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Our Reference: 9517 / 32944

The *Taxus* National Collection, University of Bath

- 1:0 Introduction
- 2:0 Schedule of *Taxus* specimens as at January 2010
- 3:0 New stock of *Taxus* cultivars (2009)
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- 5:0 Taxonomic notes on the genus *Taxus*

Appendix A: Location Plan

1:0 Introduction

- 1:1 Along with Bedgebury National Pinetum (Forestry Commission), the University of Bath is the official holder of the National Collection for the species *Taxus* (Yew). National Collections are administered by Plant Heritage, more commonly known as the National Council for the Conservation of Plants & Gardens (NCCPG) which is 'the world's leading garden plant conservation charity'. Collection holders include private individuals, nurseries, local authorities, public gardens, botanic gardens, arboreta and historic gardens.
- 1:2 The collection at Bath is laid out across the centre of the main campus at Claverton Down. It was largely laid out about 30 years ago by the landscape manager at the time, Bill Bowen, with some subsequent additions by Peter Brown. Very recently there are some new specimens, supplied by Bedgebury Pinetum (2009), awaiting their final planting positions under the charge of the current landscape manager for University of Bath, David Hunt, who has commissioned this report.
- 1:3 The University has been very fortunate in having the expertise of dendrologist Tony Titchen in this project, compiling the list of all specimens in the collection and providing useful notes and references. Tony was involved about 15 years ago with a subsequent cataloguing of the all the trees on the campus (following the placement of a Tree Preservation Order, which included the Yews at the time) ago and was even able to call on his original paperwork in identifying some of the specimens. *Taxus* is perhaps an unspectacular species however there is a fascinating proliferation of cultivars – sometimes very similar - that have been propagated and brought into cultivation due to differences of form, colour or fruiting. These can be very difficult to accurately identify (there may also be duplicate names) and having Tony Titchen for this project has been absolutely invaluable, and duly acknowledged.
- 1:4 Specimens were numbered and plotted onto the location plan (Appendix A) by Mike Gregory (Tree Maintenance Ltd) in December 2009. The identification visits, research and all the data and notes detailed below were carried out by Tony Titchen in January and February 2010. The final report was collated by Geoffrey March (Tree Maintenance Ltd).
- 1:5 Tony Titchen* was born in 1937 and studied Horticultural Botany at Reading University, developing an interest in Taxonomy and Plant Classification and exploring the local flora of Mediterranean countries. Trees have become his specialism including, in particular, conifers and their cultivars. He has led garden tours for Saga Holidays and the RHS, tree tours for Bristol City Council and tree identification courses and projects for Cardiff, Bristol and Bath Universities, Westonbirt Arboretum, Horticultural colleges, Trees for London and others. Current projects include verification work for the National Trust, involvement with the Forestry Commission's Cyril Hart Arboretum in the Forest of Dean, and working on his forthcoming book "The Trees of Gloucestershire, Past and Present". Recently he was presented with a Special Award by Trees for Cities. He was involved in the early development of the *Taxus* collection at Bath University and has been able to draw on original records for this current project.

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2:0 **Schedule of *Taxus* specimens as at January 2010**
Tony Titchen

See location plan, Appendix A

2:1 GROUPS 1 - 16

- G1 **Taxus x media `Hicksii`** Rehder.
Group with 2 female and one male.
U.S.A 1923
- G2 **Taxus x media `Hilli`** Hill.
Group of 5 – all male?
- G3 **Taxus x media `Kelseyi`** J. Vermeulan
Group of 5 female.
U.S.A. 1915
- G4 **Taxus x media `Kelseyi`** J. Vermeulen
Group of 3 female and one male.
U.S.A. 1915
- G5 **Taxus baccata** L infillings
- G6 **Taxus x media `Welleslyana`** L.C.Chadwick
3 male and 2 female upright.
U.S.A. 1951
- G7 **Taxus x media `Totem`?** Chadwick and Keen
4 female, upright.
U.S.A. 1976
- G8 **Taxus baccata `Nissens Regent`** Nissen.
Group of 6 male trees
Germany 1957
- G9 **Taxus baccata `Praesident`** Nissen.
Group of 3 spreading male trees
Germany 1957
- G10 **Taxus x media `Thayerana affinis`**
7 vase shaped all female; badly deer predated
U.S.A.1917

