Documenting ethnobotanical knowledge among Gújjolaay Eegimaa speakers

Serge Sagna

Surrey Morphology Group

University of Surrey - UK

Background

- Part of ethnobiological research includes investigating:
  - How entities like plants, the focus of this presentation, are used
  - How they are classified/categorized by examining their names.
- A good justification for the examination of e.g. plant names is Berlin's (1992: 26-27) claim that:

'salient morphological and behavioral features of plant and animal species are often encoded directly in the ethnobiological names used to refer to these species.'

Background (cont.)

- In Language documentation (e.g. Himmelmann 1998, Gippert et al. 2006) much of the focus is on producing (and archiving) material that can be used by specialists from other disciplines

- In both areas, emphasis is laid on collaborative research to provide the best account of the phenomena researched

Outline

- The goals of this presentation are to:
- briefly discuss techniques used to document ethnobotanical knowledge among Eegimaa speakers.
- Examine the classification of plant names in the Eegimaa gender/noun class system.
- Show that plants are not assigned to classes based taxonomic criteria
  - But more following principles e.g. perceptual similarities; economic significance as argued in the literature (e.g. Berlin 1992)

Eegimaa

ETHNOBOTANICAL DOCUMENTATION

Some assumptions

- Language Documentation seeks to capture the theoretical and practical knowledge (individual & collective) and experience of a people about e.g., their plants and animals.

- That is, how they 'conceive of and think about the objects and events which make up their world – including everything from physical objects like wild plants to abstract events like social justice' (D'andrade 1995: 1).

Data collection methods

Fieldwork manuals
- Linguistic fieldwork manuals do not usually discuss ethnobiological research
- Useful source: Bouquiaux and Thomas (1987)

Introspection
- I am native speaker of Eegimaa
- Early exposure to plants through cattle minding & agriculture

Collaboration with a native speaker botanist
- Reinforcement of native speaker judgment
- Collection of popular & scientific names
- Production of orthography for collaborative use

Participant observation
- Witnessing many instances of plant use for different purposes
- Attending traditional trials about ownership of trees of great importance

Elicitation:
woodworkers & healers
- Eegimaa healers are very secretive (see Diatta et. al 2009)
- Elicitation onsite

Information to collect

- Vernacular and scientific names of plants and the meanings of those names
- A description of - their physical characteristics, their habitat and their relationships with other plants
- Whether they are grown, owned or are wild
- Uses: consumption - medical purposes - religious rituals - making artefacts - literature e.g. folktales or proverbs.
- How their parts are harvested, preserved and processed for use

