HOW GREEN WAS OUR EMPIRE ?
Environment, development and the Colonial Service

A seminar held at the Institute for Commonwealth Studies, London, sponsored by the Overseas Service Pensioners' Association, 27.4.2004

Ed. Terry Barringer

Inst. Comm. Stud. Occasional paper of OSPA RP No.2, p.31-56, 2005

Forest conservation in Uganda – a roller-coaster ride

Henry Osmaston (Uganda Forest Department 1949 – 1963)

When I received notice of this seminar, my first thought was 'What does this matter now?' except to satisfy the nostalgia of people like myself and provide fodder for colonial historians. Liddell Hart, the military strategist, once wrote *"Why do generals and politicians never learn from history?*" so is it likely that foresters and conservationists will do so? A century ago people would instead have asked "*How powerful/prosperous/beneficial is our Empire?*". That too was a time when the tradition still prevailed of *"Let us now praise famous men"* (*Ecclesiasticus 44*), though Lytton Strachey's *Eminent Victorians* paved the way to the modern political correctness of denigrating our predecessors and their achievements. Is it worth trying to swim against the tide? I hope so, but to answer this question properly demands a critical essay not just a bald historical account.

If we are to learn anything from history we must be judgemental, but I think it is both philosophically and practically desirable that perceived history should be as reliable as possible. I was irritated the other day by a politically correct letter to *The Times*, asserting that colonialists had stripped the colonies of their natural resources (Alexander Cookman, 13 April 2004). That is not at all how I saw my work and that of my colleagues in Uganda, working with the renewable resources of agriculture, live-stock, forestry and water; though one could argue a case against mining non-renewable resources; happily *The Times* has published my response this morning. There remains the question of whether more of the proceeds could have been retained in the colony. This was indeed relevant to forestry in Tanganyika Territory (as it still was then) on one unfortunate occasion due to the commercial naivety of the TT Forest Dept. A major licence for harvesting *mvule* (*iroko*) on the Rondo Plateau was granted to a firm of saw-millers at fees based on the export price they were able to obtain for their timber. They had not foreseen that the millers would sell all the timber at a nominal price to an associated firm in UK, thus greatly increasing their profits and depriving the TT Govt. of a fair share. Of course Marxist historians might deprecate the funding of our industrial revolution partly on the low prices at which we were able to buy Indian cotton, and then re-export the finished goods, but as far as I am concerned now that is just water under the bridge.

When I rashly offered to read a paper here, I did not consider carefully enough just how I intended to use my memories of forestry in Uganda to answer the question. As the date approached, I became less sure of what exactly the question meant and what criteria one could use for answering it.

Box 1. TRADITIONAL CRITERIA FOR SUCCESSFUL FOREST CONSERVATION

1. **Formulation of an officially agreed forest policy and forest legislation, implemented by professional staff.**
2. **Establishment of a permanent forest estate of reserves which are surveyed, mapped, demarcated, gazetted and if necessary patrolled.**

3. **Adequate reserves to supply foreseeable demands of forest produce as far as other considerations permit.**
4. **Information about the ecology of natural and planted forests.**
5. **Systems of harvesting and regeneration which ensure a sustained yield.**
6. **Up-to-date management plans.**
7. **Encouragement for private forestry.**
8. **Systems of harvesting and regeneration which safeguard biodiversity**

Box 2. POSSIBLE "GREEN" CRITERIA
Conservation of biodiversity ?
Protection and sustainability of resources?
Reconciling national and local interests?
Reconciling development & conservation?
Structural resilience to changing factors ?
Creation of new natural resources ?

Two things are particularly noticeable: The priority of biodiversity changes from last to first and the criteria in the second list are far less concrete than those in the first. Since the question necessarily implies a comparison against some reference, I also suggest more tentatively some comparisons we could consider.

Box 3. COMPARISONS
Other empires ? Non-empires ?
Ideal empires ?

Ancient:- Roman Empire – deforestation of Cyprus to supply mines and smelting
Contemporary ? King Leopold's Congo – exploitation of humans, timber and minerals
Modern ? Indonesia – copper mining in New Guinea. Deforestation in Kalimantan

We further need to consider who, if anyone, is qualified to give an unbiased opinion, for as Nietzsche emphasised *"Everything that reaches human consciousness is utterly interpreted, modified ...*".

Box 4. WHO CAN GIVE AN UNBIASED OPINION?

Someone Detached Then ?	Few thought about it.
Someone Detached Now?	An academic historian?
Someone Involved Now ?	From WWF ? from Shell or Rio Tinto?
Someone Involved Then?	Someone like myself?

Someone Detached Now? An academic historian?

Although in principle this may sound as if it should be our aim, truly detached academic historians may be *rarae aves.* This is illustrated by a relevant review by David Walton in the latest issue of the British Ecological Soc. Bulletin (Nov.2003) of a book *Decolonising Nature: Strategies for Conservation in a Post-Colonial Era.* Eds. W.M.Adams & M.Mulligan, 2003. (Earthscan). The term 'colonial' is broadly interpreted, ranging from Australia to the Highlands of Scotland, making little or no reference to colonies which came under the UK Colonial Office. Although on p.2 of the Introduction the editors concede that

"without the legacy of conservation work that has been built in countries such as .....there would be little or no basis to work from, no thinking to be rethought" the main thrust of the book is how to undo the harm to conservation that was inflicted by so-called colonial policies and practices in disregarding the interests of the local people. Remarkably, but fashionably, none of the papers considers the effectiveness of colonialism in the actual conservation of the natural resources of water, soil, plants, animals, forests and biodiversity (the only paper to discuss conservation of this kind is about Wicken Fen in Cambridgeshire!). There is no mention of 'ivory, apes and peacocks' so besides not reading John Masefield the authors have apparently not read CITES, the only mention of the latter being to condemn it for marginalising local peoples.

The reviewer deprecated the authors' tendency to attribute blame to the colonialists who were responsible, and emphasised the importance of exercising our hindsight of the past with due regard to the context in which policies were formulated and events took place. In the words of the review:-

"Hindsight allows history to be re-interpreted and here the authors take the moral high ground in criticising Victorian approaches using a modern rather than a historical framework.

In understanding history, context is all important and this volume seems at times to lose a sense of balance and detachment, as our ancestors are bought to book for not acting as we would now have wished them to!"

What Is Hindsight ? Assessing through modern eyes the benefit and harm done by past policies and practice and by those responsible for them. Too often this is done with only a superficial understanding of the concepts, conditions and constraints which applied in the past.

If we wish to be critical then we must be prepared to do this from two different standpoints. Certainly we can dispassionately examine the past in the light of present knowledge and the extent to which policies and actions, individuals and groups, then contributed to what we now regard as desirable or undesirable results, both in the short term and the long term. This is a relatively straightforward task though different reviewers may have different views as to the desirability of the results .

