“Lincoln University campus – a guide to some of the trees currently growing there”

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The purpose of this document is to illustrate some of the range of plants currently grown on the Lincoln University campus. This is a first draft and later editions will both add species and address some of the obvious gaps.
The purpose of this guide is primarily to increase the awareness for people who are interested in plants of the Lincoln University campus. At this point in time the list is incomplete and it is my intention to add others at a later date. I have started with the trees, because in the main this is the group I am largely asked to identify for various people.

There is no doubt trees are an important part of the physical landscape at Lincoln University. They remind us of the changing seasons and we are comfortable with trees that we are familiar with. Trees in many ways are the link between the past and future generations of staff and students. Some trees have been planted as Memorials to staff and students effectively recognising the longevity of trees.

Trees that have space to grow and if they are well maintained always look good. Trees provide us with shelter, visual satisfaction and provide a soft edge to buildings and tarmac. Some trees stand out because of their size, while others only seem to come alive with seasonal displays and then blend into the background. The Lincoln campus is all the better for large areas of open space where trees can properly displayed for both inspiration and reflection, or to just eat your lunch beneath in some shade on a sunny day.

For some people trees can also be a learning resource, much like a library of books is for others. In a library, books of course have a title and are classified in order that they can easily be found. From there it is up to the individual as to what they may wish to find out from the contents. Currently plants at Lincoln are known by some at different levels of correctness, but for the majority providing the equivalent of a title and where you might find them may be a useful starting point, from there people can choose to learn what they may want to know about the plants. Labelling trees is another option, but for now, this should be seen for what it is - a starting point for those who wish to find out more.

Hilgendorf is reputed to have said “the field is my laboratory” that should still at least partly true for all land based subjects. The function of the Grounds Department at Lincoln is very important and if this can serve to help them promote and protect the resource we have for all sorts of purposes that can include teaching, research and the promotional values to the general public, then the time spent on this will have been useful. It can also be the start of future plans which can rationally look at the resource that is already here and how it can be improved, what gaps this and subsequent lists could help that planning.

Trees offer many opportunities to learn about the environment around us. There are many examples of both exotic and native species on campus. Trees generally make the environment we spend much of our time amongst more pleasant. Bernatsky (1978) made some very important points in his book ‘Tree ecology and preservation' not just about aesthetics and the common values we all appreciate, but values associated with the cooling effect of trees, their ability to humidify the air, to reduce pollutants from the air and many other desirable qualities trees contribute to a better environment.

It is important and sometimes forgotten that trees and other plants have to fit in with a greatly modified environment, changed by the incorporation of drainage, roads, paths and buildings. Associated with that are the expectations many people have that their working space is not shaded and the simple pleasures people get from plants that reflect the changing of the seasons.
There are some simple truths about trees that are worth considering. I have listed a few briefly only. Trees require time and space to grow well, many are expected to live for decades and possibly centuries. Planting plans are necessary for incorporating trees into the landscape if trees are to survive long term. Trees are not necessarily the perfect form and may need some training or corrective pruning especially when they are young. Good, well selected trees and proper initial training will pay dividends in terms of the longevity of trees. Tree maintenance is important, not all trees remain in good health and some trees can become unsafe over time.

A regular management plan for the maintenance of trees should be part of any good grounds maintenance plan. Knowledge about tree maintenance should be based on an understanding of how trees grow. Some trees create problems by lifting paths, foundations and footpaths, by blocking drains, being host to pests and disease, or by suckering or seeding. Many trees produce seed and often seedlings grow where they were never planted. Seedlings of all types should be removed before they get a chance to become established.

Trees are living organisms and cannot readily adapt to having roots cut or paths, driveways or car parks sealed over them. Trees do not adapt to levels being changed over root systems, they will simply die a slow death which may not even be noticed initially. Trees may be harmed by cultural practices, not all trees need staking for instance, often the stakes and ties cause more damage than if the tree was never staked in the first place. Weed eaters used carelessly often seriously damage or ring bark young trees. Herbicide use needs to be carefully managed around trees.

Trees do not live forever even though the replacement of new living cells would theoretically suggest that a tree could. Sometimes large trees need to be removed for safety or other reasons. Not all trees growing on campus may be desirable either.

The list of trees has been something I have built up over the years, initially from knowledge about trees gained as a student at Lincoln from my early lecturers notably John Taylor, Charlie Challenger and Sheldon Cradock, all of whom have since passed away. I also came across a list of trees at Lincoln produced by Ruth Burns in 1984 which provided information about some trees planted in the grounds of Lincoln University. Other lists of plants planted in the grounds have occasionally come my way from various grounds staff, but more often than not I have discovered new plants planted and old plants gone on visits around the grounds.

