

Indigenous systems of bird classification: Comparative, Ecological and Evolutionary Aspects

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ABSTRACT—In recent years an increasing number of ethnobiological studies have been undertaken to better understand how human populations perceive and categorize information with respect to the living world around them. A universal hypothesis was introduced by Berlin, Breedlove, & Raven (1973), describing similarities among systems of classification. In the past ten years research has, in general, reinforced these proposed universals of classification. But there is still a lack of adequate information as to how biological units are put together. Clearly, studies of a more restricted nature than "the world", and yet more general in scope than just one culture, could contribute useful information along this line.

This study examines classification systems of birds among four indigenous Amazonian groups of people all with similar but not identical cultures and environments (Wayampi, Urubu-Kaapor, Sateré-Mawé, Apalaí). The first three are related linguistically (all from the Tupi linguistic stock) whereas Apalaí is from the Karib linguistic family (an entirely different stock). The purpose of this thesis is to identify those aspects which seem to be characteristic of Tupi classification systems in order to better understand the roles which the physical environments, culture, and language play in the evolution of those systems.

The indigenous classification system of birds was evaluated through the use of 500 photographs and drawings (each one on a separate 3"x5" card). The cards were given to the language helper for grouping into emic categories. The resulting groupings represent their concept of bird classification. The different environments were evaluated through observation, analysis, and reference to the literature.

The broad study of the Wayampi system of bird classification showed the following:

1. The Wayampi have a system of classification which can be visualized hierarchically in accord with the proposal of Berlin et. al. (1973). However, emically it appears that their system can best be visualized as a set of model species (or chiefs) each with its own kingdom or "following" species. These species occur at variable distances from their chief, depending on the comparative degree of similarity which they share with him.
2. These emic categories compare favorably with discontinuities found in nature which are also recognized by the Linnaean system.
3. In general the groupings fit into the scheme proposed by Berlin et. al. (1973), which includes levels for Life-form, Folkgeneric, Folkspecies and Folksubspecies. But, in their

recognition of diverse distances from a "chief", the Wayampi express another three levels not accounted for in the scheme of Berlin: Folkfamily, Folksubfamily and Folksubgeneric.

4. As is the case among most indigenous groups in the world, the level corresponding to "Folkgeneric" seems to be the most salient among the Wayampi.

5. The Wayampi transmit information with respect to birds both through their nomenclature and through their own classification system: information with respect to bird behavior at the more generic levels, onomatopoeic representations of their songs at the more specific levels, and information with respect to morphology on all levels of classification.

The comparative study of the different indigenous classification systems showed the following:

1. Although all of the systems examined in this study indicate the level corresponding to "Folkgeneric" as the most salient, the Tupi groups share certain basic similarities not evident in the non-Tupi group.

2. All of the Tupi groups have the concept of "chief" or "model species" and its following. In cases where a model species of one indigenous group is also known in the other two indigenous areas, frequently that species will also be the "model species" among the other two.

3. The three Tupi groups recognize the same discontinuities of birds by name.

4. The absence of cognates for the names of some birds among Tupi groups indicates a relative degree of chronological separation between the cultures, even though the discontinuity groupings remain almost the same.

5. The Apalai tribe (Karib) has a classification system markedly simpler than the Tupi groups noted on the level of nomenclature and in the distribution of discontinuities.

The environment can influence the evolution of classification systems in the following manner:

1. The names of birds reflect the characteristic species of each region. Even though there exists a tendency to maintain the historical nomenclature of the tribe, new species are included in the system through borrowing from neighboring cultures, by imitation of the bird song, or for reasons of characteristic behavior.

2. Ecological knowledge about the bird species contributes necessary adaptation to daily life. This is reflected in various degrees among indigenous groups depending on their cultural origin and/or the relative degree to which their culture depends on birds for their livelihood.

3. Competition between indigenous (human) and bird populations for wild fruits may influence the classification system.

4. Species of birds, as well as species of trees, serve as indicators of soils adequate for planting and maintaining a garden. This is also reflected in the bird classification system.

Man may influence the evolution of his own bird classification system in the following ways:

1. He may superimpose aspects of his political-cultural system on recognized discontinuities of birds, and in so doing, modify the relationship among component members of that discontinuity.

2. He may superimpose aspects of his economic culture on certain birds, and in so doing, determine who the component members are of a given discontinuity of birds. By emphasizing a particular economic value of special interest to him, he will consequently emphasize some birds more than he will others in the system. If he imposes the economically important aspect of some food type, for example, only those birds associated with that food will be highlighted. Other birds will be de-emphasized.

KEY WORDS— ethnobiology, ethnozoology, ethnoclassification, cognitive systems, birds, Amazonia, Wayampi, Urubu-Kaapor, Sateré, Apalaí, Tupi, Carib, Karib