

# **ANTHROPOENTOMOPHAGY IN BRAZIL: AN OVERVIEW**

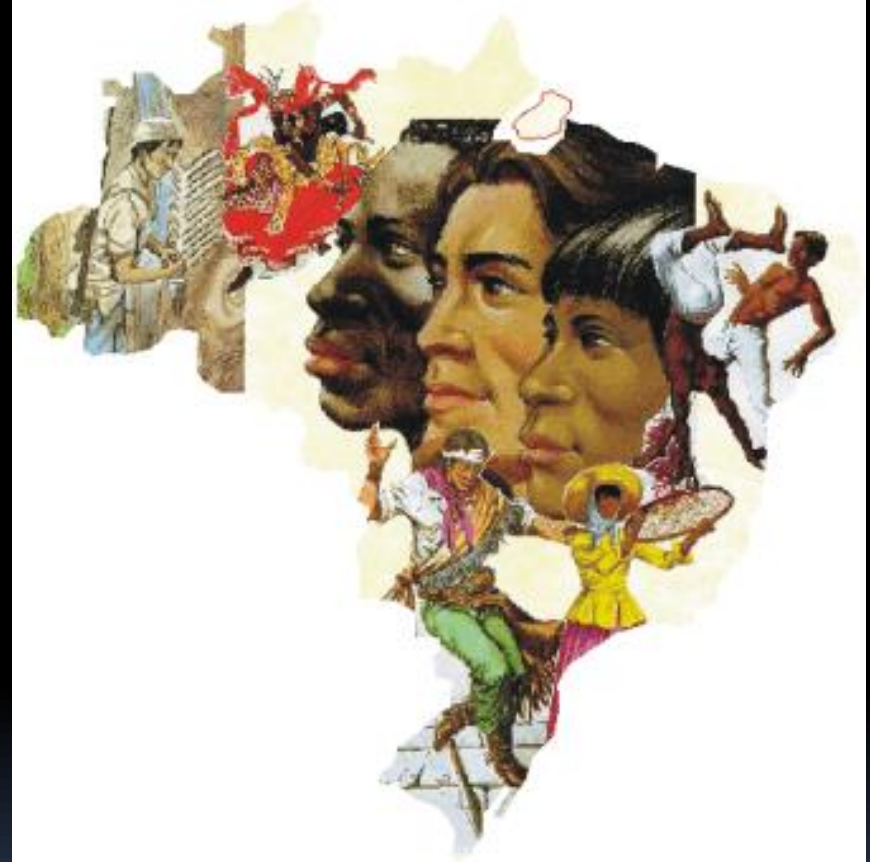


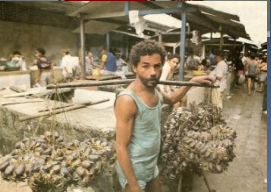
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# Introduction

Brazil has an extremely rich and lush biosociodiversity, represented both by one of the highest rates of biodiversity on the planet and a vast cultural diversity, as there are currently a total of 222 indigenous ethnic groups recognized by the State.

In addition to indigenous people, there are several non-traditional indigenous populations such as artisanal fishermen, Amazon 'caboclos' (river-dwellers.), Afro-Brazilian descendents ('quilombolas' communities), and others





**It is essential to record the rich amount of traditional knowledge, customs, and practices of indigenous and non-indigenous peoples since, with no doubt, they are living representatives of their own culture as well as they have a significant knowledge on the biological resources they depend upon.**

**In this regard, traditional peoples know where, how and when to find edible insect species and know different ways to prepare and conserve them in order to have these resources in times of shortage (Ramos-Elorduy, 1984).**



**In general, people use insects depending on their presence, abundance and availability.**

**They have been consuming different species according to seasons .**



Pankararé Indians extracting honey of *Apis mellifera scutellata* Lepeletier. Photos by Eraldo M. Costa Neto.

⇒ Despite the growing number of articles, reviews and books published on the potential of insects as human food, the entomophagous habit remains unknown (or better, despised) by the vast majority of the world's urban population, especially in developed countries.

✓ Prejudice and ethnocentrism: The consumption of insects is taken as a practice of 'primitive people'.



