



# Hepatica

a passion

Jürgen Peters



# Hepatica

## Liverleaves -

## A lifelong passion II

with  
more than 650 colour photographs  
more than 60 drawings  
and photo collages

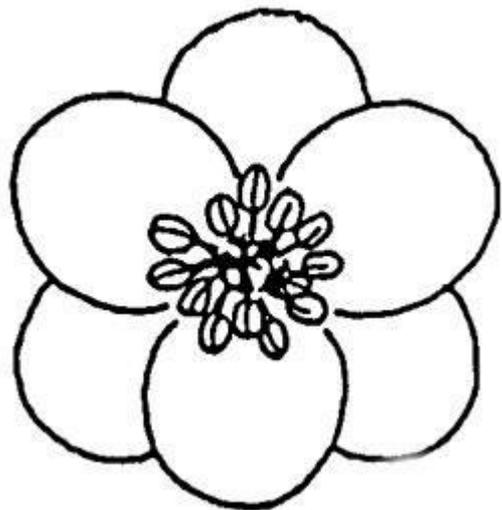
This issue is mainly focused on the **interspecies hybrids**.  
Garden-worthy liverleaves for everyone,  
collectors and Hepatica enthusiasts!

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Susanne Peters: text pages 5-6 & 20-21.

Sebastian Urban: photographs front and back cover,  
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Bauer: photographs *H. falconeri* in habitat, Ile-Alatau, page 54.

Josef Auer: photo-collages pages 8, 91 & 98.

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*Hepatica nobilis* var. *nobilis* 'Blaues Wunder' JP

**Winter went,**

**Spring came,**

**which brings liverleaves flowery charm anew!**

J. Peters



## A liverleaf's tale continued...

Do you remember me? I do not want to boast but I am quite special. My name is 'Blaues Wunder' (Blue Wonder), or to use my full and correct name: *Hepatica nobilis* var. *nobilis* 'Blaues Wunder'.

I am an exceptionally beautiful cultivar, selected from the North European endemic liverleaf species. As evidenced by my three-lobed leaves, I belong to the Triloba series. Completely different from the species of the Angulosa series, which are characterized by their larger, five-lobed leaves and especially by their horizontally growing buds.

The Romanian side of my family, from the Angulosa series (*Hepatica transsilvanica*), keep themselves a bit away from us, that is why they look so different. Big, stately, growing just as well in dryer soils...Oh, I am getting ecstatic.

During the last couple of years, I attended a lot of our "family reunions", that is how I came to know there are a lot of different forms and geographical varieties in our family. There are those with wonderfully marbled leaves, for example. A characteristic most often seen in our relatives from the Pyrenees. And one of my aunts (*Hepatica nobilis* var. *glabrata*) from Scandinavia has no red pigments at all, that makes her a true albino in green. If I wanted to meet even more special relatives, I should travel a bit further. My parents maintain a lively correspondence with America, where a few relatives are living (*Hepatica nobilis* var. *acuta* and *Hepatica nobilis* var. *obtusa*). It is said they have a lot more hair on their flower- and leafstalks. It seems the leaf cover through which they have to come up in spring is a lot thicker there, so the hairs help the leaves to push through.

Excitingly, we also got a message from an uncle in Korea. He told of a giant in his family, who lives solely on an island (*Hepatica maxima*). As tall as 25 centimetres and with its unusually large leaves and seed heads, it is a very remarkable species. In Korea you can also find the elegant *Hepatica nobilis* var. *insularis*. The leaves with their incredibly beautiful patterns, that die down in winter, are worth being highlighted here.

While we are on the topic of my Asian relatives, there is also our small Chinese grandmother (*Hepatica henryi*). She appears to be closer related to our Romanian cousins, since her small leaves are also five-lobed. This lady is very elegant. On a well-known mountain another of the Angulosa series is growing (*Hepatica yamatutai*). This one is a lot bigger, with very hairy leaves and the underside of the leaves are crimson coloured.

Ever since my childhood, I was told the story of a lost relative. And now he was rediscovered in Central-Asia. *Hepatica falconeri* belongs to the five-lobed species but is often considered to be the archetype of *Hepatica*.



*H. transsilvanica*



*H. nobilis* Marmorata



*H. nobilis* var. *glabrata*



*H. nobilis* var. *acuta*



*H. nobilis* var. *insularis*

Actually, I think he has little in common with us - very deeply divided leaves and very elegant flowers. I hope he does not think himself superior...

But we are the proudest of our Japanese connections. In that country the Hepatica's have been held in high esteem since the first century CE. There are even cities that carry this flower in their coat of arms. The colours and forms of those family-members are a lot more variable than those of the species in our native woods. Enough so to make me a bit jealous. But on the other side I have been told that a lot of these Asian species are not strong enough to withstand our winters. They are just not used to our muddy/wet winters.

Oh well, that just means they must get the best place in the garden. We, the locals, are not so demanding. It would be even better if we could combine our best characteristics. Just like in nature, where the strongest reproduce and where new adaptations help our survival. But, to that end, we need help since we are too far apart for the bees or the wind to help us. That is why I talked to some gardeners...

And for sure, the first attempts were made decades ago by a Swedish person. In Germany, the first crosses were made between *Hepatica nobilis* var. *pubescens* and *Hepatica transsilvanica*. The wonderful children from that cross are often grouped as *Hepatica x euroasiatica*. Bi-coloured flowers, quick to increase and just as strong as my indigenous sisters and brothers.

When *Hepatica transsilvanica* is used as one of the parents, the progeny is very vigorous and garden worthy, so it is clear that is the future. The focus of my breeder for example is the hybridisation of *Hepatica transsilvanica* with the wonderful Japanese forms and colours (*Hepatica x trans-japonica*). Not because we, as indigenous plants, are not beautiful, but you should have seen the corner with the young people at our last family reunion. Big, good looking forms with bright pink or dark blue flowers. With healthy leaves and they withstand our Northern German weather perfectly. I look forward to the next reunion, to see if the family will have grown some more...

I hope to have sparked your interest in me and my extensive family. When you are in the neighbourhood, please visit us in our Hepatica-garden in the real North.

You're welcome, your liverleaf: **'Blaues Wunder'**



*H. yamatutai*



*H. henryi*



*H. maxima* buds



*H. x euroasiatica*



*H. x trans-japonica*

## Hepatica - Liverleaves

These adorable gems of the forest are becoming more and more popular. For a long time, these plants were mostly known as a Japanese status symbol. In Niigata it has become one of the symbols of the prefecture since 2008. Even though the popularity is rising quickly in Europe, it's still a long way of the Japanese status. I'd like to give you an overview of the genus in this book.

### Summary:

Hepatica is a part of the Ranunculaceae family, there are 6 species and a lot of varieties and forms. Add to those the many hybrids. They only grow in the wild in the northern temperate zones of the world.

### Hepatica Triloba Series

#### Europe:

*Hepatica nobilis* var. *nobilis*  
*Hepatica nobilis* var. *pyrenaica*  
*Hepatica nobilis* var. *glabrata*  
*Hepatica nobilis* f. *crenatiloba*  
*Hepatica nobilis* f. *marmorata*  
*Hepatica nobilis* f. *multiloba*  
*Hepatica nobilis* f. *minima*

*Hepatica nobilis* 'Einblatt'  
*Hepatica nobilis* 'Kleeblatt'  
*Hepatica nobilis* 'Abruzzen'  
*Hepatica nobilis* 'Gotland'  
*Hepatica nobilis* 'Oeland'

#### North America:

*Hepatica nobilis* var. *acuta* (*H. acutiloba*)  
*Hepatica nobilis* var. *acuta* f. *marmorata*  
(*H. acutiloba* f. *marmorata*)  
*Hepatica nobilis* var. *acuta* f. *multiloba*  
(*H. acutiloba* f. *multiloba*)  
*Hepatica nobilis* var. *obtusa* (*H. americana*)  
*Hepatica nobilis* var. *obtusa* f. *marmorata*  
(*H. americana* f. *marmorata*)



Festival Niigata 2008, award of the 'Flower prefecture Niigata'



*H. nobilis* blue-violet



*H. nobilis* var. *acuta* Alba

**Asia:**

**China and Korea:**

- Hepatica nobilis* var. *asiatica*
- Hepatica maxima*
- Hepatica nobilis* var. *insularis*

**Japan:**

- Hepatica nobilis* var. *japonica* f. *japonica* (*H. japonica*)
- Hepatica nobilis* var. *japonica* f. *lutea* (*H. japonica* f. *lutea*)
- Hepatica nobilis* var. *japonica* f. *magna* (*H. japonica* f. *magna*)
- Hepatica nobilis* var. *japonica* f. *variegata* (*H. japonica* f. *variegata*)
- Hepatica nobilis* var. *pubescens* (*H. pubescens*)

**Hepatica Angulosa Series**

**Europe:**

- Hepatica transsilvanica*

**Central Asia:**

- Hepatica falconeri*

**Asia:**

- Hepatica henryi* var. *henryi*
- Hepatica yamatutai* var. *yamatutai* (*H. henryi* var. *yamatutai*)
- Hepatica yamatutai* f. *marmorata*

**Hepatica Hybrida Series (H. Media Series)**

(Green) = Working name (nomen nudum), not officially recognized!

- Hepatica henryi* x *nobilis* var. *obtusa* (*H. x henryi-obtusa* JP)
- Hepatica henryi* x *nobilis* var. *japonica* (*H. x henryi-japonica* JP)
- Hepatica nobilis* x *japonica* (*H. x eurasia* GP)
- Hepatica nobilis* var. *glabrata* x *nobilis* f. *marmorata*
- Hepatica transsilvanica* x *falconeri* (*H. transs-falconeri* JP)
- Hepatica transsilvanica* x *nobilis* var. *japonica* (*H. x transs-japonica* JP)
- Hepatica transsilvanica* x *nobilis* var. *crenatiloba* (*H. x transs-crenata* JP)
- Hepatica transsilvanica* x *nobilis* var. *acuta* (*H. x transs-acut* JP)
- Hepatica x euroasiatica* (*H. transsilvanica* x *pubescens*)
- Hepatica x media* (*H. transsilvanica* x *nobilis* var. *nobilis*)
- Hepatica x schlyteri* (*H. nobilis* x *maxima*)
- Hepatica x schlyteri* x *transsilvanica* (*H. x petersii* JP)
- Hepatica yamatutai* f. *marmorata* x *nobilis* var. *crenatiloba* (*H. x kristensenae* JP)
- Hepatica yamatutai* x *nobilis* var. *nobilis*
- Hepatica yamatutai* x *nobilis* var. *japonica* f. *magna*
- Hepatica yamatutai* x *transsilvanica* (*H. x harvingtonii* JP)

More and different hybrids will be created in the future for sure



*H. japonica* Akebono



*H. transsilvanica*



*H. x euroasiatica* Mandy JP



*H. x transs-japonica*

Red Ebrithil JP

The world revolves around Hepatica!



Natural habitat

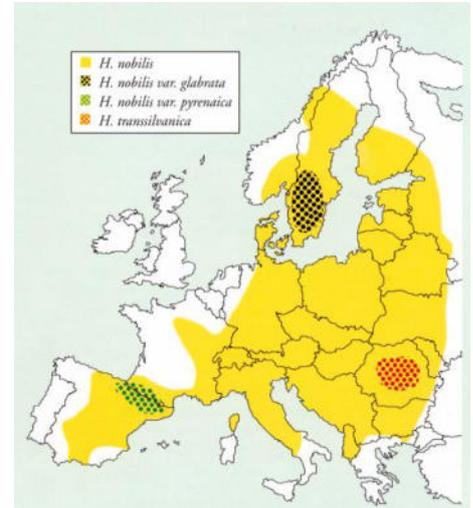
## Hepatica Triloba Series

Europe:

*Hepatica nobilis* var. *nobilis*

Liverleaf

The species range of the European liverleaf extends from Scandinavia to the Iberian Peninsula and from Central France to Russia. The flowers have a diameter of 1.5 - 3 cm and they are mostly blue to violet, sometimes pink or white. The leaves are mostly reddish and slightly hirsute on the underside of the leaves. The upper side of the leaves is bright green, with a slight leathery look and a diameter of 3 - 4.5 cm. In nature they grow in deciduous forests with a well-drained, calcareous soil.



Ballkleid Rosa JP



Ballkleid Weiß JP



Ballkleid Blau JP



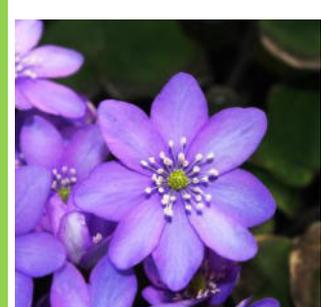
Rubra Plena



Frühlingsstern JP



Blaues Wunder JP



Ballkleid Rotviolett



Albula Pass



Selma

## *Hepatica nobilis* var. *pyrenaica*

Pyrenean Liverleaf

**Distribution:** Spanish and French Pyrenees where they grow in both deciduous and coniferous forests. I've even found them at an altitude of 2000 m in alpine grasslands.

**Characteristics:** the main difference with the regular *Hepatica nobilis* is the marbled leaf. It is a nice form with variety-status. It's also worth mentioning that the warmer they grow in their natural habitat, the more marbling there's visible in the leaves.

**Growing shape:** compact, 8-12 cm.

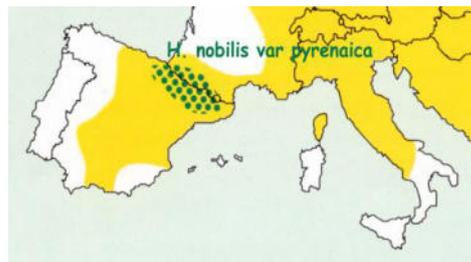
**Flower colour:** varied in pastel colours but predominantly white, very rarely intense colours like dark red or dark blue.

**Stamen, Anthers::** white to yellowish. Rarely with different coloured anthers (in most cases pale pink) and only when the flower colour is intense.

**Ovary:** yellowish to light green.

**Colour:** during flowering the colour can change.

**Flower size:** similar to the regular species with a diameter of 2 - 4 cm. Some so-called "**Multiloba**" forms have been found too ('Ute'), as well as semi-plena forms like 'Su's Double'. When visiting the Pyrenees, it is worth the effort to have a good look around, nature might have some real surprises in store!



Su's Double



Harlekin Rosa JP



Harlekin Blau JP



marmorata Picos GP



Pyrenäenschnee JP



Pyrenäennacht JP



multiloba Ute



marmorata

## *Hepatica nobilis* var. *glabrata*

Hairless liverleaf

**Distribution:** Central-Sweden, mostly in mixed woods, sometimes in coniferous woods.

**Buds, stalks, and leaves:** almost without hairs (glabrous) and light green. This characteristic makes them unique within the genus *Hepatica*.

**Flowers:** always white, which gives it the impression of being an albino.

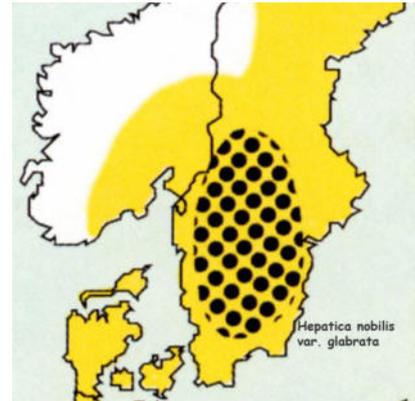
**Flower shape:** uniformly round, sometimes star-shaped.

**Flower diameter:** 1 - 2.5 cm.

**Stamen and anthers:** white like the flowers.

**Ovary:** light green.

**Buds:** Produce 5 - 8 flowers from each crown bud, making it a very floriferous variety.



Dwarf Form



Hans Swed Type



Maijland Type



Glabrous leaves



*H. nobilis* var. *glabrata* ca. 20 years old



Size of leaves 3.5-4cm



Crown bud

## *Hepatica nobilis f. crenatiloba*

Curled leaf Liverleaf

The form of its leaves is the product of intentional hybridization. They can be created within every *Hepatica nobilis* variety. The pioneer of these hybrids was Severin Schlyter from Sweden, he specialized in hand pollination to get special leaf forms for about 20 years. According to his data, he crossed various Swedish clones with different inherited traits with each other. To get to these forms we need to start with plants with leaves with multiple lobes (multiloba) which, when crossed with other multiloba forms, give forms that have leaves with even more lobes. This is a simple explanation of what in the "art of hybridisation" is a lot more complicated. Looking at the outcome it was worth the effort. In nature crenatiloba (and by extension multiloba) forms are extremely rare to find...



Crenata SS



109N



114N



116N Crenata



15-001 JP



15-003 JP



Silbernebel JP



Silber Raffels



15-003 P JP



112N



15-002 JP

## *Hepatica nobilis* var. *nobilis* f. *marmorata*

### Marbled Liverleaf

All *Hepatica* species have forms with bright spots on their leaves. Within the European species, *H. nobilis* var. *pyrenaica* is especially well known for its forms with beautifully marbled leaves. It's possible to find marbled-leaved forms around lake Garda and in Abruzzo as well. Why these plants have developed such a pattern is not known yet. There are several hypotheses:

- 1) It might depend on the **pH of the soil**, since you'll find a bigger share of plants with marbled leaves growing on acidic soils!
- 2) It might be an adaptation, as a **protection** against too much sunlight since most of these forms are found in more southern/warmer regions!
- 3) It might be triggered by **genetic** variances, which are passed on to the following generations!

Based on where I found most of these forms in the wild, I'd say the protection-hypothesis is the most probable, the spots serve as protection against too much UV-radiation.

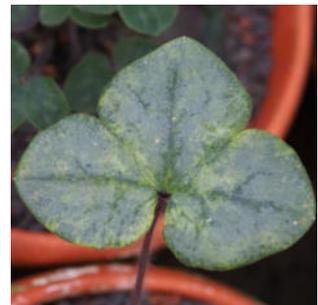
In the north (Scandinavia), plants with marbled leaves are extremely rare. In the south (around the Mediterranean) and on higher elevations, more of these plants are found. This characteristic increases the ornamental value of these forms a lot.



Leonie JP



Selekt JP



Silberlaub Extra JP



Cremer



marmorata



Natural habitat Abruzzo



Natural habitat Pyrenees

*Hepatica nobilis f. multiloba*

*Hepatica nobilis f. multiloba f. marmorata*

Multi-lobed Liverleaf

**Botanically:** multiloba = with multiple lobes  
marmorata = spotted, marbled

In nature these forms are extremely rare, if you find one, you're just as lucky as to find a "four-leaved clover"

**Breeding:** These forms are often used for hybridization, especially for the "wow-effect", since they always have an exotic look when growing in the garden. These are the forms which are used to create "crenatiloba" forms.



111N



multiloba



Ute



multiloba f.  
marmorata



111N in the garden



multiloba f.  
marmorata



multiloba f.  
marmorata

## *Hepatica nobilis f. minima* (JP)

Dwarf Liverleaf

This particular form, which can only be described as a dwarf form, has leaf-lobes the size of a thumbnail.

**Leaves:** 1.5 - 2 cm, sometimes lightly marbled

**Flowers:** never bigger than 1 - 1.5 cm

**Habitus:** very compact, takes on the form of a small ball

**Use:** particularly useful for planting in troughs, small containers and as Kusamono or Shitakusa (companion plant with Bonsai).



