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NOTES FROM THE EDITOR

It is with a sense of deep personal loss that I must inform readers of the death of Benedict Sandin. Benedict was unexcelled as an Iban ethnohistorian and folklorist, and served as friend and counselor to many persons who lived and worked in Sarawak. His contributions on all aspects of Iban life, law, and ritual are invaluable, as was his work in a variety of capacities, most recently as Curator, at the Sarawak Museum. It is entirely appropriate that Dr. Clifford Sather, who collaborated with him in his last publications, write an obituary which we shall publish in the next issue. Beyond that we shall welcome contributions for publication from colleagues who want to submit articles in Benedict's honor.

The organized session proposed for the Annual Meeting of the American Anthropological Association has been approved, and will be held in the Monroe West Room of the Washington Hilton at 9 a.m., December 6th. Abstracts of the papers to be presented will be published in the next issue of the Bulletin. The Council's business meeting will be held at 5:30 p.m. in the Caucus Room the same day as the organized session.

You will note (hopefully with a minimum of dismay!) that there is an increase in fees and subscription rates. We have resisted raising charges for several years, but inflation of printing and postage costs makes it imperative that we institute the increase. As reported last year, we now mail over 600 copies of each issue but only about one-fourth of the subscribers/recipients remit fees (or make contributions) regularly.

I would like to thank the following persons for their contributions to the work of the Council and to the support of the Bulletin: Dr. & Mrs. G. N. Appell, Ian Black, Martin Fryer, Jack Golson, Diétrich Kühne, Norman Myers, Dr. and Mrs. Rodney Needham, Dr. Sayogy & Ms. Pudjiwati Sayogy, Dr. & Mrs. Clifford Sather, Barbara Smith, C. H. Southwell, Wang Gungwu, Bruce Wheatley and Leigh Wright.

THE BORNEO RESEARCH COUNCIL

The Borneo Research Council was founded in 1968 and its membership consists of Fellows, an international group of scholars who are professionally engaged in research in Borneo. The goals of the Council are (1) to promote scientific research in Borneo; (2) to permit the research community, interested Borneo government departments and others to keep abreast of ongoing research and its results; (3) to serve as a vehicle for

(continued on pg. 94)

RESEARCH NOTES

THE INITIAL-SYLLABLE-LOSS AFFECTIONATE VOCATIVE IN BRUNEI MALAY

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The Brunei Malay vocative is an important and interesting area of speech. Its forms range from elaborate titles, polite terms, and circumlocutions, to ordinary and affectionate terms. One common way of forming the affectionate vocative is through dropping the initial syllable of an ordinary term.¹

This process applies to both male and female proper names. Thus the female proper name Aminah becomes Minah, which in turn may be shortened to Nah; likewise Ajijah becomes Jijah or Jah.² Similarly the male name Adzis becomes Des; and Ramlan becomes Lan. For returned pilgrims the male title Haji may shorten to Ji and the female Hajiah to Jiah.

Some kinship terms also receive this affectionate vocative treatment. In royal kinship terms (as used in traditional literature) the pattern is:³ nininda, "royal grandparent," shortens to ninda; chuchunda, "royal grandchild," chunda; kakanda, "royal elder sibling," kanda, adinda, "royal younger sibling," dinda, and ayahanda, "royal father," yahanda.⁴ In commoner kinship terms the pattern is: mama, "mother," shortens to ma; bapa, "father," pa; kakak, "elder sibling," kak;⁵ adek/adik, "younger sibling," dek; and awang, "male child," wang.

The same principle applies to certain animal names. The duck, itek, is shortened, to tek, and the chicken, ayam, to yam. The most used affectionate animal name is that of the cat, kuching or uching.⁶ The term si kuching refers to a specific cat, with the particle si indicating reference to a particular animate individual.⁷ The affectionate vocative for "cat" is ching. To summon a pet cat one normally uses the affectionate vocative, ching, ching, kamaritah ching, "Kitty, kitty, come here kitty."⁸ The extensive use of the affectionate vocative to cats reflects the special place they hold in Brunei Malay culture: cats help protect a house against malicious spirits.⁹ Sometimes little children are addressed playfully with the ching vocative. This vocative is also used to anyone who is choking on food. One grasps a bit of the victim's hair and says, ching, ching, mana pangulinmu ching?, "Kitty, kitty, where is your midwife kitty?", with a very marked tonal pattern on the first ching of low to high, and on the second ching of high to low.¹⁰ In structural

terms the significant feature of the Brunei Malay affectionate vocative is the loss of the initial syllable.

The importance of these vocative forms for Austronesian historical linguistic studies is twofold. First, it suggests that some individual sound changes, such as the loss of k in uching, and the loss of the initial syllable in affectionate vocatives generally, may occur as the result of special processes rather than as part of a larger pattern of sound change. Thus, the initial k- loss differs from the systematic loss of initial and medial h-, -h-, which is ongoing in Brunei Malay.

The loss of h is widespread in initial and medial position, though it is so far strongly retained word final.¹¹ This loss cannot be fully explained on the basis of synchronic analytical grounds (Kimball 1979); but two key factors seem to be at work. First, there is an ongoing shortening of Brunei Malay words toward the dysyllabic. Second, h-, and especially medial -h-, tends to be retained when its loss would make the word a homophone, give it a shape easily conflatable with another, or, it seems in some instances, break it out of a group of words following a similar sound pattern. Thus medial -h- is retained in bahal, "brackish," which contrasts with batal, "negated" (of a fast), and mahal, "expensive," gatal, "itch." This is in contradistinction to the affectionate vocative initial syllable loss, which is not part of such a general sound loss pattern.

The second aspect of the Brunei Malay affectionate vocative is more important. Specifically, the pattern suggests that in Austronesian semantic rather than purely phonological factors may condition syllable loss and possibly other sound changes. This is a situation which has not been adequately studied, though it has been implied (Dyen 1971). It remains for future studies to clarify whether or not consideration of a semantic component at work might help resolve some of the current problems in Austronesian reconstructions.

Notes

1. There are other ways, for example, adding the term shya to a proper name, or in some cases to the shortened affectionate. Thus Shya Nun for Ainun, Shya Mat for Mohammad.
2. The use of capitals has no phonological significance; it merely indicates proper names. The orthography used here is that of the older romanized Malay: ch = /č/, ng = /ŋ/, my = /m/, j = /j/, sh = /s/; vowels are "pure" rather than diphthongized; ʔ is a glottal stop. The glottal stop generally follows all final vowels not followed by some other consonant; it is notated here in words where its occurrence is particularly distinct. The vowel e is an allophone of i; o is an allophone of u.
3. Except for the "parent" and "parents siblings" terms neither this nor the commoner vocative set distinguishes sex. Some of the referent

terms do. Thus the commoner referent term kakak, "elder sibling," has the alternate forms kabini, "female elder sibling," and kalaki, "male elder sibling;" no such alternates exist for adik/adek, "younger sibling."

4. "Royal mother" is bonda and does not shorten. "Royal child," anakanda shortens by the dropping of medial -an- to anakda, as does the commoner term dayang, female child, shorten by dropping the medial -ya- to become dang.
5. Under the influence of Standard Malay, used in schoolbooks, the meaning of the term kakak, "elder sibling" is becoming restricted to "female elder sibling;" to fill the resulting vacated "male elder sibling" slot the Standard Malay term abang (affectionate vocative bang) is coming into use. This causes a homophony, though one unlikely to cause confusion: the term bang (or bahang) in Brunei Malay means "beating of the mosque drums to mark the start of a new day (just after sundown); a drumming particularly important during the fasting month since it marks the start of the period when it is permissible to eat and drink, waktu berbuka puasa, "the time when the fast is lifted (literally, "opened" so that eating may take place)."

Alternative forms of kak are kah, where final k is assimilated to the initial consonant of the following proper name, and ka, where final k is dropped before the initial consonant or vowel of the following proper name. The forms kah and ka are in free variation when the following proper name begins with a consonant.

6. Though the form uching could represent a borrowing from Murut uching/using, "cat," it is more likely a process of k- loss by analogy with other affectionate vocatives.
7. The particle si, indicating a particular vertebrate animate individual who has feet is often used with human proper names in traditional Brunei Malay; thus it functions as a basic animateness marker. The term si Dullah refers to a particular Abdullah. By contrast, si in Standard Malay has come to be used only in connection with animals and has taken on the connotation of animateness. In consequence younger Brunei Malay speakers, who learn Standard Malay in school and here it on television, are tending to drop the use of si with personal names and to resent its application to their own. For the older speakers si still retains its Brunei Malay meaning of more general animateness in the sense of having at least a small soul toward which one might be favorably disposed. (Hence, si is not applied to the dog or pig.)
8. The seemingly verbal construction (in English translation) is in fact an adessive one: ke (motion to or towards) + mari ("here") + tah (emphatic particle). Thus it is an emphatic, "Hither!!!"

9. Cats see evil spirits lurking about; and they tell humans when such is happening. If only we humans understood cat language we would always receive these reports. Evil spirits know that cats report their presence and so they do not hang around houses that have cats. Consequently, one should always be kind and nice to cats (who if they are good also find special favor with the Lord). At special events and holidays cats are given nice tidbits to eat so they can share in the occasion and lend their help and goodwill to it. Cats also catch mice and are sometimes scolded (or given away or dumped at the market) if they do not. Cats that steal too much food out of the kitchen, particularly if they become adept at getting into covered containers, will be dumped at the market; *si penchuri*, "the thief," is not a welcome feline. Cats often serve as friendly pets; but their society is that of cats, not that of humans.
10. In summoning cats the tonal pattern is low to high on one *ching*, or on each of two successive *ching ching*, when occurring in isolation or with a significant pause before a following phrase. In one longer call the tonal pattern is: *ching* (low to high) *ching* (high to low), *o* (low to high) *ching* (high to low), *kamaritah* (low to high) *ching* (high to low). When a summons is made louder, or emphasized to call a cat some distance off, the low-to-high tonal curve is exaggerated and emphasized.
11. In this it follows the general Brunei Malay pattern that when words shorten the sound loss is usually initial or medial; final syllable retains its integrity.

