

## A tribute to Frank White (5th March 1927 to 12th September 1994)

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### *Apologia*

We are grateful for this opportunity to express our appreciation of our mutual friend Frank White (Figure 1). Angus worked with him early in his career from 1950 and Chapman was associated with him from the early 1960s. We all met for the first time at Chisenga resthouse at the foot of the Mafinga Mts in Malawi in 1952. White and Angus were on an Expedition from Oxford University, and Chapman, of the Nyasaland Forest Dept, was on 'ulendo' with his wife, returning with bulging plant presses from a boundary survey of the Misuku Forests. It was a momentous meeting for Chapman. He learned that all his future collections would be named by Frank himself at Oxford, and it was the beginning of an association that has been the inspiration of Chapman's work ever since. We have all been friends from that day, and often enjoyed each other's hospitality. Thus we feel qualified to write about Frank White while we fondly remember him.

### *Introduction*

Frank White, eminent Oxford botanist and leading authority on African plants and vegetation died in September 1994 after a long struggle with emphysema. Already in 1981 he was beginning to have difficulty with his breathing, yet despite his increasingly debilitating and depressive illness he never let up on his work and was productive to the end, even laying plans for the furtherance of his unfinished projects.

Although his name is now identified with Africa, he did, because of his Cambridge training, go on his first expedition to Arctic Lapland, which resulted in a significant paper in the *Journal of Ecology* (Coombe & White 1951), and a radio broadcast talk about the Lapps entitled 'Europe's last nomadic race' (White 1951a). Thereafter he turned his attentions to Africa. Towards the end of his life, sadly too late, he had begun to widen his interests to include tropical America and the Far East.

### *Career in brief*

Born in Sunderland, County Durham, and educated at the Bede Collegiate School, he won a Scholarship to Cambridge in 1945. There he obtained Firsts in Parts 1 and 2 of the Natural Science Tripos, and won the Frank Smartt Prize in Botany. In 1948 he was appointed Demonstrator in Forest Botany at the Imperial Forestry Institute; was promoted to University lecturer in 1955; became Curator of the Forest Herbarium (FHO) in 1961 and also of the

Fielding-Druce Herbarium (OXF) in 1971. In 1988–89 he was awarded the E. de Wildeman Prize of the Société Botanique de Belgique for his work on the African Ebenaceae, and in 1991 the degree of Sc. D. from Cambridge University in recognition of his published work. In 1992 the Oxford University Dept of Plant Sciences conferred on him the title of Distinguished Research Curator for his 'outstanding research work notably on the taxonomy and ecology of African plants'.

### *His work*

White was one of a line of Oxford botanists interested in Africa, beginning with J. Burt Davy, who founded the Forest Herbarium, and including A.C. Hoyle and J.P.M. Brenan. Burt Davy, incidentally, also founded the herbarium of the Department of Agriculture of the Transvaal Province in Pretoria in 1903 which grew into the National Herbarium, now part of the National Botanical Institute of South Africa. White first became known for his works on the Ebenaceae,



FIGURE 1.—Frank White, 1927–1994.

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FIGURE 2.—White at work with P. Bamps and J. Léonard in the herbarium of the Jardin Botanique in Brussels, 1986. (Photo by J. Léonard).

Chrysobalanaceae, and Meliaceae, and the forest floras of Northern Rhodesia (Zambia) and Malawi. His work in orthodox taxonomy, by himself and in collaboration with others, resulted in the description of one new genus, 59 new species, and 27 new subspecies. These together with 91 new combinations and other taxonomic categories make a total of 210 taxa covering 12 families associated with his name. (Information supplied by S.K. Marnier courtesy of Index Kewensis CD ROM). Later he became renowned principally for his studies in the fields of phytogeography, chorology, and cartography of the vegetation of the whole of Africa. To quote his AETFAT colleague, J. Léonard (1995), 'il aura marqué la phytogéographie de l'Afrique d'une empreinte originale et indélébile' (Figure 2).