If in addition we wish to ascribe moral or intellectual credit or discredit to these or to the individuals or groups of people responsible, that is something different. It is a difficult and demanding task to assess through sympathetic *context-moderated* eyes the insight, foresight, performance and effectiveness of the individuals and groups responsible for policies and actions which controlled, effected or prevented conservation. From an early age we learn history from a judgemental point of view, for instance: *"Richard III was a bad king*" – (though perhaps that was an adequate justification for one of my ancestors reputedly slaying him at the battle of Bosworth Field, 1485). To be fair however we must try to see our predecessors in context and through contemporary eyes, and to see their circumstances as these would have appeared to them. So *faute de mieux* I shall attempt this task myself in a restricted field of which I have personal experience, that of forestry in Uganda. First you may ask legitimately who I am, what are my background and ingrained beliefs, and why should you take any notice of what I say ?

Box 5. WHO AM I?

A nostalgic and unreconstructed 'Sanders of the River' paternal colonialist ?
A 'Ground-nut Scheme' production development economist ?
A green 'Biodiversity Conservation' ecologist ?
An economic and political realist ?

I hope that in some ways I have strains of all these. I was born in India in 1922 where my father was a forester, still in the hey-day of the Indian Raj, so from him I absorbed many of the traditional conservation values of European forestry – it is often not appreciated that the Imperial (later Indian) Forest Service was established by the eminent German foresters Brandis and Schlich. I was a botanist very young, as my earliest memories are of riding through the jungle on an elephant and asking the *mahout* to make the elephant pick flowers or fruits for me from the trees. I am (or have been) a colonial forester, an academic geographer, a commercial farmer with 150 cattle, a development consultant in Tibet, an Hon. National. Park Warden in Uganda and I have other hats too. After the war I was fortunate enough to be posted to the Forest Department in Uganda, an interesting and varied country, running from 500 to 5000 metres above sea level, with correspondingly interesting and varied forests and welcoming local people. My colleagues were enterprising and stimulating and included two subsequent Forestry Advisers to the Colonial Office, Swabey and Logan; Joe Eggeling later head of the Scottish Nature Conservancy; and Colyear Dawkins as our brilliant though unconventional ecologist. During nearly 15 years there, I worked in nearly every district in the country, besides specialist jobs in working plans, mensuration and mapping. I left Uganda soon after Independence but have returned several times recently for work or family holidays. I hope that this variety of experience both in Uganda and elsewhere will enable me to make a fair assessment of the record in Uganda.

It is vital to tread carefully between the two extremes of rosy-tinted nostalgia and the denigration which characterises modern politically correct indictments, taking into account context constraints – Financial, Political, Practical, Conceptual – and other appropriate criteria. Many constraints must have operated then, some of which may no longer exist.

Financial constraints. In the early days the Uganda Protectorate, like all the colonies, was metaphorically supporting itself by its financial bootstraps. Small grants in aid from the British exchequer supplemented what could be raised locally from poll-tax and other revenue. The Forest Department was under pressure to obtain sufficient revenue from the supply and sale of timber to support its operations, so it is not surprising that this absorbed an inordinate share of its attention. This did not ease till the prosperity of the cotton and coffee crops enabled the government to build up a fund to support other activities such as afforestation, education, health-care and the Nile Dam. The modern days when millions in international aid can be sought and won were far away.

Political constraints were always present. Though in the earliest days Lugard had the 'Gatling Gun' to back his decisions, subsequently the effective power to impose really unwelcome legislation was limited and most government was necessarily by persuasion, insistence and consent. I can recall hours sitting under some huge tree holding a *baraza* to try to persuade a local council of the desirability of some forest reserve.

Practical constraints strictly limited what could be achieved, and initially much was lacking. To begin with foresters did not know how big the forests were, what was in them and whether it was useful. Many were too far away to be of use. Lower staff were uneducated and untrained. Nothing was known about how to grow trees suited to local conditions.

Conceptual constraints were probably ultimately the most serious. For example, the epidemic of sleeping sickness in the early years of the Protectorate killed about 200,000 out of a population which then probably numbered about 3 million and by the 1931 census had recovered to 3.5 million. By the 1950s it had reached about 4 million, but nobody then imagined, or should be expected to have imagined, that by the end of the century the population, still predominantly rural, would number 20 million (an annual increase of 3.3% compound) and would exert corresponding pressure on land and natural resources.

Conceptual and contextual problems can cause problems in the reverse direction also, and to illustrate this I am going to digress briefly to our other imperial possession, India. In the hills not far from Dehra Dun, there stands a tree with this notice:

NOTICE
NEAR THIS SPOT IN MAY 1888 A MAN-EATING TIGER, THE LAST KNOWN TIGER TO HAVE INHABITED THE DISTRICT, WAS SHOT BY MR.B.B.OSMASTON I.F.S. WHILE IT WAS IN THE ACT OF MAULING MR.HANSERD A FOREST STUDENT.

Besides my father I had two uncles and two cousins in the Indian Forest Service (H.A.Osmaston, 1989) and this man was my favourite uncle. At the age of 20 when he had only been in India three months and had never before seen a tiger except in an English zoo, he shot this man-eater which had defied the efforts of experienced shikaris for many years (B.B.Osmaston, 1999). Eventually he became president of the prestigious Forest Research Institute, and during his service he shot about 20 tigers and 20 leopards, including four man-eaters. This record appals some modern conservationists and if we look at the present status of the tiger in one of its remaining protected reserves such as the Sunderbans, it is easy to see why.

Box 6. TIGERS in INDIA
The Guardian, 15 Jan 2004
250 wildlife surveyors wearing fibreglass vests and steel helmets yesterday began a tiger census in the Sunderbans Forest, of 3,500 sq. miles
The last count in 2002 recorded 271 tigers. Tigers kill about 50 people a year there.

It is clear that the Indian tiger is now a very endangered species. However if we look at the state of the Indian tiger in 1935, half a century *after* the events commemorated by the notice on the tree, we see an entirely different picture. Tigers and leopards were still regarded as vermin and treated accordingly.

Box 7. TIGERS in INDIA & BURMA
Sir John Hewett (1938) quoting Govt. statistics
In the 5 year period c. 1930-35
7,000 people killed by tigers
9,000 tigers killed and rewards paid
27,000 leopards killed and rewards paid
In Sunderbans Forest alone c.1935
47 people killed by tigers in one year

It is interesting to note that the number of people killed annually in the Sunderbans has remained unchanged.

At this stage one may ask to what extent traditional colonials can be re-educated in the ethics of modern conservation, and conversely whether it is possible for a modern conservationist to appreciate the outlook of the former colonials. Can a leopard change its spots? Kipling's Just So Story of how the leopard got its spots is one of my favourites for reading to grandchildren and I think perhaps it throws light on this question. The original

dun-coloured leopard, who hunted on the High Veldt, acquired his spots to match the biodiverse jungle relatively easily but could still cast his mind back to the High Veldt. However the modern spotted conservationist, born and bred in the jungle of biodiversity, CITES and endangered species, may have greater problems or even reluctance in shedding his spots to visualise a state which he has never experienced. I must confess that for my own part, having lived through an immense change of perception and practice about conservation, I find its warnings are challenging, and many of its successes are inspiring, but I see many cases where its practitioners would benefit from tempering in the fire of practicality and human relationships.

