

Experience 2,000 different trees and shrubs at the Hørsholm Arboretum



UNIVERSITY OF COPENHAGEN

The Arboretum in Hørsholm

The Arboretum is a living collection of more than 8,500 trees and shrubs. The objective of the collection is to include and observe woody plant species that can survive and grow under Danish conditions.

All plants in the Arboretum have detailed documentation of age, GPS location, species identity, and the geographic origin of where seeds were collected. The information is stored in a database and can be accessed from the Arboretum webpage.

The collection is managed by the Department of Geoscience and Natural Resource Management, University of Copenhagen.

Why an Arboretum

Less than a hundred species of trees, shrubs and woody climbers are native to Denmark. The main reason for this is the fact that most of Northern Europe during each of the last 7 major glaciations was covered by ice, and the unglaciated landscapes north of the Alps were covered by arctic and sub-arctic tundra and steppe. The rich flora in e.g. North America and Eastern Asia could escape such cold and dry climates.

In spite of our poor native dendroflora, a rich variety of exotic species and provenances are able to grow in the Danish climate. At present the collections of the Arboretum include approximately 2,000 species, subspecies and cultivars in an area of 25 ha.

The Arboretum is a continuation of the Forest Botanical Garden in Charlottenlund from 1838. The establishment of the Arboretum in Hørsholm was initiated in 1936, to support teaching and research in utilization of introduced species.

To this day, the Arboretum collection plays an important role for teaching and ongoing research activities.

The tree species, their taxonomy, and interactions with other species and microorganisms, are studied using both concrete observations, practical experiments in greenhouses, and advanced genetic studies. Moreover, studies of tree responses to climate change take place.

A different type of research and teaching focuses on trees and bushes, their aesthetics and relaxing functions for public health within the framework of the Health Forest and Therapy Garden, located within the Arboretum.

The trees and shrubs in the Arboretum are all marked with aluminum labels. Database identity code, scientific name, family, and geographic origin of the seed are printed on the front. A code reveals if the seed was collected from a natural population (W), from a plant that originates from a natural population (Z) or is a cultivated variety (G). The common name in Danish (if available), age of the tree and natural distribution area of the species are printed on the opposite side of the label.

Although the Arboretum was established as a scientific collection with research and teaching as its principal objective, it has during the last 80 years developed into a beautiful and unique collection of trees and shrubs, which each year is visited by thousands of guests. Year round there are interesting species that you can explore, or you can enjoy just taking a walk in its peaceful surrounds.

There are always interesting species to observe with varying colours and shapes on stem bark, leaves, flowers, cones and fruits. Detailed information on the 8,500 plants is available at the homepage www.arboretet.dk.

The homepage also recommends specific species to visit, depending on the time of year, and a search facility allows you to identify the exact location of a specific species of interest. Various leaflets are also available for download.



A tour of the Arboretum

The map provides a proposed route with examples of places (marked by numbers), which you can explore. The text below provides information about some of the trees you pass on the way. Additional information can be found on the information signs (marked on the map with an **i** for signs describing selected plants or plant groups).

1 The tour starts at the north gate. Among the first trees you meet are Cedars of Lebanon (*Cedrus libani*). This species was important to the economies of early civilizations around the Mediterranean. The once magnificent forests in Lebanon were nearly obliterated but restoration efforts are now underway.

2 Take the first small road to your right, where the tour continues along 'Søvejen', passing the collection of dogwoods (*Cornus*). In the early spring the Cornelian cherry (*Cornus mas*) can be seen clad with small yellow flowers. In mid-summer the Korean flowering dogwood (*Cornus kousa*) is covered with white 'flowers', which are actually bracts. The true flowers are small and form an inflorescence between the bracts.

3 Further ahead on your left you will find crab-apples (*Malus*), pears (*Pyrus*), rowans (*Sorbus*), serviceberries (*Amelanchier*), and hawthorns (*Crataegus*), all belonging to the rose family. This group is lovely when flowering in May, but also worth seeing in the autumn with lots of colourful fruits.

4 Approaching the cherries you will see a couple of extraordinary, columnar larches, which turned up in off-spring from a cross between European (*L. decidua*) and Japanese larch (*L. kaempferi*). The cherries flower in early spring, and a few even in mild periods during winter. Many species have a remarkable bark, e.g. *Prunus maackii*.

5 At the corners of the first vista you will see two impressive trees. One is a special oak hybrid described on the information board. In the opposite corner you will notice 'Henry's Poplar' (*Populus x henryana*), one of the fastest growing trees in the Arboretum. Behind 'Henry's Poplar' you will find *Parrotia persica*, named from its gaudy autumn colours.

6 Between the road and 'Ubberød Dam' (the pond) a collection of birches (*Betula*) and alders (*Alnus*) is found. Please notice the variation in bark colours among the different birch species.