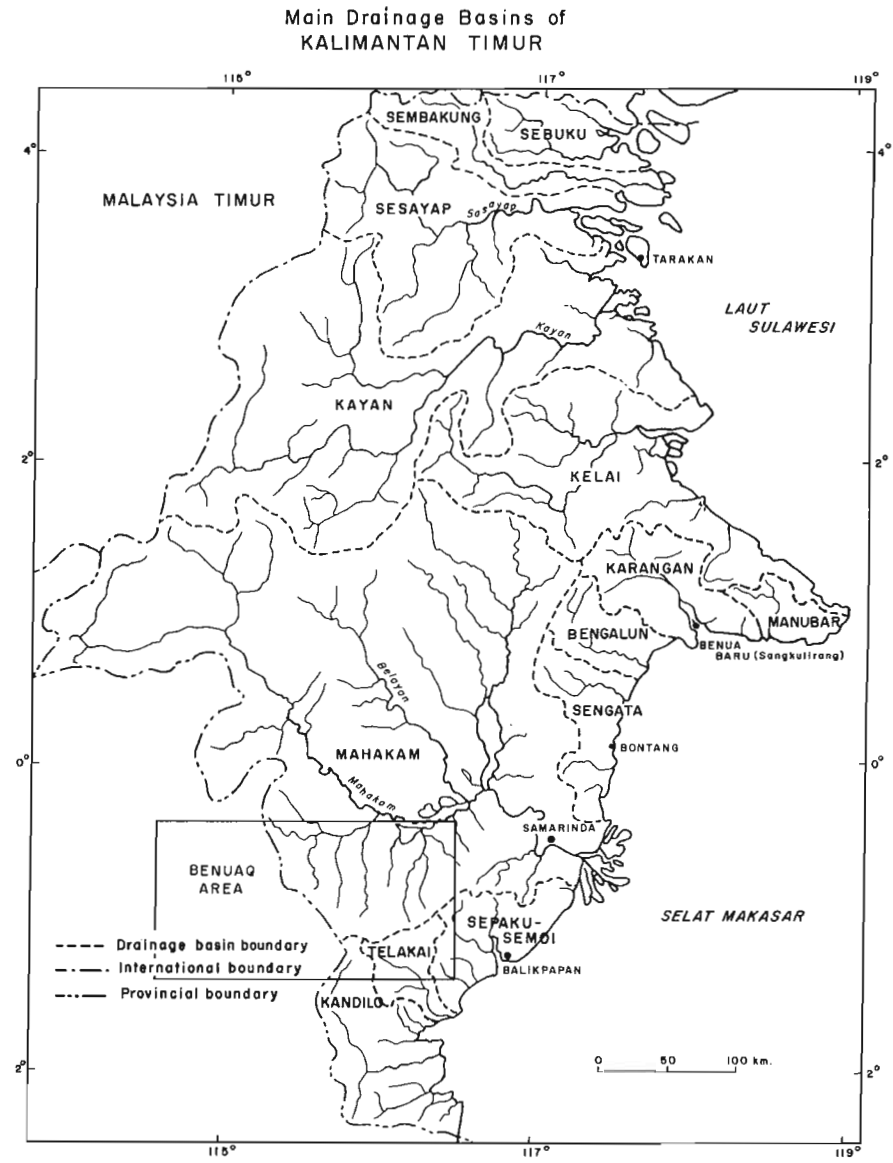
BIBLIOGRAPHY: Dyen, Isidore 1971. "The Austronesian Languages and Proto-Austronesian," in Thomas A Sebeok, editor, *Current Trends In Linguistics*, vol. 8, *Linguistics in Oceania*, Mouton, The Hague, pp. 5-54. Kimball, Linda Amy 1979. "A Note on the Loss of Intervocalic -H- in Brunei Malay," *Borneo Research Bulletin*, vol. 11, number 2, pp. 40-42.

WHERE MEDICINE FAILS: BELIAN DISEASE PREVENTION AND CURING RITUALS AMONG THE LAWANGAN DAYAK OF EAST KALIMANTAN

Andreas W. Massing

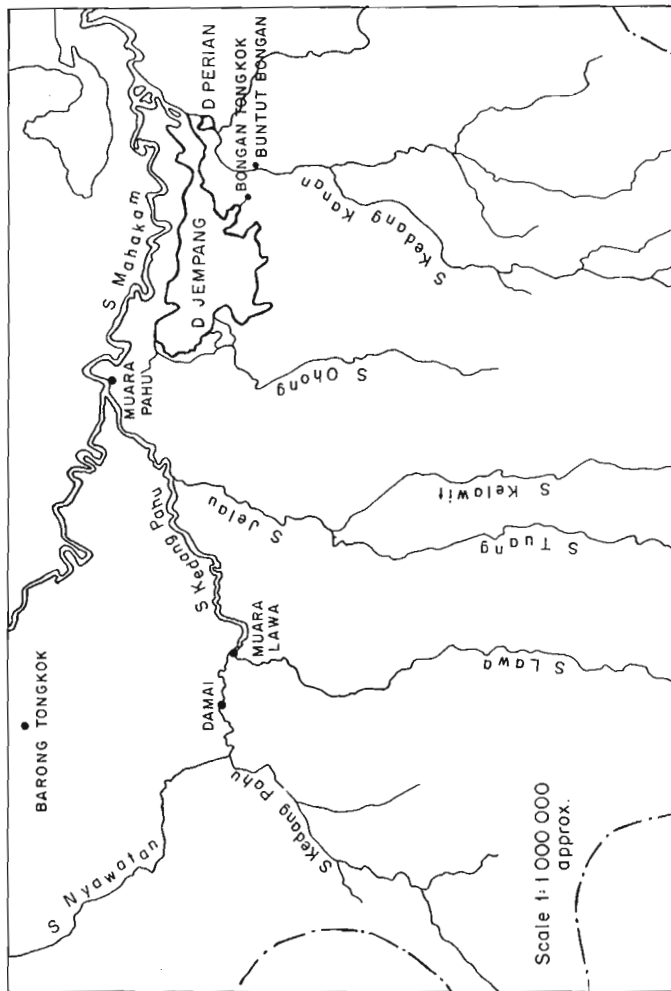
Introduction

Those traveling through the countryside in the Benuaq and Tunjung areas of East Kalimantan (Maps 1 and 2) will notice in the villages fragile little structures made of bamboo or wood decorated with ornaments from dry leaves swinging in the wind. Upon inquiry the curious visitor will be informed by the local population that these specimens of an ephemeral architecture are *balais*¹ and serve as shrines and altars in *belian*



Map 1

PAHU and TEWEH
Catchment Basins



Map 2

ceremonies. Belian designates ritual connected with removing evil from individuals and communities and restoring the balance between them and the cosmos which has somehow been disturbed.

Spending the night in one of the villages, the traveller actually may come across a belian ceremony: from one of the houses in the dark, he may hear the sound of gongs and drums and approaching may see musicians and an individual dancing inside the house. The latter is the tukang belian, ritual specialist - man or woman - who is diviner, priest and doctor at the same time, and has been called to conduct the ritual.

Disease, physical and mental ailments, and malnutrition are common among the Benuaq and Tunjung.² Mortality, infant mortality and morbidity rates are high, and in case of illness chances of obtaining public health care are low. Rural health centres (Puskesmas) exist only in the district (kecamatan) headquarters.³ Few have facilities for in-patient treatment and are frequently out of drugs. The qualification of their personnel, if a doctor is available at all, leaves much to be desired, and there are no out-patient services, so that the villagers have little or no access to qualified treatment. For any more severe health problem e.g. appendicitis, or a broken leg, the hospitals of Samarinda - more than a day's journey away - give the only chance of successful treatment. Death is often a result of arriving too late for treatment. Moreover, in an environment where the slightest wound may become severely infected leading to gangrene, where most water for human consumption is taken from partly polluted rivers and where tuberculosis, malaria, parasitic infections are endemic and reinfection occurs constantly, pain, disability, morbidity and death are common companions of everyday life. Uncertainty and fear about the outcome of any disease, of the adults and their children put uncommon psychological stress on people, and resignation is often an expression for the fact that not much can be done anyway. Therefore, it is not surprising that cure and help by supernatural means are being sought by the local population.

For several reasons improvement of this situation via public health care will take considerable time: rural incomes of the Dayak areas are lower than those of the Moslem peoples along the rivers limiting the private purchase of drugs and health care; second, the Dayak areas are more neglected by public budgetary allocations than the Moslem areas; finally, the collective and subjective beliefs of the Benuaq and Tunjung about origins and causes of diseases are fundamentally different from Western medicine, so that many patients lack the motivation to consult the public medical system because they believe it inadequate to solve their problems. Though the Dayaks may believe in the effectiveness of drugs or treatments prescribed by public health servants, confidence in their skills is not too high and they will not pursue the cure if they do not quickly experience remedy, but will seek other solutions since they believe in super-natural causes. Thus, the application and effectiveness of Western pharmacology and therapy will remain limited until the Western-trained health personnel themselves get an understanding of the native

concepts of pathogenesis and therapy, and the psychological condition of their patients.