He was a stalwart protagonist of AETFAT (Association pour l'Étude Taxonomique de la Flore d'Afrique Tropicale), of which he was a founder member and which played a big role in his life. He attended its first plenary meeting in Brussels in 1951, and most of the subsequent general assemblies. At the 5th Assembly in Sept. 1963 in Italy, he became secretary of a committee of seven (Aubréville, Barbosa, Codd, Duvigneaud, Pichi-Sermolli, White and Wild) charged with the compilation of a vegetation map to replace the more concise earlier map of Keay (1959). The next twenty years were devoted primarily to this work (Figure 3). Before publication the map was tested in the field by many experienced AETFAT members, but chiefly by White himself. The finished map, with its 365-page memoir, was a brilliant synthesis and earned great acclaim. It was reviewed by J. Léonard (1984), and translated into French by P. Bamps in 1986.

White derived great inspiration and help from the AETFAT fraternity. He in turn enriched its work by his own considerable genius. Léonard (1995) has said that 'working on his own in relative isolation at Oxford, he realized early that works of great breadth, like those with which he became involved, could only be successfully completed with the help of numerous specialists such as are to be found within the great family of AETFAT'.

White was an original thinker. Take for example his treatment of those very variable species which defy classification because of lack of correlation of characters, a classic example being *Diospyros mespiliformis* (White 1962b). He coined the term 'ochlopecies' to accommodate them, and this term has been taken up by taxonomists around the world.

In the field of phytogeography he devoted much of this thinking to chorology. In current usage it is the study of the *distribution* of taxa and phytochoria and their *histories*. In his memoir (White 1983c) he outlined a new conception of African chorology. The system he used for the Vegetation Map was concerned with the most widely used category, the *region* (see his definition, White 1976a, 1979c), which in previous systems had been characterised mainly by endemic families and genera. But in his opinion the distribution of species provides a more objective classification. He always emphasised the interdependence of taxonomy, ecology and chorology which, he maintained, should always be studied together, and he proposed his now famous general and chorological aphorisms which he said all botanists should bear constantly in mind (White 1971).

He believed in studying the plants in the field, and to that end he travelled widely and collected extensively in Morocco, Nigeria, Cameroun, Niger, Kenya, Zambia, Malawi, South Africa and Zanzibar (Figure 4). His travel notes, contained in ten documents entitled '*Iter africanum*' totalling 3 000 pages of typescript (see Bibliography), and his collections which run into the 14 000s, give some indication of his work rate in the field (information supplied by A.M. Struggnell of the Daubeny Herbarium, Oxford).

His thinking on the role of perception (or 'intuitive discernment') is worth noting (White 1993b). He talks about perception being 'based on the capacity of the human eye and mind to detect patterns in large amounts of visual and factual data, before they have been consciously analysed'. 'Perception', he said should be based on 'wide experience, a critical outlook, the possession of a good eye and a good memory'. All these qualities he had him-



self in good measure (Figures 5 & 6). Chapman was witness to his powers of observation in the field. 'On one very brief visit to the Misuku Forests (Malawi), he

found *Alangium chinense*, a first record for these forests, an elusive tree which I had failed to discover. A few weeks later on Mt Mulanje he spotted *Olea*

