



## Ethnozoology of Malay Tribe in Bagan Serdang Village, Pantai Labu District

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### ABSTRACT

Bagan Serdang Village is one of the villages in the Pantai Labu District, Deli Serdang Regency, North Sumatra Province. This coastal area boasts abundant natural resources, including seafood, tourism, agriculture, and fisheries. The aim of this research is to uncover, analyze and synthesize the believe (cosmos) and local knowledge (corpus) of the Malay community in Bagan Serdang Village in processing and utilizing (praxis) animal around the coast. This type of research is an exploratory survey with an emic and etic approach. The research sources are key informants selected through purposive sampling techniques. Data collection through interviews, observations, and species inventories. Data analysis was carried out by qualitative type (reduction, display and verification). The results of the study showed that there are 28 animal species were found to be used for various purposes, ranging from food sources, medicine, and rituals. Some of these animal are processed before use, but many are also unprocessed.

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## Introduction

Ethnobiology is the study of the biological knowledge of a particular ethnic group, including their knowledge of the environment, plants, and animals, and the relationships between them (Anderson, Pearsall, Hunn & Turner, 2011). This relationship refers to human perceptions of their biological environment, which

influence human behavior, while human behavior influences and shapes their biological environment. Ethnobiology encompasses ethnoecology, ethnobotany, and ethnozoology.

As a branch of ethnobiology, ethnozoology focuses on the study of beliefs, local knowledge, and animal use within an ethnic group. Through ethnozoological studies, we can understand

and analyze the views/beliefs, local knowledge, and animal use practices of local communities, contributing to traditional conservation and the fulfillment of their subsistence needs. Local knowledge, conservation practices, and animal management that positively impact the sustainability of these biological resources must be uncovered and utilized to improve community well-being. Community well-being is determined by the sustainability of the biological resources around them, as these resources are essential for meeting their subsistence needs.

Indonesia is renowned for its biodiversity due to the diversity of flora, fauna, and ecosystems and has various ethnicities with unique and distinct cultural knowledge from Sabang to Merauke (Oktoba, 2018). Every ethnic group in Indonesia utilizes plants for various purposes, including as a source of food, medicine, traditional ceremonies, and others. This is in line with the results of Bahriyah's (2015) research which states that each community group has local knowledge about the use of plants.

One of the ethnic groups possessing a wealth of local knowledge and rich biological resources is the Malay Tribe in Bagan Serdang Village. Bagan Serdang Village is located in Pantai Labu District, Deli Serdang Regency, North Sumatra Province, Indonesia, with an area of 600 hectares. Bagan Serdang Village has three "dusun" with a population of 1,674 and 466 families (BPS, 2020). Bagan Serdang Village has a coastal area of 32 hectares and a mangrove forest of 63 hectares (BPS, 2020). Most of its members work as a fishermen. Based on the community profile of Bagan Serdang Village in 2022, as many

as 89% of the community depends on marine products for their livelihood. Coastal communities generally rely heavily on marine products, especially fishermen (Fatah & Lisa, 2022).

The Malay Tribe of Bagan Serdang Village depend on the natural resources around the coast, so local wisdom also emerged as a result of the community's relationship with the environment. To this day, they still use traditional methods taught by their ancestors in ancient times with the values contained in their heritage, which are very helpful in preserving the sea (Yani & Dora, 2023). This local knowledge is the result of the community's interaction with the forest ecosystem and the biological resources contained therein that has been going on for a long time and is generally influenced by the type of ecosystem where they live, the climate especially rainfall, culture, economy, technology and politics (Walujo 2009).

The local knowledge of the Malay Tribe in Bagan Serdang Village regarding animal processing and utilizing needs to be explored and analyzed. This knowledge can provide information on the ecological impacts of these activities, which can inform conservation efforts and the sustainable development of the Pantai Labu area. Furthermore, optimizing local knowledge in utilizing the environment can help improve their independence and well-being.

In general, local knowledge and wisdom of a community are only passed down orally from generation to generation (Anderson, Pearsall, Hunn & Turner, 2011), so that this knowledge can be lost from the community. In fact, the rate of species loss is parallel to the rate of loss of traditional knowledge (Kartawinata 2010). Based on the

description above, it is important to document local beliefs and knowledge about animals so that they are not lost and can be passed on to the younger generation before their views, thoughts and behaviors are degraded by environmental influences and external cultural interventions.

To uncover the local knowledge of the Malay community in Bagan Serdang Village, a multidisciplinary study is needed covering various aspects of ethnoscience studies, one of which is through ethnozoology studies. Based on the description above, it is necessary to conduct research on the Ethnozoology of the Malay Tribe in Bagan Serdang Village, Pantai Labu District, Deli Serdang Regency.