Therefore, this paper is directed not only to anthropologists but to doctors and health personnel in order to make them understand the subjective beliefs of their patients about the origin and cure of disease which are based on the Dayak religion. Those with another religious background, Moslems or Christians, should be careful not to consider these beliefs simply as superstitions which need to be overcome to make Western medicine more effective. As is frequently the case in traditional ritual, it redefines the relationship between individual and community which has somehow been disturbed - so that there are sociopsychological causes to diseases as well as somatic ones - and its elimination could destroy integrative channels for both individual and society.⁴

While, on the one hand, the unavailability of medicines and technical inadequacy of public health care account for the continuing popularity of belian ritual, and the population accepts Western drugs and treatment whenever available, on the other hand, a cure cannot be complete as long as the supernatural ultimate causes have not been dealt with. When the normal drugs fail, or are unavailable in the first place, the Benuaq believe that they have violated certain norms of the social universe and have recourse to belian. This ritual seeks to establish the ultimate, supernatural causes of disease and disorders and to provide super-natural remedies.

There are three major types of Belian ritual:

- Belian Lowangan with the sub-types nugu tahun, bedasuk and nular. They are community-wide purification rites which formerly were held yearly. They are of particular prevalence among the Bentian and Pahu, but are less known among the Tunjung.
- Belian beneq with the main types of belian senteo and bawo, both divination and curing rituals. Senteo is the only variant practised on the Bongan, Ohong, Kelawit and lower Pahu and is said to originate from the Pahu river. Bawo is said to originate in Central Kalimantan, among the Benuaq Bawo, and in East Kalimantan commonly found in the Bentian and Nyawatan areas and among the Tunjung.
- Belian bawe, which includes rituals for women and children in particular; e.g., protection during pregnancy, childbirth, and nursing. Its major sub-types are belian jiwata, belian turan and belian melas kanak.

I. Concepts of Spirit Forces in the Lawangan Universe

This is one of the most difficult aspects of Benuaq ritual for the following reasons: the data must be elicited from informants and cannot

be checked independently by observation or any measurement; texts or recordings of the incantations are still lacking⁵; each priest and kepala adat, who are more knowledgeable informants than others, tends to have his own idiosyncratic conception of the spirit universe and variation exists between individuals and between villages in practices. Variation is in the nature of social phenomena and in order to account for it adequately a distributional study of the traits characterizing the symbolic universe would be required. Even then, one would still need criteria to decide which details are irrelevant, or insignificant, and to what extent variation reflects a regional type or only individual syncretism. Our interviews, however, are too few and this paper should be considered as a pilot study which tries to identify structure in an unknown domain. Here only those features which emerge as a common core from those interviews are presented.⁶

The human sphere: The Benuaq distinguish between vital force (jus, semangat) and intellectual faculty, the latter located in the head. After death, both are considered to leave the body. The intellect becomes kelelungan, a spirit which proceeds to a place on top of a mountain⁷ to await the time of the final funeral ritual.⁸ The semangat becomes liau⁹ which remains in the neighborhood of the deceased individual's home. The generic term for both liau and kelelungan is roh.

During man's lifetime, his roh can leave the body at night and wander around - what it sees then is represented in man's dreams. However, this was not frequently reported by our informants who mentioned this mainly for witches (tukang sihir) whose mind wanders around at night doing evil putting inanimate objects, e.g. fishbones, teeth, pebbles, in place of the soul (roh) of other individuals. In this way, an individual may fall sick as his life force is weakened. Another way is that his soul is captured by a powerful evil spirit during its nightly excursions and carried away. Besides kidnaping the human soul, evil spirits may also enter the human body and replace the soul.

Beyond mankind: in the universe surrounding mankind are four main classes of spirits: A. God (Perejadig, Tuhan) - B. Seniang (or Jinn) - C. Mulung (Ntuh, Dewa) - D. Mulang (Blis, Nwo' Bahala, Ha ntu).

- A. God is considered - perhaps under the influence of Christian missions - as creator and eternal judge but is so remote that he does not interfere in everyday human affairs and is generally not invoked in ritual.
- B. The Seniang, which may best be conceptualized as elementary forces, inhabit the layers of heaven, four above the sky and four beneath it. Thus, we have:
 1. Seniang tahun (the life forces of the year and the seasons).
 2. Seniang hari (olo) (the forces of sun and daylight)
 3. Seniang bulan (the forces of the moon, perhaps also the night)

4. Seniang bintang (the forces of the stars, particularly of individual stars such as bintang penyulu = 'advisor' (Venus))
5. Seniang hujan (the forces of rain)
6. Seniang angin (the forces of wind)
7. Seniang koren (kemarau) (the forces of dry periods)
8. Seniang sahu (the forces which are brought into action when taboos have been violated)

Each of these categories contains individual, personalized seniang who are considered powerful and are therefore frequently invoked for help, but not directly but via another class of spirits, namely

C. Mulung or Ntuh are essentially mediator spirits which are considered benevolent and supportive of human enterprises. They are contacted by the belian priests and asked to intervene either with the seniang, to request luck, or with the harmful spirits, in order to limit their influence. There are sub-categories which correspond to forces in nature which are considered active and whose actions have consequences on human life

1. Ntuh kayangan (keniong) lunar powers called esp. in senteo ritual,
2. Ntuh bawo from langit bawo, called in bawo ceremonies,
3. Ntuh kwiakn, the spirits residing in large trees,
4. Ntuh nayukn, the souls of former warrior-heroes, headhunters, and magicians who became immortal and endowed with magic powers (ghaib),
5. Ntuh jiwata, spirits residing in rivers and lakes,
6. Ntuh ntonoi, earth spirits.

It is not quite clear whether nayukn, jiwata, and ntonoi should be classed as ntuh or seniang, as they are invoked directly but also requested to intervene on higher levels. Finally, there are

D. Mulang or Blis, the dangers, calamities, epidemics and evil spirits which are harmful to mankind, cause illness and disease and must be eliminated with the help of the mediator spirits and seniang. They are believed to exist in nature - in poisonous plants, roots, trees, in the water and in the air - as well as in men (witches). The sub-classes in this category are less clear, but again there are certain personified spirits who appear to be leaders of a sub-class.¹⁰ As with the seniang, man communicates rarely directly with them but uses the help of the mediator spirits and the belians.

Literature Review and Comparison with Other Groups

In the sources on South and Central Kalimantan Dayak groups (Ngadju, Maanjan, Siang-Murung)¹¹ God, called Mahatara or Allatallah, had one son and seven daughters (Putri Santang), the latter being the mothers of seven tribes of spirits, called sanggiang. An attempt is made to summarize the types and names of spirits mentioned by the sources in Table 1.

Table 1.

Perelaer (1870)	Grabowsky (1888, 1892)	Sundermann (1926)
1. Mahatara, Allatallah (God)	1. Mahatara, Hatalla	1. Alatala (God)
2. Putri Santang (son of 1)	2. Umban (So of 1)	2. ambilis, setan (evil spirits)
3. Putri Santang (daughters of 1)	3. Bahoi (So of 1)	3. orang gaip (immortal ghosts of earlier men)
4. Djata (Br. of 1) water god	4. Putri Santang (Da of 1 (7)) (princesses of oracles)	4. ompoi (spirits of children appearing as birds: oracles)
5. Kloweh (Si of 1) mother of earth spirits	5. Djata (originally one one, but now a category of good spirits)	5. Diwata (water god)
6. Sambaia sanggiang (So of 3)	6. Sultan Kuning (a djata, water spirit)	6. Kariou (evil forest spirits)
7. 7 sons and 7 daughters of 6	7. Raden Panambahan (a djata)	7. Tantanaran (a kariou)
8. Tempon Telon (So of the youngest son of (6))	8. Raja Kudang (a djata)	8. Rasasa (a kariou, giant)
9. Raja ontong (Sanggiang of good luck)	9. Tempon Telon (the highest S.)	9. Jinu (a kariou eating men)
10. Raja Arcoen (Raja Haramoeng, king of evil)	10. Raja Ngalang (protector spirit)	10. Harimaung, or Dato (tiger)
11. Antoe kankamiak (messenger of 10)	11. Tempon Kanaraan (protector spirit)	11. Nanju (nayukn?) lives in caves, trees, skulls and causes fire and flood
12. Sangiang Saroeman (Fa of 13)	12. Raja Dhong (protector spirit)	12. Ahra'at (a kariou)
13. Sangiang Njaro (So of 12) (12 and 13 are kings of the weather spirits)	13. Sangumang	13. Kaka Ukang (eternal judge presiding over dead souls in Iewu Iiau)
14. Sangiang Pamphilip (king of the forest spirits)	14. Sakanak	14. Datu Turjong (king of Iewu Iiau)
15. Kariou (messengers of 13 and 14)	15. Papaloi	
	16. Aai menteng (fighter of 9)	
	17. Silang (Br of 9) protector on water and in storm	
	18. Hamparong (slave of 9)	
	19. Sandah (female slave of 9)	
	20. Lumpang Pandjalo (lord of clouds)	

Table 1. (continued)