Now I can turn to my main topic ***"Forest conservation in Uganda: a roller-coaster ride".*** To provide it with a clear framework I shall first provide a *resumé* of the geographical and historical setting, then describe some of the principal relevant issues, and finally try to assess both them and some of the officials responsible, using the criteria I have just discussed and emphasising the importance of the two major contexts which together have had a controlling influence on the extent and nature of forest cover: climate and man. I shall not restrict myself to what in Uganda was a rather brief colonial period, since some preceding events had important influences on the colonial period, and one criterion of the success of the colonial period is the extent to which the 'green' structures established then have been able to endure a subsequent period of exceptional problems and facilitate recovery from them.

GEOGRAPHY & VEGETATION PREHISTORY

Uganda lies across the equator almost at the centre of Africa, rather small (200,000 km^2 land and swamp area) and completely landlocked, forming with Lake Victoria part of a plateau at about 1,000m altitude between the Eastern and Western rift valleys and providing the main sources of the White Nile. Ecologically it lies on the boundary between the West African rain-forests of the Congo basin and the dry East African and Sudanese savannas so that forest cover reacts sensitively to small changes in environmental conditions. There is now good evidence from fossil pollen of the changes of forest cover in the past which enable us to put the present cover into perspective (Fig.2). 12,000 years ago the climate was drier, Lake Victoria was nearly dry and forests nearly disappeared. At 8-9,000 years ago wetter conditions allowed them to expand. Their extent then is quite unknown, but Langdale Brown *et al*. (1964) mapped the parts of Uganda potentially capable of carrying natural closed forest in 1950 as about 37,000 sq.km., nearly one fifth of the land area of the country. There is evidence of deforestation (Morrison & Hamilton 1974) probably associated with the beginning of farming which from archaeological evidence was at about 400 BC. Since then forests have gradually diminished, but fluctuated in response to changes in pressure from human and cattle populations due to factors such as wars, sleeping sickness and rinderpest. Earthwork fortifications a few hundred years old in the Bugoma Forest are now forest covered (Osmaston 1965). Langdale Brown (1960) estimated by indirect statistics that forest and moist thicket covered 15% of Uganda (again excluding lakes) in 1900, but could not distinguish between these two categories and it is likely that the moist thicket comprised about two-thirds of this. In consequence, at the start of British control we inherited an extent of closed forest (excluding huge areas of woodland, thicket and savanna) amounting to about 5% or 6% of the land and swamp area (excluding the large lakes); not much by the standards of many other countries, far less than the Congo but more than neighbouring Kenya or Tanzania.

Present rainfall is sufficient to support agriculture or pastoralism over most of the area. Some of the lake shore forests and parts of the savanna areas were originally (and

some still are) infested with tsetse flies, some carrying human sleeping sickness, others the cattle variety; this influenced the selection of such areas, unoccupied by man, for the early National Parks and to some extent for forest reserves. The closed forest occupies three main types of high rainfall site: near the Victoria lake shore (Mabira, Mengo, etc.); the Western Rift shoulder (Budongo, Kibale etc.); the high mountains (Rwenzori, Elgon, Virunga, Imatong).

The short period of Imperial control, only 70 years, which imposed a *Pax Britannica* and achieved social and economic development, lay between two periods of tribal warfare and autocracy. In the first, the kingdoms of the Baganda and the Batoro were struggling for supremacy with the traditional weapons of spears and arrows; in the second a ruthless dictator and his gang of northerners used the power of a modern army and secret police to terrorise the Baganda. These periods and the part played by the Forest Department are summarised in the potted history below and in Fig.3. Contrary to many people's impressions, no payments were made by Uganda to the UK government and only minor subventions for special objectives in the reverse direction. Until 1945 Forest Department expenditure and revenue kept roughly level, but by 1955 expenditure was 2½ times the revenue, being funded from surpluses in the cotton and coffee funds.

INSERT FIGS. 2&3

HISTORY

1892 East Africa Co. withdraws and Sir Gerald Portal declares Uganda a British Protectorate, despite reluctant British Govt - well known cartoon of baby abandoned on doorstep of No.10 Downing Street. Explicit status as a protectorate, not a colony, with self-government as the explicit ultimate aim, guided both administration and development.

1898 Scientific and Forestry Department established. European staff only 2 till 1910.

1900 Buganda Agreement. 3800 km^2 to be Crown Forest in Buganda Kingdom (44,000km^2) but the UFD was not involved and in 1936 when *mailo* survey was completed in 1936 it was found to be only 1300 km^2. Privatisation of the rest of the land was based on a sociological misunderstanding of the relationship between chieftainship and rights to land control.

1902-1910 The Superintendent of Forests (with just one assistant)was M.T.Dawe, who energetically explored and surveyed all the main forests of the country previously unknown, collected botanical and timber specimens (46 species, mostly trees, being new to science), made detailed reports and appeared set to establish an effective and professional Forest Department (Dawe 1906[a], 1906[b]). Tragically he resigned over a dispute about his pension rights (though later becoming Director of Forestry, Palestine). His loss delayed forest progress in Uganda by nearly 20 years.

1910 - 1928 Pressure on UFD to produce revenue to fund its expenses resulted in work being concentrated on harvesting timber and wild rubber, and on small scale planting, but there was no forest reservation nor working plans. European staff varied between one and five, A.R.Fyffe (not a professional forester) being the senior officer for most of this period of inaction).

1922 Prof. R.S.Troup (1922), special Colonial Office Forestry Adviser, reported that urgent attention was needed to the survey and demarcation of reserves and preparation of working plans. This was ignored.

1929 A.R.Nicholson (1929), special Forestry Adviser, reported "*Where the Forest Department has failed badly has been in its omission to take proper steps to ensure*

forest conservation." No forest reserves had yet been gazetted, even those in Buganda province established by the Survey Dept. mailo survey, and no working plans prepared.

1930 – 1950 A period in which the main structure of a legally based forest estate was built up, based on a formally agreed forest policy (Appx. 1), eventually including almost all surviving natural closed forest besides large areas of savanna. Despite the 1939-45 war, the sound work of this period provided a firm basis for the rapid progress of the following 15 years. N.V.Brasnett '*the father of professional forestry in Uganda'* was Conservator 1929 – 1945. He started and carried through the main bulk of forest reservation and started the preparation of working plans. He was succeeded by W.J.Eggeling who had joined the Dept. in 1931 and spear-headed a drive for botanical and ecological information (Eggeling 1940, 1947) which had lapsed since the departure of Dawe.

1951-1965 This was a period of rapid development on all major fronts in Uganda, including forestry, largely funded by the cotton and coffee cess funds. John Hudson (Forestry Adviser, DFID) wrote in his foreword to the UFD History Pt.3 (Webster & Osmaston 2002):-

"*1951 – 1965 was a wholly original period in the history of the Uganda Forest Department, ... the high point of its achievement."*

The remaining ungazetted forests were surveyed, demarcated and gazetted. Forest inventories were carried out in all major forests aided by stockmapping from airphotos. Research, particularly by H.C.Dawkins (1958), on the ecology and silviculture of both natural forests and plantations provided the foundations for increased rates of harvesting and emphasis on natural regeneration in the natural forests. A detailed census of timber consumption by FAO, and forecast of future growth (Pringle & Arnold, 1960) provided the rationale for an accelerating programme of softwood plantations. All reserves were placed under formal management plans with sustained or increasing yield as a primary objective; by the end of the period there were about 5000 ha of fuel and pole plantations and the same of softwood timber plantations, while about 27,000 ha of natural forest had either been underplanted or treated to encourage natural regeneration after selective harvesting. The recruitment of expatriate staff, including specialists, was increased, and the training of local staff expanded, including that to professional level. Chief Conservators were C.Swabey, who secured administrative consolidation, strict financial control and production of working plans, W.E.M.Logan, who continued this, and G.Webster, who smoothed the transition from colonialism to independence.