- G11 **Taxus baccata** infillings (male and female) with a `**Nissen Praesident`** in group
- G12 **Taxus baccata`Adpressa`** Hort. Lindley and Gordon .
Group of 3 young female plants at top of rockery by 8 west.
U.K. 1828
- G13 **Taxus** taxons - infillings, mixture of male and female **T. baccata**
- G14 **Taxus** taxons - infillings, mixture of male and female **T. baccata**
- G15 **Taxus** taxons - infillings, mixture of male and female **T. baccata**
- G16 **Taxus x media`Welleslyana`** L.C. Chadwick.
Male plants
U.S.A. 1951

2:2 INDIVIDUAL TREES 1 - 48

- T1 **Taxus baccata`Gracilis Pendula`** Lauche
Male
Germany 1880
- T2 **Taxus baccata L. Sensus stricto**
Female
U.K.
- T3 **Taxus baccata`Linearis`** Carrier
Female
Czechoslovakia 1855
- T4 **Taxus baccata`Semperaurea`** Dallimore
Male
U.K. 1908
- T5 **Taxus baccata`Lutea` (Xanthocarpa)** Endlicher
Female
Germany 1847
- T6 **Taxus baccata`Lutea` (Xanthocarpa)** Endlicher
Female
Germany 1847

- T7 **Taxus baccata** `Lutea` (**Xanthocarpa**) Endlicher
Female
Germany 1847
- T8 **Taxus baccata** L -sensu stricto
Coppiced specimen. Male
U.K.
- T9 **Taxus baccata** L -sensu stricto
Male
U.K.
- T10 **Taxus baccata** `Dovastoniana` The West Felton Yew
Female. Poor shape.
Shropshire 1847
- T11 **Taxus baccata** Unknown (to me) Cultivar
Female
- T12 **Taxus baccata** `Fastigiata Aurea` (Standishii) Dallimore
Female
U.K. 1908
- T13 **Taxus baccata** L -sensu stricto
Male
- T14 **Taxus baccata** `Semperaurea` Dallimore
U.K. 1908
- T15 **Taxus x media** `Kobel`
Female
U.S.A 1951
- T16 **Taxus baccata** `Dovastoniana Aurea` ?
Male and female branches; poor specimen, some golden foliage, reversion
and stock growing through.
France 1868
- T17 **Taxus baccata** `Semperaurea` Dallimore
Female
U.K. 1908
- T18 **Taxus x media** `Welleslyana` L.C.Chadwick
Male

U.S.A. 1951

- T19 **Taxus x media** `Totem` Chadwick
Female
U.S.A. 1976
- T20 **Taxus x media** `Welleslyana` Chadwick
Male
U.S.A 1951
- T21 **Taxus baccata** `Overenderi` Schneider
Boskoop, Holland 1923
- T22 **Taxus baccata** `Fastigiata Robusta` Zulanf ex Haln
Grafted on T.baccata rootstock. Found wild in Germany, female. See also
T23 and T24.
Germany
- T23 **Taxus baccata** `Fastigiata Robusta` Zulanf ex Haln
Grafted on T.baccata rootstock. Found wild in Germany, female. See also
T23 and T24.
Germany
- T24 **Taxus baccata** `Fastigiata Robusta` Zulanf ex Haln
Grafted on T.baccata rootstock. Found wild in Germany, female. T.
baccata rootstock evident. See also T23 and T24.
Germany
- T25 **Taxus x media** `Thayerae` Hort Amer.
Female. Note: this cultivar was considered by E H Wilson then working at
the Arnold Arboretum to be a cultivar `Andersonii` of one of the parents
Taxus cuspidate and not a hybrid at all.
Mass. U.S.A. 1917
- T26 **Taxus x media** `Thayerae` Hort Amer.
Female. See note above.
Mass. U.S.A 1917
- T27 **Taxus baccata** `Nissens Regent` Nissen .
Male
Germany 1957
- T28 **Taxus baccata** `Nissens Regent` Nissen .
Male