Sarwoto (1963)	Grabowski (1888, 1892)
2. <i>dewi Luwing Njjang</i> (deity of rice)	21. <i>Lambong</i> (nephew of 9)
3. <i>Samarikung Mulung</i> (Fa of 2)	22. <i>Dobong Kiting Rawing</i> (Br of 21)
4. <i>Djang Serunai</i> (Mo of 2)	23. <i>Bungen Bulau</i> (female sanggiang)
5. <i>Rawing Tempon Telon</i>	24. <i>Tandon</i> (female sanggiang)
6. <i>Djata Lahundjung Sawang</i>	25. <i>Djarang Bawan</i> (Hercules-like S.) 9 others are named p. 124
7. <i>Kalue Tunggal Tusoh</i>	26. <i>Pampahalep</i> (forest spirits) several of these cause specific diseases; see next section
8. <i>Hantarung Tata Dahiang</i>	27. <i>Njaro</i> (spirits of storm, thunder)
9. <i>Njahu Papan Sahwae</i>	28. <i>Kambae</i> (ghosts), <i>hantoe</i> (witches) <i>tabit</i> (magicians)
10. <i>Lalang Rangkang Halamaung Ampit</i> <i>Puntung Djambangan Njahu</i> (creator of vases)	29. <i>Kaluae</i> (mother of earth ghosts)
	30. <i>Pambala Batong</i> (king of dewa)
	31. <i>Radja ontong Sanggiang</i> of luck)
	32. <i>Putir Sawalang Langit</i> (wife of 31)
	33. <i>ntang</i> (a bird transmitting messages between priests and <i>Radja ontong</i> and <i>Tempon Telon</i>)
	34. <i>Kadjianga</i> (lord of the moon) (<i>Kayangan?</i>)
	35. <i>Hantoe Njaring</i> (drive people crazy)

Sarwoto (1963), whose data refer to the Dusun in Kabupaten Ulu Sungai Utara in South Kalimantan, essentially agrees with the above description and the sources. He distinguishes the souls (*ju'us*) of humans and of living things (*jiwa*) like rice plants, trees, as well as those of inanimate objects (*ganan*) like Chinese jars (*gucci*, *antang*) which are attributed magic powers (*kuasa ghaib*). There are the following classes of spirits of living things: *kujang* (cf. *kwiakn*) or *mulung*, the spirits of large trees; *tondoi*, those of flowers (perhaps identical with *ntonoi*, the earth spirits); *timang*, those of stones; *nayu'* (cf. *nayukn*), *longit*, the spirits of *mandaus*.

Moreover, there are the helpful *sangiang* or *ju'us*, and the evil *nwok* (*roch djahat*, *hantu*, *setan*, *djin* or *iblis*). Each of these classes contains personified beings, collectively referred to as *dewa*, which are named and carry the title of Raja or Ratu (king, queen). Each of these *dewa* has a special function for man. They live in the seven layers of heaven: in the first live the *dewa*, who regulate signs and forebodings like thunder and the flight of birds, like *Hantarung Tata Dahiang* (father of omens) and *Njahu Papan Saliwae* (thunder); in the second, live the *dewa* of wind and moon; in the third those who regulate the sea and the rivers, and tides (*Sangiang Danum Pasang*) and those who assist all water vessels (*Sangiang Rahan Banama*); in the fourth and fifth live other, non-specified *sangiang*; in the sixth live the *dewa* which determine the ripening of fruit, which make hills and animals, but also the creator of *gucci*, *Lalang Rangkang Halamaung Ampit Puntung Djambangan Njahu*.

In the seventh heaven, finally, lives *Lalunganing Singkor Olo*, the highest *dewa*, also called *Lahtala Dju'us Tuha*, together with *dewi Luwing Ajang*, the goddess of rice and her parents *Samarikung Mulung* and *Djang Serunai*; *Rawing Tempon Telon* who accompanies the souls of the deceased (*roh liau*) into paradise (*sorga*, *negeri arwah*), also live there, with the *dewa* of the *bijowo* (*sawang*) plant, *Djata Lahundjung Sawang*, and *Kalue Tunggal Tusoh*, the one-breasted goddess of all plant-life (Sarwoto, 1963:37).

Under the earth live the *djewata*, water spirits, which help mankind in times of illness and in crisis rites (Sarawoto, 1963:38).

Pathogenesis and Nosology

Tentatively a correlation between disease types, classes of causative spirits and types of cures can be established, even though more work is required to confirm and refine these findings.

Lighter ailments such as fever (malaria), headaches, and toothaches seem to be caused by spirits (*mulung*) entering the human body thus causing the *semangat* to weaken. They are cured by sacrifices to a *dewa* or *sangiang* in a minor ceremony at the end of which the priest sucks out the spirit.

medicine (obat) or sacrifice, they could be caused by a person practising witchcraft, who has gotten power over the semangat. The spirit of this witch has entered the human body and exchanged the semangat by an object, resulting in the body to languish and lose its force. This soul of a witch, has to be induced by sacrifices to the mediator spirits, and eventually some assisting seniang, to relinquish the semangat and leave the human body. Senteo-type rituals are to cure such protracted diseases as persistent headache, stiffness pneumonia, unexplained weakness, recurrent fevers and also infections.

The most severe diseases involve total soul loss believed to be caused by the capture of the semangat by an evil spirit or a Raja Hantu. Its visible symptoms are such diseases as epilepsy, schizophrenia, paranoia and depressions. To cure these requires magic of the highest order with the help of the highest sangiangs and costly sacrifices, including one or several water buffalos. Bawo or Lowangan-type ceremonies - the latter if the disease is believed to have been caused by an infraction of a taboo - are usually employed to cure these neuro-psychotic disorders.

Grabowsky (1892:125-29) mentions several specific spirits as agents of specific diseases: pu djut, forest spirits causing chest cramps, severe cough and asthma; kalabawai, a forest spirit, and pantoh, also a forest spirit, which both cause frenzy. Kambae are ghosts which when insulted cause spotted fever with infected pustules.

Hantus, according to Grabowsky, are the spirits of men which send out their agents, pulong, to attack people: hantu bantas cause dropsy, hantu baruno cause cramps and sharp abdominal pain, hantu sambalik cause high fever, hantu beranak attack pregnant women causing childbed fever and abortion, sawan and indurarawi induce cramps and pains in infants, tabakau result in internal infections, sangkala cause men to run amuck, langkong induce persistent headache, bahutai make for quick death by fever, cramps followed by paralysis and black spots covering the whole body (plague?); kankamiak and kaluae prevent women from safe delivery, others enter animals which bite people causing rabies, while other hantu cause people to become insane, etc. etc.

The extent to which belian priests use plant substances to cure diseases seems to this author more limited than in other areas with which he has experience; e.g. Java and West Africa. But, on the other hand, we had no opportunity to visit the herbalists pointed out to us (3 days journey by canoe). Against the more severe diseases like typhus, dropsy, epilepsy, rabies, tetanus and psychotic disorders there seem to be no other than magical means, and even then they are mostly fatal, even though patients and priests did report successful restitution of such cases. Therefore, in addition to interviews, a more detailed study of case histories - pathogenesis, treatment and results - should be undertaken to assess the medical and socio-psychological validity of the belian curing rituals.

II. Belian Lowangan Ceremonies

A. Belian Nugu Tahun

Its purpose is threefold: to thank the seniang for a successful year, a good harvest and the absence of epidemics from the village; to invoke the spirits to prevent, or remove, epidemics, crop failures, pests and famine during the coming year; to purify the village (kampung) and the surrounding fields (tanah) from evil caused by or threatening because of violation of taboos (tuhing), in particular the incest taboo (sahu) by individual members of the village. The Nugu Tahun ceremony is organized by the entire community, but may be called for by individuals or their families in fulfillment of a vow (niat, sawai) made for the delivery from illness.

The ceremony has two phases: one for the kampung, one for the tanah i.e. gardens, fields, forests surrounding the village. The entire ceremony lasts at least 8 days, but multiples of the number 8 - which symbolizes the life forces, in contrast to 7 which symbolizes death - are also common.

The first part is held in and in front of the longhouse (lamin). In front several balais are constructed, which are moved after 4 days to the tanah, in this case, the open space behind the village where the ceremony is repeated during 4 more days and concluded with a buffalo sacrifice. Fig. 1 shows the arrangement of balais for the performance of the ritual (the arrangement is essentially the same for kampung and tanah).

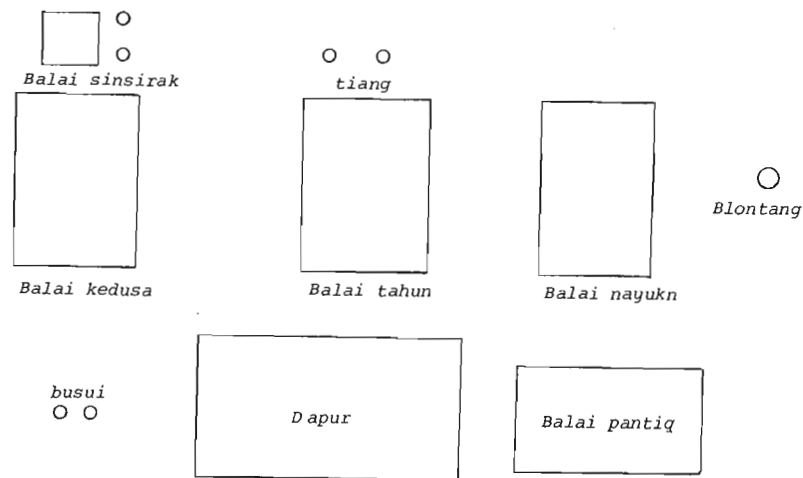


Fig. 1 Arrangement of Altars for Nugu Tahun Ceremony

The dapur (kitchen) serves for food preparation, as a shelter to the carver of the blontang and the musicians with their instruments, kelentangan (a board with 6 gongs like a gamelan), 2 gimer (tall drums) and gendang (a large gong).