## **Materials and Methods**

### **Location and Time of Research**

This research was conducted in Bagan Serdang Village, Pantai Labu District, Sumatra Utara Province. This research was conducted over a period of three months starting from July to September 2025.

### **Data Collection Techniques**

Data collection in this study was carried out through semi-structured interviews, participatory observation and documentation.

### **Data Analysis**

The data analysis used in this study is descriptive qualitative consist of data reduction, data display and verification (miles and hubermann, 1992).

## **Results and Discussion**

### **The Malay Tribe's Cosmos System Regarding Animals**

The Malay community in Bagan Serdang Village believes that the various animal species on earth are God's creation. Nature, including animals, was created to fulfill human needs. Humans, as rational

beings, are commanded to use their reason to utilize the existence of various animal species to fulfill their needs. However, excessive exploitation of animals should not lead to a decline in their populations, as this would impact their lives. This view aligns with the theories of biocentrism and ecocentrism, which recognize the value of nature and the environment. It contrasts with anthropocentrism, which only recognizes the value inherent in humans, allowing humans to exploit nature to their fullest potential.

Malay views on animals vary, with beliefs about mystical meanings or specific rituals associated with animals (such as geckos or turtledoves), and the application of environmental wisdom and the urge to maintain the balance of nature. Animals also appear in cultural patterns or symbols, and there is also a mystical understanding of a king who is at one with nature and animals.

Animals, along with plants, the sea, and land, are resources utilized by the Malay community to fulfill their needs. Tribal communities possess wisdom in utilizing natural resources, including animals, by observing and respecting nature's ability to prevent disasters.

Some animals are considered to have mystical significance or are associated with certain events. An example is the gecko. A gecko is believed to bring bad luck if it falls on a person. The turtledove has mystical significance according to the Malay tribe. Its single caw is considered a sign of prayer time, two caws mean disaster, and three caws are a sign of good fortune. Crows have mystical significance. Tribes believe that a crow's caw signals a stormy or stormy day. The Asian stork also has mystical significance. If heard far from the village, it is said to indicate a death in the family. Kingship, as believed to be at one with nature, was believed to possess supernatural abilities to blend with nature, including wild animals, and was even revered by wild animals. Other animals considered mystical include the kampung chicken (manok),

which must be consumed for easy childbirth and must be kept for the safety and comfort of the home. Another myth prevalent in the Bagan Serdang Village community is that if an owl hoots at night, it's believed to be the presence of spirits. Hearing a crow at night is believed to indicate a death. A monitor lizard entering the house is a bad omen. Hearing a frog's croak is believed to herald rain.

Animals also have symbolic significance among the Malay community. Birds such as birds (ducks, chickens), reptiles (snakes, dragons), wild animals (lions, tigers), insects (ants, butterflies), and aquatic animals inspire various artistic patterns and motifs. Culturally and spiritually, the community understands the importance of balance between humans and nature, encompassing a positive relationship with animals and the environment. The Malay community is predominantly Muslim, so Islamic values influence their views on animals, such as a love of cats, as they were the Prophet Muhammad's favorite animal, a prohibition against killing animals that do not harm life, and a prioritization of compassion when slaughtering livestock, such as beginning with the words "Bismillah" (in the name of God), and avoiding harming animals as much as possible, as using sharp cutting tools can cause a quick and painless death. These Islamic beliefs undermine beliefs that conflict with religion.

The Malay tradition of preserving animals includes careful harvesting of bee honey. Bees must not be killed to obtain their honey. To this end, a ceremony is held led by a shaman and his staff, who are tasked with collecting the honey. He can safely collect the honey by holding the smoke of a smokeless incense burner close to the bees. When the smoke is exposed, the bees flee, making the honey easy to collect. Another tradition that embodies the wisdom of raising animals to maintain ecological balance is the use of civets, which are actually enemies of chickens. However, these animals have never been eradicated by

the tribe. Although civets can threaten chickens and ducks, they play a role in environmental sustainability. Civets enjoy eating fruit, especially sugar palm fruit, coffee beans, and other seeds. After consuming these fruits, especially sugar palm fruit, the coffee beans are scattered everywhere and readily grow in the areas where the animals defecate. Therefore, the tribe rarely plants sugar palm trees or other fruit trees intentionally.

### **The Malay Tribe's Corpus System Regarding Animals**

The Malay community possesses knowledge of the diversity of animal resources around them. Their knowledge of animals is demonstrated by their ability to recognize, name, and group animals based on their role or use. They possess knowledge of various animal species, both wild and farmed, due to their frequent interactions with animals, both during fishing and in gardens and forests. They are generally familiar with the various animal species associated with fishing and the animals around their settlements. However, their knowledge of animal species diversity is not as extensive as their knowledge of plant species diversity, as their primary occupation is fishing, while raising livestock is a secondary activity. This knowledge is crucial for harmoniously managing nature to maintain ecosystem sustainability. The community must assume a high level of responsibility for the continued maintenance of both wild and domesticated animals, as a disruption in animal populations can disrupt the ecosystem's balance, negatively impacting humans.

