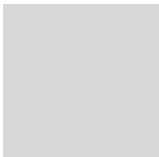
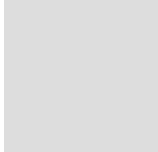




# Documentation of Endangered Cosao “Green Codes” Yunnan, China



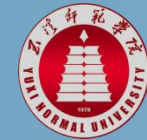
Bibo BAI & Xianming XU

Research Centre for  
Endangered Languages  
Yuxi Normal University  
Yunnan, China

4<sup>th</sup> ICLDC

# The Map of China



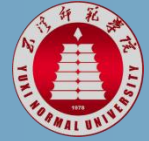


# The Map of Yunnan



# Location





# Introduction

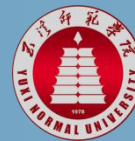
- The Cosao people
  - A small ethnic group living in Yunnan, southwest of China
  - Only one village with 149 people, living in 47 households (2013)
- Local government grouped them into the Hani nationality in 2004
- Cosao has no ISO code yet for it has not been previously reported in the literature
- **Horn People:** the traditional women's headdress.







# Cosao Group



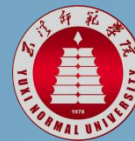




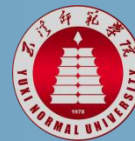
# Cosao Women



# Praying for Ancestors



# Drinking Wine Together



# Language



- The Cosao people speak one of Southern Yi branch languages
- Tibeto-Burman language family in Sino-Tibetan language phylum
- They don't have a written language
- The Majority of Cosao have become bilingual or mutil-lingual. Children are monolingual in Chinese.
- They use plants, or “green codes”, to communicate with each other.



# Unique Culture \_\_ Green Codes

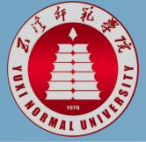


- Use plants to encode and decode meanings and feelings in communication within tribe
- Formerly used approximately 400 plants to express meanings and feelings covering love, ethics, worship, number, birth, offering sacrifices to gods and ancestors, etc.



*Cassytha Filiformis* Linn / khə<sup>31</sup>khaŋ<sup>53</sup> 克抗

Rootless Vine / 无根藤





# Linguistic decoding

- It is a parasitic vine with no roots that is used to symbolically tell people to “**Stop spreading rumors**”.
- When a villager spreads rumors, elders pick some vines and take them to the home of the rumor-starters.
- When you receive this “gift” you know that what you’ve been saying is a groundless allegation, and you know to stop.
- The message encodes natural traits: rootless vines can eat up the main tree.

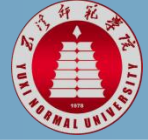


*Mussaenda sp.* / pha<sup>31</sup> phju<sup>55</sup> tsw<sup>55</sup> ze<sup>33</sup> 帕普资忍

*Mussaenda pubescens* / 玉叶金花





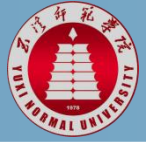


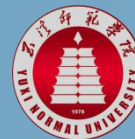
- Means “**living with both old and bald**”.
- When two young people love each other, the young man will send the bark of *the plant* to the girl, which means he has decided to marry her. If the girl returns the same plant to him, then it shows that she agrees to marry and grow old with him.
- The message encodes natural traits: green leaves mean youth, the white leaves mean white hair, infers the old.



*Bombax malabaricum* DC./ a<sup>31</sup>by<sup>31</sup>lo<sup>33</sup>pa<sup>55</sup>

阿倍楞巴 / Red Silk-cotton Tree / 木棉树

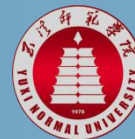




## Natural Traits:

- A deciduous tree, grows as high as 25 meters in subtropics, with red or yellow flowers in spring.
- Its fruit has many seeds wrapped in “cotton” which is blown away by the wind.
- The message encodes both **homophonic** and **natural traits (Metaphor)**.





**Homophonic:** a<sup>31</sup>by<sup>31</sup>lo<sup>33</sup>pa<sup>55</sup>, in Cosao pa<sup>55</sup>

contains “to fly”. Means to elope or run away from Parent-arranged marriage.

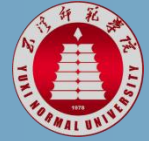
**Metaphor:** It’s leaves and flowers symbolize that lovers want to fly away together like its cotton which encodes uncertainty of lovers’ future life.



