

can be deployed. However, some of the selections and other resistant elm cultivars form part of a series of trials initiated in 2000 by Butterfly Conservation in Hampshire to not only evaluate their potential as host plants for the rare White-letter Hairstreak butterfly, but their growth and visual appearance, together with tolerance of environmental stresses such as exposure, drought and waterlogging (Brookes, 2019). Information from these trials and other plantings of resistant elms in Britain (e.g. Kent Resistant Elms: Herling, 2014) could well play a critical part guiding the use of resistant elms in the landscape plantings over the next decade.

References

Brasier, C.M. (1996). New horizons in Dutch elm disease control. Report on Forest Research 1996. HMSO, London, pp 20–28.
 Brasier, C. (2000). Intercontinental spread and continuing evolution of the Dutch elm disease pathogens. In: The elms: breeding, conservation, and disease management, ed. Dunn, CP. Kluwer Academic Publishers, Boston. pp 61–72.

Brasier, C.M. and Webber, J.F. (2019) Is there evidence for post-epidemic attenuation in the Dutch elm disease pathogen *Ophiostoma novo-ulmi*? Plant Pathology doi.org/10.1111/ppa.13022
 Brookes, A. (2019). Disease resistant elms – Butterfly Conservation Trials Report 2019. <http://www.hantsiowbutterflies.org.uk/downloads/Disease%20resistant%20elm%20cultivars%20BC%20trials%208th%20report%202019.pdf>
 Harwood, T.D., Tomlinson, I., Potter, C.A. and Knight, J.D. (2011). Dutch elm disease revisited: past, present and future management in Great Britain. Plant Pathology 60, 545–555.
 Heybroek, H.M. (1957). Elm-breeding in the Netherlands. Silvae Genetica 6, 112–116.
 Herling, D. (2014). Resistant Elms. Creating awareness of elm trees in the UK www.resistantelms.co.uk
 Martín, J.A., Sobrino-Plata, J., Rodríguez-Calcerrada, J., Collada, C. and Gil, L. (2019). Breeding and scientific advances in the fight against Dutch elm disease: Will they allow the use of elms in forest restoration? New Forests 50: 183. <https://doi.org/10.1007/s11056-018-9640-x>
 Sell, P., Murrell, G. (2018). Flora of Great Britain and Ireland. Cambridge, UK: Cambridge University Press.

Joan Webber

*Forest Research, Farnham, Surrey, GU10 4LH, UK
 Joan.webber@forestresearch.gov.uk*

Bangor University in Ghana – experiences and insights from recent study tours



Students and staff at the Form Ghana plantation in Asubima Forest Reserve, Central Ghana, July 2019 © James Walmsley

What do forestry programmes run by a university in North Wales, a former global empire, a small UK-based woodland charity and a small country in West Africa have in common? Very little, you might imagine. . .

Every other year, groups of ~25–30 students and 5–6 staff gather for two weeks in Ghana for Bangor University’s bi-annual MSc Tropical Forestry study tour. But this is no ordinary study tour. The students attending have never met each other in person before; they are all part-time distance learning students,

typically coming from up to 18 different countries. Alongside their studies, these are professionals, typically working full-time in a wide range of fascinating roles, for example in plantation forest management in Zambia; forest reserve management in Rwanda; afforestation in Malawi, reforestation in Lestotho, forest research in Kenya, agroforestry in India, forest monitoring in Guyana. These students are exceptional – many of them in receipt of prestigious Commonwealth Scholarship Commission scholarships. The staff team members are equally diverse, including Professor Phillip Nyeko from Makerere University, a Bangor alumnus from 2001, and staff from Bangor with experience in The Gambia, Panama, Bolivia, Uganda, Canada, Portugal, Australia and Europe.

Gathering such a group together for two weeks leads to the most enriching learning experience. The itinerary for the study tour typically includes a week of 'traditional' study tour activities – guided visits to forest reserves, plantations, cocoa agroforests, sawmills, private farms and markets selling an incredible range of non-timber forest products (NTFPs). Yet it combines these visits with a very large element of student-focused activities, including several research projects, which culminate in a student-led research symposium at the Forestry Research Institute of Ghana headquarters in Kumasi.

Having led this study tour on three occasions (2015, 2017 and 2019) something that has surprised me is the number of

unexpected links that exist between Bangor University, Ghana, Woodland Heritage and the Commonwealth, which has prompted me to write this short article. Purely by coincidence, since 2014, several Bangor alumni have been in touch, unprompted, with their *alma mater*, reporting their various links with Ghana. For example, Martyn Baguley (BSc Forestry, 1960) got in touch and recounted a project he had worked on in Ghana in 1994 relating to the economics of teak plantations and their potential to supply national electrification projects – ideal historical context given renewed interest in plantation forestry as part of reforestation efforts. Martyn also shared information about a fellow Bangor graduate of 1960, Elias Afanyedi, who rose to number 3 in the Ghana Forestry Commission. Meanwhile, James Sandom (BSc Forestry, 1973) contacted the university and reported that he had worked on several forestry projects in Ghana – he was able to provide updates on the latest situation regarding rosewood harvesting in northern Ghana. There are many similar stories. On every study tour to Ghana we encounter more alumni, highlighting the long tradition in Bangor University of educating people who go onto make substantial contributions to forest research, management and conservation across the world, including West Africa.

