

THE SPECIES LILY

*The Newsletter of the Species Lily Preservation Group
Affiliated with the North American Lily Society*



*When was I born
Spring, 2007*

SLPG GOALS

- * Growing as many species lilies as possible, especially those rare and in danger of extinction.
- * Making excess species bulbs available to members.
- * Collecting, preserving, planting, growing and distributing species seed.
- * Collecting all possible information on each species: its habitat, distribution, cultural needs, etc.
- * Disseminating cultural information on each species.
- * Assembling a slide and photo record of all species lilies.
- * Identifying areas where specific species grow and seeking protection for these areas.

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Cover design: David Sims. Cover illustrations are all by Walter Hood Fitch in Elwes' *Monograph of the Genus Lilium*. Cover: *L. candidum*, back cover: top left *L. pomponium*, top right *L. pyrenaicum*, bottom left *L. chalcedonicum* and bottom right *L. carniolicum*.

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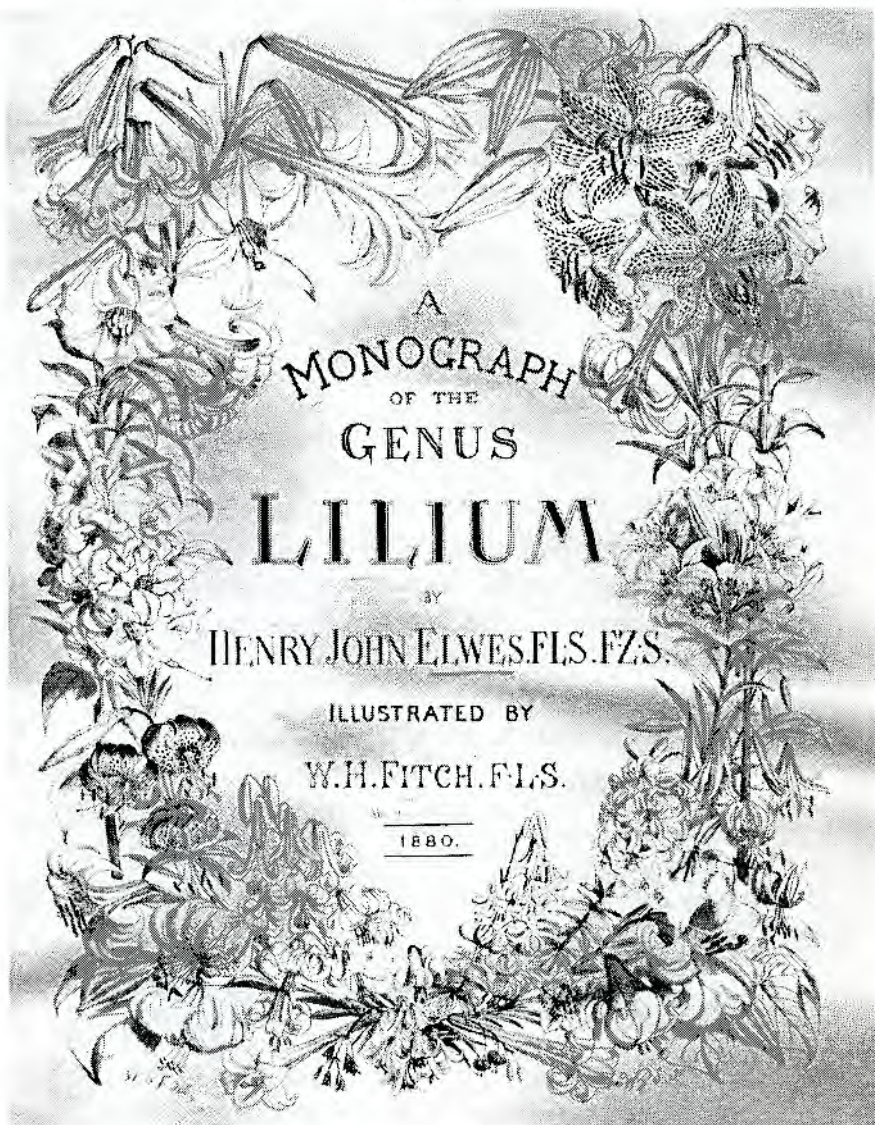
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Henry John Elwes and Walter Hood Fitch:
Monograph on the Genus *Lilium*
Barbara M. Small
Nevada



Frontispiece for the Monograph

Henry John Elwes (1846-1922), author of *Monograph of the Genus Lilium* (1877-1880) and *Trees of Great Britain and Ireland*, was a British botanist and entomologist whose chief interests were lilies, trees and butterflies. In 1897 he was the first person to be awarded the Victoria Medal of the Royal Horticultural Society. He traveled widely, making several visits to India and even Nepal in 1914 where his interest in botany and especially lilies was piqued..