*Baccaurea ramiflora* Lour/su<sup>31</sup>ho<sup>55</sup>色伙  
Root of Ramiflorous *Baccaurea* /木奶果



# Linguistic decoding



The plant grows more than 5 meters in sub-tropics, with red or light yellow fruit in summer.

## Rationale of Linguistic Encoding and Decoding

**Homophonic:** su<sup>31</sup>ho<sup>55</sup>red, as red as girl's face.

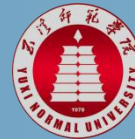
**Natural Traits:** its fruit is red, lovely, enjoy tasting.

**Metaphor:** beautiful, attractive

**Cultural Traits:** You are so beautiful and I love you.



# Encoding arguments



- Homophonic
- Metaphor
- Compound



# Homophonic



- **Latin Name**
- Symplocos sinuata Brand
- Commelina communis L.
- Tacca chantrieri Andre
- Jatropha curcas L.

## Cosao Name

mɛ<sup>31</sup> mɯŋ<sup>53</sup>

‘beautiful’

va<sup>31</sup> ʒu<sup>55</sup>

‘marry’

ma<sup>55</sup> ɕi<sup>55</sup> pha<sup>31</sup> lɛ<sup>31</sup>

‘not willing’

də<sup>55</sup> pha<sup>33</sup> lɛ<sup>31</sup>

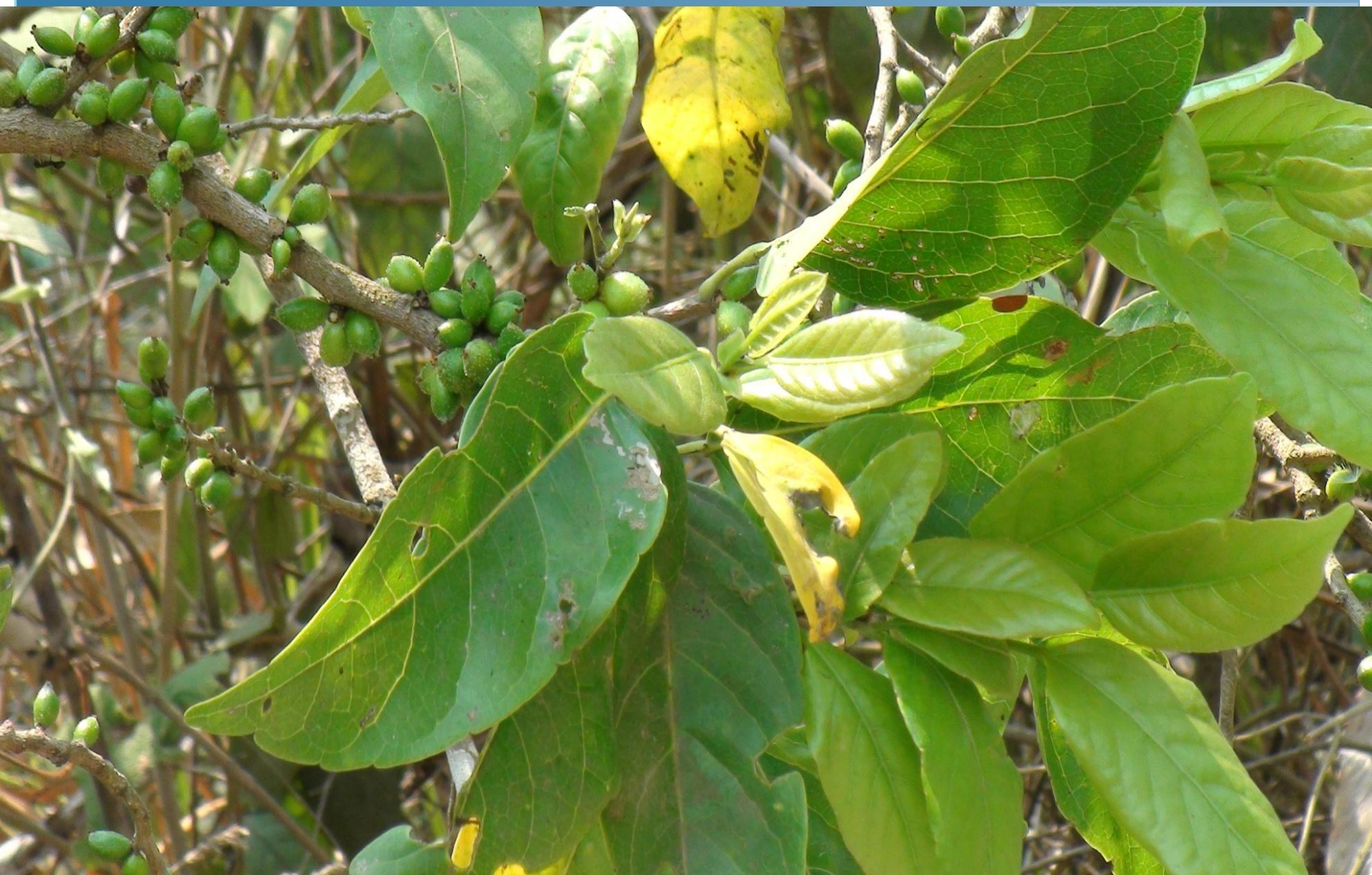
‘hybrid’





