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Ecolexicon of Medicinal Plants in the Local Knowledge System of the Batak Toba Community

Nehemia Anugrah Parasian[1], Tasnim Lubis[*1]
Universitas Sumatera Utara, Medan, 20155, Indonesia
Corresponding Author: tasnimlubis@usu.ac.id

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ABSTRACT

This study examines the ecolexicon of medicinal plants in the local knowledge system of the Toba Batak people, as part of an effort to preserve the regional language and culture. Using a qualitative ethnographic approach, data were collected through interviews and documentation of native speakers who have traditional knowledge of medicinal plants. The results of the study revealed 20 types of medicinal plants known and utilized by the Batak Toba people, consisting of three main categories: leaves, fruits, and rhizomes. Each plant has a local name that reflects the biological, ideological, and sociological aspects of the speaker community. This lexicon not only reflects the ecological relationship between humans and nature, but also stores cultural values, mythology, and traditional healing practices that are passed down from generation to generation. This study emphasizes the importance of ecolexicon documentation as a form of preserving local knowledge and revitalizing endangered regional languages.

Keywords: Ecolexicon, Medicinal plants, Batak Toba, Local knowledge, Ethnolinguistics

ABSTRAK

Penelitian ini mengkaji ekoleksikon tanaman obat dalam sistem pengetahuan lokal masyarakat Batak Toba, sebagai bagian dari upaya pelestarian bahasa dan budaya daerah. Dengan pendekatan kualitatif etnografi, data dikumpulkan melalui wawancara dan dokumentasi terhadap penutur asli yang memiliki pengetahuan tradisional tentang tanaman obat. Hasil penelitian mengungkapkan sebanyak 20 jenis tanaman obat yang dikenal dan dimanfaatkan oleh masyarakat Batak Toba, yang terdiri dari tiga kategori utama: daun, buah, dan rimpang. Setiap tanaman memiliki nama lokal yang mencerminkan aspek biologis, ideologis, dan sosiologis masyarakat penutur. Leksikon ini tidak hanya mencerminkan hubungan ekologis antara manusia dan alam, tetapi juga menyimpan nilai-nilai budaya, mitologi, serta praktik pengobatan tradisional yang diwariskan secara turun-temurun. Kajian ini menegaskan pentingnya dokumentasi ekoleksikon sebagai bentuk pelestarian pengetahuan lokal dan revitalisasi bahasa daerah yang terancam punah.

Kata kunci: Ekoleksikon, Tanaman obat, Batak Toba, Pengetahuan lokal, Ttnolinguistik

1. Introduction

Language and culture are two inseparable elements in human life. Language not only functions as a means of communication, but also as a container for storing and conveying cultural knowledge, including in terms of human interaction with their environment [1][2][3]. In linguistic studies, especially the branch of ecolinguistics, there is special attention to how language reflects the relationship between humans and nature, including the lexical representation of flora and fauna found in a particular ecosystem. One important aspect in this study is the ecolexicon, which is a collection of vocabulary in a language that is related to the living environment of its speaking community [4][5][6].

Indonesia as an archipelagic country with high biodiversity and culture is a fertile ground for ecolexicon studies. Each ethnic group in Indonesia has unique local knowledge about the surrounding environment,

including in terms of the use of medicinal plants. One of the ethnic groups that has rich traditional knowledge in the field of natural medicine is the Batak Toba people, who live in the mountainous region around Lake Toba, North Sumatra [7][8]. In their daily lives, the Batak Toba people have long used various types of plants that grow in forests, fields, or yards as medicine to cure various diseases. This knowledge is passed down orally from generation to generation and is still used today, especially in areas with limited access to modern health facilities [9][10].

Medicinal plants in the Batak Toba community are not only known biologically, but also linguistically and culturally [11][12][13]. Each type of plant usually has a local name in the Batak Toba language, and the name often contains meanings that reflect the physical characteristics of the plant, medical benefits, myths, and philosophical values of the local community [14][15][16]. This is the main entry point in the study of ecolexicon: how medicinal plants are conceived, named, and interpreted by local communities through their language. Therefore, the medicinal plant ecolexicon is not just a collection of plant names, but a representation of ecological knowledge internalized in culture and language [17][4][18].