Weißer Zwerg JP



Rosa Zwerg JP



Blauer Zwerg JP



Roter Zwerg JP

*Hepatica nobilis* with very unusual leaf-shapes:

### *Hepatica nobilis* „Einblatt“ (JP) (“one-leaf”)

The lobes of the leaves of these forms are fused, which gives them the appearance of a flabellate leaf. Forms like this do not appear in nature..

Sometimes named as *H. nobilis f. asarifolia*.



„Einblatt“



marmorata

„Einblatt“

### *Hepatica nobilis* „Kleeblatt“ (JP)

(“cloverleaf”)

Forms with trifoliate leaves are often referred to as “cloverleaf”. In these forms, the lobes are separate from each other and every lobe has its own petiole..



marmorata

„Kleeblatt“



„Kleeblatt“

## *Hepatica nobilis* „Abruzzen“ (JP)

This form can be found in Abruzzo, the Adriatic coast and Apennines. They remain very compact and have marbled leaves, the colour of the flowers follows the range of colours of the regular *H. nobilis*.



Monte Velino JP



Marbled leaves



Gran Sasso JP



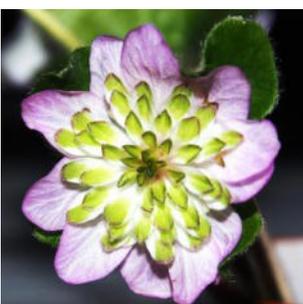
L'Aquila JP



Terama JP

## *Hepatica nobilis* „Gotland“ (JP)

The forms of the regular *H. nobilis* hailing from Gotland are really special, especially since more and more semi-plena and Flore Pleno forms are found there. It will be interesting to see what's to come from over there.



No PL 5 Lyseröd



No PL 1



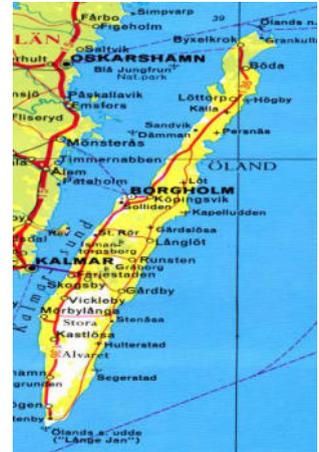
No PL 3



No PL 4

***Hepatica nobilis* „Oeland“ (JP)**

This population on this island have been growing in very different conditions, making them extremely adaptable. Hepatica's there grow in pure sand (pH 6), in calcareous gravel (ph 7.5) and even in marshland (ph 4.5).



Oeland's Himmel JP



Oeland's Feuer JP



Oeland's Hellblau  
Doppelstern JP



Oeland's Weiße JP



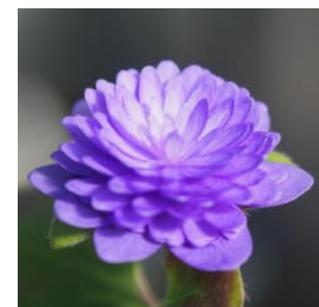
Oeland's Alba Plena



Oeland's Rosa JP

***Hepatica nobilis* var. *nobilis* „Plena“**

In the last couple of years a few very interesting flore pleno Hepaticas have been found in Europe. Most of them come from Scandinavia, Austria and Bavaria. And a few growers have created new forms as well. Here are a few teasers:



Liz



Materna



Little Abington



Lise GP



Schneeflocke HF



Birgit



Gjovik



Koronel No 3



Leonie JP



Askar



Marion



Plena No 4



Plena No 8



Rubra Plena



Peter Petersen



Red Lucky JP



Supercrenata



Estonia



Dr. E. von Siemens



Otto Beutnagel JP



Scatwal EM

## How to grow *Hepatica nobilis* var. *nobilis* in the garden

By nature, our endemic liverleaf keeps its healthy dark green leaves in winter. The health of the leaves is crucial for the plants to grow well, since they are important for the creation of the building blocks of the plants. During the growth-cycle, the old leaves bend down to soil-level, where they die down gradually. Immediately after flowering new leaves are formed. The plants hibernate with the help of a thick bud (crown bud) just above soil level. Within this crown bud, the flower buds, that appear early in the year, are formed.

It's our duty as plant lovers to find the optimal growing place for them, so they can grow according to their natural cycle. The northern European weather is actually perfect for *Hepatica*, so it's a good idea to try to approximate the light regime and soil composition of their natural habitat. Most *Hepaticas* grow in hilly deciduous forests and shadowy woodland edges. In spring, the time in which they are growing and increasing, they enjoy more light and water. And the decomposing leaves offer a lot of micro-nutrients.

As the leaf canopy gets more and more dense, light levels drop and the soil dries out a bit. In summer they grow in darker and dryer circumstances, which is no problem for the liverleaves, since they have leathery leaves and strongly branched roots. These roots are protected from the heat and complete desiccation by the carpet of leaf litter. In the wild they grow obviously better on cooler, north facing slopes.

As the leaves start to fall in autumn, the availability of light and water increases again. During this time, the plants form the new flower buds for the coming year. Since they are often found growing on slopes, the roots are always growing in a well-drained medium. In winter, the leaf litter offers protection and humus which releases some nutrients.



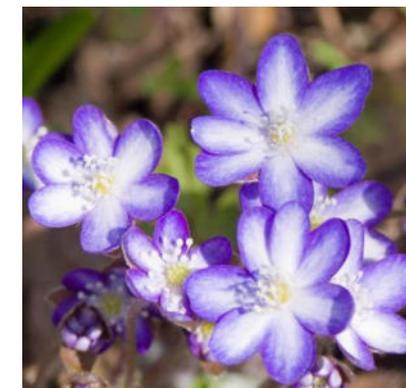
13 N



35 N



Alabaster JP



Alande JE

In older literature, it was often said they preferred more calcareous soils, new insights have made it clear a calcareous soil is no requirement for them to grow well. Crucial for good growth is a constant supply of trace elements and nutrients, which they get from the decomposing leaves. If the pH drops too low, it can impede the uptake of phosphor and iron, which can reduce the vigour of the plants.

So, for cultivation in the garden we can conclude that they love a place in cool shade. For example on the north or east side of a building or under large woody plants. They like a loose, slightly loamy soil. When you're not gardening on a slope and there's a possible problem of waterlogging, it might be a good idea to plant them in raised beds. If we're having a very dry spring and/or autumn, some extra watering is a good idea.

The best time to divide and transplant *Hepatica nobilis* var. *nobilis* is early spring, from as soon as they start to flower until the new leaves start to emerge. You can tell this is the best moment to transplant them from the root tips which are white (and in full growth) at that time. If they grow in soil with a low pH, you should keep an eye on the available trace-elements, it's also possible to carefully adjust the pH by adding a bit of lime.

To summarize, you can say that Hepaticas make it easy for plant lovers to know how they're doing. If the leaves are healthy and green, all growing conditions have been fulfilled.

**Susanne Peters** 2018 Dec.



Brautkleid hellblau JP



Brautkleid rot JP



Brautkleid dunkelblau JP



Blaubeermilch AH



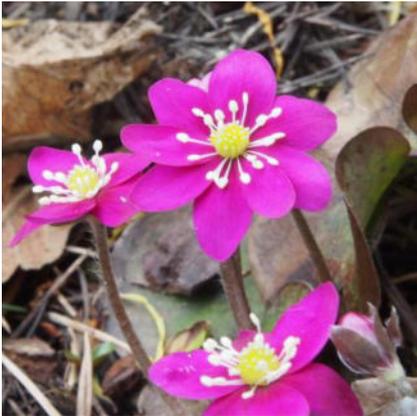
Blaue Elfe JP



Cobald



Dr. B. Maciejezeck JP



Ex Bibo JM



Fliederprinz AH



Bavaria Blue



Gewize JE



Giselle AH



Harzer Blau JP



Himbeereis AH



Jennifer JP



Kapsede JE



Isla Hall



Julita



Labern JP



Maigums JE



Marlene Ahlburg JP



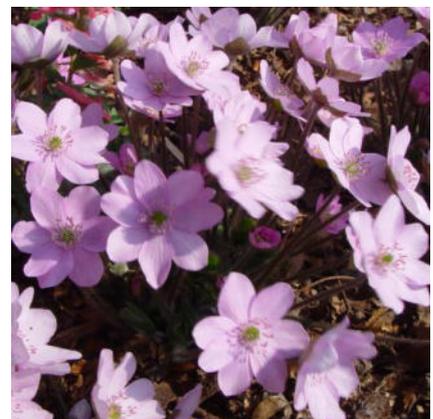
Holzdorfer Rot JP



Meeresauge JP



Multipetala AH



Odette AH



Ohleila Strain OB



Purpurkäfer AH



Rosenkäfer AH



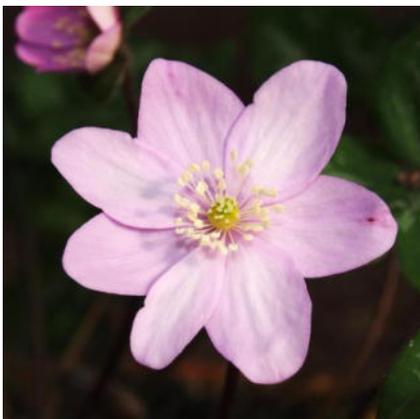
Raiba JE



Sahra JP



Rotes Feuer JP



Selekt JP (marmorata)



Tausendschön AH



Zuckerwatte JP



*H. nobilis var. acuta* Oregon JP

## North America:

In North America two varieties/species of the *Hepatica nobilis* group can be found, *H. nobilis var. acuta* (*Hepatica acutiloba*) and *H. nobilis var. obtusa* (*H. americana*). They have different habitats and the peak flowering time is 14 days apart. Although in nature there is a big overlap of both species, naturally occurring hybrids are very rare to find.

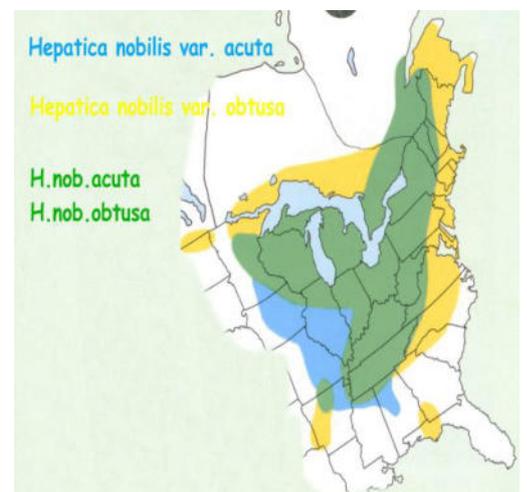
There's a difference of **soil preference** on which both varieties grow:

### *H. nobilis var. acuta*

Calcareous, well-drained soil pH 7 - 7.5

### *H. nobilis var. obtusa*

Prefers slightly acidic soils pH 6 - 6.5



***Hepatica nobilis var. acuta*** (*H. acutiloba*)

Sharp-lobed liverleaf

**Habitus:** perennial, herbaceous, winter-green, upright growing plant, 10 (- 25) cm tall

**Unique traits:** Often with red shoots that turn green over time.

**Leaves:** Basal leaves deeply divided , 3 (rarely 5) lobes, up to 5 cm long and wide, margins entire; Lobes sharply pointed, middle lobe elongated, longer than wide, dark green and leathery with smooth upper side, usually lightly spotted, underside hirsute, in Autumn turning red-brown to violet, remains on the plant through winter, new leaves emerge after flowering, long petioles, very hirsute at the bottom to glabrous at the top.

**Flowering time:** March - May (observed in the wild around Chicago)

**Flowers:** Perigonium; ♀ , radial symmetric, basal, 1-flowered, 3 pointed involucral bracts, 6 -15 sepals, which are ovate - oblong, mostly white, sometimes bright pastel tones from pink to blue, flower diameter 2 - 3 cm, pedicel 10 - 25 cm, flowers well above the leaves. When full in flower, the plant looks like a flower bouquet.

**Style:** greenish **Stigma:** white **Anthers:** white

**Filaments:** white to yellowish with a greenish connective

**Ovary:** Greenish

**Achenes:** ripens in early summer; oblong and gradually tapering, up to 5 mm long, hispid. The seeds are a loved food of chipmunks.

**Chromosome number:** 2n = 14



hirsute leaf shoot



acuta leaf



Maine JP



Louisiana JP



Violetter Traum JP



Oregon



Merlin JP, 16-009



Alba

***Hepatica nobilis* var. *acuta* f. *marmorata***

***Hepatica nobilis* var. *acuta* f. *multiloba***

Within this variety especially wonderful leaf-forms can be found. From deeply divided leaves to silvery marbling on the leaf blades. Selecting the most beautiful ones for in the garden is a worthy endeavour.



young leaves



multiloba leaves



Sunmarble



5-lobed leaves



mature leaf



silvery leaf



young leaf

***Hepatica nobilis* var. *acuta* „Plena“**

Fur sure it is possible to find more double flowering forms of *acuta* in the wild. For the moment, the only well-known plant is 'Louise Köhler', which is awfully slow to increase, hence the high selling price! There should be a white double following form, called 'Eco White Fluff' but I've only found reference to that form in one of the old catalogues of ECO garden. Unfortunately, I never got a plant of this form from Don Jacobs. What a pity!



***Hepatica nobilis* var. *obtusa*** (*H. americana*)

Round-lobed liverleaf

**Habitus:** perennial, herbaceous, winter-green, 15 cm tall, more compact than his close relative 'acuta'.

**Leaves:** All basal leaves are conspicuously more hirsute during sprouting than those of *H. acuta*, oblatly cordate, 3-lobed, tips of the lobes are rounded, with a light marbling on dark leaves, often with a purple hue, 4 - 8 cm, emerge after flowering, leathery and burgundy-brown in winter, dying away after winter.

**Flowering time:** March - April (observed in the wild in Missouri, in Germany at the same time as *Hepatica nobilis* var. *nobilis*)

**Flowers:** Perigonium; ♀, radial symmetric, basal, 1-flowered, 3 cup-shaped involucral bracts, 6 -10 sepals, in pastel tones- pale blue, white or pink, 12 - 25 mm; with a shorter pedicel than *acuta* 10- 20 cm, basally hirsute, glabrous on the top.

**Style:** greenish

**Stigma:** white

**Filaments:** white to greenish

**Anthers:** white to pale yellowish

**Ovary:** greenish

**Chromosome number:** 2n = 14

***Hepatica nobilis* var. *obtusa* f. *marmorata***

As with any other *Hepatica nobilis*, forms with intensely marbled leaves can be found. Of particular interest are those forms with hirsute flower and leaf buds.



ECO Idigo



Virginia JP



Montana JP



Marmorata Pink



hirsute flower buds



extremely hirsute  
leaf buds



Marmorata



Marmorata

## Asia

### *Hepatica nobilis* var. *asiatica* (*H. asiatica*)

Asian Liverleaf

**China:** central and eastern areas (Anhui, Henan, Liaoning, SE Shaanxi, Zhejiang, on altitudes of 700 - 1000 m), coastal region of Manchuria, the far-east of Russia and Primorsky Krai.

**Korea:** in woods and on grassy slopes in the north, west and middle of Korea, and in the south of the Korean peninsula.

**Distribution:** orange areas on the maps.

**Habitus:** perennial, herbaceous, 6 - 12 (15) cm, deciduous; new leaves appear in March, the leaves stay green until October, they turn yellow by the end of November and die down. They grow in the same way as Japanese *Hepatica nobilis* var. *japonica*.

**Roots:** dense, fibrous roots

**Leaves:** small basal leaves, (ca. 2.5 - 4.5 cm ø), sparsely hirsute, triangular-ovate, 3-lobed, split up to the middle of the leaf, sparsely but nicely marbled. With rounded tips (sometimes obtuse), lobes broadly ovate, entire, petiole 6 - 9 cm long, glabrous.

**Flowering time:** early February

**Flowers:** Perigonium; ♀, radial symmetric, basal, 1-flowered, small; cup-shaped involucral bracts, ovate - elliptic, sparsely hirsute, with obtuse tips, with 6 - 11 uniform sepals.

**Sepals:** narrowly oblong, 12 - 14 mm long and 3 - 6 mm wide, mostly white or pink to red coloured, rarely violet or in blue hues; long, elegant, and hirsute pedicel.

**Style:** greenish

**Stigma:** white

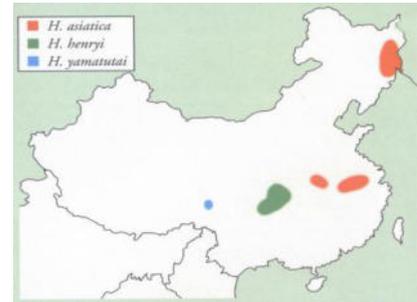
**Filaments:** white

**Anthers:** white to pale greenish

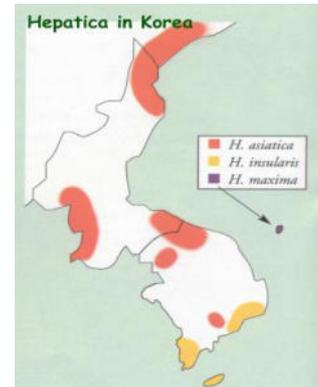
**Ovary:** greenish, slightly hirsute

**Achenes:** hirsute, 4 mm long

**Chromosome number:** 2n = 14



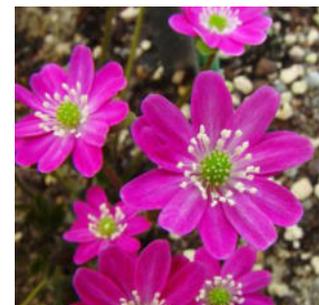
China



Korea



Purple



Red



Marbled leaves

***Hepatica nobilis var. insularis*** (*H. insularis*)

Koreanisches-Leberblümchen

**Distribution:**

**Korea:** Only on Cheju Island/Cheju-do and at the southern tip of the Korean peninsula; in deciduous forests. Yellow areas on the map.

**Description:**

**Habitus:** perennial, herbaceous

**Leaves:** small basal leaves, 1.5 - 5 cm wide, 3-lobed, mostly beautifully marbled; drops all leaves in winter (in cool climates), new leaves appear with the flowers.

**Flowering time:** early, January -February

**Flowers:** Perigonium; ♀, radial symmetric, basal, 1-flowered, small, 1 - 1.5 cm in diameter; 3 cup-shaped involucre bracts, lightly hirsute, 9 - 10 cm long; with 6 - 10 uniform sepals; long and hirsute pedicel.

**Sepals:** white or pink

**Style:** greenish

**Stigma:** white

**Filaments:** white

**Anthers:** white

**Ovary:** greenish, hirsute

**Chromosome number:** 2n = 14



Autumn foliage



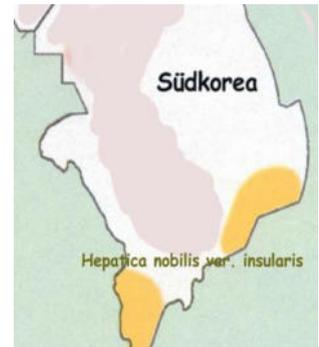
Autumn foliage



Seoul-ui haneul JP

I received this variety in 1995 from Korea, and I tested it out in our growing conditions. The first surprise was the huge number of flowers one plant could produce. The second surprise came after the leaves were completely gone by winter and I thought: "That's it, it's gone!" But on the contrary, the plants grew well and every year

since then, they have delighted me with more and more flowers.