In 2006 Michael Smetham approached me to write some notes about a few trees on campus to fit in with a publication previously covering art works. I did this and eventually contributed information for twenty eight trees into a “Visitors Guide to Artworks, Buildings and Trees on the Lincoln University Campus” published in 2007. However in the process of writing that material I wrote about significantly more trees than were ultimately required and from that decided that perhaps I should simply continue. Dick Lucas encouraged me to do so and Carol Brandenburg offered to print a few copies in colour, but requested what I have covered so far now, suggesting I could finish the trees and shrubs not included here at a later date.

I have complied with Carol’s suggestion, however this has left plenty of gaps to fill for the next edition. Opportunities include possible GPS locations, more precise planting dates, growth rates of trees at Lincoln and fuller botanical descriptions, however I hope that this accepted for what it is - an incomplete, but useful starting point. All of the photographs are my own, taken with a DSC Sony H7 digital camera which does have some limitations, but is wonderfully convenient.

It might be useful to briefly consider what a tree is here before proceeding.
Some definitions

A tree is…

“A woody plant that produces one main trunk and a more or less distinct and elevated crown” Staff of Bailey Hortorum (1976)

“A woody, perennial plant with a single main stem, generally branching at some distance from the ground and possessing a more or less distinct, elevated crown” Huxley, Griffiths, Levy. (1992)

“A tree is a plant that stands of itself and can be climbed in” Haller (1977)

Shrubs are

“Shrubs are perennial plants with many persistent woody stems from or near the base. If the woody part is confined to the lower portion of the plant while the upper shoots are soft, the term sub-shrub is applied” Synge, P. (1956)

Woody climbing plants

“Climbing plants ascend toward the light by using other objects for support” Synge, P. (1956)

While I have endeavoured to separate trees and shrubs based on what one expects a tree to be cabbage trees and palms according to Haller’s definition are not trees for the reason that you can climb on palms, but not in them. Similarly some trees branch close to the base, trees like the Chilean mayten and the strawberry tree, yet in terms of size and form are best described as trees. Some trees may be small simply because they are still too young to climb in on. Trees planted at higher altitudes with a reduced growing season may not grow any higher than plants normally considered as shrubs, bonsai tree forms can live much longer than trees in the wild, yet are miniaturised forms of the species. Some cultivars of species can be dwarf forms or “witches brooms”, especially true of conifers. Trees in extreme environments such as that exposed to coastal winds can have their form dramatically altered. With training plants such as climbing wisteria can be trained to have a supporting trunk, much like a tree. So within the scope of this list of trees there is the potential to challenge whether or not a particular species that has been included is exactly a tree. You will have to forgive my liberties in that respect. Where I have included some shrubs I will endeavour to make that clear.
The following references have been used in a general sense or to check species names or identification.


Lincoln Campus trees

*Abies fargesii* (silver fir, Farges fir)
*Abies numidica* (Algerian fir)
*Abies pinsapo* (Spanish fir)

*Acacia* (wattles) see *Racosperma*

*Acer buergerianum* (trident maple)
*Acer campestre* (field maple, hedge maple)
*Acer capillipes* (red snakebark maple)
*Acer davidii* (Pere David’s maple)
*Acer griseum* (paper bark maple)
*Acer negundo* (box elder, ash leaved maple)
  - *Acer negundo* ‘Argenteo-Marginatum’
  - *Acer negundo* ‘Aureo-Variegatum’

*Acer palmatum* (Japanese maple)

*Acer platanoides* (Norway maple)
  - *Acer platanoides* ‘Crimson King’ (Norway maple)
  - *Acer platanoides* ‘Goldsworth Purple’ (Norway maple)

*Acer pseudoplatanus* (sycamore)
  - *Acer pseudoplatanus* ‘Leopoldii’

*Acer rubrum* (red maple)
*Acer saccharum* (sugar maple)
*Acer saccharinum* (silver maple)
  - *Acer saccharinum* ‘Laciniatum’ (cut leaved silver maple)

*Acer tataricum* ssp. *ginnala* (Amur maple)
*Aesculus* x *carnea* ‘Briotii’ (red horse chestnut)
*Aesculus hippocastanum* (horse chestnut)
*Aesculus indica* (Indian horse chestnut)

*Agathis australis* (kauri)
*Agonis juniperina* ‘Florists Star’
*Ailanthus altissima* (tree of heaven)
*Albizia julibrissin* (silk tree)
*Alectryon excelsus* (titoki)
*Alnus glutinosa* (common alder, alder)
*Amelanchier canadensis* (shad bush)
*Amomyrtus luma* (Palomadrona)
*Arbutus menziesii* (madrona)
*Arbutus unedo* (Irish strawberry tree)
*Aristotelia serrata* (makomako or wineberry)
*Athrotaxis cupressoides* (smooth Tasmanian cedar)
*Azara microphylla* (vanilla tree)