Germany 1957

- T29 **Taxus baccata** L.
Female. Attractive bark
U.K.
- T30 **Taxus baccata** L
A planted tree
U.K.
- T31 **Taxus baccata** L.
A planted tree, male
U.K.
- T32 **Taxus baccata` Nissens Praesident`** Nissen
Male
Germany 1957
- T33 **Taxus baccata `Nissens` ?** Nissen
Male tree
Germany 1957
- T34 **Taxus baccata `Nissens Regent`** Nissen
Male
Germany 1957
- T35 **Taxus baccata** L
At Medical Centre. Oldish tree, female
U.K.
- T36 **Taxus baccata** L
At Medical Centre. Oldish tree, female
U.K.
- T 37 **Taxus baccata** L.
At Medical Centre. Male mature tree in shrubbery.
U.K.
- T38 **Taxus baccata** L
At VC residence. Trimmed by staff and deer.
U.K.
- T39 **Taxus baccata `Aureovariagata`**
Male tree

U.K. 1865

- T40 **Taxus baccata** L
At the Lodge. Male, mature tree.
U.K.
- T41 **Taxus baccata** `Nissens Corona` Nissen
Female
Germany 1957
- T42 **Taxus x media** `Dutweileri` L.C. Chadwick
Female
U.S.A 1951
- T43 **Taxus baccata** L
Large garden tree, male
U.K.
- T44 **Taxus baccata** `Fisleri` R.Smith
Male
U.K. 1865
- T45 **Taxus baccata** `Nissens Corona` Nissens
Male
Germany 1957
- T46 **Taxus baccata** L
Garden tree, female
U.K.
- T47 **Taxus baccata** `Repandens` Parsons
Female prostrate cultivar
U.S.A. 1887
- T48 **Taxus baccata** `Fastigiata Aureovariagata`
Male
U.K. 1865

3:0 **New stock of *Taxus* cultivars**
Tony Titchen

3:1 These were sent by Bedgebury Pinetum (Forestry Commission) in 2009 to the University of Bath (David Hunt, landscape manager), to be incorporated into the National Collection. The following Plant Names have been verified. A brief description and origin details is included below.

3:2 Schedule of new stock

***Taxus baccata* `Fastigiata Aureomarginata` Fisher ex Veitch**

Leaves edged golden yellow in first season. The original supplied by Fisher and Son and Sibray at Handsworth Nurseries Sheffield U.K.

***Taxus baccata* `Dovastonia` Leighton**

A tree form with a wide spreading branch system and pendulous branchlets. Known as the Westfelton Yew. Raised in 1777 from a seedling by John Doverston at Westfelton Shropshire –nr Shrewsbury. Published in the Flors of Shropshire 1841 .

(Krus) A male tree though with female branches occurring. 3 -5 metres high. Bark dark brown. Original tree still exists.

***Taxus baccata* `Intermedis` Carriere**

Similar to `Fastigiata` but more open habit. Origin 1867 by Monsr. Briot Trion Gdns Versaille France

(Krus) Broad strong grower; branches thick, upright and short branched. The needles are radial, rather widely spaced; straight; stiff and the thickest is 15-25mm long and 2-3 mm wide, tapering to the apex with a reddish point. Originally a seedling of the female plant `Fastigiata`.

***Taxus baccata* `Nissens Praesident` Nissen.**

A vigorous spreading male clone. Foliage a deep green. The originals were in a Nursery Catalogie J. Nissen Aprath nr. Wuppental Germany. Raised in 1934 by Mr J.Nissen .

(Krus) A broad spreading habit, strong grower and about 6-8 metres wide and 3 metres high after 30 yrs.

***Taxus baccata* `Raket` P.de Vogel.**

A dense form selected before 1967, by Hanboom. Its origin is published in the Dutch Journal –Dendroflora 5.

(Krus) Broadly conical in habit. Very densely branched, needles 15-20 mm long and 2-2.5mm wide. Dark green above, lighter green below. Very suitable for hedges as it is so narrow. In habit.