The first stop of the study tour is to the excellent Aburi Botanic Gardens in the hills overlooking Accra. The Gardens introduce (in a gentle manner) the immense task of 'tree



Visiting the *Grevillea robusta* planted by Prince Charles

spotting' in a country where a single hectare of natural forest may host far more species than the United Kingdom! The Botanic Gardens have also hosted numerous visits by royalty and dignitaries and, as you might expect, trees have been planted in their honour. It is here that the links referred to in the title of this article emerge once again. One of the ceremonial tree plantings is a *Khaya senegalensis* (Mahogany) planted by HRH Queen Elizabeth II in 1961. Queen Elizabeth II is the Head of the Commonwealth – a group of sovereign nations whose members are nearly all former territories of the British Empire. The Commonwealth Scholarship Commission, the organisation that generously supports so many of the MSc Tropical Forestry students at Bangor University, is a direct consequence of the Commonwealth: eligibility is confined to applicants from developing Commonwealth countries alone. It was established in 1959 to provide educational opportunities and exchanges amongst member countries: since 2011 it has generously supported over 100 scholars with their MSc Tropical Forestry studies at Bangor University. The study tour provides a unique learning experience for forestry professionals from many different corners of the Commonwealth, who come together and share their expertise, knowledge, ideas and culture insights, and form many life-long friendships in the process. Such inter-cultural experiences are vital as part of attempts to improve the management of forested habitats across the planet.

The other ceremonial tree planting of relevance to this article is a *Grevillea robusta* (silver oak or silky oak) which was planted at Aburi Botanic Gardens by HRH Prince Charles in 1977. Prince Charles has been patron of Woodland Heritage since 2005. This is where this story comes full circle: Woodland Heritage has been a loyal and unstinting supporter of forestry education and research at Bangor University since before I arrived at Bangor as a PhD student in 2004: the importance of this unstinting support is very difficult to quantify. It includes numerous Garthwaite Bursaries which have enabled students

(and staff!) to attend international symposia, as well as subsidised places on the excellent 'Woodland to Workshop' and 'Irregular Silviculture' courses, plus several substantial research grants relating to vital Acute Oak Decline research. Most recently, Woodland Heritage provided invaluable advice and support to the Bangor Forestry Students' Association (BFSA), enabling students to host a European meeting of forestry students in North Wales in April 2019. On a personal note, had it not been for my work with Woodland Heritage, I would not have had the privilege to visit Buckingham Palace for a royal Garden Party in May 2019, which is, of course, the official London residence of the Head of the Commonwealth. The former BFSA president, Sarah Ellis, was also privileged to join.

Take from this story what you wish. What I have taken from these experiences is that the world is full of surprises. Organisations, institutions and indeed nations that at first appear to have little in common may in fact have many shared interests and overlapping histories. Recognising these and building on them is a rewarding and productive endeavour that can yield unexpected outcomes. At a time of great political change and environmental concern, these are surely as important as ever.

Further reading:

Various articles on this webpage: <https://www.bangor.ac.uk/natural-sciences/courses/distancelearning/articles.php.en>

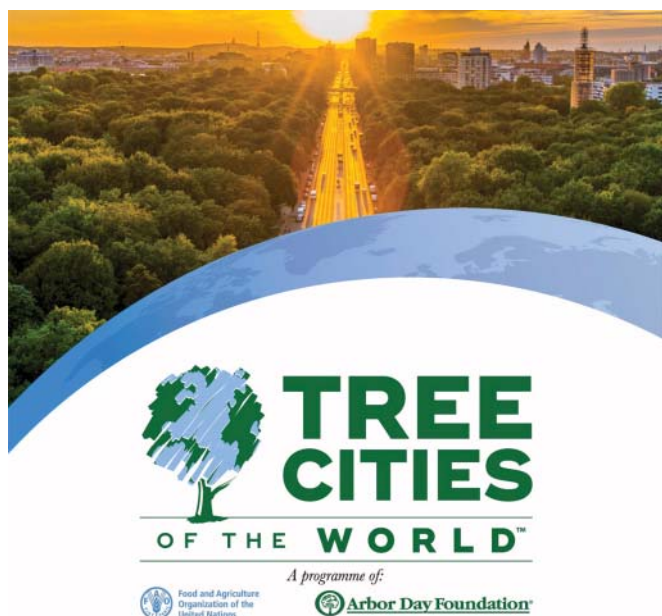
Walmsley et al (2016) Turning literature into reality tales from a Bangor University MSc Tropical Forestry study tour in Ghana, Agriculture for Development, No. 27: 20–21 available at <https://www.bangor.ac.uk/natural-sciences/courses/distancelearning/documents/Ag4Dev27-NewsfromtheField2pdf.pdf>

Commonwealth Scholarship Commission – <http://cscuk.dfid.gov.uk/>
Forestry Research Institute of Ghana – <https://www.csir-forig.org.gh/>

James Walmsley

Senior Lecturer in Forestry, Bangor University
j.walmsley@bangor.ac.uk

Tree Cities of the World



At the Arbor Day Foundation, planting trees is at the heart of our mission “to inspire people to plant, nurture, and celebrate trees.” We are now in our fifth decade of planting trees and forests, in rural areas, in cities and towns, across our country and around the globe. We know that trees can change people’s lives and that trees, in fact, provide the necessities of life itself.

It makes sense, then, that citizens and community leaders increasingly value community trees. They know that trees and forests are vital components of healthy, livable, and sustainable communities. Urban forests define a sense of place and well-being where people live, work, play, and learn. The need for management of our urban and community forests has never been greater, all around the globe: cities are hotter than ever, air and water pollution affect millions of people, and the frequency and intensity of storms is growing. Insects, diseases, storms, and the constant pressures of urban growth claim more trees every year.

The Arbor Day Foundation has long aimed to build greener communities around the world through recognition programs like Tree City USA and Tree Campus USA. In 2019, with support