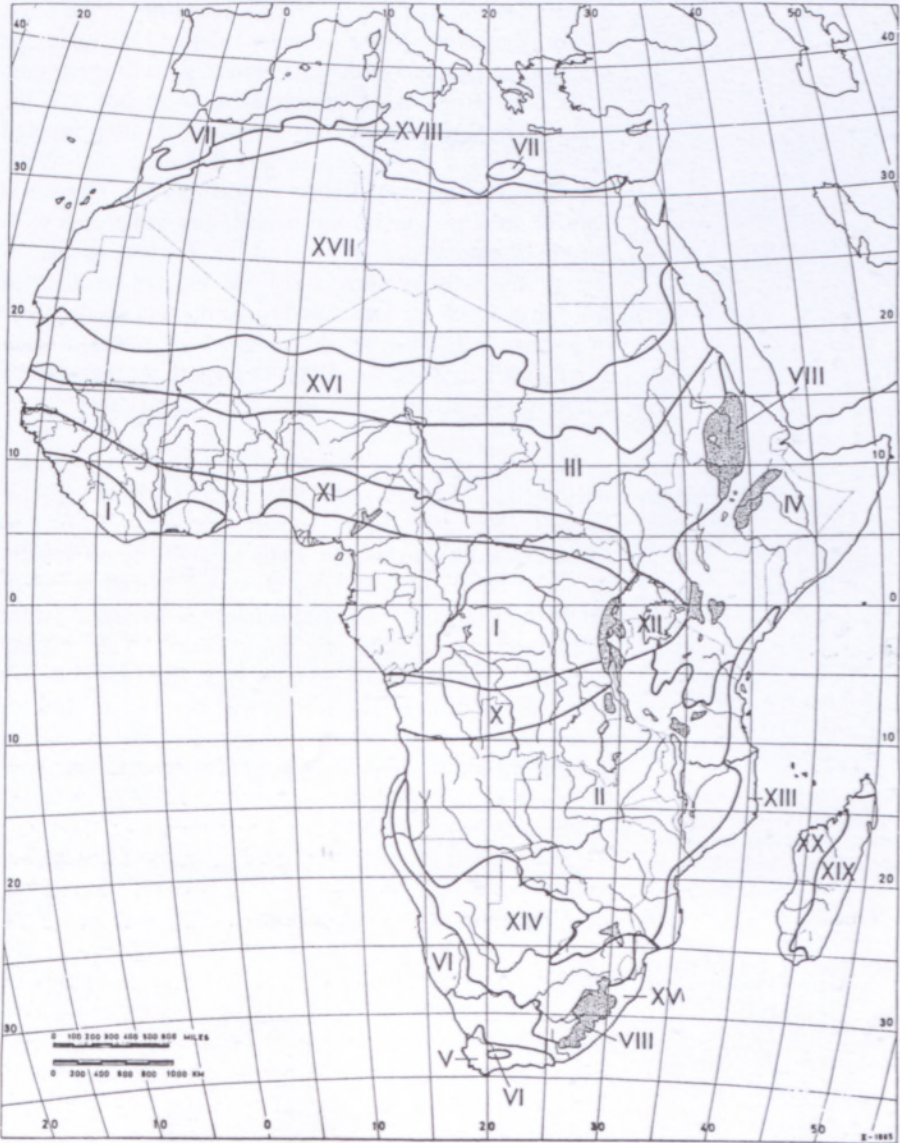


FIGURE 3.—White's map of regional phytocoria of Africa and Madagascar (from White 1993: 237).



FIGURE 4.—White, left, at work on his collections in camp, with forestry officer W.D. Holmes, Mwinilunga District, Zambia, 1952. (Photo by A. Angus).





FIGURE 5.—Frank White, doyen of 20th century African forest botanists, observing the Chinzama cedars, *Widdringtonia whytei* Rendle, Mt Mulanje, Malawi, May 1981, (Photo. by J. Chapman).

*europaea* subsp. *africana*, the only record for Malawi south of the Viphya plateau'.

One of his last accomplishments was the masterly résumé of his ideas and methods, expounded over the years in diverse publications, which he was asked to write by his AETFAT colleagues in Brussels (White 1993). Léonard & Bamps (1995) note that he entitled it 'par modestie', 'The AETFAT Chorological Classification of Africa'. This paper is a fitting finale to his writings which were always of high quality and always bore the stamp of scholarship.

Aside from his research, White was an excellent teacher. He also ran the two big Oxford herbaria from 1971. Many of his students, now dispersed throughout the world, continue to study plants inspired by his example and using his methods (Figure 7).

#### The man

One might imagine from the above account of White's work that he must have been a very serious fellow totally absorbed by his specimens, books and manuscripts. Far from it. He had a lively sense of humour. He enjoyed laughter and making laughter. A connoisseur of food and drink, he was also an accomplished cook. A generous host, his hospitality became legendary. There was always a firkin of ale

tapped ready to refresh visitors to his cottage in Taston which he appropriately called 'Firkins' (Figure 8).