UNVERIFIABLE PLANTS

Please refer back to the supplier (Bedgebury) No reference on internet found either.

Taxus baccata `Booy` ?----could this be a Cultivar of *Taxus cuspidata*?

Taxus baccata `Grafes Gold` ?

Taxus baccata `Wintergold` ?-----could this be the Krussman `Weismoor Gold`, described by the originator Martin Zimmer of Zimmer Nurseries Weismoor Holland in 1983 as an irregularly columnar tree with a golden selection. ?

***Taxus x media* `Viridis` J.Vermeulen**

First distributed as `Stricta Viridis`. Dense conical plant with stout erect branches - a male clone. Originated in 1948 at the Vermeulen Nursert Catalogue Neshanic Stn. New Jersey U.S.A.

(Krus) as `Stricta Viridis`

Columnar habit; grows broadly upright; irregular, stem not glabrous (but hirsute). A fine ornamental plant. Very conspicuous for its attractive LIGHT green needles; which as opposed to other *Taxus* forms do not darken much in the winter. Very winter hardy.

***Taxus x media* `groenland` Hort Holland**

No description given, but in 1987 it was mentioned in "Naanlist" by H.J. van de Laar Holland. Perhaps Bedgebury have more details ?

***Taxus x media* `Fairview` Chadwick and Keen**

Mentioned as being vigorous, globose to spreading and dark green in colour. Original origin unknown; but in 1976 it was distributed by Fairview Nurseries Fairview Pennsylvania U.S.A.

***Taxus x media* `Adams` Chadwick and Keen**

Described as columnar; foliage is peculiar and variable-a male clone. Seems to go under other names in the trade as well?

Origin 1972 Adams Nurseries Catalogue; Springfield Ohio U.S.A.

(Krus) gives it as female clone; columnar in habit and 3-6 metres high !

***Taxus x media* `Anthony Wayne` Hess**

Described as hardy columnar habit; a strong grower with foliage yellowy green. Origin in trade 1960 at Hess Nursert New Jersey U.S.A. Occurred at the nursery in 1943.

(Krus) Strong growing columnar form with yellowish green foliage

UNVERIFIABLE TAXON

Taxus x media `Wojter`

No record as far as I can find out exists of this taxon. Ask Bedgebury for more information?

3:3 NOTES

Under the full taxon name with accepted authority is the description given in:

The World Checklist of Conifers (The World Conifer Data Pool) –by Humphrey Welch and Gordon Haddow.

Published by the Landsman`s Bookshop Ltd in 1993 ISBN 0 900513 09 8 (Buchenhill, Bromyard Herefordshire.

Additional information from (Krus): Manual of Cultivated Conifers Gerd Krussmann (English Edn) 1985 Timber Press This is the “2nd Edn translated by Michael E.Epp. ISBN 0-88192-007-X . Sadly Dr. h.c.Gerd Krussmann died on 5th June 1980. Taxonomists and Dendrologists are grateful for all the information he passed on in the form of articles, journals and books. Most have been translated into English. He gives the following references for the serious researcher:

Chadwick. The best in Taxus. American Nurseryman, 2/15/1958 pp 148-150.

W.Dallimore. Holly; Yew and Box London 1908. pp284,ill).

Pilger, R. Taxaceae in Engler Pflanzenreich IV 5 pp 1-124 1903 with 24 illustrations.

Pilger R. Taxaceae in Die Taxales . Mitt Deutsch .Dendrol Ges 25 1916 pp 1-28.

Wyman D. Much confusion, big variety in this widely grown Yew. American Nurseryman 2/1/1964 pp 12/13; 88-91; 112-119.

There may be others published in the last 50 years! Maybe Bedgebury will be able to help with copies. Otherwise I see no reason why the excellent library facilities at the Bath University can not be used to procure them.

4:0 **References used at Bath University campus to identify *Taxus* taxons**
Tony Titchen (from his home collection - a trawl through literature will
reveal other publications)

4:1 This list may be of interest as the National Collection develops.