Elwes, a plant collector from Colesbourne, Gloucestershire, grew many lilies in his own garden and was recognized as an authority on *Lilium*. For his *Monograph* he consulted many other botanical experts for help with the text. Between March 1877 and May 1880 he provided his subscribers with seven parts and 48 illustrations by Walter Hood Fitch. Each illustration is a life-sized, hand-colored lithograph. Somehow, either he or Fitch must have grown or had access to North American Lilies since the illustrations consist of, among others, *L. philadelphicum* (plate 12), *L. superbum* (plate 24), *L. pardalinum* (plate 29 and listed again in Botanicus.org as plate 50 with a different illustration), *L. humboldtii* (plate 34), *L. columbianum* (plate 35), *L. canadense* (plate 37), *L. rubescens* (plate 42 but with text following describing *L. washingtonianum*), *L. washingtonianum* (plate 43) and *L. maritimum* (plate 49).

One of his last contributions to the Genus *Lilium* was Elwes' request to A. Grove, also a lily expert, to produce a supplement, co-written by A.D. Cotton. Elwes' distant relative Dame Alice Godman agreed to underwrite the cost of the publication, and another seven parts were published between July 1933 and February 1940, this time with 30 hand-colored lithographs mostly by Lillian Snelling. The Royal Horticultural Society published two additional parts of the supplement in 1960 and 1962 with text by W. B. Turrill and 10 plates from drawings by Margaret Stones (b. 1920).

Walter Hood Fitch (1817-1892), born in Glasgow, Scotland, was

involved in fabric printing from the age of 17. When William Jackson Hooker, the editor of *Curtis' Botanical Magazine* and Professor of Botany at the University of Glasgow, discovered his talent, Fitch found his career as a botanical artist. Hooker became the director of the Royal Botanical Gardens at Kew in 1841 and they both moved to London. After that time, Fitch was the sole artist for all official and unofficial Kew publications. Among others, Fitch produced illustrations for Hooker's *A Century of Orchidaceous Plants* (1851), James Bateman's *A Monograph of Odonoglossum* (1864-74), Hooker's *Icones Plantarum* (1836-76) and George Bentham and Hooker's *Handbook of the British Flora* (1865), Hooker's *Rhododendrons of Sikkim Himalaya* (1849-51) and *Illustrations of Himalayan Plants* (1855). Eventually Fitch and Hooker parted ways, Fitch continuing his botanical illustrations on his own. It was during this time that he produced the remarkable drawings for Elwes' *Monograph of the Genus Lilium*.

[All the above information — and many of the words — were obtained from Wikipeddia.org under “Henry John Elwes“ and Walter Hood Fitch.” Information and drawings came from Botanicus.org and the website of W. Graham Arader III. Arader's website offers colored lithographs of *L. parvum*, *L. parryi*, *L. occidentale*, *L. Californicum* (?) and *L. bolanderi* listed under Henry John Elwes, although I could not find these lilies in Botanicus.org. The latter site does not contain plates 13, 30 or 45. Perhaps some or all of these lithographs are from one of the supplements.]

Corrections and Additions to the Where to Find Lilies Article, Autumn 2006

- 1) Paul Christian Rare Plants is in Wales, not England. Thank you, Ieaun Evans.

2) Another source is Westonbirt Plants, 9 Westonbirt Close, Worcester, WR5 3RX, office@westonbirtplants.co.uk They offer *L. auratum* var. *virginale*, *L. lophophorum*, *L. martagon* var. *daugavense*, *L. nanum* var. *flavum*, *L. oxypetalum* var. *insigne*, *L. pardalinum* subsp. *volmeri*, *L. sargentiae* Cox 7099 and *L. taliense*. Thank you Tony Dickerson.

3) Another source is The Lily Pad Bulb Farm, 3403 Steamboat Is. Road, PMB 374, Olympia, WA 98502. Lilypadbulbs.com, Phone 800-484-5894. They offer *L. cernuum*, *L. cernuum album*, *L. martagon*, *L. pardalinum*, *L. pumilum*, *L. regale*, *L. sargentiae*, *L. speciosum rubrum*, *L. speciosum album*, *L. speciosum* "Uchida" and *L. tigrinum*.

Royal Horticultural Society Lily Group Alisdair Aird, England

The RHS Lily Group has several hundred members in various countries. Its main activity is a good seed distribution (stronger on lily species than hybrids), with non-lily species as well. US members must apply for a permit to import the seeds. Google USDA and type in "Importation of small lots of seeds." You will find the correct form there. The Group produces *Lilies and Related Plants*, successor to the *Lily Yearbook*, every two years, and a short quarterly newsletter. In the UK, the Group runs an annual bulb auction each autumn and arranges garden visits, displays and lectures. It has expert advice panels and hosts an occasional International Lily Conference. The annual subscription is £10.00 (or £30.00 for three years). The Group accepts credit cards for those not in the UK. Further information from Mrs. Rose Voelcker, Lanjique, 32380 St Leonard, Gers, France; phone 003305062043076; email rvlanjique@wanadoo.fr.