Class distribution: 128 plants vs. 101 birds

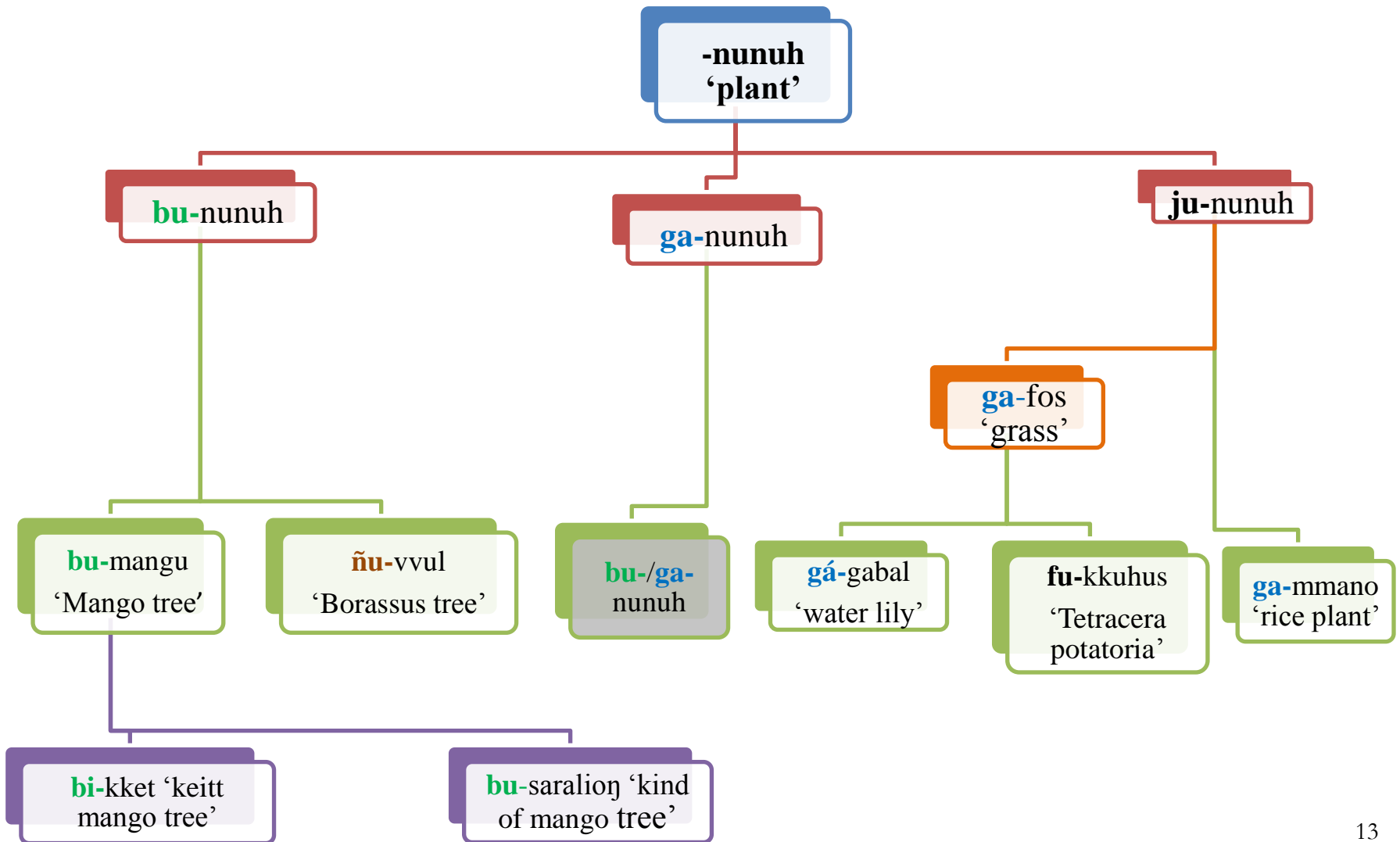| CL pair	Plants	Birds	Noun class semantics - generalisations
bu- (u-)	**87**	**0**	Assemblages; augmentative (enormous size)
ga- (u-)	22 (**e-**)	33	Flat; big size; augmentative; derogatory
fu- (gu-)	8	16	Round entities
e- (su-)	5	22	Default class, semantically unspecified
ñu- (u-)	**3**	**0**	Economy and social organisation
ju- (mu-)	3	30	Small things & diminutive
Total	**128**	**101**	

17 of **22** use **e-** to form collective meaning

PLANT CLASSIFICATION

Taxonomic hierarchies (Berlin 1992)

Taxonomy hierarchy		Example	Characteristics
1	Unique beginner	plant	Most inclusive level; does not always have a label.
2	Life-form	bush	'Stem habit'; Very few in number - 10 to 15.
3	Intermediate	pine	'Suprageneric [category] of lesser scope that life-form' Most categories not labelled. (Berlin 1992: 139; D'andrade 1995: 97).
4	Generic	rose	'Most salient for native speakers'; learned earlier; easily elicited; up to 500 items; generally monotypic; simple lexemes (Foley 1997: 116).
5	specific	hybrid tea	Existence culturally motivated – binomial.
6	varietal	Peace	Intesive human manipulation (Berlin 1992: 102); rare; polynomial labels.

Taxonomic hierarchy

-nunuh **'plant'**

bu-nunuh

ga-nunuh

ju-nunuh

ga-fos 'grass'

bu-mangu 'Mango tree'

ñu-vvul 'Borassus tree'

bu-/**ga-**nunuh

gá-gabal 'water lily'

fu-kkuhus 'Tetracera potatoria'

ga-mmano 'rice plant'

bi-kket 'keitt mango tree'

bu-saralioŋ 'kind of mango tree'