The Balais and Perkakas (Ritual Objects)

Balai kedusa (from dusa = sin), here the tukang belian invokes the forces of sahu, taboos which have been violated and require compensation. The balai consists of a platform of sticks supported by 20 poles which are doubled by thinner poles whose tops are carved, and is covered by thatch. For two days, the tukang belian stays on this balai, even spends the night there, praying and communicating with the spirits. On the balai, certain decorations (signs or symbols: ramuan, perkakas, perhiasan) must be ready to indicate the spirits of sahu that they are being called; in addition, sacrifices (sajen) of food and/or flowers must be prepared such as:

- lilin, a candle placed in a coconut shell; this is to light the spirits' way;
- bujak, a spear placed in a small Chinese jar, jei; this serves as a ladder for the spirits to descend from heaven. Whereas these are in front of the balai, the following are placed on the platform;
- tikar, a mat of purun or rotan, and a traditional bark cloth (ikat doyo, or ulap lepat apai baling);
- three rotan baskets (bakul) covered with red, white and black cloth; these serve as penduduk, a place for the spirits to sit;
- bakur, a buffalo horn symbolizing the vow to kill a buffalo;
- the carved effigy of a leopard (harimau); the symbolism is not clear but may point to the royal lineage of the kepala adat who is responsible for the ceremony, as the leopard is the sign of royalty;
- cakes from glutinous rice (ketan) wrapped in banana leaf (pisang besangan);
- beras kuning (yellow rice) to be sprinkled on the heads of the villagers to bring luck;
- sirih, betel leaves, and kapur, lime to be mixed when chewing the betel¹²;
- daun ringit, a wreath or crown of leaves died red and white, which the priest wears while praying and invoking the spirits.

The color symbolism of offerings and decorations is as follows: red symbolizes blood, and the ntuh nayukn, the spirits of the dead headhunters; white symbolizes the bones, as well as the jiwata, the spirits of purification; black symbolizes the skin, and the forces of sahu; yellow symbolizes flesh, or the ntonoi, also spirits of fertility; sometimes green objects, symbolizing nerves and muscles (urat) are also included among the sacrifices.

Behind the balai kedusa may stand one or several smaller structures - there exists some variation between different areas and villages: an altar of four bamboo poles (betunjong) to store rice offerings; a smaller balai supported by 5 x 8 poles (longan) to protect the community

from the dangers of sahu; two young trees, one of bamboo, onto which the returned soul of the ill person will be redeposited, the other a jelmu tree, on which the spirit of the belian priest attends the evil spirit which has carried away the patient's soul.

After two days of asking the forces of sahu for forgiveness and requesting the seniang to help return the lost souls, the belian priest moves to the next balai. During that time, a person or persons who have violated taboos are placed on the balai pantiq and cleansed with sacred water (air mayang) and the blood of the sacrifices, i.e. chickens or pigs.

Balai tahun (from tahun = year), here the spirits of the year and the seasons - animals, plants, insects - are invoked to ward off the evil spirits (bliss) which bring pests, epidemics and bad harvests. The balai is built of 16 poles of jelmu (patung) wood, a platform and likewise covered with thatch. On the platform are placed:

- mandau
- a whistle made from the tooth of a honey bear (beruang) to call the spirits,
- one gendang, two gimer,
- a burner with incense wood (kayu gaharu), and
- a plate with yellow rice.

Behind the main balai stands a square tower with 8 levels made of board (balai senjirak); on each level are placed animal symbols cut out from paper or leaves which represent the different living things in the environment of the village e.g. fish, birds, frogs, rodents. These at the same time may represent dangers, for example crop pests such as insects and rats, but also beneficial forces, for example sources of food. Another balai, balai luwing, probably devoted to dewi Luwing Adjang, goddess of padi contains offerings of rice, pupur (face powder), sacred water and cloth. Two young jelmu trees are planted behind the balai for the dewa tahun to rest before they descend to the balai to partake of the offerings.

Balai Nayukn, serves to invoke the souls of the great ancestor-heroes who have perished in wars and headhunting expeditions and now protect their descendants from their mountain-top residences. The balai consists of 18 poles carved to represent the dewa nayukn, one of which should be from ulin wood, two from jelmu, and 2 from kayu manyang. At the entrance to the balai are placed as symbols of warriors a tombak (spear), mandau (cutlass) and a keliau (shield), all in a jei, a small porcelain vase. On the elevated platform at the back of the balai, the following decorations and offerings can be seen:

- lilin, a candle in a coconut;
- three baskets covered with red, white and black cloth (see above);
- skulls of former headhunting victims wrapped in red stripes of daun palas and decorated with ibus, tassles made from daun biru;
- torung, a staff used in dances to honor the ancestors;
- jigai, a little house resembling a selimat, the box where the skulls of the dead are kept during funerals;

- a miniature blontang, the pole to which the buffalo is tied for its sacrifice.

As offerings, there are: a bowl with yellow rice, one with betel nuts, and another with gaharu (incense).

Behind the balai, we find a balai mesigit (mesigit=mosque), a structure made of eight yellow bamboo poles with a square roof, where additional offerings are made. After the tukang belian has concluded the offerings and invocations of the spirits and spent one or two nights on each balai, during which time already a number of pigs and chickens is sacrificed, he gets ready for the buffalo sacrifice. The carved and painted blontang is erected and, on the morning of the last day, the buffalo tied to it with a long rotan rope. The tukang belian calls the seniang and ntuh to present them the sacrifice. Then the buffalo is made furious by a candle which is used to set fire to its tail and stampedes on the open space around the blontang. Now the task of the men is to approach it as closely as possible and hit it with their spear, a sign of courage (?), until the animal breaks down bleeding from many wounds. Its head is now severed with a mandau, and its blood caught in a vase. The tukang belian then leads a procession to the nearby fields sprinkling blood over the fields with a bijowo whisk which is dipped into the blood asking the spirits to protect plants and give a rich harvest.

B. Belian Nular

This appears to be a minor form of the Nugu Tahun ritual - common among the western Benuaq - performed in particular for violators of taboos and for fighting crop pests when the occasion requires. The ceremony lasts for four days only and only requires sacrifices of chickens and pigs. Only the balai kedusa is used, which is hexagonal in this case, to request the forces of sahu to stop their anger.

C. Belian Bedasuk (from berdasuk = to go)

The western Benuaq include this among the Lowangan-type ceremonies even though it is a ritual to cure illness caused by the bliss mulakn which live in the forest. Ritual, instruments and dance are said to differ from the other curing ceremonies described in the following section but unfortunately, this author did not have the opportunity to attend an actual ceremony so that not much detail can be presented here.

III. Belian Beneq (from beneq = proper, true)

Under this name the main curing rituals of the Benuaq shall be grouped. Until further work has established the differences more clearly, it will be assumed that the two main variations encountered, bawo and senteo, are different regional phenotypes of one ritual with the same purpose to cure diseases.

As already mentioned, Belian Bawo occurs mainly among the Pahu-Nyawatan Benuaq, the Bentian and the Tunjung, but is not found among the Bongan, Ohong and Tuang-Kelawit who exclusively employ Belian Senteo.

The main differences concern the spirits/dewa invoked and the respective incantations. More superficial but distinctive differences concern the rhythm instruments and dance style used by the tukang belian, as well as the balais and ritual objects.

A. Belian Bawo

Thus, for example, the belian bawo priest uses gelang, two pairs of heavy iron bracelets to generate the rhythmic sound to accompany his dance. During the later phase of the ritual, also a special balai is used to call the seniang from bawo langit.

Both bawo and senteo curing rituals consist of a diagnostic phase (ngeno) and a curing phase (nyolung). Length of these phases and quantity of the sacrifices depend on the severity of the disease, which is in turn established during the diagnosis. Psycho-somatic disorders, for example, require more elaborate and lengthy treatment from 8 to 16 days.

During the first night, and sometimes also the second, of the ritual the tukang belian attempts to establish the cause of the disease. The ntuh are invoked to help and certain preparations are necessary to indicate to the spirits that they are being called:

- daun rirong, palm fronds over the door of the house are to indicate the passage to the patient,
- mayangi, the fruit stand of a betel palm (pinang) is suspended from the ceiling in the middle of the house and decorated with batik cloth. This mayangi establishes the connection between heaven and earth and is a way for the spirit to descend to the scene;
- a little bamboo scaffold with two bakul, covered with red and white cloth, as penduduk for the spirits of the patient's ancestor;
- as musical instruments one gimer and a kelentangan;
- decorations, ibus, in red and yellow - to represent earth spirits and ancestral spirits - suspended from the walls inside the house;
- a mat (tikar) in the center of the room under the mayangi for the tukang belian to sit down.

As sacrifices, there are a candle (lilin), four porcelain bowls (tong) filled with beras and lemang,¹³ four white porcelain plates (piring) filled with sirih, pinang, and kemiri nuts.¹⁴ A brass tray contains an egg, coconut oil, chicken blood and sacred water is placed next to the mayangi.

After the sick person has been brought near the centre of the house, the ceremony begins with the sound of drums and the kelentangan. The tukang belian who had been sitting on the mat, only dressed in a sarong of

batik and a batik headdress, lights the candle and explains the purpose of the sacrifices to the spirits. However, the spirits take some time before they follow the summons. The tukang belian, in his hand two whisks of bijowo, rises and dances around the mayangi moving his arms to the rhythm of the instruments. At intervals he pauses and sits down presenting the offerings to the spirits and pouring libations. Gradually, his dancing will become faster, he will turn around his axis while circling the mayangi and his hand movements become more eccentric and his incantations louder, all signs that he becomes possessed (rasuk) by a spirit. At times he has to hold on fast to the mayangi in order not to lose control of his movements and his breath.