1962 Uganda became independent, drawing a line under the Imperial connection.

1963 – 1972 Despite the retirement of most of the expatriate staff, the established programmes were continued by newly trained foresters. In 1965 Webster handed over to M.Rukuba, who had been the first Ugandan professional forester and was now Chief Conservator of Forests.

1972 – 1986 These were terrible years for the people of Uganda, who suffered under the terrorism of first Idi Amin and then Obote; 300,000 people were murdered and the economy wrecked. Work on forestry ceased, since everyone's efforts were concentrated on survival (Fig.4). Encroachment by farmers into forest reserves was actively encouraged by Amin. The Asian population were evicted, which brought the sawmills, largely owned and staffed by Sikhs, to a standstill. Rukuba and many

staff were transferred to WICO (Wood Industries Corporation) to run the mills but lack of spares and skills resulted in the closure of all but two. Rukuba was kidnapped by one of Amin's henchmen, rescued but eventually fled and became an FAO consultant (Webster & Osmaston, 2003)..

INSERT FIG.4 SALARY & INFLATION

1985 Obote evicted by Okello, who in turn was soon evicted by Museveni, the climax of several years struggle by the National Resistance Movement.

1986 – 2003 Huge input of foreign aid. Encroachers were evicted from all the major forests. Forestry slowly recovering. Serious problems with illegal pitsawing in forest reserves fostered by widespread corruption. Softwood plantations established in the 1950s and 1960s provide bulk of sawn timber requirements, but are not replaced by new planting. The influence of aid donors makes conservation of biodiversity a higher priority than wood production. 3000 km^2 of forest reserves reclassified as National Parks, and large parts of other natural forest reserves were declared conservation areas.

2004 Forest Department replaced by National Forest Authority with aim of reducing staff but paying better salaries, reducing bureaucracy and encouraging a commercial outlook.

Table 1. PROTECTED FORESTS km^2

(land & swamp area of Uganda 205,550 km^2)

Year	Fully productive THF reserves	Conservation zones in THF forest reserves	Mountain protection forests	Total forest reserves incl. savanna	National Parks (forest excl. savanna parks)
1928	0			0	
1932	?			3,600	
1950	3,800		2,000	16,300	
1965	4,500		2,000	14,440	250
2000	1,500	1,500	600	c. 11,000	3,150

Table 1, Columns 2, 3, 4: these cover closed Tropical High Forest, originally reserved mainly for timber production or mountain watershed protection. Some are now National Parks and other protected areas, partly or entirely excluded from harvesting. A slightly larger area of savanna forest reserves is intended for bush fuel supplies, softwood afforestation or for hill-land protection.

How Green was the UFD?

The summary above presents the UFD in traditional historical terms, and its performance in traditional measures: establishment of an official forest policy, dates and areas of protected forests, areas planted or regenerated. I will now try to assess it in terms of the criteria listed in both Boxes 1 & 2.

From the 5-6% of forest at the start of the Protectorate little closed forest remained by Independence in 1965 except the 3.4% which was protected in forest reserves and 0.7% on private land (Webster & Osmaston, 2003). Thus over the Imperial period a centralised system of forest administration had been successful in protecting about two-thirds of the forest that had existed at its start, and providing a legal and administrative structure that ensured the survival of most of it through a period of gruelling civil war.

It is fashionable now to emphasise the effective functioning of traditional local communal controls in resource management, exercising limitations on trees cut, on areas cleared for cultivation etc. and to decry the imposition of 'foreign' systems of centralised

and formal legal control. The former may have functioned well in the historic environment of more stable and often low density populations in which they are retrospectively studied, but their advocates should study the effects of rocketing populations, of major population migration and of a breakdown of central government control, all of which have been experienced by Uganda in the last few decades. Compared with many other countries, much of Uganda has been fortunate to have had abundant spare land available for farmers, but in some areas such as central Buganda, Kigezi and the slopes of Mt.Elgon serious land shortages developed during the later years of the colonial period and it was a continual struggle to stop encroachment into forest reserves. Eventually the failure of central law and order under Amin and Obote led to wholesale encroachment of thousands of hectares in for instance the Mabira Forest, while 7,000 migrant farmers from Kigezi partially occupied 97 sq.km. of the Kibale Forest. Fortunately the Museveni regime, encouraged by donors, evicted the encroachers and restored the status quo. Without their prior demarcation and protection they would have disappeared long before.

Forestry in India, sometimes treated as a model for development elsewhere, experienced a roller-coaster of policy changes with respect to the interests of local people. The Moslem Amirs of Sind enclosed large areas for afforestation with little regard to the local people, but the policy of the East India Company and the subsequent British Government was in the hands of the revenue boards which took a very lax approach to forest conservation, so forest use and clearance by locals was unchecked. This was only reversed in the mid-C19 at the insistence of the Navy Board, scared of a shortage of timber for ship-building and by the installation of experienced German foresters such as Brandis and Schlich (Grove, 1995). Hence the extensive reservation of forests in India in the late 1800s and early 1900s took little account of traditional local practices and communal rights in the forests, especially grazing and browse. It led to widespread discontent and later sometimes to dereservation. In Uganda this error was not made and from the beginning the forestry legislation explicitly embodied rights for local people to gather many kinds of forest produce from reserves for their own use, a provision that both reduced local opposition and reduced demands on policing.

Complementing this original policy, strenuous and successful efforts were made to involve local councils at various levels in the management of many of the lesser forest reserves and in the control of forestry on public land outside reserves, accompanied by the receipt of revenue from these sources. It is remarkable that after Independence one of the early actions of the government was to reverse this and centralise all control, a decision that was driven by general political attitudes rather than forest policy.

Similarly, on the transfer of six of the largest forest reserves (Elgon, Rwenzori, Kibale, Semliki, Bwindi (Impenetrable), Mgahinga) to National Park status a decade ago the rights of local inhabitants were extinguished, under the 'advice' of aid donors who were influenced by the American concept of parks as 'wilderness' areas, free from human intrusion. The strong opposition that this aroused, accompanied by rapidly changing world perceptions, has subsequently led to a reversal of this policy and now around both parks and forest reserves there is intense activity trying to establish communal organisations of 'stakeholders', while innumerable research theses and papers report on traditional resource use. The early National Park view of local inhabitants as "the enemy", arising from the need to protect the savanna fauna from poaching, was remarkably persistent, as was the accompanying conviction that fishing villagers adjoining the Queen Elizabeth NP were devastating the local bush for fuel for fish-smoking. Recently it has been shown convincingly from historical and recent ground and air photos that latterly the reverse was the case (Risby *et al*., 2002).

