

Forest Perspectives

Celebrating 100 years of Forestry education in UCD

John J. Gardiner and Maarten Nieuwenhuis

This paper is a revised version of the Sean Mac Bride lecture given by Prof. (Emeritus) John J. Gardiner on 26th November, 2013 at University College, Dublin.



Figure 1: Pictured at the event were (right to left, front row) Prof. Gardiner, Mr Pacelli Breathnach (president of the Society), Dr Hugh Brady (President of UCD), Prof. Nieuwenhuis; (back row) Mr John Mc Loughlin, Dr Áine Ní Dhubháin, Mr Kevin Hutchinson, Ms Marie Doyle and Dr Brian Tobin (Photograph: Catherine Hutchinson).

Introduction

In the beginning there was Trinity College. Founded in 1593 by Queen Elizabeth I; in the words of one of its distinguished alumni “.... Founded by Protestants, for Protestants and in the Protestant Interest”. It was to remain exclusively Protestant for 200 years. University statutes made it (1) obligatory for all students to attend services, and (2) religious tests and anti-papal oaths were imposed on provost, fellows, scholars and all who wished to obtain a degree. Trinity was an exclusively Protestant university. The Catholic Relief Act of 1793 enabled Catholics to enter Trinity and obtain a degree but they could not hold administrative office or become fellows or scholars.

Then in 1845, Sir Robert Peel established Queens Colleges at Belfast, Galway and Cork. These were to be un-denominational with religious teaching and catechetical instruction prohibited. The setting up of these colleges was a political ploy designed to break the link between home-rule politics and the people, and between the church and people. According to Archbishop McHale, Catholics aspiring to a third-level education had a choice of entering a Protestant university or a Godless university. Thus, a National Synod of Bishops held in Thurles in 1850, decided to establish a Catholic University and in 1851, they invited John Henry Newman, the most famous Catholic scholar in England, to become its first Rector. A total of £30,000 was available, raised through church collections, and a property at 86 St. Stephen’s Green was purchased at a cost of £3,500.

Newman’s idea was that the students should live in self-supporting halls or colleges, and so the University Committee bought 6 and 16 Harcourt Street. Newman himself lived and was Dean or House Master at 6 Harcourt Street. Newman appointed Catholics of eminence, whose names were well-known, as professors; e.g.

- Eugene O Casey Professor of Archaeology and Irish History
- Aubrey de Vere Professor of Political and Social Science
- Denis Florence McCarthy Professor of Poetry and Literature

The Catholic University of Ireland opened on 5th November 1854, offering courses in Logic, English Literature, Italian, Spanish, French, Mathematics, Physics, History, Geography and Chemistry. There was a total of 17 students. The Medical School was the only section of the University that could be said to be a success. The remainder suffered from lack of students and resources and its degrees were not recognised.

University College (University College, Dublin)

Then in 1880, Disraeli introduced the University Education (Ireland) Bill, leading to the establishment of the Royal College of Ireland. This was a non-teaching, degree awarding institution – the forerunner of the National University of Ireland.

The Catholic University was renamed University College, later University College, Dublin. At this time (1880), the Catholic University was a failure – basic problems: little money, few students and its degrees were not recognised. After Disraeli's Act, two things happened: 1) University College degrees were recognised by the Royal University, and 2) the Jesuits took over the management of University College. With Jesuit help and encouragement, constituent colleges at Kilkenny, Clonliffe, Blackrock, Carlow, Terenure, etc. set up university departments. These would: 1) prepare students for matriculation, and 2) permit students to take the University courses in their home school or college and undertake Royal University Examinations – with the exception of final year courses, which they were required to attend in Dublin. The University began to prosper and the number of students increased. From 1895 to 1909, University College greatly outstripped the provincial Colleges in the number of students and in the quality of its degrees.

The Royal College of Science (RCSI)

The Royal College of Science was established in 1867 to provide advanced education in branches of science connected with industry, and particularly engineering, chemistry and agriculture. It never attracted large numbers of students. With the formation of the Department of Agriculture and Technical Instruction (DATI) in 1900, the College, its staff and the Albert Agricultural College (Figures 2 and 3), came under its control. From 1840-1926, it (with the Albert College) was the premier establishment in Ireland in the provision of higher education in Agriculture, Horticulture and Forestry. It offered a three-year course, which was adjusted to four years when the new building (at Merrion Street) opened in 1911. With the passing of the University Education (Agriculture and Dairy Science) Act in 1926, the Royal College of Science and the Albert College, Glasnevin, were transferred to UCD. They housed the Faculty of Science and the Faculty of General Agriculture, respectively, until these were accommodated at Belfield.