*Betula ermanii* (Erman’s birch)
*Betula papyrifera* (canoe birch, paper-bark birch)
*Betula pendula* (silver birch)
  - *Betula pendula* ‘Dalecarlica’ (Swedish birch, cut leafed birch)
  - *Betula pendula* ‘Purpurea’
  - *Betula pendula* ‘Youngii’

*Betula utilis* (Himalayan birch)
*Broussonetia papyrifera* (aute, paper mulberry)
*Calliandra portoricensis* (snow flake wattle)
*Callitris oblonga* (Tasmanian cypress pine)
*Calocedrus decurrens* (incense cedar)
*Carpinus betulus* (hornbeam, European hornbeam, common hornbeam)
*Carpodetus serratus* (putaputaweta, marble leaf)
*Casuarina cunninghamiana* (river she–oak, she-oak)
Catalpa bignonioides (Indian bean tree)
Catalpa bignonioides ‘Aurea’ (Indian bean tree)
Cedrus deodara (deodar cedar, Himalayan cedar)
Cedrus libani (Cedar of Lebanon)
Cedrus libani subsp. atlantica
Cephalotaxus harringtonia var. drupacea (Japanese plum yew)
Cercis silquastrum (Judas tree)
Chamaecyparis lawsoniana (Lawson’s cypress)
Chamaecyparis obtusa cv.s ‘Confucius’, ‘Gracilis Aurea’, ‘Tetragona Aurea’
Chamaecyparis pisifera ‘Boulevard’
Chamaecyparis pisifera ‘Filifera Aurea’
Cordyline australis (ti kauka, cabbage tree)
Cornus capitata (strawberry tree, dogwood)
Cornus florida (flowering dogwood)
Cornus mas (Cornelian cherry)
Corynocarpus laevigatus (karaka)
Crataegus crus-galli (cockspar thorn)
Crataegus laevigata ‘Paul’s Scarlet’ (English hawthorn cultivar)
Crataegus x lavallei ‘Carrierei’
Cryptomeria japonica (Japanese cedar)
Cunninghamia lanceolata (Chinese fir)
Cupressus lusitanica (Cedar of Goa, lusitanica cypress, Mexican cedar)
Cupressus macrocarpa (macrocarpa, Monterey cypress)
Cupressus sempervirens f. sempervirens (Italian cypress)
Cupressus sempervirens f. sempervirens ‘Gracilis’, ‘Stricta’, ‘Swaines Gold’
Cupressus torulosa (Bhutan cypress, Himalayan cypress)
Dacrycarpus dacrydioides (kahikatea, white pine)
Dacrydium cupressinum (rimu, red pine)
Dais cotinifolia (pompon tree)
Davidia involucrata (handkerchief tree, dove tree, ghost tree)
Diospyros lotus (date plum)
Dodonaea viscosa (akeake, ironwood, hopbush)
Dodonaea viscosa ‘Purpurea’
Drimys lanceolata (pepper tree)
Drimys winteri
Elaeocarpus dentatus (hinau)
Eucalyptus amygdalina (peppermint)
Eucalyptus cinerea (silver dollar gum, Argyle apple)
Eucalyptus viminalis (manna gum)
Eucryphia moorei (stinkwood, pinkwood, plum tree)
Eucryphia x intermedia (stinkwood, pinkwood, plum tree)
Euonymus europaeus (spindle berry, common spindle tree)
Evodia daniellii see Tetradium daniellii
Fagus sylvatica (English beech)
Fagus sylvatica ‘Pendula Purpurea’
Fagus sylvatica ‘Purpurea’ (copper beech)
Fraxinus angustifolia (Caucasian ash)
Fraxinus angustifolia ‘Raywood’ (claret ash)
Fraxinus excelsior ‘Aurea’ (golden ash)
Fraxinus ornus (manna ash, flowering ash)
Fraxinus pennsylvanica (green ash, red ash)
Fraxinus velutina (Arizona ash)
Garrya elliptica ‘James Roof’ (silk tree, tassel tree)
Ginkgo biloba (ginkgo, maidenhair tree)
Gleditsia triacanthos (honey locust)
Gleditsia triacanthos ‘Sunburst’
Gymnocladus dioica (Kentucky coffee bean tree)
Hedera helix in relation to.. (see Cupressus lusitanica)
Hoheria angustifolia (houhere)
Hoheria glabrata (houhi, mountain ribbonwood)
Hoheria populnea (houhere or lacebark)
Hoheria sexstylosa (houhere or lacebark)
Hymenanthera spp. see Melicytus
Ilex aquifolium (English holly)
Iochnos cyaneum
Juglans nigra (black walnut)
Juglans regia (English walnut)
Juniperus chinensis ‘Kaizuka’ (Hollywood juniper)
Juniperus recurva var. coxii (Burmese coffin juniper)
Juniperus squamata ‘Meyeri’
Knightia excelsa (rewarewa, New Zealand honeysuckle)
Koelreuteria paniculata (Golden rain tree, Pride of India)
Kunzea ericoides (kanuka)
Laburnum anagyroides (common laburnum, golden chain)
Lagerstroemia indica (crepe myrtle, crepe flower)
Larix decidua (larch)
Leptospermum nitidum ‘Copper Sheen’
Leptospermum scoparium (manuka)
Leucadendron argenteum (silver tree)
Libocedrus bidwillii (pahautea, mountain cedar)
Libocedrus plumosa (kawaka, New Zealand cedar)
Ligustrum lucidum ‘Tricolor’ (variegated shining privet, variegated tree privet)
Liquidambar styraciflua (sweet gum)
Liriodendron tulipifera (tulip tree)
Magnolia cylindrica
Magnolia doltsopa ‘Silver Cloud’ (syn. Michelia)
Magnolia grandiflora (Bull Bay magnolia)
Magnolia ‘Lanarth’ (syn. Magnolia campbellii ssp. mollicomata ‘Lanarth’)
Magnolia liliiflora ‘Nigra’ (Mulan)
Magnolia macrophylla (large-leaved cucumber tree, umbrella tree)
Magnolia x raffillii ‘Charles Raffill’
Magnolia x soulangeana ‘Norbertii’
Magnolia x soulangeana ‘Picture’
Malus ‘Gorgeous’ (crab apple)
Malus trilobata
Maytenus boaria (Chilean mayten)
Melicytus chathamicus
Melicytus lanceolatus (mahoewao kai-weta)
Melicytus ramiflorus (mahohe or whiteywood)
Metasequoia glyptostroboides (dawn redwood of China)
Michelia see Magnolia
Morus alba (white mulberry)
Muehlenbeckia australis in relation to…(see Cupressus lusitanica)
Myrsine australis (mapou, matipo)
Nothofagus fusca (red beech)
Nothofagus menziesii (silver beech)
Nothofagus solanderi var. cliffortioides (mountain beech) (syn N. solandrii var. cliffortioides)
Nothofagus solanderi var. solanderi (black beech) (syn N. solandrii var. solandrii)
Nothofagus truncata (hard beech)
Nyssa sylvatica  (tupelo)