The Carniolicum Group of Lilies

Fred Stoker, formerly of the U.K.

However exact the description of a living plant may be, no true conception of it can be gained without some idea of its past, both as an entity and as an undifferentiated element lying in the womb of its ancestry. Therefore, before describing the units of what is here spoken of as the Carniolicum Group of lilies, I propose to attempt a brief survey of their possible history.

At the outset, however, some definition is called for. It may be given in these terms: the Carniolicum Group is that European aggregate of lilies characterized by scattered leaves and martagon-type flowers and which embraces *Lilium carniolicum*, *L. chalcedonicum*, *L. heldreichii* [now considered a variety of *L. chalcedonicum*], *L. pomponium* and *L. pyrenaicum*. It has an intimate connection with the N.W. Himalayan *L. polyphyllum* and with such species of Eastern Asia as *L. amabile*, *L. davidii*, *L. henryi* and *L. tigrinum*, but is without any close affinity in North America.

An opinion of the time and place of origin of a plant or group of plants and on the forces which controlled its distribution must, in the nature of things, be largely conjectural. In some cases, it is true, a more or less continuous geological record from the remote past to the near present gives what we take to be an approximately true statement of the age and wanderings of a plant, but in genera like *Lilium* which, for one reason or another, have no fossil existence, we are obligated to construct a story that, though its framework is based upon the work of geologists and phytogeographers, must inevitably be charged with surmise.

J.C. Willis has very clearly shown that, other things being equal, the age of a plant or genus determines the extent of its distribution: the greater the age, the greater the area covered. As lilies for a broad zone, only interrupted by seas, round the cool and temperate regions of the northern hemisphere, we may, on Willis' dic-

tum, acknowledge their antiquity; and this after making full allowance for the fact that flowering herbs spread more rapidly than trees and shrubs.

In the *Lily Year Book* of 1933 (*Environment of Lilies*) I ventured the opinion that the genus — what there was of it at that distant period — existed in the Eocene in the northern circumpolar belt and was gradually dispersed by the increasing cold that culminated, millions of years later, in the Great Ice Age. No reason has appeared to alter the broad outline of that hypothesis. I should, however, be understood to imply that both during the sojourn of lilies in the Arctic and Sub-arctic and during their migration southwards, new groups and species were evolved.

Let us postulate that, among the migrants, a Precarniolicum division originated. That it appeared later than the Leucolirions, Isolirions and whorl-leaved Martagons (all of which are represented in both New and Old Worlds) is suggested by its never reaching America. The genus, one supposes, had already split into western and eastern parts and the latter was far advanced on its southern journey before the birth of the Precarniolicums occurred within its ranks; but not too far to prevent the new group from penetrating both Asia and southern Europe. (The Precarniolicum group, I am assuming, gave issue to the Asiatic scattered-leaved Martagons as well as the European aggregate of Carniolicums.)

Further theorizing on the origin and fate of the entire ancestral tribe is unprofitable for our present purpose, but we may with interest pursue the conceivable adventures of the European branch.

One pictures the intact and as yet undifferentiated assemblage being checked in its southward-tending journey by the Carpathians and the stretch of water which extended from the Carpathians to the Caucasus in the Pleistocene period. There was, however, an avenue of escape from the advancing cold between the Carpathians and the Eastern Alps and through it, one presumes, a portion

of the lilies passed to find harborage eventually in the Balkan countries, the north-eastern Adriatic lands and Hungary. The pioneers in the movement comprised that section of the whole which eventually gave rise to *L. chalcedonicum*, *L. heldreichii* and *L. albanicum* if, that is, one may judge from the present stations of those descendants. Following their leaders, the great mass of the European Precarniolicums took advantage of the opening and, in the course of time, were shaped into *L. carniolicum*, *L. carniolicum* subsp. *jankae* and *L. carniolicum* var. *bosniacum*. A residuum, instead of passing through the gap, turned southwards to continue its course between the western Alps and the Cevennes, threw off a detachment into south-western France and the adjoining part of Italy and came to rest in the Pyrenees and north of Spain.

This theory of distribution may appear too fanciful without some concrete testimony to back it. But, in the want of fossil evidence, what concrete testimony can there be? May we not allow that the meteorological phenomena and geographical disposals which so profoundly influenced the dispersal of other plants had a like effect on lilies?

And what other suggestions can be advanced? That each species was evolved in its present situation? That the several species originated elsewhere, but by an extraordinary series of accidents reached neighboring homes? The very enunciation of such proposals is sufficient to indicate their unlikelihood.