*Symplocos sinuata* Brand /məˈmjuːn<sup>53</sup> 买某

*Symplocos Sumuntia* /波缘山矾



*Commelina communis* L. / va<sup>31</sup> zu<sup>55</sup> 哇叻

Herba Commelinae/鸭跖草



Tacca chantrieri Andre/ ma<sup>55</sup>çi<sup>55</sup>pha<sup>31</sup>le<sup>31</sup>麻息帕莱  
Taccachantrieri/老虎须



*Jatropha curcas* L. / dɛ<sup>55</sup>pha<sup>33</sup>lɛ<sup>31</sup> 豆帕菜  
*Vernicia Fordii* / 麻疯树



# Metaphor



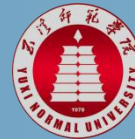
- Applying parts of plants: flowers, fruit, leaves, vines, roots, stems, etc.;
- Natural growth of plants: growing, blossoming, bearing, withering and fading;
- Characteristics of plants: color, smell, taste, appearance, weight
- Use physical properties to construct new concepts: **semantic shifts** of plant traits.



*Epipremnum pinnatum* (L.) / ʒo<sup>33</sup> və<sup>33</sup> ŋa<sup>33</sup> tu<sup>33</sup> 啲喔阿都  
Kylin leaf / 麒麟叶



# Metaphor



- $ʐo^{33}və^{33}ŋa^{33}tu^{33}$  哟喔阿都 / Kylin leaf
- $ʐo^{33}və^{33}$  = elephant, strongest animal in the forests which can protect people and animals in the village.
- $ŋa^{33}tu^{33}$  = banana flower, edible vegetable



*Dendrocnide urentissima* / pha<sup>31</sup>ty<sup>31</sup> 帕堆

Nettle/荨麻





# Metaphor



**Natural Traits:** The leaves can hurt people.

When people touch the leaves, they will suffer a lot.

**Cultural Traits:**

- Exorcise evil spirits
- Protect people and animals in the village.
- Normally used in birth, festival and sacrificial activities.



# Compound



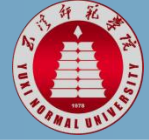
- Use both **Homophonic** and **Metaphor** as key words.



Herba Lophatheri / tha<sup>55</sup>sa<sup>33</sup>塔洒  
Common Lophatherum / 皱叶狗尾草



# Compound



- $\text{tha}^{55}\text{sa}^{33}$
- **Homophonic**:  $\text{sa}^{33}$ =itch, tickle, sticky
- **Metaphor**: Don't let me become a scapegoat.
- When a girl was pregnant and she told her boy friend or new husband. The boy or husband realized the baby was not his. He would like to send her a bark of  $\text{tha}^{55}\text{sa}^{33}$ .
- This is a compound code because they encode both **Homophonic** and **Metaphor**.

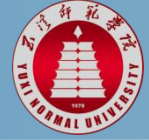


*Castanopsis hystrix* Miq. / tshə<sup>31</sup> nə<sup>55</sup> 策呢

Chinese Evergreen chinkapin / 犁靶柯



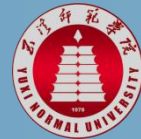
# Compound



- tshə<sup>31</sup>nə<sup>55</sup>
- **Homophonic**: nə<sup>55</sup>=red, refers to “baby”
- When baby was born. The skin was pink.
- **Metaphor**: We have known since we were babies. The baby’s skin is red.
- This is a compound code because they encode both **Homophonic** and **Metaphor**.



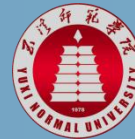
# How do they use the codes



- Most of them use one or two plants.
- Some of them use three or four plants.
- A few use five or more plants.
- They send short messages like we do via mobilephone, or WeChat today.