The development of modernization, globalization, and the dominance of national and foreign languages in various aspects of life threaten the existence of regional languages and local knowledge. Many young generations in the Batak Toba community no longer know the names of medicinal plants in their mother tongue, let alone how to use them [19][20]. If documentation and revitalization efforts are not carried out immediately, the richness of this ecolexicon can be slowly lost. Therefore, this study is important to document and analyze the medicinal plant ecolexicon in the Batak Toba community, so that this cultural heritage and local knowledge do not become extinct [21][22][23].

The medicinal plant lexicon used by the Batak Toba community not only reflects the biodiversity in the region, but also describes the local classification system, understanding of plant properties, and the accompanying traditional healing practices [24]. Unfortunately, modernization and shifts in lifestyle have caused many aspects of this knowledge to be forgotten, including local terms or names for medicinal plants. Therefore, it is important to document and linguistically study the medicinal plant lexicon in the Batak Toba community [25][26][27].

This study aims to identify and describe the lexicon of medicinal plants used by the Batak Toba community, including their meaning, function, and context of use [28]. With an ethnolinguistic approach, this study is also expected to reveal the cultural values contained in the language and terms used, as well as contribute to the preservation of regional languages and local knowledge that are increasingly threatened with extinction.

2. Method

This research is a qualitative research with an ethnographic model that is directed to deeply understand the relationship between language, culture, and local knowledge related to medicinal plants. Ethnography is a qualitative research process that aims to understand the views of other people's lives (native point of view) through direct observation and in-depth interviews [29][30]. Therefore, this model is used to understand the meaning of culture and language used by the Batak Toba community in naming and utilizing medicinal plants [31].

The data collection method in this study was carried out by interview and documentation. Interviews in qualitative research aim to understand the world from the informant's point of view, not from the researcher's point of view. Therefore, the interviews conducted in this study were with informants who had special criteria, namely: (1) full enculturation; (2) direct involvement; (3) unfamiliar cultural atmosphere; (4) sufficient time; and (5) non-analytical. The documentation carried out was by recording local terms for medicinal plants and photographing them.

3. Result and Discussion

Based on the results of the research that has been done, 19 lexicons of medicinal plants were found in the Batak Toba community. Then the 19 lexicons were grouped into leaf lexicons, fruit lexicons, and rhizome lexicons. See the table below.

Lexicon	Phonetic	Latin Names	Section
alum-alum	/ˈæl.əm ˈæl.əm/	Emilia sonchifolia	Leaf
Apapaga	/ˈapapaga/	Centela asiatica	Leaf

Appirdot	/ˈæpɪrˌdɒt/	Saurauia bracteosa	Leaf
atirangga	/ˈætɪˌræŋgə/	Impatiens balsamina	Leaf
bangun-bangun	/bɑŋun bɑŋun/	Plectranthus ambonicius	Leaf
dingin-dingin	/dɪŋɪn dɪŋɪn/	Kalanchoe pinnata	Leaf
gambir	/gɑmbɪr/	Uncaria *gambir*	Leaf
gambiri	/gɑmbɪri/	Aleurites mollucacana	Fruit
halas	/hɑlɑs/	Alpinia galangal	Rhizome
harambir	/hɑrɑmbɪr/	Cocos nucifera	Fruit
hasior	/hɑsiɔr/	Kaemferia galanga L	Rhizome
hunik	/*hunik*/	Curcuma domestika	Rhizome
Inggu	/ɪŋgur/	Piper betle L	Leaf
jarango	/dʒɑrɑŋo/	Acorus calamus	
napuran	/nɑpuran/	Piper betle L	Leaf
pege	/pɛge/	Zingiber officinale roxb	Rhizoma
pining	/ˈpaɪnɪŋ/	Areca catechu	Fruit
sangge-sangge	/ˈsæŋgeɪ ˈsæŋgeɪ/	Cymbopogon nardus	Leaf
unte pangir	/ʌnˈteɪ ˈpæŋɪr/	Citrus hystrix	Fruit

The following will explain in detail about medicinal plants used by the Batak Toba people, both from leaves, fruits and rhizomes. Of course, these medicinal plants are used by the Batak Toba people for traditional medicine.

1. Leaf Lexicon

a. *Alum-alum*

The *alum-alum* plant is known by the Batak Toba people as a plant that has the characteristic of a long flower stem with purplish white petals. This plant has been used for generations as a traditional medicine, especially for treating wounds and ulcers. Knowledge about the efficacy of *alum-alum* is passed down orally and becomes part of the collective memory of the community, so that it is embedded in their belief system (ideological dimension) and social practices (sociological dimension). The leaves of this plant are the part most often used for medicine. Because of its benefits which are considered important, the term *alum-alum* is still used in the daily life of the Batak Toba people, indicating its continuing role in their social and cultural structure.