The Recess Committee

At the suggestion of Horace Plunkett, a committee was formed in 1895, representing virtually all of the factions in Irish society (political and religious). Representation was invited from any group wishing to participate on a thirty-two county basis. In essence, anyone who wanted to contribute to the working of the committee was welcome. It was called the Recess Committee because it could only meet when parliament was in recess. The purpose of the committee was to consider: 1) the setting up of a Board of Agriculture for Ireland, and 2) technical and practical education. The Chairman was Horace Plunkett who was an agnostic and a Unionist. The Secretary was T.P. Gill, who was a Catholic Nationalist. One would have imagined that such a committee could not agree on anything. However, in 1896 the committee issued a unanimous

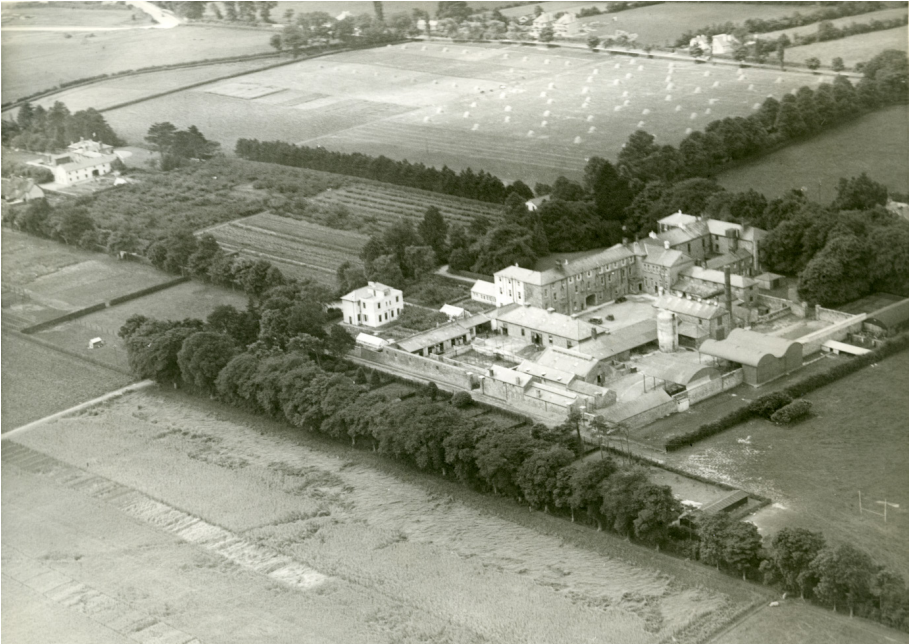


Figure 2: Aerial view from the south-east of the Albert Agricultural College in Glasnevin. Part of the Stormanstown estate is visible on the left. Stormanstown was demolished in 1979 to make way for a community housing scheme in Ballymun. Image courtesy of UCD Archives.



Figure 3: Main teaching buildings at the Albert College from the south-west (left), the east wing is behind the trees and the lecture theatres are to the right. View from west through the arch from the sundial path into the yard (right). Photographs taken in the period 1927-38. Many of the buildings at Glasnevin date from the middle of the 19th century. Following UCD's departure to Belfield, the site forms part of Dublin City University. Image courtesy of UCD Archives.

report, recommending that the Government should provide the necessary financial and administrative support for agricultural development. Such was the political clout and drive of the Chairman and Secretary, that in 1900 the Department of Agriculture and Technical Instruction (DATI) was established. It was given widespread and sweeping powers, including control of the Royal College of Science and the Albert Agricultural College. From 1898, students could theoretically take a three-year course in Forestry at the Royal College of Science. However, the volume of relevant subject matter in the course may have been quite limited. The appropriate calendar gives the syllabus as “ the cultivation of trees in nursery, plantation and woods”. On reflection, I suppose this gave plenty of scope for the inclusion and teaching of technical subjects. After 1905, the Department was offering generous scholarships to suitably qualified students to undertake three-year courses in Agriculture, Horticulture and Forestry. There appear to have been no “takers” for the Forestry course until 1910 when those courses were expanded to four years. This may have been due to the difficult matriculation and practical experience requirements.