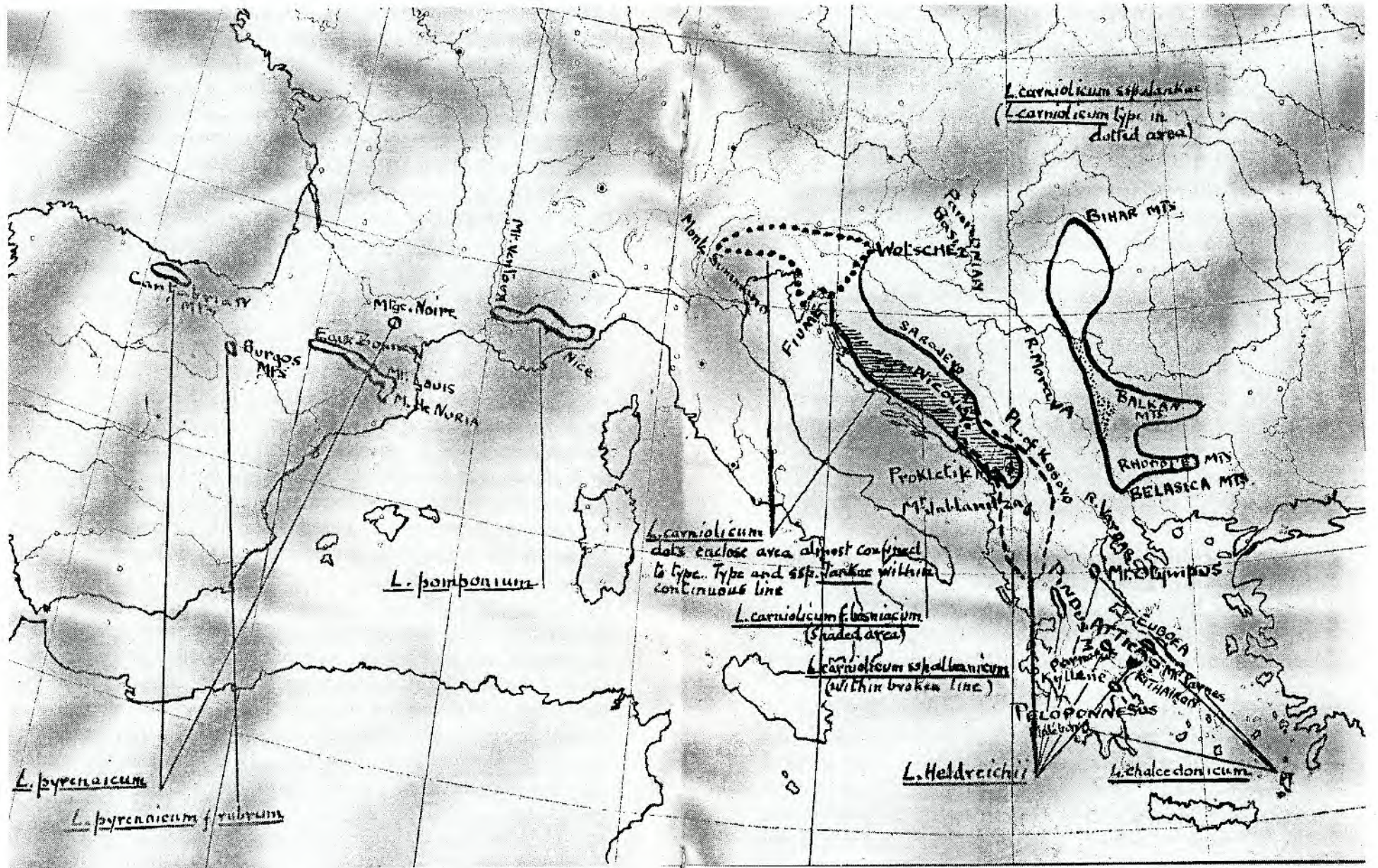
There is a trite but just saying to the effect that when a judgment is arrived at from circumstantial evidence, the more closely that approaches probability the more is it likely to be true. The criterion of probability, we may agree, justifies at least the provisional acceptance of the thesis propounded.

The members of the Carniolicum group all inhabit alpine or sub-alpine territories in Nature and so prejudiced is their inherited appetite for the conditions prevailing there they are, in the mass,

usually very reluctant to accept those of cultivations. Not infrequently, however, we read that *L. chalcedonicum* and *L. pomponium* are amongst the easiest of their genus; they have even been known to appear in those attractive lists cunningly entitled "Lilies for the Beginner." Gardeners, unfortunately, have not found that their behavior corresponds to such excellent testimonials. *L. carniolicum* is rarely seen in cultivation and its subspecies more rarely still. *L. pomponium* seldom maintains its size and numbers for more than a few years, and a good group of *L. chalcedonicum* or *L. heldreichii* is not a common sight. *L. pyrenaicum* alone is reasonably tolerant. When it displays signs of automatic spread the occasion is deemed for the clashing of cymbals. [©]

The resemblance that the members of the Carniolicum group bear to one another is reflected in their symmetry. It will be seen below that the name *L. pyrenaicum* has, in different hands, served for *L. jankae* and *L. albanicum*, that *L. chalcedonicum* has covered *L. albanicum*, *L. carniolicum* and *L. pyrenaicum* and that *L. carniolicum* was described by at least one botanist as a variety of *L. pomponium*. In short, on the axiom that things that are equal to the same thing are equal to one another, all the lilies with which we are now concerned might be reduced to one species if their synonyms expressed facts.