The priests who were interviewed told me that in this state they are revealed the origin and cause of the disease and the means to cure it. That is, a spirit tells them which other spirit has taken a hold of the patient's soul and why this has happened; e.g. violation of a taboo by the patient, and which sacrifices must be brought to induce the spirit to let go the patient's soul. Frequently, the patient has to make a vow (niat) that these sacrifices will be made when his health has been restored and he has the means to procure them. Of course, it is the priest himself who sets the requirements in accordance with the means of the patient. In lighter cases, however, the sacrifices are prepared immediately so that the curing phase follows the diagnostic phase immediately.

The following day, after the balais and sacrifices have been prepared, the Belian priest summons the ntuh again and tries to get in touch with the evil spirit responsible for the disease.

From a special quadratic platform, sentelawan lawai, on which he climbs the tukang belian summons the spirits with a beruang whistle. Special balais representing the dwelling places of the seniang, dewa and hantu are put up inside the longhouse where the bawo ceremonies are usually held: balai agung mulukn is a model of the seven heavens and the abodes of the seniang; a balai pantiq agung represents the locations where the raja hantu reside; the longan jus or papan longan is a ship for the spirit of the diseased person to rest after it has been returned. At times, the tukang belian himself has to travel through the different spirit kingdoms and may do this, either by water on a sampan or tujung pelompong or by air on a longan celuk in order to seek the lost soul and return it to earth. He does this with the help of other powerful spirits who intervene with the evil spirits (hantu) requesting them to return the stolen soul of the patient. In one case, a priest kept among his magic utensils two newspaper clippings of photographs of two American missionaries who had worked in Indonesia during the fifties. This is clearly an indicator of individual idiosyncraticism as well as of beginning syncretism. The spirits of these missionaries were also summoned to help the belian.

A more detailed study of belian bawo ritual which seems to involve the most powerful magic of the Benuaq and can reveal most about their cosmology is in place, since very little is known about it until now.

B. Belian Senteo

This seems to be employed rather for somatic diseases among the Western Benuaq, but is used in similar functions as Belian Lowangan (and perhaps Bawo) among the Eastern Benuaq, and seems to involve a different spirit order. It is also called Belian Kayangan (or Keniong) after the Kayangan lunar spirits. The belian which is sometimes found among the original but Islamized Kutainese who live along the main rivers, and among some non-Dayak pockets of non-Islamic people seems to be a form of Senteo but is used there mostly for psycho-neurotic disorders.

Among the Western Benuaq, senteo is used to heal pains, e.g. fever, headaches, toothaches which are cured by sucking out the active spirits of the patient's body or head. The Eastern Benuaq cure all diseases by senteo.

Offerings and divination practices are similar as described for belian bawo. Music, dance style and incantations, however, are different. Instead of gelang bracelets, the tukang belian uses anklets of brass bells to accompany the characteristic senteo rhythm.

In the house of the patient, the following decorations and sacrifices are prepared for the divination session:

- two trees, one of ulin, the other of jelmu, are planted by the side of the door; as a sign for the spirits to enter the house;
- Rice (nasi and suman) are placed on 8 different types of kelengkang, little suspended trays made from rotan;
- rice (beras) colored red, yellow and black is placed in porcelain bowls on the floor;
- various types (cf. following page) of decorations made from plaited dry leaves are suspended at various parts of the house.

After divination, when the requirements of the spirit(s) have been announced and the patient has made his vow, symbols of the promised future sacrifice are added to the offerings: miniature chicken and pig cages, and a rotan rope as a sign for the buffalo sacrifice.

On the second and third day, the balais are constructed:

1. Balai rempukut, a bird-house-like structure on 4 poles where rice cakes (wadai) and flowers (kembang) are deposited.
2. Balai pedoman (pedoman = guide), this serves as penduduk (resting place) for the mediator spirit and consists of two platforms supported by 6 poles of young green bamboo. It is decorated with various decorations from niyur (yellow coconut);
3. Balai pedoman jadi, a platform supported by 8 poles of mature yellow bamboo;
4. Balai Mesigit Muda (mesigit muda = young mosque), consisting of a platform supported by 8 poles of yellow bamboo and two young jelmu trees, where offerings of cloth, coconut and betel are deposited;

5. Balai Mesigit Jadi (mesigit jadi = complete mosque) consisting of 2x8 poles of yellow bamboo, a platform and a roof. One set of 8 poles is carved with bird-heads, while the other 8, which are somewhat lower than the first, are tipped with cloth. Rice cakes (lemang) in yed, yellow and green color are deposited on the platform.

There are five types of ornamental decorations plaited from coconut or pandanus leaves to decorate these balais (Fig. 2).

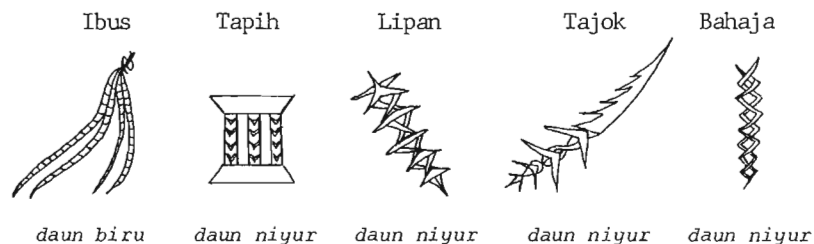


Figure 2. Ornamental Decorations

If a buffalo sacrifice is part of the vow, this is performed similarly as during Nugu Tahun or Kwangkei (funeral) ceremonies, and a carved blontang erected.

IV. Belian Bawe Ceremonies

These include ritual concerned with the health and welfare of mothers and children and with their purification. The major ceremonies in this category are: belian jiwata, immediately after childbirth, belian turan (Eastern Benuaq) or beneg (Western Benuaq), one week after birth, and belian melas, one to several years after birth.

A. Belian Jiwata

Its purpose is to clean mother and child from blood and placenta at childbirth which are considered polluting, and protect them against potential diseases (infections, childbed fever) sent by evil spirits. As we have seen infant mortality is very high and it is therefore not surprising that the local population has realized this and attempted to do something about it, even though the effectiveness of the magical means employed seems doubtful. Two balais, balai jiwata and balai pantiq, are built by the riverside, the first on the bank, the second in the water. the offerings for the jiwata, water spirits, are placed on the first: red, white and yellow cloth (kelayu), 1 small and 1 large plate, a knife and an egg mixed with purur. The priest kills the sacrificial animals, chickens and a pig, and

gives their blood to the spirits, i.e. pours some of it in the water. Part of it is smeared on the forehead of mother and child to purify them ritually under certain incantations.

Both are then led to the water and seated on the other balai. The knife is placed in the mouth of the baby to indicate the wish for a strong character of the child; coconut water is mixed with the egg and the face powder, all symbols of purity, and poured over the head of mother and child. Then, the tukang belian picks up the baby and places its left foot 7 times on the ground to fortify it against evils and dangers; his right foot is then placed 8 times on the ground to give it health; following this, head and body are bowed 7 times towards sunset to keep away evil spirits, and 8 times towards sunrise to make the child's future wishes come true.¹⁵

Thereafter the baby is seated in the water and bathed while the knife is held over his head. The mother is then likewise washed. Some of the baby's saliva is smeared on two carved figures, a crocodile and a human effigy, in order to protect it against the perils of waters spirits and witches. A tempatung sisir, also a carved figurine, is to protect the child from cholera.

B. Belian Turan

This takes place in the village between 4 to 7 days after childbirth and involves the ritual purification of all those who have assisted in childbirth, as they are considered impure from the bodily excretions (pemali dari tubuh), and are, for example, forbidden to have intercourse until this ceremony. They and mother and child again are washed with sacred water (air mayang). Only after this is done, the baby is for the first time put in its ayun, a swinging cradle.

C. Belian Melas Kanak

This is a preventive as well as a curative ritual for babies and infants and may take place between 40 days and one year after birth. If preventive it involves the request of the parents from the jiwata to keep the child free from diseases or any post-natal defects. If curative, the spirits are asked to remove any congenital or post-natal defects the child may have; e.g. deafness, muteness, and imbecility. In the latter case, the parents may also make a vow and promise certain sacrifices if the child can be cured.

Anyway, the family slaughters a chicken and a pig which are cooked with rice; meat and rice are placed as offerings and little trays suspended from a balai benawig, six interconnected bamboo poles, next to the house facing east. The tukang belian invokes the jiwata under the sounding of a gong to keep away or remove evil and childhood defects; he dips whisks of bijowo leaves and tobacco into sacred water which is then sprinkled over the head of the child and those present.

V. Literature Review and Comparison with Other Groups

For ritual as well as spirit concepts, the only available literature comes from the Ngaju, Maanjan, Dusun in South Kalimantan and Tajan-Landak in West Kalimantan. (The sources do not distinguish explicitly, i.e., by means of names, between different types of ceremony. An examination of these, however, reveals different types as well as a general similarity of ritual and the underlying beliefs among the three groups and with those of the Benuaq, even when taking into account that these as well as our data remain incomplete.) Thus it can be said that Ngaju, Maanjan, Dusun and Lawangan (Benuaq, Tunjung) share the same core of supernatural beliefs and ritual. Much of the difference apparent from the material presented here may well be a result of incomplete data collection and a lack of understanding by the investigators. A standard frame of reference for collecting and classifying the data on Dayak ritual would be a first precondition for comparisons and distribution studies. Table 2 presents a synopsis of the data in the sources.

