reviews

History of African crops

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Origins of African Plant Domestication. Edited by J. R. Harlan, J. M. de Wet and A. B. L. Stemler. Pp. xiii+498. (Mouton: The Hague and Paris; Aldine: Chicago, 1976.) Dfl.84.50; \$32.50.

THIS book contains the papers of the 58th Wenner-Gren Symposium on the origin of African plant domesticates, held at Burg Wartenstein in August, 1972. It opens with a series of three general papers, on the origins of domestication and of agriculture in Africa (Harlan, de Wet, Stemler), on causes (Pfeiffer) and on the problems of philosophy, technique and evidence (Higgs). Between them, they spell out the central question—at what periods, where, and why did African people begin deliberately to plant, tend and harvest some of the indigenous food and other useful plants of Africa; and how far, in doing these things, were they affected by influences from Asia? Over these topics controversy has smouldered for many years, alongside the more general endeavour to describe, more satisfactorily, the nature of the Neolithic transition and the emergence and spread of agriculture.

The climatic and ecological scene is set by van Zinderen Bakker. During the last glacial period, up to about 12,000 yr ago, Africa was dry, so that the Sahara spread as far south as 13°N (not S, as an oversight suggests). In a subsequent more or less warm and wet period, cattle, crocodiles and men could inhabit much of what is now desert, and the internal delta of the White Nile reached almost as far north as the modern junction of the Niles at Khartoum. This gave way about 4,500 yr ago to a cooler and drier period which may have driven Saharan man from an Eden of hunting, gathering and fishing into the drudgery of agriculture.

Seven archaeological and cultural/historical papers follow. Three are general (Clark, Shaw, P. E. L. Smith) and four more specialised (Munson, Flight, David, Wendorf and Schild). The evidence comes from a regrettably small number of sites, and there is not yet enough of it to tell a continuous or coherent story. Wheat and barley

from Asia were grown in Egypt more than 7,000 yr ago. It is easy to be convinced that indigenous *Pennisetum*, after being gathered for several thousand years, had given mankind a new crop, bulrush millet, by about 2,500 yr ago. Sorghum and cowpeas appear in West, East and Southern Africa in archaeological contexts, none of which is more than 1,500 yr old. From the Ethiopian plateau there is only one early record, of barley and chickpea, at about 2,500 yr ago.

The last seven papers are on botanical and agricultural topics. Purselove presents a useful compendium on the crops domesticated in Africa, the history of exchanges between Africa and Asia, and the entry of American species. An essay by Harris on the origins of agriculture in West Africa is based too firmly for me on geographical and ecological 'first principles', but many will find in it, as its author hopes, useful hypotheses to be tested against observations, new and old. Scudder's brave reconstruction of prehistoric land-use in Zambia is illuminated by studies of modern agriculture in the same region. Then the botanists have the last words—on yams (Coursey) and African cereals: sorghum (two papers by de Wet, Harlan, Price and Stemler) and other species (by the late Professor R. Portères, a valuable English summary of over thirty years of devoted and scholarly labour). The two sorghum papers base a geographical history of the cultivated sorghums, starting with initial domestication in the eastern part of the sub-Saharan region, on a range of modern biosystematic and agricultural criteria, but in the absence of early archaeological records the timescale has to depend on the records of sorghum in India 3,000 yr ago.

This book is valuable because it assembles much of what is known, what is said to be known, and what is thought at the present time about the history of African crops. It is strongly suggested that the chief African cereals, and the domesticated yams, emerged without benefit of influences from outside Africa. But the timescales are tantalising: most if not all of the known history happened after agri-

culture had been established in the Nile Valley, and long after it was the basis of a way of life only 400 km away at Jericho and of course further north and east. It is difficult to imagine that the news did not get around. Man, including African man, is far too mobile for that. One wonders whether African oral tradition, difficult though it may be to date, has not a contribution to make here.

It must be important to learn more about human movement in antiquity: the apparently ancient navigation of the Indian Ocean from China to Ceylon, the Gulf, Suez and East Africa, the links across the Red Sea between the similar agricultures of the highlands of Yemen and of Ethiopia, the east-west traffic through what are now the Sahelian and savanna zones from the Blue Nile region (where every *jebel* seems to have been a workshop in days gone by) to the Atlantic; the north-south traffic across what is now the desert from the Mediterranean and the Nile, along the routes—like the *Darb al Arba'in*, the road of forty days—to Kordofan, Darfur, the Tibesti and West Africa (which some suggest brought the builders of stone circles to Senegal and the Gambia, although we know not when).

Then I am tantalised by querns and mortars, the two distinct means by which African people grind grain. The quern, an ancient device in Asia, seems to have spread in Africa before agriculture; the mortar seems to be African. Are the crops and the means for preparing them historically related, and if so, how?

Finally a question about vegetation. Chevalier divided the different sorts of vegetation he saw in West Africa into the forest, savannah and other zones. These correspond broadly with current climates, and many people seem to regard them as 'natural' biogeographical divisions. Yet without exception they are artefacts of agricultural man. What did West Africa look like in the wetter and warmer period 6,000 yr ago, when farming was at most in its infancy? □

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