Olea europaea  (olive)

Parrotia persica  (Persian ironwood, Persian witch hazel)

Paulownia tomentosa  (Imperial tree of China)

Phebalium squameum  (satin wood)

Phebalium squameum 'Illumination'  (variegated satin wood)

Phoenix canariensis  (Canary Island palm)

Photinia x fraseri  ‘Robusta’  (photinia)

Phyllocladus trichomanoides  (celery pine)

Picea glauca  ‘Conica’  (dwarf Alberta spruce)

Picea glenii  (Sakhalin spruce)

Picea omorika  (Serbian spruce)

Picea pungens  ‘Koster’  (blue Colorado spruce)

Picea sitchensis  (Sitka spruce)

Pinus coulteri  (big cone pine)

Pinus montezumae  (rough barked Mexican pine)

Pinus mugo  (mountain pine, dwarf mountain pine)

Pinus nigra var. maritima  (Corsican pine)

Pinus pinaster  (maritime pine)

Pinus radiata  (Monterey pine, radiata pine)

Pinus radiata  ‘Golden Selection’

Pinus sylvestris  (Scots pine)

Pittosporum eugenioides  (tarata, lemonwood)

Pittosporum eugenioides  ‘Variegatum’

Pittosporum ralphii  (karo)

Pittosporum tenuifolium  (kohuhu)

Pittosporum tenuifolium  ‘Eila Keightley’

Pittosporum tenuifolium  ‘Irene Patterson’

Pittosporum tenuifolium  ‘Tom Thumb’

Pittosporum  ‘Variegatum’

Plagianthus divaricatus  (makaka, shore ribbonwood)

Plagianthus regius  (manatu, ribbonwood)

Platanus x acerifolia  (London plane)

Platanus orientalis  (Oriental plane)

Platycladus orientalis  ‘Blue Cone’

Podocarpus totara  (totara)

Podocarpus totara  (totara - weeping form)

Podocarpus hallii  x totara  ‘Aurea’  (golden totara)

Populus grandidentata  (big toothed aspen, Canadian aspen)

