

Rosaceae family intergeneric hybrids

Introduction

The Rosaceae subtribe Pyrinae (formerly subfamily Maloideae) includes an unusually large number of intergeneric hybrids, some having natural origins and others resulting from intentional cross pollinations. For example, hybrid clones with garden origins include \times Sorbopyrus (*Sorbus* x *Pyrus*), which has been known since the early 1400s and \times Crataemespilus (*Crataegus* x *Mespilus*) since the late 1800s. Much of the work on these hybrids in the 20th century was by Ivan Michurin in the former Soviet Union.

There are several hybrid cultivars in Europe, Asia and North America used both on a home and commercial scales for fruit production. This article aims to give an overview of these interspecific hybrids, some of which have previously been assumed to belong to a single species.

X Amelasorbus

Hybrids of chokeberry (*Aronia*) and *Sorbus*.

X Amelosorbus jackii

Amelanchier alnifolia x *Sorbus sitchensis*

Controlled crosses have been made of these species, although natural populations of \times *Amelasorbus* are known from western North America.

X Crataegomespulis

Hybrids of hawthorn (*Crataegus*) and medlar (*Mespilus germanica*) - not to be confused with the graft chimera +*Crataegomespilus*.

X Crategomespilus dardarii

Slow growing shrub reaching 3m x 3m. Leaves, flowers and fruits medlar-like. Hardy to zone 6.

X Crataegosorbus

Hardy hybrids of hawthorn (*Crataegus*) and *Sorbus*.

\times Crataegosorbus miczurinii

'Ivans Belle' = 'Granatnaja'
Hybrid of *Sorbus aucuparia* x *Crataegus sanguinea* bred by Michurin in Lithuania.



'Ivans Belle'

A tree growing 3 to 7m high with glossy dark green compound leaves (with unpaired leaflets) which turn red in autumn. White (tinged pink) flowers in May-June. Fruit cherry sized, pomegranate red, in clusters, borne abundantly, sweet and sour, tasty, ripens September-October. Eaten raw or used in juices, jams, jellies, compotes, liqueurs. High in vitamins A and C, yields can reach 15kg per tree. Can be propagated from cuttings.

X *Malosorbus*

Hybrids of apple (*Malus*) and *Sorbus*.

X *Malosorbus florentina* (Syn *Malus florentina*)

Hybrid of wood apple (*Malus sylvestris*) and wild service tree (*Sorbus torminalis*). A small rounded tree from southern Europe with 1cm red fruits.

X *Pyronia*

Hybrids of pear (*Pyrus*) and quince (*Cydonia oblonga*).

'PQ-5' – hybrid of *Pyrus pyrifolia* x *Cydonia oblonga*

X *Pyronia veitchii*

Pyrus communis x *Cydonia oblonga*

Has become a useful virus sensitive indicator plant.

'Luxemburgiana' is a form available from nurseries. Fruits round, to 8cm diameter, sweet and soft flesh, good flavour. Flowers spring and autumn.



x *Pyronia veitchii*

X *Sorbaronia*

Hardy hybrids of *Sorbus* and *Aronia*, making very hardy shrubs.

X *Sorbaronia dippelii*

Sorbus aria x *Aronia melanocarpa*

Completely fertile and sets seeds abundantly.

X Sorbaronia fallax

'Bursinka': later ripening selection, ripening in September.

'Ivan's Beauty' (= 'Likjornaja'): Small tree or shrub to 4m high with pinky-white flowers in spring, clusters of large deep red berries in autumn and beautiful autumn foliage. Fruits used cooked, for juice, jam etc. Ripens late August.



'Ivans Beauty'

X *Sorbaronia mitschurinii*

Sorbus aucuparia x *Aronia melanocarpa*

Leaves are broader and fruits larger than wild *Aronia melanocarpa*. Self fertile. Historically extensively cultivated in the former Soviet Union with the fruits used for juice, wine and jams. More recently cultivated commercially with the fruit used as a flavouring, food colourant, and component of fruit juice mixes.

Recently, Genetic testing has found that some cultivars assumed to be *Aronia melanocarpa* are in fact hybrids belonging here. Apparently originating from deliberate crossing, it has been suggested by Ivan Michurin in the early 20th century. They include:

'Nero'

'Viking' – this is 75% aronia and 25% mountain ash

X *Sorbaronia* 'Burka'

Sorbus aucuparia x (*Sorbus aria* x *Aronia arbutifolia*)

Shrub, 2-3m high. The berries are dark burgundy and sweet. Ripens late August.



X *Sorbaronia* 'Burka'

× **Sorbaronia sorbifolia**

Backcross of cultivar Stewart with *Aronia melanocarpa*. Fruits black, taste like an apple and very sweet.