In 1905, Arthur C. Forbes was appointed “Forestry-Expert” at the DATI. He had been Forester-in-Charge at the Longleat Estate in Wiltshire and Lecturer in Forestry at the College of Science, Newcastle-upon-Tyne. He directed the development of Avondale and presumably the establishment of the teaching programme. In addition, he was involved in setting-up a Forestry Committee within the Department and in organising an advisory service, in forestry, to landowners. He was a prolific author and many of his articles were published in the Journal of the Department. They were on topics of a somewhat mundane nature, such as Forest Protection and aspects of the production and use of Irish timber. He travelled widely and wrote accounts of the organisation of forestry activities in Denmark, Sweden and Germany. In 1904, he delivered a series of public lectures at the Royal College. Registration for these lectures cost 10/- (roughly equivalent to €0.63). After the Treaty of 1922 he was styled, Director of Forestry. Later in his career, he was involved with John Crozier, his assistant in the DATI from 1910 to 1933, in visiting sites and making recommendations in relation to site preparation, species selection and planting. He was one of the first foresters to be made an Honorary Member of the Society of Irish Foresters. He retired from the Department in 1931.

Earlsfort Terrace (1912-1924)

The building of University College at Earlsfort Terrace rings so many bells in today’s terms that I felt I just had to say a few words about it. Essentially, the story was of an inadequate site and budget for what the University wanted to build. UCD wanted university buildings that could accommodate 2,000 students. The neighbouring landlords – Hely-Hutchinson on the Hatch Street end and Lord Iveagh on the St Stephen’s Green end – were not too willing to help rectify the site difficulties. The

former was of no help, and while the latter was willing to help (he was Chancellor of Trinity at that time), he was anxious that his gardens, tennis courts and stables should not be overlooked. Hence, he imposed restrictions upon the height of buildings on his sides and on the positioning of windows. With the advent of the war, the cost of labour and materials soared. Cramptons' (the builders) workers went on strike and the whole project quickly ran over budget. UCD was not able to source any additional funding. There was much recrimination as builders and contractors were unpaid. The entire project ran years behind schedule. The original design was for a set of buildings in quadrangular design, with a library and *Aula Maxima* in the centre. The building of the University was never completed.

The Degree Programme (B.Agr.Sc. in Forestry)

Since the appointment of Augustine Henry in 1913, the number of academic staff associated with the Forestry programme has slowly increased (Table 1). In this section, we focus on some of the earlier appointees.

Augustine Henry

Augustine Henry joined the staff of the DATI in 1913 as Professor of Forestry (Figure 4). However, while Forbes's duties were manifold, Henry seems to have confined himself to teaching, research and publication duties at the Royal College of Science. There is no evidence that he became in any way involved in Avondale, in advisory activities or in State afforestation affairs. After he took up office, the Forestry curriculum began to evolve and by 1921/22, it had assumed the "shape" which we know today (by year of study): science, science, practical, professional, professional. In addition, the gradual transfer of the teaching programme to the Faculty of Science in UCD began. Initially, this took the form of course work at the Royal College of Science and accreditation at NUI (UCD). The culmination of this gradual change was the transfer of the Royal College of Science and The Albert College to UCD in 1926. The Faculty of Agriculture and the Faculty of Science both had a centre of operations.

Henry had very few students, but he was responsible for lectures to Agriculture and Horticulture students, who were required to take his courses. These third-year and fourth-year courses were extensive in scope and depth. The appropriate calendar indicates that they were supplemented by excursions and practical work. At the Royal College, Henry continued the research on hybridisation, which he had begun at Kew. His publications in the period 1915 to 1925 very much reflect his interests, e.g.

- "A New Hybrid Poplar", 1914.
- "American Sycamores are Possibly Hybrids", 1917.
- "The History of the Dunkeld Hybrid Larch", 1919.
- "The Douglas Firs", 1920.
- "The Swamp Cypressess, *Glyptostrobus* of China and *Taxodium* of America", 1926.



