

*Review***Ethnozoology: A Review****Melodi YENMİŞ<sup>1,\*</sup>, Dinçer AYAZ<sup>1</sup>, C. Varol TOK<sup>2</sup>**<sup>1</sup>Department of Biology, Science Faculty, Ege University, Türkiye<sup>2</sup>Department of Biology, Science-Literature Faculty, Onsekiz Mart University, Türkiye

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**Abstract:** Here we summarized the historical improvement of the terms ethnobiology and ethnozoology in general. The term ethnobiology was first used in 19th century as well as the term ethnozoology which was primarily used in 1899. However, relationships between people and their environment are as old as the history of men. First, the interactions were simply utilitarian, like hunting, making clothes, faunal and floral derived medicines; but there were other kinds of use too, such as spiritual and magical handling. Anatolia has always had a great biodiversity and the civilizations that lived at this mainland were very different. History of Anatolia is full of different ethnobiological data. And human-fauna relationship is also a promising area for the researches. However, there are not many studies about the interactions of people and environment in Anatolia. Due to the lack of investigations, existence of flora and fauna in Anatolian culture is out of focus.

**Keywords:** Ethnobiology, Ethnozoology, Anatolia, Flora, Fauna, History

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**History of Ethnobiology**

The term "ethnobiology" is a combination of two words, "ethnos" and "biology," The definition from 19th century says that "the study of the biological sciences as practiced by the various peoples studied by ethnology" (Clement, 1998). Subdivisional terms were used after that as ethnobotany (Harshberger, 1896), ethnozoology (Mason, 1899), ethnoscience (Murdock et al., 1950), ethnohistory (mid-20th century).

Hunn 2007 separated the history of the term ethnobiology in four phases: Ethnobiology I involve the period before the term was being used at the end of the 19th century. This first phase is qualified as pragmatically. Ethnobiology II was thorough in the cognitive/linguistic anthropology of the 1960s. Ethnobiology III bonds knowledge of ecological outcomes with implementation.

Ethnobiology IV lay stress on the rights of native people to control their conventional information.

Ethnobiological studies have shown that indigenous people have a katamathesis of nature and of the biological sources they interact (Mourão and Nordi, 2002; Nishida et al., 2006; Alves et al., 2013).

**Ethnozoology as a subdiscipline**

Relationships between humans and animals were and are highly close (Alves, 2012). One of oldest known human activities is hunting which people exhibited for utilitarian reasons mostly (Alves, 2012). Outputs that were derived from the animals used as food (Alvard et al., 1997), clothing (Alves et al., 2009), tools (Alves and Pereira Filho, 2007), medicine and magical-spiritual purposes (Prins et al., 2000; Inskip and Zimmermann, 2009).

Stearns (1889) published the first article with an ethnozoological drift and he discussed the use of shell money (subdiscipline of ethnomalacology). Ethnozoology term was first used in 1899 in the article named *Aboriginal American Zoötechny* written by Mason. The definition that Henderson and Harrington (1914) used for ethnozoology is the one that comprise most of the modern studies by saying “the study of existing cultures and their relationships with the animals in the environments surrounding them”.

The use of animals or products derived from them has been documented along the history of men using papyri, archives and medicinal abridgment, even at the ancient Mesopotamian, Assyrian and Babylonian urbaneness (Lev, 2012; Vijayakumar et al., 2015).

Ethnozoological studies are especially necessary in terms of medicinal purposes; finding out new medications is essential for human health (Vijayakumar et al. 2014). Some of the oldest medicinal researches that used faunal resources are Hippocrates (5th century BC), Dioscorides (1st century AD), Avicenna (10th century AD) and Ibn al Baitar (12th century AD) (Vijayakumar, et al. 2015).

As ethnobiology has branches such as ethnobotany and ethnomedicine, ethnozoology has its subdisciplines too. The animal taxon involved in the investigation would be inclosed by the different subdivision; like insects (Ethnoentomology), fishes (Ethnoichthyology), birds (Ethnoornithology), mammals (Ethnomastozoology), reptiles/ amphibians (Ethnoherpetology) and primates (Ethnoprimatology).

### **Conservation and Folklore**

Ethnozoological studies can help us develop sustainable management plans (Alves, 2012), in this way they are fundamental to conservational attempts (Alves and Souto, 2011; Mendonça et al., 2014).

It is requisite to plan conservational acts to preserve natural biodiversity (Alves and Souto 2010), and to do so faunal consumption of people must be considered as essential to ethnozoological studies (Alves 2012). It was shown that ethnobiological studies contributed to start dialog between native people, find out new management strategies, understand and interpret the environmental impacts of humans (Lopes et al., 2010; Alves and Souto, 2015).

### **Anatolia: Culture, Narratives, Ruins, Museums**

Anatolia has one of the greatest faunal and floral diversity in the whole wide world. But there are a few studies about worldwide cross-cultural studies in general (Pieroni et al., 2011) and Anatolian ethnozoology in particular. Ethnozoology studies should be expanded because the findings of the researches will help to develop new debate platform which will lead us to preserving conservation acts (Arluke, 2003).

Human-animal relationships does not only include simple pragmatic notions but also magical and spiritual believes and practices (Alves, 2012). Mythologies show close unity and with animals, as totems, animal-gods or stories that has been told throughout history (Allaby, 2010; Alves et al., 2013).

Anatolia was the home of many different cultures throughout time. This varying knowledge of people can easily been pursued with the help the museums and archaeological sites. And these primary places keep valuable information about human-fauna interactions. Such as archeological museums some of which contains human-animal mosaics from 4th century BC.

Anatolia is a very rich region in terms of stories and beliefs. Those cultural structures are often symbolized by or used faunal or floral elements. The early shamanism that was common in old Anatolian residents has its impacts even now. Medicinal utilization of plants and animals is still resuming. Therewithal, nature has always been the source of varying mythological stories and beliefs. This wide diversity is a way to plan conservational management since local people are at the center of the act and they are reachable.

Anatolia has many herpetological stories, beliefs and archeological data. Through ethnoherpetological studies in particular, would help us to find out the historical changes on the perspective on reptiles and amphibians. As one of the pedestal ethnozoological creatures, reptiles take up a significant room in our knowledge and the interpretation of our relationship with them differently depends on culture, environment and personal experience (Alves et al. 2009). Snakes have often been used for medicinal objectives since remote times in different cultures (Brazil, 1934; Baldwin, 1995). Because of their unusual locomotion, nature and life-cycle, reptiles are often the topic of interest and a matchless folklore. In many incidences these apprehensions ensample the mysterious habits and disastrous mystique of reptiles, including aspects like disease, poison and death

(Goodman and Hobbs, 1994). Reptile centered studies in Anatolia, starting with snakes would be the first step to connect culture, history and science since there are many folkloric assets and narratives like the medusa headed pillars (Apollon temple, Basilica cistern) and basilisk stories (Şahmaran, head of snakes). These attempts will also start to plan sustainable use of nature and conservation plans. Unfortunately, snakes have been overused without a sustainable foundation which creates apprehension for their conservation all over the world as for many other animals (Yau et al., 2002).

Cross-cultural ethnozoological studies are essential to understand human populations and their use of biodiversity (Alves and Rosa, 2005). Nature and culture have mutual influences, and ethnobiological (and subdisciplinary) studies are the greater part to reveal the interrelations.

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