# Plant Messages (Love)



## 4 Plants:

tse<sup>31</sup>ko<sup>31</sup> + do<sup>55</sup>phja<sup>33</sup> + va<sup>31</sup>zu<sup>55</sup> + pha<sup>31</sup>phju<sup>55</sup>tsu<sup>55</sup>ze<sup>33</sup>

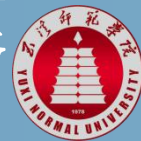
say shoot more marry silver white wood

Meanings: We have encountered trouble. No matter  
What happens, we will get married. We will live with  
both old and bald.





*Spilanthes paniculata* Wall.ex DC / tse<sup>31</sup>ko<sup>31</sup> 择菓  
Umbrella grass / 金纽扣



*Arthromeris wallichiana* (Spreng.) Ching  
do<sup>55</sup> phja<sup>33</sup> 道翩 / Fern / 单行节肢蕨



*Commelina communis* L. / va<sup>31</sup> zu<sup>55</sup> 哇叻

Herba Commelinae / 鸭跖草



*Mussaenda pubescens* Ait.f. / pha<sup>31</sup> phju<sup>55</sup> tsw<sup>55</sup> ze<sup>33</sup>  
帕普资忍 / *Mussaenda pubescens* / 玉叶金花



# Plant Messages (Curse)



## 5 plants:

tɕha<sup>53</sup>zə<sup>31</sup>tɕa<sup>33</sup>gə<sup>53</sup> + su<sup>31</sup>khə<sup>31</sup>khə<sup>31</sup>lo<sup>31</sup> +

good-for-nothing                      disgust

zɛ<sup>31</sup>hu<sup>33</sup> + pɛ<sup>31</sup>pɛ<sup>31</sup> + ku<sup>31</sup>sau<sup>33</sup>

yellow                      swollen face                      vegetable old beard

- This is an old man hunts a young girl.

**Meanings:** You are a good-for-nothing, disgusting, ugly old man. You want to eat tender vegetables.

That's a day dream!



*Nepeta cataria* L./ ṭha<sup>53</sup> zə<sup>31</sup> ṭa<sup>31</sup> gə<sup>53</sup> 恰热加格  
Fineleaf Schizonepeta Herb /野荆芥



*Solanum indicum* L./su<sup>31</sup>khə<sup>31</sup>khə<sup>31</sup>lo<sup>31</sup>色可可楞  
Himalaya Nightshade / 刺天茄



*Buddleja officinalis* Maxim /  $z\varepsilon^{31}hw^{55}$  热禾  
Flos *Buddlejae* / 密蒙花



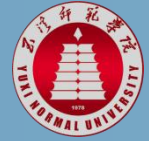


*Osbeckia crinita* Benth.ex Wall /  $\rho\epsilon^{31}\rho\epsilon^{31}$  备备  
Wideleaf Osbeckia Root / 朝天罐



*Toona sinensis* (A. Juss.) Roem. / ku<sup>31</sup>sau<sup>33</sup> 谷梢  
Fruit of Chinese Toona / 香椿





# Plant message/Use 9 plants (sacrifice )

- $a^{31}by^{31}z\phi u^{55}tha^{55} + t\phi hi^{55}m\phi^{31} + suw^{31}kh\phi^{31}kh\phi^{31}lo^{31}$   
+  $i^{31} + z\phi^{33}v\phi^{33}\eta a^{33}tu^{33} + pha^{31}ty^{31} + som^{55}poi^{55} +$   
 $\phi\eta^{53}t\phi ha^{53}t\phi ha^{53}n\phi^{33} + bj\epsilon^{33}t\phi^{55}$
- This is for sacrificial activities.
- Meanings: All the spirits and evils will fight away. Soldiers as strong as elephants have protected the people and animals in our village. All the things that hurt the people and animals will be driven out by the plant soldiers.



*Alocasia macrorrhiza*(L.)Schott / a<sup>31</sup>by<sup>31</sup>zu<sup>55</sup>tha<sup>55</sup> 阿标哟  
塔 / Rhizome of Taro / 野芋头



*Rhus chinensis* Mill. var. *roxburghii* (DC) Rehd  
tɕhi<sup>55</sup> mɔ<sup>31</sup> 期眸 / *Rhus chinensis* Mill / 盐酸木



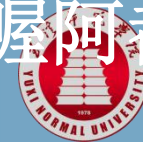
*Solanum indicum* L./su<sup>31</sup>khə<sup>31</sup>khə<sup>31</sup>lo<sup>31</sup>色可可楞  
Himalaya Nightshade / 刺天茄



