Journal of Ecological Anthropology

Volume 4
Issue 1 *Volume 4, Issue 1 (2000)*

Article 4

2000

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The Significance of the Category 'Insect' for Folk Biological Classification Systems

Eraldo Medeiros Costa-Neto[1]

Abstract

In most human societies, the term 'insect' denotes a category that includes organisms other than those of the Linnaean class Insecta, such as bats, snakes, toads, spiders, lizards, scorpions, and slugs. Such a pattern of ethnozoological classification occurs because human beings tend to project feelings of noisomeness, danger, disgust, and disdain toward some non-insect animals (including people) by allocating them to the culturally determined category 'insect'. Metaphors related to this lexeme highlight the negative aspects that are normally associated with real or imaginary perceptions of 'insects'. This article briefly discusses this cultural pattern. It is suggested that researchers who carry out inventories of biological diversity should take into account the ethnocategory 'insect' during their studies, especially if they are collaborating with members of traditional communities.

> "Categories are linguistic constructs which enable a culture to give some order to its universe, organize collective perceptions, and bear out relationships between beings and phenomena."
>
> (Greene 1995)

Introduction

The way people perceive, identify, categorize, and classify the natural world intervenes in the way they think, act, and feel in relation to animals. Cross-culturally, humans perceive and group as 'insects' members of the scientific class Insecta and non-insect animals by transferring qualities associated with cultural constructions of the category 'insect.' This lexeme is often used to designate an ethnocategory that includes organisms such as rats, bats, lizards, snakes, toads, vultures, mollusks, earthworms, scorpions, and spiders, among others (Brown 1979, Posey 1983, Laurent 1995). In Greene's conception (1995), 'insects' can be seen as a representational category since they become metaphorical realizations of other beings or their qualities. For example, the Mofu people of northern Cameroon project their own social and political behaviors upon insects in their environment, especially the ants and termites. There is a type of ant known as **jaglavak** that is considered to be the Prince of the insects (Seignobos et al. 1996). In another example, Silva (1998) has found that of 264 animals that appear in popular expressions, about ten percent were insects.

In general, human beings demonstrate attitudes and feelings of disdain, fear, and aversion toward invertebrates and 'insect'-like animals. According to folk perception, "insects are everything that are useless" (Dias 1999). That's why 'insects' are commonly killed. Ramos-Elorduy (1998) has claimed that negative stereotypes of insects (Linnaean category) can be traced to prejudiced attitudes that associate insects with aboriginal people. More positive attitudes towards invertebrates can be found when these animals possess esthetic, utilitarian, ecological or recreational values (Kellert 1993).

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Different reasons for a consistent human aversion towards insects and other invertebrates can be found in the literature (Kellert 1993). One of these has raised the hypothesis of an innate fear of potentially dangerous insects, which was generalized to include other invertebrates. Another explanation is the association of invertebrates to illnesses and human habitation. A third suggests human alienation to creatures so different and distinct from our own species. To Laurent (1995), the general shape, the morpho-ethological aspects, and the negative sensations attributed to the animals are reasons that explain man's aversion to the invertebrates, particularly to the insects. However, the reasons for which animals other than insects are also named as such have not been recorded in a systematic way.

Categorization of animals from different scientific taxa using a single linguistic label constitutes a pattern of ethnozoological classification discussed by Costa-Neto (1999) through the Entomoprojective Ambivalence Hypothesis. Humans tend to project feelings of harmfulness, danger, irritability, repugnance, and disdain toward non-insect animals (including people) by associating them with the culturally defined category 'insect.' The idea of ambivalence comes from sociology and relates to cultural attitudes that oscillate among diverse, and sometimes, antagonistic values. The result is that while in some cultures 'insects' are viewed as benign creatures (especially by non-Westerners), others take them as malign beings. Projection results from the psychological processes by which a person attributes to another being the reasons of his/her own conflict and/or behavior. This hypothesis can be tested by recording metaphors that depict the emotive-situational character of the perception of animals classified as 'insects' (including the class Insecta).

Considering that human cultures classify animal species in different ways, this article attempts to briefly analyze the ethnocategory 'insect,' trying to understand why some animals are classified as 'insects' in folk zoological classification systems.

Methods

Data were obtained through fieldwork in different communities within the State of Bahia, Northeastern Brazil. Monthly visits of about three days each were made to the Pankararé Indians' Brejo do Burgo village from July to November 1995. Fourteen individuals (nine men and five women) 18-67 years old participated in open-ended interviews (Costa-Neto 1998a). In the Siribinha fishermen's community, fieldwork was conducted in March 1998. A total of 57 individuals were interviewed (Costa-Neto 1998b). And at Feira de Santana city's main market, ten traders were interviewed (Katiúcia et al. 1999).

All interviews, which lasted from thirty minutes to one hour, were conducted in Portuguese. They were transcribed and deposited at the Laboratory of Ethnobiology of Feira de Santana State University (UEFS). Voucher specimens, primarily from the Brejo do Burgo village, were collected and deposited at the same Laboratory.

In addition English, Spanish, Italian, French, German, and Portuguese dictionaries were used to delineate the vocabulary and expressions attributed to the lexeme 'insect.'

