



The Ethnobotany of the Yanomami Indians

Ghilleen T. Prance

Editor's Note

The following was originally presented as a keynote address to the Building Bridges with Traditional Knowledge Summit meeting held in Honolulu, Hawai'i in May- June 2001. At the time, controversy over the publication of *Darkness in El Dorado* was raging. Sir Ghilleen Prance provided this introduction to a pictorial essay on Yanomami ethnobotany. It is included here because it presented an ethnobiologist's perspective on the controversy as well as a brief overview of literature on yanomami ethnobotany.

The Yanomami

I have decided to speak on the ethnobotany of the Yanomami people here because this group has recently been the topic of much controversy since the publication of the book *Darkness in El Dorado* by investigative journalist Patrick Tierney (2000). This book made serious accusations against various anthropologists and other scientists who have worked amongst the Yanomami. It is a highly controversial book and makes many speculative accusations about a large number of people including the anthropologist Napoleon Chagnon who characterized the Yanomami as a "fierce people". I have long thought this is a misnomer for the Yanomami with whom I have worked in Brazil and I initially thought that I would be glad to see a book that attempts to debunk that notion. The Yanomami are no fiercer than many other groups of Amazonian people. However, Tierney's book goes beyond the acceptable in the accusations it makes about several other scientists and probably of Chagnon as well. It is interesting that various people and organizations in Latin America have come to the defense of some of the accused, but not of Chagnon or of the other anthropologist involved, paedophile Jacques Lizot, who has certainly made a large and significant contribution to our knowledge about Yanomami (e.g. Lizot 1972, 1984, 1996).

The Brazilian Academy of Sciences (2001) issued a statement in defense of the well-known geneticist and physician, the late James V. Neel. In fact the published version of Tierney's book considerably toned down his accusations against Neel which were made in material released prior to publication that accused Neel of deliberately causing a devastating outbreak of measles among the Yanomami to test his eugenic theories. The Brazilian Academy of Sciences (2001) came out with a strong point by point defense of Neel that ends with the words:

"We are convinced that the scientific enterprise, whatever it is, demands a permanent ethical concern. But it is important to be aware of sensationalist distortions and manipulations. It is deplorable that such gross charges have been raised against a person of a moral and scientific stature such as Prof. James V. Neel. Moreover, despite all denials, the evil has already been done, since suspicion has been raised about the need for biological and medical studies in tribal and ethnically different groups. Certainly, there

Correspondence

Ghilean T. Prance, School of Plant Sciences, University of Reading, Whiteknights, Reading RG6 6AS, UNITED KINGDOM, Gtolmiep@aol.com

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are more elegant ways of achieving notoriety and financial compensation.”

Since Neel was no longer alive to defend himself, it is excellent that his scientific colleagues have come to his defense.

Another of the accused was a most distinguished Venezuelan scientist Dr Marcel Roche. The journal *Science* recently, and most appropriately, published a defense of Roche signed by nine prominent Venezuelan scientists, who were all at one time staff members of the Medical Research Institute, Luis Roche Foundation in Caracas, of which Marcel Roche was director. (Bosch et al. 2001). There is no substance in the accusations made against Roche, one of Venezuela's most well-known scientists.

Given the number of false accusations, it is hard to evaluate Tierney's book accurately, but his case against Chagnon appears to be more founded on data and supports criticisms that have long been voiced by many anthropologists. I have twice been asked to present the other side of the Yanomami to University classes that were using Chagnon's (1968) book as a text. Chagnon's central thesis is that the Yanomami are a fierce, violent people who kill to achieve greater reproductive success and this point has been taken up by some sociobiologists. What does seem well documented, is the fact that Chagnon provoked the Yanomami to be more aggressive and that much of the aggression was not about reproductive success, but over trade goods. This is really no surprise since this has been shown as a cause of disruption and fighting in other groups of indigenous peoples, for example the Xikrin Kayapó who were the subject of a recent book on the subject (Fisher, 2000).

Chagnon's data (published in *Science*, 1988) presenting statistics to show that known killers among the Yanomami had more than twice as many wives and three times more children as non-killers, were rapidly shown to be false. Some of his so-called killers had not killed and some of his 'fathers' had not produced offspring. More alarming than falsified data is the effect that anthropological studies have had on the Venezuelan Yanomami. It is quite apparent that Chagnon was fermenting conflicts between the Yanomami communities. Many of the facts reported by Tierney are also documented in the work of anthropologist Brian Ferguson (1995), who argued that the presence of foreigners, especially Chagnon, provoked much of the conflict between the Yanomami.

Fortunately on the Brazilian side of Yanomami territory, where my experience is, the situation has been much less controversial from the point of view of anthropology. A number of good anthropological studies have been made e.g. (Ramos & Taylor, 1979; Ramos, 1995; Migliazza 1972; Albert & Gomez, 1997) and of their ethnobotany (Milliken and Albert, 1999) and various people have con-

tested the fierceness of the Yanomami (e.g. Albert, 1990). The poor Brazilian Yanomami have had quite a different outside influence to contend with, an invasion of garimpeiros (gold miners). This massive invasion peaked in 1988 and despite strong government measures it continues in a much smaller way even today. The harm has been done through all the diseases that have been introduced by the miners. In July 1993 a heavily armed group of Brazilian garimpeiros massacred twelve unarmed Yanomami at Haximu-teri in Venezuela in the Parima mountains (see Albert, 1994 for an unbiased report). The population of Yanomami has been severely depleted through the actions of the gold miners.

This by way of introduction to the perfectly peaceful way in which I and others (e.g. Schultes & Holmstedt, 1968; Milliken and Albert, 1999) have been permitted to study the ethnobotany of the Yanomami (see Fidalgo & Prance 1976, Prance 1972, 1984). The dramas of gold rushes or controversy about anthropological studies have taken attention away from the normal daily life of the Yanomami and from their plant based culture, as was succinctly summarized by Milliken and Albert (1999) prior to Tierney's book.

“In spite of the fact that the Yanomami have been the subject of innumerable studies, anthropological and otherwise, these widely publicized issues have tended to draw attention away from the aspects of their society and way of living for which other indigenous peoples, in less dramatic or tragic circumstances, have been celebrated. One such aspect is their remarkable knowledge of the forest in which they live, of the species which inhabit it, and of the uses to which they may be put.”

So, for the rest of my allocated time tonight, let us look at this knowledge of the forest from the point view of the ethnobotany of these wonderful people rather than from the externally caused controversy that surrounded them. For details of this work see Fidalgo & Prance, 1976; Prance, 1970, 1973a, 1973b, 1973c, 1986. 1999.

Nowhere in the world is it more important to build bridges than between a discredited anthropological community and the friendly Yanomami people.

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