

POPULUS CANADENSIS MOENCH
VERSUS P. EURAMERICANA GUINIER

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Considerable difficulties have arisen recently in the nomenclature of the trees which, in Europe anyhow, are known as "Canadian Poplars". Since many years we have been accustomed to use for this taxonomical group the name *Populus canadensis* Moench, but the International Poplar Committee of the F.A.O. has substituted this name by *P. euramericana* Guinier. In modern poplar literature, and especially in those publications that are destined for the practice, for example in descriptive lists of varieties, the name *P. euramericana* Guinier is increasingly used. For this reason it is definitely desirable to see in how far this name change is justified.

The Canadian Poplars in Europe widely planted were not introduced from Canada, and not even from North America. They are hybrids between the american *P. deltoides* Marshal and the european *P. nigra* L., of which the first ones originated spontaneously in France around the middle of the 18th century, a short time after *P. deltoides* has been introduced in Europe. *P. deltoides* itself seems to have disappeared soon afterwards, probable the cause was that the hybrids were more resistant than the american species against the european climate. Later, in the Netherlands in 1891, *P. deltoides* was once more imported from the U.S.A., and one particular clone of it is now rather frequently planted along the dutch roads as "Heidemij."

It seems that in the beginning the replacement of *P. deltoides* by the hybrids has escaped the attention, and this is easy to understand, as in the hybrids the character of *P. deltoides* generally dominates, so that they are very similar to the latter.

The oldest descriptions of the concerned poplars were given by MOENCH (1785) who published a catalogue of trees planted in the Weissenstein-park (now Wilhelmshöhe) at Kassel; in this catalogue he mentioned two species that are of importance to us, viz. *P. carolinensis* and *P. canadensis*. He undoubtedly supposed that the first was an american species and the second one a Canadian poplar.

For a very long time it was not possible to give a correct interpretation of Moench's descriptions. The essential difference between *P. deltoides* and the hybrids was not known; even in 1928, at the International Forestry Congress held at Arnhem, nobody was able to answer the question what the differences between *P. deltoides* and the Canadian Poplars really are, (HOUTZAGERS, 1937, 1). Nevertheless valuable

literature was published about this subject, viz. HENRY (1913) who had given a detailed survey of the origin of the hybrids and REHDER (1923) who had argued that the correct name for these hybrids should be *P. canadensis* Moench. Due to insufficient knowledge the name *P. canadensis* has been used for different taxa of *Populus*, although mostly for segregates of the hybrids, e.g. for *P. serotina*, etc. To put an end to this confusion HOUTZAGERS (1937, 2) proposed to regard the name *P. canadensis* Moench as a nomen ambiguum, which means that it should never again be used. Acting upon this opinion GUINIER (1950) created a totally new name for the group of hybrids, namely *P. euramericana* and thus the hybrids are now known under two names, which causes a great confusion. The two points of view are strongly opposed: the nomenclature experts reject the name *P. euramericana* Guinier because it is illegitimate, whereas the International Poplar Committee accepts it as the only official name.

Therefore, it is necessary to examine which name is the correct one.

1. THE NAME *P. CANADENSIS* MOENCH

a. The diagnosis

Moench's catalogue is a rare book; by the good help from the librarian of the Kew herbarium I received a fotocopy of it, and afterwards I found that an important part of the catalogue has been republished as an appendix to a guide map of the Wilhelmshöhe-park (SAUER, 1955). Moench gives in his catalogue 10 poplar-species of which only the last two are of importance to us. Moench describes them as follows:

"POPULUS *caroliniensis*, foliis cordatis, crenatis, supra glandulosis, antice integris, Die Carolinische Pappel"

"POPULUS *Canadensis*, foliis cordatis, crenatis, eglandulosis, Die Canadische Pappel"

These descriptions are only short, but I think sufficient; the presence or absence of the glands at the upperside of the leave-base is decisive. There are no american poplars of the group of *P. deltoides* which lack these glands, and to identify *P. canadensis* with the balm-poplar, as was done by DODE (1905), is certainly incorrect, because the differences between these two species are already clearly brought out in Moench's list. *P. nigra* never has glands, and in the present day hybrids there are either two, one or no glands. Moreover MOENCH (1894) gives in a later publication further details; here he alters the name *P. canadensis* in *P. latifolia*, and describes the flowers and fruits, but that does not help us much, because in dealing with the american poplar, which he renamed *P. glandulosa*, he states that the flowers of this species do not differ from those of *P. latifolia*. Still he indicates that the twigs of *P. latifolia* are less pronounced 5-edged than those of *P. glandulosa*. Consequently it seems to me quite justified to identify on account of the data given in the diagnosis *P. caroliniensis* Moench with *P. deltoides* Marshal, and *P. canadensis* Moench with our canadian poplars.

b. The type

It is noteworthy that there is no reference at all in the literature with regard to type-material. Hoping to find some of the original material of *P. canadensis* Moench, I visited during the summer 1956 the Wilhelmshöhe-park and the Natural History Museum at Kassel.

