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Cover: Scientists in Hawaii have taught two dolphins similar to this one to understand imperative sentences made up of acoustic and gestural words. The research, however, inspires both compliments and criticisms. (Photograph: Marineland of Florida)

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Letters

Grave doubts

"What Mean Those African Stones?" (SN: 9/15/84, p. 168) merits some comments expressing a more skeptical opinion of the Namoratunga II site's calendrical function.

The Borana calendar as documented operates now. Doyle's interpretation of it as using declination apparently fits neatly with consecutive "conjunctions" of new moon and stars in 300 B.C. In the meantime the stars in question have precessed by varying amounts, while lunar motion has remained essentially the

same. How can this be reconciled?

The term "Cushitic" should be of purely linguistic application, referring to a branch of the Afro-Asiatic language family of which Eastern Cushitic includes Borana, Galla, Somali, etc. According to Legesse, the Borana and their calendar have a time depth of about four centuries, though their antecedents may be ex-

pected to go back much farther. Other E. Cushitic groups also use the stars, but there is no evidence for a single "calendar devised by the ancient Cushitic people.'

Namoratunga II is in fact undated. The bone mentioned is from Namoratunga I and the date is 330 ± 165 B.C., but there is another bone date from the same site of A.D. 750 ± 100 , and there is no good reason to prefer one to the other. Beyond this, the cultural relationship and contemporaneity of the two sites is arguable.

The significance of the proposed alignments is also questionable. They depend in the first instance on the stones having been placed at a wide variety of apparently random declinations and inclinations (including horizontal!) and not having moved or settled since. Secondly it would seem extremely inefficient to set up 19 stones, some very close together, to provide seven alignments. Finally, given 19 stones, imprecise apices, a small margin of error and the

eye of faith, it should not be difficult to find any number of alignments desired - and this is borne out by the fact that it was apparently just as easy to find "significant" alignments in the corrected survey data as it was from the original incorrect survey.

Any calendrical function for the monument thus remains entirely speculative, and pending excavation it would seem more realistic to seek a more mundane explanation, such as gravestones.

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