Figure 4: Professors and heads of Forestry at UCD, past and present. Top to bottom and left to right: Prof. Augustine Henry (watercolour by Anna O’Leary, courtesy of the National Botanic Gardens, Glasnevin), H.M. FitzPatrick (Ann Luke collection), A.C. Forbes (Coillte), Prof. Tom Clear (UCD School of Agriculture and Food Science), Prof. Padraic Joyce, Prof. John J. Gardiner (UCD School of Agriculture and Food Science) and Prof. Maarten Nieuwenhuis.

They appear, however, to have been mostly of a review nature and do not suggest a concentrated or focused research programme. With the passing of the University Education (Agriculture and Dairy Science) Act in 1926, Henry transferred to UCD. The Statute appointing him was most unusual in that he was made Professor for life, but without pension rights. I am guessing that these unusual conditions were imposed because of his age; he was sixty-nine at the time. In 1926, his salary was fixed at £600 yr^{-1} (€762) with a potential bonus of £226.14 yr^{-1} (€287). Only four students studied for the Associateship / Degree in Forestry during the eighteen years in which he was Professor of Forestry. In the period 1913 to 1926, there were two forestry experts in the DATI; remember that the Royal College was under the control of the DATI, so Henry and Forbes worked for the same department. Yet there is no evidence of any interaction whatsoever between the two men. Socially they must also have moved in different circles. Pim (1984) has written about Henry dining at the Vice-Regal Lodge and mingling with the artistic and medical “sets” (Æ, Eoin McNeill, Padraic Colum, Lady Gregory). Forbes is never mentioned in these circles.

Table 1: Academic staff over the period 1913 - 2013.

Timeline	Staff
1910 ^a	A. Henry, Professor of Forestry
1930	H.M. FitzPatrick A.C. Forbes T. Clear
1950	T. Clear, Professor of Forestry L.U. Gallagher P.M. Joyce
1970	J.J. Gardiner P.M. Joyce, Professor of Forestry J.J. Gardiner, M. Mac Siúrtáin, M. Nieuwenhuis
1990	J.J. Gardiner, Professor of Forestry M. Mac Siúrtáin, M. Nieuwenhuis, Á. Ní Dhubháin, C. O'Reilly
2010	Current staff: M. Nieuwenhuis, Professor of Forestry M. Mac Siúrtáin, Á. Ní Dhubháin, C. O'Reilly, M. Doyle B. Tobin, C. Harper, O. Grant, A. McCullagh

^a Indicative dates only.*Hugh M. FitzPatrick*

Hugh M. FitzPatrick graduated in UCD with a primary degree specialising in Forestry in 1927 and a Master's degree (M.Agr.Sc.) in 1928. His mentor was Professor Henry. His task as a postgraduate student was to compile a series of descriptions of the conifers, based on the morphology of the twigs and foliage and to arrange them in an artificial key. This key was published by the Royal Dublin Society in 1929 and is one which I found most useful for instruction in Dendrology. He was Acting Lecturer in Forestry in 1937/38.

A.C. Forbes

Arthur C. Forbes retired from the DATI in 1930. From 1931 to 1935, he was solely responsible for the delivery of the Forestry Degree Programme at UCD. This was the period following the death of Henry and before the appointment of Tom Clear.

Tom Clear

Tom Clear was a very experienced silviculturalist and forester. As a final year student, he and his classmates had studied in Sweden for four months under the direction of A.C. Forbes. As a result, he was au fait with modern methods of site classification and inventory. In his postgraduate work, he travelled extensively in Germany and acquired an in-depth knowledge of European forestry systems and species. Because of his contacts with the likes of Lord Meath, Thomas Pakenham and the Tottenhams, he appreciated how European tree species performed in Ireland on ecologically suitable sites. Like Henry before him, he favoured the use of North Western American tree species on the sites which were available for afforestation in Ireland, but he feared “.... that a growing flood of blanket bogs drains the hopes that State afforestation will ever be anything more than a relief scheme”. In general terms, Tom Clear was much more at ease in the forest than in the classroom. The fact that he had access to such an enormous range of forest sites (public and private), and could use them for student exercises, greatly enhanced his course in Silviculture. He was a big advocate of student fieldwork, the practical year and the final year tour. He believed that silviculture, in particular, should have a substantial field element. Despite being something of a reluctant lecturer, he was a talented raconteur. This facility, combined with his wide local knowledge of Irish forestry, often made his lectures in Forest Policy quite entertaining.