Figure 1. *Alum-alum* leaves

b. *Apapaga*

Apapaga is a type of soft plant that grows all year round. This plant has red and white flowers, and produces small hanging fruit with a flat or oval shape. The close relationship between the Batak Toba people and the *Apapaga* plant is reflected in their understanding of the biological characteristics of this plant, which is characterized by a fragrant aroma and bitter taste. *Apapaga* is a plant without a true stem, but has a short rhizome with a length ranging from 10 to 80 centimeters. The leaves are single, with stems about 5 to 15 centimeters long, kidney-shaped and serrated at the edges.

This plant is widely known by the Batak Toba people as a medicinal plant that is believed to have health benefits. Knowledge about *Apapaga* is passed down orally and becomes part of the collective memory of the community, which shows its existence in the ideological and sociological order of their social life. From an ideological and biological perspective, *Apapaga* is believed to be efficacious in treating various diseases such as rheumatism, hepatitis, measles, fever, coughing up blood, and worms. The *Apapaga* lexicon is still preserved and continues to be used from generation to generation in the daily lives of the Toba Batak people, strengthening its role in their socio-cultural dimensions.

Figure 2. *Apapaga* leaves

In Figure 2, the participation performer is the focus of participation, namely as a speech producer. The effort is to connect it with the performance domain. Therefore, the semantic relationship is bridging, namely showing that the performer is part of the performance displayed in class.

c. *Appirdot*

The biological relationship between the *Appirdot* plant and the Batak Toba community can be seen from their understanding of the biological characteristics of this plant, which is marked by the brown color of the stem. *Appirdot* plants can grow as high as 3 to 15 meters. The leaves are elongated oval, with a length of between 18 to 36 centimeters and a width of 8 to 18 centimeters. These leaves have serrated edges, pointed tips, and rounded bases.

The *Appirdot* plant is known by the Batak Toba community as one of the efficacious plants used for traditional medicine. Knowledge of its benefits is passed down orally and becomes part of the community's collective memory, reflecting its existence in the ideological and biological dimensions of their social life. In the community's beliefs, *Appirdot* is believed to help cure various diseases, such as stomach aches, gout, and malaria. This plant grows well around the Batak Toba community's settlements, and the part that is generally used as medicine is the leaves. Biologically and sociologically, the *Appirdot* lexicon is still actively used by the Toba Batak people today and is maintained as part of the cultural heritage passed down from generation to generation.

Figure 3. *Appirdot* leaves

d. *Atirangga*

The *atirangga* plant has a thick, juicy stem, but contains woody tissue. The leaves are serrated at the edges and shaped like a spearhead with a striking green color. The flowers come in various colors, such as white, red, purple, and pink. Meanwhile, the *atirangga* fruit is green, oval, and contains very small black seeds. These characteristics represent the biological characteristics of the *atirangga* plant.

The close relationship between the Toba Batak people and the *atirangga* plant can be seen from their understanding of the biological characteristics of this plant, especially its distinctive green color. *Atirangga* is believed to have health benefits, and knowledge of its uses is passed down orally and becomes part of the

community's cognitive system. This belief shows the role of *atirangga* in the ideological and sociological dimensions of the Toba Batak people. The part of the plant that is commonly used as medicine is the leaves. In a biological context, *atirangga* is used by the community to treat swelling due to broken bones.

Figure 4. *Atirangga* leaves

e. *Bangun-bangun*

The *bangun-bangun* plant has a close relationship with the Batak Toba community. In the biological dimension, this closeness is reflected in the community's understanding of the characteristics of the plant. *Bangun-bangun* is known to have single, fleshy leaves, oval in shape, light green in color, and emits a distinctive aroma when crushed. This plant grows quickly, and its jointed stems can reach up to one meter in height. The leaves have pointed tips and bases, and serrated leaf edges, except at the base.

In sociological aspects, the Batak Toba community uses *bangun-bangun* as a traditional medicinal plant. Its health benefits have become part of the collective knowledge that is passed down orally, indicating its position in the ideological and sociological order of community life. The part of the plant used as medicine is the leaves. Specifically, *bangun-bangun* leaves are used to treat various health problems such as mouth ulcers, fever, asthma, coughs, headaches, rheumatism, and are believed to help increase breast milk production for postpartum mothers.

