Ethnozoology by Batak Toba Tribe in Bahal Gajah Village, Simalungun Regency, North Sumatera, Indonesia

R Rambey*, P Siringo-ringo, B Y Buana, D Wiranata and B Prayoga
Faculty of Forestry, Universitas Sumatera Utara, Medan, Indonesia.

E-mail: *ridahati.2017@gmail.com or ridahati.rambey@usu.ac.id

Abstract. The use of wild animals has been used by various tribe groups in the world for a long time to fulfil their daily needs, including as source of food and medicine and means of cultural rituals. The purpose of this study was to determine the animals used by the Batak Toba tribe in Bahal Gajah Village, Simalungun regency, North Sumatra. The number of animals used by the Batak Toba Tribe in Bahal Gajah Village is 20 species of animals, the utilization of which includes 14 animals for consumption, 7 types of animals for medicine, and 4 types of animals for rituals. Based on class 6 classes, namely mammals, reptiles, aves, molluscs, pisces and amphibians.

1. Introduction
Indonesia has a lot of forests, in the forest there are interrelationships between animals and their environment, since the time of our ancestors a high level of biodiversity, a wide variety of endemic flora and fauna that are unique to the forest can be found [1]. Not only in Indonesia, several countries in the world also use animals to support their lives, one example in Africa in the Mpem et Djim and Deng-deng National Park areas also uses the Smutsia gigantea pangolin for traditional medicine [2]. The use of various biological resources cannot be separated from human life. The biological resources in question are plant and animals. The use of wild animals has been used by various tribe groups in the world for a long time to fulfill their daily needs, among others as a source of food and medicine, a means of cultural rituals and the economic interest of the sub-system. The variety of animal uses in an implication of various tribe ties, both in terms the types of animals used, the form of use and how to use them [3].

The use of flora and fauna has been carried out by various tribe groups in North Sumatra for a long time to fulfill their daily needs. Diversity in the use of animals encourages the formation of patterns, namely a system or a permanent way of working in utilizing various types of animals. The community around the forest makes the forest their life support because in the forest there are animals that form interactions and are interrelated and can be used by humans [4].

Bahal Gajah Village is one of the villages in Simalungun Regency with the majority of Batak tribe. Community work is farming, community life is very dependent on nature. The Batak community is also known for its thick customs and highly upholds local socio-cultural values. The use of animals in community socio-cultural activities is important for the Batak tribe group. Therefore, this research is important to do to find out what types of animals are used by the local community.

This study aims to determine the use of community animals both for food, traditional ceremonies and for other activities related to the lives of the Batak tribe community.
2. Materials and methods
The research was conducted from February to July in Bahal Gajah Village, Sidamanik District, Simalungun Regency with the selection of the research location in Bahal Gajah Dolok Hamlet. The research method used is snowball sampling [5] by means of interviews with key informants in the community. The data taken includes the types of animals used, and the use of animals. The data obtained from the interviews were made in tabulations and then discussed descriptively.

3. Results and discussion
Based on the results of the interview, 20 species of animals were used by the Batak community of Bahal Gajah Dolok Village. The animals used by the community come from the family Suidae (1 species), Cervidae (2 species), Trionychidae (2 species), Gekkonidae (2 species) and Canidae (2 species) which have 2 species each. Based on the class level, 6 classes of animals were obtained, namely Mammals, Reptiles, Aves, Amphibians, Pisces, and Molluscs, information on animal species can be seen in Table 1a and 1b.

Table 1a. Species of animals used by the Batak Toba tribe in Bahal Gajah Village, Sidamanik District, Simalungun Regency.

