

# The Harold Hillier Herbarium – Documenting Oak Species and Cultivars

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A herbarium has been defined as a collection of preserved plants arranged systematically for study. However, for me, such dry definitions do not come close to defining the value of a good herbarium, nor do they explain the fascination of working with one. To explain why a herbarium is so useful, not only to botanists, but also to gardeners and collectors, we might ask the question, “How can we be sure of the name of a plant?” Different people will probably have different answers to this question. These may include “that is what it is labelled or sold as,” or “that is what I have been told it is,” or “this is the plant I see everywhere under this name.” A description in a good reference work such as a flora or monograph is better but the only definitive way to know what any species should look like is to go to the original description of that species and the original herbarium specimen designated by the author of the name. One of the functions of a herbarium is to store and safeguard these specimens so that we can always be sure of the intentions of the author of any name.

We all know that because of variation and hybridisation there are often problems in identifying oak species in the wild (after all, we cannot carry all those type specimens with us). Once we enter the realm of horticulture the problems and challenges become much greater. Not only do we have all the possible oak species to deal with but a great many hybrids, many of which could never occur naturally, as well as an ever-increasing number of cultivars. So how can the herbarium help us in the garden? In fact, cultivated plants can be documented in herbaria just as naturally occurring ones can and a Standard Specimen can be designated to represent a cultivar so that, as with a species, we will always know what any particular cultivar was supposed to be.

The Sir Harold Hillier Gardens were started in 1953 by the late Sir Harold Hillier, and contain many of the plants he collected in different parts of the world. In 1977 he gifted the Gardens to Hampshire County Council who act as sole trustee. The Gardens hold the National Plant Collection of *Quercus*, with currently more than 300 taxa (including cultivars).

The Harold Hillier Herbarium was started in 1995, initially to accommodate collections made by Sir Harold Hillier. It is small as herbaria go, with nearly 6000 specimens, of which just over 1900 are oaks, and was registered with Index Herbariorum in 2005. It is the official herbarium of the International Oak Society. Much of the work of the herbarium is carried out by a team of dedicated volunteers. Together with the gardens’ living collections, details of herbarium specimens are available on a searchable database on the gardens’ website <http://www.hilliergardens.org.uk/>. This is also a valuable resource for checking spelling and synonymy. All specimens are being photographed and we hope to be able to make them available online in the future. The aims of the herbarium are as follows:

1. To document the collections of the Sir Harold Hillier Gardens.
2. To hold specimens of oak species collected in the wild, particularly to

document seed collections. This enables cultivated plants to be compared to their naturally occurring counterparts. It also allows the identity of collections to be verified, even if the resulting plants do not survive and enables collecting localities and plants found to be recorded for future visits.

3. To hold specimens of cultivated plants from gardens around the world. This not only documents which species are in cultivation but is also revealing a fascinating range of garden hybrids. Collecting specimens from cultivated plants grown from wild collected seed has also proved important. As many more plants can be raised in cultivation than most oaks would give rise to in their lifetime it is possible to record unusual and previously unknown hybridisation events.

4. To hold specimens of known oak cultivars, and especially, when possible, the Standard Specimen.

The current holding of the herbarium for *Quercus* are as follows:

Total oak specimens	1911
Wild collected	800
Taxa	617
Species	270
Cultivars	164
Countries represented	32
From Hillier Gardens	436

Cultivated plants form a large part of the herbarium because they are often poorly documented. For this reason, we endeavour to obtain specimens from new selections while their origin is still known. If it is possible to collect from the original plant, or as close as we can get to it, this can be designated as a Standard Specimen. However, it is impossible to collect personally material of every new cultivar, and for this we need your help.

Those raising and naming new selections are urged to send herbarium material of their plant to us and also to register them. This will ensure that the identity and origin of new plants is preserved for ever. In addition we also appreciate material of any species not represented. To register a new cultivar please visit the website of the International Oak Society at [www.saintmarys.edu/~rjensen/ios.html](http://www.saintmarys.edu/~rjensen/ios.html) and download the registration form.