VII. The Economics of Belian Ritual

Economics deals by definition with the allocation of resources and the mechanisms thereof. Looking at ritual from this viewpoint we have to ask which goods are being traded in the 'ritual market'. Keeping in mind F. Knight's word that services, defined as, a flow of benefits, rather than goods are the subject matter of economics, we can answer the question by stating that health benefits and, as always in religion, security or rather the expectations thereof (hope, peace of mind, etc.) are exchanged for material resources such as food, money, animals, cloth. Sacrifices of considerable value are made in order to obtain a promise, if not a guarantee, that things will be all right. It should be expected, then, that in line with the law of demand, the scarcer a good - or, in probabilistic terms, the lower the chances of obtaining it - the higher its price; diseases where the chances to get all right again without doing anything are low - diseases with a high lethality rate - should command a higher price in terms of material resources. Thus it is understandable that the cures for psycho-neurotic disorders involve the heaviest sacrifices, even though we may believe that these sacrifices are futile since the patients cannot be cured with traditional means anyway. However, as long as we believe, as the local population obviously does, that there is a chance for cure rather than being fatalistic, then we see how a higher premium is commanded by diseases believed to be more severe.

The local clients of the belian priests spend considerable resources, on a day-by-day basis, for the resource "health" in the form of sacrifices,, food, wages and gifts, not to speak of the amounts of time and money going into the preparation of ornaments, decorations and the architectural-sculptural artifacts such as balais and blontangs. A few examples may illustrate this:

Table 2
Perelaer (1870)

<u>Type of Ritual (Purpose)</u>	<u>Persomages</u>	<u>Ritual Objects</u>	<u>Ritual Action</u>
1. Asking good luck from raja ontong (20-22)	balian (7fem)	7 goats, 7 mats 7 cakes, 7 pc. rice rotan stick as acceptance sign; buffalo sacrifice	sacrifices of food and animals
2. Asking Djata for fertility (20)	women		sacrifice
3. Asking protection from Kloweh during pregnancy (22)	women	black hen	sacrifice to Kloweh
4. Asking protection for newborns (39-49)	balian		sacrifice to Raja ontong;
	balian		driving away evil spirits;
	male relatives		namegiving;
	goodfather	goat or pig sacrifice	smear blood on forehead, back, belly, limbs of baby
	midwife & godfather		direct baby towards earth and heaven (bowing)
	basir/oepoh	7 jars water 7 baskets rice water, blood gong, canoe	asking for <i>danom kaharingan</i> (water of life); washing and bathing baby in blood and water mixed in gong; later drive on the river
	basir	monkey, deer	sacrifices to Djata
	basir	pig, rice	sacrifice to earth spirits, smear blood on newborn
5. Asking protection for newlyweds (51-55)	balian & elders	rice, goats	invoking <i>sangiang</i> ; animal sacrifice; smear blood on forehead, shoulder, navel, wrists of couple

Table 2 (continued)

Type of Ritual (Purpose)	Personnages	Ritual Objects	Ritual Action
		gong	seat couple on gong
		prouw	drive couple on river
	balian	rice, goat	after 7 days seclusion, repetition of above sacrifices to <i>Kadjanka</i> , the moon god
6. General	Basir (high priest) Oepoh (head of: Balian (priestesses)	red <i>baju</i> blue <i>sarong</i> headdress, bracelets on arms; sea-shell bracelet on wrist 'cul de Paris' from rotan	singing, sacrifices, giving message to the sick, remove agents of disease

Grabowsky (1888, 1892)

1. Asking for luck and long life (<i>blaku ontong</i>)	Balians	<i>pasah ontong</i> : red cloth, carved pine-apple top, pinang girlands, <i>sangan hambaruan</i> ; 7 chickens, 7 <i>suman</i> , 7 <i>nasi</i> , fruit, egg	eliminate <i>sial</i> (bad luck) sacrifices to Antang and Tempon Telon
	belians	gold, rice, rotan	fix gold on <i>pasah</i> as sign of Raja ontong
	belians	thread, rope	knotting <i>tahasang</i> (sing of long life) into rope; singing
2. Ritual Purification	belians	blood of pig	<i>menjaki</i> , ritual cleaning
3. Asking cure from obsession (1892-132)	belian	mats with <i>dewa</i> pictures; <i>banama sanggiang</i> (boat); <i>sumping</i> (headdress) and <i>lawong</i> (headband)	sacrifice to <i>sanggiang</i>

Table 2 (continued)

Type of Ritual (Purpose)	Personnages	Ritual Objects	Ritual Action
4. Asking protection during pregnancy (133)	women	balais <i>Djata, panti</i>	
5. Divination (131)		<i>samburup</i> (scaffold); <i>antjak, djamban bulau</i>	ask <i>Djata</i> whether he wants to do the cure
6. Asking success in	individual	pig	sacrifice to <i>Kayangan</i>
Sunderman 1926			
1. General (455-56)	wadian (balian)	<i>sumbang sabit</i> (necklace of claws, beads & teeth) <i>awai</i> (holy oil) <i>rirong & kambat</i> leaf	invocation of ghosts mix oil with blood, leaves, rice and egg for <i>saki</i>
2. Purification (<i>menjaki</i>) of newlyweds, newborn, new mothers, houses of deceased people (457)	wadian	blood of sacrificial animal	touch various parts of human body with blood
3. Curing illnesses (<i>miempo</i>) (464-68)	wadian	mat, <i>batik</i> 'ceiling' <i>perjunjung</i> (brass stand for sacrifice) rice, egg, cigarette, betel, flowers, oil mirror; drums, copper rings <i>solompajan</i> (magic whistle from bear tooth)	set down oil flasks; put on dress and copper bracelets; whistling 3 times; lighting candle; dancing with candle on head; divination
		<i>amapatong</i> (figures from rice and wood) small boat	possession (<i>pasoa</i>) of belian by spirit; requesting spirit to return soul of patient; statue as substitute of patient; suspend boat and candle on door;

Table 2 (continued)

Type of Ritual (Purpose)	Personnages	Ritual Objects	Ritual Action
4. Sacrifices to spirits of the dead (468-73)			catch soul and replace in patient's body by rubbing with oil
(This paper does not cover funeral rites; therefore, these data are not presented)			
5. Asking health for newborn (<i>njaki pohot</i> 474-76)	wadian	chickens small axe	axe is dipped into blood of chicken; temples, shoulders, knees, hands, eyes and back of child & mother touched with the bloody axe
6. Detaching child from Diwata (<i>nubur walenon</i>) (474-75)	wadian	<i>sanggar</i> (baskets), <i>njundong tarantang</i> (coconut leaf crown) <i>tamorako</i> (canoe), <i>pinang</i> girland, food offerings (<i>sajian</i>)	invocation and food offerings for Diwata at riverside; bathing of parents and child in river with crown and boat;
7. Protection of village from epidemics (476)	wadian	coconut, red sugar, sugar cane, thread baskets with food offerings, figurines	symbols of bones, blood and nerves put in the river sacrifices, offerings

1. In the case of a woman with persistent headache for more than 3 months (sinusitis?), the total cost of a senteo ceremony was Rp. 15,000 (US\$ 25.00), for 1 pig, 5 chickens, rice, wages of Rp. 4,000 for the tukang and the balai.

2. In another case, a man with a stiff shoulder (nerve infection ? ischias ?), the expenditures required were as follows:

1 buffalo	Rp. 250,000
4 pigs	Rp. 40,000
8 chickens	Rp. 20,000
food, flowers	Rp. 10,000
Belian wage	Rp. 5,000
cloth	Rp. 12,000
	Rp. 337,000 = US\$ 539.00

This represents more than the average annual family income in the Benuaq area!

3. Finally we list the expenditures for a Nugu Tahun feast for a whole village:

1 buffalo	Rp. 300,000
15 pigs	Rp. 750,000
40 chickens	Rp. 100,000
1 ton of rice	Rp. 250,000
5 pc. of batik	Rp. 25,000
1 parang	Rp. 3,000
1 spear	Rp. 3,000
Belian wage	Rp. 20,000
Total	Rp. 1451,000 = US\$ 2,322

While this is shared by the entire village, individual families contribute additional gifts of food and cloth.

The high cost of such health care is surprising. It also seems to turn the terms against the traditional curing rituals and, as a consequence, against traditional religion generally in favor of modern treatment by pills from the drugstore. Some of the rural traders have a surprising variety of drugs on stock in their shops, even sufficient sometimes for this author's needs. Among the Tunjung, the recent strong trend towards conversion to Christianity was explained to me, when I asked for the reasons, in these terms:

"It costs me at least ten thousand Rupiah to call a Belian, to pay for the chicken, the wage of the tukang and his tools; if you go to the pastor's pharmacy, you pay five hundred Rupiah and you get an injection or some pills and your pains are gone."

In history, many institutions have become obsolete because they became too expensive and could not compete with others less expensive. This could be the fate of belian curing ritual in the future. On the other hand, even among Christian Dayak elaborate funeral ceremonies, whose costs are in the order of the nugu tahun feast quoted above and whose immediate utility is even less obvious than that of curing ceremonies, are still upheld and remain expensive social festivals even when the religious background has disappeared. Seeing these outlays against the background of poverty and underdevelopment in the rural region one can wonder what would happen if these resources would be channeled into other, so-called productive, i.e., income-generating activities.