*Imperata cylindrica* (Linn.) Beauv. /  $i^{31}$  矣  
*Cymbopogon Citratus* / 茅草



*Epipremnum pinnatum* (L.)/ zo<sup>33</sup> və<sup>33</sup> ŋa<sup>33</sup> tu<sup>33</sup> 哟喔阿都



Kylin leaf / 麒麟叶





*Dendrocnide urentissima* / pha<sup>31</sup>ty<sup>31</sup>帕堆

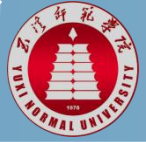
Nettle / 荨麻



*Acacia sinuata* (Lour.) Merr. / som<sup>55</sup> poi<sup>55</sup> 嵩博  
Silk Tree / 藤金合欢



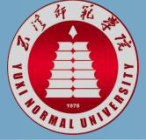
*Caryota ochlandra* / ɔŋ<sup>53</sup>tɕha<sup>53</sup>tɕha<sup>53</sup>ŋɔ<sup>33</sup> 喻恰恰哟  
Fishtail Palm / 鱼尾葵



*Dicranopteris linearis* (Brum.f.) Under / bje<sup>33</sup> to<sup>55</sup> 百道  
Old World forked fern / 芒萁







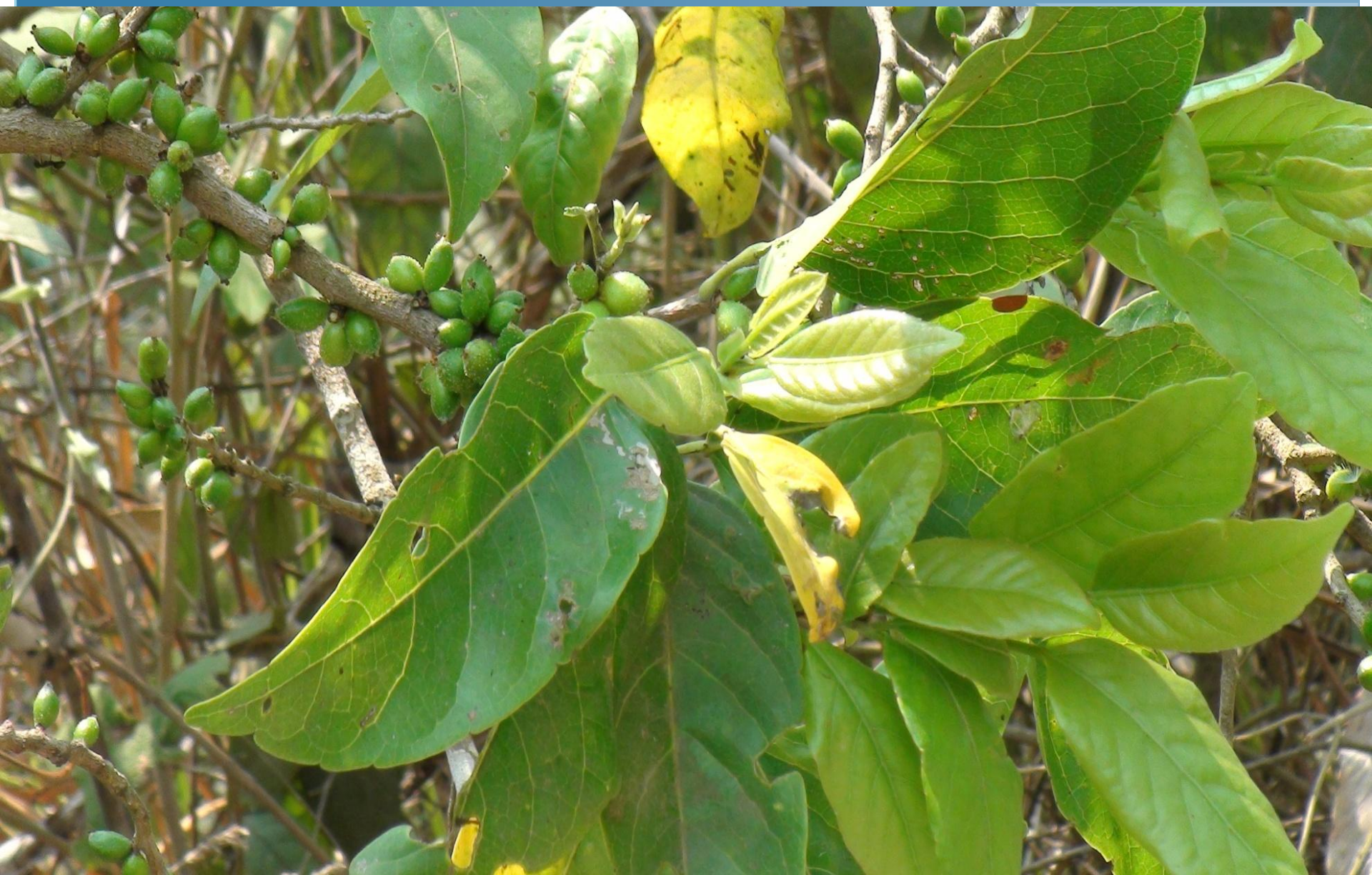
# Use 11 plants (love)

