

## A COMPARATIVE ANALYSIS ON BUGKALOT OF ELDERS AND GENZ PERCEPTION ON THE ETHNOBOTANICAL KNOWLEDGE AND PRACTICES IN WASID, NAGTIPUNAN, QUIRINO

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### ABSTRACT

This qualitative, ethnographic study explores the use of medicinal plants within the Bugkalot community for healing purposes. It aims to evaluate the younger generation's knowledge of these plants, alongside the methods of their preparation and administration. Utilizing semi-structured interviews with key informants, the research underscores the importance of ethical considerations, securing permissions from both the National Commission on Indigenous Peoples and individual participants. The study engages with a diverse age group, including Generation Z members aged 13 to 25 and seniors aged 70 to 85, involving a total of nine participants. Data collection was enriched by recorded discussions subsequent to questionnaire dissemination, maintaining confidentiality regarding participant profiles. Through qualitative thematic analysis of interview transcripts, organized into thematic units, the study interprets the collected data to shed light on the Bugkalot community's ethnobotanical knowledge. This research not only contributes to the understanding of traditional healing practices but also suggests a framework for their preservation and potential integration into wider healthcare systems. It opens future research pathways into the medicinal properties of specific plants, the fusion of traditional and modern healthcare practices, and the documentation of cultural significance within the Bugkalot healing tradition.

*Keywords: Medicinal plant, Bugkalot, Healing practices, Ethnobotanical, Indigenous people, Cytotoxicity, patability*

### INTRODUCTION

Examining the complex interactions between people and plants is the broad field of ethnobotany study. Along with scientific classification and identification, it examines cultural practices, customs, and beliefs toward the use of plants. By integrating the social and ecological sciences, ethnobotany aids in preserving resources and creating sustainable

resource use plans (Voeks & Leony, 2020). Medicinal ethnobotany is becoming more and more popular because it provides important resources for future research in drug development, community healthcare, and cultural and biodiversity conservation.

However, indigenous peoples' (IPs') traditional knowledge of medicinal plants is in risk of disappearing. (Dapar & Alejandro, 2020).

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Publications on ethnobotany about Philippine tribal communities or indigenous peoples are few. Some plant species might be challenging to recognize due to unfamiliarity; thus, careful documentation of their medicinal advantages is required. Being an individual is challenging.

The *Ilongot*, or *Bugkalots*, are a well-known indigenous community in northern Luzon who are renowned for their expert headhunting techniques that are engrained in their way of life. In the Philippines, thorough records of the *Bugkalots'* traditional knowledge are uncommon, despite its significance. (Torres et al., 2020).

Ninety-two different kinds of medicinal herbs are used by the Bugkalot tribe to treat coughs, fevers, and wounds (Castillo et al., 2018). Similarly, (Ramirez et al., 2019) discovered that 49 plant species were utilized by Ayta communities in San Marcelino, Zambales, Philippines, as medicinal treatments for wounds, fever, and stomachaches. Additionally, *Adhatoda vasica* was one of the plants identified by (Kayani et al., 2014) as being utilized to treat respiratory issues in the Gallies-Abbottabad community in northern Pakistan. the one that is used most frequently. According to (Omwenga et al., 2015), the Borabu community in Kenya utilized *Solanum incanum* as a remedy for respiratory ailments.

Although there is a lot of information available on ethnomedicinal plants, there is still little traditional knowledge among indigenous peoples. The risk of losing traditional knowledge about medicinal plants is highlighted (Dapar & Alejandro, 2020), and it is because of the Philippines' lack of ethnobotanical publications. Furthermore, inaccurate reporting of medicinal qualities is retrained by difficulty in plant identification resulting from unfamiliarity (Dapar & Alejandro, 2020). These difficulties highlight the value of maintaining customary medical procedures and the gaps in indigenous knowledge. Given that these indigenous people the Bugkalots live in some parts of Quirino province (Torres et al., 2020), this study aims to

add knowledge on the plants that are used by this society.

## OBJECTIVES OF THE STUDY

The study was conducted to determine the knowledge of the younger generation compared to the traditional bugkalot community tribe in Wasid, Nagtipunan, Quirino. Specifically, it seeks to shed light on the following facets a.) Identify the different traditional medicinal plant, Bugkalot used for healing. b.) Determine the knowledge of the younger generation and traditional community about their traditional medicinal plants. c.) Determine different methods of preparation and administration of traditional medicinal plants used by the Bugkalot tribe d.) Comparison of Perception of the Gen Z and Elders in the Use of the Traditional Medicine.

