



Endangered Languages in Revitalization Development and Mapping Featuring the Batanes and Orchid Island¹

**2nd International Conference on Language Development, Language Revitalization,
and Multilingual Education in Ethnolinguistic Communities, Bangkok, Thailand**

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**David Blundell²
National Chengchi University**

This paper is about research progress made since our last gathering here in Bangkok at the 1st International Conference on Language Development, Language Revitalization, and Multilingual Education in Ethnolinguistic Communities in 2003. In the past five years, our collaborative Austronesia Team has continued development on Pacific Language Mapping accomplishing the digital geo-vectored edition of *The Language Atlas of the Pacific Area* (Wurm and Hattori 1981, 1983). The Australian Academy of the Humanities, which owns the copyright to the printed maps, has graciously permitted their reproduction and distribution in this form through the Electronic Cultural Atlas Initiative (ECAI). The Pacific Language Mapping Website drew heavily on the commitment and

¹ This is a revised paper resulting from the presentation and session feedback at the *2nd International Conference on Language Development, Language Revitalization, and Multilingual Education in Ethnolinguistic Communities*, Bangkok, Thailand, July 1st-3rd, 2008. My appreciation goes to the Conference Chair and Program Coordination Dr Susan Malone (SLI – International), and especially to those who worked tirelessly for the conference supervised by Dr Sophana Srichampa, Director, and Ms Sunida Siwapathomchai, Assistant Director, of the Institute of Language and Culture for Rural Development, Mahidol University.

² David Blundell works on language and culture studies in the Asia-Pacific region. His research has been motivated initially from early historic records. Prof Blundell received his doctorate in anthropology from the University of California. Blundell serves as editor for mapping Pacific languages with the Electronic Cultural Atlas Initiative (ECAI). He is working on a new publication – *Ethnography of Communication: Acquisition of Language and Knowledge*. His books include *Masks: Anthropology on the Sinhalese Belief System* (New York: Peter Lang, 1994) and his edited volume *Austronesian Taiwan: Linguistics, History, Ethnology, Prehistory* (Berkeley: Phoebe A. Hearst Museum of Anthropology, University of California, and Taipei: Shung Ye Museum of Formosan Aborigines, 2000 [Revised Edition 2009]).

hard work of the Computing Centre of Academia Sinica and of the Spatial Data Projects at the Griffith Asia Pacific Research Institute, Griffith University, to scan and digitize most of the maps as a seamless Web based digital atlas.

Our project traces its history to the Conference on Austronesian Studies in Taiwan, October 1997 held at the University of California, Berkeley. Lewis Lancaster gathered the scholars for an orientation at the campus for the Central Asia/Silk Road projects and to discuss the Pacific Neighborhood Consortium (PNC) established in the early 1990s (see *Berkeley Image Database Project* 1991; Wasley 1995) and the formation of the Electronic Cultural Atlas Initiative (ECAI). It was mentioned that our group could possibly work on an atlas for the Austronesian Language Family. The people attending considered this to be an intriguing idea. At the 1998 PNC meetings, at Academia Sinica, Taipei, the concept grew along with the digital museum and library programs developing at National Taiwan University and Academia Sinica.

Our *ECAI Digital Language Atlas of the Pacific Area* includes vectorized datasets developed from the original 47-leaf atlas of language boundaries. The geographic content of shorelines and language boundaries of the paper maps were digitally traced into a seamless atlas using as a reference the *Digital Chart of the World (DCW)*. The DCW is a comprehensive 1:1,000,000 scale vector base map of the world designed to meet the needs of pilots and aircrews in medium-and low-altitude navigation and to support military operational planning, intelligence briefings, and other needs. The primary source for this data set is the Operational Navigation Chart (ONC) series produced by the United States, Australia, Canada, and the United Kingdom and issued by the US Defense Mapping Agency (DMA, an ancestor of the present National Geospatial-Intelligence Agency). The data currency varies from place to place, ranging from the mid 1960s to the early 1990s and includes numerous thematic layers including country boundaries, urbanized areas and points, altitude, land cover, cultural landmarks, transportation structure, and other features. The GIS version is viewable using the *TimeMap* dynamic map browser. See: <http://ecai.org/austronesiaweb/pacificlanguages.htm>.

The work reported here built directly on these prior achievements. The Website and its maps were extensively developed in conjunction with the following objectives: Fieldwork for providing map layers relevant to the languages and cultures of the Batanes

and Orchid Island; and, especially, the indicator symbols -- like pins on a paper map -- referring to all the cultural evidence (texts, audio, photos, material culture, etc.) that we and our collaborators can locate in libraries, museums, and bibliographies (Blundell *et al.* in press).

