M. L. BOROWSKY

# Plants from Ukraine in Canada

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# PREFACE

*The author of this work, Mychaylo Borowsky, was born in 1891 in Zubrivka, province of Podillia, Ukraine. After completing his secondary education he was conscripted into the Russian Imperial Army and served in Siberia.*

*After the Revolution of 1917 he was sent to the front against the Central Powers' armies, where in 1918 he joined a newly organized army of Ukraine, and was stationed in Kamenetz-Podilsky. There, later, he was enrolled in the botanical and later the agricultural department of the university.*

*However, in 1920, Borowsky was forced by the war situation to move to Poland. He enrolled in the Warsaw University and transfered later, in 1923, to the Politetechnicum, agricultural department, in Praha, Czechoslovakia. There he graduated in 1927.*

*Returning to Poland, that part of Ukraine which was under the Polish occupation, he worked in the editorial office of a Ukrainian agricultural organization "Silsky Hospodar", writing articles, lecturing, doing research, etc.*

*Towards the end of the Second World War, in 1944, he moved to Czechoslovakia, then to West Germany, and resided in the Displaced Persons' Camps. With the reestablishment of the Ukrainian Technical and Agricultural Institute in Regensburg, he occupied the chair of an assistant professor in the agricultural faculty of the college.*

*Borowsky emigrated to Canada in 1948, having to his credit over 120 publications in the field of agricultural sciences. He settled in Winnipeg and immediately established his small experimental garden, orchard and apiary. In a few years he had them in full operation.*

*There appeared some plants and trees which Borowsky was first to cultivate in Canada. Along with his experiments he wrote articles and essays in his field for various Ukrainian publications in Canada and abroad.*

*One of Borowsky's special contributions to Canadian research is the establishment and description of the plants brought to Canada from Ukraine by Ukrainian and other settlers, and the plants of special favor in Ukraine that he found in Canada. He looked for such plants on farms, in cemeteries, in church yards, private plots, etc.*

*This small book represents only one limited part of his own experimental work and work in co-operation with other Ukrainian Canadian agronomists. Among them he was a leading authority by his initiative, erudition and experience.*

*M. I. MANDRYKA,*
*Ukrainian Free Academy of Sciences*

## FOREWORD

A profound affection has moved me towards nature since childhood, especially towards its rich and varied plant kingdom, later leading me to study natural history at Kamyanetz Podilskyj in Ukraine, in Warsaw, Poland, and at the Polytechnic College in Prague, Czecholslovakia. On coming to Canada, I immediately became interested in the flora, so new to me, of the grassland prairies. Settling in Winnipeg, during my spare time I began to make private botanical excursions to the outskirts of the city and even within the city itself. To my great surprise I came across several familiar plants - flowers, herbs and shrubs which grow in abundance in Ukraine, where they are cultivated by every household. Later I also found such plants in other regions of Canada, growing in the gardens and flowerbeds of Ukrainian people, in their yards in the cities and on their farms.

And small wonder. The Ukrainian settlers and pioneers, leaving the Ukraine to go out into the world to found new settlements, would always take with them as a momento lump of their native soil as well as various seeds of their useful plants, in order to cultivate and utilize them in their new places of settlement. They knew how to propagate them, they grew accustomed to them. They became adapted to them, and what was most important, they loved them. Their thinking was practical: what if, in that unknown land that they were intending to settle, there were no such plants? Or perhaps the familiar plants would be better than the native ones already there? Accordingly, when embarking on the long journey, the Ukrainian settlers filled whatever space was available in bags and pockets with their prized seeds. The farmers

took with them various useful seeds and domestic implements while their wives and daughters, emigrating at the same time or a while later, brought along the seeds and the roots of favourite flowers and aromatic herbs. These plants often served medicinal purposes, were used to ornament dwellings during traditional festivals and their aromas became an integral part of the culture-conditioning process starting in infancy. During the several decades of Ukrainian immigration to Canada, the numbers and varieties of plant seeds and roots from the Ukraine increased steadily, becoming disseminated throughout all of the areas of Ukrainian settlement, and gradually becoming naturalized to Canadian soil.

My observations in the vicinity of Winnipeg led me to pursue my research at greater depth and scope. This work is the result of these studies which have encompassed the past quarter century.

## PLANTS FROM UKRAINE IN CANADA

I am commencing with the hollyhock, a plant that was and is a favourite in Ukraine. The hollyhock's bright and cheering flowers peeked into almost every house, laughing gaily at the windows. In Canada as well the tall, luxuriant hollyhocks can often be seen around Ukrainian homes.

### Fam. Malvaceae

*Malva. Althaea rosea.*

Biennial, sometimes perennial. Height 5-6 feet. Relatively large, variously coloured flowers, pentamerous,

**Althaea rosea — Malva**

borne on tall spikes, inserted in the axils of rotund leaves. Flowers single or double, depending on variety. Blooms from June to September inclusive. Propagated by seeds. The plant originates from China. In the Ukraine it is very popular and a national favourite. The Ukrainians brought its seeds home from various lands. It has long been a favourite in Britain whence it was transported to Canada and the United States.

### Fam. Compositae

*Chornobryvtzi. Tagetes patulus L.*

An annual, aromatic plant. Height 1-6 feet. Flowers variously coloured, velvety dark or brilliant when at their best, borne at the ends of densely clustered branches. Blooms throughout the summer until frost. The plants are suitable for flowerbeds and ornamental floral plantings. The species originates from Mexico and South America. In Ukraine it is an old favourite and has become adopted as a national flower. Its seeds were easily transported by Ukrainian settlers.