Populus laevigata  (Chinese necklace poplar)

Populus nigra  ‘Italica’  (Lombardy poplar, Italian poplar)

Populus trichocarpa  (black cottonwood, western balsam poplar)

Populus yunnanensis

Prumnopitys ferruginea  syn. Podocarpus ferrugineus  (miro)

Prunus campanulata  (Taiwan cherry, Formosan cherry, bell flowering cherry)

Prunus cerasifera  ‘Nigra’  (purple leafed myrobalan plum, cherry plum)

Prunus  ‘Amanogawa’  (Japanese cherries)

Prunus ‘Shogetsu’  syn. P. ‘Shimidsu-zakura’

Prunus ‘Kanzan’

Prunus ‘Kiku-Shidare-Zakura’

Prunus ‘Shirotae’, Prunus ‘Shogetsu’  syn. P. ‘Shimidsu-Zakura’

Prunus laurocerasus  (cherry laurel)

Prunus lusitanica  (Portuguese laurel)
Prunus mume 'The Geisha' (Korean apricot)

Prunus x subhirtella 'Jugatsu-Zakura' syn. 'Autumnalis'

Prunus x yedoensis (Somei-yoshino, yoshino cherry)

Pseudotsuga menziesii (Douglas fir)

Pseudowintera colorata (horopito, pepper tree)

Pyrus calleryana (Bradford pear, callery pear)

Pyrus communis 'Winter Cole' (pear)

Pyrus salicifolia 'Pendula' (silver weeping pear)

Quercus acutissima (Japanese chestnut oak, saw tooth oak)

Quercus canariensis x Q. robur

Quercus cerris (Turkey oak)

Quercus ilex (Holm oak)

Quercus laurifolia (laurel oak)

Quercus palustris (pin oak)

Quercus palustris x Quercus coccinea

Quercus robur 'Fastigiata', Quercus robur (Joan Mahoney memorial oak tree)

Quercus robur x Q. canariensis

Quercus rubra (red oak)

Racosperma baileyanum syn. Acacia

Racosperma dealbatum syn. Acacia

Racosperma floribundum syn. Acacia

Racosperma longifolium syn. Acacia

Racosperma melanoxylon syn. Acacia

Racosperma pravissima syn. Acacia

Racosperma rubida syn. Acacia

Robinia pseudoacacia (robinia, false locust)

Salix matsudana (matsudana willow, Peking willow)

Saxegothaea conspicua (Prince Albert’s yew)

Scidopitys verticillata (Japanese umbrella pine)

Sequoia sempervirens (coastal redwood, redwood, Californian redwood)

Sequoiadendron giganteum (Wellingtonia, giant sequoia, big tree, Sierra redwood)

Sophora japonica (pagoda tree, Japanese pagoda tree, Chinese pagoda tree)

Sophora longicarina (kowhai)

Sophora microphylla (kowhai, South Island kowhai)

Sophora prostrata (kowhai)

Sophora tetraptera (kowhai, North Island kowhai)

Sorbus aria ‘Lutescens’ (whitebeam)

Sorbus aucuparia (rowan tree, mountain ash)

Sorbus hupehensis (Hupeh rowan)

Sorbus insignis x S. foliosa 'Ghose'

Styrax japonicum (snow bell, silver bells, storax)

Styrax obassia

Taxodium distichum (swamp cypress)

Taxus baccata

Taxus baccata 'Dovastonia'?

Taxus baccata 'Fastigiata' (Irish yew)

Tetradium daniellii syn. Evodia

Thuja occidentalis 'Pyramidalis'

Thuja orientalis see Platycladus orientalis

Thuja plicata (western red cedar)

Thuja plicata 'Aurea'

Thujopsis dolabrata (hiba arborvitae)

Thujopsis dolabrata 'Variegata'
*Tilia x vulgaris* syn. *T. x europaea* (European lime, common lime)

*Torreya californica* (Californian nutmeg-yew)

*Trachycarpus fortunei* (Chusan palm, Chinese fan palm)

*Ulmus carpinifolia* ‘Variegata’ (smooth leaved elm, European field elm)

*Ulmus glabra* ‘Camperdown’ (wych elm, Camperdown elm)

*Ulmus x hollandica* (Dutch elm)

*Ulmus parvifolia* (Chinese elm)

*Washingtonia robusta* (southern washingtonia, Mexican washingtonia)

*Weinmanniana racemosa* (kamahi)

*Zelkova serrata* (Japanese zelkova, saw leaf zelkova)
*Abies fargesii*  (silver fir, Farges fir)