Distribution in the wild



Huin-nun JP



Bunhongsae-g JP



Hwaiteu JP



## *Hepatica maxima*

### Distribution:

**Korea:** little known species; endemic to the Ulleungdo island (= Dagelet Island or Argonaut Island), situated ca 140 km to the east of the Korean peninsula, in the Sea of Japan, probably also on some of the smaller islands like the Liancourt Rocks; on the north-facing slopes of the islands mountains, warm, extremely high humidity in summer, and relatively mild winters (rarely frost down to  $-5^{\circ}\text{C}$ ) with moderate snowfall. Often found growing under *Rhododendron*.

### Remark:

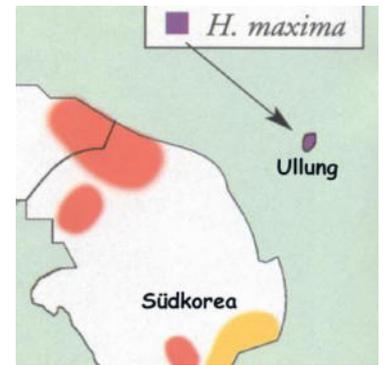
The plants we have been growing, have withstood temperatures down to  $-22^{\circ}\text{C}$  (at soil level), only the leaves died down, they re-emerged in Spring.

**Growing conditions:** in winter dryer, only moderately humid.

**Habitus:** perennial, herbaceous, 20 - 40 cm tall; 30 - 40 cm in diameter; biggest of all *Hepatica* species.

**Roots:** elongated, fibrous rhizome; vertically growing.

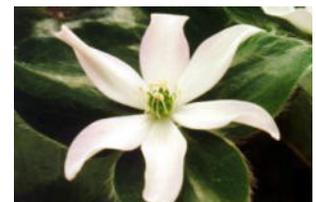
**Leaves:** Basal leaves, almost succulent-leathery, 3-lobed, lobes entire and strongly rounded, 8 -16 cm wide and ca 6- 9 (10) cm long, the biggest leaves of the genus; when they emerge, on both sides glossy bright green and uniformly covered with significantly long, white, silky hairs; leaf margin covered with short white hairs; later the upper side turns matte with slightly raised leaf veins while the underside remains smooth, with as soft leathery feel; 2-year old leaves are shiny dark wine red to bright purple red. The leaves are biennial; when the previous season was very dry, the leaves can colour in autumn. The margin turns dark and the leaf blade turns yellow. When they grow normally, *H. maxima* is wintergreen, only in Spring, when the new leaves emerge and the seed stems wither, the leaves change colour and die down. Petiole ca 12 cm long, dark red. New leaves emerge at the same time as the flowers.



mature plant in my  
*Hepatica*-garden with newly  
emerging leaves



Bud



Open flower



Seedhead

**Flowering time:** March - April

**Flowers:** Perigonium: ♀, radial symmetric, basal, 1-flowered; 3 strikingly big, evergreen involucral bracts, 10 - 25 (30) mm long and 6 - 20 mm wide, covered with short white hairs, do not turn yellow after the seeds have ripened but only after the following flower period; flat on top the 6 - 8 sepals, quite narrow and slightly curled, mostly white but possibly varying between green-white with a pink margin, pure white, white-pink and sometimes with a very delicate touch of pink (the range of colours should be more extensive in the wild). When the flower is not yet completely open, they resemble a Trillium flower.

**Pedicel:** shorter than the petiole, dark red, hirsute

**Style:** green

**Stigma:** green

**Filaments stamens sepals** as well as the

**Anthers:** creamy white with a pink connective

**Achenes:** 5 - 6 mm long, bigger than any other *Hepatica* species, when they ripen, they take on a silk-matt/shiny black colour, with a white elaiosome at the basal end, glaucous.

**Seeds:** small seeds ripen rather late; they remain on the pedicel until September and form a glossy black seed head.

**Chromosome number:**  $2n = 14$

**Genetic variability:** Compared to the other Korean species, *Hepatica nobilis* var. *insularis* and especially *Hepatica nobilis* var. *asiatica*, there is a lot less variability within this species, often a sign that the species is impoverishing genetically and is approaching the end of its evolution.

**Korean name:** 섬노루귀 (*Seomno-ru-gwi*), because of the long white silky hairs and the white hairs on the leaf margins, the Korean name describes it as the "island deer ear flower" or "**The deer-eared flower from the island**"

Seeds>



Crown buds



Upper side leaves



Underside leaves



Selina JP



Winter colour, Selina JP

## Japan:

In Japan, Hepatica's are divided into different forms. The most important form in Japan is *Hepatica nobilis* var. *japonica* f. *magna*, which occurs mainly in the region of Niigata (Ishikawa - Aomori area), along the Sea of Japan. The lobes are mostly rounded. In this region a lot of forms with different colours and flower shapes can be found. This form by itself, was the inspiration for a lot of books in Japan.

### Distribution: see Map

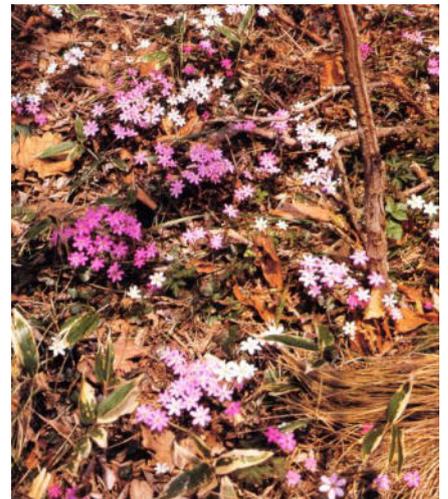
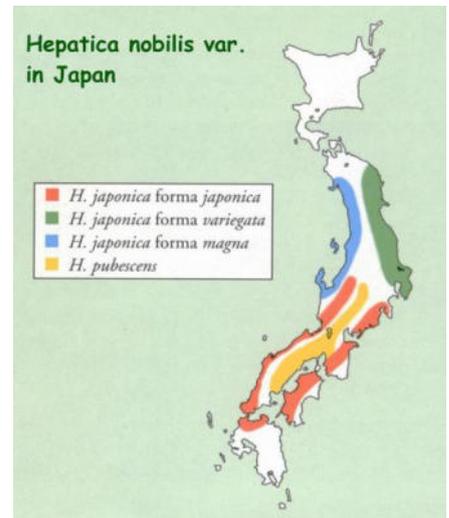
Main island Honshu, island Shikoku, and the north of the island Kyushu

### Companion plants in the wild in japan:

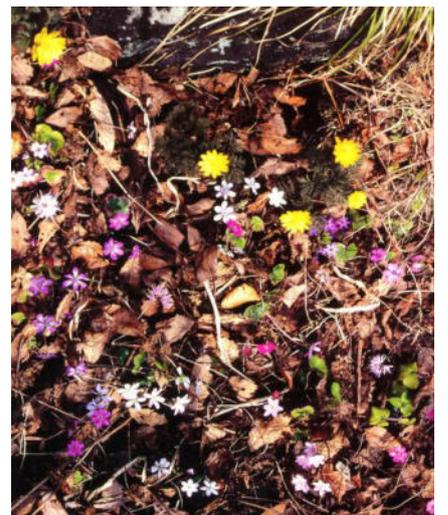
Hepatica grows in woodland, in shaded and in semi-shaded places. They grow in different soils, often in leaf mould on top of sandstone, lava, granite, or calcareous rocks. They are mostly found on altitudes up to 1250 m. Their companion plants in deciduous woods are: *Fagus crenata*, *Acer mono*, *Castanea crenata*, *Zelkova serrata*, *Daphne kamtschatica* var. *jezoensis* and *Prunus jamasakura*. In coniferous woods they grow under *Pinus densiflora*, *Cryptomeria japonica*, *Chamaecyparis obtusa*, *Kamelia japonica* and different bamboo species. There they have the company of perennials and geophytes like *Erythronium dens-canis* f. *japonicum*, *Anemone pseudoaltaica*, *Adonis amurensis* and a few dwarf grasses.

### Nomenclature

A lot of the Japanese Hepatica cultivars were collected in the wild. Others have been bred by crossing the different *Hepatica nobilis* varieties. By now, the parentage of a lot of these cultivars is no longer known, that's why they are mostly offered as **Hepatica japonica**.



Natural habitat  
Niigata/Japan



***Hepatica nobilis var. japonica f. japonica***

Yukiwariso (= "plant that breaks through the snow"), is the nickname of this plant in Japan. You can find it growing in the wild to the west and south of Central-Japan, on altitudes of 300 - 1000 m; in woods with slightly acid soils and well-drained humus. The range of flower shapes and colours is comparable to the European and American species.

**Leaves:** more acute (acutiloba)

**Sepals:** 9 - 20

**Flowers:** bowl-shaped

**Flower colour:** white to cream, rarely other colours

**Stamens:** yellow to green

**Distribution:** indicated in red on the distribution map



Misaki JP



lobes with acute tips



Watasumi JP



Kichi JP



Beniko JP



Miharu JP

***Hepatica nobilis var. japonica f. variegata***

**Endemic:** in the northwest of Japan. Grows on altitudes of 150 to 800 m in mixed woods and based on the region from where it hails, it should be more cold-hardy.

**Leaves:** rounded lobes

**Flowers:** 6 - 10 ovate sepals

**Flower colours:** white to cream,  
rarely other colours

**Stamens:** yellow to green

**Distribution:** indicated in green on the  
distribution map



rounded leaf shape



Susanoo JP



Alba

## *Hepatica nobilis* var. *japonica* f. *magna*

Grows in the wild in the northeast of Japan on altitudes of 0 - 500 m, which makes it a lowland plant.

### **Distribution:**

indicated in blue on the distribution map

**Leaf shape:** intermediate between the forms mentioned above

**Sepals:** ovate, mostly 6 -13

**Flowers:** very variable both in colour and shape

**Stamens:** very variable, yellow, green to red and violet

### **Information:**

For the last 250 years a lot of *Hepatica nobilis* var. *japonica* f. *magna* forms were collected in the wild. Since the end of the 19th century until halfway the 20th century, the interest dwindled a bit, but especially since 1980 interest in the cultivation of *Hepatica*'s has surged. The famous *Hepatica*-breeder Kouich Iwafuchi for example has created a great number of new cultivars (especially flore-plena forms). *Hepatica nobilis* var. *japonica* f. *magna* seems to be very genetically instable, making it quite easy to create a lot of different cultivars from this form. In the meantime, several hundreds or even thousands of *Hepatica japonica* have been created. There are semi-plena and flore-plena forms, flowers with different colours as well as plants with variegated leaves. To achieve at least a bit of an overview, Iwafuchi and Oikawa have created the following cultivar-classification for the Japanese cultivars. (See chart page 35).

*Hepatica*-plants are mostly grown as small potted plants in Japan and cherished as the heralds of Spring. Every year a lot of *Hepatica*-shows take place, which attract a lot of visitors.

During my trip to Japan, I had the opportunity to meet mister K. Iwafuchi. We exchanged our autographed books.



Exhibits with awards



Presentation



Vase as top prize



Sales area



**Classification: *Hepatica japonica* cultivars**

- Single flowered group ---|---Normal type
  - |---Type with degenerated anthers (without anthers)
  - |---Type with degenerated stamens (without stamens)
  - |---Deformed type
- Double flowered Group (stamens and stigma are partly or completely transformed into petals)-
  - |---Petaloid stamens ---|---Petaloid stamens and pistils
    - |---Basic (Herashibe)-type ---|---Basic (Sandan)-type
    - |---Advanced (Nidan)-type ---|---Advanced (Karako)-type
    - |---Complete (Sen-E)-type

Below a few exhibited plants from the Niigata-show in 2009, regrettably without cultivar names.



Collage with pressed flowers



## *Hepatica nobilis* var. *japonica* f. *lutea*

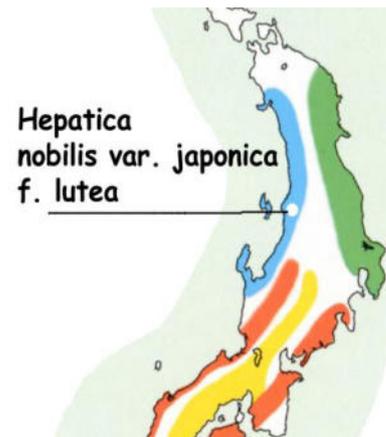
Inspired by the publication of K. Iwafuchi in the Flora of Japan (2) I can only support the point he makes for the distinctiveness of these yellow-flowered Hepatica. They are remarkably different, and both their leaves and flowers are different enough for these plants to be defined as a separate forma.

**Habitus:** Like *H. nobilis* var. *japonica* f. *magna*, with broadly ovate in each of the 3 lobes, rarely with two small notches. The leaf upper side is green, the underside is reddish and hirsute.

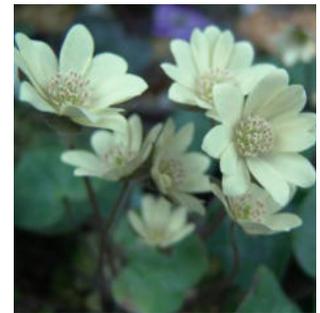
**Flowers:** Cream-yellow coloured, the typical form has 5 - 12 sepals, semi-plena forms can be found as well.

**Hybridization:** When crossing with *Hepatica nobilis* var. *japonica* f. *magna*, semi-plena and plena flowering forms will arise. Now, some bicoloured forms have been created as well, an example of a yellow flower with a reddish outside is given in the picture. Most of the time, these hybrids retain the leaf shape of forma *lutea*.

**Distribution:** North-western part of Honshu, in the region of Niigata (white point on the map).



*Hepatica nobilis* var. *japonica* f. *lutea*



Original wild selection



Kibani



*lutea* x *magna*



Yellow-white bud



Upper side leaf



Kinohikari (Nidan)



Koshi no Yamabuki



Amano (multipetala)



Under side leaf

***Hepatica nobilis var. pubescens* (*H. pubescens*)**

**Leaves:** Rounded, lightly to heavily marbled.

**Sepals:** 6 - 10, ovate, highly variable.

**Anthers:** Highly variable in colour, from yellow, over green to red and violet.

**Chromosomes:**  $2n = 28$  (tetraploid)

They are characterised by strong growth and flowers on strong pedicels. A prime example is the variety 'Tenjinbai' with its uniform flowers in white-pink, with red coloured ovaries. Marbled, smooth leaves make this a perfect looking plant.

**Distribution:**

In yellow on the distribution-map, central Honshu on altitudes up to 1050 m.

**My experience:**

Thanks to their tetraploidy, these plants grow extremely vigorously. They are quite easy to grow. Double the number of flowers as with normal forms emerge from the crown buds (normal: 3-5 flowers, *pubescens*: 5-9).

The leaves and petioles are very strong. Most of the leaves are slightly marbled and lightly hirsute. Most of the flowers have 6 - 10 ovate sepals and grow to a diameter of 5 cm. In most of the cases, the flowers are bicoloured with a white heart, rarely unicoloured. Even though it's possible to find a multitude of colours in the wild, all the named cultivars fall within the white, pink, or red colour spectrum, e.g., 'Tenjinbai' or 'Hohobeni'.

Another characteristic we must mention is the red colour (in most cases) of the ovaries. Due to these characteristics it's particularly interesting to hybridise with them. In the future some wonderful new cultivars will be created from these forms.

I've been creating hybrids with *H. pubescens* for a while now and I must say: they never cease to amaze.



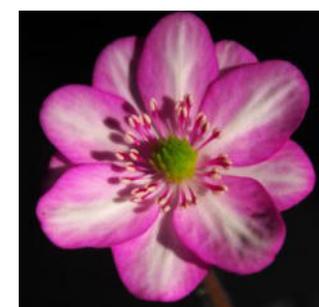
Tenjinbai



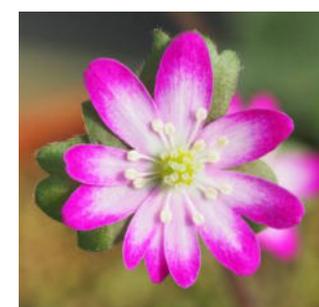
Hohobeni



Tantjobai



Super One JP



Flammenschwert JP

## Advice for overwintering them in the garden:

### The clay pot-method:

We've tested this method in a lot of gardens. Since *H. japonica* abhors a lot of water in winter, some precautions should be taken. With these precautions they will survive perfectly, even in very cold and wet winters. It is worth the try and this species should not be ignored for use in our gardens. Here's what we can do for them to thrive in our gardens.

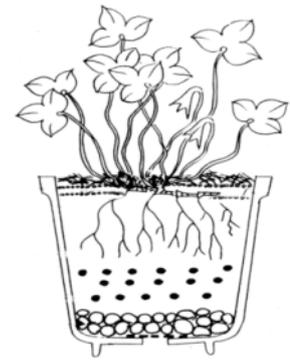
1) You can use clay pots. You'll should use a very well-drained soil mix for growing them in pots. Best is to add a good amount of pumice and lava or sand, 30% each.

2) The pots are plunged into the garden-soil at a suitable place. The rim of the pot should be 1-2 cm above soil level. This serves as a kind of wick, allowing the excess moisture to escape.

3) At the bottom of the pot, drainage can be improved by adding some crushed pot shards.

4) During the coldest, windiest days it's good to cover them with some fir branches, this helps to protect the leaves from drying out. The best leaves to use as cover are beech or maple.

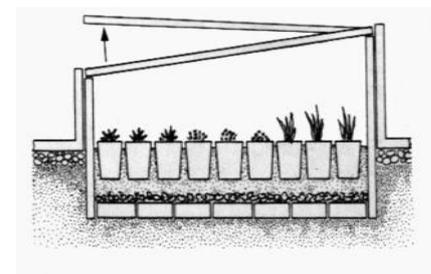
5) When you're gardening on heavy clay soils, it's best to use the **cold frame-method**. Conditions 1 to 4 should be observed as well.



Clay pot with drainage holes



Plunged clay pots in well-drained soil



Cold frame-method



Alpine House

**Permeability, drainage, and the absence of stagnant water is exactly what a Japanese liverleaf needs!**

## Planting them out in the garden:

Of course, it's just as possible to plant the Japanese liverleaves out in the open garden. With this comes a big "BUT"! Some conditions should be absolutely met:

- 1) In this case the permeability of the soil should be as high as possible. Adding sand, pine bark, pumice or lava will improve the soil of the planting site.
- 2) In almost every garden a raised, drier spot can be found. If not, you can follow my example and create a raised bed, framed by tree logs and stones, and filled with a mixed substrate.
- 3) It's best if the planting site is situated underneath evergreen shrubs and trees or conifers. This will give them enough shade and diminish the humidity of the soil. (The trees take up all excess water.)
- 4) It's possible you'll have to water the Hepatica's when it's very dry.

## Experiences in my own garden

have proven this method to be successful. I've got more than 100 different Asian Hepatica's growing underneath a cedar, together with a Japanese maple, a witch-hazel and some shrubby Daphne's. They grow very well in those circumstances. Three winters have passed without any noteworthy losses. They were not covered in Winter. The only thing I've noticed is some minor damage on the leaves, caused by frost and cold eastern winds. Even so, every Spring they return in full bloom.