The Society of Irish Foresters must be very aware that Tom gave very generously of his time and expertise to the causes that he avowed. The same is true relative to UCD. He served two terms as Dean of this Faculty, at a time when the Faculty feared for its well-being. Despite this involvement in College administration, he was quite indifferent to Faculty and College politics; it appeared as if he just could not be bothered. As a result, he was easily duped by the machinations of more aggressive colleagues. A simple anecdote may serve to illustrate this point. Tom Clear was keen to have a small nursery attached to the Department. At Stormanstown House, Ballymun, he had access to a suitable site but he lacked technical assistance. Requests to the Faculty for such help fell on deaf ears, until, lo and behold, one day a fellow professor approached to inform him that he had in his department the ideal man, whom he would let him have on a permanent basis. No doubt, Tom was overcome with this outburst of collegiality, particularly as the technician in question turned out to be suitable and reliable. I do not know if Tom ever appreciated that his benefactor

had been trying to get rid of this man for some time because he was the local union organiser. Such was the manner in which a gem of a gentleman called Louis O'Reilly came to join the Forestry Department in UCD in the late 1950s.

I want to mention specifically the year 1963; not simply because it was the mid-point of the centenary, but for three other, related reasons:

1. The list of graduates for that year is as follows: M. Bulfin, M. Cassidy, J. Treacy and J.J. Gardiner.
2. Also in 1963, Len Gallagher returned to UCD from study leave at the University of Washington, Seattle.
3. In the autumn of that year, the first Science and Technology show was mounted at the RDS, with the science departments of the Universities putting on exhibits.

Tom Clear induced me (a few £s changed hands) to assist Len to prepare an exhibit which would show the work of the Department. The actual exhibit was a mock-up of a hydroponics-based experiment to show the impact of low oxygen levels in the soil upon tree growth. It consisted of trees growing in glass tubes with oxygen from cylinders bubbling through the nutrient solution. It attracted much favourable attention and I just wanted to mention it as Len Gallagher was a staff member in the Department of Forestry, Stormanstown House, at the time.

Pádraig Joyce

In reviewing 100 years of Forestry education at UCD, I consider that the recruitment of P.M. Joyce to the staff in the 1960s had a transformational impact upon the entire degree programme. To this time, the emphasis had been upon silviculture and silviculturally related subjects. Pádraig introduced computer applications and a hard numeracy to the teaching of subjects such as Forest inventory and Management. His input in statistics, experimental design and data analysis stiffened and added impetus to the teaching and research of the Department. From the late 1960s onwards, the Forestry Degree programme presented the concept of a scientifically-based and commercially viable land-use enterprise. You might consider that in this way, the degree course anticipated the formation and development of Coillte Teo. At this point, I must remind you that the innovative techniques introduced by Pádraig were accomplished at a time when the only computer system available was the old Fortran-based one. With this, users had to write their own programs, punch and arrange their own decks of cards and bring them to a dedicated building for processing. Introducing computer applications into a degree curriculum was not a task for intellectual wimps. P. M. Joyce is Emeritus Professor of Forestry, UCD.

It is appropriate here that I should mention that for much of the time during

which Tom Clear, Pádraig Joyce and I were employed at UCD, the Department of Forestry was fortunate to have the services of an exceptionally talented and dedicated administrator, Ms. Valerie Guilfoyle.

The Curriculum

In its core philosophy, the curriculum for education in Forestry is older than the degree programme itself. The acquisition of the farm at Glasnevin in 1838, gave a clear signal that the Board of Education, of the time, appreciated the benefit of experience and demonstration in the education of instructors in Agriculture. In addition, it has been acknowledged from this time that graduates in Agricultural Science, Horticulture and Forestry should have a first class exposure to basic science as well as professional matter.