Figure 5. *Bangun-bangun* leaves

f. *Dingin-dingin*

Dingin-dingin leaves have a thick and fleshy texture, with a fairly high water content. The edges of the leaves are wavy, oval to round, with blunt tips and rounded bases. The surface of the leaves is smooth and hairless. The size of these leaves varies, with a length of between 5 and 20 centimeters and a width of 2.5 to 15 centimeters.

Biologically, the relationship between the *dingin-dingin* plant and the Batak Toba community can be seen from their understanding of the biological characteristics of this plant, which is generally green or gray. This plant has long been used as a traditional medicine by the local community, and knowledge of its benefits is passed down orally and embedded in their collective consciousness. This shows the role of the *dingin-dingin* plant in the biological and sociological order of the life of the Batak Toba community.

Ideologically and biologically, *dingin-dingin* is believed to have properties to treat boils and reduce fever. The part used as medicine is the leaves. Until now, the lexicon of *dingin-dingin* is still widely known and continues to be used from generation to generation among the Batak Toba community.

Figure 6. *Dingin-dingin* leaves

g. *Gambir*
Gambir plants are climbing plants with branches that grow long. The stems are rectangular. The leaves are single leaves that grow in pairs facing each other, oval in shape with a rounded base resembling a heart, and pointed tips. The surface of the leaves feels slightly slippery, green in color, and measures between 5 and 15 centimeters.

The Batak Toba people have a close relationship with the *gambir* plant. In the biological dimension, this closeness is reflected in their knowledge of the characteristics of this plant, including its green and pink flowers. In addition, *gambir* is used as a traditional medicinal plant because it is considered to have good properties for health. Knowledge about the uses of this plant is passed down orally and becomes part of the collective memory of the community, which is reflected in the ideological and sociological dimensions of their social life. In the beliefs of the Batak Toba people, which are included in the ideological and biological dimensions, *gambir* is believed to be able to help treat toothache and stomachache. The part of the plant that is usually used as medicine is the leaves. Not only that, in the sociological dimension, this plant also has an important meaning in the Batak Toba culture, because it is used in various traditional ceremonies and traditions. Until now, the *gambir* lexicon is still known and used from generation to generation by the community

Figure 7. *Gambir* leaves

h. *Inggu*
Inggu is a plant that has a small stem and can grow to a height of about one meter. The stem is covered with a little hair, while the leaves are oval-shaped like eggs. *Inggu* leaves grow on short branches, and this plant produces bright yellow flowers with fairly long stems.

In the biological dimension, the relationship between the Batak Toba people and the *inggu* plant can be seen from their understanding of the biological characteristics of this plant, one of which is recognized by its green color. The Batak Toba people have long used *inggu* as a medicinal plant that is believed to have health benefits. This knowledge is passed down orally and becomes part of the cognitive system that lives in the social order of society, especially in the biological and sociological dimensions.

In the ideological and biological context, *inggu* is believed to be efficacious in treating various diseases such as fever, toothache, and bruises. Leaves are the part of the plant that is most often used for medicinal

purposes. Moreover, in the beliefs of the Batak Toba people related to the ideological and sociological dimensions, *inggu* is also used as a means to expel spirits that are considered to interfere with a person's health. Due to its diverse benefits, the *inggu* lexicon still survives and is used from generation to generation in the social life of the Toba Batak people to this day.

Figure 8. *Inggu* leaves

i. *Napuran*

The *napuran* plant has a greenish brown stem, is round, segmented, and becomes a place for roots to grow. The leaves are single leaves that are shaped like a heart, have pointed tips, grow alternately, and have stalks. *Napuran* leaves give off a distinctive aroma when crushed. The size of the leaves ranges from 5 to 8 centimeters long and 2 to 5 centimeters wide.

In the biological dimension, the closeness between the Toba Batak people and the *napuran* plant is reflected in their understanding of how this plant grows, namely by climbing. This plant has long been known as a traditional medicine that is believed to have various health benefits. Knowledge about the benefits of *napuran* is conveyed orally and becomes part of the collective memory of the community, reflecting values embedded in the ideological and sociological dimensions.