## What more could I ask for!



Raised bed with a frame of



Raised bed with a frame of



Spring 2017



Spring 2018



Spring 2018

## Monthly care of the Japanese Hepatica's:

### December

**Watering:** The plants are watered, when the top layer of the soil is dry. When it freezes during the nights, it's best to water on a nice sunny morning to give them the chance to dry a bit during the day.

**Frost:** The plants are very frost-resistant, it's the roots that don't like wet conditions. Newly potted seedlings should be covered by newspaper, to protect them from frost heaving.

**Overwintering in the garden:** Since it can become very cold in shady areas, the pots should be plunged deeper (to the top of the pot rim). A light covering with leaves, like in nature, is advised. This will protect them from strong wind as well.

**Overwintering in an unheated greenhouse:** When the weather is nice, the temperatures can rise quickly during the day, to drop down to the outdoors level during the night. Don't forget to open the windows during the day and to close them when needed in the evening. Covering them with paper or with rush mats helps to keep the temperature more constant. Do not place the pots indoors or in a dark place, the pedicels will elongate, and the flowers won't last very long.

**Ventilation:** Caution should be taken during cold weather and with low air humidity. It's not really a problem for the plants, but the leaves could be damaged.

**Advice to get them to flower earlier:** If you want to enjoy the flowers on New Year's Day, start them on a 20-day regime of enough direct (sun)light and ventilation and of higher temperature. But watch out! The next growing period might be problematic, it often takes the plants 2 to 3 years to recover from such treatment.

### January

#### Protect young plants:

The small orbicular cotyledons are frost hardy. Young seedlings from November or December are still quite weak and need special protection.

**Overwintering:** both in the garden and in an unheated greenhouse, the same as in December.

### February

**Watering:** As in January, watering should be kept to a minimum.

**Unheated Greenhouse:** In February they are mostly still in rest, but the excitement is rising. Ensure constant temperatures as much as possible.

**Care:** Seeds sown in May/June of last year will start to germinate. Germination of 70-80% of the plants takes one month. Since they are extremely frost hardy, they will not suffer from any cold temperatures. Make sure they get enough water and light. Young plants need more light than mature plants.

**Breeding/hybridizing:** I'd advise to prepare the plants you want to use for hybridizing by cleaning them and by giving them a bit of fertiliser.



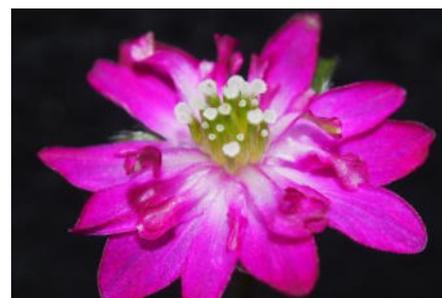
Asahi zuru



Ami JP



Arisu JP



Aya JP



Aimi JP

## Märch

**Exhibitions:** Plants you want to exhibit, should be prepared. Plants that were covered during winter should be acclimatized.

**Breeding/hybridizing:** It's the time to think about the new forms you'd like to create, and which parent-plants should be used for this. It's often possible to perform the first hand-pollinations.

### Care of one-year-old seedlings:

If the seedlings are too crowded in their seed pot, it's possible to transplant the biggest seedlings now. 2-year-old plants will start to grow earlier than mature plants.

**Watering:** The soft, new leaves often wither because they don't get enough water. So, make sure to give enough water.

**Wind and sun:** The leaves can withstand more direct sunlight during this period, they will become stronger and hardier. Strong wind will damage the leaves but no wind at all will makes them weak. Weak leaves lose their resilience towards diseases and pests, especially when they remain too soft.

## April

**Watering:** Make sure they get enough water in April, this is the period in which they grow the most.

**Repotting:** A chapter by itself, a lot of care and consideration is required.

**Fertilising:** Add a bit of fertiliser to the soil or give some liquid fertiliser.

**Care:** Have a look if you don't find any pests in the soil, if so, treat them with a right product. Remove the old, wilted leaves.

**Seeds:** By the end of April the first seeds will be ripe, and they can be collected. Put the collected seeds immediately in sand, so they don't dry out. If they dry out, they'll be damaged, and won't germinate as readily.

## May

**Watering:** Until the leaves have become leatherier, enough water should be given.

**Fertilising:** Careful application of a bit of fertilizer, several times in small quantities is best. An organic fertiliser, like dried cow manure, is recommendable.

**Pests and diseases:** Some pests hide in the pots during the day but are active during the night. Stay on the lookout for them and if necessary, apply the correct products.

**Sunlight:** Direct sunlight is bad for Hepatica's, so a shading of 50-70% is advised.

**Seeds:** Seeds can still be harvested, they should be checked and sown immediately.

## June

**Watering:** Take care when watering, too much water will damage the roots. It's better to keep them on the dryer side and to give some water when needed.



Benishinjyu



Chiyonishiki



Dai shihou



Fukurin



Chiba

**Fertilising:** Fertiliser can be applied until the end of the month, from July onwards no fertiliser should be given.

**Pests and diseases:** In this period the roots dislike too much water. Take precautions, if necessary, apply a fungicide.

**Sunlight:** As in May, give enough shade.

### July

**Watering:** Keep the pots dryish, just spraying with water over the pots is enough..

**Temperature:** Keep the temperatures down by shading and ventilation. They dislike high temperatures.

**Pests and diseases:** July and August are the months during which the roots are most susceptible to diseases. Make sure to check on them regularly.

#### **Saving them:**

1. Cut off the rotten pieces.
2. Clean the wound under running water.
3. Treat with charcoal or with a fungicide.
4. Wrap the root in sphagnum, keep them lightly damp.

**Sunlight:** Increase the shading to 80 %.

### August

**Watering:** Water them in the morning, spraying of the leaves is recommended.

**Fertilising:** When the temperature is high, fertilising with liquid fertiliser should be stopped.

**Pests and diseases:** Don't always use the same pesticide/fungicide. Use them carefully and purposefully.

**Repotting:** It's also possible to repot in Autumn, so now is the moment to make your soil-mixture.

### September

**Watering:** Before repotting, keep up the watering-regime of July and August. After repotting, the new soil mix will dry out quicker, so make sure you give enough water.

**Fertilising:** Fertilising is not necessary, but you can give a bit of fertiliser 14 days after repotting. Mature plants will like a gift of phosphorus/potassium.

**Pests and diseases:** As the temperatures drop, they will get less prone to disease.

**Sunlight:** In September it's best to retain the 80% shading.

### October

**Watering:** The roots are full in growth, so they need enough water.

**Fertilising:** Fertilisers can be gradually reduced, foliar fertilisers low in nitrogen can still be applied. Fertiliser with iron will strengthen the plants.

**Pests and diseases:** Not a lot of diseases and pests are active during this period. But you should always be cautious.

**Sunlight:** Reduce the shading to 50%.

**Repotting:** You can repot during the entire month. If the crown buds are very small, it's a good idea to cut some of the leaves.



Green flowering type



Haru Ichiban



Haru matsuri



Hokutosai



Hougyoku

**November**

**Watering:** The soil should be a bit humid, give enough water but make sure there's no waterlogging!

**Sunlight:** Shading can be lifted now, 20-30% shade is more than enough.

**Repotting:** With a few exceptions, you should be done with repotting. Hepatica which are repotted too late should be kept warmer, or even frost-free.

**Leaves:** Keep an eye on the leaves so they don't dry out. A bit of protection by leaves or twigs could be applied.

**It's done, a Hepatica year is over, onwards to the next one!**



Irogawari



Itoe JP



Kagura



Tousen



Kasuga



Kuro Taiyo



Taiyouno Kagayaki

## Japanese standards for flower evaluation

There are several points on which Hepatica's are evaluated, I will focus on the most important ones. These are the three main points.

### 1. Flower shape

This might be the most important point of all, since it is crucial for the flowers to be appealing. The basic form of Hepatica has 6 sepals, ideally rounded and perfectly separate. If the sepals are irregularly shaped or thin and weak, they are classified as bad flowers. Star-shaped flowers are usual. Flowers with a lot of sepals (double flowers) are held in the "highest esteem".

### 2. Flower size

It's not so that the biggest flowers are automatically special. Some say the smaller flowers are delightful, but when you get forms with similarly coloured and shaped flowers, the bigger ones will be favoured.

### 3. The colour, form (character)

I think it's clear what's meant by colour and form, depending on your own taste. When for example red- and purple-coloured flowers are considered beautiful, dark velvety colours which fade over time are considered even more beautiful. Vivid details can be beautiful as well, e.g., flowers with clear white stamens on top of red- or violet-coloured sepals. These are seen as flowers with more character. See flower classification (page 46). The main points considered for the evaluation of flowers are those above. There aren't a lot of forms which will meet all three criteria. Plants whose flowers meet all these requirements are therefore rated extremely high. Passionate breeders pursue the creation of the ideal flower and these are sold for the highest prizes in Japan.

**If you can get them cheaper, you're in luck!**



Momosango



Ryokuun



Saiun SU



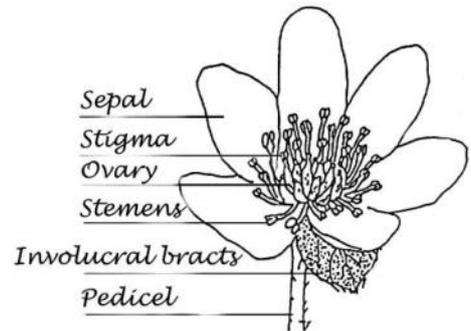
Raiu o hōsha JP



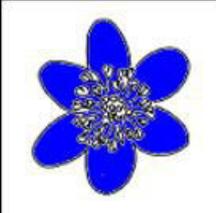
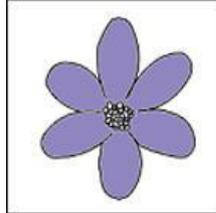
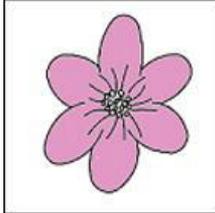
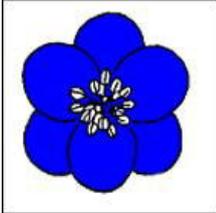
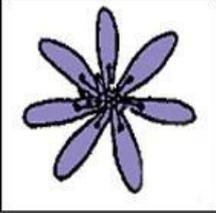
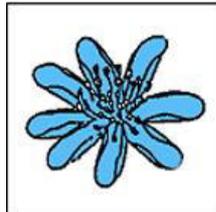
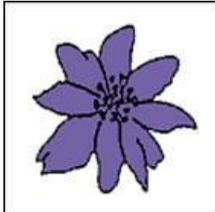
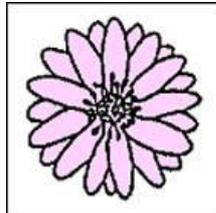
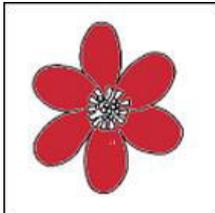
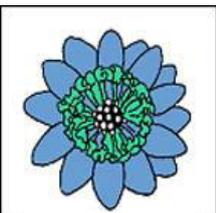
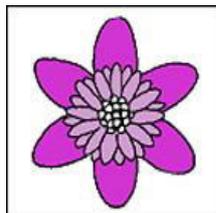
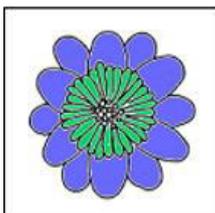
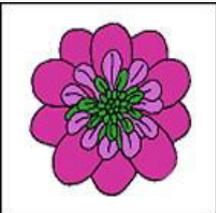
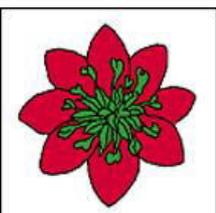
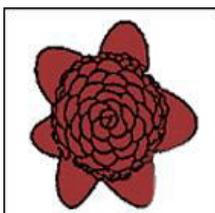
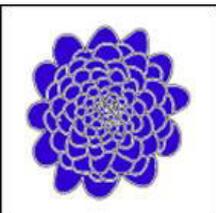
Yumenhana

## Flower classification:

The following drawings show the structure of the flowers. You can see the variety of flower shapes. (Japanese drawings)



Flower Structure

				
Basic shape A	Basic shape B	Basic shape C	Perfect shape	Star shape
				
Deformed A	Deformed B	Deformed C	Multipetaled A	Multipetaled B
				
Semiplena A	Semiplena B	Harashibe A	Harashibe B	Choji Zaki
				
Teigi Zaki	Nidan A	Nidan B	Sandan A	Sandan B
				
Karako A	Karako B	Sen e A	Sen e B	Sen e C



## Hepatica Angulosa Series

This series is comprised of all Hepatica with 3 to 5-lobed leaves. They are usually tetraploid with  $2n=28$  chromosomes. The one exception is *H. falconeri* which is diploid with  $2n=14$  chromosomes. The tetraploid species are very vigorous, with bigger leaves and flowers compared to those from the Triloba series. This makes them particularly good for hybridizing.

### **Hepatica Angulosa Series**

#### **Europe:**

*Hepatica transsilvanica*

#### **Central Asia:**

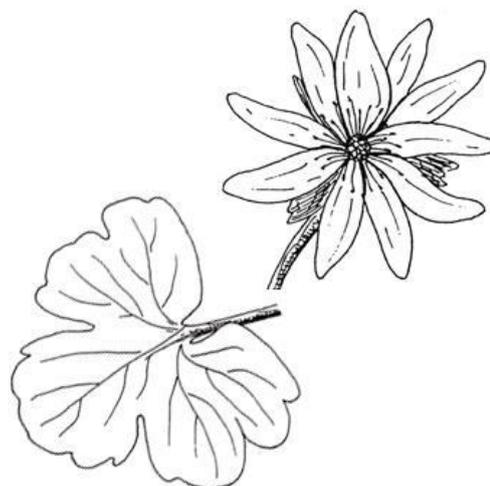
*Hepatica falconeri*

#### **Asia:**

China:

*Hepatica henryi* var. *henryi*

*Hepatica yamatutai* var. *yamatutai*



## *Hepatica transsilvanica*

Large blue Liverleaf

### Description:

**Habitus:** perennial, herbaceous, up to 15 - 25 cm tall. The axis of the stem is slightly inclined. After several years and if good growing conditions are met, they form short, slightly horizontally creeping shoots (formation of runners in contrast to the formation of new shoots in *Hepatica nobilis*), so that small groups can appear.

**Roots:** short rhizome, forms runners.

**Leaves:** All basal leaves form a basal rosette, with petioles, 3 - 5-lobed, hirsute, deeply serrated (to the centre of the leaf or even deeper), 5 to 8 cm in diameter, edge serrated - dentated, rough texture; petioles 8 - 20 cm long, villous.

**Flowering time:** (January-)February-March(-April), first flowers +/- 2 weeks earlier than *Hepatica nobilis*.

**Flowers:** Perigonium; radial symmetric, basal, 1-flowered; 3 cup-shaped involucral bracts, hirsute, ovate to oblanceolate, tips have 2 to 3 small teeth; directly above the bracts 8 - 9 (11) uniform sepals, which are oblong -ovate, obtuse, blue to purple, also white and pink flowers, 25 - 50 mm ø, with a long pedicel. Style yellowish; stigma white to yellowish; filaments blueish; with a white to blueish or reddish connective; anther white to blueish; pollen with 5 pores, yellowish; ovaries yellow to light green or greenish.

### Distribution:

This species grows in the Romanian Carpathians from Borsec to Deva and in the Carpathian arc near Kronstadt. In the mountains they can be found up to 2000 m altitude in woodland.



Leaf



Carpathian arc Romania

### Excerpt from a letter from Kronstadt, Romania:

I've found particularly beautiful forms of *H. transsilvanica*. These forms can be divided in 3 groups:

- 1) Often: (very) light blue
- 2) Rarely: white, blue with a reddish sheen
- 3) Seldom: bicoloured (blue with a white centre to the sepals), pink violet-red.

Do you know that the Tâmpa (960 m) is the locus classicus for *Hepatica transsilvanica*?

N. Balascuta





Adam JP



Alba



Angela JP



Anja JP



Arktica JP



Easy JP



Astrid JP



B. Aschauer JP



Barbarossa AH



Belkala OB



Big JP



Bläuling JP



Blue Fantasy JP



Blumenstadt Erfurt



Donnerwolke JP



DeBuis



Düvelsblau JP



Eisfee JP



Eistaucher



Eisvogel



Gletschereis JP



Grethe



Holzdorfer Rosa JP



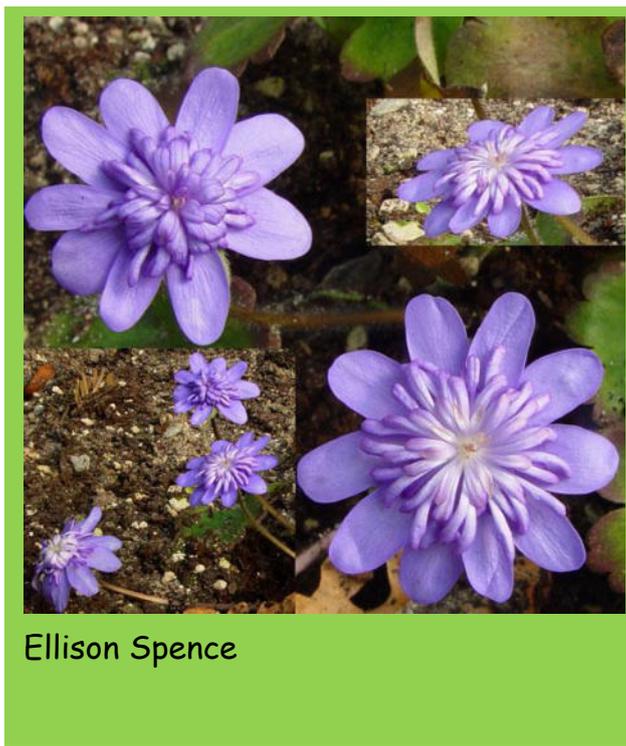
Hans Scharrer



January-February



Jessica JP



Ellison Spence



Karpatenstern JP



Karpatenkrone MA



Loddon Blue



Melanie JP



MM JP



Nadine JP



March



Peter Majland



Pfauenauge AH



Rosea (Linacina)



Schwanensee AH



Semiplena JP



Sensation JP



Silberregen JP



Silver JP



Sternenglanz AH



Silbertaler JP



Sterni JP



Supernova AH



Waldgeist AH



Weinreichs Blau



Weinreichs Weiße



Was Nun JP



Winterfreude AH



Thiem



Wintertraum JP



Zwerg JP



Edge planting, A. Lund in Denmark



Struwelpeter

### ***Hepatica transsilvanica* `Elison Spence`**

Several years ago, I had an extensive correspondence with Molly Sanderson from Ireland. She told me a special clone of *Hepatica transsilvanica* had appeared in the garden of one of her friends. It had purple and double flowers! I was surprised and immediately requested a piece for my collection. It was a nice surprise when a delivery came with a small parcel containing a piece of that plant. At about the same time Molly told me her friend had died and she was now taking care of her garden. At some of the Irish and English plant-shows, where it was shown as 'Flore Pleno', it was highly awarded. In memory of Molly's friend this wonderful founding was later named as 'Elison Spence'.