As mentioned above, all forest working plans provided for the maintenance of a sustained (or increasing) yield and this was rigorously complied with during the colonial period, though the disruption of the subsequent civil war has prevented this for two reasons. Uncontrolled illegal felling in the natural forests has very seriously depleted the stocking of harvestable trees, while the progressive cutting in the softwood plantations, which were established in the 1950s and 1960s and have supplied Uganda's needs for nearly two decades but are now nearly exhausted, has not been replaced by new planting. Although some green eyebrows might be raised at the replacement of natural savanna by exotic conifers, the produce of this investment has been the salvation of the national economy since the civil war. Future needs of sawtimber will be so great that they will have to be supplied from large new plantations of fast-growing eucalyptus and pines in the savanna reserves.

During the colonial period, biodiversity and its conservation were not yet generally seen as major issues either internationally or nationally. Although in each major forest reserve an area amounting to perhaps 5% was set aside as a nature reserve, foresters' minds were more focussed on conserving and augmenting long-term supplies of useful forest products, particularly sawtimber and fuel, complemented by conservation of the water-supply function of hill areas. However biodiversity was not ignored. Dawe followed by Eggeling (1945, 1940) and Dale made major contributions to knowledge of the forest flora and its ecology and were punctilious in identifying specimens sent in by other collectors; Dawkins studied and then applied ecological findings to effective regeneration and efficient management; Langdale Brown *et al* (1964) set the forest vegetation in its place in that of the country as a whole. However the national focus of biological conservation, led by the Game Department and the National Parks, still centred on the protection of large savanna animals and these, particularly elephant when in large numbers, were the enemy of the forester (Laws *et al*. 1975; Webster & Osmaston, 2003). They treated the Budongo Forest which adjoined the Murchison NP as a salad bar providing tasty snacks of young mahogany saplings and still in 1969 the elephant population in this area of about 3000 km^2 was estimated at 9000. A survey in the Kibale Forest, where the elephant population mingled with that of the Queen Elizabeth National Park, showed that a large proportion of the stems of mature trees had suffered serious debarking damage by elephants. Nevertheless the Forest Department cooperated with the Game Department and National Parks in numerous ways, managing forest reserves which overlapped with national parks and game sanctuaries, and supported ecological research into elephants, chimpanzees and even forest mosquitoes (vectors of yellow fever).

However it is interesting to recall the opposing aims and activities of different departments. The Forest Department had a general policy of 'early-burning' in the savanna reserves to reduce the damage done by more severe late fires and encourage the growth of trees and bushes; the Tsetse Control Department 'late-burnt' areas of savanna to destroy the clumps of bush where tsetse flies laid their pupae. The Game Department tried to protect wild animals throughout Uganda; the Tsetse Control Department in selected (but large) areas tried (unsuccessfully) to shoot every animal on which tsetse flies could feed.

The target of maximising the productivity of timber in the natural forests without regard to the maintenance of biodiversity, both plant and animal, led to the development of techniques which classed many tree species such as figs as 'weeds', which could be eliminated to make more room for 'desirable' timber species such as mahoganies. Only later was it realised that figs are an important food source for both birds and primates. The most effective and economic method of doing this weeding was by the use of a chemical arboricide 2,4,5-T mixed with diesel and about sixty thousand hectares were treated in this way, but this was only a fraction of the total production forest.

The misuse of this chemical (the notorious Agent Orange) by the Americans in the Vietnam war, growing fears of its carcinogenic potential, and growing concern with the consequent general reduction in biodiversity (though research has shown that the opening of the forest can increase bird diversity) have effectively outlawed its use now. An alternative technique was developed after independence, using charcoal-burners to clear weed trees and branchwood after timber harvesting in the Mengo forests (Earl 1968) and proved very successful and economic, but it ran out of control in a forest elsewhere due to lack of supervision of the burners. That and the influence of the conservationists who regard conservation as an absolute priority over economic production, even in areas not specially designated for conservation, has unfortunately resulted in charcoal-burning being proscribed in all forest reserves, despite the growing demand and the approaching exhaustion of present supplies from the bush.

With the arrival of international aid donors after the eviction of Amin and Obote, there was a major change in policy for the natural forests, with a swing from production towards conservation. A biodiversity survey of all the major high forest reserves was done in 1985-88 by Howard (1991). His recommendations resulted both in the transfer of six forests to National Park status, and in the total protection from harvesting of core areas of 20% in others, with partial protection of a further 30% in buffer zones. This caused a huge reduction in the area of productive high forest.

The forest conservation roller coaster

LOW **20,000 BP** Last ice age, cool and dry.
UP **8,000 BP** Warm and wet.
DOWN **2,400 BP**– First cultivation
Oscillating with wars, human & animal diseases
UP **1898 – 1910 AD** A promising start by UFD.
DOWN **1910 - 1928** A wasted period of stagnation.
UP **1929 – 1950** A firm base was established for future development.
UP & UP **1951 – 1963** Rapid progress on all fronts. Uganda was one of the leading colonial forest departments.
STEADY **1963 – 1972** Adjusting to Independence.
DOWN & DOWN **1972 - 1986** Disastrous civil war.
SLOWLY UP AGAIN **1986 – 2004** Gradual recovery, thanks to foreign aid.

Who was responsible?

The only forester who does not come out of this with credit was Fyffe, and some of the blame can be laid at the door of the administrators who, despite an adverse report from a consultant, did not see that the post demanded a professionally trained officer. Otherwise Uganda was fortunate to have had the services of a cadre of active, dedicated and skilled foresters (Leggat, 2004), serving a succession of outstandingly competent and inspiring Conservators.

Conclusions.

During the colonial period the Uganda Forest Department successfully met traditional criteria for forest conservation (Box 1). It established a system of forest reserves, legislation and management which effectively protected the country's forest resources, amounting to not greatly less than had existed at any time in the last millenium, after the first impacts of clearance by man. This structure survived a period of civil war with only partial losses and with sufficient resilience to be reconstituted afterwards.

It also met most of the 'green criteria' for successful conservation (Box 2) the only shortcoming being the low priority given to the conservation of biodiversity rather than meeting demands for wood production. Given the national and international economics of that time, and the low priority given to biodiversity internationally, any alternative policy would have been impossible. However current biodiversity protection depends critically on the physical assets of protected areas and the intellectual assets of botanical and ecological understanding which were established then.

Strict quantitative comparisons with other empires and regimes are impossible, but conservation in Uganda was evidently much better than the historical records of the empires listed in Box 3. In the latter half of the colonial period it could be compared favourably with European practice, and was a great improvement on North America when the 'Frontier Mentality' prevailed, and forests were seen as an unlimited resource to be exploited and/or cleared for farming.