CONIFERS “The illustrated Encyclopaedia Vol 2 (L-Z); coloured pictures with names. D.M.Van Gelderen and J.R.P.van Hoey Smith. 1996 Timber Press

Manual of Cultivated Conifers. Krussman 1985 English Edn. pp280-294 Timber Press

The World Checklist of Conifers –Humphrey Welch and Gordon Haddon
(The World Conifer Data Pool) - Landsmans Bookshop Ltd Herefordshire
1993

Hilliers Manual of Trees and Shrubs (David and Charles) 2002 edn. David and Charles Newton Abbott Devon

Trees and Shrubs Hardy in the British Isles by W.J.Bean vol iv R-Z 8th edn.
John Murray

An Encyclopaedia of Trees and Shrubs (Arboretum et Fruticetum Britannicum
Abridged) 1869 J.C.Loudon

5:0 Taxonomic notes on the genus *Taxus*

Tony Titchen

- 5:1 The Yew was first described by Linnaeus in 1753 - *Taxus* L.
The genus *Taxus* forms a group of 10-12 species spread about the world and usually given separate specific status in each part of the world where they are found, although the differences are very slight. Being hardy, they are garden plants of colder areas and within several of the species very many selections or `CULTIVARS` have been named. These have been propagated either by grafting onto a stock plant or by vegetative cuttings, and introduced into cultivation after growing on in a nursery bed. Some are almost identical.
- 5:2 A feature of the genus - apart from the seed and the aril - is an almost total inability to develop FRESH leader growth once the natural leader is damaged. Damage may be caused by animals eating off the original leading shoot—a natural form of coppicing.
- 5:3 It is important to note the “habit” of the plant (prostrate; erect; vase shaped; conical; upright etc) and to note the sex of the plant — remembering that yews can be either male or female (dioecious). This information will sometimes predetermine the `Cultivar` although some seem to have representatives of both sexes (eg *Fastigiata* Group).
- 5:4 YEWS IN CULTIVATION

Species

T. baccata Linnaeus ---with well over 100 Cultivars

T.chinensis (Pilger) Rehder -the Chinese Yew named in 1919 with the possibility that it really represents six separate species all growing in China!

T.cuspidata Siebold and Zucanini The Japanese Yew, named in 1846 with nearly 30 Cultivars.

T. floridana Nuttall The Florida Yew named in 1860

T.globosa Schlechtenld The Mexican Yew named in 1838

T. maire (Lemd Lev) S.Y.Hu. The Maire Yew named in 1914

T. wallichiana Zuccarni The Himalayan Yew named in 1843

T. yunnanensis Cheng and L.H.Fu. The Yunnan Yew named in 1975

Plus other local species.

Hybrids

Work on these seems to have been restricted to N. American nurseries

Taxus hunnewelliana Rehder. Very early in the C20th T.D. Hatfield working at the Hunneywell Pinetum Wellesley Mass. U.S.A crossed the Japanese Yew with a local hardy species *Taxus canadensis*.

This cross has been done by other people over the years. Each time producing a separate cloned hybrid!

We don't to the best of my knowledge have these in cultivation in the U.K. – although special collections of conifers may have representatives - imported from abroad?