Elison Spence

## Hepatica Blattvarianten



H. henryi



H. yamatutai



H. falconeri



?  
H. falconeri x  
H. transsilvanica



H. transsilvanica



H. nobilis var. nobilis



H. nobilis var. obtusa



H. nobilis var. acuta



H. nobilis var. glabrata



H. maxima



H. nobilis x H. transsilvanica = H. x media



H. nobilis "Marmorata"

+



H. nobilis "Crenatiloba"

=



H. nobilis "Marmor Crenata"



andere "Crenata" sowie "Marmorata" Formen

## *Hepatica falconeri*

### Description:

**Habitus:** perennial, herbaceous, 6 - 20 cm tall, new leaves emerge in March, the plants remain in growth until October and the leaves start to turn yellow in November.

**Roots:** compact rhizome, with elongated, membranous scales at the tip.

**Leaves:** Basal leaves 3-lobed, reni-cordiform, in the beginning villous, later sparsely hirsute, deeply incised; lobes rounded to rhomboid, broadly cone shaped, two to threefold with broad teeth and serrated lobes or just simply incised-serrated with broad obtuse tip or slightly sharp-pointed teeth; long petioles, with soft hairs sticking out horizontally.

**Flowering time:** March-April-June

**Flowers:** Perigonium; ♀, radial symmetric, basal, 1-flowered; 3 (seldomly 4) small, entire involucral bracts, narrowly ovate to oblong, almost acute, entire, rarely with (usually 3) small, pointed teeth at the tip, with flat-laying soft hairs; above that the flower on a short pedicel (ca. 8 mm), 1 - 2 (-3) cm ø and 5 (sometimes 6) sepals, which are white, sometimes with a reddish underside, ovate-oblong, blunt or lightly sharp tips, glabrous or at the base with flat-laying soft hairs; pedicel upward growing or erect, as long as or longer than the petioles, thin, seemingly weak, mostly undulated, hirsute similar to the petioles but to a lesser extent.

**Style:** yellowish-greenish

**Stigma:** yellowish

**Filaments:** white

**Anthers:** white to yellowish

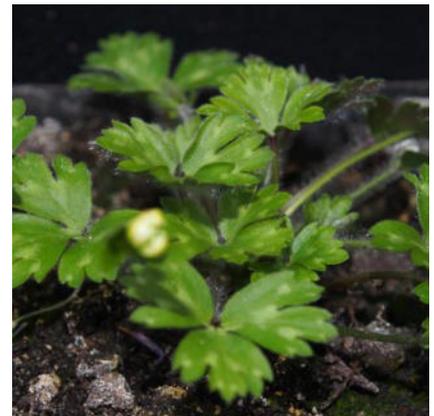
**Ovaries:** greenish

**Seeds:** narrowly oblong, gradually getting thinner to the tip, lightly curved, circular, villous.

**Chromosomes:**  $2n = 14$  (diploid)



Leaf- and flowerbuds



leaf shoot



Upper side leaf



Hirsute underside leaf

**Distribution:**

Central Asia; India: Northwest of the Himalayas, district Himachal Pradesh and the district Jammu and Kashmir, northwest of China, Tianshan, Kyrgyzstan and Tajikistan: Pamir-Alay; the north of Pakistan: mountain areas; Kazakhstan: North-Tianshan (Ile-Alatau), at high altitudes, in thickets and forests, rocky mountain slopes, on calcareous soil rich in organic matter. (Included in the list of endangered plant species by decision of the Government of the Republic of Kazakhstan dd. 31 Oct. 2006)

**Cultivation and propagation:**

Soil with a lot of organic matter, humid, grow in shade. Will die down if too hot in summer. Propagation by sowing immediately after seeds are ripe or by division after flowering.

**Hardiness:**

Perfectly hardy, especially in areas with a reliable snow cover. I've been growing them in my garden for 3 years underneath a dwarf conifer. They increase easily from seed, although we almost never have snow and temperatures down to -15°C (deliberately without winter covering)



Distribution



Natural Habitat Ile-Alatau



Natural Habitat Ile-Alatau



Flower



Flower



Seed head



Seeds



In cultivation



Natural Habitat Ile-Alatau

## *Hepatica henryi* var. *henryi*

### **Description:**

### **Distribution:**

West of China: Chongqing (E. Sichuan/Szechuan), Hubei, Hunan, Shaanxi; 1300 - 2500 m; deciduous forests (1400 - 1800 m) covered in bamboo, which ensures good drainage. Grassland and thicket; shady, calcareous, humid locations.

**Habitus:** perennial, herbaceous, 5 - 10 cm tall (smallest species).

**Roots:** The rhizomes are very delicate but strong none the less.

**Leaves:** Basal leaves are slightly lobed (not deeper than 1/3 of the length of the leaf), 3 (- 5?)-lobed, it's possible for them to have 12 -15 smaller lobes which gives the leaves a rounded look, 3 - 5 cm ø, dark green, lightly hirsute, slightly marbled. Young leaves often nicely bronze coloured when emerging. Petiole with ruffled, shaggy looking hairs, 5 10 cm long.

**Flowering time:** March.

**Flowers:** Perigonium; ♀, radial symmetric, 1 - 2 cm, basal, 1-flowered; 3 (-5?) pointed, hirsute involucre bracts, directly above 6 uniform sepals, small 8 - 12 mm long, obovate to small elliptic; rarely with filled flowers; mostly white (to lightly yellowish-white), sometimes light pink to delicately lavender coloured; with a long pedicel, hirsute.

**Style:** white

**Filaments:** white, or pink, with a reddish connective

**Anthers:** white

**Ovaries:** light green, hirsute.

**Chromosomes:** 2n = 28 (tetraploid)

**Propagation:** Often forms root buds, which can be used to propagate the plant. Division is possible after flowering. It's also possible to increase *H. henryi* var. *henryi* by sowing, sow the seeds as soon as they are ripe.



Emerging leaves



Flowers and leaf



Upper side leaf



Underside leaf

**Soil requirements:** slightly acidic, well drained and with a lot of humus. Soil neutral to slightly acidic, rich in humus, slightly humid and well drained..

**Use:** it's a small, easy growing plant which can be planted in troughs or in the shade garden. The hardiness in our European gardens is guaranteed. Hepatica-connoisseurs from central Sweden, Norway, Poland, Austria, the Netherlands and England and different areas in Germany have been growing in their garden.

**Availability:** Imported in Europa and North-America from China in 1997.



Early stage, leaves



Flower white



Flower pink-white



Mature plant



Flower pink filled



Flower white filled



Flower pink

## *Hepatica yamatutai* var. *yamatutai*

### Description:

### Distribution:

West of China, province of Sichuan, on the slopes of the Emei Shan (3099 m) between 1600 and 2000 m. altitude; evergreen forests with high rainfall, well drained calcareous soils with a leaf mould layer.

**Roots:** Repent roots

**Leaves:** Basal leaves 5-lobed, with 3 bigger lobes and 2 smaller lobes, pointed, 3 - 5 cm ø, both on the underside and the upper side hirsute; new leaves emerge in April after flowering, when they emerge completely violet to reddish, later the upper side turns green and the underside remains violet-red.

**Flowering time:** January - March

**Flowers:** Perigonium; ♂ radial symmetric, basal, 1-flowered; 3 pointed, hirsute involucre bracts; 5-6(-7) uniform sepals, initially with pink stripes on the underside, the flower is white when opened and bigger than the flower of its relative *Hepatica henryi*. With a long, hirsute pedicel.

**Style:** Greenish

**Stigma:** Whiteish - greenish

**Filaments:** Light green

**Anthers:** white

**Ovaries:** Light green

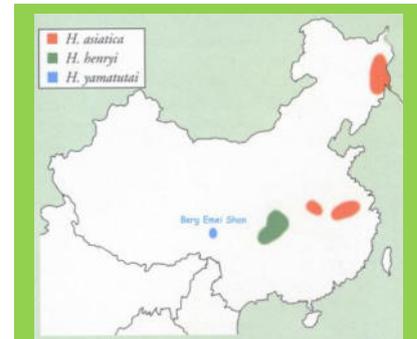
**Chromosomes**  $2n = 28$  (tetraploid)

**Related:** Closely related to *Hepatica henryi*.

### Cultivation:

Slow growing, but not difficult in humid, well-drained, calcareous to neutral soil, grows in shade.

**Propagation:** Vegetatively by division. Break of underground shoots or take root-cuttings from the thickened roots when they are about 10 cm long.



Distribution



Upper side leaf (hirsute)



Underside leaf (hirsute with a reddish colour)



Flowers and leaves

**Use in the garden:** The hardiness in our European gardens is guaranteed. Hepatica-connoisseurs from all over Europe have been growing them in their garden. Well-drained soil, rich in humus, neutral soil. Grows best in shady places when possible near wintergreen shrubs.

**Experience:** : In my Hepatica-garden they are growing under a cedar, in an area which is covered by a Japanese maple. In the very hot summer (with high temperatures and dry air) of 2018, the leaves suffered a lot but the plants survived perfectly.

***Hepatica yamatutai f. marmorata***

Everything written above for the regular 'yamatotai' can be applied to this form as well. It's an incredibly beautiful leaf form with high ornamental value.



In the garden



In the garden



Marmorata in the garden



Marmorata leaf



Involucral leaves and buds



Marmorata emerging flowers



Marmorata emerging leaves



*H. x euroasiatica* Mandy JP

## Hepatica Hybrid Groups

in (Green) = working name, not recognized nomenclature!

*Hepatica henryi x nobilis* var. *obtusa*

(*H. x henryi-obtusa* JP)

*Hepatica henryi x nobilis* var. *japonica*

(*H. x henryi-japonica* JP)

*Hepatica nobilis x nobilis* var. *japonica* f. *magna*

(*H. x eurasia* GP)

*Hepatica nobilis* var. *glabrata x nobilis* f. *marmorata*

*Hepatica transsilvanica x falconeri*

(*H. x transs-falconeri* JP)

*Hepatica transsilvanica x nobilis* var. *crenatiloba*

(*H. x transs-crenata* JP)

*Hepatica transsilvanica x nobilis* var. *japonica*

(*H. x transs-japonica* JP)

*Hepatica transsilvanica x nobilis* var. *acuta*

(*H. x transs-acut* JP)

*Hepatica x euroasiatica* (*H. transsilvanica x pubescens*)

*Hepatica x media* (*H. transsilvanica x nobilis* var. *nobilis*)

*Hepatica x schlyteri* (*H. nobilis x maxima*)

*Hepatica x schlyteri x transsilvanica*

(*H. x petersii* JP)

*Hepatica yamatutai* f. *marmorata x nobilis* var. *crenatiloba*

(*H. x kristensenae* JP)

*Hepatica yamatutai x nobilis* var. *nobilis*

*Hepatica yamatutai x nobilis* var. *japonica* f. *magna*

*Hepatica yamatutai x transsilvanica*

(*H. x harvingtonii* JP)



*H. x trans-crenata*

Barbara JP



*H. x trans-japonica*

Blue Fortune JP

## Selections from the Hepatica hybrid Groups

During the last 10-15 years Hepatica selections have enjoyed great popularity and enormous progress was made. First, I'd like to mention some famous gardeners and plant lovers:

**Severin Schlyter** (†) from Sweden with his "Cremar forms", *H. x schlyteri* (*H. maxima* x *nobilis*) and some *H. nobilis* var. *nobilis* selections.



*H. x schlyteri* Blue Max SS

**Marlene Ahlburg** (†) from Germany, she was the first to successfully create *H. x euroasiatica* (*H. transsilvanica* x *nobilis* var. *pubescens*) hybrids.



*H. x euroasiatica*  
Prof. F. Hildebrand MA

**Andreas Händel**, Germany, mostly creates *H. x media* (*H. transsilvanica* x *nobilis*) forms as well as selections from *H. transsilvanica* and *H. nobilis* var. *nobilis*.

**Otto Beutnagel** (†), Germany, was mostly interested in *H. x euroasiatica*, *H. transsilvanica* and *H. nobilis* var. *nobilis*. After his death, his collection was given to A. Händel and J. Peters.



*H. x media* Blaue Stunde AH

**Jürgen Peters**, retired nurseryman, Germany, has a big collection of Japanese Hepatica's and different wild forms. Own hybrids and selections from all possible Hepatica's, he's especially interested in *H. transsilvanica*. First to cross *H. maxima* x *nobilis* var. *nobilis* x *transsilvanica* = *H. x petersii*

**John Massey**, Ashwood Nurseries, England has a very extensive collection and mostly creates *H. x schlyteri* hybrids for the moment.

**Robin White**, England, mostly interested in *H. x media* and *H. x schlyteri*



*H. x media* Sue White RW

**Gunhild Poulsen**, Denmark, mostly *H. nobilis* var. *japonica* selections and *H. x eurasia* (*H. nobilis* var. *nobilis* x *nobilis* var. *japonica*) hybrids

**Gunda Kristensen**, Dänemark, Denmark, creates wonderful *H. x kristensenae* (*H. yamatutai* x *nobilis* var. *crenata*) hybrids as well as *H. x harvingtonii* (*H. yamatutai* x *transsilvanica*) hybrids

**Jan Huismann**, The Netherlands, has created and marketed interesting *H. x media* selections

Last but not least, the many **Japanese hybridizers**, who are mostly creating *H. nobilis* var. *japonica* selections, there are more 2000 different clones in Japan. We should not forget the **numerous hobbyists**, who have dedicated themselves to the creation and selection of Hepatica's in private. This book is especially interesting for them, as it gives the current situation.

What's the motive for these people to create new Hepatica forms? In my opinion, most gardeners and hobbyists want to improve the garden-worthiness of their favourite plants. For example, they will cross a strong growing *H. transsilvanica* with a beautiful flowering *H. nobilis*, to get something better. It can easily take 10-15 years, to get to the ideal plant. But success gives the certainty that you have created something unique, which makes you happy. There's also the quest for something special, something that did not yet exist, one could say that the possibilities are unlimited. Swapping across borders with fellow enthusiasts makes it even more exciting. Here we'll give an overview of where the current hybridization stands. Of course, it's a snapshot in time, there are countless other possibilities still left open.



*H. x eurasia* Harmony GP



*H. x kristensenae*  
Fantastica GK

### **Abbreviation of Breeders:**

AH = Andreas Händel  
GP = Gunhild Poulsen  
GK = Gunda Kristensen  
MA = Marlene Ahlburg  
SS = Severin Schlyter  
JP = Jürgen Peters  
RW = Robin White  
JM = John Massey  
US = Uwe Stiebritz  
KH = Kees Huisman  
EB = Ernst Ballard  
EW = Ewelina Wajgert

## *Hepatica henryi*

### *x nobilis var. obtusa*

(*H. x henryi-obtusa* JP)

This cross originates with G. Kristensen from Denmark. I've received a plant of this hybrid in 2017, so it's a bit early to say anything about it for sure, except that it grows well and has nice pink flowers.



## *Hepatica henryi*

### *x nobilis var. japonica*

(*H. x henryi-japonica* JP)

Here two worlds collide, the colourful Japanese with the round-leaved 'henry'. The result is a large, violet-blue flower with the typical rounded leaves. They are particularly good growers. Code: hj-015 JP



hj-015 JP

## *Hepatica nobilis*

### *x nobilis var. japonica f. magna*

(*H. x eurasia* GP)

From these two *H. nobilis* varieties, a few very floriferous clones have been selected. The idea to cross the European form with the Japanese form originated with G. Poulsen from Denmark. She thought these hybrids might be easier to grow in the Danish gardens, the weather conditions with high humidity are not always opportune for the Japanese forms. The goal was to transfer the beautiful Japanese flowers to the European hardy forms, in which G. Poulsen did succeed wonderfully.



Cherry Blossom GP



Dolly GP



Harmony GP



Red Eyes GP



Night Owl GP



Souvenirs GP



Stardust GP



Innocence GP



Pleasure GP

## *Hepatica nobilis f. marmorata*

### *X nobilis var. glabrata*

Cross from 2007 under code No. 2011-gl-no JP. The goal was to create a 'glabrata' with different flower colours. I succeeded by creating a blue flowered form, the leaves are lightly marbled and are completely glabrous, like 'glabrata'. The growth is intermediate between *H. nobilis* and *H. glabrata*. Unique within the *Hepatica* diversity.



## *Hepatica transsilvanica x falconeri*

### (*H. x transs-falconeri* JP)

Since the time that *H. falconeri* has been available to most *Hepatica* collectors, I've been thinking about the possibility to cross these two species. Said and done, in 2005 I crossed the two parent plants, and I harvested the resulting seeds. After that I followed the usual procedure: sowing, pricking-out and planting them in pots in 2017. In 2018 I had the first flowers.

**Leaves:** Intermediate between the two species, with three big lobes which are deeply divided. Each lobe with 4 smaller lobes. The leaves are longer than they are wide.

**Flowers:** The silver blue colour comes from *H. transsilvanica* 'Loddon Blue' and the flower is 5 cm ø. As with *H. falconeri* the sepals are not sessile directly above the involucral bracts, see picture. Code: 15-013 JP



*H. x transs-falconeri* leaf



*H. falconeri* leaf



*H. x transs-falconeri* Flower



Pedicel *H. x transs-falconeri* (sterile)



Pedicel *H.falconeri*

## *Hepatica transsilvanica*

*x nobilis* var. *crenatiloba*

(*H. x transs-crenata* JP)

Hybrids since 2008, some remarkable clones came out of this cross. Always with *H. transsilvanica* as seed parent and *H. nobilis* var. *crenata* f. *marmorata* as pollen parent.

**Flower Colours:** The "Crenata-pink" is inherited by the clones, from a light pink to an intense salmon-pink, I did not get any blue or white flowering forms.

**Flowers:** medium sized 3 - 5.5 cm ø

**Leaves:** all leaves are marbled, some lighter, some more intense.

**Habitus:** the genes of *H. transsilvanica* have a big influence here, grows very well.

**Experience in the garden:** the same as described with *H. x transs-japonica*



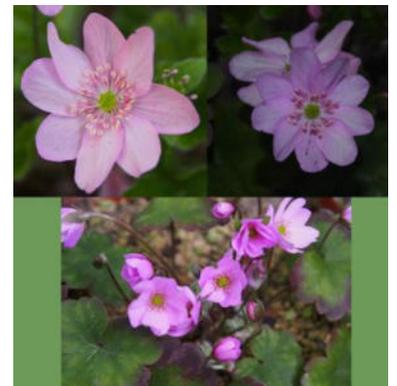
Ellesmera JP



Barbara JP



Barbara JP leaf



Leeana JP



Manuela JP leaf



Manuela JP



Rosanne JP

## *Hepatica transsilvanica x nobilis var. japonica*

(*H. x transs-japonica* JP)

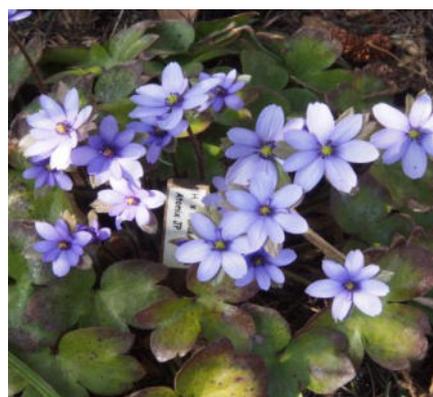
Popular hybrids since 2004, with *H. transsilvanica* as seed parent and *H. nobilis var. japonica f. magna* as pollen parent. Gives interesting results, some with marbled leaves, most without marbling. Some have transformed filaments, in Harashibe, Choji, Teigi & Nidan forms. The same possibilities as with the Japanese forms but stronger in growth and with the same growth behaviour as *H. transsilvanica*. The inflorescences seem to be closer in shape and colour to the 'japonica' form. The flower size varies between 3.5 - 5.5 cm ø. Since 2014 the reverse cross has been made as well, the results of these crosses are not yet available, we'll have to wait and see!