*Kupchaky. Tagetes erectus L.*

Annual, height up to 3 feet, well-branched. Flowers generally yellow and full. The flower heads resemble those of chrysanthemums. Blooming continues throughout the summer. The plant originates from North America, but the Ukrainian settlers brought its seeds to Canada from Ukraine. Ukrainian gardeners in Canada cultivate its explants in greenhouses.

*Nahidky. Calendula officinale L.*

Annual, aromatic plants, height 1-2 feet, well-branched. Flowers generally yellow, single or double, borne in terminal clusters. They are used in Ukrainian folk medicine to treat internal ailments. The juice of the plants is used as a substitute for saffron. The plant often persists in gardens by seeding itself from year to year.

**Calendula officinale — Nahidky**

*Kanuper. Tanacetum balsamita L.*

A perennial herb, having the odour of lemon. Height up to 3 feet. Leaves lanceolate, light-green in colour. Flowers small, yellow, tubular and composite, borne apically on the stem. Propagated by division of the roots. The plant originates from the Middle East, whence it was introduced into Ukraine. In Canada it is cultivated only in Ukrainian gardens. On the Canadian prairies one finds more commonly a close relative of the kanuper - the kudriavetz (*T. vulgaris*).

*Kudriavetz. Tanacetum vulgaris L.*

This perennial grows in Manitoba and elsewhere in Canada, mainly in the West, on prairie and wastelands as a weed. The plant has a sturdy root system and a hard stem that reaches a height of up to 3 feet. It is a perennial and strongly aromatic. Leaves elongate, dissected. Inflorescences small, yellow, terminally borne. Easily propagates by seeds and by budding from the roots. The flowers and leaves are used in folk medicine. The cultivated variety *T. crispum* can also be often found in Ukrainian flowergardens; it has shinier leaves and is somewhat more domesticated.

**Tanacetum vulgaris — Kudriavetz**

*Maruna. Chrysanthemum parthenium Pers.*

Perennial, often biennial. Height up to 2 feet, well-branched. Leaves pinnately light green in colour. Flowers white, single or double. The entire plant is aromatic. Easily propagated from seed. This plant tolerates a wide range of soil types. Its seeds were brought to Canada from Ukraine.

*Rumianok. Matricaria chamomilla L.*

Annual or biennial. Aromatic. Height up to 2 feet, well-branched. Leaves finely dissected. Flowers white. In Ukrainian folk medicine, the plant has played an important role in the treatment of various ailments. Only the flowers are used for medicinal purposes; they are harvested, dried in the shade and stored in airtight containers.

*Polyn. Artemisia absinthium L.*

This is a well-known hardy perennial with grey dissected leaves which are strongly aromatic. Height up to 4 feet. The Ukrainians brought it to Canada together with garlic. The flowers are small, yellow-green and arranged in bunches along the tops of the stems. It thrives throughout Ukraine in gardens, on fields and wastelands and on the steppes. Of the many varieties of this plant in the Ukraine, this species is considered to be the most

**Artemisia absinthium — Polyn**

valuable for medicinal purposes. A light alcoholic extract of the plant is believed to be effective in treating gastric disorders. Alcoholic beverage producers make use of absinthe in some of their products, for example, vermouth. The odour of the plant discourages pests such as fleas, moths and others. Ukrainian emigrants, on leaving their homeland, took along the seeds and dried leaves of this plant, not knowing whether they would find it in their new land. Canadian botanical manuals note that this species has been introduced to Canada from Europe.

*Krutay or Holovaten'. Echinops sphaerocephalus L.*

A biennial species, 5-7 feet high. The blooms are grey in colour. There are two other species of globe thistle, both perennial; one has white flower heads and the other blue. The blooming of these three species is sequential: the grey-flowered biennial blooms in July, the white-flowered perennial in August and the blue-flowered

**Echinops sphaerocephalus — Krutay - Holovaten**

perennial in September. The grey-flowered species is an excellent summer honey source and as such is useful for seeding wasteland. In Canada this plant has been cultivated on a large scale by M. Pankiw, a Ukrainian beekeeper in Dufrost, Manitoba. The leaves are used as green fodder when harvested during the first year at which time they are not very prickly.

*Blavatky or Voloshky. Centaurea cyanus L.*

An annual species. In Ukraine it grows wild among the weeds on roadsides and also in rye fields. Several differently coloured varieties have been derived from the wild type: The plant is now cultivated in flowergardens. It is well-branched, attaining a height of 1-2 feet. Blooming continues from April to August. The wild type flower colour is blue. There are several species of cornflower in Ukraine. The plant has been introduced to Canada with grain.

## Fam. Labiatae

*Vasyliok. Ocimum basilicum L.*

A strongly aromatic annual. Height 1-2 feet, stems densely clustered. Flowers are borne at the ends of the stems, bilabiate, sessile in the axils of opposite, simple oval leaves. The plant originates from southern Asia.

**Ocimum basilicum — Vasyliok**

In Ukraine it has become very widespread in gardens and flowerbeds. The dried plant is used for its aromatic qualities, largely in religious ceremonies. It is mentioned in certain folksongs.

In horticulture a variety of basil has been derived that has violet leaves; this variety is well suited for border plantings.

*M'yata kucheriava Mentha crispa L.*

This perennial is very widespread in the Ukraine and among Ukrainians in Canada. Height up to 2 feet. It propagates profusely from underground stems and spreads very rapidly. In a few years a single piece of stem can produce a large healthy plant. Another variety known as *Men-*

*tha piperita* is popular in Ukraine. Because of its aromatic properties it has become an industrial plant and is cultivated in large plantations, mainly for the manufacture of peppermint oil which is used in perfumes, medicines, confections, etc. It originates from Asia and has spread throughout Europe. It has been known in the Ukraine since ancient times. Ukrainian settlers brought pieces of its stem to Canada. Several species of mint are known but the peppermint is considered to be the most useful.

