The Cultural Practices behind “Tawak ,” a Traditional Cure for Snakebite in Marinduque

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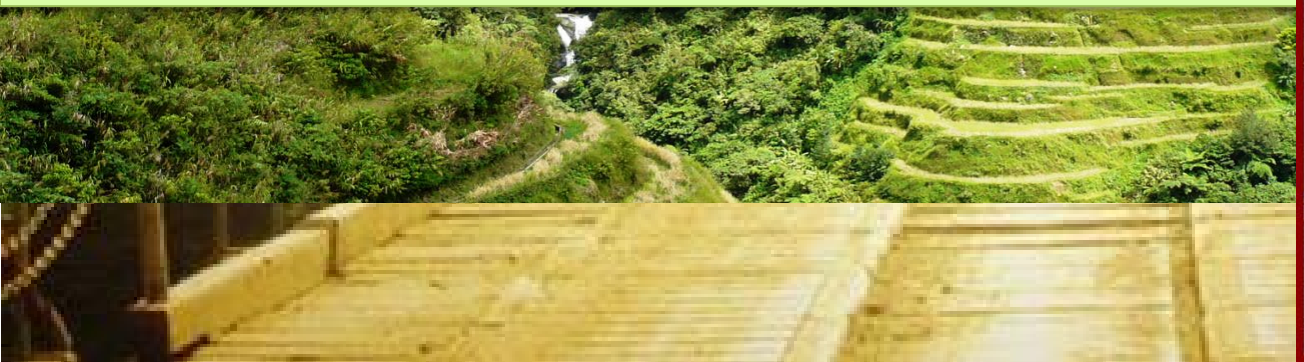
INTRODUCTION

- Culture, plants, environment and tourism are connected to one another
- Our ancestors, the indigenous people contributed to our culture the knowledge of medicinal plants – developed through thousand of years
- Today, become part of our knowledge system, a product of two important natural wealth – biodiversity and cultural diversity
- Application of knowledge on medicinal plants is empowering to the indigenous people and allows a more realistic sustainable conservation of natural resources that is appealing to tourists




INTRODUCTION

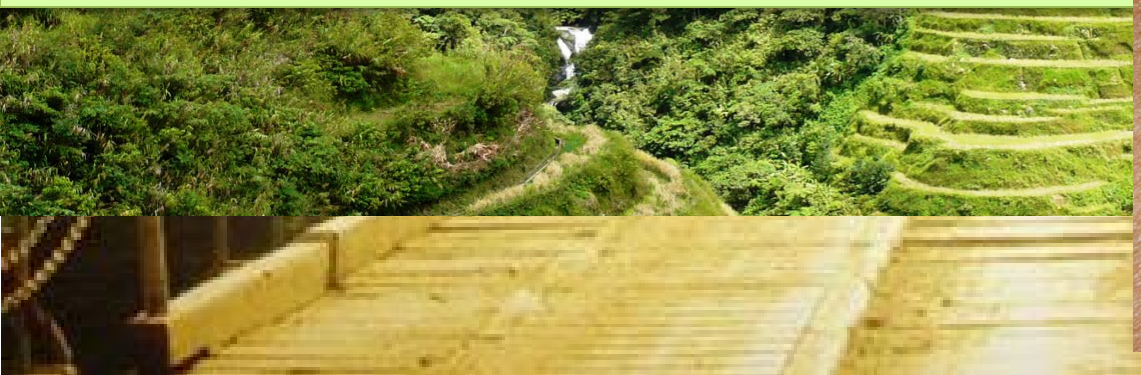
- Ethnomedicine or traditional medicine is found in every culture (Winkelman, 2008; Staub, et al., 2015).
- 100 million people in the European Union use herbal medicine (Robinson & Zhang), wherein its global market can soar to US $150 billion by 2020 (WHO, 2015)
- Traditional medicine today is linked to medical and wellness tourism using available natural resources, like plants for experiences of the tourists (Smith & Puczko, 2008; Richards, 2011).



OBJECTIVE

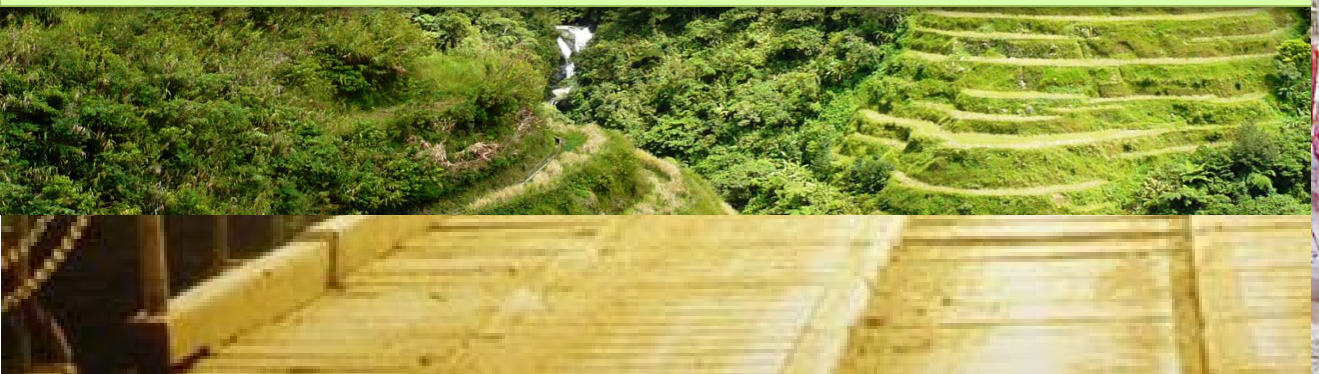
This study aims:

1. To identify the plants use in making “tawak ”
2. To determine the phytochemical present in the plants
3. To determine the cultural practices involve in preparing and using “tawak”



METHODOLOGY

- Interviewed 26 “Magtatawak” (Snakebite healers)
- Collected plant samples
- Identified botanically subjected phytochemical screening:
  - Alkaloids (Mayer’s Test)
  - Flavonoids (Shinoda Test)
  - Saponins (Froth Test)
  - Tannins and Phenols (Ferric Chloride Test)
  - Triterpenes (Salkowski Test)
  - Sterols (Libermann-Burchard’s Test)
  - Cardiac glycosides (Keller-Killani Test)



FINDINGS

- 150 plant species use by the “Magtatawak” with varying combination of “tawak”
- Distributed in 53 plant families and 124 genera

Families with most number of plants are:			
Asteriacease	(14)	Menispermaceae	(6)
Fabaceae	(10)	Poaceae	(6)
Zingiberaceae	(9)	Rutaceae	(6)
Euphorbiaceae	(7)	Amaranthaceae	(5)
Piperaceae	(7)	Apocunaeae	(5)
Acanthaceae	(6)	Lamiaceae	(5)

FINDINGS

The most commonly used plants				
Common Name	Scientific Name	Family	Part Used	No. of magtatawak using the plant
1. Tagbak	Kolowratia elegans Presl.	Zingiberaceae	Rhizomes	26
2. Bawang	Allium sativum L.	Liliaceae	Bulb	25
3. Mam-in	Piper betle L.	Piperaceae	Whole	25
4. Butingot	Piper sarmentosum	Piperaceae	Stem/leaf	24
5.Tambal Ahas	Arcangelisia flava	Menispermaceae	Whole	24
6. Litlit	Piper retrofractum Vahl.	Piperaceae	Leaf	23
7. Lubigan	Acorus calamus L.	Araceae	Stem	20
8. Bamban	Donax canniformis Forst.	Marantaceae	Rhizome	18

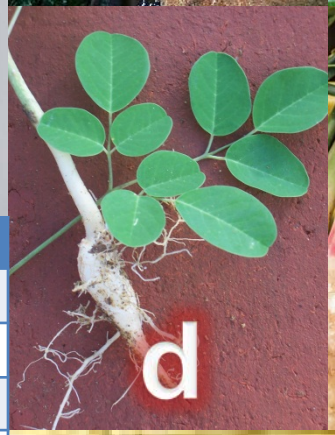
FINDINGS

The most commonly used plants				
Common Name	Scientific Name	Family	Part Used	No. of magtatawak using the plant
9. Hamotyo	Piper tomentosum	Piperaceae	Stem/leaf	18
10. Malunggay	Moringa olefera Lam	Moringaceae	Roots	18
11. Luya	Zingiber officinale Rosc.	Zingiberaceae	Rhizome	17
12. Duso	Kaempferia galanga	Zingiberaceae	Rhizome	15
13. Seremonyas	Aerva lanata	Amaranthaceae	Whole	14
14. Kugyog	Dysoxylum Cumingianum	Meliaceae	Bark	13
15. Nito	Lygodium cirninnamatum	Schizaeaceae	Rhizome	10
16. Undan	Cyperus rotundus Linn.	Cyperaceae	Tuber	10

FINDINGS

- **Parts of plant used by “Magtatawak”**

Parts of Plant	
Whole plant	(49)
Bark	(22)
Leaves	(20)
Roots	(18)
Rhizomes	(15)



Legend:

Some parts of plants used in making “tawak”		
Tagalog	English	Scientific name
a. Seremonyas	Mountain knot grass	Aerva lanata
b. Kudyog	Rosewoods	Dysoxylum cumingianum C.
c. Butingot	Wild betel	Piper sarmentosum
d. Malunggay	Horse-radish tree	Moringa olefera Lam.
e. Luya	Ginger	Zingiber officinale Rosc.

FINDINGS

Phytochemical		
Phytochemical	No. of Plants contain	Functions
Flavonoid	134	Anti-inflammatory, antibacterial, regulates blood flow, antioxidant, hepatoprotective
Triterpenoid	103	Anti-inflammatory, anti-bacterial
Alkaloid	102	Anti-inflammatory, antipyretic, analgesic
Steroid	79	Anti-inflammatory, immunity booster, analgesic
Saponin	78	Antioxidant, immunity booster, anti-hepatic
Phenol	70	Analgesic, antiseptic
Tannin	70	Antimicrobial, antioxidant, stop hemorrhage, reduce blood pressure
Cardiac glycoside	10	Treatment of cardiac congestion and arrhythmias

FINDINGS

Collection of plants from the wild such as in the forest along the river, grasslands sometimes on their backyard

Collection of the plants and making concoction are made during Holyweek starting Holy Monday

FINDINGS

- “Magtatawak” concocts these plants into potion “tawak”
- Preparations is accompanied by cultural traditions, like “usal and bulong” (magical incantations)

FINDINGS

People age 15 and above participates in the drinking of “tawak” potion believe to be efficacious during Good Friday

CONCLUSION

- Environmentally, the preparation of “tawak” is diversed as their knowledge about the plants found in their surroundings
- Phytochemically, majority of the plants are rich in flavonoids, triterpenoid and alkaloid; other present are steroid, saponin, phenol, tannin and cardiac glycoside.
- Culturally, the preparation of “tawak” is also based on their belief of magical incantations which has been pass to the from generation to generation in savings peoples lives against venom, poisonous and other diseases. It is belief that it will become efficacious if will drink during Good Friday.
- In connection to tourism, it is now attracting local and foreign tourists participating in “tawak” drinking practices during Good Friday.


TAWAK DRINKING
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