But besides indicating resemblances, this common denominating has caused, and still causes, perplexity. So disturbed were botanists of the rank of Beck and Kerneer by the state of affairs that they went a little too far; they gave what we now recognize as variants specific rank. Nevertheless, the names they and others gave took root, and to this day it is very easy to gain the impression that, for example, *L. jankae* and *L. bosniacum* are good species. This is far from the case. The late Professor Kösanin, whose knowledge of the Carniolicum group was perhaps unequalled, asserted, indeed, that *L. carniolicum* and (in modern nomenclature) its subspecies *jankae* are really one and the same thing. He also held that *L. bosniacum* was a form of *L. carniolicum* or, alternatively, a hybrid between *L. carniolicum* and *L. al-*



Map of the Mediterranean Area Showing Distribution of Lilies of the Carniolicum Group

banicum, and that *L. albanicum* was a good species. Acceptance of Kōsanin's views, and it is difficult to oppose them, must lead to an alteration in the nomenclature of the plants concerned. In this contribution, however, accepted names are adhered to and possible changes, and the reasons for them, [are] only discussed under the lilies involved.

As in the past different authors have given different values to certain terms in describing lilies, it may be well to say that, as used below, the following words are intended to bear the meanings appended:

- * Peduncle — the whole length of a flower stalk arising from the main axis
- * Raceme — that part of the main axis from which the peduncles arise
- * Versatile — applied to anthers that move freely on their stalks (filaments). Thus a single versatile anther may, at different moments of its life, face the center of the flower, face outwards, swing horizontally or assume any intermediate position.

Characteristics held in common by the Carniolicum Group

- * Bulbs made up of overlapping scales.
- * Stems erect, rounded, rooting (not in the way that, e.g. *L. auratum* is stem-rooting, but only to a small degree [?])
- * Leaves scattered, sessile, punctate below, glandular-ciliate at margin.
- * Inflorescence racemose; peduncles single-flowered.
- * Flowers, except for those of *L. chalconicum* and *L. heldreichii*, smell of green vegetation in the first stage of decay, Martagon-shaped. Segments tipped and, at their bases, fringed with glandular cilia. Nectariferous furrows smooth-edged. Anthers versatile, pinkish-buff in color, i.e. before they split and expose the pollen which, in every case, is bright red. Filaments awl-shaped, slightly flattened at base. Stigma trilobed: together with style forms a club-shaped structure. Style smooth. Ovary cylindrical and, as in other groups of

this genus, 6-ridged and tri-ocular.

- * Capsules. Shape and size not constant and dependent upon water supply and vigor of plants. (Description given can only be taken as rough guides.)

Lilies Comprising the Carniolicum Group

L. carniolicum

[From this point on, I have compressed Stoker's information, including Derek Fox's definition of the various types as varieties rather than as subspecies.]

Distribution: From a northern dispersal through the Venetian and Julian Alps, the Karawanken and N.S. Yugoslavia (Carniola and N. Croatia) it spreads southwards through W. Yugoslavia to the Prokletije Mountains in N. Albania. The northern part of this area (Venezia, Carinthia, Carniola, N. Croatia, limited to the south by a line from just south of Fiume to Wotsche) is given, as between the type and the subspecies *jankae*, almost entirely to the type *L. carniolicum*. The southern part is shared by both. Found also in eastern Yugoslavia though there the subspecies *jankae* predominates.

Flowers: Opening in late May and June. Characteristic smell. Light red or orange, tinged green on outer surface (strongly at base) and on lower third of inner surface; lower two-thirds inner surface marked with short, raised, dark purple lines.

L. carniolicum* var. *jankae

As in the preparation of this contribution no morphological difference that could be considered constant was found between the lilies, *L. jankae* is looked upon as, but not so designated, a yellow form of *L. carniolicum*. In contemplation of the fact, however, that it exhibits only a color variation from the type species, a varietal rank would be more appropriate to it than a subspecific one.

Distribution: Western Area: From south of the Fiume-Wotsche line (rarely north of it) to the Prokletije Mountains. Eastern Area: From the Bihar Mountains (N.W. Rumania) through Bulgaria and eastern Yugoslavia to the Bclastica Mts. On the Yugoslavian-

Macedonian frontier. It may be seen on the map [see pages 12-3] that the eastern area, which represents the principal distribution of *L. jankae*, is separated from the western and from the northern distribution of *L. carniolicum* by, from south to north, the Vardar valley, the Morava valley and the Pannonian basin. (Pannonia was an old Roman province bounded to the east and north by the Danube and now forms, roughly, the western half of Hungary and the Styrian part of Austria. The point is interesting as illustrating the avoidance of low ground by the Carniolicum Group.

