Correspondence

Comment on "Recent Origin and Cultural Reversion of a Hunter–Gatherer Group"

Tony Waters

I read the article "Recent Origin and Cultural Reversion of a Hunter-Gatherer Group" [1] with interest. The article raises questions about the nature of contemporary hunter-gatherer groups like the Mlabri of Thailand that are important. But I am concerned that the authors, in demonstrating the elegance of their genetic technique, have reduced the anthropological question about socioecology to an "either-or" one of descent from an ancient isolated group versus a relatively recent "flight to the forest" by a small founder group from a horticultural society. The authors claim that genetic, linguistic, and folkloric data come down solidly on the side of the latter conclusion. I think that as likely an explanation is that the Mlabri are a product of the socioecological world of highland Southeast Asia, where most groups have varying elements of both modes of subsistence.

No Southeast Asian highlanders are strictly horticulturalists or hunter–gatherers. Most Southeast Asian highlanders are horticulturalists who supplement their diet through foraging. A few of them also trade with groups like the Mlabri, who are at one extreme of the horticulturalist–forager continuum. Sometimes, trade occurs between linguistic groups, using shared knowledge of each other's languages. Other times, trade is within the same ethnic group. Indeed, the Khmu of Laos, who are linguistically most closely related to the Mlabri, have traditionally practiced this mixed strategy.

When observed in both the 1930s by Bernatzik [2], and in the late 20th century by missionaries and anthropologists, the Mlabri were in contact with other ethnic groups, primarily the highland Hmong, Northern Thai, and Lao. Indeed, Mlabri men spoke these languages well enough to trade forest products for scraps of cloth and rice. It is also probable that, as with many other such groups, women were captured or married, and Mlabri children were occasionally taken for adoption. Checking for evidence of Mlabri mtDNA in these populations could verify whether this is the case. However, this raises a second problem with the approach the authors took. The DNA of the hill tribes presented in the article did not include those groups that the Mlabri have had contact with, such as the Hmong, northern Thai, Htin, Lao, and Khmu of the remoter areas of Nan (Thailand), Phrae (Thailand), and Sayaboury (Laos) provinces, where they have lived during at least the last 70–80 years. Instead, the authors used blood samples from different hill tribes speaking Sino-Tibetan languages and currently living in the Chiang Rai and Mae Hong Son provinces of Thailand, hundreds of kilometers to the west. These tribes have had no known contact with the Mlabri during the last 80 years, or before. In such a context, perhaps it is not surprising that the authors concluded that the Mlabri were isolated from these groups.

This opens up another explanation for how the Mlabri might have persisted in Southeast Asia during the last 600 years. They could have been skilled hunter–gatherers who 600 years ago began living in symbiotic trading relationships with more settled groups. There is no reason that such relationships could not have been persistent, even though it does not fit neatly into the old hunter–gatherer versus horticulturalist dichotomy, favored by the authors. Nevertheless, I think that this is an interesting relationship to explore. While, as the authors point out, the Mlabri may have little to teach us about how humans subsisted before the dawn of agriculture, they may well have much to say about the socioecology of how horticulturalists and hunter–gatherers coexisted since the emergence of agriculture 10,000 years ago.

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References

- Oota H, Pakendorf B, Weiss G, von Haeseler A, Pookajorn S, et al. (2005) Recent origin and cultural reversion of a hunter–gatherer group. PLoS Biol 3: e71. DOI: 10.1371/journal.pbio.0030071
- Bernatzik H (1958) The spirits of the yellow leaves. Dickson EW, translator. London: R. Hale. 222 p.

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Authors' Reply

Waters [1] makes a number of points concerning our article [2], which, in our view, require clarification. First, Waters states that classifying Southeast Asian highland groups as either strictly horticultural or strictly foraging is overly simplistic, as most groups practice horticulture supplemented with some degree of foraging. While we are sympathetic with the view that subsistence strategy is more complicated than a simple dichotomy (indeed, one of the main messages of our paper is that a strictly foraging group such as the Mlabri may have practiced horticulture in the past), we wish to emphasize that the Mlabri are, indeed, quite different from the other Southeast Asian highland groups in that they have never, in either their recorded or oral history, practiced horticulture. It is this distinction, coupled with their extreme paucity of genetic diversity, that sets them apart from other groups in the area.

Second, Waters suggests that our comparison of the Mlabri with hill tribes from a different geographic region (Chiang Rai and Mae Hong Son provinces of Thailand) leads to our conclusion that "the Mlabri were isolated from these groups," and that had we examined neighboring groups of the Mlabri, we might have reached a different conclusion. These statements misrepresent our work; in particular, we found that the Mlabri were not genetically distinct from other hill tribes for which we had data, as the mtDNA sequence, Y-STR alleles, and autosomal STR alleles of the Mlabri are all found in other groups. Moreover, this sharing pattern is in stark contrast to African foraging groups, such as the !Kung and Pygmies, who are genetically

distinct from their horticultural neighbors. It is precisely this sharing of alleles between the Mlabri and other groups that is the basis for our suggestion that the Mlabri may have reverted to their current exclusively foraging lifestyle from a previous horticultural lifestyle, rather than having always been foragers.

Finally, Waters states that we claimed that our data "solidly" support the scenario of an extreme founder event from a horticultural group, followed by reversion to a foraging lifestyle, for the origin of the Mlabri. This is not true; we were careful to state that our data only suggest such a scenario. We agree with Waters that genetic analysis of neighboring groups of the Mlabri (in particular, the Tin Prai) would be useful to further evaluate the scenario we proposed for the origin of the Mlabri. And we clearly agree with Water's concluding statement concerning the importance of interactions between horticultural and foraging groups, as we make exactly that point in the penultimate sentence of our paper.

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References

- 1. Waters T (2005) Comment on "Recent origin and cultural reversion of a hunter-gatherer group." PLoS Biol 3: e269. DOI: 10.1371/journal. pbio.0030269
- Oota H, Pakendorf B, Weiss G, von Haeseler A, Pookajorn S, et al. (2005) Recent origin and cultural reversion of a hunter-gatherer group. PLoS Biol 3: e71. DOI: 10.1371/journal.pbio.0030071

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