Interviews with informants revealed that the Malay community in Bagan Serdang Village has approximately 23 wild animal species and five farmed animal species. These animal species belong to 24 families, namely Phasianidae, Anatidae, Bovidae, Felidae, Canidae, Viverridae, Cercopithecidae, Tupaiidae, Manidae, Columbidae, Bucerotidae, Tytonidae,

Corvidae, Gekkonidae, Phytionidae, Varanidae, Lumbricidae, Palaemonidae, Portunidae, Pholadidae, Cyrenidae, Clupeidae, Scombridae, Lologinidae. The Anatidae, Bovidae, Columbidae and Cyrenidae families are the animal families with the most species members in treating

diseases according to the Malay Tribe in Bagan Serdang Village with 2 species each. The most frequently used part of an animal is the entire body. The following diagram shows the parts used by the Malay people in Bagan Serdang Village.

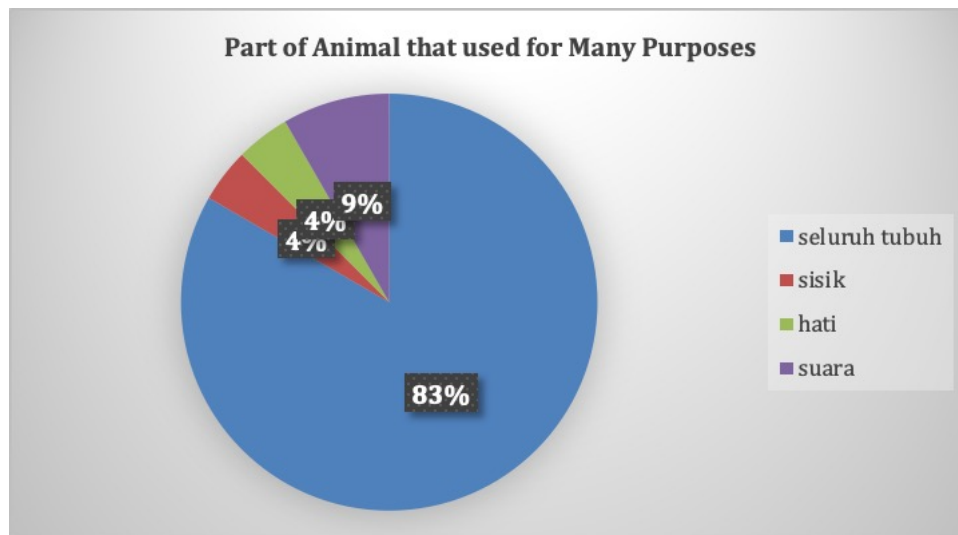


Figure 1. Part of Animal that Used for Many Purposes

### Practices of Utilizing Animals Used as Various Purposes

The Malay people of Bagan Serdang Village possess knowledge of utilizing

plants for various purposes. Some are used directly, but most require processing.

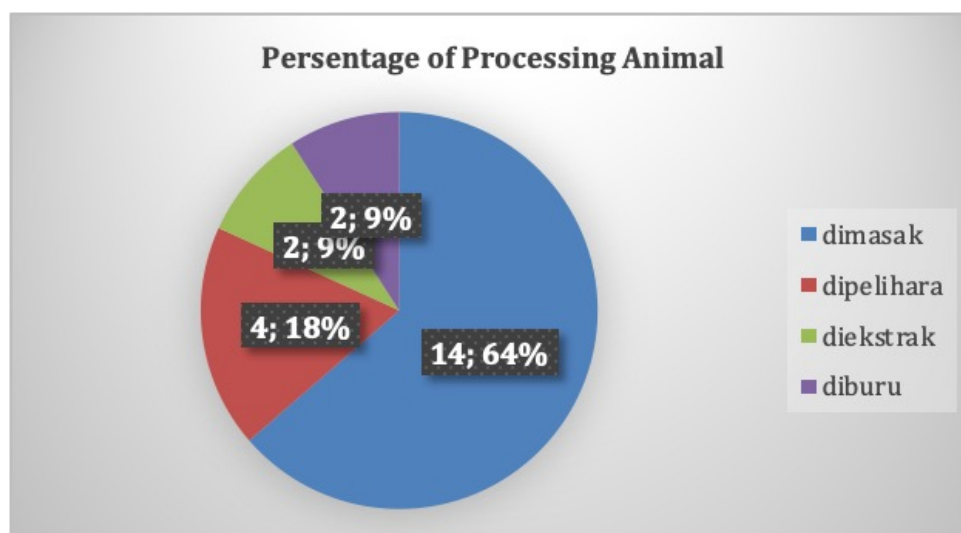


Figure 2. Part of Processing Animal

The Malay people of Bagan Serdang Village not only fish for sale but also gather shellfish for side dishes and to sell. This

