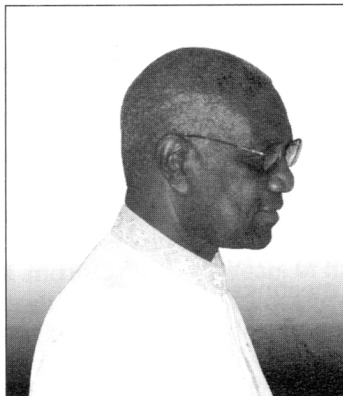

OBITUARY

THOMAS RISLEY ODHIAMBO

Founding Editor of *Insect Science and Its Application*

Africa has few modern-day heroes, least of all in science. In a continent where less than one half of one percent (0.04% to be exact) of GDP growth can be attributed to investment in science and technology, as opposed to 60–70% in the industrialised North, Kenyan entomologist Thomas R. Odhiambo set about to change this state of affairs.

Odhiambo was one of that first generation of African academics to rise from a humble background, emerging to struggle through the rigours of early colonial education—often designed to limit expectations—and walk the corridors of some of the world's finest institutions. Thomas was born in Mombasa, Kenya in 1931, the first of 10 children of a telegraph officer and his wife from the Nyanza Province of western Kenya. He excelled at the Maseno Primary School run by the Church Missionary Society (CMS), scoring first in the country in the national Kenya Preliminary Examination of 1945. This earned him a much sought-after place in Maseno's secondary school, and thereafter to the famous Makerere University College in 1950, where he studied biology (entomology, soil biology and nematology). He began his working life in 1953 in Uganda as a junior officer in the Ministry of Agriculture before proceeding to Queens College at the University of Cambridge in 1959, where he first enrolled for a Natural Science Tripos. Six years later, and armed with both a PhD in Insect Physiology (1965) with specialisation on the reproductive physiology of the desert locust, and an MA in Natural Science, he returned to Kenya in 1965 ready to change his world.



Thomas Risley Odhiambo

His dream was to create a working environment of international standard for African scientists, to build the capacity of the indigenous populations to solve their own problems, and to change the political climate to enable countries to make use of this expertise. At the end of his 40-some-year career, he would have been key to the establishment of an extant R&D institution, four

scientific academies and societies, an internationally acclaimed postgraduate training programme, and a plethora of other science-related organisations and activities. He became an erudite advocate for African-led development and a mentor for the continent's young scientists, as well as a catalyst in creating an African scientific renaissance. Furthermore, he had a more personal challenge: to refute the taunt of the former Director of the Tea Research Institute for East Africa, where he worked for a short stint in between his Makerere

and Cambridge days, who told him that, "It is impossible for an African to be an entomologist". (This, in spite of the fact that his growing publication record had already made him one of the world's dozen or so experts on the bugs, an order of the Insecta.)

He immediately plunged into an academic career at the then University College, Nairobi, an affiliate in those days of the University of London, where he soon became Ag. Head and Reader in the Department of Zoology in 1969. At the newly constituted University of Nairobi, he was appointed the first Professor and Head of the new Department of Entomology, rising to become the first Dean of the new Faculty of Agriculture in 1970.

A “serendipitous opportunity” (his words) presented itself in 1967 when he was asked by the editor of the journal *Science* to write a major review of the status of science in Africa. This article proved to be a rallying call for attention to paid to Africa and its development issues. In it, he proposed that a scientific centre of excellence be established on the continent. The centre would provide a mechanism and focal point for linking the world’s leading scientists with the problems facing the smallscale farmers of the developing world. Odhiambo’s plea for a centre of excellence in Africa galvanised international interest and support, and he received more than 1000 requests for the article in the space of a few weeks. Among his many eminent supporters were his former tutor at Cambridge, Professor Sir V. B. Wigglesworth, Carl Djerassi and Carrol Wilson.

Within three years of the *Science* (Vol. 156, pp. 876–881) article, the International Centre of Insect Physiology and Ecology (ICIPE) was created in Nairobi as a multidisciplinary institute with the objectives “to discover new knowledge that may permit the design and development of species-specific, non-toxic, non-persistent means for insect control”. The budget for the first year was only US\$ 10,000. Odhiambo said in an interview in *Africa Forum* (Vol. 1 no. 4, 1992), on his problems with raising funds in the early years, that “scientific research gets low priority because of the belief that you can actually buy technology...We tried to ensure that we could manage insects with completely new technology, away from insecticides...We held 11 international meetings to persuade people to agree with us”.

Given his own background in entomology, it is not surprising that this new centre should concentrate on insects and related arthropods (mites, ticks, spiders and the like), however Odhiambo was also keenly aware that Africa is endowed with a great diversity of insect life, and that many (but not all) of these species have played a major role in shaping the economic and social history of the continent, as well as being serious impediments to intensifying agricultural development in the region. He also recognised that only 0.03% or less of insects are ‘harmful’, and that the vast majority are essential components of the ecosystem, performing necessary services such as pollination, as natural enemies to control the pests, in soil nutrient recycling, as well as being potential sources of useful products and food.

The International Committee charged with guiding the new Centre in its formative years reads like a Who’s Who of prestigious scientific

academies, with representatives from learned societies in the UK, Netherlands, Sweden, France, Israel, Japan, USA, Switzerland, Germany, and observers from Hungary, Norway and Denmark. To ensure relevancy, this was mirrored by an African Committee of academics from nine countries and a representative of the newly established East African Academy, of which Odhiambo was a founding member.