The interface is also to show contextual information, with map layers for the geography of languages, political boundaries, topography, and other information. Kimberly Carl, Ray Larson, Jeanette Zerneke, and others created this interactive atlas at UC Berkeley, using TMWin tools developed by the *TimeMap* Project, University of Sydney (Johnson 1998; Zerneke and Johnson 2002; Buckland *et al.* 2004; Zerneke 2005). Collaboration is important for the project to research contemporary issues of endangered languages and conservation. Procedures are based on UNESCO guidelines for tangible and intangible cultural heritage and UNESCO's The Babel Initiative for Internet-based recording of languages, dissemination, and revitalization processes.

When researching language maps, several distinctions come into play. Charting a language could refer to "mapping communications" as a field theoretical approach (i.e., ethnography of communication, media conveyance) to the ways and means people utilize in formulating and transferring ideas and information. Another mapping purpose could be in the conceptual "reference to space and spatial directions" given in a language (see Senft 1997). Here, language mapping is concerned with the production of an "atlas of languages" with boundaries. Serious physical and theoretical problems occur when defining a language and its dialects and when attempting to mark the geographic limits of a language. Individual languages are referred to by various names, often by a name that did not originate with the speakers of that language, but was selected from field studies or in previous accounts of the literature referring to the language. Then, as the language speakers move spatially, or as the language becomes a dialect, the supposed language shifts position on a map. Also, speakers adopt other languages, becoming bilingual or multilingual, challenging the established geo-census data.

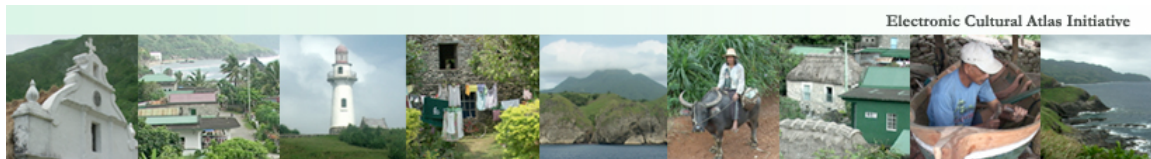
The ECAI tools are not definitive. They are meant to be facilitating a progression of Web-based technologies for researchers to utilize. Let's say by selecting an island -- what is provided includes: geo-referenced boundaries such as coasts, rivers, estuaries, satellite images, topographies, place names, and roughly cultural zones distinguished by

languages. Researchers wanting more definitive information will provide their own data as layers to the atlas format. Early cartography could be applied dating back hundreds of years including legendary data based on stories. Or recent case studies of micro-household language ethnography could be applied of socio-linguistic significance to the multilingual capabilities of individual speakers. Think of ECAI atlases as bulletin boards with layered components of technologies provided to assist data providers. It's expected that ECAI technologies will migrate with advances of collaborative researchers providing the latest interactive tools for data input and storage.

Critical questions³ have emerged on the worth and value of mapping languages. Languages are dynamic and shifting with mobile populations of multilingual speakers. When considering a "map" traditionally, it appears static and dated to the time of its cartographic research and publication. The ECAI concepts of mapping are based on the flowing processes in the flux of dynamic changing data. Researchers have their own objectives for the development of atlases.

Atlas research data holdings could be made public and/or kept as a personal bulletin board with password entry for internal data storage and utility. It's a dynamic research suite of tools provided by a consortium of interested parties.

Current Project on the Batanes and Orchid Island



Batanes Islands Cultural Atlas

Our current phase of the project deals with the language and culture of the Batanes Islands -- the smallest and most northern island province of the Philippines (Moriguchi 1998) and Orchid Island (Lan-yu, or Irala) administrated by Taitung County, Taiwan, and. These islands straddle the Bashi Channel. The Bashiic cultural arena includes the Yami speakers of Lan-yu in the north and the Batanic speakers south between Taiwan and the Philippines. The Yami as well as most people of the Batanes

³ Appreciation is given to the people who critiqued this presentation at the *2nd International Conference on Language Development, Language Revitalization, and Multilingual Education in Ethnolinguistic Communities* and the editing consultants of this paper.

claim origins from Itbayat and Batan islands. The project includes field research and participation by Yu-hsiu Lu, ethnomusicologist; Chien-hsiang Lin, documentary filmmaker; Andrew Limond, specializing in boat construction; Christian Anderson, anthropologist; and others. The documentation and presentation of the research is intended to demonstrate the use geographical information systems facilitating local and scholarly input.

The Batanes Islands

The semi-tropical Batanes group of islands is the northernmost province of the Philippines. The islands comprise an archipelago located between 121° 45' to 122° 15' east longitudes, and at 20°15' north latitude. The Batanes Islands are closer to Taiwan than to the northern end of Luzon. Of the ten volcanic islands composing the province, three of the largest islands are inhabited: Batan (7,000 hectares) and Sabtang (1,600 hectares), and Itbayat (9,000 hectares). A fourth island, Ivuhos, lying about a 1.5 kilometers from Sabtang, has some families raising cattle. The other, uninhabited islands are Yam'i, North, Mavudis, Siayan, Di-nem, and Dequey. The province has a total island area of 230 sq. km, the smallest in the Philippines. There seasons include: *rayun* (summer), March to May, *amian* (winter) November to February. Kachachimuyen is the rainy season for the other months with sudden warmer conditions (*dekey a rayun*) during two weeks between September and October.