aligns with Romi's (2022) research, which found that to meet their food needs, the Bunguran people of the Natuna coast forage

for their own food by scavenging on rocks. This scavenging is done by following the ebb and flow of the tide. They find fish and other marine life, which can be eaten as side dishes with rice and sweet potatoes at home.

The Malay people of Bagan Serdang Village rarely hunt. They usually hunt animals that disturb or eat their livestock. The animals they hunt are usually koro (monkeys). This aligns with Romi's (2022) research, which states that hunting is a common activity among the people of the Natuna coast to protect their gardens from wild boar and monkeys. They also hunt to find other forest products that provide a livelihood, such as wild honey and several types of edible animals, especially mouse deer.

## Conclusion

1. The Malay cosmos consists of myths, values, and norms such as good fortune, fortune, and taboos. The cosmos influences the corpus (local knowledge) and praxis (utilization) of environmental units, plants, and animals.
2. The Malay plant corpus comprises 80 plant species used for various purposes, from food and medicine to cosmetics and rituals, firewood, and building materials. The largest family is Zingiberaceae, the largest organ is leaves, and the greatest use is as medicinal plants.
3. Praxis related to plants and animals is mostly processed through cooking and consumed through eating.

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## Reference

Anderson EN, Pearsall DM, Hunn ES,

Turner NJ. (2011). *Ethnobiology*. United States of America (US): Willey Blackwell.

Bahriyah, I., Hayati, A., & Zayadi, H. (2015). Studi Etnobotani Tanaman Kelor (*Moringa oleifera*) di Desa Somber Kecamatan Tambelangan Kabupaten Sampang Madura. *Biosaintropis*, 1(1), 61–67. Batubara, T., Badru., & Muhajir, A. (2022). Tradisi Tepung Tawar: Integrasi Kebudayaan pada Masyarakat di Sumatera Utara: *Journal Medan Resource Center* 2(1); 10-16.

Dewin VL, Anwar MS, Prayogo H. (2017). Kajian etnozooologi Masyarakat Dayak Seberuang di Desa Gunung Mali Kecamatan Tempunak Kabupaten Sintang. *Jurnal Hutan Lestari* 5(4): 978-986.

Fatah, A., & Lisa, N. P. (2022). Pengembangan Potensi Lokal Pesisir Mengolkan Menjadi Nugget Guna Meningkatkan Pendapatan Ekonomi Masyarakat Nelayan di Seuneubok Aceh. *Jurnal Abdi Masyarakat Indonesia*, 2(2), 427–432.

Kartawinata K. (2010). *Dua Abad Mengungkap Kekayaan Flora dan Ekosistem Indonesia*. Jakarta (ID): Bidang Lingkungan, Pusat Penelitian Biologi, Lembaga Ilmu Pengetahuan Indonesia (LIPI).

Oktoba, Z. (2018). Studi Etnofarmasi Tanaman Obat Untuk Perawatan Dan Penumbuh Rambut Pada Beberapa Daerah Di Indonesia. *Jurnal Jamu Indonesia*, 3(3), 81–88.

Romi, Januariusdi, Maggangka. (2022). Strategi Masyarakat Bunguran Pesisir Natuna Untuk Mempertahankan Hidup Dalam Perspektif Budaya Agamis. *Finest Jurnal Riset Dan Pengembangan Ekonomi Islam*.

6(2); 1-16.

- Sunaryo E, Anwari MS, Yani A. (2019).  
Etnozoologi Masyarakat Dayak  
Jelai Hulu Embulu Lima di Desa  
Mekar Utama Kecamatan  
Kendawangan Kabupaten  
Ketapang. *Jurnal Hutan Lestari*  
7(3): 1100-1110.
- Walujo, E.B. (2009). Etnobotani:  
Memanfasilitasi penghayatan,  
pemutakiran pengetahuan dan  
kearifan lokal dengan menggunakan  
prinsip-prinsip dasar ilmu  
pengetahuan. Prosiding Seminar  
Etnobotani IV. Cibinong Scnce  
Center- LIPI, 18 Mei 2009.
- Yani, R dan Dora, N. (2023). MANHAJ:  
Jurnal Ilmu Pengetahuan, Sosial  
Budaya dan Kemasyarakatan P 2 (2):  
94.