## Oaks and Oak Hybrids at Arboretum Trompenburg

TThe collection of oaks in the Arboretum Trompenburg originates from 1925 and continues to develop today. Apart from some Quercus robur remaining from the original layout of 1820 , the oak collection could be built only after the Dutch elm disease cleared the area. More than 400 huge elms had to be cut down. At the time, we considered it to be a disaster; now, we see it as a blessing, because my father was granted the opportunity to develop Trompenburg into the arboretum for the City of Rotterdam, Holland.
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J.R.P. van Hoey Smith with his introduction, Quercus macranthera $\times \mathrm{Q}$. frainetto (cutlivar 'Macon') at Arboretum Trompenburg.

# Arboretum Trompenburg . . . 

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To fill the gaps created by the removal of the dead elms, he traveled across Europe to buy trees and shrubs, visiting (among others) the Hesse Nursery in Germany near the Dutch border. This nursery had propagated the oak collection of the famous estate of Muskau, situated on both sides of the Oder River, the international border between Germany and Poland. Owing to the Second World War, not much is left at Muskau today. On the German side, a nice land-

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Quercus robur 'Cristata' (left) and Quercus frainetto Ten. (right) at Arboretum Trompenburg.
scape with a few trees still exists; on the Polish side little remains. My father bought 15 of the Muskau oaks from the Hesse Nursery to start our present oak collection. These he planted between 1930 and 1940.

During the Second World War, nothing further could be done. After that war, I assumed management of the arboretum. As soon as travel again was possible, I went to the Royal Botanic Garden Kew in London during half of October to collect acorns from the extensive collection there. It is astonishing to note that, apparently owing to different times of flowering, most species came true from seed and were not hybridized. I returned with a suitcase full of acorns in bags precisely labeled with the species (but not the genus, since all were Quercus).

Acorns were, and are still, forbidden to import into Holland. Upon opening my bag, I suggested to the customs official it contained a sample collection of hazelnuts. This worked,
and for years on end they accepted the explanation! This was the start of expanding our oak assortment, which now comprises more than 250 taxa including 110 species and 140 cultivars and hybrids. Of these, 25 are evergreen. We are able to grow these 25 tender evergreen oaks due to the fact that we learned, with practice, that if the plants can be protected during their first five years until the vigorous juvenile growth slows, the plants then begin to harden earlier in the fall and can withstand cold better.

Having only five hectares (12.5 acres) at our disposal, we must specialize. So we have chosen to feature oaks, beeches, and rhododendrons. I cannot even grow all oak species and cultivars in our limited space, so we concentrate upon those which are conspicuously different. Thus, many common varieties are missing. In order to make the arboretum inter-

## International Oaks

esting also for the general public (which pay the majority of our expenses), we also plant other genera, but only the raisins from the cake, which help to make the arboretum attractive for everyone.

We have found that sowing acorns is fascinating and can produce unexpected results. We normally would predict the progeny from hybrid oaks to Mendel back $25 \%$ to each parent and $50 \%$ intermediate for each characteristic, but this is seldom true. The seedling progeny from cultivars may yield very few interesting specimens. For instance, 1000 acorns from Quercus robur 'Pendula' yielded not a single pendulous plant, while $100 \%$ of a sowing of $Q$. robur 'Salicifolia' were true to type. From $Q$. robur 'Cristata' $50 \%$ were true and the rest reverted to plain Q. robur. Finally, from 1000 acorns of $Q$. robur 'Pectinata' we found not a single progeny true to type. We continue to ponder the cause of this different behavior.

A selection of oaks at Arboretum Trompenburg
Quercus acuta
Q. alnifolia
Q. xbrittonii (Q. ilicifolia $\times$ Q. marilandica)
Q. xbushii (Q. marilandica $\times$ Q. velutina)
Q. castaneifolia
Q. cerris 'Argenteovariegata'
Q. cerris 'Laciniata'
Q. cerris 'Marmorata' (a Trompenburg introduction)
Q. coccifera
Q. dentata
Q. dentata 'Pinnatifida'
Q. frainetto
Q. hartwissiana
Q. xhispanica 'Lucombeana' (Q. cerris $\times Q$. suber)
Q. ilex
Q. ilicifolia
Q. macrolepis
Q. xkewensis (Q. cerris $\times$ Q. wislizeni)
Q. lamellosa
Q. semecarpifolia
Q. libani
Q. xlibanerris 'Rotterdam' (Q. libani x $Q$. cerris)
Q. lusitanica
Q. macranthera
Q. (macranthera $\times$ Q. frainetto) 'Macon'
Q. mongolica var. grosseserrata
Q. myrsinifolia
Q. (petraea 'Mespilifolia' x Q. robur 'Fastigiata') 'Columna'
Q. (petraea 'Mespilifolia' x Q. robur 'Fastigiata') 'East Column'
Q. (petraea 'Mespilifolia' $\times$ Q. robur 'Fastigiata') 'West Column'
Q. petraea 'Laciniata Crispa'
Q. petraea 'Mespilifolia'
Q. phillyreoides
Q. pontica
Q. (pontica $\times$ Q. dentata) 'Pondaim'
$Q$. xhickelii ( $Q$. pontica $\times Q$. robur)
Q. xturneri 'Pseudoturneri' (Q. ilex $\times$ Q. robur $)$
Q. pyrenaica
Q. robur 'Atropurpurea'
Q. robur 'Concordia'
Q. robur 'Cristata'
Q. robur 'Pectinata'
Q. robur 'Pendula'
Q. robur 'Salicifolia'
Q. rubra 'Aurea'
Q. rubra 'Miki'
Q. rubra 'Regence'
Q. sadleriana
Q. xtabajdiana (Q. frainetto $\times Q$. petraea)
Q. trojana
Q. variabilis
Q. xvilmoriniana ( $Q$. petraea $\times Q$. dentata)
Q. vulcanica
Q. warburgii (doubtful species - possibly hybrid origin)