This is an attractive evergreen conifer in the Amenity area in the Pinaceae collection. It is native of China and is the only example on campus. It is monoecious, leaves are moderately stiff, forward pointing, curving upwards with white stomata below, except for a midrib and margins. Leaves are green or bluish above about 30mm long. Cones are purplish blue with exserted scales with a reflexed tip. Male cones are soft purple to brown.
Abies numidica  (Algerian fir)

This tree has a damaged top, but is as far as I am aware the only example of this species on campus. Young branches are yellowish to brownish green. Leaves are curved upwards, 15-20mm long, twisted at the base with 2 white stomatal bands below.
*Abies pinsapo* (Spanish fir)

There are a few of this species on campus, the oldest is in Farm Road east of the Works Office, a second younger glaucous specimen is growing in the Pinaceae collection in the north west corner of the Amenity area. Leaves are 10-18mm long, very stiff and typically point forward and upward, although arranged all around the shoot. The glaucous specimens generally do better in drier Canterbury than the similar blue spruce as lawn specimens. There was a second tree near the Works Office that was badly attacked by scale a few years ago and that tree was removed.
Acer buergerianum  (trident maple)

There is a small tree of this species planted on the north western side of the pond in the Amenity area. This was planted in 1997. Another was given to the Grounds Department at the same time and was planted in the centre and just to the south of Orchard car park. On a cursory inspection I have not been able to locate this second tree. The trident maple appears to be relatively slow growing, it eventually is expected to grow to 10 -12 m or so. The trident maple is a native of Eastern China and Japan. This species has opposite, simple three lobed leaves, with a petiole of up to 4-8cm or so. Sometimes the leaves appear without lobes amongst lobed leaves on the same branch. The lamina is approximately 8-10cm long and wide, dark green above and paler below, leaves are pubescent when young. Leaves colour up to shades of red in the autumn. Small yellow flowers are produced in terminal panicles in late spring. The fruit consists of paired winged samaras, more or less v shaped.
Acer campestre  (field maple, hedge maple)

This tree is growing in the lawn to the north of the lodge and is the only good example of this species represented on campus. A second younger and smaller tree is struggling in a hot dry open position to the north of the Hort. Teaching lab. This tree would be better relocated to a more sheltered site or removed. Field maples are usually small to medium sized deciduous trees with a rounded crown. The species originate from Europe and Western Asia and are reputedly, often used for hedging purposes in the United Kingdom. The leaves of field maples are simple, opposite at each node and palmately lobed with five lobes, the upper three larger than the basal pair. Fully expanded leaves are approximately 8 - 12cm long and slightly broader on slender green or pink coloured petioles of about 10cm. Leaves are a dull dark green colour and usually colour up to rich yellow or gold tones in the autumn. Flowers are produced in terminal panicles as young leaves start to unfold around early October. They are small and green and not particularly visually significant. The keys (paired samaras containing seed) are almost horizontal and about 30mm long. The twigs of field maples sometimes develop corky “wings” as they age. It is not known when this tree was planted but suspect it was possibly sometime during the 1950’s.
Acer capillipes  (red snake-bark maple)

This is a small deciduous maple that originates from Japan. This tree can be seen on the east side of the western wing at the southern end of Hudson Hall. It is a relatively young tree that looks like it may have been planted in the early years of 2000. This tree is easily recognized as one of the snake-bark maples based on its attractive green and white striped trunk and branches. Like all other maples this species has opposite leaves. The leaves are simple and petiolate. The lamina has three obvious lobes and usually two less obvious basal lobes, the terminal lobe is the largest. The lamina is up to about 13cm long by 10cm across with a mixture of mainly fine serrations. The upper surface is a dark, dull green, the lower surface is a whitish-green. Venation is very clear on both sides of the lamina. The main veins at the base are palmately arranged, then become pinnate (palmi-pinnate). In the axils of the pinnate veins on the lower surface is a distinctive pale yellowish green gland like lump. The petiole and the lower main veins are reddish, the petiole is up to 45mm long and concave above. Flowers are produced in early November, each flower is about 5mm across and is a greenish yellow. The flowers are produced in terminal racemes about 8-10cm long of about 20-30 flowers. The fruit are nearly horizontal paired winged samaras, wings about 25mm long. This tree could grow to about 8-10m or so and has good autumn colours.
Acer davidii (Pere David’s maple)

This example is at the south end of Stevens Hall. The tree displays both old and young bark which is strikingly different. The leaves are large for a maple and glossy green above. Leaves ovate to 150mm x 100mm margins serrate ± 7 pairs veins strongly evident above and below, petiole to 70mm red-yellow, concave above. This is an attractive small garden tree, probably around forty years old.
Acer griseum (paper bark maple)