### **Experience in the Garden:**

Since 2016 I've planted my *H. transs-japonica* assortment out in the Hepatica-trial-garden. The first results are encouraging, they survived the winter perfectly and flowered well. Shoots arose from the plants that were planted out and in the 2nd year outside I could divide my plants. This shows the adaptability of many of these clones. As with every breeding program, some forms are stronger and some are weaker growing.



Atomix JP (Harashibe A)



Atomix JP in the Garden



BloedhgarmJP



Red Ebrithil JP (Harashibe)



Lilien JP



Anna JP



Babsi JP (Harashibe)



Blue Alchemist JP (Nidan)



Blue Darkness JP



Blue Fly JP



Blue Fortune JP (Nidan)



Blue Wizard JP



Brisinger JP



Fairith JP



Niernen JP



Rosenhochzeit AH



Ulfin JP (Harashibe B)



Urmel JP (Choji Zaki)

***Hepatica transsilvanica* x *nobilis* var. *acuta***

(*H. x transs-acut* JP)

**Hybrids:** from the years 2004-2008. Some remarkable clones were the result of this cross. Always with *H. transsilvanica* as seed parent and *H. nobilis* var. *acuta* as pollen parent. The resulting clones are sterile.

**Leaves:** individual lobes are pointed, and most plants have intensely marbled leaves. Three big lobes to each leaf, each lobe has one or two indentations.

**Flower Size:** as with *H. transsilvanica*: 4 to 5.5 cm ø.

**Habitus:** like *H. transsilvanica*

**Experience in the garden:** the same as described with *H. x transs-japonica*



Typical leaf



Doris JP



Katarina JP



Katarina JP leaf



Katja JP



Lakastre US



Variegated emerging leaf,  
Lakastre US



Lena JP



Lilafee JP



Lilafee JP young leaves



Lilafee JP Autumn colouring



Millstream Merlin in the garden 2018



Millstream Merlin



NT 4 SS



Uschi JP



Miss Violet JP



Rita JP



Doris JP



Miss Violet JP young flower

## *Hepatica x euroasiatica* MA

*H. transsilvanica* x *nobilis* var. *pubescens*

### History:

Without the hybridisation-activities of Marlene Ahlburg in the years 1992 to 2003, this hybrid would probably not yet have existed. She was the first to try her hand in creating this hybrid. She wanted to cross two diploid species (*H. transsilvanica* and *H. pubescens*) to create a sturdy, floriferous liverleaf for the general gardener. I'd say, the results argue in Mrs. Ahlburg's favour. All her hybrids are sterile, because of this, they can only be increased by division. This makes them significantly slower to bring into cultivation.

### Traits:

**Leaves:** remarkably similar to *H. transsilvanica* with 5 lobes and small indentations.

**Crown buds:** the buds grow upright close to one another, same as with *H. nobilis*.

**Flowers:** normally a beautifully rounded flower shape, close to the "perfect" form.

**Flower size:** 3,5 to 5,5cm Ø

**Flower colour:** all shades of the colour spectrum are possible, there's also an inclination towards bicoloured flowers, with a darker margin to the sepals.

**Habitus:** Quite easy in the garden, they grow like *H. transsilvanica* but they aren't as quick to increase.

**Experience:** the clones of these hybrids I've planted in the garden grow well, every year they become more beautiful and I'm always happily awaiting the flowers in Spring.

**Remark:** in the meantime, some other hybridizers have taken an interest in this cross. In my opinion, there's still a lot of possibilities left undiscovered with these specific hybrids.



Charlotte JP



Charlotte JP



Feuerdrache JP



Hiro JP



Jena US



Königin Luise MA



Königin Luise MA



Mandy JP



Mandy JP



Maria Sibylla Merian MA



Marthea JP



Max Leichtlin MA



Max Leichtlin MA



Murtaght JP



Nasuada JP



Noringa OB



Ohringa OB



Pink Panther JP



Pink Panther JP



Rötgesbüttler Röschen MA



Prinz Himmelblau JP



Prof. F. Hildebrand MA



Schimmerschuppe JP



Verla OB



Prof. F. Hildebrand MA

## *Hepatica x media*

*H. transsilvanica* x *nobilis* var. *nobilis*

### History:

Professor Friedrich Hildebrand, botanist at the university of Heidelberg, published a small article in 1898 about his hybridisation experiments with the *Hepatica* species which were known at the time. He liked none of them except for one. He wrote: "it is astonishing that the cross between the white *H. nobilis* and the blue *H. transsilvanica* is the one to create pretty hybrids" and he described those. Hybridisation takes a long time, so he had not really done a lot of work on them when the first world war started. After that, his hybrids seem to have disappeared. Maybe they died because nobody took care of them? Or they were stolen by someone who did not know how to take care of them? Nobody knows. But in the middle of the war, in 1916, a single new plant popped up in England, cultivated by Ernst Ballard (= *ballardii*), which closely resembled the "plants of Hildebrand", with big, wonderfully shaped, light blue flowers. For a long time after the world war, this was the only hybrid being swapped between collectors in England. Even now, there are not a lot of plants of this form, since it sets no seeds it is slow to increase.

### Traits:

**Flowers:** distinctly big from 3.5 to 5.5 cm ø, the flower shape is very variable.

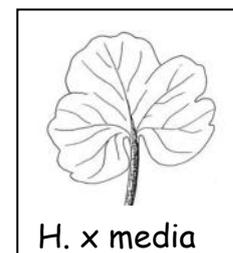
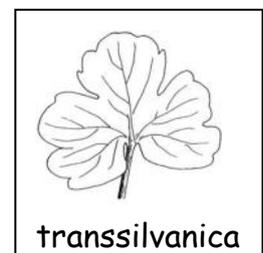
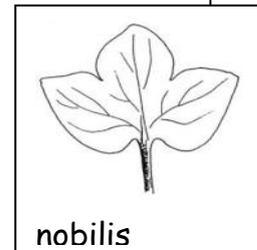
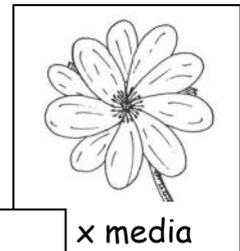
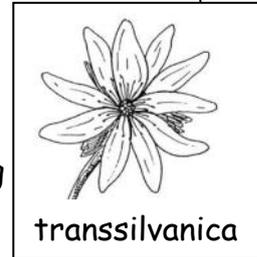
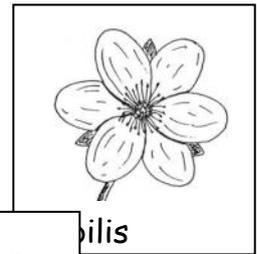
**Flower colours:** white, pink, red and all shades of blue.

**Leaves:** haben die Form von *H. transsilvanica*, manchmal mit leichter Marmorierung

**Crown buds:** upright, like with *H. nobilis*.

**Fertility:** all clones are sterile.

**Habitus:** like *H. transsilvanica*, slow to increase, strong plants.



Leaves often lightly marbled



Avatar AH



Ballardii EB



Bergsee AH



Blackthorn I RW



Blackthorn V RW



Blackthorn VI RW



Blackthorn VII RW



Blackthorn X RW



Blau Stunde AH



Blue Eyes KH



Blue Jewel KH



Estra OB



Gewenna JP



Gletscherfee JP



Himmelstiger JP



Himmelslicht AH



Himmelszauber AH



Holzdorfer Silber JP



Karpatenhimmel AH



Nachthimmel JP



Paktai OB



Silberprinzessin JP



Sue White RW



Silberkönig JP

## *Hepatica x schlyteri*

*H. maxima* x *nobilis*

I know some of these hybrids were created in Japan, but nothing has been published about those. In Europe, Severin Schlyter (Sweden) and Robin White (England), were chiefly involved with making these crosses. I've been making my own hybrids of these since 2006, I can tell you the following about these:

**Flower Colour:** *H. maxima* seems to take on the colours of *H. nobilis*. All colours are possible.

**Flower shape:** like *H. nobilis*, most of them exceptionally beautiful, which is one of the advantages of these hybrids. Against all expectations, I've also noticed that some of these clones, do set seed (are fertile).

**Leaves:** with three big lobes, often slightly curved in upon themselves. The underside is reddish and lightly hirsute. The leaves grow to be as big as with *H. maxima*. If the parent plants had marbled leaves, the resulting *H. x schlyteri* will have lightly marbled leaves as well. The shape of the leaves is influenced by the parent-plants, if one of the parents has acute leaves (with pointed lobes), the resulting hybrids will have those as well.

**Crown buds:** slightly hirsute as with *H. maxima*. The tip of the buds is more needle-like and the bud itself is thicker than those of *H. nobilis*, they are purple red coloured.

**Breeding/hybridizing:** In England John Massey (Ashwood Nurseries) creates a lot of *H. x schlyteri* hybrids, he has created both fertile and sterile clones and he sells them as *H. x schlyteri*, Ashwood Hybrids. In my own crosses I have the same results, see pictures of cultivars on page 77. I think, we can expect some wonderful surprises with these hybrids



Crown bud



Leaf with rounded lobes



Leaf with pointed lobes



Rosa Max JP in the garden



Amelie JP



Bicolor Max JP



Blue Max



Claudia JP in the Garden



H. maxima x japonica



Lalelu JP in the Garden



Steffania EW



Red Max JP



Silbermond JP



The Bridge RW



Bicolor 15-076-1 JP



Violett Max JP

*Hepatica x schlyteri x transsilvanica*  
(*H. x petersii* JP)

**Diary of a Hepatica-hybridization JP**

The time had come again, the first liverleaves were flowering and the quest of "helping nature" was playing in my mind.

Simply put, you take two different plants and pollinate one with the pollen of the other in the hope that something good will come out of it. This is the quite simple art of hybridizing.

But the point is to find something new, which had never been seen before. So, it's important to think about which species, cultivars or clones should be crossed. That's how I came about this crazy idea, I knew *H. x schlyteri* (*H. maxima x nobilis* var. *nobilis*) 'The Bridge' (RW) is fertile. I wanted to cross this cultivar with *H. transsilvanica* 'Grethe'. Why use this form, you ask? Because the flowers are big and most importantly, they give a lot of pollen.

For the second combination, I decided on going with *H. transsilvanica* 'Schwanensee' (AH) because of the different colour of its flowers. I made this cross in February of 2006. So, I became Type I and Type II seeds. From Type I, I got 10 seeds and from Type II just 6. In July, after they were ripe, I sowed them immediately and the waiting game could start. In 2007 100% of the seeds germinated, which was a very pleasant surprise. After I pricked them out in June of 2008, I got some very good growing plants in 2011. The first ones were flowering in that year as well. It became possible to see the difference between the clones, but a few general characteristics were clear as well:

- 1) The crown buds are similar to the ones of *H. maxima*, plump and long, well above the soil, but with very few hairs and with a more acute tip, a bit like *H. x schlyteri*.
- 2) The pedicels and petioles are very long and strong, up to 25 cm.



Arya JP



"Flying leaves"



underside leaf, hirsute,  
with some reddish spots



upper side leaf

3) The flowers are substantially bigger than with *H. x schlyteri*, nearing the size of *H. transsilvanica*.

4) The leaves are very special. They look like *H. transsilvanica* leaves with 3 big lobes, each further divided into three smaller lobes, creating a 9-lobed leaf. Because of the measurements, 8-10 cm wide and 5-7 cm long, it seems a bit rounded. The highlight is the waviness of the leaves, which gives the impression of movement, as if they want to take off to fly.

5) The upper side is green with a slight marbling. The underside is slightly reddish/green, visibly hirsute. The hairs and the colours of the underside come from *H. maxima*.

This is the basic information for this "threefold-hybridization" from *H. maxima* x *nobilis* = (*x schlyteri*) x *transsilvanica*, for which I use the working name of *H. x petersii*. From the 16 seeds I retained 5 cultivars, which I will describe below.

### ` Arya JP`

**Crossing Type:** II

**Flower Colour:** dark violet -blue with a white centre

**Flowers Ø:** 4-5 cm

**Sepals:** 7-9

**Filaments:** white

**Anthers:** white

**Connective:** white

**Pedice:** 10-15 cm, slightly hirsute

**Petiole:** 8-10cm, slightly hirsute

**Leaves Ø:** 6 cm wide, 5 cm long, slightly marbled

**Habitus:** grows moderately to strong

**Vegetative propagation:** slow, difficult

**Assessment:** good grower, floriferous, slow to increase



Crown bud



Emerging leaf



Arya JP



Arya JP

### ` Blue Highlight JP`

**Crossing type:** I      **Flower Colour:** dark violet-blue-red  
**Flowers Ø:** 5-6 cm      **Sepals:** 6-7  
**Filaments:** violet    **Anthers:** white      **Connective:** white  
**Pedicel:** 15-20 cm, slightly hirsute (silvery hairs)  
**Petiole:** 12-15cm, slightly hirsute (silvery hairs)  
**Leaves Ø:** 8 cm wide, 6 cm long, not marbled  
**Habitus:** grows strongly    **Vegetative propagation:** quick, easy  
**Assessment:** the best grower which increases readily, with big, round flowers



Blue Highlight JP

### ` Ealwihna JP`

**Crossing type:** II      **Flower colour:** dark violet-blue  
**Flower Ø:** 4-5 cm  
**Sepals:** 10-12, almost semiplena  
**Filaments:** violet      **Anthers:** white  
**Connective:** violet  
**Pedicel:** 15-20 cm, slightly hirsute  
**Petiole:** 12-15cm, slightly hirsute  
**Leaves Ø:** 6 cm wide, 5 cm long, not marbled  
**Habitus:** grows moderately to strong **Vegetative propagation:** moderate  
**Assessment:** interesting and dark flower; good, moderate grower.



Ealwihna JP

### ` Oromis JP`

**Crossing type:** II      **Flower colour:** pale violet-blue  
**Flowers Ø:** 4-5 cm      **Sepals:** 5-7  
**Filaments:** pale violet    **Anthers:** white    **Connective:** green  
**Pedicel:** 10-12 cm, slightly hirsute (silvery hairs)  
**Petiole:** 8-10cm, slightly hirsute (silvery hairs)  
**Leaves Ø:** 5 cm wide, 4 cm long, slightly marbled  
**Habitus:** grows slowly    **Vegetative propagation:** very slow  
**Assessment:** the cultivar with the smallest flowers and leaves and the slowest to increase.



Oromis JP

### ` Saphira JP`

**Crossing type:** I      **Flower colour:** violet-blue  
**Flowers Ø:** 5,5-6 cm      **Sepals:** 7-8 Stück  
**Filaments:** pale violet      **Anthers:** white  
**Connective:** yellowish  
**Pedicel:** 20-25 cm, hirsute (silvery hairs)  
**Petiole:** 15-20cm, hirsute (silvery hairs)  
**Leaves Ø:** 8 cm wide, 6 cm long, not marbled  
**Habitus:** grows quickly    **Vegetative propagation:** slow



Saphira JP

One may ask, what did we gain for garden-use from this new hybridization? These cultivars grow out to be strong perennials, which can be grown in every shade-garden. On a well-drained soil with a lot of organic material and enough fertiliser, these plants, with their wonderful shiny leaves and their big, early, and colourful flowers will bring you a lot of joy.

Pictures from the garden



Arya JP (2018)



Ealwiehna JP (2018)



Ealwiehna JP



The H. x petersii collection in the garden 2018



Saphira JP (2018)



Saphira JP

## **Hepatica yamatutai**

**x nobilis var. crenatiloba 400SS**

(*H. x kristensense* GK)

### **Jewel-leaved liverleaf**

#### **History:**

From the ca. 1200 different *Hepatica*'s in my collection, this one is the best. Gunda Kristensen from Denmark really succeeded in creating a perfect hybrid. She crossed both parent-plants (see pictures) for the first time in 2011. The result was truly astonishing. I acquired this plant in 2015 at the plant-fair in Kolding. The first two years, I grew it in a big pot in my greenhouse. This plant grew so well I was able to show it as an exceptional plant at the *Hepatica*-exhibition of 2017 in München. Later, I planted it out in my *Hepatica*-garden, a true eyecatcher. A lot of people want a division, but thus far I have not dared to divide my plant, maybe in one of the following years. For this original plant, prices with five numbers have been offered, Japan sends its regards!

#### **Description:**

**Leaves:** with silver/green markings, marbled

**Leaf underside:** reddish, slightly hirsute

**Leaf size:** 10 to 12cm Ø,

**Leaf shape:** with 3 lobes, each divided into three smaller lobes

**Petiole:** 15 to 25cm long

**Flowers:** salmon-pink, 5 to 6cm Ø

**Filaments:** white

**Anthers:** white

**Connective:** pale green

**Ovary:** dark green

**Stigma:** white

**Style:** dark green

**Name:** Gunda and I agreed to give it the name

*H. x kristensense* 'Fantastica'.



*H. yamatutai* f. *marmorata*  
leaf



*H. nobilis* f. *crenatiloba*  
Cremar 400 SS leaf



*H. x kristensense*  
*Fantastica* shiny leaf



*H. yamatutai* f. *marmorata*  
Rosea



*H. nobilis* f. *crenatiloba*  
Crema 400 SS



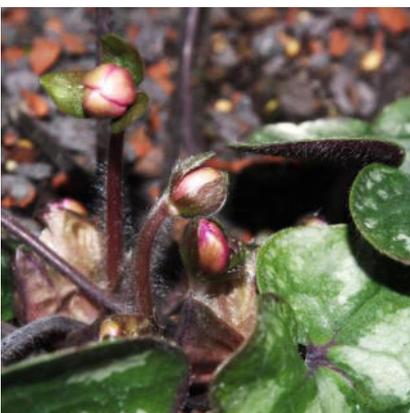
*H. x kristensenae*  
'Fantastica'



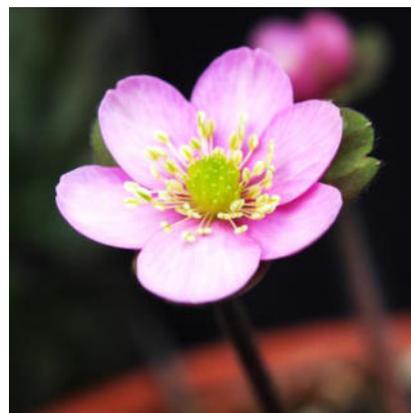
*H. x kristensenae* 'Fantastica' exhibition München 2017



*H. x kristensenae*  
'Fantastica'  
30cm Ø 2016



*H. x kristensenae*  
'Fantastica' buds



*H. x kristensenae*  
'Fantastica' young flower



*H. x kristensenae*  
'Fantastica'  
45cm Ø, planted out in the  
Hepatica-garden in 2018

## *Hepatica yamatutai* x *nobilis* Typ SS63

Another hybrid from Gunda Kristensen, which I obtained in 2017. Essentially, a *H. yamatutai* with beautiful dark blue flowers.

