

How many guests, what sort of hosts?

To the Editor: Lansing *et al.* (1) offer an intriguing approach to the prehistory of the island of Sumba. There is at least one critical flaw in the reasoning used, the assumption that the languages of Sumba form a subgroup, being all derived from a single ancestral language, Proto-Sumba. The comparative method used by the authors allows us to subgroup languages together if two criteria are met, that of inclusivity and that of exclusivity. Inclusivity requires that all of the subgrouped languages participate in the same innovation; exclusivity requires that this innovation uniquely identifies the subgrouped languages (with respect to other possible members of the subgroup). Assume that A-B-C are three related languages; we can posit that B-C form a subgroup if they all share an unusual innovation, and that this innovation is not shared with A. Although it may be true that all of the languages of

Sumba share innovations, if these same innovations are found outside the island, we cannot refute the argument that some of the languages of the Sumba subgroup more closely with languages represented off the island than with the other languages on the island. There is, thus, no basis for assuming that the Austronesian element of the gene pool on Sumba represents a single migration, just as there is no reason to suppose that the pre-Austronesian population was not agricultural.

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1. Lansing JS, *et al.* (2007) Coevolution of languages and genes on the island of Sumba, eastern Indonesia. *Proc Natl Acad Sci USA* 104:16022–16026.

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