Flowers: Opening in early June. Characteristic smell. Bright yellow (except for lower fourth of outer surface which is green) marked with raised, brown purple spots and lines on middle two-fifths of inner surface, but sometimes unspotted.

L. carniolicum* var. *bosniacum

As has been mentioned, Kōsanin looked upon *L. bosniacum* as either a form of *L. carniolicum* or as a hybrid between *L. carniolicum* and *L. albanicum*. While *L. carniolicum* (type and subsp. *jankae*) meets *L. albanicum* in N. Albania and S. Yugoslavia and *L. bosniacum* is found in that area, it (*L. bosniacum*) also extends much farther northwards than does the distribution of *L. albanicum*. Moreover, in the limited number of specimens examined, *L. bosniacum* showed no character for which *L. albanicum* could be held as undoubtedly responsible. One inclines, therefore, to the opinion that *L. bosniacum* is a form of *L. carniolicum*.

Distribution: Mountain ranges in western Yugoslavia (from S. Croatia to Montenegro).

Flowers: Opening in June. Characteristic smell. Bright yellow (or, according to report, rarely red or orange), marked with raised, brown purple spots and lines or blotched in throat.

L. chalcedonicum

Distribution: Greece. (Thessaly, Mt. Olympus, Euboea, Peloponnesus)

Flowers: Opening in July. Very faint but agreeable smell. Or-

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Distribution: Mountain ranges in western Yugoslavia (from S. Croatia to Montenegro).

Flowers: Opening in June. Characteristic smell. Bright yellow (or, according to report, rarely red or orange), marked with raised, brown purple spots and lines or blotched in throat.

L. chalcidonicum

Distribution: Greece. (Thessaly, Mt. Olympus, Euboea, Peloponnesus)

Flowers: Opening in July. Very faint but agreeable smell. Or-

ange-vermilion within, vermilion-orange without, suffused olive-brown at base, raised lines and spots in throat which become pedunculated in segments.

L. chalcedonicum* var. *maculatum

There is a form in which the raised spots within the throat are colored purple. It used to be included in descriptions of the type, the marking being casual and liable to occur in any individual. As, however, the attribute appears to be hereditary, plants with spotted flowers are now known in gardens by the varietal name *maculatum*.

L. chalcedonicum* var. *heldreichii

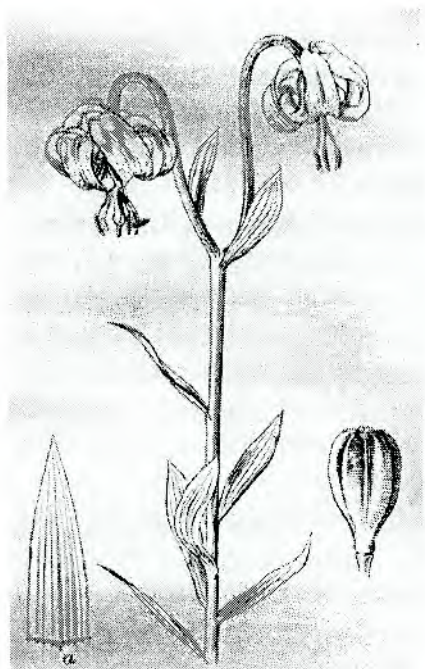
Distribution: Albania: Mt. Jablanitza. Greece: Thessaly, Mt. Olympus, Foothills of Pindus range. Attica: Kithäron, Parnassus, Parnes range. Peloponnesus: Kyllene

Flowers: Opening in July a little later than those of *L. chalcedonicum*. Faint but agreeable smell. Orange-vermilion within, vermilion-orange and often with a broad, central, lighter band on outer segments without, suffused olive-brown at base.

The minor differences given as existing between *L. chalcedonicum* and *L. heldreichii* do not appear sufficient to justify specific separation of the two. Freyn, moreover, in his original description of *L. heldreichii* does not mention any characteristic that might not be as readily assigned to *L. chalcedonicum*. At the same time, the contrasts between their respective bulbs, their upper leaves, their styles, the usual presence of bracteoles on the peduncles of *L. chalcedonicum* and their usual absence in *L. heldreichii* prevent us from regarding the plants as identical. The circumstances suggest, indeed, that the grading of *L. heldreichii* as a variety of *L. chalcedonicum* would be appropriate.