He was an intellectual with the common touch, equally at home in the pub chatting with the locals as in the rooms and corridors of the University. An eccentric, in the sense of not conforming to the ordinary rules of behaviour, his idiosyncracies could sometimes amuse, sometimes irritate. For example he would, on occasion, work late into the night and sleep well into the morning. He often ignored public holidays. Angus remembers that on a visit to the Mt Makulu Research Station in Zambia, on Christmas Day he took no part in the general festivities except to eat his Christmas dinner. Most of the day was spent collecting and writing notes, and he would not be diverted from that which he considered to be making the best use of his time. Chapman recalls his emphatic refusal to take a daily walk in Zomba in 1981, to prepare for the arduous climb up Mt Mulanje. His time was too precious.

He was a renowned spinner of yarns, and many of his tales are remembered and retold by his students and colleagues. One of the better known anecdotes tells of him being chased by an ostrich while riding a motor-scooter in South Africa. Angus remembers his special brand of 'herbarium humour'. We had numerous botanical swear words and occasionally one might hear an oath ringing through the herbarium—words like *Hel-i-chrysum* or *Sphe-damn-ocarpus*. The reader will be able to think of others! We invented common names for African plants, such as 'hedgehog with lifebelt' for *Pterocarpus angolensis*.



FIGURE 6.—White outside the Chinzama hut, Mt Mulanje, May 1981. The tree is *Ilex mitis* (L.) Radlk. (Photo. by J. Chapman).





FIGURE 7.—White, Oxford University archive photograph, giving a student seminar, 1984.

sis. The tag 'indet., mat. insuff.' (not identified, material insufficient), sometimes necessarily applied to specimens sent for identification, often meant for him 'not identifiable, material insufferable'.

Although a bachelor, Frank liked women, and got on well with them. And they liked him. Chapman remembers hearing how popular he was with the girl students at the University of Cape Town. 'His attraction for the ladies had not diminished 28 years later. On one trip to the Lichenya Forest Reserve near the foot of Mt Mulanje in Malawi we were accompanied by a number of tea estate and other botanically-inclined ladies. Frank obviously

held their attention, and this was clearly not only because of his red straw hat which they all greatly admired'. And in his work he had much fruitful collaboration with women, notably in the role of botanical artist; but also as co-workers and co-authors in research. Special mention should be made of Françoise Dowsett-Lemaire, a Belgian zoologist with a flair for botany. He first met her in 1981 in Malawi and with Chapman they collaborated on the flora of Malawi until his death. Through her continuing efforts this major work will be published. A special friendship developed between them, and during her frequent stays at his home in Taston, in the last difficult years of his life, she was a great help to him in the mundane but necessary affairs of life such as shopping and cooking. She has said of him (pers. comm.) that 'he formed me as a taxonomist' and she remembers him 'above all, as wonderful, affectionate friend'.

We who knew him well shall always remember his laugh, his upright bearing and striding gait (he was a great walker), and his twinkling eyes. Chapman's wife mentioned his 'twinkly eyes' in her diary, after that first meeting with him at the foot of the Mafinga Mts in 1952. That 'twinkle' remained with him always and was a natural expression of his great intelligence and sense of humour.

Sir Ghilleen Prance, one of his most distinguished students has said with truth in the Funeral Oration, that 'those who knew Frank only for the last ten years of his life did not know the true Frank White, because he struggled so hard with illness that made him at times impatient, intolerant or outspoken. Underneath was a brave fight to continue his work in which he succeeded well'. We mourn the passing of a botanist of great erudition and independent mind, but more than that, a fine colleague and a loyal friend.

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FIGURE 8.—White by his cottage, 'Firkins', early 1970s. (Photo. by A. Angus).



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**A Frank White Memorial Symposium on Floral Diversity in Africa and Madagascar**, arranged jointly by the Royal Botanic Gardens, Kew and the Linnean Society of London, will take place at the Department of Plant Sciences, University of Oxford on 26 and 27 September 1996. Topics will include: chorology, vegetation structure and diversity, plant adaptation, animal interactions, taxonomic complexities and application of botanical information. Sir Ghilleen Prance will introduce the meeting and speakers will include I. Friis, P. Morat, M.J.A. Werger, P. Lowry, R.M. Polhill, J.M. Lock, F. Dowsett-Lemaire, C.E.G. Tutin, Q.C.B. Cronk, M.H.P. Jebb, D. Harris and D.F. Cutler. Caroline Pannell will speak on Frank White's scientific achievements.