The aromas of mint and other aromatic plants, which have been brought from Ukraine and naturalized in Canada, spiritually unite the Ukrainian people with their native land. They remind the older immigrants of their youth, their home, church, school, their experiences and their loved ones. This sentiment of one's native but distant homeland is transferred from the older people to the younger and persists from generation to generation.

*Stepova m'yata. Nepeta ucrainica L.*

This species was originally donated to Assiniboine Park in Winnipeg in 1966 under the name *Nepeta* - Russian mint. When it was shown to the administration of the park that the plant is *N. ukrainica,* as originally described by the Swedish botanist Linnaeus, the administration changed the name on the plate, for an unknown reason, to *Nepeta catmint.* But the latter is a weed which has nothing in common with *N. ukrainica* except for congeneric status. It has quite distinct leaves and flowers.

This plant is perennial, attaining a height of up to 2 feet. The leaves are oval, attenuated and serrate. The flowers are blue in colour and comparatively large. It propagates rapidly by budding from the underground parts.

*Chebretz. Thymus serpyllum L.*

A semishrub, ½-1 foot high. The entire plant is aromatic. In Canada it has become known in horticultural catalogues as Ukrainian thyme (*T. odoratissimus*). It is

suitable for rock gardens. It grows wild in Ukraine in rocky areas and dry pastures. It is used in making wreaths.

*Tymyan. Thymus vulgare L.*

Annual. Height up to 1½ feet. It is cultivated in gardens because of its aromatic qualities. It is used in cookery and in medicine. In Ukraine it grows wild. It originates from southern Europe and is found in most Ukrainian gardens in Canada.

**Thymus serpyllum — Chebretz**

*Mayoran. Origanum hortensis L.*

Annual, aromatic. Height 1-2 feet. Marjoram originates from the Middle East and is widely distributed in Europe. It is used as a seasoning for food. In Ukraine there is also another species of marjoram called materynka.

*Materynka. Origanum vulgare L.*

An aromatic ornamental and medicinal plant. Perennial. In Ukraine it grows on calcareous soils in the steppes and on hills. The flowers are pink and densely clustered on the stem apices. Height up to 2 feet, stems, well-branched. It is used in flowergardens for borders. It

originates from Asia and is widespread in Europe. There are several varieties in Ukraine. In Canada it is found in the eastern provinces. Ukrainian settlers brought its seeds to Canada from Ukraine.

*Hysop or Yuzefok. Hyssopus officinalis L.*

A perennial semishrub that is cultivated for its aromatic and medicinal properties. In Ukraine it has escaped from cultivation and grows wild on dry soils, largely in the southern part. In Manitoba this plant has been mass cultivated as an excellent honey source by M. Pankiw of Dufrost. Blooms blue and white in July and August.

**Hyssopus officinalis — Hysop or Yuzefok**

*Rozmaryn. Rosmarinus officinalis L.*

A small arborescent evergreen shrub. Height 2-3 feet. Very aromatic. It originates from southern Europe. In the southern part of Ukraine it is cultivated in gardens while in the northern regions it is grown as a houseplant. Its oil, sold in pharmacies, has a tonic effect in cases of nervous disorders. It blooms with small pink flowers in May and June.

## Fam. Umbelliferae

*Liubystok. Levisticum officinale L. Koch.*

In Ukrainian flowergardens in Canada, as in Ukraine, one can find many favourite plants close to the Ukrainian heart which are characterized by their aromatic foliage. Liubystok is an aromatic rather than an ornamental plant, but the Ukrainians have always cultivated it around their homes. It has a sharp, characteristic odour and large, delicate, shiny compound leaves.

**Levisticum officinale — Liubystok**

Perennial, tall. Flowers small, yellow-green and borne in umbels. Roots stout. The plant originates from Iran. A powder was made from the dried and ground roots of this plant for seasoning food, similar to the celery salt used today. In Ukraine a broth was made from the plant and added to children's baths.

## Fam. Apocynaceae

*Barvinok. Vinca minor L.*

This plant has become so widespread in Ukraine that it has become associated with many customs, traditions and folksongs. Wreaths are made from the periwinkle on festive occasions such as weddings and traditional holidays. Girls would often use it to ornament their braids. It is a popular decorative plant and is often planted on graves because of its shiny evergreen leaves and attractive light blue flowers.

The plant is perennial, evergreen and trailing, attaining lengths of more than 4 feet. It easily overwinters beneath the snow cover. The flowers are borne on short erect pedicels inserted on the base of the plant. Blooming occurs in the spring. The plant is propagated by the rise of adventitious roots at the nodes of the trailing stems. It originates from southern Europe. Three species of periwinkles grow in Ukraine: *V. minor, V. major* and *V. herbacea.* The latter ranges from northern Ukraine south to Crimea.

## Fam. Cruciferae

*Matiola. Matthiola bicornis L.*

A grey, modest, well-branched annual. Height up to 1½ feet. Flowers moderately small, pink, strongly aromatic, closing during the day in sunlight and opening at dusk. Because of its plain appearance the mathiola is often planted in an inconspicuous corner of the garden or in boxes which can be moved from place to place. The plant is a favourite of many nations, including the Ukrainian people. It is cultivated throughout Ukraine. Ukrainian pioneers brought its seeds to Canada.

*Levkoyi. Matthiola incana R.*

A plant with very pleasantly aromatic flowers which are variously coloured and single or double. This plant has become a favourite of the Ukrainian people. It is similar in many respects to *M. bicornis* but must be started early indoors.