Biologically, the Toba Batak people use *napuran* leaves to overcome various health complaints such as bad breath, bleeding gums, toothache, canker sores, nosebleeds, coughs, burns, and boils. This plant is still used from generation to generation and is still known by the community today. In the sociological dimension, its broad uses make the *napuran* lexicon remain alive in the social life of the Toba Batak people.

Figure 9. *Napuran* leaves

j. *Sangge-sangge*

The *sangge-sangge* plant has an appearance that resembles cogongrass, but the size of the clump is larger and grows in clusters. The leaves are straight and flat, with a length of about 1 meter and a width of about 15 millimeters. The leaf veins are arranged parallel, with sharp edges and a leaf surface that feels rough. In the biological dimension, the close relationship between the Batak Toba community and the *sangge-sangge* plant can be seen from the understanding of the characteristics of its light green leaves.

This plant is believed to have good properties for health and has become part of the oral knowledge of the Batak Toba community, which is passed down from generation to generation. This reflects the values embedded in the ideological and sociological dimensions of their lives. Leaves are the main part of the *sangge-sangge* plant which is used as traditional medicine.

In practice, the Batak Toba community uses *sangge-sangge* to treat various health complaints, such as coughs, colds, and rheumatism, as reflected in the biological dimension. Apart from being used as medicine,

in the sociological dimension, *sangge-sangge* also has another function as an additional ingredient in traditional cooking of the Toba Batak people.

Figure 10. *Sangge-sangge* leaves

2. Fruit Lexicon

a. *gambiri*

The *gambiri* lexicon has a strong connection with the life of the Batak Toba community. This plant can grow as high as 16 to 25 meters. The leaves are pale green, while the fragrant flowers are greenish white and arranged in several groups. *Gambiri* fruit is green to brownish, with an oval to round shape. These biological characteristics are the basis for people's understanding of this plant in the biological dimension.

In the biological and sociological dimensions, *gambiri* is used by the Batak Toba community as a medicinal plant because it is considered to have great benefits for health. Knowledge about the efficacy of *gambiri* is passed down orally and becomes part of the collective cognitive system of the community, which strengthens its position in the social and cultural structure. In the ideological dimension, belief in the efficacy of *gambiri* is still alive and continues to be maintained by the Batak Toba community through collective memory and oral tradition.

In practice, *gambiri* is used to treat various health complaints such as constipation, dysentery, boils, and toothache. The parts of the plant that are used as medicine include the bark, sap, and fruit. Apart from being a medicinal plant, in the sociological dimension *gambiri* also has an important culinary function, namely as a spice in traditional Batak Toba dishes such as na ni arsik and na ni ura.

Figure 11. *Gambiri* fruit

b. *Harambir*

Harambir is a type of tree that has a single trunk with fibrous roots, thick structure, woody, and forms a clump resembling a stump. The trunk is segmented, but as it ages, the number of segments tends to decrease. *Harambir* leaves are classified as single leaves with pinnate leaf veins. The fruit is large, with a diameter ranging from 10 to 20 centimeters, or even more.

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n the biological dimension, the Batak Toba people believe that *harambir* has properties that are beneficial to health. This belief has been passed down verbally and has become part of the collective knowledge in the

social life of the community. Specifically, this plant is used to treat fever and diarrhea, with the parts used as medicine including the roots and fruit.

In addition to being a medicinal plant, in the sociological dimension, *harambir* is still widely known and used from generation to generation by the Batak Toba people. Its functions and uses that have been maintained from generation to generation make the *harambir* lexicon continue to live and play a role in the social life of the community to this day.

Figure 12. *Harambir* fruit

c. *Pining*

Pining is a type of palm plant that can grow to a height of around 25 meters with a trunk diameter of around 15 centimeters. The leaf stalks are tube-shaped, 80 centimeters long, with short leaf stalks. The leaf blades are the same length, around 80 centimeters, with serrated and torn leaf tips. *Pining* fruit is shaped like an elongated inverted egg, orange-red in color, between 3.5 and 7 centimeters long and has fibrous fruit walls. These characteristics reflect the identification of *pining* in the biological dimension.

In the ideological and sociological dimensions, the Batak Toba people believe that *pining* has important health benefits. Belief in its efficacy has been passed down orally and has become part of the collective knowledge of the community in their social life. The parts of the plant that are used as medicine are the roots and fruit.

Biologically and sociologically, *pining* is used by the Batak Toba people to treat fever and strengthen teeth. Apart from its use in medicine, in the sociological dimension, *pining* also has an important role in the tradition of mardemban or betel chewing, which is part of the customs of the Toba Batak people.