L. carniolicum* *albanicum

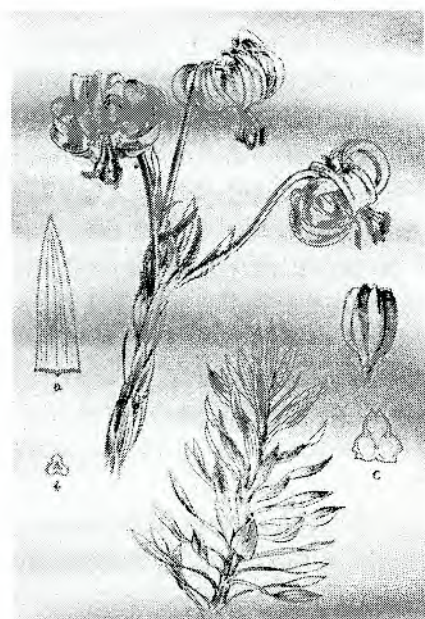
Distribution: Mountainous regions in W. Macedonia, Albania and S.W. Yugoslavia from the Pindus Mts. In the south to Nikovič (a little north of Mt. Durmitor) in the north and bounded to the east by the valley of the Vardar and plain of Kosovo.



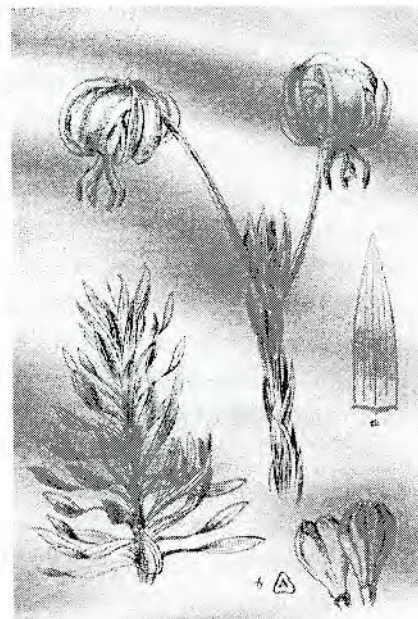
1) *L. carniolicum*



2) *L. carniolicum jankae*



3) *L. chalconicum*



4) *L. chalconicum heldreichii*



5) *L. pomponium*



6) *L. pyrenaicum*

[When I first looked at these illustrations (from pages 91, 93, 97, 99, 102 and 104), I thought they certainly must represent the same lily. If they had been in color, I might have made a few guesses: Illustration 1 = red or orange (back cover, bottom right), 2 = yellow, 3 = vermilion-orange (back cover, bottom left), 4 = vermilion-orange, 5 = vermilion with purple spots (back cover, top left) and 6 = greenish-yellow (back cover, top right) A sniff test would have given more clues: Illustrations 1, 2 and 5 would have smelled of vegetative decay, 6 would also have been objectionable but slightly sweet while only 3 and 4 would have been agreeable. It was not until I placed the illustrations together that I could see indeed that much of the identification of these members of the Carniolicum Group must be based on the leaf structure and placement (see pages 20-1). While it is difficult to see from these illustrations the tiny hair-like structures on the lower surfaces of the leaves of illustrations 1 through 4 and the nude veins on the lower surfaces of illustrations 5-6, the abrupt transition of leaf arrangement on illustrations 3-4 quite clearly stands out.

Flowers Opening about middle of June. Faint but typical smell. Bright yellow, tinged purple on outer surface, wart-like elevations and raised lines which may be colored purple at level of throat. Red and orange flowers are also reported. These, according to Kōsanin, are *always* purple spotted.

L. pomponium

Distribution: Mountainous regions in 1) S.E. France in Departments of Drôme, Vacluse, Basses Alpes, Var and Alpes Maritimes. 2) N.W. Italy in S.W. Piedmont and Liguria.

Flowers: Opening middle of June. Characteristic smell. Vermilion within and speckled with raised purple spots and lines in lower half or two-thirds (except for lowest half-inch or so); outer surface orange-red stained purple-green at base.

L. pyrenaicum

Distribution: Spain: Asturias and Santander (Cantabrian Mts.) Calalonia (Montes de Juria). Pyrenees: From Eaux-Bonnes to Mt. Louis. France: Montagne Noire, Forêt de Ramonden (Dept. of Tarn).

Flowers: Opening in early June. Characteristic smell with a hint of sweetness added; a mawkish odor. Greenish-yellow gradually changing to the pale green of lower third; middle third speckled with dark purple, raised spots and lines within.