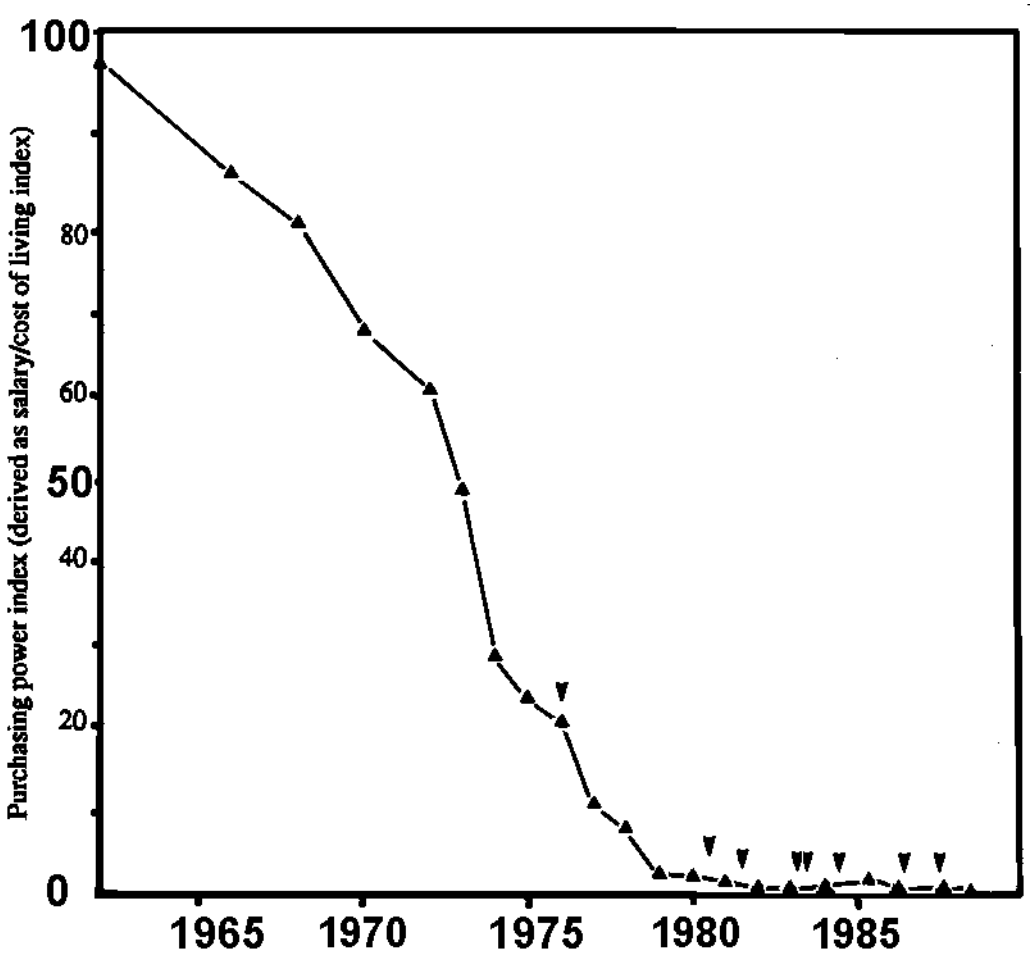

Fig. 4. Depreciation in the value of a Ugandan forest officer's salary during the civil war. (Howard 1991).