*Q. greggii* was collected in Mexico by Sir Harold Hillier in 1979. This is one of the specimens received on founding the herbarium and was matched to a plant in the garden from the same collection.

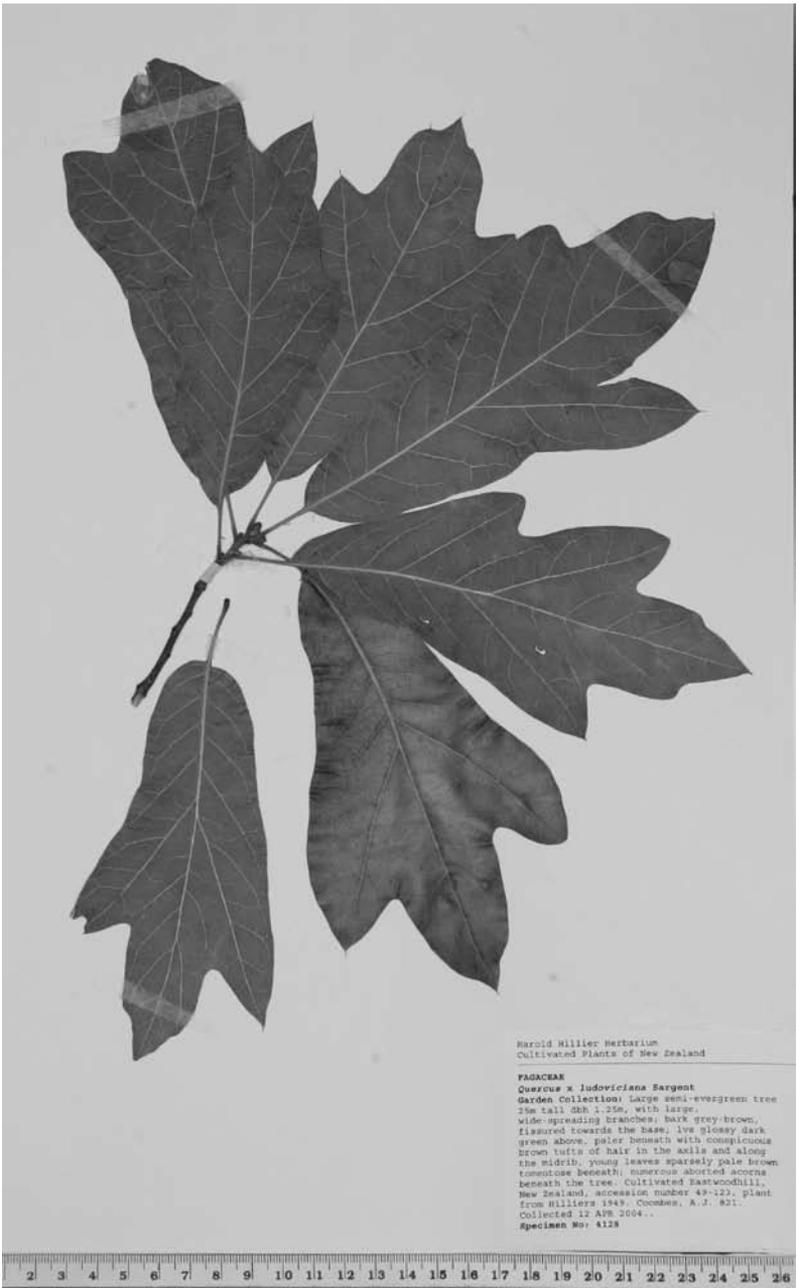
What seems to be the true *Q. x ludoviciana* (*Q. pagoda* x *Q. phellos*) sent by Hillier Nurseries to Eastwoodhill, New Zealand in 1949.

The plant sent by Hillier Nurseries to Trompenburg, Netherlands as *Q. x ludoviciana* in 1951, and still distributed under that name by some European nurseries. This has now been named *Q. nigra* 'Beethoven.'