## Fam. Araliaceae

*Prochytan or Bliusch. Hedera helix L.*

This is a perennial climber which branches very rarely. In the Ukrainian forests in the south it climbs on trees and trails along the ground. Leaves palmately lobed, tough, leathery and shiny, with light variegations along the veins. It blooms at an advanced age, but even so, quite rarely. The branches and leaves bearing the inflorescences are quite distinct from the vegetative branches in appearance. The flowers, appearing in August and September, are yellow-green, small and clustered in heads. The plant is an excellent honey source when in flower. The fruits are black berries which ripen in the spring of the following year. In Manitoba this is a houseplant and never flowers.

## Fam. Buxaceae

*Bukshpan or Myrt. Buxus sempervirens L.*

A small, evergreen well-branched shrub. Leaves small, oval, leathery and shiny. Flowers small and white. The plant originates from subtropical Europe. In Ukraine it grows wild in the Crimean forests and is also cultivated there in flowergardens and parks as hedge plantings. In the forests it grows as a tree which can attain a height of 24-27 feet. The wood is very hard and therefore highly prized. In past times it was worth its weight in gold in Ukraine. Among other things, shuttles for weaving looms are carved from it. In Canada this plant is cultivated in greenhouses for its decorative branches which are used in bouquets.

## Fam. Crassulaceae

*Ochytok. Sedum acre L.*

A small, perennial evergreen plant. It grows in Ukraine on cliffs, rocky outcrops and in the steppes. The writer has encountered it in Winnipeg in the All Saints Cemetery, growing on a forgotten grave. It originates from southern Europe where it is used as an ornamental

plant in rockeries. In Ukraine much of it grows in the Carpathian Mountains and in Podilia. Several differently coloured varieties of it are known. It is used in folk medicine.

### Fam. Nyctaginaceae

*Nichna krasunia. Mirabilis jalapa L.*

Annual. Height up to 2 feet, well-branched. It blooms profusely with white, red or yellow flowers, depending on the variety. The flowers close in sunlight, opening at 4 o'clock in the afternoon and closing in the morning. The plant blooms abundantly until frost. The seeds are round and black, falling to the ground when ripe. The plant originates from Peru but has become widespread in Ukraine. It is used in flowergardens and flowering hedges.

### Fam. Tropaeolaceae

*Nasturtzia or Krasola. Tropaeolum minus L.*

Annual, pungent trailing plant. Leaves orbicular and peltate, on long petioles. Flowers moderately large, on long

**Tropaeolum minus — Nasturtzia or Krasola**

pedicels, the colour variable depending on the particular variety. The stem trails along the ground or is held above it on supports 2-4 inches long. It blooms from June until fall. The plant is propagated by seed. It originates from South America but has been known in Ukraine for a long time.

### Fam. Resedaceae

*Rezeda pakhucha. Reseda odorata L.*

Annual, Height up to 1½ feet, well-branched. Flowers small, aromatic, yellow-green, borne on the ends of erect shoots. Flowering is indeterminate. The plant is an excellent honey source and flowers from June until frost. It originates from Egypt. It is a popular favourite in Ukrainian gardens. Plants should be started from seed in the open ground for they grow quickly and dislike transplanting.

### Fam. Rutaceae

*Yasenetz or Neopalyma kupyna. Dictamnus albus L.*

This is an attractive perennial which grows wild in Ukraine on rocky lime slopes, open bush and southern meadows. It grows as a shrub with several erect canes 2-3 feet high. The leaves resemble those of the ash tree and are alternately pinnately compound. The flowers are rather large, similar to those of the Labiatae, and borne along the tops of the shoots. There are two species of gas plant: one is pink-flowered and taller while the other is white-flowered and smaller. The plants remain in bloom for a rather long time and are attractive. The plant has a lemony odour, especially in hot humid weather. The oil secreted from the leaves in the sunlight can be ignited at the touch of a lighted match. Because of this property the Ukrainians have called the plant the "burning bush" which is mentioned in the bible "Neopalyma kupyna".

**Dictamnus albus — Yasenok or Neopalyma Kupyna**

### Fam. Campanulaceae

*Dzvinochky. Campanula carpatica Jacg.*

Perennial. Height 1½ feet. It grows as a dense clump and flowers abundantly. The flowers resemble bells of moderate size, usually blue in colour but rarely white. It is propagated by seed and by division of the roots. It originates from the cliffs of the Carpathian Mountains in Ukraine. It overwinters well on the Canadian prairies.

### Fam. Ranunculaceae

*Toyad or Akonit. Aconitum napellus L.*

Perennial. Height up to 3 feet. The flowers are similar to those of larkspur, blue in colour although mottled varieties are known. It is tolerant of many soil types. Blooming occurs from June to the end of August.

**Aconitum napellus — Toyad or Akonit**

It is propagated from buds arising from the roots. The entire plant is poisonous but finds considerable use in pharmacology. It is very frequently encountered in Ukrainian gardens. There are 5 species of aconite in Ukraine; these grow wild in the steppes and forests.

## Fam. Caprifoliaceae

*Kalyna. Viburnum opulus L.*

The cranberry bush is encountered very frequently among the ornamental shrubs in Ukrainian-Canadian gardens. This decorative shrub attains a height of 6-10 feet. The leaves have three palmate lobes, reminiscent of those of grapes but smaller. The flowers are borne in umbels; those around the edges of the inflorescence are white, large and sterile while those in the centre are small, yellowish and fertile. The berries are red and remain attached to the bush throughout the winter, provided that

**Viburnum opulus — Kalyna**

they are not pecked off by birds in the autumn. The semiripened berries are used to make jams and jellies and are also often utilized in folk medicine. Brews made from the twigs are used in children's baths. The cranberry has long been valued in Ukraine for its medicinal properties and has played an important part in Ukrainian legendary romanticism. Flutes were fashioned from the wood; these instruments were noted for their expressiveness. Modern European and American horticulture has derived a variety of cranberry known as "snowball"; this plant has only sterile flowers and thus produces no fruits. Another species of cranberry known as "sheepberry" (*V. lantana*) is found in Canadian parks. Downy arrowood (*V. pubescens*) grows wild in Canadian forests; unfortunately it is not yet used for ornamental plantings. This latter species has black berries which are suitable for jams and wine.