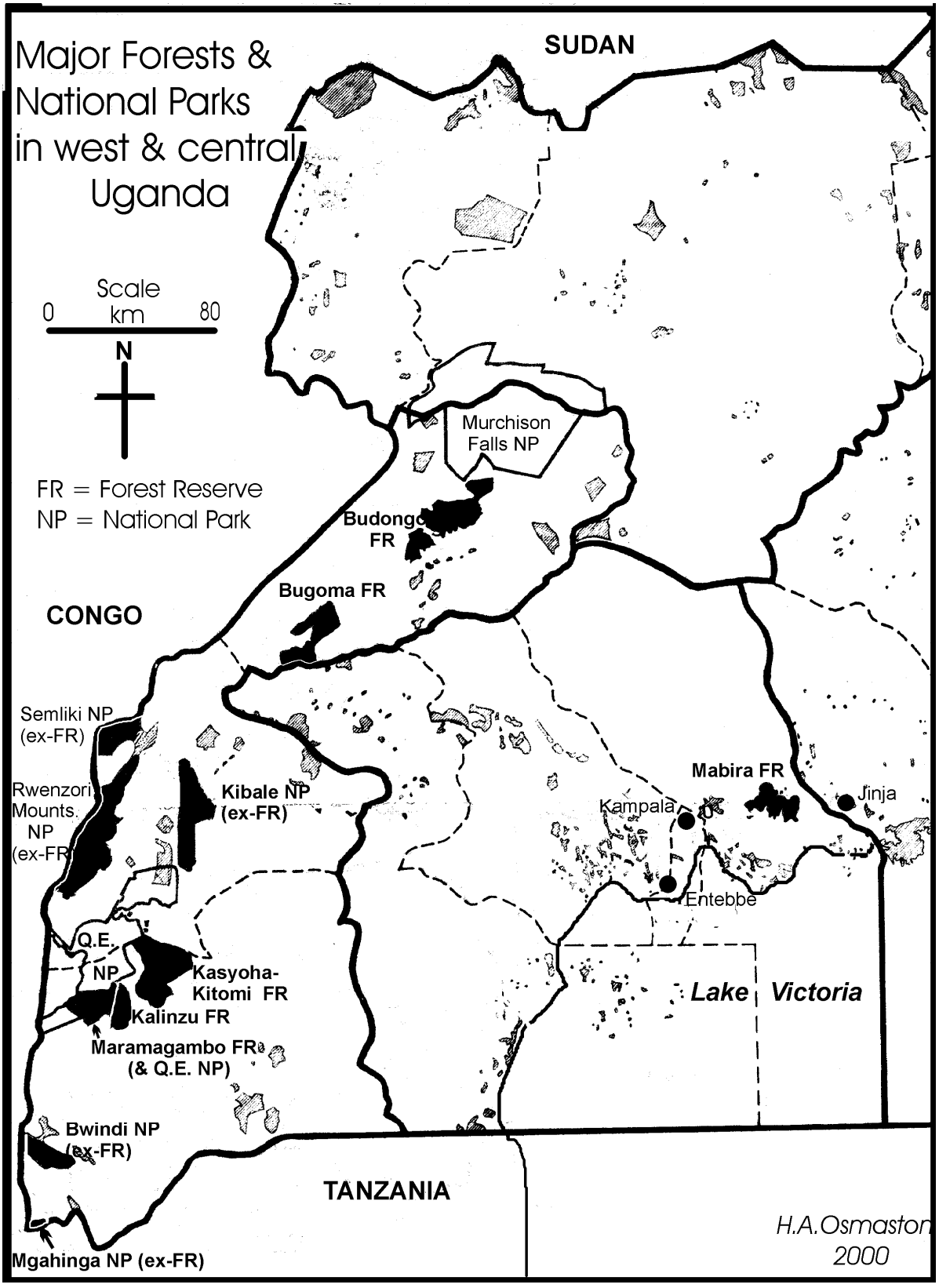

Fig.1. Major forest reserves and national parks in western Uganda, 2000

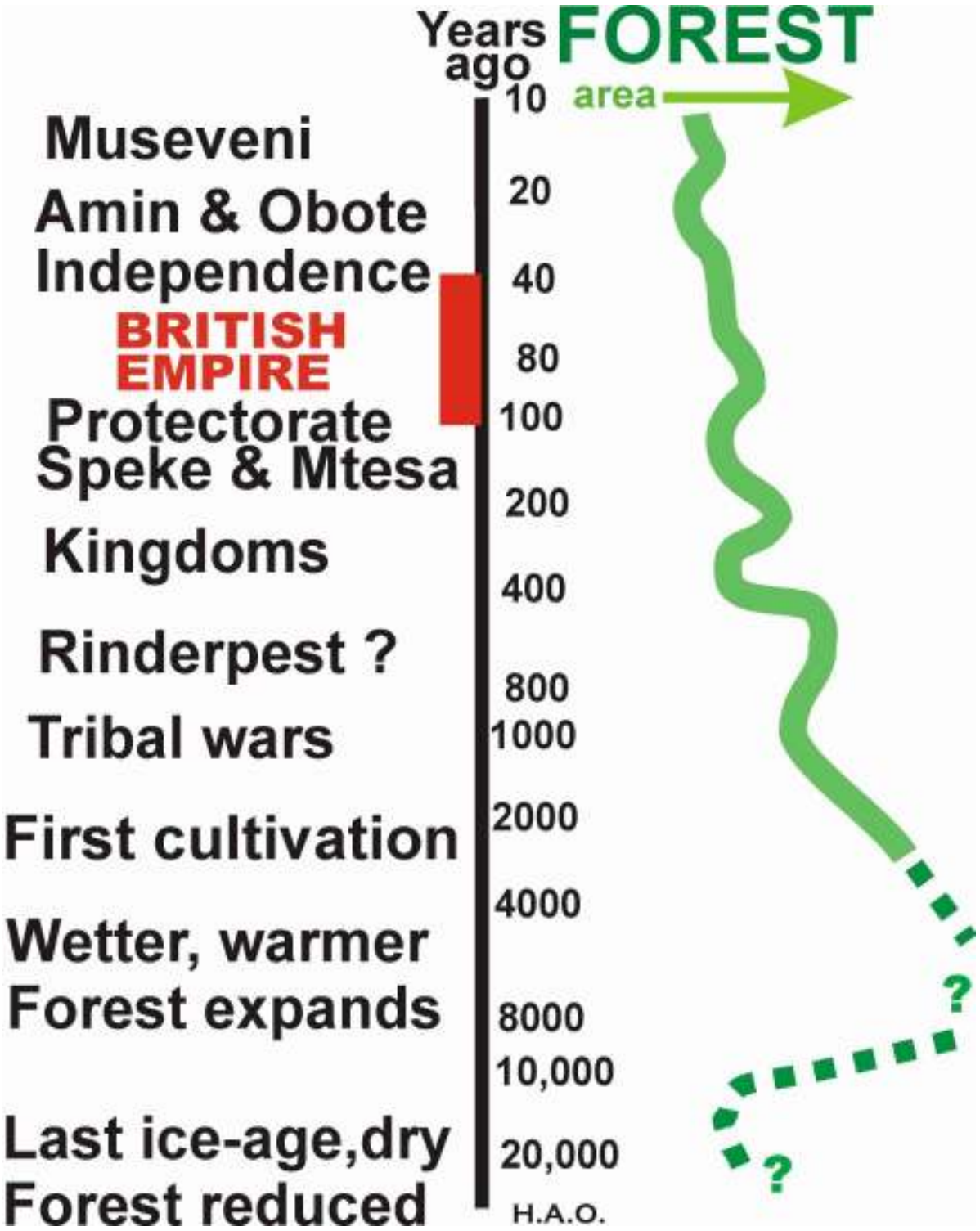

Fig. 2. The history of forest cover in Uganda over the last 20,000 years, mainly inferred from pollen analysis of cores from lakes and bogs.

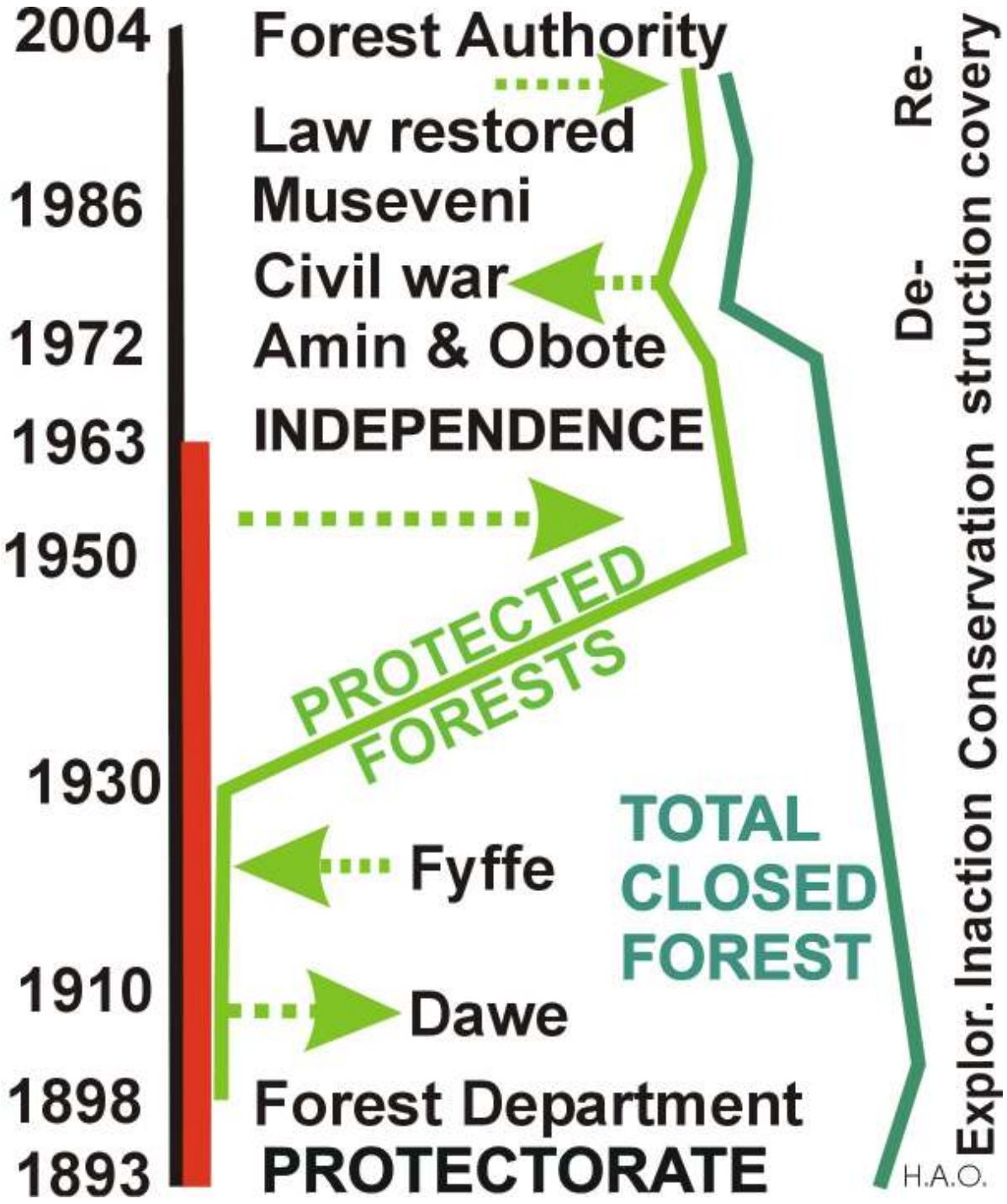

Fig. 3. The history of forestry in Uganda since the declaration of the Protectorate. The green lines roughly depict the changes in the areas of total forest cover and of the area legally protected. The arrows indicate changes in the activity and effectiveness of the Forest Department, the Roller Coaster Ride.