Figure 13. *Pining* fruit

d. *Unte pangir*

Unte pangir is a plant that grows between 5 and 7.5 meters high. The stem is upright, round, thorny, and dull green. The leaves are single leaves that grow alternately, oval with serrated edges and pointed tips. *Unte pangir* flowers grow in the leaf axils, have star-shaped petals, and are yellowish green. The fruit is generally 4–5 centimeters in diameter, has a distinctive wrinkled surface, and is green. The flesh of the fruit is also green with a slightly bitter sour taste.

In the biological dimension, the closeness of the Batak Toba people to the *unte pangir* plant is reflected in the understanding of the biological characteristics of this plant. This plant has long been used as a traditional medicine by the community, and knowledge of its properties is passed down orally, becoming part of the collective memory in their social life. This shows its existence in the ideological and sociological dimensions.

The part of the plant used for treatment is the fruit. In the traditional medicine practices of the Batak Toba people, *unte pangir* is used to treat influenza, reduce body odor, and eliminate dandruff. This use strengthens the position of *unte pangir* as a plant that is still known and used from generation to generation in the daily lives of the Toba Batak people.

Figure 14. *Unte pangir* fruit

3. Lexicon Rhizome

a. Halas

Halas is a plant that is about 2 meters tall. The leaves grow at the base of the stem, while the leaf sheath is covered by the stem of the plant itself. Halas flowers appear at the tip of the base of the plant and are white. In the biological dimension, the closeness of the Batak Toba people to halas can be seen from the characteristics of its rhizome which is white and has a fragrant aroma.

This plant is used as medicine, especially the leaves and rhizomes, in the context of the biological dimension. While in the sociological dimension, halas is used by the Batak Toba people to treat various health problems such as ringworm, tinea versicolor, body odor, and coughs. In addition to its medicinal function, halas also plays a role as a kitchen spice that is often used in the daily lives of the Batak Toba people.

Figure 15. Halas

b. *Hasior*

In the biological dimension, the Batak Toba community has a close relationship with the *hasior* plant, which is recognized by its special characteristics. This plant has between 2 and 3 leaves arranged opposite each other. The *hasior* flowers are arranged in a semi-sitting position with flower buds ranging from 4 to 12 pieces.

In the social life of the Batak Toba community, *hasior* is used as one of the medicinal plants that is believed

to provide health benefits, reflected in the ideological and sociological dimensions. Sociologically, *hasior* is used to overcome various complaints such as coughs, flatulence, diarrhea, itching, and functions as a body warmer. In addition, in the ideological dimension, *hasior* is also believed to be able to accelerate the recovery of maternal health after giving birth.

The parts of the plant used as medicine are the tubers and leaves. Because of its properties which are considered effective, *hasior* continues to be used and known from generation to generation in the social life of the Batak Toba community to this day.

Figure 16. *Hasior*

c. *Hunik*

The *Hunik* plant has a very close relationship with the Batak Toba community. From a biological perspective, this can be seen from the characteristics of the *Hunik* which has an elongated stem without branches, in the form of a pseudo stem that is tightly covered by leaf sheaths with a purplish green color. The leaves number between 3 to 8 strands, with a total length of leaves and sheaths reaching around 70 centimeters. While the outer skin of the rhizome is brownish orange.

In the sociological dimension, the Batak Toba community often uses *Hunik* as a medicinal plant. Its good health benefits have been recorded verbally in the community's cognition, especially in the ideological and sociological dimensions. This plant is used to overcome various complaints such as nausea, postpartum wounds, diarrhea, ulcers, dengue fever, stomach ache, and helps increase appetite. The part that is used as medicine is the rhizome. The tradition of using *Hunik* continues to be preserved from generation to generation in the social life of the community. Apart from its medicinal function, in the sociological dimension, *hunik* is also used as a spice in typical Batak Toba cuisine, such as na i arsik and na i ura.

Figure 17. *Hunik*

d. *Jarango*

Jarango plants thrive in wet and humid areas, with short stems and rhizomes. The leaves have an elongated lanceolate or cone shape, with pointed tips and flat leaf edges. The length of the jarako leaves reaches around 60 centimeters with a width of around 5 centimeters. Jarako flowers are shaped like tubers with pointed tips.
The relationship between jarako lexicon is very close to the Batak Toba community. From a biological perspective, this plant is recognized by its green color and distinctive aroma. The Batak Toba community uses jarako as a medicinal plant because it is considered to have good properties for health, which are recorded verbally in their cognition, especially in the ideological and sociological dimensions.

