Road, Meredith, New Hampshire

For a unique and outstanding horticultural garden which features some of the finest cultivars of modern lilac for public viewing in a setting of beauty among rare conifers and rock-garden plants of exceptional merit.

For his co-discovery and distribution of the rare cultivars of *Syringa julianae George Eastman* featured in this lovely garden with many rare plants as models for the public as what can be achieved in such a unique and beautiful setting.

The President's Award

presented to

Alice and Thomas Chieppo

of East Burke, Vermont, and Woodbridge, Connecticut

For one of Vermont's newest and most outstanding lilac collections in landscaping of magnificent dimensions and beauty exclusively featuring the best of both old and modern lilacs open for public viewing and for educating the public as to the merits and beauty of the lilacs, their adaptability and ease of growth in that region.

For their outstanding services to the Society and as Hosts of the 1984 International Lilac Convention at their beautiful Estate at East Burke, Vermont.

presented to THE RESIDENTS, CIVIC ADMINISTRATION and GARDEN CLUB of WOODSTOCK, VERMONT

For their outstanding use and preservation of lilacs in a town-wide planting of this magnificent shrub that presents a truly extraordinary display of beauty from Main Street and throughout hundreds of gardens each springtime for the appreciation of the local citizenry and for all who visit there of outstanding landscaping and use of lilacs of both old and new cultivars. We designate Woodstock, Vermont, as one of the nation's finest general, town-wide displays of lilacs.

For encouraging, by this mass planting and preservation of lilacs, others to plant and cherish lilacs for their beauty and usefulness.

The Directors' Award

presented to Jack Alexander, III

of the Arnold Arboretum, Jamaica Plains, MA

For his outstanding efforts in the propagation and distribution of newer and rare species and cultivars of the Lilac.

For his outstanding work in promoting the Lilac in authoring many scientific and informative articles in ARNOLDIA, and outstanding publication of the Arnold Arboretum.

For his work in maintaining the Arnold Arboretum Lilac Collection as one of the Finest and the oldest source of rare and outstanding lilacs in America.

The Award of Merit

presented to Marie Frances Chaykowski of Mantua, Ohio

For outstanding and truly dedicated work as Treasurer of the International Lilac Society, presently and for the past several consecutive terms-

For outstanding work as a member of the Board of Directors of the Society-

For efforts in promoting both the Society and the Lilac and for promotion and work for the success of the Annual Lilac Auction.

presented to Elsie Lenore Kara of Columbia Station, Ohio and Anthony, Florida

For dedicated work as a member of the Board of Directors and Regional Vice-President of the International Lilac Society in promoting the goals of the Society on various committees and for working to make the Annual Lilac Auction a success-

For keeping a fine collection of lilacs for local display and visitation.

31

ŝ.

presented to Pauline Lucille Fiala of Spencer, Ohio

For dedicated and outstanding service as a member of the Board of Directors of the International Lilac Society and various Lilac Committees

For truly excellent work in promoting and making successful the Annual Lilac Auctions and Conventions.

Presented to Mary Smith of Bellevue, Iowa

For truly dedicated and outstanding work as Editor of the LILAC NEWSLETTER, the monthly publication of the International Lilac Society and thereby promoting the Society and the Lilac.

For her reviewing of Lilac literature and making the most pertinent and practical available to the membership and for her untiring efforts at excellence in the Society's publications.

presented to Roger F. Luce of Hampden Highlands, Maine

For dedicated work as a Director of the Society and as promoter and chairman of the Lilac Seed Distribution Committee that has enabled many lilac enthusiasts to obtain rare species and encouraged the planting of seed of newer named varieties to obtain better cultivars.

For his efforts at plant explorations in China in recent years that have brought back new lilac gene materials especially in *Syringa reticulata*.