This is a small to medium sized tree, there are two examples on campus, a young tree at the north eastern end of Stewart Building and a much larger example south of Room one at the southern end of Hilgendorf wing. The main feature of this species is the attractive bark characteristics. Bark peels away from the trunk high lighting cinnamon brown or orange tones and an interesting textural appearance. The tree is a small to medium rounded topped tree at maturity with a tidy habit. It is best displayed where the trunk can be seen, this may involve removing the lower branches as the tree grows. As with other maples the leaves are arranged opposite each other at nodes and in this case are palmately compound, divided into three leaflets. Each leaflet is lobed in the upper half, leaves are hairy, dull green above and a paler blue – green below. The keys (paired samaras containing seed) are pendulous, almost vertical. This is a desirable specimen tree when grown well. It is difficult to propagate from seed compared with many other species of maple which only makes the tree more desirable. Harrison in his Handbook of Trees and Shrubs for the Southern Hemisphere describes this species as “a real connoisseur’s piece” It originates from Central China. Stewart Building e.n.
Acer negundo  (box elder, ash leafed maple)

The box elder is a small to medium sized fast growing round topped deciduous tree. This tree is one of the few maple species that is quite tolerant of wind, the Norway maple (Acer platanoides) is another. The box elder unlike most other maples has pinnately compound leaves. The leaves are arranged opposite at each node and have between three and seven leaflets, and often with variable numbers of leaflets on leaves on the same shoot. Fully expanded leaves are up to 25cm long with a petiole of 8cm, leaflets are ovate to lanceolate to 10cm long by about 5cm across, with serrated margins and often the terminal leaflet is strongly three lobed as well. Petiolules vary in size from about 5-10mm to much more for the terminal leaflets. The flowers of this maple are amongst the showiest of the maple species as they are clustered on drooping stalks about late September, before the leaves appear. This species is dioecious with separate male and female trees. Female trees produce drooping paired samaras of about 4cm in length with curved pale yellow wings. There is an older example of this species at the eastern end of the Betula Border. There are other examples on campus including some variegated cultivars, both Acer negundo ‘Argenteo-Marginatum’ and Acer negundo ‘Aureo-Variegatum’ were transplanted from the Nursery stockbed to the Amenity area in 1991. Both trees have tended to try and revert to the species by producing vigorous green shoots at the base of the trunk.
Japanese maples are small to medium, moderately slow growing deciduous trees, they are best known for their multiplicity of leaf shapes, leaf colour and delicate often shiny reds, brown or green branches. Japanese maples grow best where good shelter from the wind is provided and in good soils. There are a number of different leaf forms of Japanese maple in the old formal garden north of the Commerce building toward the western end. They are seen here in association with winter sweet, witch hazel, viburnums, rhododendrons, azaleas, camellias, Japanese cherries and magnolias. This garden has become less formal over time with some seedling species that do not associate well having been allowed to get established here. As with most other maples the leaves are simple, arranged in opposite pairs at each node and are variously palmately lobed and serrated. Flowers are not showy and the fruits are paired samaras. Within this largely Asiatic collection there is also the dwarf grafted form with a strongly weeping habit - *Acer palmatum* ‘Dissectum Atropurpureum’. This is a sought after plant which is usually budded or grafted on to seedlings of *Acer palmatum*, because they are not easy to produce, they do tend to be quite expensive to buy. Never the less, Japanese maples of all sorts of cultivars are popular garden plants.
Acer platanoides  (Norway maple)

This example is seen toward the extreme eastern end of the Betula border. This is a small to medium sized deciduous tree that does well at Lincoln. Leaves are simple and opposite, five lobed with several teeth, approx. 150mm x 175mm, petiolate. Paired samaras are broad spreading to 50mm.

Five lobed leaves and spreading samaras, leaves colour up well in the autumn.
Acer platanoides ‘Crimson King’ (Norway maple)

A purple leaved cultivar of Norway maple

deep purple - red leaves and red winged samaras
Acer platanoides ‘Goldsworth Purple’ (Norway maple)

Trees planted in a north-south row west of the main sports field adjacent to (east of) the large evergreen row of holm oak (Quercus ilex). Another row is adjacent to the lime trees lining the western side of Calder Drive. These trees are a dull purple leaved form of Norway maple.