13
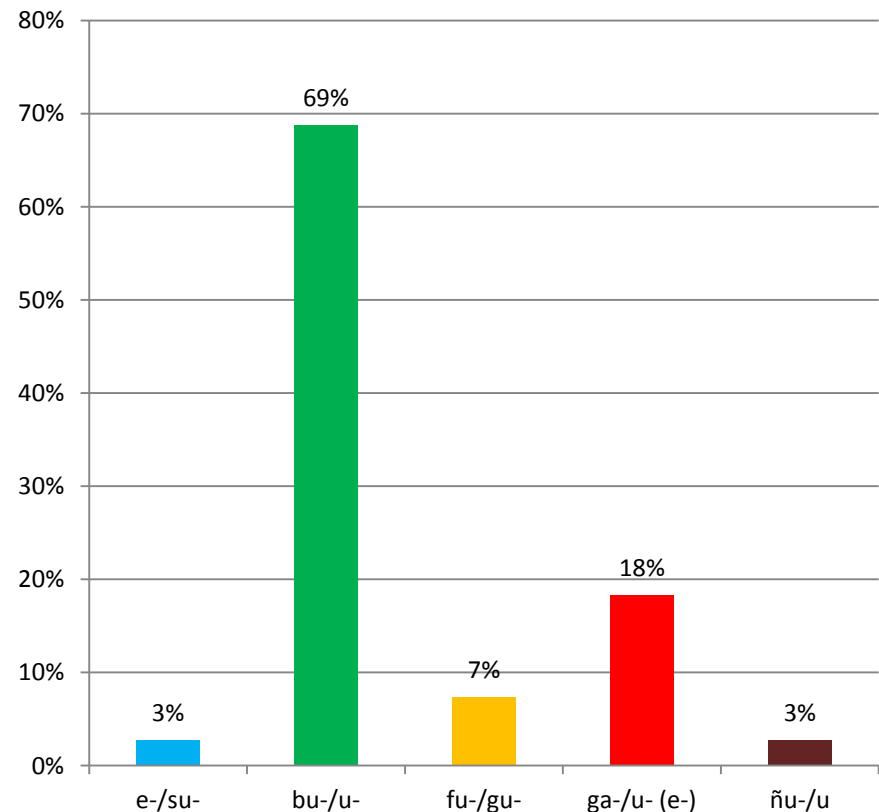
Plants in the generic taxon

- No one-to-one match between taxonomic rank and noun class
- Most plants still assigned to class bu-/u-

Distribution of plant names in the generic taxonomic rank

	e-/su-	bu-/u-	fu-/gu-	ga-/u- (e-)	ñu-/u
	3%	69%	7%	18%	3%

PLANT CATEGORIZATION

Principles of categorization

- Conceptual categorization of plants may based on:
  - 'people's cognitive assessments of the gross perceptual resemblances observed among classes and organisms'
  - Secondarily, 'economic significance or cultural evaluation' (Berlin 1992: 21)
- The claims are also supported by research in cognitive categorization (see Rosch 1978; Lakoff 1987, Taylor 2003)

Examples with class bu-

bu-bah (**u-**)	'baobab tree'
bu-ssana (**u-**)	'silk cotton tree'
bi-tel (**u-**)	'Sida rhombifolia' (small plant)
bú-kkaju (**u-**)	'cashew tree'
bi-peleeŋ (**u-**)	'Newbouldia laevis' (small plant)
bu-ñoññokkoy (**u-**)	'kind of grass'

Plants in class bu-

- The class of trees in previous works (e.g. Sapir 1965)
  - Loanwords in this class are trees
- The class of 'enormous entities', purposeful 'assemblages' etc. (cf. Sagna 2008, 2012)
- Smaller plants in this class are generally used for medical or other utilitarian purposes
- They differ from plants in e.g., class ga- which mainly include grass (generally unimportant).

Grass in CL ga-; CL e-

Singular (Plural)		Collective for colonies	
ga-rarah (**u-**)	'Ipomea asarifolia'	**e**-rarah	'colony of ipomea asarifolia'
gá-gabal (**ú-**)	'Water lily plant (-s)'	**e**-gabal	'colony of water lily plant'
ga-mmano (**u-**)	'Rice plant (-s)'	**e**-mmano	'rice (plantation)'
ga-lallañ (**u-**)	'kind of grass'	**e**-lallañ	'colony of that kind of grass'
ga-ssel (**u-**)	'kind of grass'	**e**-ssel	'colony of that kind of plant'

Grass in CL ga- & Coll in CL e-

- Mostly herbaceous but also plants than are cultivated by humans
- Only grass that grow as a colony use CL e- as a collective marker
  - also express human collectivities e.g. identity groups, professions, geographical and ethnic origin…
- Plants are categorized as a conceptual unit/collective based on their perceived behavioural properties.