The first Professor of Forestry discovered these elements of the curriculum at Nancy where the year's lectures were followed by end-of-year excursions to the forests of the Jura, Pyrenees and Landes regions. He introduced similar elements into the curriculum at the Royal College and so we read of FitzPatrick undertaking practical work at Gort Forest and preparing a working plan for the hardwood forest of Tronçais. Forbes also maintained a strong element of fieldwork in the curriculum, preferable in a European context. Hence, the sojourn of Clear et al. in Sweden during their final year of studies. Clear, in turn, appears to have striven to maintain the fieldwork element, even under the most difficult wartime conditions. Dermot Mangan (1988) has referred to a student tour, by bicycle, in 1941, in the Gort area. So the forestry curriculum in UCD, as indeed in most other Forestry Schools in Europe has, for many decades, opened with a strong element of basic science, followed by extensive exposure to applied science subjects and professional work experience. This foundation was capped with a full complement of professional subjects. This core curriculum has remained unchanged over the past 100 years.

The emphasis upon fieldwork is still in position but the detail has been significantly upgraded and modernised. In the Forest Management Plan module, each student must undertake a case study of an actual forest area (Ballycurry and Cloragh Estates) and, in compliance with given economic, social and environmental objectives, produce a management plan based on sustainable forest management (SFM) principles. This plan must incorporate a description of the site, including both timber and non-timber details, based on the results of the GIS and Forest Inventory and SFM Assessment modules. Using SFM criteria and multi-criteria decision-support software, each student is required to analyse the inventory data and produce detailed prescriptions for yield regulation, harvest scheduling, silvicultural practices, forest protection and environmental, cultural and social indicators. A financial analysis must also be included.

Staff and students have always appreciated the beneficial effects of exposure to the forestry culture and environment of another country. Hence, the fourth year

tour remains. Traditionally, this tour attempted to visit a different country each year. However, for the past 15 years or so, the tour has been hosted by Professor Jürgen Huss of the Albert Ludwigs University in Freiburg and includes students from the University of Aberdeen. Many aspects of forestry in Germany and the Black Forest, including silviculture, management, harvesting and utilisation, and farm forestry are explored. A trip to the coppice with standards forests, across the border in France, is also included. The learning experience is enhanced by Professor Huss's knowledge of Irish forestry. This tour has been generously sponsored by Coillte, COFORD, and recently also by Green Belt and Forest Enterprises Limited.

However, to say that the core of the curriculum has not changed is not to suggest no change. Indeed, there have been major changes over the past 100 years and the actual syllabus is in a constant state of evolution. A major change introduced in the mid-nineties was to reduce the duration of the programme from 5 to 4 years. This was a Faculty decision and was to apply to the nine degree options in the Faculty. In the era of competition for students and resources, a five-year degree programme (no matter how good) could not compare with a three-year Bachelor of Arts (for example). The only way to accommodate such a major change in the curriculum was to abbreviate the duration of the professional work experience component to six months. This may not have been a bad thing, in itself, since feedback from students had indicated that the value of the practical year was a "mixed bag". Some students considered it the most valuable and informative year in the curriculum; others considered that they had learned nothing and that it was a waste of time. Another important change that was introduced was to make the final year almost entirely composed of project work (*sans* lectures). The aim was to shift the entire focus from passive teaching to active learning and skills acquisition; from the lecturers to the students. One of these final year projects would be an elective research one. This would give students a choice of subject area and would bring them into contact with research problems: problem identification and formulation; method(s) of study, design and analysis, scientific reporting and meeting deadlines.

I could go on all night about other changes that have been introduced, notably in the areas of inventory, management planning and forecasting. However, there just is not sufficient time, so I will confine my remarks to just two: around 1990, a new subject, "Introduction to Forestry" (later renamed "Trees and Forests of Ireland"), was included at first year level and was opened to all comers – simply to permit students to find out a little bit about forestry. Now 60 to 80 students – most of them non-forestry – take this course each year, on an elective basis. In addition, the School's second year course in Statistics is now delivered by a Forestry staff member and is taken by approximately 300 students each year. The curriculum for the primary degree in Forestry has indeed changed significantly over the past 100 years, but in such a way as to maintain, in its entirety, the integrity of the B.Agr.Sc. in Forestry.

From time to time, other innovative developments have been introduced. The Higher Diploma / Taught Masters in Forestry was launched in 1996. The course was unique in the Faculty in that students registered initially for a Higher Diploma (1 year); these students, reaching a set standard in the Higher Diploma examinations, could opt to change their registration to a Taught Masters programme. To facilitate those with full-time jobs, lectures were delivered on alternate weekends with students required to undertake a considerable amount of reading in between. Originally, the course was open to those with a previous forestry qualification but in 2000, it was opened to those with a prior science qualification. In 2001, a transfer programme was introduced to facilitate forestry graduates from Waterford Institute of Technology and the Galway-Mayo Institute of Technology to get access to the Honours Degree Programme in Forestry in UCD.