ICIPE was granted full international status by the Government of Kenya in 1977 and was made an inter-governmental organisation in 1986 with a charter signed by 11 countries from all parts of the globe. ICIPE has continued with its original mandate and commitment to what is known as ‘integrated pest and vector management’, and the organisation has received recognition in the form of the St Francis Prize for the Environment (1992), awarded by the Franciscan Centre of Environmental Studies in Assisi, and the Alan Shawn Feinstein World Hunger Award of Brown University (1986), among others.

The author of over 160 refereed publications, Odhiambo himself was honoured with numerous awards, among them the Albert Einstein Gold Medal (1991), the Gold Mercury International Award (1982), the Gold Medal Award from the International Congress of Plant Protection (1983), the African Prize for Leadership for the Sustainable End of Hunger (shared with President Abdi Diouf of Senegal in 1987), the ISCTRC Silver Jubilee Award of the African Union (2000), and others. He was awarded an honorary PhD from the University of Oslo in 1986, the DSc from the University of Massachusetts (1990), a Doctor of Laws from Notre Dame University (1992), a Doctor of Humane Letters from Johns Hopkins University (1991), and closer to home, the DSc from the University of Eastern Africa at Baraton (2002) and the Jomo Kenyatta University of Agriculture and Technology (2003) in Kenya.

One of his most rewarding achievements at ICIPE was in fulfilment of another cornerstone of the Centre’s mandate, to “build a motivated, highly talented, human capital in insect science and its applications for Africa”. This was achieved by the establishment of the African Regional Postgraduate Programme in Insect Science, or ARPPIS, in 1983. To date the programme has trained more than 165 PhD students from around the continent and over 100 at MSc level in collaboration with 27 African universities. Of immense satisfaction to all who helped found this programme, the great majority of graduates have remained to work in Africa.

The full extent of the brain drain and its cost to Africa was brought home to Odhiambo when he

travelled to Houston, Texas to give a series of lectures in 1992. There he found himself surrounded by over 3000 African specialists in that locale alone, engaged in engineering, computer work, and space and medical research. He called them refugees, not only in strictly economic terms, but refugees from political systems that “do not give them the wherewithal to do what they most want to do”.

After his reluctant departure as Director of ICIPE in 1994, he therefore set about on his next challenge: to change the political climate so as to create an enabling environment for the growing numbers of well trained Africans emerging from universities at home and abroad. This culminated in the founding of another institution, RANDFORUM, the Research and Development Forum for Science-Led Development in Africa, whose mandate was to rally political commitment to investing in science and technology. On one occasion, Odhiambo was able to marshal seven African presidents to sit together to discuss how their countries could nurture and benefit from science and technology. Of this African ‘Group of 7’, one has thus far already contributed over US\$ 5 M to the African Academy of Sciences to support their programmes: President Obasanjo of Nigeria.

Although now defunct, the RANDFORUM’s ethos reflected its founder’s passionate belief that Africans must lead their own development. At the end of his career, Odhiambo was most dismayed that, “many Africans still believe that Africa can only develop with the help of human and technical assistance from the industrialised North—in spite of the contrary evidence over the past 500 years of the African Diaspora”. Africans must, as he said in the interview with *Africa Forum*, “draw up new priorities for ourselves and use our own resources or other resources from elsewhere to do what needs to be done”.

Providing incentives and rewards to talented world class scientists to remain in Africa is one part of the solution, and this is where Odhiambo recognised the importance of scientific academies. This was one of the rationales for the establishment of the African Academy of Sciences (AAS) which he served as Founder President from 1986–1999. An academy such as the AAS can also select and honour the best people in their respective disciplines, as well as conducting its own R&D programmes, serving as advocates and providing a forum for discussion and dialogue. Odhiambo

had earlier co-founded the East African Academy in 1963; the Kenya National Academy of Sciences, which he served as Founder-Chairman in 1982–1994; and the African Association of Insect Scientists (AAIS), which is celebrating its 25th Anniversary this year. He served as Vice-President of the Third World Academy of Sciences (TWAS) from 1986–1997, and was a member of 12 other learned societies around the world.

His wide-ranging interests are also evident in the way he addressed the problem that only 4% of the world’s publishing is done in Africa. He established the ICIPE Science Press in 1980 to promote and build capacity in science writing and to publish one of his proudest achievements, *Insect Science and Its Application*. Another more generalist journal, *Discovery and Innovation*, is published by the Academy Science Press of the AAS. From scholarly publications to children’s literature, Odhiambo was a prolific writer and proponent of science and its charms. Believing that interest must be sparked early in life, in his later years he created ChiSci, an organisation to promote science for children. Among its popular activities was a ‘reading tent’, where children without access to libraries could sit and read.

On a personal level, Odhiambo was a fastidious, demanding perfectionist, with an impressive command of the English language, thus making him a forceful advocate for his causes. He had a penetrating gaze and a clarity of thought, coupled with a single-minded determination. The last nine years of his career after leaving ICIPE saw him on a voyage of self-discovery, in which he became a deeply spiritual being. At a ceremony to pay tribute to him at ICIPE in April of this year, Odhiambo stated his personal philosophy that “science is in the business of truth, and so is spirituality”. He reiterated his belief that “the methods of insect population control that progressively emerge must be closest to nature, that keep Africa a perennial Garden of Eden, and that provide Africa with a perpetual, sustained abundance to continue to share among the African society in its entirety, excluding no one”. Ever the dreamer and visionary, he had several proposals in mind for establishing a new kind of university that would be integrated fully into the rural communities that its graduates were meant to serve. It is a pity that his sudden death on 26th May from liver cancer at the age of 72 prevented him from realising another of his dreams.

This obituary was prepared by Annalee N. Mengech and Ahmed Hassanali, both editors of Insect Science and Its Application. Portions of this tribute were previously published in The Times (London) on June 12, 2003.