## Fam. Rosaceae

*Stepovyj mygdal. Amygdalus nana L.*

This species is popularly known in Canada as Russian Almond but in reality it originates from the Ukrainian steppes. It is an attractive shrub with pink blooms, flowering in the early spring. It is easily propagated by suckering.

**Amygdalus nana — Mygdal Stepovyj**

The fruits are bitter almonds. This species is common in the Ukrainian steppes together with the steppe cherry (*Prunus fruticosa*). It is cultivated occasionally by Ukrainians in Canada and at the Experimental Horticultural Station at Morden, Manitoba.

## Fam. Tamaricaceae

*Chamaryshok. Tamarix odessana Stev.*

The Odessa Tamarisk is an attractive shrub which can be seen but rarely under cultivation in some Ukrainian gardens in Canada. It reaches a height of 5-6 feet. The flowers are small, light pink in colour and borne on long drooping stems. The leaves are small, greyish and unattractive. The entire shrub has an interesting aspect during flowering - it appears to be covered with a veil which trembles at the slightest breeze. These shrubs have been planted in Assiniboine Park and on the legislative building grounds in Winnipeg. Frost damage occurs during some winters and it is necessary to protect the

shrubs from severe frost. The plant originates from Asia; it is common in Crimea and along the shores of the Black Sea. It is propagated by seeds and cuttings. It is suitable for ornamental plantings in eastern and western Canada.

### Fam. Aceraceae

*Klen ostrolystyj. Acer platanoides L.*
*Klen tatarskyj. Acer tataricum L.*

Among trees, the Ukrainian people especially like to cultivate the linden and the maple which have been the subjects of many folksongs. The maple is characteristic of temperate climates. There are many maple stands in Canada, especially in the coastal forests. Maples are widely distributed throughout Ukraine and Europe. Both *A. platanoides* and *A. pseudoplatanus* originates from Europe. The species *A. tataricum* originates from Ukraine. The writer has introduced the first species to Winnipeg from eastern Canada through his son who works in Ottawa and

**Acer tataricum — Klen tatarskyj (Chornoklen)**

sends the seeds. The trees grow well in Winnipeg. An example which has been donated can be seen on the grounds of the technical school on Dufferin Avenue, in Winnipeg in the author's orchard and some private gardens.

### Fam. Gramineae

*Pysana trava. Phalaris arundinacea L.*

This ornamental perennial is a member of the canary grass tribe. Its characteristic leaves are adorned with white longitudinal stripes on a green background. The inflorescence is a panicle. The plant reproduces by cloning. It has been used in Ukraine as an ornamental plant for a long time. It is cultivated on a large scale in gardens and parks. One species of this grass, known as canary grass (*P. canariensis*), is grown for bird seed.

### Fam. Araceae

*Tatarske zillia or Lepekha. Acorus calamus L.*

This plant, so little known in Canada, has a magical significance for Ukrainians. It reminds them of their native land and beckons them to it. It is the "Yevshan Zillia" of the legends of the Ukraine, mystical and elusive, as has been described by the poet Mykola Woronyj.

It grows clumped in wetlands, marshes and along the shores of lakes, ponds and quiet rivers in Ukraine and other countries with relatively mild climates. In Canada it is found in Nova Scotia. The writer has found this plant growing on the bank of a pond in the garden of a Ukrainian agronomist at camp Dibrova, near Winnipeg Beach, Manitoba. The writer cultivates this plant in his garden by planting it over a buried basin in which water can collect.

The entire plant is strongly aromatic. The leaves are grasslike, 3-4 feet long and resemble those of wetland irises (*Iris pseudocorus*) but are longer and narrower. The roots are also iris-like. This plant is used in sugar manufacture and in medicine. In the United States it is known as "Indian turnip". It is used as an ornamental

**Acorus calamus — Lepekha - Tatarske zillia**

in park ponds along with water lillies. In Ukraine it was the custom to carpet the floors of churches and homes with the freshly harvested aromatic leaves during the religious holiday "Zeleni Swiata".

### Fam. Liliaceae

*Tzarskyj vinetz. Fritillaria imperialis L.*

This plant originates from Persia and Turkey. There are several varieties of it in Ukraine as well as in Britain. One of the species, *F. ruthenica,* is popularly known as "Ukrainian crown imperial"; in Ukraine this species can be found rarely in the wild state along meadows and lowlands in the regions of Kiev, Poltava, Kherson and Kharkiw. It blooms from April to the end of May.

## Fam. Liliaceae

*Konvalia. Convallaria majalis L.*

A small perennial plant. Leaves large, ovate-lanceolate, inserted on the base of the plant; generally there are only two leaves. The peduncles arise directly from the underground parts. Flowers white, delicately scented,

**Fritillaria imperialis — Tzarskyj vinetz**

arranged unilaterally along the axis and facing downwards like small bells. The fruits are round red berries. The plant reproduces mainly by division of the underground parts. Blooming occurs in May. The plant originates from Asia and has become acclimatized in Europe. Can be found in Canada in Ukrainian flower gardens.

## SOME DOMESTIC PLANTS

### Fam. Papilionaceae

*Fasolia. Phaseolus vulgaris L.*

Among the domestic plants cultivated by Ukrainian gardeners and farmers in Canada there is a significant proportion of varieties which were introduced to Canada through Ukrainian settlers. The writer has not pursued exhaustive research in this area but would like to note nonetheless certain varieties such as Ukrainian beans which are now quite widespread in Canada.