In terms of social aspects, jarako is used to treat fever and cough. In addition, this plant is also believed to be able to maintain the health of babies, help strengthen the body, and protect against diseases such as fever and

wind. The use of jarako in babies also aims to prevent the occurrence of convulsions when they are adults. The part of the plant used as medicine is the rhizome. Furthermore, in the ideological and sociological dimensions, jarako is believed to be able to expel spirits such as begu (ghosts) and various forms of black magic or sorcery. Until now, the Batak Toba people still know and use jarako in their social life

Figure 18. *Jarango*

e. *Pege*

Pege is a plant with an upright stem, fibrous roots, and has tubers arranged with horizontal rhizomes. *Pege* rhizomes have rather thick skin and wrap around fibrous, brown tuber flesh. The leaves are elongated and not too wide, while the flowers grow in the leaf axils in a sitting position. The Batak Toba people have a very close relationship with the *pege* plant. This closeness can be seen from their understanding of the biological characteristics of the plant, especially the spicy taste which is the biological identification of *pege*.

Pege is used by the Batak Toba people as a medicinal plant that is believed to have various health benefits. Information about its benefits is stored verbally in the cognition of the community, both in ideological and sociological contexts. The part used as medicine is the rhizome. This plant is believed to be able to treat digestive problems, headaches, coughs, and colds. Until now, *pege* is still known and used by the Batak Toba people in their social activities. In addition, in sociological aspects, *pege* is also often used as a kitchen spice.

Figure 19. *Pege*

4. Conclusion

This study shows that the Batak Toba community has a lexical richness that reflects their ecological knowledge of medicinal plants. There are 19 medicinal plant lexicons that have been successfully documented and classified into three main categories: leaves, fruits, and rhizomes. Each lexicon not only shows the biological characteristics of the plant, but also contains ideological and sociological dimensions that show the close relationship between language, culture, and the environment of the Batak Toba community.

This knowledge is passed down orally from generation to generation, becoming an integral part of the belief system, traditional health practices, and local cultural identity. However, modernization and language shift have led to a decline in the use and understanding of this lexicon among the younger generation. Therefore, documentation and preservation of ecolexicons are important steps to protect cultural heritage and regional languages from extinction

References

[1] Andriany L, Lubis T, Amalia, Abus A F and Delima 2022 Shaping ethnobotanical tourism on the coastal landscape through Halobanese oral traditions at Banyak Island *IOP Conf. Ser. Earth Environ. Sci.* **1115** 012103

[2] Saputra N, Lubis T and Setiawan F 2021 Politeness Strategies for the Speech Acts of Indonesian Language Education Students in Pidie Regency *Tradit. Mod. Humanit.* **1** 33–40

[3] Wibowo S and Lubis T 2022 Naming Paya Badau at Taman Cadika Pramuka Medan: Semiotic Narative Analysis *Tradit. Mod. Humanit.* **2** 47–55

[4] Abus A F, Lubis T and Abus N A A 2022 The implementation of open space toward living harmony at Taman Burung Cemara Asri in Medan, North Sumatra *IOP Conf. Ser. Earth Environ. Sci.* **977** 012100

[5] Natsir M, Saragih B and Lubis T 2022 Using Local Wisdom as a Protection from COVID-19 *Tradit. Mod. Humanit.* **2** 39–46

[6] Abus A F, Lubis T, Abus A A, Saputra N and Abus N A A 2022 The role of local leader on food security campaign toward sustainable goals of agriculture in Simeulue Island *IOP Conf. Ser. Earth Environ. Sci.* **1114** 012091

[7] Tausya R S and Lubis T 2023 Performance Participation of Peucicap in West Aceh *Tradit. Mod. Humanit.* **3** 11–9

[8] Abus A A, Purba M and Lubis T 2024 Bah Bolon River 1980-2023: The History of Pollution and River Used *Tradit. Mod. Humanit.* **4** 1–7

[9] Khaira C N and Lubis T 2024 Language Kinship between Acehnese and Tamiang Malay Language *Tradit. Mod. Humanit.* **4** 66–71