A brief scrutiny of the characteristics of the lilies described will suggest that Kōsanin's method of using ciliated [fringed with hairs] veins as a means of distinguishing those most closely allied to *L. carniolicum* itself may, with some broadening, be made a basis for classification of the whole Carniolicum group; thus:

- I. Lower surface of leaf exhibits glandular cilia on veins.
 - A. Leaves show no abrupt change in size and arrangement:
 - * Ciliation marked and regular: flowers red or orange = *L. carniolicum*
 - * Ciliation less marked, but regular; flowers yellow = *L. chalcidonicum* var. *jankae*
 - * Ciliation less obvious still and patchy = *L. carniolicum* var.

bosniacum

B. Leaves show abrupt transition in size and arrangement between lower and upper series:

- * Upper leaves tend towards the ovate; peduncles usually bracteolate [bearing much-reduced leaf]; style tri-lobed in transverse section = *L. chalcidonicum*
- * Upper leaves lanceolate; peduncles usually non-bracteolate; style almost triangular in transverse section = *L. heldreichii*

II. Lower surface of leaf exhibits nude veins

A. Leaves very numerous

- * Leaves linear, channelled and keeled [ridged] = *L. pomponium*
- * Leaves linear-lanceolate, not channelled or keeled = *L. pyrenaicum*

B. Leaves 30-50, lanceolate, ovate or oblong = *L. carniolicum albanicum*.

[The above article was extracted from the *Lily Year Book*, 1938, pages 86-107, with the kind permission of the Lily Group of the

Julius Wadekamper's Lilies Benefit the SLPG
Thank you Lily Nook!

Earlier this year, the SLPG received a donation from The Lily Nook in memory of Julius Wadekamper, one of the original founders of the Species Lily Preservation Group. They plan to make this donation continuing: The Lily Nook will donate 10% of the money they receive for each lily registered by Julius. One painless and pleasant way to support our group is by purchasing the following lilies as they become available. Those lilies marked with * will be available this fall.

Buffy	Dandy Lion	Doctor Yu	Hot Fudge
Maple Cream	* Miss Alice	Peach Pie	Portrait
Pumpkin Pie	*Purple Reign	Purple Shadows	Raspberries and Cream
Red Satin	Seashell	Serenity	Snow Angel

Soft Moonbeam	Sparkling Waters	Speckled Blaze	Spring Star
Star Search	Stardom	White Prince	Willow Wood
Wine and Roses	Winnie		

Lilium candidum
Henry James Elwes
Formerly of the UK

The White Lily is of all lilies the one best known and most universally beloved. Except in a few gardens, where bedding-plants monopolize all the space, it may be seen everywhere, and in abundance. A bed of 200 or 300 white lilies, surrounded by a ring of that brilliant scarlet-flowered plant *Lobelia cardinalis*, forms one of the most striking and effective combinations I have ever seen; and though of course, like most lilies, its bloom is not of long duration, no one who loves flowers will deny its stately beauty.

Its culture is so easy and its constitution so good that it will grow in almost any soil or situation, a good deep loam being, however, the one most favorable to its development. There is a very beautiful variety, called *aureo-marginatum*, which has the leaves, especially the primary ones, broadly bordered with yellow, and in winter is for this reason a very handsome object. It is at present somewhat scarce, the variety with blotched leaves often sold for it being very inferior in beauty.

The variety called *peregrinum* by Linnaeus, which is now seldom seen, was much grown on the Continent two centuries ago, under the name of Sultan Zambach, and is said to have come from Constantinople. Leonard Rauwolf, a German botanist and traveler of the 16th century, met with it in Syria. It is considered by M. De Cannart D'Hamale a distinct species, and is said by Prof. D. Don to have the style triangular near the apex; but after examining living plants, I think that Mr. Baker is quite right in placing it under the head of *candidum*. There is also a double form in cultivation, which possesses none of the beauty of the single one, and is, like the striped form, a curiosity of no merit.

The White Lily seldom or never ripens seed in this country [UK]; and though it is said that by taking it up when in flower, suspending its head downwards, it may be induced to do so, I have tried this method without success. Professor Duchartre informs me that he has obtained seed by artificial fertilization, and has raised young plants from it. The notes on the germination and development of this and other species, however, will be better understood, and more convenient for reference, if given separately at the end of the work; and this I hope to do in a more complete manner than would be at present possible.

The history of the White Lily must be sought for rather in such ancient authors as Clusius, Parkinson, and Dalechamp, than in a work like the present, as it has been known in gardens from the earliest ages. In a charming little work of the history of lilies ("Monographic historique et litteraire des Lis," Malines, 1870) by my friend M. de Cannart d'Hamale, President of the United Horticultural Societies of Belgium, will be found a long account of its history, illustrated by many quotations from ancient and modern authors.

It was undoubtedly grown by the ancients, and probably furnished the emblem of the fleur-de-lis borne on the standard of France for so many years, though some think that the design of the fleur-de-lis was taken from the yellow flag (*Iris pseudacorus*).

It is said to be found wild in the Jura mountains, in the Pyrenees, in Corsica, Italy, and many other parts of the south of Europe; but having been so generally cultivated for centuries, it is doubtful in which, if any, of these localities it is truly indigenous. Mr. Baker, however, gives its range as from Corsica, through Greece and Turkey, to Palestine, Northern Syria, and the Caucasus; and though I never saw it wild in Turkey or Asia Minor, it is mentioned in the Floras of almost every country of Southern Europe. Ledebour, in the "Flora Rossica," speaks of it as indigenous in Georgia, which seems more likely to be its native country than any part of Europe.