## METHODOLOGY

This research was designed as an ethnographic study focusing on ethnobotany to gather information on the ethnobotanical knowledge and practices of the Bugkalot people. The researcher conducted semi-structured interviews with key informants, using purposive sampling to select 9 participants deemed most appropriate for the study's objectives. Ethical considerations were addressed by obtaining permits from the National Commission on Indigenous Peoples in San Marcos, Cabarroguis, Quirino. After obtaining permission, the researcher sought approval from chosen respondents and distributed questionnaires to Gen Z Bugkalots aged 13 to 25 and Senior Citizens that aged 60 to 75. With participants' consent, discussions were recorded using written and audio methods. The collected interview data underwent qualitative thematic analysis, involving transcription and

organization into thematic units with titles reflecting major themes.

## RESULTS AND DISCUSSION

Ethnobotany, a multidisciplinary field, explores the intricate relationships between people and plants delving into traditional knowledge, cultural practices, and beliefs surrounding plant use. In this part, we can see the list of medicinal plants used by bugkalot tribe, the analysis of their knowledge and practices, and the comparison of Gen Z and elders in bugkalot tribe.

### 1. Medicinal Plants Used by the Bugkalot Tribe

**Table 1**

*List of Medicinal Plants used by the Bugkalot Tribe*

Plants used by Bugkalot
1. Ambudak
2. Dangla ( <i>Vitex negundo</i> )
3. Gadpang
4. Kammugat
5. Kustay ( <i>Allium tuberosum</i> )
6. Laddek
7. Labi
8. Pangamaya
9. Tukod ( <i>Helminthostachys zeylanica</i> )

There are nine identified plants that the *Bugkalot* tribe uses for medicinal purposes which are namely Ambudak, Dangla (*Vitex negundo*) Gadpang, Kammugat, Kustay (*Allium tuberosum*), Laddek, Labi, Pangamaya, Tukod (*Helminthostachys zeylanica*).. These comprise botanical remedies that are used to treat fever, cough, flu, cuts, and wounds. These plants have been utilized to treat common ailments like the flu, cough, irregular periods, cuts, wounds, and some digestion problems. All of these plants were

identified in *Wasid*, *Nagtipunan*, *Quirino*, and are commonly utilized by the *Bugkalot* tribe for healing purposes.

### 2. Traditional Knowledge and Practices of Bugkalot Tribe using Medicinal Plants

The Bugkalot tribe, indigenous to the mountainous regions of northern Luzon, Philippines, possesses a long-standing tradition of utilizing plants for medicinal purposes. A total of 9 species of plants were identified in this study.

The Bugkalot tribe's choice of plant species and their parts for medicinal use is influenced by both environmental abundance and the effectiveness of specific components in addressing ailments. Stems are favored, suggesting a recognition of their medicinal properties, while ingestion is the primary method of preparation. Boiling or decocting plant parts is widespread, likely serving to extract active compounds efficiently and enhance palatability for ease of administration. Various parts of different medicinal plants have been identified in *Wasid*, *Nagtipunan*, *Quirino*, each utilized by the native community for specific medicinal purposes. Among these, leaves and stems are predominantly employed for treating a diverse range of ailments, including coughs, sore eyes, flu, wounds, cuts, irregular menstruation, stomach ailments, injuries, fever, and internal injuries leading to limping. This comprehensive use underscores the traditional knowledge and expertise of the Bugkalot tribe in harnessing the healing properties of local flora to address a wide array of health concerns within their community. In addition to internal use, external application of plant-based preparations is also employed, particularly for treating wounds and injuries. This demonstrates the Bugkalot tribe's recognition of the different therapeutic applications of medicinal plants, including their antibacterial, anti-inflammatory, and wound-healing properties. This



explores the Bugkalot's plant-based remedies, focusing on their methods of preparation and continued relevance in the face of modern healthcare options.