X Sorbomespilus

Hybrids of *Sorbus* and medlar (*Mespilus germanica*.)

'Desertnaja' - hybrid of X *Sorbaronia* 'Likjornaja' x *Mespilus germanica*

Shrubs, 1-3m high. A Michurin cross. The berries are orange-red, juicy, very sweet and tasty with a spicy aftertaste. Very early to ripen.



X Sorbomespilus 'Desertnaja'

X Sorbopyrus

Hardy hybrids of *Sorbus* and *Pyrus*.

X Sorbopyrus auricularis

Hybrids of European Pear (*Pyrus communis*) and the Common Whitebeam (*Sorbus aria*). The original hybrid, known as the Bollwiller Pear, first arose at Bollwiller in Alsace, France, before 1619, and has mostly been propagated by grafting since then; it is nearly sterile, only rarely producing any viable seeds. Two successful seedling propagations have been named as the cultivar 'Bulboformis' and as the species *Pyrus malifolia*.

'Bulboformis'

Fast growing tree, fruit slightly pear shaped, 4cm x 5.5cm, sweet and juicy.



***X Sorbopyrus auricularis* 'Bulbiformis'**

'Shipova'

A small to medium-sized tree growing to 10-18 m tall, with deciduous oval leaves 7-11 cm long and 5-6 cm broad. The fruit is a pome 2.5-3 cm long; it is edible with a sweet, yellowish flesh, which tastes similar to an Asian pear. Originates from Serbia/Montenegro.

'Smokvarka'

Originates from Macedonia, although may be the same as 'Shipova'.

'Tatarova'

A seedling of the original Bollwiller pear selected in Prague in the early 20th century. A tree with white flowers and yellowish-orange fruit, honey-sweet, juicy, excellent eating.

Sorbus aucuparia x Pyrus communis

'Krassavitsa' *Sorbus aucuparia x Pyrus communis*

Tree or shrub bush to 3-4m.

'Rubinovaja'

Tree or shrub to 3-4m. The berries are medium-sized, red, and pleasantly tart and sweet.

Sorbus aucuparia x Pyrus sp.

'Eliit'

'Zoltaja ': Tree to 4-5m high. The berries are medium-sized, reddish yellow, apple-like and juicy.

***X Sorbopyrus* 'Baciu 1' and 'Baciu 2'**

Originate from Romania, possibly *Pyrus nivalis x Sorbus aucuparia*. Fruits are edible, medium sized.

X *Sorbopyrus* 'Alaya Krupnaya'
(*Sorbus aucuparia* X *Pyrus*) X *S. moravica*
Estonian cultivar.

Other hybrids

'**Titan**': hybrid of 'Burka' x *Malus* sp. x *Pyrus* sp.
Very hardy, a Michurin cross. Tree / shrub to 3m+. The berries are like large rowan berries, dark red, in bunches. Flesh yellow, slightly sour but not bitter. Ripens mid August.
Previously included in x *Sorbaronia fallax*.



'Titan'

Cultivar list

Cultivar	See above in
Alaya Krupnaya	X <i>Sorbopyrus</i>
Baiciu 1	X <i>Sorbopyrus</i>
Baiciu 2	X <i>Sorbopyrus</i>
Bulbiformis	X <i>Sorbopyrus auricularis</i>
Burka	X <i>Sorbaronia</i>

Cultivar	See above in
Bursinka	<i>X Sorbaronia fallax</i>
Desertnaja	<i>X Sorbomespilus</i>
Eliit	<i>X Sorbopyrus</i>
Granatnaja	<i>X Crataegosorbus miczurinii</i>
Ivans Beauty	<i>X Sorbaronia fallax</i>
Ivans Belle	<i>X Crataegosorbus miczurinii</i>
Krassavitsa	<i>X Sorbopyrus</i>
Likjornaja	<i>X Sorbaronia fallax</i>
Luxemburgiana	<i>X Pyronia veitchii</i>
Nero	<i>X Sorbaronia mitschurinii</i>
Rubinovaja	<i>X Sorbopyrus</i>
Shipova	<i>X Sorbopyrus auricularis</i>
Smokvarka	<i>X Sorbopyrus auricularis</i>
Tatarova	<i>X Sorbopyrus auricularis</i>
Titan	Other hybrids
Viking	<i>X Sorbaronia mitschurinii</i>
Zoltaja	<i>X Sorbopyrus</i>

Sources

The ART currently supplies Ivans Belle, Nero, and Viking, and hopes to obtain others soon. Other nurseries in Europe and North America are listed in the references below.

References

Postman, J.D. 2011. Intergeneric hybrids in Rosaceae subtribe Pyrinae (formerly subfamily Maloideae) at USDA genebank. *Acta Horticulturae*. 918:937-943.

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