REFERENCES

[Brasnett, N.V.] 1951. *A history of the Uganda Forest Department, 1898-1929*. Uganda Forest Dept. Bull. No.3.

[Brasnett, N.V. & I.RDale] 1955. *A history of the Uganda Forest Department, 1930-1950*. Uganda Forest Dept. Bull. No.4.

Eggeling, W.J. 1940 *The indigenous trees of Uganda*. Ug. Govt. Printer. (Rev. & enl. I.R.Dale 1951, Govt. Printer)

Eggeling, W.J. 1947. Observations on the ecology of the Budongo Rain Forest. *J. Ecology* 34, 20-87.

Dawe, M.T. 1906a. *Report on a botanical mission through the forest districts of Buddu and the Western and Nile Provinces of the Uganda Protectorate*. Cmd.paper, HMSO, London.

Dawe, M.T. 1906b. An ascent of Rwenzori. *J. African Soc*.1906, 182-186.

Dawkins, H.C. 1958. *The management of natural tropical high forest with special reference to Uganda*. Imperial Forestry Inst. Oxford, Paper 34.

Earl, D.E. 1968. *Latest techniques in the treatment of natural high forest in South Mengo District [Uganda]*. Paper, 9th Commonwealth Forestry Conference. Govt. Printer, Entebbe.

Grove, R. 1995 *Green Imperialism, Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism 1600-1860.* Oxford Univ. Press, Oxford.

Hamilton, A.C., 1982. Environmental History of East Afiica: A study of the Quaternary. Academic Press, London, UK.

Hamilton, A.C., 1984. *Deforestation in Uganda.* Oxford University Press, Nairobi

Hewitt, Sir J., 1938. *Jungle Trails of Northern India.* Methuen.

Howard, P.C., 1991. *Nature Conservation in Uganda's tropical forest reserves*. IUCN. 313p.

Langdale Brown, I.R. 1960. *The vegetation of Uganda (excluding Karamoja).* Research Division, Department of Agriculture, Uganda, Memoirs, ser.2, no.6.

Langdale Brown, I.R., H.A.Osmaston & P.Wilson 1964. *The vegetation of Uganda and its bearing on land use.* Govt. of Uganda. Govt. Printer. 159 p., 8 maps.

Laws, R.M., I.S.C.Parker and R.C.B.Johnstone 1975 *Elephants and their habitats: the ecology of elephants in North Bunyoro, Uganda.* Clarendon Press, Oxford,. 376 p.

Leggat, G.J., 2004. *Your obedient servant: tales of a Uganda forester.* (Ed. J.R.Lang Brown, A.Beaton, H.A.Osmaston). Henry Osmaston, Cumbria. 112 p.

Morrison, M.E.S., & A.C.Hamilton 1974. Vegetation and climate in the uplands of south-western Uganda during the later Pleistocene period, II. Forest clearance and other vegetational changes in the Rukiga Highlands during the past 8000 years. *Journal of Ecology* 62, 1-31.

Nicholson, J.W. 1929. *Report on the future of forestry in Uganda*. Govt. Press, Entebbe, Uganda.

Osmaston, B.B. 1999 *Wildlife and adventures in Indian Forests.* Revised edition, ed. and pub. Henry Osmaston, Cumbria. 290 p.

Osmaston, H.A. 1965. Ensa za Kateboha: ancient earthworks and waterholes at Karwata, Bunyoro. *Uganda Journal,* 29, (2), 222-224.

Osmaston, H.A. 1989. Family tree: the Osmaston family, foresters & Imperial servants. *Commonwealth Forestry Review*, 68, 77-87.

Pringle, S.M. & J.E.M.Arnold 1960. *Present wood consumption and future requirements in Uganda*. FAO Rome. Report 1287.

Risby, L.A., T.Blomley, C. Kendall, I.Kahwa & M.Onen 2002. Environmental narratives in protected area planning: the case of Queen Elizabeth National Park, Uganda. *IUCN, CEESP Policy Matters* Paper 10, 40-49.

Stapf, O. 1906. Plantae novae Daweanae in Uganda lectae. *J. Linnean Soc. (Bot.)* 38.

Troup, R.S. 1922. *Report on forestry in Uganda.* Crown Agents for the Colonies, London.

Webster, G., & H.A.Osmaston 2003. *A history of the Uganda Forest Department Part 3, 1951-1965*. Commonwealth Secretariat, London.

Note. This paper was originally designed as an oral and Power-Point presentation. Though edited for printing it retains some of those characteristics. I am grateful to Michael Philip and Elisabeth Lang Brown for comments and corrections.

Appendix 1. **Summary of Official Forest Policy**
(approved by Governor in 1932 and restated in 1948)

(a) the reservation of an adequate forest estate for protective and productive purposes; *[achieved by 1963]*

(b) the management of this estate to obtain the best returns consistent with the above objectives; *[achieved by 1963]*

(c) fostering among the people of Uganda a real understanding of the value of forests; *[partly achieved by 1963]*

(d) encouraging the practice of sound forestry by Local Authorities and private enterprise *[achieved by 1963 but reversed in 1965 after independence]*— and to educate selected Africans in technical forestry. *[partly achieved by 1963]*

NOTE that this includes no mention of 'nature conservation' nor 'biodiversity'; the latter word was not coined till 1985.

Captions for figures

Fig. 1. Uganda showing forest reserves and national parks, 1966

Fig. 2. The history of forest cover in Uganda over the last 20,000 years, mainly inferred from pollen analysis of cores from lakes and bogs.

Fig. 3. The history of forestry in Uganda since the declaration of the Protectorate. The green lines roughly depict the changes in the areas of total forest cover and of the area legally protected. The arrows indicate changes in the activity and effectiveness of the Forest Department, the Roller Coaster Ride.

Fig. 4. Depreciation in the value of a Ugandan forest officer's salary during the civil war. (Howard 1991).

MINIBIO

Henry Osmaston was born in India in 1922. He took a forestry degree at Oxford, split by war service in REME, and joined the Uganda Forest Department in 1949 where he served in almost every district besides being Working Plans Officer for several years. After Independence he resigned and in 1965 took a doctorate at Oxford, studying the past glaciations and climate of the East African mountains, which secured him a post as lecturer in geography at Bristol University, while he also managed a pedigree dairy farm. He has worked many times in the Himalaya and Tibet and is president of the International Association for Ladakh Studies.

He is an Hon.Warden of Uganda National Parks and has been working there again this year. Besides writing many scientific papers he is joint author/editor of *The Vegetation of Uganda, Guide to the Ruwenzori, Himalayan Buddhist Villages, Tropical Glaciers* and *Tarns of the Central Lake District.*