Trees lining sports field

Trees colour well in the autumn

Young emerging leaves and flowers in spring.
Sycamores are often regarded as weed trees because of their prolific seed produced and subsequent ability to germinate, especially where there are good moisture retentive soils. It is somewhat surprising that this tree was retained when the Commerce Building was erected and other Works Department activity was taking place in this general area. This tree is responsible for young sycamores seen in many gardens around campus, fortunately, most seem to be removed before they become problematic. This is a medium to large sized deciduous tree that is hardy to Canterbury conditions, especially in relation to wind, but does better in sheltered conditions particularly near streams and the like. Sycamores are native to Central and NW Europe, Italy and Western Asia. They have large simple, leaves arranged in opposite pairs at each node. The leaves can be up to 2 long by 16cm across, they are usually five lobed and with a petiole of up to 9cm long. The leaves colour up to yellow shades in the autumn from a dark green. Yellow-green flowers are produced in pendent racemes up to about 12cm long after the leaves in spring and are followed by paired winged samaras.
Acer rubrum (red maple)

There is a good example of this species just inside the east side of the main entrance to the Amenity Area, before the pond, at the western end of Farm Road. This tree was planted in 1992 and is about 7m tall, another tree was planted by the Grounds Department about the same time on the western side of Forbes. The main attraction of this species is the spectacular red autumn foliage display. This is a reasonably fast growing medium sized deciduous tree hardy to wind that appears to have a good tidy ovoid form. It is a native of central and eastern North America. The red maple has simple opposite leaves with slender red petioles of up to 7cm or so. The lamina is mainly 3 lobed (some leaves 5 lobed) and coarsely serrated, the upper surface is medium to dark green above and silvery below. The main veins for the two main lobes are about 45° to the vein of the terminal lobe. The lamina is up to about 75mm long by 70mm across. Male and female flowers are often on different trees, the fruit is paired winged samaras.
Acer saccharum (sugar maple)

This tree according to an article on “Some trees at Lincoln College” by Ruth Burns in 1984 suggests that this tree just to the west of the Lodge was grown from seed collected by herself from a tree on the campus of Cornell University, Ithaca, New York State in 1958. The tree is a medium sized deciduous maple. Ruth Burns notes its autumn colouring tends towards the golden tones of the sugar maple spectrum rather than red. Sugar maple is a medium to large sized tree capable of growing to 30 metres or more, although this particular tree is well under half that height after nearly fifty years. Sugar maples have large leaves deeply and palmately lobed, arranged in opposite pairs at each node. The leaves colour up in the autumn like most other maples. It has a smooth light grey – brown trunk that becomes fissured as it ages. Sugar maples originate from Eastern North America and are tapped for maple syrup in spring. Sugar maples are also a valuable timber source in North America. The leaf lamina shape is symbolised on the Canadian flag.
Acer saccharinum and Acer saccharinum ‘Laciniatum’ (silver maple)

*Acer saccharinum* ‘Laciniatum’ is an upright growing deciduous tree at the south end of Hilgendorf wing. It is a medium to large tree, this particular example with an inherently weak branching structure. This tree was used as a subject to demonstrate flexible bracing on at a Tree Maintenance Block Course held at Lincoln in 1978. Unfortunately the bracing work failed due to the tree making significantly more height subsequently than was expected at the time. Branch failure occurred at or near the height of the bracing work done some years later. This tree still needs remedial work to make it safe despite earlier failures. Silver maples are known for their susceptibility to damage in gale force winds. Silver maples are fast growing species from eastern and central parts of the USA and Canada. They are best on good moisture retentive soils with some shelter from the worst winds. They have simple deeply palmately lobed leaves, each lobe itself being sharply lobed or toothed. The leaves are arranged opposite each other in pairs at each node and are about 15cm long and wide. The leaves have a silvery white colour beneath and are a dull green above, petioles are often reddish and approximately 5cm in length. The leaves colour up to yellow shades in the autumn. The species *Acer saccharinum* can be seen growing between Centennial Hall buildings, this tree is in good condition and was planted in the early 1980's.
**Acer tataricum ssp. ginnala**  (Amur maple)

This is a small deciduous tree, there are two examples on campus, the oldest was on the north side of Lincoln Property Services in Farm Road. (Chopped out mid 2007 to tidy the area?) This tree is quite small for its age and may be due to competition from other plants such as periwinkle which was at its base for many years and the hot dry nature of the site. That tree was over forty years, although I have no knowledge of when it was originally planted. The remaining tree is only a few years old and is at the southern end on the east side of the west wing of Hudson Hall. The Amur maple is expected to grow to about six metres only. The tree is one of the earliest species on campus to come into leaf usually about July and has good autumn foliage. The leaves are opposite and simple with three lobes, the terminal lobe is usually much larger than the two at the base. The lamina is up to 8cm long by 7cm across with a slender red petiole up to 35mm or so. The main veins are obvious, especially beneath. The surface of the lamina is glabrous, shiny above and paler below. The margins are irregularly serrate. Young twigs are reddish, turning light brown as they age. Small cream flowers appear in upright panicles in late spring, followed by paired, almost parallel winged samaras. The Amur maple is a native of middle and Northern China, Manchuria, Japan, Korea and USSR.