The most recent curriculum development is the introduction of a 2+2 undergraduate programme in Forestry with the South China Agricultural University (SCAU). Chinese students will take the first two years of study at the SCAU and for their remaining two years will transfer to the Forestry Degree Programme of UCD.

Students and Graduates

The number of students studying for the B.Agr.Sc. in Forestry has never been big. During the entire period of Henry's tenure as Professor (1913-1930) there were just four; D. McCaw or M'Caw qualified in 1913 and M. O'Beirne in 1914 (Table 2). Both were subsequently founder members of the Society of Irish Foresters. To my knowledge, Michael O'Beirne was the only forestry student to be awarded a scholarship to study forestry by the Department of Agriculture and Technical Instruction. These were valuable scholarships since not only did they give free instruction but also free board and residence at the Albert Agricultural College. In addition, there were generous allowances for travel and course materials. Arthur C. Forbes graduated, as an Associate of the Royal College, in Forestry in 1923. He was the only son of Arthur C. Forbes, forestry expert at the DATI. Afterwards, he had a distinguished career in New Zealand forestry. H. M. FitzPatrick, after graduation in 1927, lectured in Forestry for one year. He went on to complete an M.Agr.Sc. under the direction of Professor Henry.

The total number of graduates in the period 1913-2013 is 483, including 425 men and 58 women (Table 3). However, in some years there were no students and in at least six years there was just one. The first woman to study for a degree in Forestry was Philomena Tuite in 1981 and then in 1982 there were two others: Helen Maher and Melissa Newman. A bit like 46A buses, I suppose; you wait 70 years for the first to come along and then three come together. The maximum number of students taking Forestry in any one year was 28 in 1996. The relatively big number

of Forestry graduates taking higher degrees is worthy of note (Table 3). I just want to mention one. The first forestry graduate to gain a M.Agr.Sc. and a PhD in Forestry was Denis Quirke who graduated with a primary degree in 1942 and with a PhD in 1949. The research for his two postgraduate degrees involved “A Survey of Insect Pests of Irish Woodlands”. The entire survey was carried out by bicycle. It was funded by the Forestry Division of the Department of Lands and supervised by Professor John Carroll, Professor of Agricultural Zoology, UCD. It still remains one of the most complex and detailed PhD studies that I have seen and I believe that no comparable study of insect pests has been undertaken in Irish forests since that time.

I should also mention here two other groups of students who studied Forestry at UCD. For many years, it was possible for undergraduates from other Colleges of the National University to take the first two years of study at their “home” colleges and then to transfer to UCD to undertake the professional subjects of the degree programme. There were many such transfer students from University Colleges, Cork and Galway, but no record of the exact number or of student names is now available. From 1906, a Diploma course in Agriculture was available at Trinity College. When this was combined with an abbreviated B.A. course, a degree, Bachelor in Agriculture, could be conferred. This course disappeared about 1912 and shortly

Table 2: *Early Forestry graduates.*

Year	Graduates
1913	D. McCaw or M'Caw
1914	M. O'Beirne
1923	A.C. Forbes
1927	H.M. FitzPatrick
1935	T. Clear
	M. Feehan
	O.V. Mooney
	S. O'Sullivan
	D.M. Walsh

Table 3: *Number of graduates for the period 1913-2013.*

Undergraduate students			Graduate students			
Male	Female	Total	M.Agr.Sc.	M.Sc.Agr.	Ph.D.	Total
425	58	483	64	33	35	132
Number of students in final year in 1996						
18	10	28				

afterwards Bachelor degrees in Agriculture, Horticulture and Forestry were instituted. The extent of the technical (professional) components in the Diploma course had been very meagre and hence, for the purpose of these degrees, students attended courses at the Royal College of Science (University College Dublin from 1926). This appears to have been facilitated by an informal agreement between the universities. These degree programmes offered at Trinity College generally attracted few students and available records indicate that no student from Trinity attended lectures in the Forestry courses at UCD prior to 1945. From 1946-1973, 19 students (all male) took the 3rd and 4th year courses in Forestry at UCD to fulfil the requirements for the Trinity College degree, Agr. (Forest.) B. (*Baccalaurei in Agri Forestarii Cultura*). From the mid-1970s onwards, these kinds of arrangements with other Colleges and Universities became more difficult due to curriculum changes introduced by the Faculty of Agriculture, UCD. In any case, there was little demand and these arrangements just fizzled out.