The Standard specimen of *Q. x bushii* 'Seattle Trident,' a selection from Hillier Gardens, originally from University of Washington, Seattle.



*Quercus greggii*



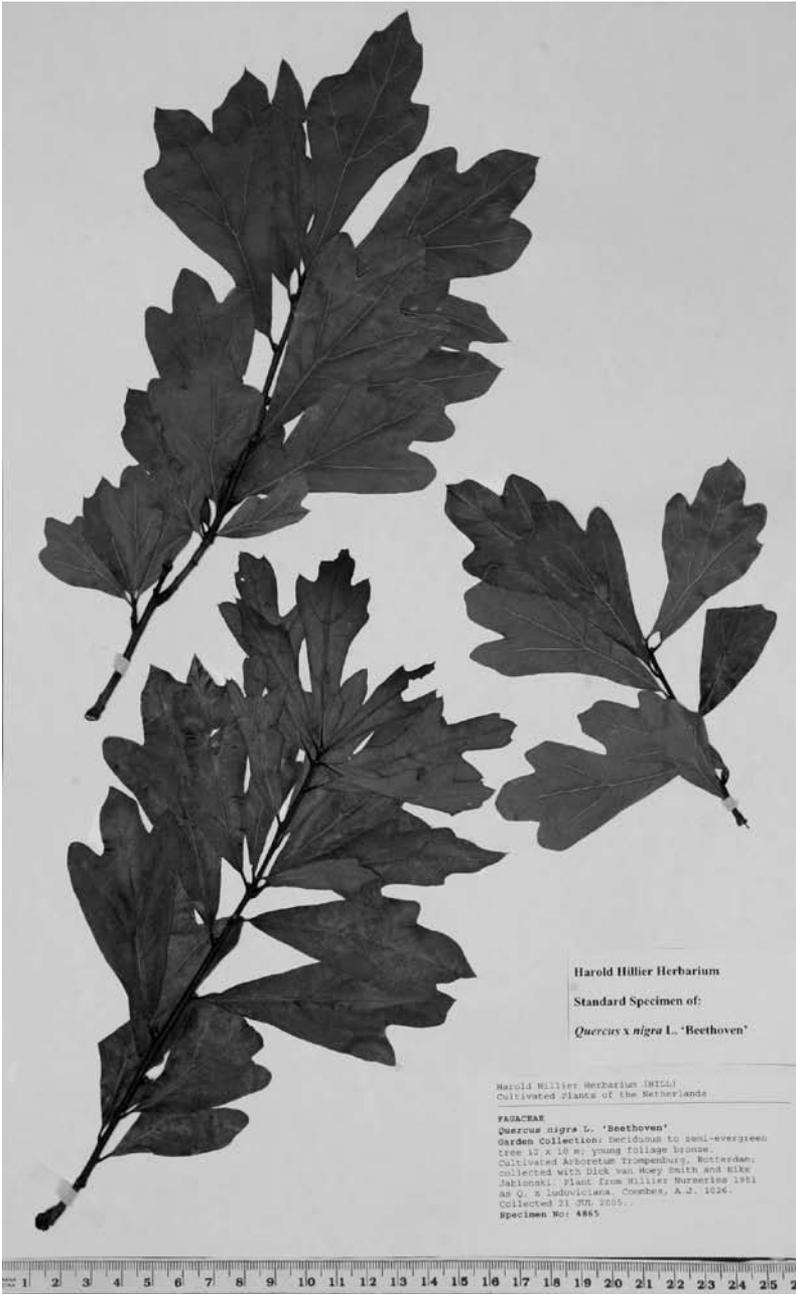
Harold Hillier Herbarium  
Cultivated Plants of New Zealand