- $m\varepsilon^{31}m\text{u}\eta^{53} + h\text{o}\eta^{31}m\text{a}\eta^{33} + s\text{u}\text{u}^{31}h\text{o}^{55} +$   
 $g\text{u}^{31}t\text{c}hi^{33}g\text{u}^{31}t\text{s}ha^{31} + p\text{i}^{31}t\text{c}a^{31}d\text{a}^{55}s\text{ə}^{55} + s\text{u}\text{u}^{31}k\text{h}\text{o}^{31}$   
 $+ l\text{o}^{31}a\eta^{55} + l\varepsilon^{31}\text{o}m^{31} + l\text{o}^{31}l\text{e}^{33} + t\text{s}a^{31}b\text{i}^{33}t\text{s}a^{55}b\text{i}^{33} +$   
 $va^{31}z\text{u}^{55}$
- **Meanings:** You are so attractive. I love you. I fall in love at first sight. We have been loving each other since then. We often chat together. You are so kind and clever. But for a long time you have not promised to marry me. I am so sad. I am serious, please do not cheat me. We are both single now. Let's marry together.



*Symplocos sinuata* Brand / me<sup>31</sup> muŋ<sup>53</sup> 买某

*Symplocos Sumuntia* / 波缘山矾



*Combretum latifolium* /  $h\alpha\eta^{31}man^{33}$  红玛

Mytle / 蒲桃



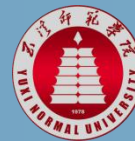


*Baccaurea ramiflora* Lour/ sw<sup>31</sup>ho<sup>55</sup>色伙  
Root of Ramiflorous *Baccaurea* / 木奶果



*Dumasia cordifolia* / gu<sup>31</sup>tɕhi<sup>33</sup>gu<sup>31</sup>tsha<sup>31</sup>谷气谷茶

Mountain Black Bean / 心叶山黑豆



*Neohusnotia tonkinensis*(Balansa) A.Gamus

pi<sup>31</sup>tɕa<sup>31</sup>da<sup>55</sup>sə<sup>55</sup>比加达色/ *Chrysopogon* / 芦竹



*Cucumis sativus* L. / sw<sup>31</sup>kho<sup>31</sup>色阔

Cucumber / 黄瓜



*Rubus multibracteatus* Lév. et Vant. / 10<sup>31</sup> an<sup>55</sup> 罗昂  
Raspberry / 大乌泡



*Schoepfia fragrans* Wall. / 菜喩

Tubiflorae / 香芙木



*Eriolaena spectabilis* (DC.) Planch. ex Mast.

$10^{31}1e^{33}$  楞菜 / Matchlock Tree / 火绳树



*Garcinia cowa* Roxb. / tsa<sup>31</sup>bi<sup>33</sup>tsa<sup>55</sup>bi<sup>33</sup> 杂比渣比  
Yunnan mountain Bamboo / 云南山竹子

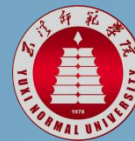




*Commelina communis* L. / va<sup>31</sup> zu<sup>55</sup> 哇叻  
Herba Commelinae / 鸭跖草



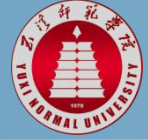
# Summary 1: Domains of Usage



- The green codes are interesting.
- When people are too shy to speak about important issues face to face.
- Solve problems in the community.
- Deliver messages to lovers and neighbors
- Provide directions when lost in the forest.
- Talk to spirits and evils in sacrificial activities.



# Summary 2: Documentation



- We have collected more than 160 plants by using digital cameras.
- We identified both natural and cultural properties.
- We have found out some linguistic encodes.
- The green codes would have disappeared in a couple of years because of many reasons.





- Thank you for your attention!



# Question time

