OBITUARY

In memoriam: Peter A. Huxley (1926–2019)

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Biography

Peter A. Huxley was born in Dulwich, East London in 1926. He was the youngest son of three to Ernest Huxley and Florence Agnes Daisy Huxley (formerly King). His father was a stock taker, while his mother was a housewife. Between 1942 and 1944 he served as an insurance underwriter for Lloyds in London. He later joined the volunteer reserve in the Royal Auxiliary Navy at the end of the Second World War (1944–1946). Peter then briefly returned to Lloyds, before deciding that it wasn't for him. He chose to go to a technical college to study biology, chemistry and physics, in order to gain access to Reading University. Not only was he the first in his family to get a

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university degree, but in 1963 he completed his PhD in Horticultural Botany. His area of focus was coffee physiology in Uganda.

In 1979 Peter joined the newly instituted International Council for Research in Agroforestry (ICRAF) with more than 20 years of tropical research experience in Uganda and Kenya. He not only came with a strong interest in agriculture, climate, tree phenology and coffee, but also with ideas about agricultural education and the gap between agriculture and forestry in terms of educational traditions. He noticed the gap between the trees that forestry cared about and the trees commonly used in farmers' fields and helped shape the new field of integrative science in support of farmer practice and policy reform, contributing to the creation of the 'agroforestry systems' journal (Huxley 1985a,b, 1987).

Peter retired in 1990 while serving as Head of the Research Development Division, and left ICRAF in 1992. However, he remained actively involved in agroforestry education and in synthesizing knowledge. In the preface of his 1999 book that reflected his journey of discovery he stated: "We should always remember that *people* are the key elements in agroforestry. Being inclined towards biology, I can only refer to some of the socio-economic aspects in this book (and without claiming much authority)".

Peter, one of the founding fathers of tropical agroforestry research, passed on in November 2019. A number of his former colleagues and next-generation scientists reflected on his contribution to the development of agroforestry science.

Reflections

Bjorn Lundgren

When I joined ICRAF in September 1981 it was a very small organization—there were only six international professional staff members, Peter Huxley and five others. The budget during my first year was a meagre USD 800,000. At that time ICRAF was housed in a small office in downtown Nairobi. In the next 5–6 years we were lucky to see a steady, sometimes rapid growth in terms of funding, staff, activities and recognition—eventually we needed a bigger headquarter and moved out to the new buildings in Gigiri in 1987. There is little doubt that part of this growth can

be attributed to the credibility our work generated among professionals and research and development institutions in the fields of agriculture, forestry, horticulture, animal husbandry, etc.

Much of this credibility was undoubtedly linked to the progress we made in developing the *science of agroforestry*, and in this Peter played a crucially important role. Not only because he was Director of Research Development, but because of his innovative and imaginative way of studying and understanding the interactions between the various woody and non-woody components of agroforestry systems.

It is impossible to summarize Peter's contribution in the establishment of agroforestry as a credible and respected scientific discipline. One way, of at least trying to understand it, is to look at three key publications which outline the rapid development of agroforestry as a science in the period 1980–2000, and, at the same time highlighting Peter's dominant role in this. The first is the proceedings of the Consultative Meeting organized by ICRAF and Peter in April 1981—*Plant Research and Agroforestry* (edited by Peter and published in 1983). A large number of prominent scientists and experts in a variety of disciplines, who were working on topics and research relevant to agroforestry in different parts of the world, were asked to share their findings. Peter, apart from organizing the workshop and editing the proceedings, also contributed five out of the 34 papers in the volume. The workshop provided the most up-to-date knowledge on agroforestry research at the time, including identifying gaps and challenges that lay ahead—it was dubbed 'the point of departure' of the science of agroforestry.

In the next 10 years, Peter, together with a growing number of highly competent and motivated scientists at ICRAF, as well as in collaboration with a number of institutions, both national and international, continued to pursue the complexities of agroforestry systems and technologies through innovative research. Many others did the same, as agroforestry gained acceptance and raised interest. In 1996, years after Peter had left ICRAF, he and his previous colleague, Chin Ong, compiled and edited a book—*Tree-Crop Interactions—A Physiological Approach* (ICRAF and CABI)—based on contributions by prominent scientists. Again, Peter was not only an initiator and co-editor, but also contributed two major chapters (out of 10), summarizing his own work and thoughts.

To understand Peter's contribution to the science of agroforestry, one must look in his '*magnum opus*': ***Tropical Agroforestry*** (Blackwell Science 1999), where he clearly summarizes the progress in the science of agroforestry from the previous two decades. In six sections he pedagogically describes what agroforestry is, its complexities, advantages and disadvantages, and, not least, how to study and develop it through reliable and credible research methods. Even after 20 years, the book still stands out as the major textbook on agroforestry.

I had the privilege of working with Peter for the whole 10-year duration of my term as ICRAF Director General. This included not only professional relations, but also very pleasant private interactions. Both as guests and hosts on numerous occasions, we enjoyed Peter's great sense of humour, his stories from his long career, and, of course, his and his wife Jenny's great social skills. He will be sadly missed.

P. K. Nair

In the 40+ years of ICRAF's Nairobi life, the infant phase of 1979–1981/82 was probably the most perilous when its life itself was under serious threat. Peter Huxley's indefatigable personality characterized by his elegant old-world British mannerisms and wise cracks, coupled with his inimitable scientific exuberance and rational arguments helped us all cling together and survive those dark days. Notwithstanding, the differences of opinions that his colleagues had with Peter, they were unanimous on two counts: (1) He was a nice guy who brought French onion soup without fail to all ICRAF social events, and (2) His handwriting was horrible! May his soul rest in peace!