The strain of table beans known as "Olive Bomb" is one of the finest varieties of Ukrainian beans. This strain is called "Corn Bean" by Canadian seed suppliers. It was developed at the agronomical experimental station in Poltava, Ukraine before the First World War. The seeds were brought to Canada by Ukrainian settlers. A second strain of bean of Ukrainian origin is an elongate, cylindrical brown bean popularly known as "Bountiful" in Canadian catalogues. Among other Ukrainian beans is a large, oval, mottled variety which was sometimes called "Krasa"; it was often planted in corn fields because of its semi-climbing habit. This bean is used in Ukrainian beet soup (borsch). Another variety, "Odessa", is a white rotund bean, (also known as "Sugar Bean"), and is usually grown for export. The kidney bean, a flattened bean similar to the lima bean, also originates from Ukraine. The Ukrainian white bean is more rarely encountered; it is popularly known as "Ukrainian" or "Crown". This is the largest twining bean. It is a widely cultivated commercial bean in the Ukraine, especially in Galicia in the regions of Zhowkwa and Rohatyn. Ukrainian cooperative centers have exported much of it to the United States.

**In this manner Agronomist A. Ilnitsky of Vancouver promoted the cultivation of the Large White Bean.**

In Canada it is cultivated, among others, by A. Ilnitsky, a Ukrainian agronomist in Vancouver. It is rarely seen at markets because it yields little during dry seasons. It does best in moderately humid areas.

### Fam. Liliaceae

*Chasnyk. Allium sativum L.*

This plant is used by the Ukrainian people for medicinal purposes and as a seasoning for various foods, such as beet soup (borsch), dill pickles and sausages and other meat products. Its dispersal in Canada is due in large part to Ukrainian settlers.

### Fam. Cruciferae

*Khrin. Armoracia rusticana G. M. Sch.*

Horseradish, although a plant utilized by many ethnic groups, owes its wide distribution in Canada in large part to Ukrainian settlers. In the Ukraine this plant grows wild near rivers, in damp meadows and wetlands. Ukrainian gardeners in Canada cultivate horseradish as a seasonal vegetable which is used mostly in Christmas and Easter dishes. Its leaves have been used with great success in cabbage rolls at the Ukrainian Festival at Dauphin, Manitoba. The leaves are also used in the processing of dill pickles, together with dill and cherry leaves.

### Fam. Umbelliferae

*Krip. Anethum graveolens L.*

This plant was brought to Canada by Ukrainian settlers and is now very widespread in Ukrainian gardens. It is dried, salted, preserved, etc., in order to last the winter and is used as a seasoning for certain dishes.

### Fam. Polygonaceae

*Schavel or Kvasok. Rumex acetosa L.*

The leaves of this perennial plant are used as seasoning for certain foods during the early spring, especially for Ukrainian "green borsch". This plant is the first green

source of vitamins in the spring for the Ukrainian household. In the markets it is sold almost as a gourmet item and the demand much exceeds the supply.

### Fam. Chenopodiaceae

*Loboda. Chenopodium album L.*

In some areas this plant is used in the early spring like spinach. It is annual, with large fleshy leaves. There are three varieties of this plant in the Ukraine: red (also called "Borsch"), green and yellow. Various strains of these are also known. The red variety is often sown in the fall for use in ornamental plantings the following year. It is thickly sown for this purpose in Assiniboine Park in Winnipeg; well-spaced plantings produce an even greater decorative effect. There are as many as 13 varieties of pigweed currently recognized; most of these are annual weeds which survive in gardents and wastelands.

### Fam. Compositae

*Soniashnyk. Helianthus annus L.*

This decorative oil-bearing plant is a favourite of the Ukrainian people. The Ukrainians, as well as German Mennonites from the Ukraine, brought the seeds of the sunflower to Canada from Ukraine. The Mennonites now cultivate it as an industrial source of sunflower oil. The sunflower attains a height of 6-10 feet. The inflorescences are large yellow capitula up to 1½ feet in diameter. The leaves are large, cordate and alternate. The entire plant has a scabrous texture. It originates from Mexico where it grows wild. It was introduced into Ukraine in the 18th century; the Ukrainian Hetman Kyrylo Rozumosky brought its seeds from Europe in 1745. The Spaniards introduced it into Europe. In Ukraine the sunflower has undergone a lengthy process of selection and has become a favourite and useful plant.

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In 1897 the United States Department of Agriculture sent a special delegation of experts to Ukraine with the aim of repatriating the sunflower in America. Currently

the United States has over 3000 hectares under sunflower cultivation while Canada has about 9000 hectares under this crop. In 1964 in the Ukraine (URSR) there were 1,753,800 hectares under sunflower, according to H. Hordienko (see literature p. 40).

## OTHER VEGETABLES

Other vegetables such as carrots, parsley, onions, beets, etc., are not discussed here because they have been so well assimilated into Canadian agriculture and have become so intermixed with local and popular varieties that it is difficult to separate them according to their "ethnic" origins. Nevertheless the following Ukrainian favourites, which can be encountered in some Ukrainian gardens in Canada, should be mentioned.

### Fam. Umbelliferae

*Kmyn. Carum carvi L.* Biennial.
*Kolendra. Coriandrum sativum L.* Annual.

### Fam. Ranunculaceae

*Chornushka. Nigella arvensis L.* Annual.

### Fam. Cannabinaceae

*Konoplia. Cannabis sativa L.* Annual.
It is against the law to cultivate this plant in Canada.