The language and people of the Batanes are known as Ivatan. The languages of Lan-yu, Itbayat, Batan, and Sabtang are mutually intelligible with dialects between islands and within islands. The language of the Batanes is classified as Austronesian, Malayo-Polynesian, Western Malayo-Polynesian, Northern Philippine, Bashiic-Central Luzon-Northern Mindoro, Bashiic, and Ivatan (see ethnographic research on the Batanes: Alonzo 1960, Madrigal 1983, Benedek 1987, Hidalgo 1996, and Castor 1998).

The Batan Island people probably originated from Luzon sometime just over a thousand years ago. The province has six municipalities with the towns Ivana, Uyugan, Mahatao, and Basco (or Vasay), the provincial capital, on Batan Island and two other island-wide municipalities of Sabtang and Itbayat.

Archaeological explorations in the islands of Batan, Sabtang, Ivuhos, and Itbayat have identified five types of sites: (1) *ijang*, defense rampart structures on promontory or highland areas; (2) *nakavajayan*, abandoned habitations; (3) Nephrite jade workshops and other Neolithic sites of pottery and slate blades from Taiwan dating from 2500-4500 BP (Szabo, *et al.* 2003, Bellwood and Dizon 2005); (4) 16th century burials marked by stones in a boat shape; and (5) jar burials. (Later burials were done by the methods of the Dominican friars from the Spanish administration).

Orchid Island (Lan-yu, or Irala)⁴

Orchid Island is “Lan-yu” in Mandarin, from the wild orchids (*Tuberolabium kotoense*) found there. Irala is a Batanes language name for the island. Another name Botel Tobago appears on early European maps expressing a trade item or shape of the island (e.g., a tobacco bottle used by sailors). Its language classification is Austronesian, Malayo-Polynesian, Western Malayo-Polynesian, Northern Philippine, Bashiic-Central Luzon-Northern Mindoro, Bashiic, and Yami. The island is north of the Batanes archipelago separated by the Bashi Channel. It is an island of 45 sq. km, about 80 km southeast of Taitung City, Taiwan, and is populated by 4,250 Yami speakers inhabiting six villages. In this strongly matriarchal society, women grow taro in complex irrigated fields surrounding villages. The people claim ancestry to the Batanes, and most probably migration was from Itbayat beginning about seven hundred years ago. Yami is the designation of the language mutually intelligible among the six villages with Lang Dao having a dialect variation. Men construct plank boats for fishing (Teng 1985). Traditional homes are built semi-underground. From March to June, flying fish are harvested in the Black Current (or Kuroshio Current [from Japanese, black stream] flowing south to the north).

The term Yami for the language and culture of the Orchid Island people came from a Japanese ethnologist, Niaoju Lungtsang. The term was retained during the Japanese occupation of Taiwan (1895-1945) and to the present. Yami speakers recently have questioned this term applied to them. In the past few decades also called themselves

⁴ For bibliography see, Chiang 2004.

Tao (meaning people) as part of a resurgence of ethnic self-identity after the lifting of martial law (that had kept the governing status quo in place from 1947 to 1987) enabling a renaissance of ethnic choices. However, Orchid Island people identify themselves by a specific locality, essentially their village name. The six village communities are Ye You, Yu Jen, Hong Tou, Ye Yin, Dong Qin, and Lang Dao. Opinions are divided as to retaining “Yami” or selecting “Tao” for self-identity -- neither of which is completely satisfactory to the local people who are divided about the choices (Limond 2002).

Fieldwork

To date, from 2004 to 2006 our team members have visited and conducted fieldwork on the Batanes and Orchid Island for interviewing people and mapping local language and culture. These ethnological surveys provided materials to create Web pages featuring historic maps, geographic information systems (GIS) vectored base maps for public research utilization, archaeological sites, place names, zones of land use, photographs, topography, and links to video interviews of oral histories, legends, and songs. Local people helped with the project with an interest to conserve their cultural heritage as a Web based utility resource.

Discussion

Our projects are collaborative efforts and provides a model for combining digital versions of older printed language map with the collection of data on contemporary languages areas in order to examine language and culture dynamics visually (see Blundell 2000a, 2000b, 2003; Blundell and Zerneke 2002; Blundell and Buckland 2004; Blundell *et al.* in press). Supported by UC Berkeley endowment funds we are (1.) adding more and more diverse local cultural resources, including photos, sound recordings and video recordings of interviews, language samples, legends, and oral history, and material culture, bibliographic resources; (2.) providing fuller annotations, explanations, and metadata for materials collected, especially video recordings; and, (3.) connecting with the Batanes Diaspora in California. We are now sharing our work with Batanes islanders living in the United States and seek their help in enriching our resources.

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