### Description:

**Leaves:** not marbled, shiny green

**Leaf underside:** red, slightly hirsute

**Leaf size:** 8 to 10 cm ø

**Leaf shape:** 3 lobes, no further divisions

**Petiole:** 10 to 20 cm long

**Flowers:** dark blue, 4 to 5 cm ø



upper side leaf, shiny



young flower



mature flower



underside leaf shiny

## *Hepatica yamatutai*

### x *nobilis* var. *japonica* f. *magna* 'Omurasaki'

### Cultivarname:

#### **H. Hybridus 'Schöne Asiatin JP'**

A hybrid from 2000. I wanted to transfer the intense pink of 'Omurasaki' to the mostly white flowers of *H. yamatutai*. Unfortunately, it didn't work out, but I've made a start.

### Description:

**Leaves:** not marbled, dull green

**Leaf underside:** red, moderately hirsute

**Leaf size:** 5 to 8cm Ø,

**Leaf shape:** 3 lobes, no further divisions

**Petiole:** 15 to 20 cm long, strongly hirsute

**Flowers:** 3 to 4cm Ø

**Flower colour:** pale salmon-pink

**Flower buds:** pink



'Schöne Asiatin JP'

*Hepatica yamatutai* x *transsilvanica*

(*H. x harvingtonii* JP)

**Large-leaved liverleaf**

Only recently some crossings of this variant have been created. Both parent-plants are good growers and have flowers of substantial size. Something even bigger must be the result! And indeed, usually these hybrids are big and they need some room in the garden. Even though the crown buds grow quite close to each other the plant can grow to a size of 40 - 50 cm ø. Even the flowers exceed all other *Hepatica*'s, for example 'Colossus' with 6-7 cm ø

**Description:**

**Leaves:** some hybrids have marbled leaves, others don't

**Leaf underside:** reddish, moderately hirsute

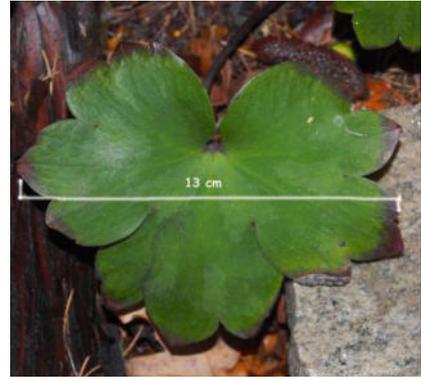
**Leaf size:** 12 to 15 cm ø

**Leaf shape:** similar to *transsilvanica*- or *yamatutai*, three-lobed, no further divisions

**Petiole:** 15 to 25 cm long, hirsute

**Flowers:** 5 - 7cm Ø

**Flower colour:** blue, violet, pink, red, silvery white



Crown bud up to 2cm



Colossus JP



Goliath JP



Miss Red JP



Miss Albino JP



Miss Rose JP



Guliwer JP



Marmorata



Miss Ellison JP

## What does the future hold?

My endeavour to further develop, cross and collect these hybrids continues unabated. I'd like to show you some of the results.

### Hybrid leaf variations:



15-010-009 JP



Silbersurfer JP



15-a008 JP



15-a010 JP



Pam JP



15-a003 JP



15-a013 JP



15-a012 JP



15-010-006 JP

Hybrid's future flowers:



Madelaine JP



Julia JP



Heike JP



Maraarete JP



Svetlana JP



Maiko's Strahlen JP



Maiko's Star JP



Maiko's Wirbel JP



15-Maiko-004 JP



Britte JP



15-010-002 JP



15-001-001 JP

## Cultivation of *Hepatica*

Pollination

Seed harvesting and collecting

Sowing

Development of a liverleaf

Pricking out and potting up of seedlings

Division

Root cuttings

Root buds

Botany



## Pollination

With so many possibilities to hybridize *Hepatica*, it's very tempting to "play bee". It's important to select some good subjects, very beautiful flowers with interesting colours or shapes. Don't forget to experiment with forms with interesting leaves. The key to a successful cross depends on the parents and the quality of the flowers. You need good, dry pollen (from the anthers) and receptive stigmas. We can transfer the pollen with either a brush or by using the anthers themselves. That's the entire secret. You're asking: that simple? Well, not that simple, but the principle is the same as what happens in nature, where this is done by ants, bumblebees, or bees. The professionals use a few accessories: a warm room (15-20°C), a light, a magnifying glass, and some soft brushes. And of course, there's the factor of "experience", which cannot be replaced by anything. It's also important to know that the ovaries of *Hepatica* are a group of female organs. Each separate gynoecium produces just one seed after pollination. Because of this, it's important to use a flower with as many ovaries as possible, to be able to collect as many seeds as possible afterwards. After a successful pollination, seeds can be collected and sown. Keep in mind, you will get a different unique plant from each seed. This is especially useful for the hybridizer. Selected and named cultivars and sterile intergeneric hybrids can only be increased by vegetative division.

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The heart of the flower, ovaries and anthers



Ovaries, anthers removed



Collecting pollen with a brush



Pollen

## Seed harvesting and collecting

Hepatica seeds are ready to be collected when they release with the slightest touch. Experts use different ways to collect the seeds. I'll show some examples here. Everyone is free to use his/her own way of course. Bind an **organza bag** around the seedheads. These bags are air-permeable, which keeps the seed from getting mouldy.



Bound seedheads



Seedhead in an organza bag



Seedhead



Organza bag with seeds

It's different when you use **plastic bags**: with these it is important to punch some small holes in them, if not, there will be condensation forming on the inside and the seeds will start to rot. Otherwise, it's great because you can see through and it's easy to see if the seeds have been released.

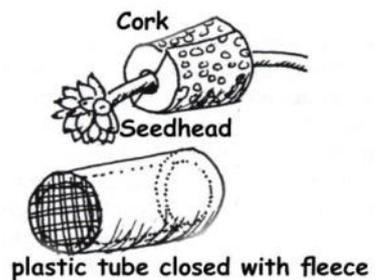
A more elaborate way of collecting the seeds is by using a **plastic pot**. It's held aloft by a copper wire and there's a small hole in the bottom, through which the seedhead has been pulled. In this case it's also easy to see if the seeds are ready.

With the **Schlyter system** it's even a bit more complicated. You use a cork, in which a slit is made for the pedicel. A small plastic tube is closed on one end with fleece. The cork is inserted into the tube and the seed is safe in that way. Disadvantage: a lot of work and it's not possible to see the seeds.

Whichever you choose, if it works, it's OK. There must be many other ways in which seeds can be collected.



Plastic pot  
(Sakuma, Japan)



Schlyter System

## Sowing

**Immediately** after harvesting, the seeds should be sown! If it's not possible to sow them immediately, you can mix them with a bit of sand and keep them in the fridge. Instead of sand, lightly wetted paper or humid sphagnum can be used as well.

Sowing:

- 1) Clean the container and fill it with a sterile substrate. Flatten the soil
- 2) Spread the seeds evenly over the soil
- 3) Press the seeds into the soil with a small wooden plank. Cover the seeds, you can use sand, sterile soil, pumice, or lava. I prefer to use finely crushed
- 4) grit, which has the added advantage of keeping liverwort of the pots
- 5) Don't forget to label the pots!
- 7) Lastly, water them in carefully. The pots are then placed in a shaded place, and it's important to make sure the seeds never dry out completely throughout the year.



Filled container with flattened soil



Spreading the seeds on the soil from a plastic cup



Seeds



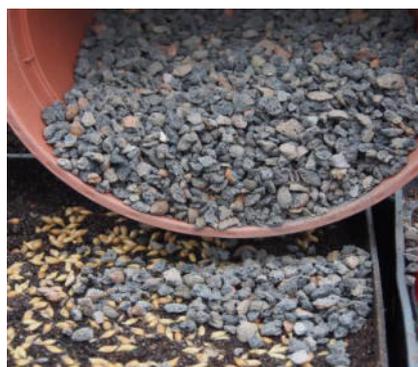
Seeds after being pressed



Seeds are pressed onto



Don't forget to water them in!

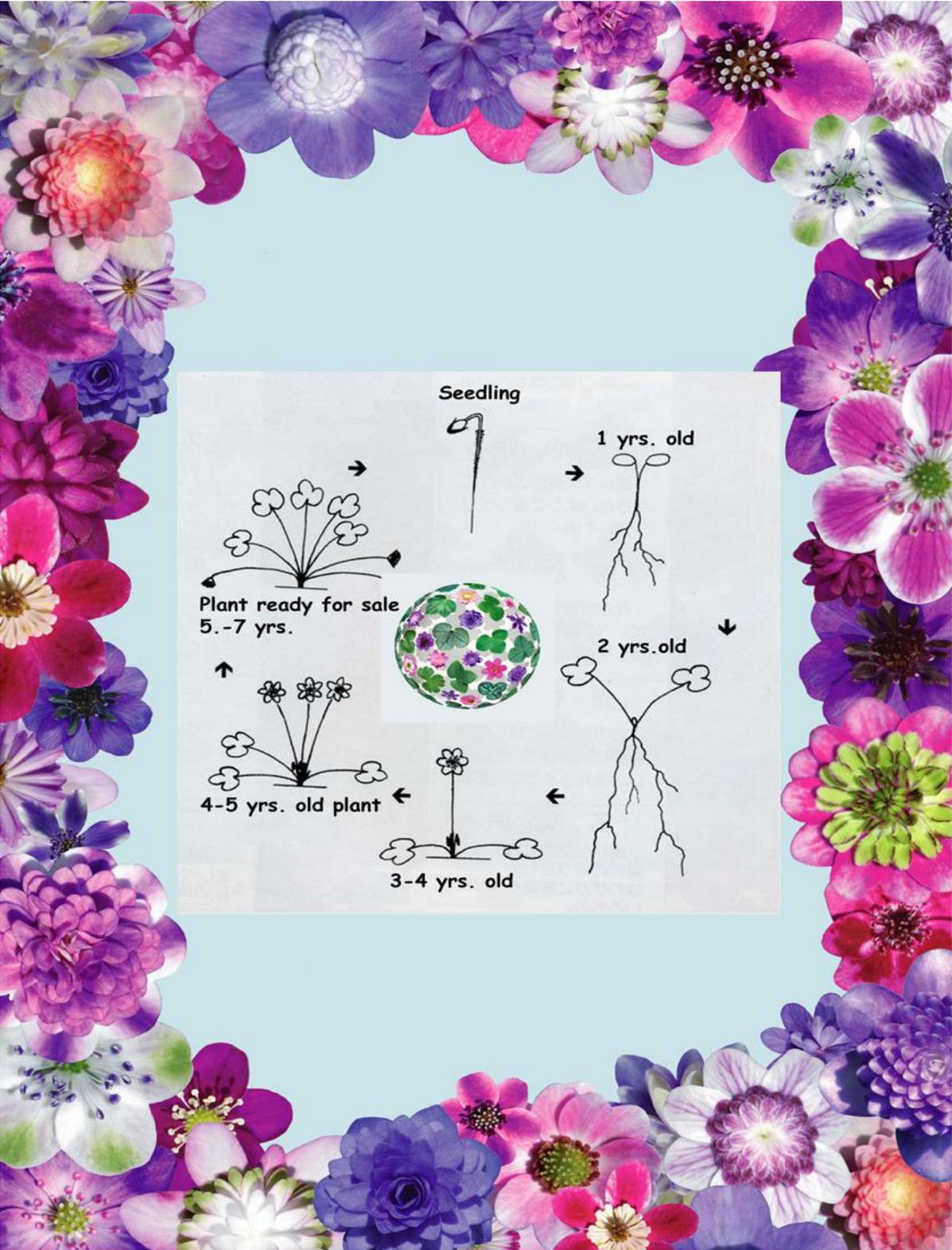


Covered with broken grit, ca. 1 - 1.5 cm



Pots filled and ready to be watered

development of a liverleaf



## Pricking out and potting up of seedlings

After germination in spring and when the seedlings have formed their first two cotyledons, a decision should be made. The opinions on when to prick them out vary.

- 1) Prick them out immediately
- 2) Wait until the second year
- 3) Wait until the first true leaf emerges
- 4) This is what I do:

I wait until the seedlings have grown up a bit and I prick them out in September. In my opinion, this is better for a couple of reasons, the roots will be developed better, and the small crown bud will be completely developed as well. In Autumn I have more time on my hands and I don't have to fear dry or hot periods. Disadvantage: it's necessary to cover the young plants in winter (fleece, bubble wrap, glass...)

### Pricking out:

I prefer to use plug trays with a size of 4 cm ø. The soil I use is a regular potting soil with 20-30% sand added. I leave them in there for the following 2 years. A bit of liquid feed is given in spring (high in nitrogen (N)) and one in August (high in phosphor and potash (P,K)), which helps them in their early growth.

### Potting up:

The 3-year-old young plants are potted up in a round 10 cm ø pot or in a square 9 x 9 cm pot. As soil I use regular potting soil with 30% sand and 20% pine bark added, but every grower has his/her own favourite mix.

### Mature plants:

After 4-5 years the plant is big enough to start flowering and they will have made enough leaves for them to be sold with a clear conscience. When they are taken care of perfectly in the following years, the plants can easily keep on growing for decades, 35-50-year-old plants are no exception.



Sprouting seeds



Seedlings emerging



Seedling



Pricking them out on a tray

## Division

I'll share with you my technique for dividing Hepatica in this book. Many Hepatica-lovers, myself included, agree that the best time to divide these plants is during flowering.

Remove the plants with a big clump of soil, try to remove the soil as careful as possible, to minimize damage to the small roots. Rinsing them out in water is a good way to do this. By no means, the roots should be cut, Hepatica do not like that.

After the soil has been removed, you can start the true division. Make sure not to divide them up in divisions that are too small. If you do, the division will react by slow regrowth or even by completely dying down.

As we've removed the leaves of the plants, we wanted to divided in winter already, now we have to remove the flowers as well. The flowers would take up too much energy, which will now be needed to form new leaves and roots.

It's best to pot the new division in a clay pot, which should not be too small, 10-13 cm ø is advised. Potting up in the period during which they are in full growth has the advantage that they regrow easily. Put the pots in a cool place and water them carefully. Plunge the clay pot halfway into the soil. When the plant has rooted well, your new treasure can be planted out in the garden, and we can enjoy its flowers in the coming years.



Don't forget to water them in!



Potting up



Plant to be divided



Soil removed



Dividing

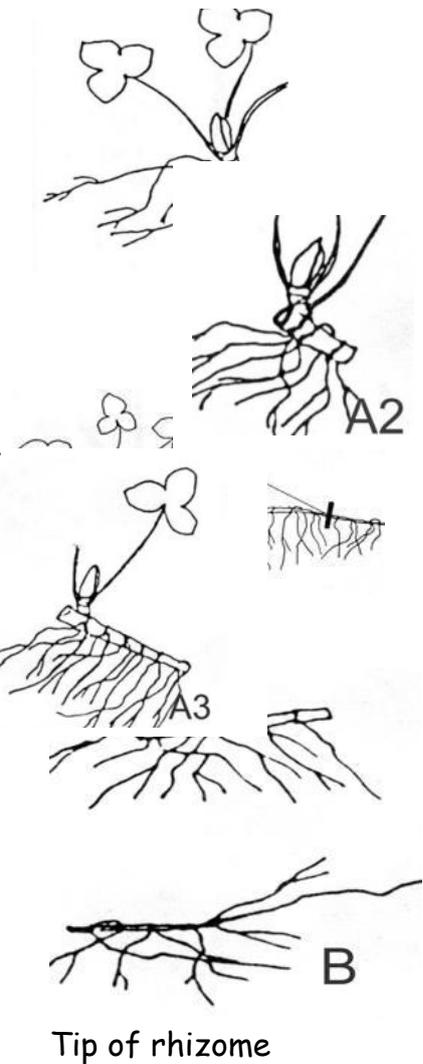


Remove the flowers

## Root cuttings

Root cuttings are not used a lot as a technique to increase Hepatica and it can only be applied to some species. It can be used with *H. transsilvanica*, *H. henryi* and *H. yamatutai*. In contrast to *H. nobilis*, these species make small rhizomes, which makes them better suited for this technique.

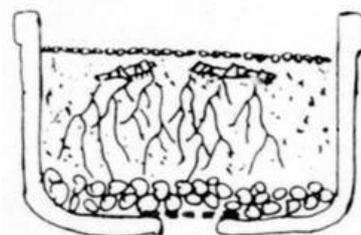
As we can see in the drawings, small buds (A) can be formed on the older parts of the rhizome, which can be taken off with a part of the rhizome. These parts can be potted up and grow on quite well. In general, these cuttings will grow to maturity in about 2-3years time. As we can see, these cuttings (A1, A2, A3) are of good quality and with some care they are not difficult to grow on. The tip of the rhizome is a different story. This part is often too thin to have enough power to grow out to a complete new plant. But we shouldn't ignore these apical parts of the Hepatica-rhizome either. Especially with rare cultivars, we are happy with every opportunity to increase the plant. These cuttings can be potted up, horizontally in a substrate of 50% sand and 50% potting soil. They should be kept slightly humid. After you've potted them up, the pot should be plunged in a shady and cool part of the garden for one year. The next year it will be clear if some new buds have formed on the rhizomes. If so, these cuttings can be grown on.



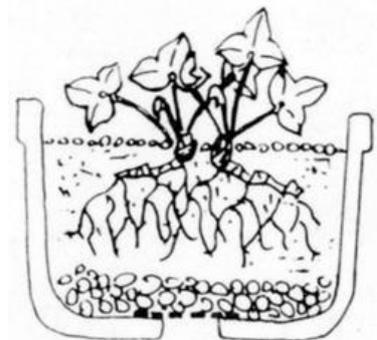
New growing buds



New crown buds



Rhizomes potted up



Growing rhizomes

## Root buds

In exceptional cases it's possible to increase *Hepatica* by taking root buds. This is something I've only ever saw once. While I was repotting *Hepatica henryi*, I noticed some pale, ca 1 cm long shoots on the roots. We removed these with a bit of root and treated them as root cuttings. Since there was one sprout on each root, they grew on perfectly. I still don't know what triggered the formation of these buds. I've observed the same phenomenon, but to a lesser extent, with *H. nobilis* var. *obtusata*, but the result was not as good as with *H. henryi*. Further observation of why and when this happens is needed!