## FRUIT TREES AND ORNAMENTAL SHRUBS

In the case of fruit trees and shrubs, the situation is much more complex than it is with herbaceous plants. The Ukrainian settlers brought the seeds of fruit trees with them to Canada. These they attempted to cultivate, with the hope of eventually establishing orchards on the Canadian prairies. However many of the seedlings were killed by the first harsh winters or became scrawny shrubs hardly rising above the ground, and spending the winters under the protective coat of snow. If normally formed trees did result from the seedlings, their fruits were often inedible. Cherries, plums and pears did not survive beyond the first winter; on account of the severe frost they died back to ground level or sometimes even below ground level as well. After such sad experiences, dedicated Ukrainian pomologists began to plant orchards of local varieties of crabapples, crossing them with the introduced trees which did manage to survive the bitter Canadian prairie winters. Better and hardier trees from nurseries in eastern Canada were added to the prairie orchards. Such mixed plantings became the basis for the production of seeds and seedlings which underwent selection for hardiness. This process took a long time. However the desire to obtain good frost-resistant varieties that would be eventually suitable for the climates of Manitoba, Saskatchewan and Alberta provided the impetus to achieve this goal. Gardeners entered into contests, competing with nature and with each other.

The Ukrainian and Canadian press have noted several Ukrainian farmers and gardeners who have made significant contributions to Canadian pomology. These people conducted pioneering experiments with the acclimatization of fruit trees and left many noteworthy achievements.

## PIONEERS OF POMOLOGY

ZWARYCH, Peter of Vegreville, Alberta. Deceased in 1966. On coming to Canada 1900 he immediately became interested in the flora of Alberta. In time he established an orchard of local crabapples and fruit shrubs. He obtained seeds from eastern Canada and attempted to select for frost-resistance and suitability for his particular locality. He experimented with as many as 80 varieties of apples, pears, plums and various fruit and ornamental shrubs. He reported his results to the Ukrainian press and encouraged people to plant his proven varieties in their orchards and farms and even gave away grafted seedlings. Unfortunately, his orchard was later destroyed by an outbreak of fire blight. This disease is caused by the bacterium *Bacillus amilovorus* and is still incurable. The leaves on the ends of the branches become yellow and later brown in colour; the disease spreads to the current season's young shoots and fruit-bearing twigs. The tree gradually dies unless the affected parts are removed and burned. For Zwarych it was a hopeless task to fight this infestation in his huge, mature orchard.

NEGRYCH, Gregory. Chronologically, Gregory Negrych was the second pioneering Ukrainian pomologist. He was a teacher from Venlav, Manitoba. Like Zwarych, he established a multi-acre orchard from his seedlings and various strains of local and introduced trees. His efforts resulted in several fine frost-resistant apple strains which were awarded top prizes in provincial competitions. In 1937 he received a citation from the Manitoba Department of Agriculture for the development of certain fruit trees. He also established a nursery of fruit tree seedlings. One of his apple varieties has been namd after him — "Negrych".

YUSKIW, S. This pomologist had a farm near Winnipeg on which he established an orchard which carried the name "Sadok". Yuskiw had a nursery of fruit trees, ornamental shrubs and flowers. He invested a great deal

of work into the cultivation of his apples and plums in Winnipeg and the surrounding farmland. He also began to cultivate trees from the seeds of Ukrainian apples, pears, plums and cherries. Eventually, after lengthy experimentation, he succeeded in obtaining several fine strains of apples which were similar in shape and coloration to the native Ukrainian varieties. He named them "Spasiwky", "Tsyhanky", etc. One of his varieties of plums was named "Claudia"; he also produced the plum-cherry "Roxolana" as well as other strains. The "Spasiwky" apples were awarded first prizes at provincial competitions. A plum, given as a gift to Dr. Mandryka, was used by the writer as a source of twigs which were grafted onto wild stocks. The original plum tree bore fruit for 30 years.

PANKIW, M. This pomologist was from Dufrost, Manitoba. He was also probably the largest beekeeper in Manitoba, averaging 700-1000 hives at any one time. After his arrival in Canada from Ukraine, he commenced agronomical studies, and having completed these, he took up farming. He specialized in beekeeping and the cultivation of orchards. At first he planted a windbreak around his farm. His first experiments were conducted with Ukrainian seeds of cultivated fruits and berries which he obtained from his brother. Later he added the seeds of local crab-apples and cultivated fruits, and from these he produced hybrids which he used for selection. In his research he made use of varied agronomical literature which he had in his rather extensive library. After many years he succeeded in obtaining several good frost-resistant varieties which are registered at the research station at Morden, Manitoba. One variety of green gooseberry known as "Skinners Nursery", was derived from native Ukrainian seed and has been named after him. Eventually the work in the immense apiary and the large cereal farm as well as advancing years prevented the continuation of his experiments. It is also necessary to mention his research

on improved honey-bearing plants for his apiary. He imported many plants from the beekeeping cooperative "Rij" in Lviv in the Ukraine. Some of these are listed below.

### Fam. Compositae

*Krutay holovatyj. Echinops sphaerocephalus.*
*Krutay syniy - E. Ritro L. or E. Ruthenica M.B.*
This plant has been discussed on page 12.

### Fam. Boraginaceae

*Syniak zwychaynyj. Echium vulgare.*
This plant was mass-cultivated in the past by the internationally renowned Ukrainian beekeeper and academician, P. Prokopovich (1775-1850), inventor of the frame hive and queen's excluder. His giant apiary was located near the historic city of Baturin in Ukraine.

*Chornokorin'. Cynoglossum officinalis.* Biennial.

### Fam. Hydrophyllaceae

*Fatzelia. Phacelia tanacetifolia Benth.* Annual.

### Fam. Labiatae

*Khvastytzia sibirska. Leonurus siberica.* Annual.