| No | Local name | Scientific name | Family  | Type of utilization | Used part |
|----|------------|----------------|---------|---------------------|-----------|
| 1  | Wild boar  | Sus scrofa      | Suidae  | Consumption, Ritual | Whole body|
| 2  | Weasel     | Paradoxurus hermaphroditus | Viverridae | Consumption | Meat |
| 3  | Cat        | Felis catus     | Felidae | Consumption, Medicinal | Meat, Fur |
| 4  | Dog        | Canis lupus familiaris | Canidae | Consumption, Ritual | Whole body |
| 5  | Field mouse | Rattus argentiventer | Muridae | Medicinal | Whole body |
| 6  | Bufallo    | Bubalus bubalis | Bovidae | Consumption, Ritual | Whole body |
| 7  | Tiger root | Prionailurus bengalensis | Felidae | Consumption | Whole body |
| 8  | Squirrel   | Tupaia sp       | Tupaidae | Consumption | Whole body |

| Aves |
|------|
| 9    | Grouse    | Dendrocygna    | Anatidae | Consumption | Meat, Egg |
| 10   | Chiken    | Gallus gallus domesticus | Phasianidae | Consumption, ritual | Meat,Egg |
| 11   | Duck      | Anas platyrhynchos domesticus | Anatidae | Consumption | Meat, Egg |

| Amfibi |
|--------|
| 12     | Field frog | Fejervarya cancrivora | Ranidae | Medicinal | Meat |

| Refil |
|-------|
| 13     | Lizard     | Varanus salvator | Varinidae | Consumption | Meat |
| 14     | Rice field Snake | Malavopython reticulates | Phytonidae | Medicinal | Meat |
Table 1b. Species of animals used by the Batak Toba tribe in Bahal Gajah Village, Sidamanik District, Simalungun Regency (Continue).

| No | Local name | Scientific name     | Family         | Type of utilization | Used part   |
|----|------------|---------------------|----------------|---------------------|-------------|
| 15 | Earthworms | *Lumbricus terrestris* | *Lumbricidae*  | Medicinal           | Whole body  |
| 16 | Snail      | *Achatina fulica*   | *Achatinidae*  | Medicinal           | Meat        |
| 17 | Eel fish   | *Monopterus albus*  | *Actinopterygii*| Medicinal           | Whole body  |
| 18 | Tilapia fish | *Oreochromis mossambicus* | *Cichlidae* | Consumption         | Whole body  |
| 19 | Catfish    | *Clarias nieuhofii* | *Claridae*     | Consumption         | Whole body  |
| 20 | Goldfish   | *Cyprinus carpio*   | *Cyprinidae*   | Consumption         | Whole body  |

The largest class used by the community is the type of mammal which consists of 8 species. The use varies from ritual, consumption, and treatment. Most utilization is for consumption needs 87.5%, while for medicinal use 37.5%, and utilization for rituals is 25% while the smallest class utilized by the community is the types of molluscs which consists of 2 species, its use is for medicine. Can be seen in the table 2. The parts of animals that are used start from the whole body, meat, voice, bones, blood, skin, horns, fat, eggs, teeth, head, liver, shells, dirt and hair. There are more than two uses for the stew that are used by the community, namely *Sus scrofa*, *Bubalus bubalis*, *Gallus gallus domesticus*. According to [6] wild animals are an important source of food and income for communities on the outskirts of the Amazon basin forests. Some types include paca (*Cuniculuc paca*) and collared peccary (*Pecari tajacu*).

3.1 Use of animals for socio-culture
The customs of the Batak Toba tribe are a hereditary tradition from their ancestors. The customs are still strongly attached to the community, especially the elderly, and they say customs. Rituals are a way to respect the customs of the Batak Toba tribe in Bahal Gajah Village, starting from weddings, customary law, to weddings. Animals used include dogs (*Canis lupus familiaris*), pigs (*Sus scrofa*). Buffaldo (*Bubalus bubalis*), chiken (*Gallus gallus*). For marriage and death, the usual uses are pigs and buffaloes. Meanwhile, to welcome the birth of animals commonly used are chickens.

3.2 Utilization of animals for consumption
Based on the results of interviews in the field, there are 14 animals that are used for consumption by the Batak Toba tribe in Bahal Gajah Village. For the Batak Toba tribe in Bahal Gajah Village, there is no taboo on eating animals or consuming animals, only poisonous animals that cannot be eaten. Types of animals for consumption include wild boar (*Sus scrofa*), civet (*Paradoxurus hermaprodites*), cats (*Felis catus*), dogs (*Canis lupus familiaris*), buffalo (*Bubalus bubalis*), Harimokka, squirrels (*Tupaia*), grouse (*Dendrocygna*), Chicken (*Gallus gallus domesticus*), Duck (*Anas platyrhynchos domesticus*), Lizard (*Varamus salvator*), Mujahir Fish (*Oreochromis mossambicus*), Goldfish (*Cyprinus carpio*), Catfish (*Clarias nieuhofii*)

3.3 Utilization of animals for medicine
Animals are used by the Batak Toba community not only for consumption but also for medicinal purposes. Several types of diseases that can be cured, such as typhus, fever, body aches. Based on [7]
states that the Tobelo Dalam tribe also uses wild animal such as kuskus as a source of protein and also as medicine.