7 Further along the road on your left you will pass a large group of conifers. An information sign tells the story about the old grafting of 'Bangsbofyren' – a Scotch pine (*Pinus sylvestris*) considered to be the only tree left from the original Danish pine forests. The conifer group also contains different fir (*Abies*) species that Danes normally associate with Christmas. The two cedars from the Mediterranean, Atlas cedar (*Cedrus atlantica*) and Lebanon cedar (*C. libani*) are also present.

8 In this part of the Arboretum you will find eight sites that jointly form a 'Health Forest' by the name of Octovia®. The Health Forest is intended to give different recreational experiences. If you follow the arrows carved in stone you will pass all eight of them.

9 The tour follows the sign towards 'Det Danske Arboret' – The Danish Arboretum. To the left of the sign you will find a large group of different ash (*Fraxinus*) species. The European ash (*F. excelsior*) is heavily damaged all over Europe by a novel fungal disease and scientists are therefore struggling to find resistant trees. Further ahead on your left you

find a nursery, research facilities, and Nacadia® therapy garden. These areas are closed to the public.

10 The tour takes you to the southernmost part of the Arboretum. The trees here are younger and it is therefore a good place to observe cones of the many conifers. The species here are organized according to their geographic origin: Eastern and Western North America, East Asia or Europe. At the southern border of the Arboretum a collection of Danish trees and shrubs is being established.

11 Before returning to the old part of the Arboretum, you pass an area ('the Rhododendron valley') with many different wild collected species of rhododendron. You may also notice the large Giant Sequoias (*Sequoiadendron giganteum*) at the entrance of the valley.

12 Back in the old part of the Arboretum, you arrive at a corner with an interesting collection of North American species. Several conifers from this geographic region have proven valuable in commercial forestry in Europe. The walk passes Sitka spruce (*Picea sitchensis*), Douglas fir (*Pseudotsuga menziesii*) and grand fir (*Abies grandis*) – examples of species that today are widely planted in Danish forestry. The success of the species can truly be understood when one sees their grand sizes.

13 After having crossed the main road, you follow the small path and enter an area planted with beech (*Fagus*), oak (*Quercus*) and chestnut (*Castanea*). These species all belong to the *Fagaceae* family. Interesting variations in leaf sizes and shapes can be observed, especially among the different oak species.

14 The tour continues through an extensive group of maples (*Acer*). In the summer, *A. tataricum* is showy with its shiny red fruits. In winter, remarkable 'snake bark' i.e. green with white stripes can be seen (e.g. *A. pensylvanicum*). *A. griseum* impresses all year round with its red bark. Many maples also show impressive red and yellow colours during the autumn, making this area especially beautiful from September to October.

15 The path leads through an area of Rhododendron under a group of walnut species. Furthermore, the path leads past the large dawn redwood (*Metasequoia glyptostroboides*). The *Metasequoia* genus was first described as fossils in 1941 and was considered to be an extinct, pre-historic species. However, later the same year, the species *M. glyptostroboides* was found happily growing in Central China.

16 When you continue along the Vista, you pass a collection of witch hazels (*Hamamelis*) that display their eye-catching yellow flowers during the winter. An information board shows the flowers of the variety 'Nina', should you happen to visit the Arboretum outside the flowering season.

17 A collection of junipers are planted next to the lawn by the flagpole. All the plants in the central part originate from seeds collected from a native population of *Juniperus communis* located on Northern Zealand. The plants exhibit large variation in shape and form, reflecting the substantial variation that can be present in natural populations.

18 The last stop on the tour is a handkerchief tree (*Davidia involucrata*), which during the flowering season in late May is full of white leaves hanging in the tree crown. The white leaves probably help pollinators to identify the small flowers.



Main entrance

Parking area

SPRINGDAM

Euonymus sachalinensis

Magnolia sieboldii

Acer micranthum

UBBERØD DAM

SPEJDESSØEN

Abies koreana

-  Suggested tour
-  Grass paths and vistas
-  Gravel paths
-  The Arboreum
-  Lakes
-  Buildings
-  Other areas
-  Research area



Welcome to the Arboretum

The Arboretum is open to the public from 7:30 am to sunset.

Arboretum in Hørsholm • Kirkegårdsvej • 2970 Hørsholm

www.arboretet.dk

www.ign.ku.dk

www.15junifonden.dk

An easy way to visit the Arboretum is by bus. Buses leave directly from Copenhagen, Holte, Nivå and Kokkedal train stations. The closest bus stop to the Arboretum is on Hørsholm Kongevej, at the roundabout at the intersection with Dr. Neergaards Vej. Follow the path from the roundabout towards the east past the lake and you will come to the main entrance. Access by car is possible from Kirkegårdsvej. Please park in the parking area outside the Arboretum.

* It is not allowed to gather leaves, fruits, or cones from the collection.



15. Juni Fonden is a non-profit foundation, which strives to work for the benefit of the Danish society by supporting activities within the objectives of the foundation including a lasting preservation of the values of the Danish landscape and its nature and biodiversity.

The Arboretum is owned by 15. Juni Fonden while being managed by the Department of Geosciences and Natural Resource Management, UCPH

 15. Juni Fonden