In the Wilhelmshöhe-park unfortunately we could not find a single poplar older than 100 years; therefore it is obvious the original trees described by Moench do not exist any longer. The Museum was for the greater part destroyed by bombs during World War II, and all records, including Moench's herbarium, were burned. Fortunately I found in the nearly restored Museum an old xylothe^c ¹⁾ made by C. Schildbach, and of this work a detailed description exists (SCHILDBACH, 1788). The periodical in which this description was published is also very rare, but by the kind co-operation of the retired Director of the botanical garden at Kassel, now in charge of the restauration of the botanical section of the Museum, Mr. H. Schulz, I obtained from the famous government-library in Vienna a fotocopy of the article.

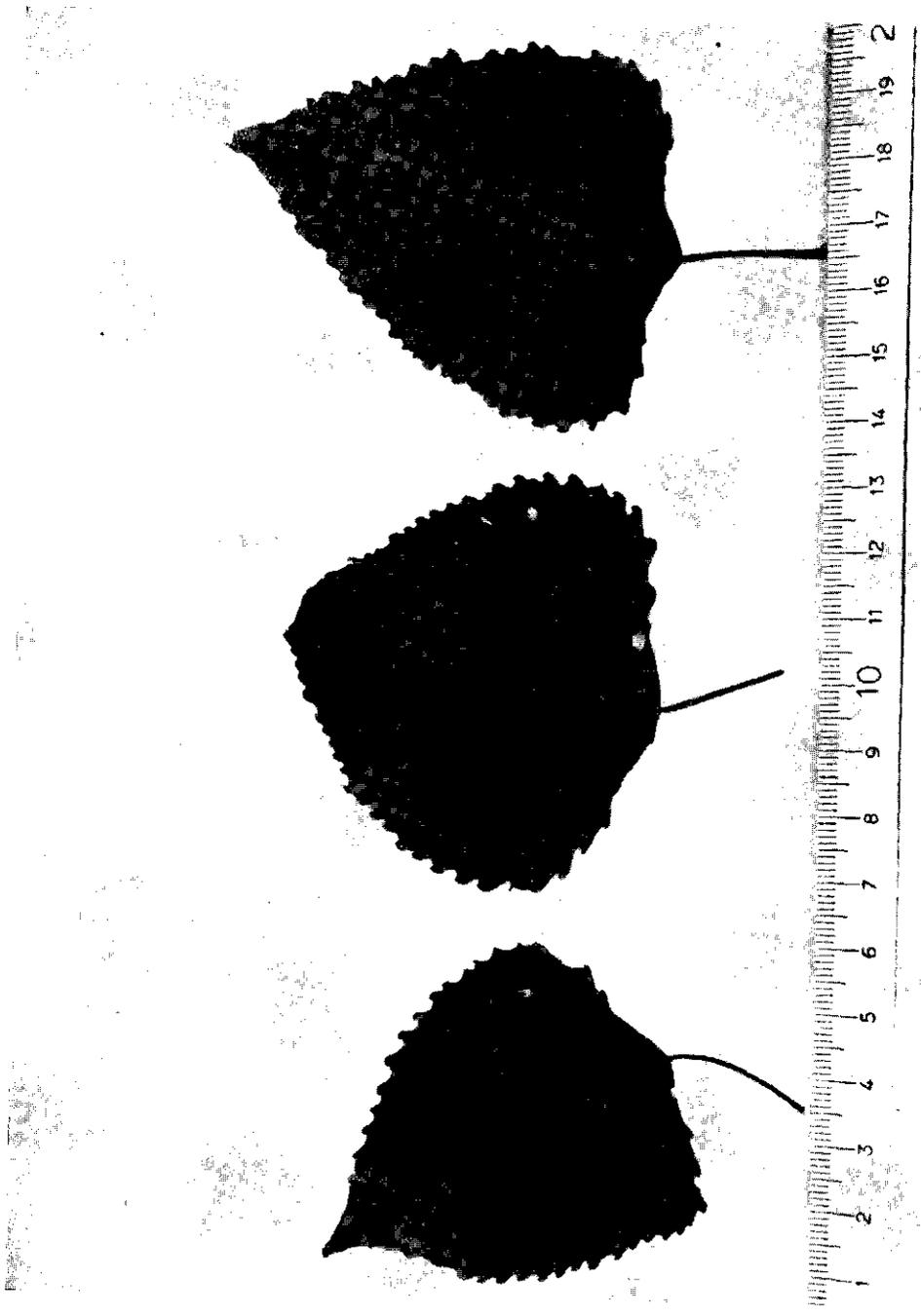
This article says among other things:

„Meine Holzbibliothek ist eine Sammlung von mehrentheils Deutschen Hölzern, die sich umweit Cassel bey dem Fürstlichen Lustschloss Weissenstein in den neuen Anlagen befinden”.