### Table 2. Use of animal species for treatment.

| No | English name   | Scientific name                      | Utilization              | Usage procedure            |
|----|----------------|--------------------------------------|--------------------------|---------------------------|
| 1  | Dog            | Canis lupus                          | Typus, dengue fever      | Soup                      |
| 2  | Field mouse    | Rattus argentivent                | Asthma                   | Fried                     |
| 3  | Field frog     | Fejervarya cancrivora              | Baby teeth booster       | Fried                     |
| 4  | Field snake    | Malayopython reticulates           | Typus                    | Soup                      |
| 5  | Earthwarms     | Lumbricina                           | Typus                    | Cooked                    |
| 6  | Snail          | Achatina fulica                     | Boils                    | Saliva smeared on boils   |
| 7  | Eel fish       | Monopterus albus                    | Animea                   | Cooked                    |

Of all the animals used by the Batak Toba tribe above, they have different economic values and the selling price depends on a certain situation. But of all the animals above, the ones that are most often sold include pigs, buffalo, dogs, chickens, and the four animals have high economic value, if the community cultivates them, the community's economy will increase.

### 4. Conclusions

Animals that have high economic value or high selling value include dogs, pigs, buffalo and chickens. There are 20 animals used by the Batak Toba tribe in Bahal Gajah Village, including 14 animals for consumption, 8 types of animals for treatment, and 4 types of animals for rituals. The use of animals used by the Batak Toba tribe in Bahal Gajah Village found 6 classes, namely Mammals, Reptiles, Aves, Molluscs, Pisces, and Amphibians.

### References

[1] Pilatus SM, Kartikawati M and Anwar S 2017 Etnozoologi Suku Dayak Kanayant di Desa Babane Kabupaten Bengkayang [Ethno zoology of Dayak Kanayant Tribe in Babane Village, Bengkayang District] Hutan Lestari 5(3) pp 858-67

[2] Fopa GD, Simo F, Kekeunou S, Ichu IG, Ingram DJ and Olson D 2020 Local ecological knowledge, ethnozoology, and public opinion improve Pangolin Conservation in the center and East Regions of Cameroon Ethnobiology 40(2) pp 234-51

[3] Novriyanti et al 2014 Pola dan Nilai Lokal Etnis dalam Pemanfaatan Satwa pada Orang Rimba Bukit Duabelas Provinsi Jambi [Local Tribe Patterns and Values in the Utilization of Animals in Orang Rimba Bukit Dua, Jambi Province] Research and Nature Conservation 11(3) pp 299-313

[4] Rusmiati et al 2018 Etnozoologi Masyarakat Dayak Bakati di Desa Seluas Kecamatan Seluas Kabupaten Bengkayang [Ethno zoology of Dayak Bakati Communities in Seluas Village, Seluas District, Bengkayang Regency] Sustainable Forestry 6(3) pp 594-604

[5] Rangkuti F 2006 Analisis SWOT Teknik Membedah Kasus Bisnis [SWOT Analysis of Techniques for Dissecting Business Cases] (Jakarta, Indonesia: PT Gramedia Pustaka Utama)

[6] El Bjiri HR, Morcatty TQ, Ferreira JC, Mayor P, Neto CFAV, Valsecchi J, Nijman V and John E F 2020 Social and Biological Correlates of Wild Meat Consumption and Trade by Rural Communities in the Jutaí River Basin, Central Ethno biology 40(2) pp 183-201

[7] Kusumaningrum EN, Supriatna J, Abinawanto and Bowolaksono A 2018 Ethnozoology The perception of Tobelo Dalam tribal community in Saolat Village, East Halmahera, Indonesia towards cuscus (Phalangeridae) Biodiversitas 19(6) pp 2140-46