*Melisa turetzka. Dracocephalus moldavica and e. c. t.*

FEDUN, W. of Andrew, Alberta. Commencing in 1919, during the ensuing 10 years he conducted acclimatization trials with fruit trees from the Ukraine which he grew from seed. He succeeded in acclimatizing a variety of the "paperivka" apple which now bears his name.

DENIS, P. This teacher from Buchanan, Saskatchewan, carried out acclimatization trials with fruit trees of Ukrainian origin on his 4-acre orchard and nursery. The research stations at Morden and Rosten have named one of his plum varieties after him — "Denis".

WOLOSHYNOWSKYJ, Yu. By vocation Woloshynowskyj was a high school teacher in Winnipeg, Manitoba. In collaboration with the writer, he began experimentation in 1949 on the acclimatization of frost-, disease- and pest-resistant fruit trees and shrubs in Manitoba.

These studies were conducted on Woloshynowskyj's 4-acre lot near Winnipeg. Seeds and cuttings from fruit trees at research stations in Morden, Manitoba; Ottawa, Ontario; Alberta and Saskatchewan, as well as apples and plums found growing locally in gardens and empty lots were used in the experiments. The trees yielding superior fruits were used as sources of cuttings which were grafted onto other seedlings.

After 14 years of meticulous work came the first good new varieties of plums, plum-cherries and sand cherries. Later years also yielded fine new varieties of apples and crabapples. Unfortunately the work in Woloshynowskyj's orchard had to be discontinued in 1963 because of his untimely death. His estate was sold by his heirs. The orchard and nursery came into indifferent hands and were destroyed. The only remnant that survived was a collection of about 100 fruit trees and shrubs in the writer's garden, where studies are being continued.

Almost every year examples of various fruits from this orchard obtain awards at provincial exhibitions. The orchard is also the source of many apple, plum and berry cuttings, grafted seedlings, etc., which are distributed to serious gardeners each year.

An interesting attempt to acclimatize the Ukrainian walnut (known as "paperivka" in the Ukraine) was made in Manitoba. The seeds had originally been brought from the Ukraine by Rev. P. Krat. Cultivation attempts were made at the home of T. Humeniuk, a Toronto lawyer. In Toronto the acclimatized walnuts grow into large trees, but in Winnipeg they are reduced to small shrubs. Several such shrubs have been planted near St. Andrew's College, a Ukrainian college on the grounds of the University of

Manitoba. Two of these shrubs can be seen near the old bulding of St. Andrew's College on Church Avenue in Winnipeg. After considerable experimentation it has become apparent that this walnut can be successfully cultivated in eastern Canada but the frost is too severe for it to grow in Manitoba.

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Obviously, this brief list of Ukrainian pomologists and their introduced fruits is far from complete and is limited only to the prairie provinces. A more comprehensive review of the contributions of Ukrainian people to Canadian pomology, horticulture, agronomy and beekeeping has yet to be made.

It should be emphasized that in all of this research and experimentation our intellectual pioneers were motivated by a love, integral to the Ukrainian people, for nature, health and cultural enrichment. All of them followed in the footsteps of Ukrainian biologist M. F. Kaschenko, (1855-1938), professor at the University of Tomsk, a notable pioneer of the acclimatization of fruit cultures, in Siberia and later in Ukraine near Kiev, where he was a professor at the University of Kiev. Under his advice conducted his research work the well-known Siberian researcher of tree culture, Ivan Michuryn.

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Akonit or Toyad — Aconite.
Barvinok — Periwinkle.
Blavatky — Corn flower.
Bukshpan or Myrt — Common Box of Myrthus.
Blusch or Prochytan — English Ivy.
Vasyliok — Basil.
Voloshky — Corn flower.
Hysop or Yusefok — Hyssop.

Dzvinochky karpatski — Bell flower carpat.

Zazuleni cherevychky — Aconite.
Kmyn — Caraway.
Kvasok or Shchavel — Sour/dock.
Kanuper — Tansy (balsam).
Kudriavetz — Tansy /crispum/.
Kalyna — Cranberry bush.
Krutaj or Holovaten — Glob thistle.
Kupyna or Jasenok — Burning bush.
Krip — Dill.
Kolendra — Coriander.
Khrin — Horse radish.
Konopla — Hemp or Cannabis.
Konva'ia — Lily of the Valley.
Kupchaky or Povniaky — Aztek /Marigold/.

Levkoja — Mathiola.
Loboda — Goose food.
Lepekha — Sweet flag.
Lypa — Linden or Bass wood.
Liubystok — Lovage.

Malva — Mallow or Hollihock.
Mygdal Stepovyi — Almond Russian.
Matiola — Matthiola.
Maruna — Fever few.
Myrt — Common Box or /Myrthus/.
Kucheriava Myata — Mint/crisp.
Majoran — Majoram.
Materynka — Wild Majoram.

Nichna krasunia — Morabilis.
Nasturtzia — Nasturtium.
Nahidky — Pot Marigold.

Ochytok — Stone crop.
Pysana trava or panska trava — Silk grass.
Polyn — Absinth.
Prochytan or Plusch — English Ivy.

Rezeda — Reseda or mignonette.
Rozmaryn — Rosemary.
Rumianok — Chamomile.

Soniashnyk — Sunflower.
Syniak — Blue weed.
Stepova miata — Steppe mint /Ukrainian/.

Tzarsky Vinetz — Crown Imperial.
Tatarske zilla or Lepekha — Sweet flag.
Tymian — Lemon thyme.

Fasolia — Bean.
Fatzelia — Facelia.

Khvastytzia — Motherwort.

Chabretz — Thyme.
Chornokorin — Hound's Tongue.
Chamaryshok odesky — Tamarisk Odessa.
Chasnyk — Garlic.
Schawel — Sour dock.
Yasenetz or Neopalyma Kupyna — Gass plant or Burning bush.

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