Taxus x media Rehder

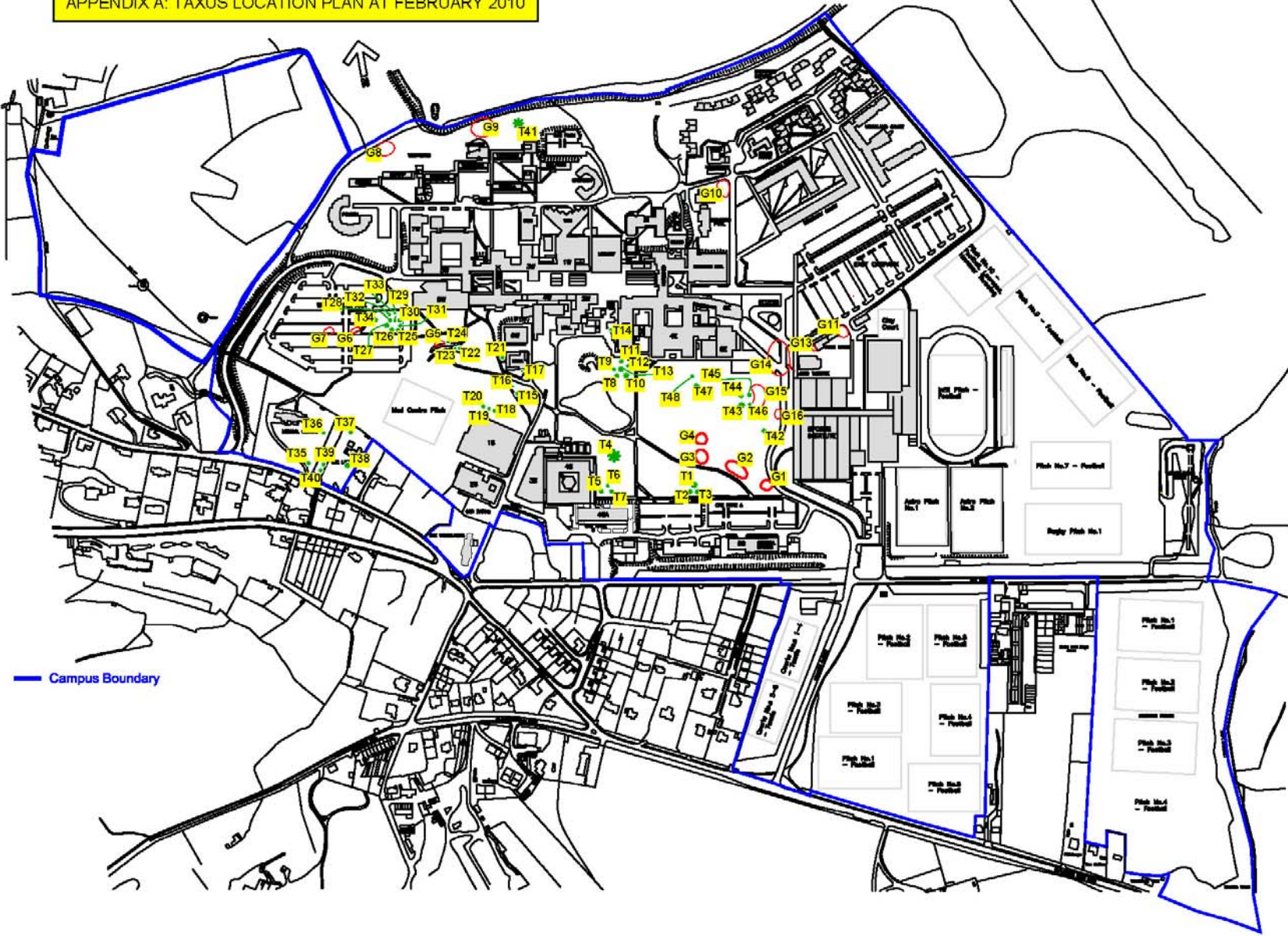
However, it is different with this hybrid.

In 1900 the same man above T.D.Hatfield in Massachusetts crossed the Japanese Yew (*T. cuspidata*) with the Common or English Yew (*Taxus baccata*). The hybrid has been done both ways – using the Japanese Yew or the English Yew as the mother. In each case the resulting variable seedlings will be known as *Taxus x media*! Many variations are known –some of which have gone on to be named selections (Cultivars). However once these have left the nurseries and sold/distributed through the trade - unless they are clearly labelled - there is a distinct possibility they can be misrepresented. Written descriptions of habit, size etc can be misleading after many years.

At present there are over 50 named Cultivars. Remember that all F1 generation Cultivars will have Hybrid Vigour and grow faster than their parents.

APPENDIX A: TAXUS LOCATION PLAN AT FEBRUARY 2010

Distances in feet (meters) at discretion of client.
 Only typical dimensions are to be worked from.
 Dimensions must be verified to the nearest within
 1/8" (3mm) or less.
 UOB/01



ESTATE INFORMATION
 DATABASE
 CLAVERTON DOWN CAMPUS
 CAMPUS PLAN

DATE	BY	SCALE
NTS	MAY 2004	1/8"
UOB/01		