**The reason we do not eat insects is not because they are dirty and disgusting. Instead, they are dirty and disgusting because we do not eat them.**

**Marvin Harris**

**Ethnographic data on the practice of entomophagy in Brazil date back to the sixteenth century, when the first chroniclers made the first records about the nature and indigenous peoples.**

**The number of species of edible insects in Brazil is undervalued. DeFoliart (2005) only records seven orders, 14 families, 19 genera, and 23 species, while Pereira (1974) records 54 species for the Amazon region. Posey (1987a, 1987b) briefly discusses the cultural and ecological implications of insects as food and summarizes the use of insects for the indigenous peoples of Brazil.**

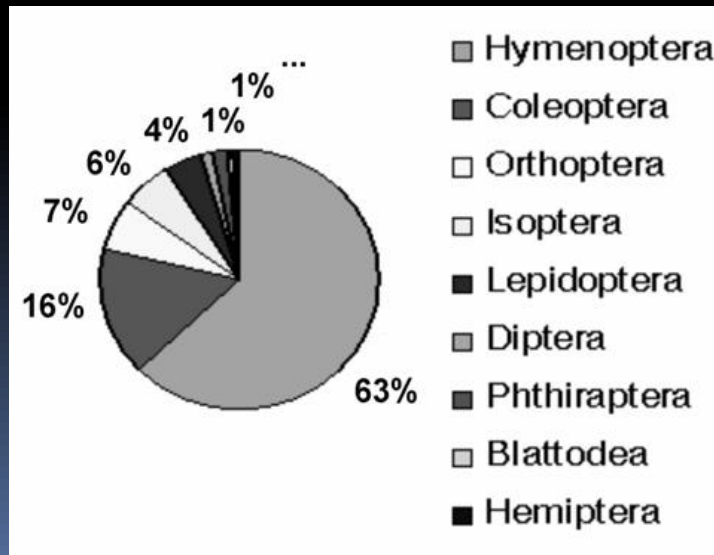


However, insects are still insufficiently investigated by ethnoentomologists, being generally regarded as marginal resources in studies on the uses of various available resources. Therefore, it is necessary that researchers conduct studies using an interdisciplinary approach and pay attention to the values and knowledge of traditional people.

## Results and Discussion

A total of 135 types of edible insects have been reported in 14 (54%) of the 26 states of the Brazilian territory. These resources are divided into nine orders and 23 families.

Only 95 are identified to species level while 18 are at the genus level, and some are reported only by their native names. Species belong to the Hymenoptera are the most abundant (63%), followed by those in the order of Coleoptera with 22 species (16%), and Orthoptera with 9 species (7%).





The consumption of insects occurs in various socio-cultural contexts. They are consumed as immature (nymphs, larvae and pupae) and adult, in part or as a whole. The ingestion occurs both directly and indirectly. Direct use happens through consuming larvae of beetles, bees and wasps or adult ants, while indirect use occurs while honey from bees and wasps is eaten.

It was observed that many insect species are consumed not only as food but also as medicine. For this reason, the hypothesis of nutraceutical entomofauna has been postulated by Costa-Neto, Ramos-Elorduy and Pino Moreno (2006).

## Orders of edible insects according to indigenous societies from Brazil.

Etnia	Órdenes de Insectos consumidos								
	ANP	ORT	BLA	ISO	HOM	COL	LEP	DIP	HYM
Amondawa									X
Araweté						X			X
Ashaninka									X
Bakairi		X							
Bororo						X			
Botocudo									X
Cocama									
Desâna		X		X		X	X		X
Guarani (subgrupo M'byá)						X			X
Jamamadi									X
Kaingang						X	X		
Kayapó				X		X			X
Macu	X			X		X	X		
Makuna									
Matis		X			X				X

The role that insects play in any economic system is important, although they represent only a small part of total resources. However, due to ethnocentric reasons, since insects are not considered appropriately in other cultures, there has been a tendency to ignore or omit their relevance to other cultures. Or, when mentioned, we have only their indigenous or generic names, making it difficult to know which species they belong to.

Considering the rich biosociodiversity found in Brazil, it could be stated that Anthroponentomophagy is underestimated, since nutritious edible insects are abundantly available.





Is there any legislation or governmental interest ?

**NO. Insects are pests and MUST be exterminated.**

Is entomophagy an illegal practice?

**NO. People are free to enjoy eating insects.**

Are insects actually consumed?

**Occasionally, mainly by indigenous peoples who are not 'contaminated' by Western culture.**

Edible insects are a renewable resource that are available for a sustainable exploitation to alleviate malnutrition and hunger in the world.

We must change the idea that insects can not be included as food items of the human diet (**educational campaigns** ), and also we should think of ***marketing strategies*** to launch products based on edible species.

Methods for mass production of insects in adequate sanitary conditions should be done in order to not depend on the collection of specimens directly from nature.

**Buon appetito!**

