

Corn in the Old World

In their article "Domestication of corn" (1), Mangelsdorf, MacNeish, and Galinat write that corn (maize) was unknown in the Old World before 1492. This reiterates a statement made by Mangelsdorf and Reeves (2) in 1959. There they relied on maize-indented pottery from Yorubaland, Nigeria. Carter of Johns Hopkins University has stated in a letter to me that the depths at which this pottery was found indicate antiquity, not recentness.

Mangelsdorf and Reeves also wrote:

The confusion which can result from what Enfield has called "idle and unprofitable speculation" is nowhere better illustrated than in Jeffreys' acceptance of that part of the Stonor-Anderson thesis which holds that if maize did not originate in Asia it must have been taken there in prehistoric times (2).

I had written (3) that Stonor and Anderson

conclude that "... these varieties [of maize] must have arrived there in pre-Columbian times" [not "... in prehistoric times"]. I am fully in agreement with this conclusion.

They continued:

So far as Europe and Africa are concerned, the early post-Columbian occurrence of maize is explained by Wright, who showed how the Moors, after being partially expelled from Spain between 1499 and 1502, took maize with them on leaving Spain.

Wright (4) wrote:

It is probable that [the Moors] became acquainted with the maize plant soon after its introduction into Spain and that they took it with them ... to Tangier and the north African Coast.

Wright is here speculating, yet his *probable* becomes with Mangelsdorf and Reeves "Wright showed." From Wright's speculation these two explain how in Europe maize became known as "the grain of Turkey." No explanation is offered, however, of why, if the Moors met maize in Spain, it is in some parts of Spain, according to Muratori (5), called *trigo de turkina*; or why, according to Cenival and Monod (6), Valentim Fernandes wrote

in 1506 that milho zaburro, an early Portuguese name for maize, was exported from Guynée to Sao Tomé till 1501.

Contrast Mangelsdorf's claim with that of the Portuguese. Santa Rosa de Viterbo, a Portuguese historian, wrote in 1798—as cited by Ribeiro (7)—that maize was brought from Guynée in Africa to Portugal in the reign of King John II (1481–1495). Ribeiro also quotes Manoel Severim de Faria as writing in the 17th century that *milho grosso de maçaroca* (maize) "comes from Guiné." Lains e Silva (8) wrote:

Zea mays ... has been cultivated in São Tomé for a very long time. Valentim Fernandes calls it *milho zaburro* of which he gave so perfect a description that it can be admitted that it is the *à mays* already known to the African peoples before the Armada of Columbus brought it from America. ...

Sauer (9), checking the early Portuguese writings, "found the Jeffreys theses confirmed that maize in Africa was pre-Columbian. ..." Mangelsdorf, however, relies on Portères's dating, which I have shown is wrong (10).

Recently Hui-Lin Li (11) has shown that Arabs were navigating the Atlantic about A.D. 1100 and had encountered maize. This evidence supports the data I had published in 1953 showing the presence of pre-Columbian Negroes in America about 1000 (12).

Mangelsdorf might well make a reappraisal of the evidence now available for the pre-Columbian presence of maize in the Old World.

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References

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3. M. D. W. Jeffreys, *Eastern Anthropologist* **9**, 21 (1955).
4. A. C. A. Wright, *Uganda J.* **13**, 64 (1949).
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6. P. de Cenival and T. Monod, *Description de la Côte d'Afrique de Ceuta au Sénégal par Valentim Fernandes 1506-1510* (Librairie Larose, Paris, 1938), p. 80.
7. O. Ribeiro, *Biblos* **17**, 657 (1941).
8. H. Lains e Silva, *Garcia de Orta* **1959**, 314 (1959).
9. C. O. Sauer, in *Internationalen Amerikanistenkongressen* **34**, Wien 1960 (1960), p. 785.

10. M. D. W. Jeffreys, *Africa* **33**, 115 (1963).
11. Hui-Lin Li, *Harvard J. Asiatic Studies* **23**, 114 (1960-61).
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Letters

The reappraisal which I have made, at Jeffreys's suggestion, of the evidence on the pre-Columbian presence of corn in the Old World has included a number of important references not mentioned by him (1, 2) and has reaffirmed my previous conclusion: there is no tangible evidence of any kind of the existence of corn in any part of the Old World before 1492.

The impressions of corn on the Nigerian pottery are suggestive, but until clearly shown to be pre-Columbian they are no more than that. The remaining evidence—historical, traditional, linguistic—is highly involved. It can be and has been interpreted in various ways to reach a variety of conclusions, some of which are diametrically opposed to Jeffreys's (2).

I recognize the *possibility* that corn may have reached Africa from America before 1492. The distance between Brazil and Africa is relatively short as ocean distances go—the obvious reason for using this route to deliver our planes to the European theater in World War II. Certainly the possibility that corn reached Africa across the Atlantic is greater than that it reached Asia across the Pacific, but even on this possibility we still have no reliable and convincing evidence, for which specious arguments are but a poor substitute.

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References

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2. F. Willett, *Africa* **32** (Jan. 1962).

Geodesy by Camel

W. R. Tobler, of the University of Michigan, has kindly pointed out a mistake in my article "Geodesy by satellite" (15 May, p. 803). In this article, I first stated that Eratosthenes, in his estimate of the circumference of the earth, used the length of a day's journey by camel as his primary standard of length, and that his estimate in terms of stades was derived secondarily. I also remarked that there has been consider-