Shoot on the root



# A bit of botany

The flower of Hepatica's is composed of five visible parts:

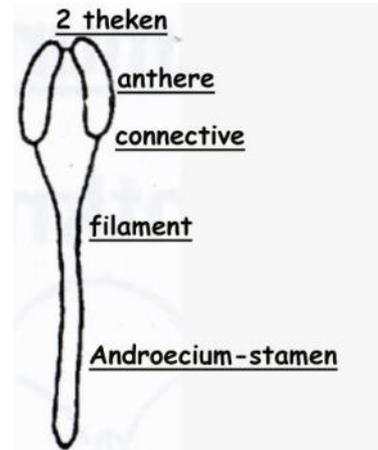
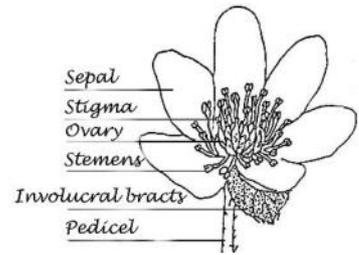
**1) Pedicel:** most are lightly to strongly hirsute, greenish, sometimes reddish

**2) Bracts:** (involucral bracts)  
Greenish, normally three  
With hybrids often up to 5 and incised

**3) Sepals**  
These beautiful, coloured parts are **petaloid sepals** often mistakenly called petals, the "perfect form has 6 sepals, but it can go up to 20 or more.  
Shape of the sepals is ovate-oblong to ovate-broad, all colours are possible

**4) Male reproductive organs, stamens:** (Androecium)  
Stamens  
white, green, yellow, red, violet  
Filaments: white, green, yellow, violet  
Anthers composed of two halves, the lobes: white, green, yellow, violet  
Connective, in between the two lobes of the anther: white, green, yellow, violet

**5) Female reproductive organs, Pistil:** (Gynoecium)>10  
Ovaries: green, yellow  
Stylus: green, yellow  
Stigma: green, yellow, rarely red



Aggregate ovaries, shapes

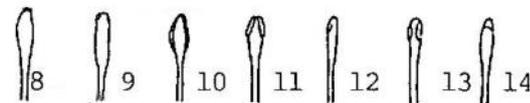


Ovaries + Stamen shapes

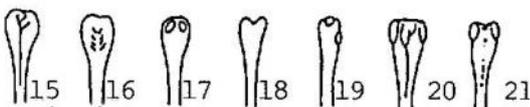
**stamen-shaps**



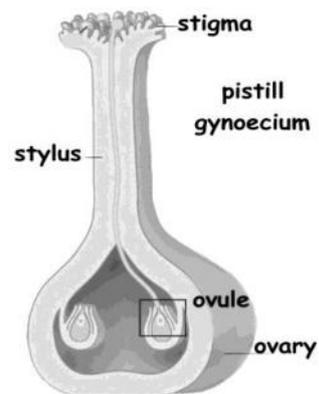
**spoon-shape**



**cane-shape**



**spade-shape**





Hepatica Exhibition Munich 2011/2014/2017



## Summary:

I've tried to shed my light on all topics regarding *Hepatica* in this book. And I've tried to share everything I know, being aware that this is not the ultimate work on this genus, new insights will lead to more knowledge, and who knows, maybe I'll add some new chapters in 10 years' time. Also, I'm aware that many questions remain unanswered, especially when naming the clones, we shouldn't make it easy for ourselves.

People wanting to acquire the "old book" No I in German, you can get it from me on CD. (630 pictures, 185 drawings on 161 pages, including the "Florengeschichte *Hepatica*" of Michael A. Commichau and "Genus *Hepatica*" of the UK M.D. Myers

If you'd like to stay updated on the current sales-assortment, please take a look at the homepage of "Allerlei Seltenes" - plant nursery of Susanne Peters at [www.shop/alpine-peters.de](http://www.shop/alpine-peters.de).

Of course, it's possible to visit us, but please contact us beforehand, we are not always present at our small nursery, we look forward to your visit.

During the second to last weekend of March, there are "**Liverleaf-days**" at our nursery.



Liverleaf-days at the nursery



Cultivation-table



Poster, 66 pictures on A2-format



Exhibition Munich 2017

## The first dialogue: A liverleaf's tale

### Blue Wonder

Firstly, I would like to introduce myself: my name is '**Blaues Wunder**'. I'm sorry, my complete name is **Hepatica nobilis var. nobilis 'Blaues Wunder'**, for those of you who take naming seriously.

When my finder, who's the narrator of my story, picked me out from among many others of my peers a few years ago, he was probably impressed by the splendour of my flowers with their large, dark violet-blue sepals and the three consistent equally large leaf lobes. And of course, I'm a stately plant with a height of ca. 20 cm. That is what I can tell you about my appearance, so you know who you are dealing with. I'd like to tell you what a year in my life looks like:

Let's start in **April**, that's the period when I take up most of my food. The soil is lovely humid, the sun is bringing some pleasant warmth, my roots are spreading and, on my pedicels, the seedheads are ripening with my progeny. In this month, my propagator is helping me by dividing me up, so I can give some divisions which are true to name.

In **May**, me and my congeners are full in growth and we take on strength to survive the hot months of June and July. At the same time, my seeds are ripening, ready for the ants to spread them all over the garden. The new leaves I formed, are now becoming strong and robust, the old ones are bending towards the soil, where they rest and turn into humus, bringing nutrition into the cycle of the earth..

With the beginning of **June**, monotony starts to set in, the grass surrounding me is in growth and helps me to stay cool and by bringing morning dew. It's teeming with all kinds of creatures around me and I must be on the lookout for any beetle or caterpillar who wants to nibble on my beautiful new leaves.

**July** is warm, often too hot for me, so I spread my leaves flat on the soil, which helps to preserve the last humidity in the soil. But we should be on the lookout again! Now some moulds are growing, and they like to grow on weak leaves which they will use as sustenance. So, I'm very happy when my gardener makes his round with a fungicide to keep me safe from their attack.

With **August** come warm days and cooler nights, which I love so much. Now I'm starting to take up nutrition with my roots again, to prepare myself for winter. I'm incredibly grateful for a small amount of fertilizer on top of my leaves and on the soil.



Even in **September** and **October**, I'm still in growth. I'm still taking up food to be stronger, since we can't predict how long the following winter will be.

In **November** I'm going into rest. It's starting to get too cold, sunlight and with it the warmth becomes a rare commodity. My friend, the gardener, improves the soil with a bit of lime, clay granules, loam, and some organic fertilizer. I can prepare myself for the most beautiful time of the year.

**December** is grey and gloomy, I've been covered by leaves, which will protect me from frost and cold winds.

So perfectly taken care of, I'll sleep for another month, in **January** I'm starting to become impatient, curious to see what the early Spring will bring. I notice my roots are starting to move, encouraged by the slow warming up of the soil. Gradually, growth is stirring within me.

By the end of **February**, the first flower buds are shooting up, to see how it looks above the leaves.

**March** is starting and with this month my yearly fireworks are coming: my pedicels push up from my swollen buds, to unfurl their beautiful sepals. Now I'm wearing my wedding gown, to show to the world how happy I am. Winter has gone! The balmy wind and the first bees caress my flowers, to pollinate the pistils with pollen, starting the cycle of life anew.

I hope, you'll come to visit me, so you can enjoy the flowery bridal gown of myself and my congeners.

You're welcome, your liverleaf: "**Blaues Wunder**"



## The background of a Hepatica-collector

I'd like to introduce myself in short:

I was born in 1949 in Uetersen/Schleswig-Holstein (Germany). My parents owned a second-generation plant nursery. When I started apprenticeship in 1965, right from the start I was entrusted with dividing my first Hepatica from my teacher's private garden. This was *Hepatica nobilis* var. *nobilis* 'Rubra Plena'. Since that time Hepaticas have always been a part of my life. In the nursery of my father some Hepaticas were growing as well, he had collected a specimen with beautifully marbled leaves during a trip to Lake Garda. Hepaticas were always increased in or nursery, mostly by sowing. Back then, we had pink, white, red, and blue coloured forms. During that time, I started to select some special colour forms which I planted out in my own small garden. That I wasn't thinking about Hepatica all the time, is understandable. It's not weird that my interest in Hepatica waned in some periods, to come back stronger again, but I never completely lost my love for this genus. In the 1980s I came into contact with other Hepatica collectors in England, Japan, and the USA. The passion grew. When working with plants, we can expect setbacks, in the 1990s I lost all my Hepatica due to frost causing them to be encapsulated in ice. The plants were growing in a sunken greenhouse, the greenhouse filled up with rainwater and immediately after it started to freeze, that was it. I didn't mope, but I started from scratch. In the meantime, I grow all known species. Together with the varieties and cultivars I'm growing in pots and in the garden, I have a collection of +1200 Hepaticas. I hear you thinking: Crazy! Oh well, I admit, in this case I am, and happily so. It brings me balance, rest and above all it is fun to be this much into Hepatica. I'll be a Hepatica-collector for as long as I can, especially as a pensioner it's a brilliant endeavour. There is no end in sight, so many things to discover, we must keep our eyes and ears open. One thing delights me about contacts with the other Hepatica-lovers, the exchange of experiences, be it by e-mail, internet or face-to-face. There's always something to share, compare notes on or we can enjoy just simply watching the liverleaves. As many amongst you will know, since 1999 I organize a Hepatica-exhibition. This is the perfect occasion, to meet a lot of fellow Hepatica-fans. This is something I will keep on doing for sure, since there's no comparable occasion in Europe. I hope to meet you on one of these get-togethers, so we can speak in person. By the way! This exhibition takes place during the second to last weekend of March. I hope this book is the start to a new hobby and you'll become a Hepatica-fan and plant lover as well.

With kind regards

**Jürgen Peters**



Jürgen Peters



Flowerage



Example stages of development Hepatica



Mother plants



Hepatica's potted up

## Nurseries

### Allerlei Seltenes -Staudengärtnerei-

Susanne Peters

Auf dem Flidd 20

D-25436 Uetersen

Tel: 04122/3312

Fax: 04122/48639

E-Mail: [alpine.peters@t-online.de](mailto:alpine.peters@t-online.de)

[www.shop.alpine-peters.de](http://www.shop.alpine-peters.de)

### Andreas Händel

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Neu-Falkenrede

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[www.hepatica-haendel.de](http://www.hepatica-haendel.de)

### Ashwood Nurseries

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DY6 0AE, West Midlands

Tel.: +44(0)1384/401996

E-Mail: [mailorder@ashwoodnurseries.com](mailto:mailorder@ashwoodnurseries.com)

[www.ashwoodnurseries.com](http://www.ashwoodnurseries.com)

### Edrom Nurseries

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Tel.: +44(0)18907/71386

Fax: +44(0)18907/71387

E-Mail:

[info@edrom-nurseries.co.uk](mailto:info@edrom-nurseries.co.uk)

[www.edrom-nurseries.co.uk](http://www.edrom-nurseries.co.uk)

### Informative websites:

[www.hepatica.eu](http://www.hepatica.eu)

[www.kalle-k.dk](http://www.kalle-k.dk)



Kanzan Rot JP



Kashiwasaki JP



Niigata JP



Minamo JP

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*Hepatica nobilis* var. *japonica* f. *magna*



Sekiten



Dewa nishili



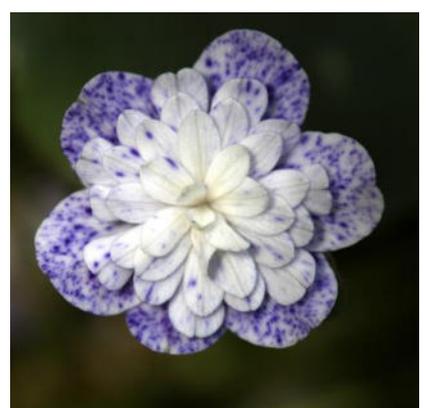
Benihagure



Beniotome



Chuyonishiki



Dai ryuuseiqun



Hakurin



Hanakurabe



Haruno utage



Hikogami



Hokutosei



Kagura

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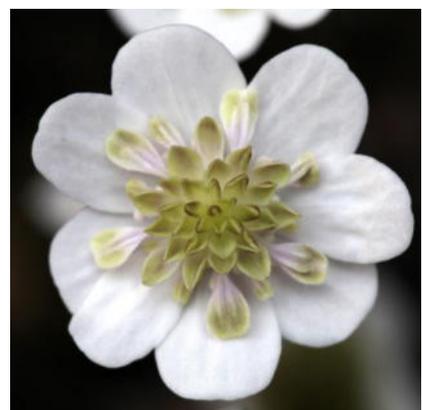
Momobanabi



Omurasaki



Roan



Ryokurin

College of Natural Sciences,  
Ewha Womans University,  
Seoul/Korea

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**Andreas Händel:**  
**Hepatica/Leberblümchen**  
**Edelsteine im Frühlingsgarten**

**GdS, Leberblümchen:**  
**Arten, Sorten, Kultur**  
**Jürgen Peters**

**Hepatica**  
**Leberblümchen eine Leidenschaft I**  
**Jürgen Peters**



Ryougetsu No 2



Saiun SU



Saichou



Sakuma No 5



Shiki



Senrei



Shinku



Sousyunka



Sugomori



Ayaka JP



Chiba JP



Cho JP



Etsu JP



Fumiko JP



Fushgi JP



Hatsukagami Kei Rosa JP



Hide JP



Himeji JP



Hoshi JP



Jingü JP



Kahoku JP



*H. yamatutai f. marmorata*  
Rosea



*H. nobilis f. crenatiloba*  
Cremer 400 SS



*H. x kristensenae*  
'Fantastica'



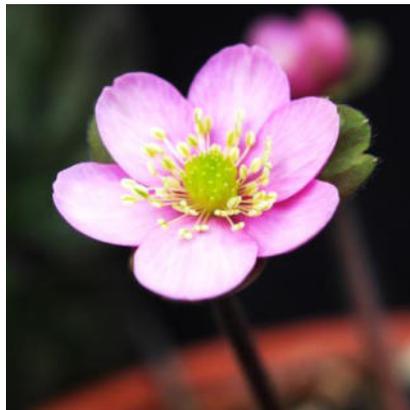
*H. x kristensenae* 'Fantastica' Ausstellung München 2017



*H. x kristensenae*  
'Fantastica'  
30cm Ø 2016



*H. x kristensenae*  
'Fantastica' Knospen



*H. x kristensenae*  
'Fantastica' junge Blüte



*H. x kristensenae*  
'Fantastica'  
45cm Ø, 2018 ausgepflanzt  
im Hepatica-Garten

## *Hepatica yamatutai* x *nobilis* Typ SS63

Ebenfalls eine Kreuzung von Gunda Kristensen, die ich 2017 erhalten habe. Im Prinzip eine *H. yamatutai* mit schönen dunkelblauen Blüten.

### Beschreibung:

**Blattwerk:** nicht marmoriert, glänzend grün

**Blattunterseite:** rot, leicht behaart

**Blattgröße:** 8 bis 10cm Ø,

**Blatteinschnitte:** drei Loben, kleine Loben-Einschnitte

**Blattstiele:** 10 bis 20cm lang

**Blüten:** dunkelblau, 4 bis 5cm Ø



Blattoberseite glänzend



junge Blüte



Ältere Blüten



Blattunterseite glänzend

## *Hepatica yamatutai*

### x *nobilis* var. *japonica* f. *magna* 'Omurasaki'

### Sortenname:

#### **H. Hybridus 'Schöne Asiatin JP'**

eine Kreuzung aus dem Jahre 2000. Der Gedanke war, das kräftige Pink der 'Omurasaki' in die meist weißen Blüten der *H. yamatutai* zu bekommen. Leider ist es nicht ganz geglückt, aber der Ansatz ist ersichtlich.

### Beschreibung:

**Blattwerk:** nicht marmoriert, stumpf Grün

**Blattunterseite:** rot, mittel stark behaart

**Blattgröße:** 5 bis 8cm Ø,

**Blatteinschnitte:** drei Loben, mit kleinen Loben

**Blattstiele:** 15 bis 20cm lang, stark behaart

**Blüten:** 3 bis 4cm Ø

**Blütenfarbe:** helles lachsrosa

**Knospe:** pink



'Schöne Asiatin JP'

*Hepatica yamatutai* x *transsilvanica*

(*H. x harvingtonii* JP)

**Großlaubiges-Leberblümchen**

Erst in jüngster Zeit sind einige Kreuzungen in dieser Variante getätigt worden. Beide Elternteile sind stark im Wuchs und haben ebenso große Blüten. Da muss doch was noch größeres bei raus kommen! In der Tat, die Klone sind in der Regel riesig und man muss ihnen im Garten schon Platz bieten. So eine Pflanze kann schon mal 40 bis 50 cm Ø haben, obwohl die Triebspitzen eng aneinander stehen. Selbst die Blüten übertreffen alles im Reich der Hepatica, zB. ‚Colossus‘ mit bis zu 6-7 cm Ø.

**Beschreibung:**

**Blattwerk:** mit und ohne Marmorierung ist möglich

**Blattunterseite:** rötlich, mittel stark behaart

**Blattgröße:** 12 bis 15cm Ø

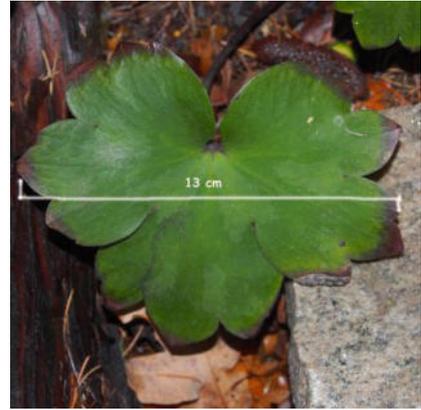
**Blattform:** transsilvanica- bis yamatutai-ähnlich

**Blatteinschnitte:** drei Loben, kleine Loben-Einschnitte

**Blattstiele:** 15 bis 25cm lang, behaart

**Blüten:** 5 - 7cm Ø

**Blütenfarbe:** blau, violett, rosa, rot, silberweiß



Blatt bis 15 cm Breite



Vegetationsknospe bis 2cm



Colossus JP



Goliath JP



Miss Red JP



Miss Albino  
JP



Miss Rose  
.JP



Guliwer JP



Marmorata



Miss Ellison JP

## Was bringt die Zukunft?

Mein Bestreben, die Hybriden weiter zu entwickeln, zu kreuzen und zu sammeln, ist ungebremst.

Einige Ergebnisse möchte ich Ihnen zeigen.

### Blattvarianten von Hybriden:



15-010-009 JP



15-a005 JP



15-a008 JP



15-a010 JP



15-a011 JP



15-a003 JP



15-a013 JP



15-a012 JP



15-010-006 JP

Blüten der Zukunft bei Hybriden:



15-010-001 JP



15-a001 JP



15-a003 JP



15-a007 JP



15-a015 JP



15-Maiko-001 JP



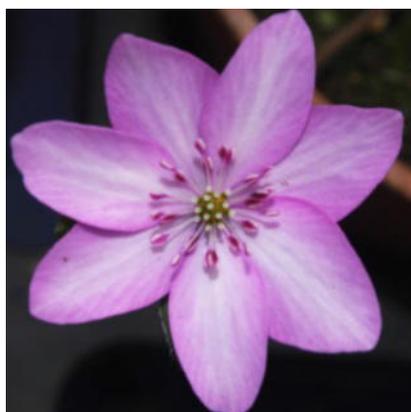
15-Maiko-002 JP



15-Maiko-003 JP



15-Maiko-004 JP



15-a004 JP



15-010-002 JP



15-001-001 JP

## Anzucht von *Hepatica*

Bestäuben

Saaternte und Saatfallen

Aussaat

Werdegang eines Leberblümchens

Sämlinge pikieren und topfen

Teilung

Rhizomschnittlinge

Wurzelbrut

Kleine Blütenkunde