Results

The Universality of the Ethnocategory 'Insect'

Human beings answer to the diversity of animal species in their environment by grouping or separating them according to their similarities and differences. This process of categorization is culturally influenced (cognitive categories) and organized in logical patterns (taxonomic structures) that can be distinctive to each society (Berlin 1992, Hunn 1982, Posey 1984). According to Posey (1987), cognitive categories cannot be considered as universal and must be inferred through a methodological approach that allows the researcher "to discover" the conceptual paradigms instead of impose them on the society under study. As he points out, folk biological classification systems do not always fit in artificial classificatory schemes that biologists attempt to create (Posey 1986).

https://digitalcommons.usf.edu/jea/vol4/iss1/4 | DOI: http://dx.doi.org/10.5038/2162-4593.4.1.4

The ethnocategory 'insect' includes different animals depending on the contexts that involve the interactions between humans and animal species (Table 1). The Pankararé Indians from Brejo do Burgo village view snakes as 'insects' because they cause damage to people and domestic animals (Costa-Neto 1997). According to these Indians, however, the boa is not considered an 'insect' because it is useful (they eat it as food). In the main market of the city of Feira de Santana, local traders said that spiders are insects because they are small animals and because they provoke illness; the lizard is an insect because it transmits illness and can be found everywhere; and the 'charge-of-two-heads' (a type of lizard) is an insect because it is easily found in the field (Katiúcia et al. 1999). In the ethnotaxonomy of fishermen from Marituba (located in the south of the State of Alagoas, Brazil) otters (*Lutra* cf. *longicaudis*) are perceived as 'bad insects' (Marques 1995). The fishermen from the county of Conde have showed the same classification (Costa-Neto 1998a). They also referred to the **traíra-canguçu** (an Erythrinid fish) as "an insect that has only a head and is dried." The perception of otters as 'insects' perhaps explains why these animals are pursued and killed by the fishermen; they destroy their fishing gear and compete with them for the same resources (i.e., fish).

Table 1. Select examples of animals perceived as 'insects' and their folk definition.

Animal	Folk definition	Source
Otter	Swampland fishermen from the State of Alagoas considered the otter a bad insect	Marques (1995)
Snakes	"Excepting the boas, all snakes are called insects"	Costa Neto (1997)
Traíra-canguçu (Erythrinid fish)	"... is an insect that has only a head and is dried"	Costa-Neto (1998a)
Spider	"... is an insect because it is small and brings illnesses"	Katiúcia et al. (1998)
Lizard	"... is an insect because it transmits illnesses and it is found everywhere"	Katiúcia et al. (1998)
Big-black ant (Ponerinae)	"... is an insect because it is small and harmful"	Katiúcia et al. (1998)
Charge-of-two-heads (Lizard)	"... is an insect because it is easy to be found in the field"	Katiúcia et al. (1998)

In the ethnoentomological classification system of the Kayapó Indians from the State of Pará, animals with shells and no flesh are interpreted as equivalent to insects. These are categorized as **maja** (Posey 1983). Social insects (**ñy**) have a special relationship with the Kayapó due to the insects' social nature. To the Ndumba, an ethnic group that lives in the highlands of Papua New Guinea, **tovendi** is an ethnocategory that relates to all insects and arachnids (Hays 1983). In some contexts, however, **tovendi** can assign to non-edible animals (e.g., some types of toads), while in other contexts it can mean any disgusting creature (e.g., the snakes). In Japan, the ethnocategory **mushi** includes insects and other animals, such as millipedes, spiders, crabs and small aquatic crustaceans, mollusks, worms, and snakes (Laurent 1995). Working on the definition and cultural representation of this category in the Japanese culture, Laurent has found two zoological meanings. A broad one, in which **mushi** is considered a vestigial category that includes animals that do not fit in any defined category, and another that presents a more restrictive character and meaning both 'autumn singing insects' and intestinal parasites.

Members of the class Insecta can also be excluded from the category 'insect'. As an example, we can cite the perception that the Pankararé Indians have of the group of Abeia, which includes both the social bees and wasps that produce honey. This category is perceived differently from that of the group of 'insects' that includes snakes and other organisms (Costa-Neto 1998b).

Dictionary definitions reveal how polysemic the term 'insect' can be. In English dictionaries, 'insect' assigns lexicographically to an insignificant, worthless person or creature. It is also a name vulgarly given to any creeping, small invertebrate animal that has pairs of legs, such as the spider and the centipede (Cowie 1989, Houaiss and Cardim 1997, Procter 1978, Thompson 1995, Read 1996). In Italian dictionaries, **insetto** refers to the figurative image of a vile, worthless, and useless man (Parlagreco 1974). In French dictionaries (Colin 1993), this lexeme designates all types of small animals, while in Portuguese (Michaelis 1998), the word 'insect' can mean a poor or insignificant person. In Spanish (Moliner 1997) and German (Irmen and Kollert 1995) dictionaries, the lexeme corresponds closely to an entomological definition.

'Insects' as a Life-form Category

The term 'insect' generally represents a level of classification associated with Berlin's (1992) life-form category. According to Berlin, this level of ethnobiological classification is the broadest classification of organisms into groups that are apparently easily recognized on the basis of morphologic characters. However, studies of Brazilian ethnoentomology have shown that in folk zoological classification systems the life-form 'insect' is identified and described based not only on morphologic and biological characters, but also on psycho-emotional criteria, which are important in the moment of naming organisms. In other words, folk taxonomies take into consideration not only knowledge of biological characteristics (cognitive dimension), but also feelings (affective dimension), beliefs (ideological dimension), and behaviors (ethological dimension). According to Marques (1995), these four dimensions mediate interactions between human beings and natural resources in their environments.

Conclusion

It can be said that 'insect' metaphors that are used in ordinary language express behavior, moral conducts, prejudices, and commentary about social status. Future ethnozoological studies could further investigate the Entomoprojective Ambivalence Hypothesis. Researchers who are carrying out surveys on biodiversity should pay attention to the ethnocategory 'insect' during their studies, especially if members of traditional communities are to be involved. Those who are interested in ethnotaxonomics must not presume universal Linnaean categories or impose them on the society under study (Posey 1986).

https://digitalcommons.usf.edu/jea/vol4/iss1/4 | DOI: http://dx.doi.org/10.5038/2162-4593.4.1.4

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