[10] Lubis T, Abus A F, Ramlan, Nasution T and Saputra N 2022 Balancing nature and landscape conservation practices of Leukon Community in Simeulue Island *IOP Conf. Ser. Earth Environ. Sci.* **1047** 012035

[11] Tarigan K E and Lubis T 2022 Indexicality of Minyak Karo in North Sumatra : An Anthropolinguistic Perspective *Tradit. Mod. Humanit.* **2** 8–25

[12] Rahmawati, Sibarani R and Lubis T 2022 The Performance of Ruwatan in Javanese Community: An Anthropolinguistic Approach *Tradit. Mod. Humanit.* **2** 1–7

[13] Zulkarnain, Lubis T, Ramlan, Dardanila, Hasrul S, Shaumiwaty and Saputra N 2021 Nandong as a culture-based effort to overcome food security toward COVID-19 pandemic situation in Simeulue Island *IOP Conf. Ser. Earth Environ. Sci.* **807** 022007

[14] Martina and Lubis T 2022 Swear Word in West Kalimantan Community *Tradit. Mod. Humanit.* **2** 14–27

[15] Lubis T, Sibarani R, Lubis S and Azhari I 2018 The Performance of Nandong in Simeulue Island *Int. J. Res. Rev.* **5** 283–9

[16] Sulistyowati H, Mahatmaharti A K and Lubis T 2022 Noun Composition in Narrative Passage *Tradit. Mod. Humanit.* **2** 1–7

[17] Abus A F, Lubis T, Saputra N and Delima D 2022 Ecotourism to improve the quality of Deli riverscape, Medan City, North Sumatra, Indonesia *IOP Conf. Ser. Earth Environ. Sci.* **1082** 012004

[18] Abus A F, Lubis T and Abus N A A 2021 The landscape concept of environment in Taman Gajah Mada Medan *IOP Conf. Ser. Earth Environ. Sci.* **922** 012035

[19] Sitorus N and Lubis T 2023 The Lexicon on Natural Knowledge of Umpasa in Batak Toba *Tradit. Mod. Humanit.* **3** 28–34

[20] Lubis T, Zein T T and Amalia A 2024 The role of folklore in shaping the Leukonese characters: An anthropolinguistic study *Stud. English Lang. Educ.* **11** 1213–30

[21] Sinaga L D and Lubis T 2023 Toponomy of Village Names at Namo Rambe Sub-district: An Anthropolinguistic Study *Tradit. Mod. Humanit.* **3** 12–20

[22] Lubis T 2019 Learning Nandong in schools as a medium to inform the Simeuluenese local wisdom: An anthropolinguistics approach *Stud. English Lang. Educ.* **6** 262–72

[23] Narhan R, Solehatun P and Lubis T 2023 Districts Naming in Medan: An Anthropolinguistics Study *Tradit. Mod. Humanit.* **3** 33–41

[24] Hasrul S, Lubis T and Abus A F 2022 Translation of Political Advertisements from Alas Language into Indonesian *Lexeme J. Linguist. Appl. Linguist.* **4** 43–51

[25] Akmal and Lubis T 2022 The Oral Tradition of Hoyak Tabuik in Pariaman, West Sumatera: An Anthropolinguistic Approach *Tradit. Mod. Humanit.* **2** 16–24

[26] Daulay E and Lubis T 2022 The Revitalization of Mandi Marpangir Tradition in Matondang Village, Padang Lawas Regency *Tradit. Mod. Humanit.* **2** 43–9

[27] Harianja N and Lubis T 2023 Local Wisdom of Menegakgen Rumah Tradition at Tabuyung Village in Mandailing Natal *Tradit. Mod. Humanit.* **3** 54–9

[28] Abus N A A, Suriadi A, Lubis T, Abus A A and Abus A F 2024 Waste Bank management as an alternative community-based waste management strategy in Langsa City, Aceh Province *IOP Conf. Ser. Earth Environ. Sci.* **1375** 012007

[29] Spradley J 1979 *The Ethnographic Interview* (USA: Rinehart and Winston)
[30] Spradley J 1980 *Participant Observation* (USA: Rinehart and Winston)
[31] Lubis T, Amalia A, Fahmi F, Abus N A A, Lubis R A, Dafitra M and Abus A A 2022 Pembentukan Komite Sekolah di KB Tanah Merah Kecamatan Galang melalui Pendekatan Antropolinguistik *Community Dev. J. Pengabdi. Masy.* **3** 1617–22