Throughout all of its existence, UCD and the Forestry Department have been fortunate in the academic quality and discipline of the students. To this day, the security force and arrangements at Belfield are skeletal. So one of the very few, semi-organised, mass student protests, which came to be known as the “Gentle Revolution”, is worthy of brief comment. In the autumn of 1968, university campuses all over the world, but notably those in the USA (Columbia, UC Berkeley) and Europe (The Sorbonne) exploded in a tsunami of student protest. It was the era of protest – civil rights protests in the US and Northern Ireland; protests against Viet Nam, nuclear armament etc. It threw up student cult figures and images: “Danny the Red” (Paris), Rudi Dutschke (Berlin) and Tariq Ali (London); it was the era of dropouts, hippies and angry young men. At this time, a whole series of minor stresses were experienced in Dublin universities, including:

- talks of a merger between UCD and Trinity;
- massive and chronic overcrowding at UCD;
- very poor library and recreation facilities at Earlsfort Terrace; and
- demands for participation by students in university government.

These circumstances led to a ripple of this tsunami reaching Dublin. It took the form of protest marches and “sit-ins”. Thousands of students took part in the marches and hundreds in the sit-ins. The whole thing was encouraged, and to some extent directed, by Junior Staff who had their own grievances. It culminated in the disruption and blockade of an Academic Council meeting in Earlsfort Terrace. Professors attending this meeting included Tom Clear who was eventually rescued by a porter via a window. The idea of a quite portly, non-athletic, Tom escaping via a window was amusing to us at the time and Tom, who could make any story sound exciting made this affair sound like Armageddon. The actual sit-in in Earlsfort Terrace which caused

the abandonment of the Academic Council meeting involved about 300 students – but it is agreed that there were only about 9-12 hard-core romantic activists (extremists, if you must). Furthermore, it is agreed that one of the leaders of this dozen, if not the leader, was a then Architecture student and leader of the UCD Student Branch of the Labour Party – Ruairi Quinn – the current Minister for Education.

Concluding Remarks

For most of the century under review, higher education in Forestry was conducted in accommodation and at locations peripheral to the University, such as The Royal College of Science, 51 St. Stephen's Green East; Royal College of Science, Merrion Street; Albert College, Glasnevin; Stormanstown House, Ballymun; Roebuck Grove, Belfield; and Builders Prefabs, Belfield (Table 4). For many years, it was never quite an integral part of the Faculty, the University or the wider academic community. This acted to the detriment of the development of staff, students and forestry education. It is only in relatively recent decades that Forestry as a scientific/commercial activity has begun to be recognised as a subject worthy of serious research and study. Many of us would claim some small recognition for this transition. However, much credit is due to the present staff who have accelerated the advancement of the study of Forestry towards a central position within the academic milieu. The impact upon future graduates and the profession of Forestry will be positive.

Table 4: *A chronology of Higher Education in Forestry at UCD, 1900-2013.*

1900	Department of Agriculture and Technical Instruction established
1908	Foundation of the National University of Ireland
1908/09	Scholarship(s) at Royal College of Science to Forestry student(s) for the first time
1911	Four-year Associateship / Degree Programme in Forestry introduced
1912	Augustine Henry appointed Professor of Forestry
1913	First Associate (Graduate) in Forestry conferred
1926	University Education (Agriculture and Dairy Science) Act, 1926, passed. Forestry Degree Programme transferred to UCD
1933	First land-purchase by UCD at Belfield
1959	Forestry Department relocated to Stormanstown House, Ballymun
1912-1969	Higher education in Forestry successively located at St. Stephen's Green; Merrion Street; Albert Agricultural College, Glasnevin; Stormanstown House, Ballymun; Roebuck Grove, Belfield
1969-2013	Forestry Department and Degree Programme located in the Agricultural Building, Belfield (Figure 5)



Figure 5: *UCD Forestry is currently located in the Agriculture and Food Science Centre in Belfield.*

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