Meine van Noordwijk

In 1980 when I was a young lecturer at the College of Natural Resources, University of Juba, in (now South) Sudan, I hosted a visit by Peter who was exploring links with universities in the region. We visited a forestry school in Yei (a picture in his 1999 ***Tropical Agroforestry*** book was taken during this visit) and had many discussions on the long road there and back. During a later visit to ICRAF (around 1989) Peter presented his single tree with all up-to-date microclimate measurements installed in Machakos, and we discussed what became chapters in the book he edited

with Chin Ong. In a recent publication, ***Sustainable Development Through Trees on Farms: Agroforestry in its Fifth Decade*** (van Noordwijk 2019) we have included a perspective on how the field of research developed in its first four decades. The information is based on the strong foundation that Peter and his generation had built.

On a lighter note, we heard from one of the longest-serving ICRAF staff that when she applied for her first job at the organization, part of the test was to translate PH's scribbles to readable text. Her score (20% correct) was apparently the highest; she got the job and her star has continued to shine at ICRAF.

Chin K. Ong

Peter inspired many of us with his ideas about systematic design and tree–crop interactions, particularly at the Machakos Research Station in Kenya in the early 1980s. I first met him in India in 1985, when he brought a group of visitors to ICRISAT, Hyderabad. He subsequently persuaded a few of us (Meka Rao, Ahmed Khan and I) to join him at ICRAF. We worked in Machakos where we were able to incorporate the principles of environmental physics, microclimatology and resource utilization of John Monteith of Nottingham into tropical agroforestry systems. The results of these studies formed the basis of the publication: ***Tree–crop Interactions*** (1996), which I edited with Peter. Twenty years later a second edition was published (Ong et al. 2015; edited with Colin Black and Julia Wilson). It was dedicated to Peter and John Monteith; by that time Peter was unable to join us in the editing.

Peter will be remembered for his ability to inspire enthusiasm in everyone who worked with him and for his infectious sense of humour. He was one of the 'giants' of agroforestry research and his greatest legacy will be his contribution to the development of ICRAF, from a Council to a World Research Centre.

Richard Coe

Thirty years ago, I was invited to ICRAF to be interviewed for a position which involved providing advice on experimental design. The interview consisted of spending two whole days in the field with Peter Huxley at our Machakos Research Station. We looked at, poked about in, and argued about

experiments and research methods—single trees, interfaces, how to study below-ground, involving farmers and on-farm research, systematic designs, orientation, systems trials, what replicates *really* are, and many other matters which Peter was passionate about. We still debate about many of these issues today. I learnt more about agroforestry and experimentation in those 2 days than in any other 2 days since. Peter knew FAR more about experimental design than I did, but he offered me the job anyway.

Fergus Sinclair

Peter kindled my interest in agroforestry when I first visited ICRAF in 1985, which was then located in Bruce House in the central business district of Nairobi. I was on my way back from Zambia to the UK, after meeting Peter, clutching a copy of *Plant Research and Agroforestry* (Huxley 1983) and a cornucopia of ideas about how trees interact with crops and livestock fizzing about in my head. Foremost amongst these, was Peter's excitement about adapting systematic spacing designs from plantation research (Nelder 1962) to agroforestry contexts.

Peter's enthusiasm for these designs led me to systematically re-space larch trees in parts of Dunkeld Forest. At that time I was studying the impact of trees on pasture production as part of my PhD. In this way he stimulated what has turned out to be a life-long quest to understand how tree–crop interactions will play out in different contexts, making Peter very much the progenitor of the options by context approach (Sinclair and Coe 2019) which is currently revolutionising agronomic research at ICRAF and far beyond.

Much later in his life, when his sight was failing, he donated a magnificent set of agroforestry slides for use in teaching at Bangor University—continuing his huge legacy to young people who dare to dream of a future that embraces agroforestry.

Peter Cooper

I remember first meeting Peter Huxley when I joined ICRAF in 1990 (still a council at the time) at the stage when it was preparing to become a fully fledged research centre as a new member of the CGIAR. Peter and I overlapped for several months as he and Jenny were basically 'packing up to leave' Nairobi. At the

time, I was settling in and attempting to come to grips with the many questions and challenges associated with agroforestry research, the priorities of which would have to form the core focus of a new CGIAR centre. During that time, I had many conversations with Peter and it rapidly became clear, dauntingly so, that 'his boots were going to be massively hard to fill'. He was indeed a giant of agroforestry research.

Perhaps one of his greatest legacies is the extent to which his wisdom and advocacy played a key part in the recognition by the CGIAR that a specialized centre for research on agroforestry was not only needed but could also play a major role in enhancing the welfare of small-scale farmers in the tropics and sub-tropics.

Ken Giller

The first courses I taught on Agroforestry were with Peter at Wye College, University of London, and then at the Oxford Forestry Institute after he had returned to the UK in the early 1990s. Peter was certainly a 'father figure' in the research community, and was keen to impart his knowledge. He was both an inspiration and a mentor in developing my own teaching on the topic. What I remember, in particular, were exciting discussions and exercises focused on the 'tree–crop interface', and how he brought his vast observational experience to bear in his teaching. When his *Tropical Agroforestry* (1999) book was produced I could hear his clear classroom explanations resonating from the pages, and this remains a key text for our teaching at Wageningen University today.

Catherine Muthuri

Though I did not have the opportunity to meet Peter in person, I relied heavily on his publications during my PhD research to help build a strong foundation in agroforestry, having come from a background in botany. For instance, the book he co-edited with Chin: *Tree–Crop Interactions* was my key reference then. His contribution to agroforestry was, without a doubt, outstanding!

Shibu Jose

Peter Huxley's work influenced my thinking and line of research early in my academic career. As editor-in-chief of *Agroforestry Systems*, I see that his early

contributions have laid a strong foundation for the journal and for the science of agroforestry.

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