Culturally significant plants in CL **ñu-**

- Only two trees – palm trees
  - **ñí-it** 'palm oil tree'
  - **ñu-vvul** 'Borassus tree'
- There are rules of ownership
- These trees are the most exploited trees by the Eegimaa speakers:
- The class is called the class of 'economy and social organisation' (Tendeng 2007 & Sagna 2008)

Culturally significant plants in CL ñu-

- From the 'Borassus palm tree' we obtain:
  - the best wood to build roof structures
  - the leaves are used to make almost all baskets, hats, umbrellas etc.
  - the fruits are eaten
  - etc.
- From the palm tree we obtain:
  - palm wine (social and religious function)
  - the rachis are used to build fences
  - blades used to make brooms
  - trunk carved to build the structure of houses
  - Etc.
- Are owned, and often the reason for serious disputes in the community
- They have a special status in society and thus differ from those in classes 5bu- or 9 ga-.

Summary

bu- plants: mainly trees

Default class for trees (largest)

Most used plants e.g. medical use.

ga- plants: herbaceous & medium size plants

Colonies of plants - collectives with **e-**

ñu- trees: high cultural/economic significance

Summary (cont.)

- Taxonomic classification does not account for the assignment of plant names into different noun classes in a language like Eegimaa

- In the Eegimaa noun class system plants are classified partly based on culture-bound principles which do not necessarily mirror Berlin's (1992) universal taxonomic relationships

- i.e There is no one-to-one correlation between class-membership and membership to a taxonomic rank.
  - e.g. the generic level includes nouns from different grammatical classes.

References

African Languages Map: http://www.nationsonline.org/maps/African_language_map.png. 20 February, 2013.

Berlin, B. (1992). *Ethnobotanical classification: Principles of categorization of plants and animals in traditional societies*. Princeton: Princeton University Press.

Bouquiaux, L., & Thomas, J. M. C. (1976). *Enquêtes et description des langues à tradition orale* (Vol. 1,2,3): SELAF.

D'Andrade, R. (1995). *The development of cognitive anthropology*. Cambridge: Cambridge University

Diatta, William, Lo, Modou, Fall, Dior Alioune, Bassène, Souleymane, Sagna, Serge, Kady, Badji, and Bassène, Emmanuel 2009. Popular traditional herbal medicines from the Jóolas of Essyl in   the rural community of Enampor (Ziguinchor Sénégal): an ethnographic survey. In *African   natural plant products: new discoveries and challenges in chemistry and quality*, eds. Rodolfo H. Juliani, James E. Simon and Ho Chi-Tang, 111-134. Washington D.C: American Chemical Society (ACS) Symposium Series Press.

Foley, W. A. (1997). *Anthropological linguistics*. Oxford: Blackwell.

Gippert, J., Himmelmann, N. P., & Mosel, U. (2006). *Essentials of language documentation*. Berlin: Mouton de Gruyter.

Lakoff, G. (1987). *Women, fire, and dangerous things : What categories reveal about the mind*. Chicago ; London: University of Chicago Press.

Rosch, E. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and Categorization* (pp. 27-48). Hillsdate, Mich: Laurence Erlbaum.

Sagna, S. (2008). *Formal and semantic properties of the Gújjolaay Eegimaa (A.k.a Banjal) nominal classification system.* PhD Thesis, University of London- School of Oriental and African Studies.

Sagna, S. (2012). Physical properties and culture-specific factors as principles of semantic categorisation in the Gújjolaay Eegimaa noun class system. *Cognitive Linguistics, 23 (1)*, 129-163.

Sapir, J. D. (1965). *A grammar of Diola-Fogny : A language spoken in the Basse-Casamance region of Senegal*. Cambridge: Cambridge University Press.

Summer Institute of Linguistics. Senegal and The Gambia (language Map). https://www.ethnologue.com/map/SNGM. 20 February, 2013.

Taylor, J. R. (2003). *Linguistic categorization* (3rd ed.). Oxford: Oxford University Press.

Tendeng, O. (2007). *Le Gusiilay: Un essai de systématisation. Une contribution à l'étude du Jóola*. Berlin: Peter Lang.