**FAGACEAE**

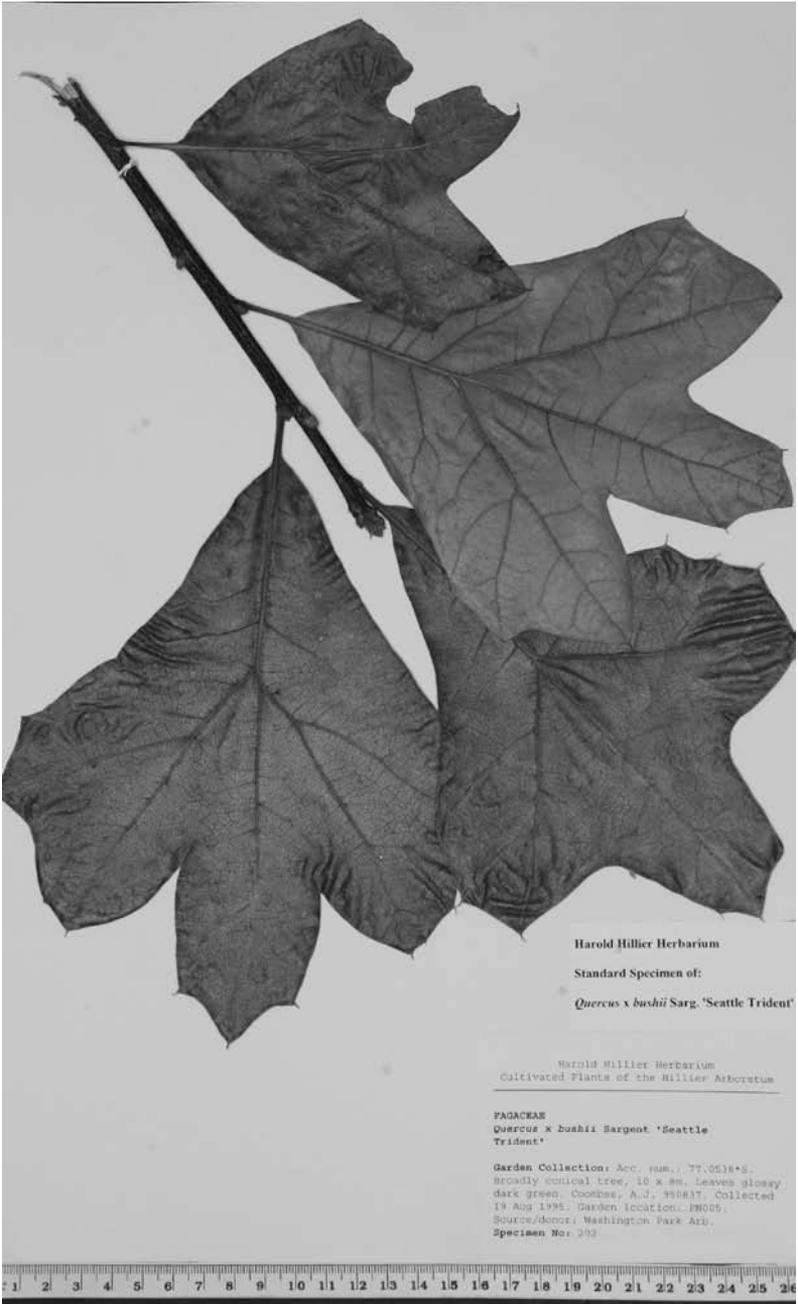
***Quercus* x *ludoviciana* Sargent**

Garden Collection: large semi-evergreen tree  
15m tall dbh 1.25m, with large,  
wide-spreading branches. Bark grey-brown,  
fissured towards the base; lvs glossy dark  
green above, paler beneath with conspicuous  
brown tufts of hair in the axils and along  
the midrib, young leaves sparsely pale brown  
tomentose beneath; numerous aborted acorns  
beneath the tree. Cultivated Eastwoodhill,  
New Zealand, accession number 49-123, plant  
from Hilliers 1949. Coombs, A.J. 821.  
Collected 12 APR 2004..  
Specimen No: 4128

*Quercus x ludoviciana* Sargent



*Quercus nigra* L. 'Beethoven'



*Quercus x bushii* Sargent 'Seattle Trident'