

The arrival of *Equus*

EVEN though papers which attempt to draw together a lot of diverse evidence are most important for the scientific community the authors of such papers should not neglect to acknowledge the basic analytical work on which they base their discussion. I feel that J. Brunet and I deserve to be quoted in discussion of the arrival of *Equus* in the Old World at least for Roccaneyra², probably the earliest European site to have yielded *Equus*, and probably the only one where *Equus* and *Hipparion* coexist. So far as I know, it was not V. J. Maglio³ but D. A. Hooijer⁴ and myself⁵ who, independently, stated that the first occurrence of *Equus* in the Omo beds was in member G of the Shungura Formation. Since 1973, we have often repeated that the arrival of *Equus* in Africa was about two million years ago⁴⁻⁹.

Lindsay *et al.*'s¹ bibliography is quite instructive. Most of the papers cited on the first occurrence of *Equus* in Europe and Africa are themselves reviews, rather than original papers describing new material or stating new facts. People like J. Brunet, who has worked for years with equids, or D. A. Hooijer and myself, who have published about 30 papers dealing with equids, are ignored, although we were responsible for the basic descriptions and determinations.

I am sure that any specialist whose colourless original work has been neglected, involuntarily or not, in more appealing papers will understand why I decided, even so late, to write about such a trifle.

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LINDSAY ET AL. REPLY—We regret that the important palaeontological contributions of Dr Eisenmann and others were slighted in our references. This was unintentional, but resulted from a bias towards selection of references with a chronological rather than a palaeontological message.

Certainly, the paper by Eisenmann and Brunet¹ on the co-occurrence of *Equus* and *Hipparion* at Roccaneyra is an important palaeontological contribution for recognition of the appearance of *Equus* in Europe. Our study was initiated with the expectation that the record of *Equus* at Montopoli would be demonstrably earlier than that at Roccaneyra, and we were more impressed with the proximity of their age assignment than with the palaeontological identity of the equids at Roccaneyra and Montopoli.

We cited Maglio² as an early review of East African biochronology in which faunal levels were characterized, including the *Mesochoerus limnetus* zone, with the appearance of *Equus*. Correlation of this faunal sequence had been questioned because of similar faunas with conflicting radiometric limits in the Shungura and Koobi Fora Formations—that conflict was resolved after further work on the radiometric dating, as discussed by Drake³. Our emphasis was on resolution of the conflict, and we concluded that the appearance of *Equus* in deposits of the Omo Basin, east of Lake Turkana, was contemporaneous with that at Olduvai Gorge. Unfortunately, we did not acknowledge the palaeontological contributions of Hooijer⁴, Eisenmann⁵, Churcher⁶, and others.

We think there might be a strong tendency for reviewers to cite other reviews, and similarly for analytical contributions to cite other analytical contributions. In spite of this, we recognize and appreciate the numerous palaeontological, radiometric, and stratigraphic studies of many researchers whose work we drew on for our review.

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