MOENCH writes in 1785 (pag. III) that the oldest trees in the park were not more than 16 years, and from two lists compiled by Prof. Böttinger, which lists I unfortunately could not find, it is possible to conclude that already in those years several trees were dead and had been replaced by others. This is in accordance with the information given by Schildbach in 1788, that he took his material from the new plantations. If we see further that the order of the wooden boxes in the xylothe^c is exactly the same as in Moench's publication, we may venture to say that the specimens preserved in this xylothe^c were collected from the trees described by Moench.

Schildbach's list records on p. 326: “No. 188, *Populus canadensis*”. The contents of this small box were luckily totally intact and in good condition; it shows a branchlet with leaves and a second one with fruits; the soaked leaves are reproduced in fig. 1. The form of these leaves is similar to that of the leaves of *P. deltoides*, but I could not find a single gland on them; the somewhat cuneate base reminds one of *P. nigra* L. Anyway it is evident that the characters of the material in box 188 agree with the Moench's description; furthermore I found that the contents of the xylothe^c boxes representing other poplar-species also agreed with Moench's descriptions. Therefore I am convinced that we may safely accept the contents of box 188 of Schildbach's xylothe^c as neotype of *P. canadensis* Moench.

¹⁾ A xylothe^c is a collection of small boxes in book-shape, each box made of the wood of a particular tree, and containing herbarium material as complete as possible of this very tree, mostly accompanied by special information of the wood concerned, and often also by herbarium material of fungi, lichens and mosses found on the trees at the time it was collected. Xylothe^cs are scarce, only a few existing in the whole world. They nearly all originated at the end of the 18th century.



Populus canadensis Moench, 3 leaves from box 188 of Schildbach's xylotheec.

Which clone it presents is not absolutely certain, but the leafshape and the female character suggest that it may be cv. "regenerata".

2. THE NAME *P. EURAMERICANA* GUINIER

This name was validly published and is accompanied by a latin diagnosis; it is very positively stated that the name is intended to cover all segregates of the hybrid *P. deltoides* x *P. nigra*. As there are older names for this group of segregates, it is a superfluous one. Before 1950 certain poplar clones had already been named and described as belonging to this hybrid, e.g. *P. robusta* SCHNEIDER (1904). Furthermore the citation of the author's name is incorrect: we find on page 5: *P. euramericana* (Dode) Guinier, but DODE (1933) writes "Peupliers euramericains" and the citation of Dode's name within brackets is therefore not justified.

It is regrettable that an International Committee which cares for the registration of poplars, goes on to use an illegitimate name for a poplar group that is widely planted, and refuses to observe the international rules laid down in the Code of botanical nomenclature.

However we may hope that this Committee will admit its error, and that it will reject the name *P. euramericana* Guinier in favour of *P. canadensis* Moench.

The naming of the clones or populations of this hybrid follows the International Code for nomenclature and registration of cultivated plants, the most important clone names being:

***P. canadensis* Moench cv. „Marilandica”** (Bosc)¹⁾

P. marilandica Bosc ex Poirer, Enc. suppl. 4 (1816) 378.

***P. canadensis* Moench cv. „Serotina”** (Hartig)

P. serotina Hartig in Naturgeschichte der forstlichen Kulturpflanzen Deutschlands, 1852, 437.

***P. canadensis* Moench cv. „Robusta”** (SimonLouis)

P. robusta SimonLouis ex Schneider, Ill. Handb. Laubholzkunde, 1 (1904), 11.

***P. canadensis* Moench cv. „Gelrica”** (Houtzagers)

P. gelrica Houtzagers, Het geslacht Populus, 1937, 141.

SUMMARY

1. The name *P. canadensis* Moench is the correct one for the hybrid *P. deltoides* x *P. nigra*.
2. The neotype of *P. canadensis* Moench is preserved in the Schildbach's xylothech under no.: 188. This xylothech is kept in the Natural History Museum at Kassel (Germany).
3. The name *P. euramericana* Guinier is superfluous and therefore illegitimate.

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¹⁾ The cultivar epithet does not form a technical nomenclatural combination with the generic, specific or varietal name to which it is attached (see Art. C 19, Note 1); if the name of the raiser, introducer or describer is cited, this remains the same even when the name preceding the cultivar-name is changed (see Art. C 19, Note 2). This name is then cited in brackets.

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