### 3. Comparison of Gen Z and Elders in the used Traditional Medicine

**Table 3**  
*Comparison of Gen Z and Elders in the used Traditional Medicine*

Codes	Theme	Key Statement	Thematic Description
Plants used for remedies	Plant Knowledge & Remedies	"...gadpang, labi, kutsay, dangla plants..." "...Laddek, kammugat, ambudak"	The Bugkalot tribe possesses knowledge and utilizes various plants for treating ailments. Specific instructions for preparing and different remedies showcase customary practices passed down through generations. Traditional healing knowledge persists through direct transmission from elders to younger generations. While familiar with healing rituals, the focus lies on the practical application of herbal remedies. Traditional remedies remain relevant and actively utilized due to affordability and cultural preference.
Remedy preparation methods	Traditional Practices	"...boiled and ingested, inhaled after boiling" "kammugat ... scraped ... boiled and drink it"	
Knowledge source	Transmission	"...We taught." were	
Ritualistic practices	Focus on Remedies	"...We just use the remedies."	
Continued use of remedies	Persistence of Tradition	"...We still use them until now" "We still use them ... too old to visit the hospital"	
Plants & ailments	Shared & Divergent Knowledge	"Ambudak for coughs and fevers" "Laddek ... river ... fever"	Remedies, like ambudak and laddek highlight additional plants and their uses.

Indigenous people's medicines include a wide variety of plants, they possess the knowledge

and utilizes various plants for treating ailments (Dapar & Alejandro 2020). Each with unique therapeutic properties "ajay gadpang, ken na ambudak, agas ti mauyek".(Gadpang and Ambudak treat coughs). Some commonly used plants include gadpang and ambudak for cough, labi for sore eyes, kutsay leaves are for wounds and cuts, Laddek leaves that take from the river, are used to treat fever and excessive body heat through decoction, the plant kammugat is used to heal internal injuries that cause limping, and dangla for flu.

Bugkalot remedies are prepared using various methods, often involving boiling, steaming, or applying directly to the affected area. The knowledge surrounding these remedies is primarily transmitted through an oral tradition (Pacio 2023). Elders teaching younger generations about plant identification, preparation methods, and appropriate uses. The phrase "We were taught," as shared by community members, highlights this direct transmission of knowledge, ensuring its continuity across generations.

They possess some knowledge of traditional healing rituals, their primary focus lies on the practical application of herbal remedies (Tomasini, & Theilade, 2019). This is evident in statements like "We just use the remedies," indicating a pragmatic approach to healthcare that emphasizes readily available plant-based solutions. This practicality is likely driven by factors such as limited access to modern medical facilities in remote areas.

### CONCLUSION

The Bugkalot tribe relies on a variety of traditional medicinal plants for healing, including Gadpang, Kutsay, Labi, Dangla, Kammugat, Ambudak, Tukod, Laddek, and Pangamaya. The Bugkalot community actively passes down their traditional healing knowledge from elders to the





younger generation, emphasizing practical application over ritualistic practices. The continued use of traditional remedies, such as Ambudak and Laddek, is attributed to their affordability and cultural significance. These plants are used for different ailments, and the methods of preparation primarily involve boiling, pounding, and external application, with ingestion being the main mode of administration. The comparison between the perceptions of the younger generation (Gen Z) and elders reveals shared knowledge and a persistent tradition of utilizing traditional medicine, reflecting the Bugkalot tribe's enduring cultural and practical reliance on these remedies for healthcare.

### Ethics

In regards to the ancestral domain of the Bugkalot indigenous community in Nagtipunan, Quirino, letters of request will be distributed to different offices, including the principal, assistant principal, and head of the National Commission on Indigenous People. This is to secure permits before proceeding with the survey and interview of the Bugkalot tribe.

### RECOMMENDATIONS

Future research could delve deeper into the plants' specific medicinal properties, investigate the potential integration of traditional and modern healthcare practices, and document the cultural significance of Bugkalot healing traditions. Moreover, the local community could create programs that will help the Bugkalot tribe to share their traditional knowledge that establish and facilitate the transfer of wider knowledge from the Elders to the current generations to ensure the transfer of wider knowledge and indigenous practices for cultural preservation. Lastly, ethnobotanical studies should be conducted across the province and its municipalities to

discover medicinal plant species and their traditional usage. With this, it would highlight the importance of community-based management techniques and sustainable use of practices for the long-term existence of ethnomedicinal resources.

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