Notes

1. Whereas in bahasa Indonesia balai means "hall, house", here it rather means "alter, shrine," in addition to the first meaning.
2. It characterizes the state of the health situation that reliable health data itself are lacking. From a health survey conducted under the auspices of the TAD project by Dinas Kesehatan, the following data may be indicative:

For all deaths reported in a sample of 18 villages and 7612 persons in Central Kutai, the following were the main causes (in %): fever (unspecified) 27.4; gastro-intestinal 31.7; unknown (sic!) 19.7; lung diseases 6.7. The death rate of 10.3% reported is certainly too high, and eliminating the extreme values of the fishermen villages, one arrives at 7.5%. The serious illnesses contracted by those questioned were: fever 24.3; gastro-intestinal 23.7; respiratory tract infections 19.3; measles 5.8; malnutrition 5.5; eye diseases 4.2; filariasis 3.9, etc.

Of those who died, 42% died under the age of 1.38% between 1 and 5. According to those figures, infant mortality seems suspiciously high with 56% (TAD Health Report, I, Samarinda 1979). Of 515 children examined, 60% had signs of malnutrition, 8.3% of severe malnutrition, amounting to a level twice as high was the average of 33% reported for the total of Indonesia. (TAD Health Report, II, Samarinda, 1979).

3. In Melak, Barong Tongkok, Muara Pahu, Damai, Tanjung Isuy.
4. To illustrate, among the Benuaq and other Dayak groups as well, those with neurotic disorders are, in the rule, not kept apart from other people and locked away in institutions like in our society, as they are - interestingly enough - rarely aggressive, but are integrated in their community as mediums. They are believed to have the faculty of becoming possessed by spirits and are thus considered useful for the communication between the living and super-natural spirits. The priests, however, which become possessed during ritual are in most cases normal individuals.

5. Perelaer (1870:232-243) reproduces the incantation of a priest during the funeral ritual; Schadee (1905:496-512) is the only source which contains a few incantations from a belian ritual relative to West Kalimantan. Incantations of curing rituals are much less standard than those of funeral rituals as they depend on the type of disease and kinds of spirits invoked. Therefore, tape recording seems the only reliable form of recording.
6. In fact, this paper is the basis for the design of a more systematic, statistical distribution study.
7. These are mountains in the neighborhood of the respective village; therefore, individual names vary.
8. See Massing, Funerary Rites of the Benuaq Dayak of East Kalimantan, BRB, Sept. 1981.
9. According to Perelaer (1870:219), the immaterial force is termed liau, and leaves immediately towards the land of the souls, while the material soul, karahang, waits until the final funeral ceremony when it is re-united with liau into hambaroeang (amarue).
10. The names we have obtained are not yet confirmed and thus not given here.
11. Sarwoto (1963:8) includes the Dusun in the larger Ngadju group, along with Maanjan and Lawangan.
12. Sirih is served as refreshment and stimulant to overcome fatigue and its preparation has been described in my paper on funeral ritual.
13. The local farmers distinguish the following, Indonesian language, concepts of rice in its raw and cooked stages:

<u>Rice Plant</u> generically <u>padi</u>	<u>By Location</u>	<u>Husked, uncooked</u>	<u>Cooked</u>	<u>Cakes</u>
varieties	<u>sawah</u> (irrigated field) <u>rapak</u> (swamp irrigation) <u>ladang</u> (rain-fed upland)	<u>beras</u> (for all types) <u>beras gunung</u>	<u>nasi</u> (gen. for all types <u>ketan</u> (glutinous rice from <u>pulut</u>)	<u>suman</u> (<u>nasi</u> cooked in bamboo) <u>lemang</u> (<u>ketan</u> in bamboo)
<u>pulut</u> , a variety of <u>ladang</u>				

14. The ingredients for betel chewing; kemiri or keminting is an oleaginous nut from which an aromatic oil is extracted.

15. This appears to be the same ceremony as the *tidjak tanah* ceremony described for the pre-Islamic kings of Kutai in the Salasila of Kuta, ch. Mees (1926), and Tromp (1888). There, however, it only takes place at the fifth birthday when the future royal successor's foot touches the ground for the first time, after having been placed on the heads of buffalo and human sacrifices.

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BRUNEI PROTECTS ITS WILDLIFE

Russell A. Mittermeier

Brunei, a British protectorate scheduled to become independent in 1983, is a tiny, oil-rich sultanate in north Borneo, covering 2226 square miles, between the Malaysian states of Sarawak and Sabah; a small strip of Sarawak divides it into two. Most of the 200,000 people are concentrated in and around the capital city of Bandar Seri Begawan and the oil-rich coastal region around Seria. Only a handful of aboriginal tribes occupy the interior, among them the Dusuns in Ulu Tutong and Belait, the Muruts in Temburong, and the Ibans in the upper regions of the Tutong, Belait and Temburong Districts.

Although Brunei does not yet have any national parks or sanctuaries, an important Wild Life Protection Enactment was passed in 1978, empowering the Sultan and his council to establish wildlife sanctuaries by decree, and listing 34 protected species that cannot be hunted or exported without a special permit. These include proboscis monkey, clouded leopard, dugong, great argus pheasant, eight species of hornbills, three of sea turtles, and the earless monitor lizard, *Lanthanotus*. The export of wildlife was never important in Brunei, and this Enactment has ensured that it will not become a significant threat in the future.

Several other factors give Brunei an unusually high level of wildlife protection. First, people are largely devout Muslims and will not eat monkeys, pigs or many other animals. Secondly, guns have been prohibited since 1962, and the only hunting is in the interior, where people still use the traditional tribal methods to capture animals for food and for pets. Third, no timber is exported - in contrast to Sarawak, Sabah and Kalimantan - so that large-scale habitat destruction is not an issue in Brunei. Timber extraction for local consumption is allowed, but only in areas allocated by the government; clear-felling is prohibited. Areas already cleared for agriculture are being used more intensively, with a resultant decrease in shifting agriculture. Fourth, the people of this small country are beginning to realize that their forest and wildlife resources are limited and need to be conserved. Moreover, they are a well-educated young people by means of lectures and displays in schools, organized by the Brunei Museum's educational services.

Responsibility for wildlife conservation at present rests with the Brunei Museum, one of the finest in Asia, and its dynamic director, Dato Pengiran M. Shariffuddin. At his request the author conducted a brief survey of the nipa-mangrove islands in the immediate vicinity of Bandar Seri Begawan, and made recommendations for the establishment of several wildlife sanctuaries and possibly a mangrove national park in the Brunei Bay area. Except for the northern part of Pulau Berambang, the island nearest Bandar Seri Begawan, these islands are almost entirely uninhabited, and they have substantial populations of proboscis monkeys *Nasalis larvatus*, a crab-eating macaques *Macaca fascicularis*, silver leaf

monkeys Presbytis cristata, and a variety of birds. They are excellent examples of the nipa-mangrove associations characteristic of the north Borneo coast.

Especially interesting is the proboscis monkey, listed as vulnerable in the Red Data Book and on Appendix I of both the Convention on International Trade in Endangered Species (CITES) and the US Endangered Species List. J. A. Kern, who studied them in the Brunei Bay area, found them to be still thriving, unaffected by the regular boat traffic or the close proximity of man, and the author found the same in 1979. Indeed, one large group was seen within 100 metres of a small mainland village, and local people showed no interest in hunting or otherwise disturbing them. Proboscis also have potential as a tourist attraction, since they can easily be seen in early morning or late afternoon only 15 minutes by boat from the centre of Bandar Seri Begawan.

Another important coastal wildlife area is Pulau Siarau, an uninhabited island in Brunei Bay to the south-east of Bandar Seri Begawan and about an hour from the capital (by 25HP out-board motor): this is the roosting site for an enormous population of the large fruit bat Pteropus vampyrus. Every evening between 6 and 7 pm they fly out in thousands to forage along the Brunei and Sarawak coasts. This island should certainly be made a wildlife sanctuary.

There is also potential for a large sanctuary or national park along the uninhabited stretch of coast between Pulau Siarau and the Sungei Labu (Labu Creek), and east to the Batang Trusan (Trusan River). This would encompass the entire coastal region of the smaller part of Brunei and would be a protected area of considerable international significance.

Several potential park sites also exist in the interior. The Brunei Museum expeditions of 1978 and 1979 to the Ulu Temburong region and South Labi, in the Ulu Belait region, revealed a large and uninhabited area of primary forest in the former, ranging between 500 and 6000ft and very rich in wildlife, and also an important, very scenic tract of lowland forest in the smaller South Labi area, adjacent to Sarawak's Gunung Mulu National Park. Both areas deserve special protection. The possibility of establishing parks or sanctuaries both in the interior and on the coast is being investigated.

Brunei's farsighted policies make it one of the best areas in Borneo and indeed in all south-east Asia for wildlife conservation, and the Government and the Brunei Museum are to be congratulated. Official establishment of parks and sanctuaries will make these important wildlife areas secure for the future and give them the international recognition they deserve.

Notes

1. Kern, J. A. 1964. Observations on the habitats of the proboscis monkey, Nasalis larvatus (Wurmb), made in the Brunei Bay area, Borneo. Zoologica 49(3):183-92.
2. Kern, J. A. 1965a. The proboscis monkey. Animals 6:522-6.
3. Kern, J. A. 1965b. Grotesque honker of the Bornean swamps - the proboscis monkey. Animal Kingdom 68:67-73 (Oryx, May 1981, pp. 67-70).

BRIEF COMMUNICATIONS

Agriculture Not Epistemology

Joseph A. Weinstock
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Rather sadly, the April issue of the BRB 14(1) found Dove again beating a dead horse. Dove tried to claim epistemological problems with my BRB articles (Weinstock, 1979 and 1981) through manipulation, out of context, of what I have said. The real problem lies in agricultural naivete. Being symptomatic of this, Dove's work does not warrant any further reply. All that can be said is, in the future, Dove would be wise to consult with the appropriate agricultural specialists prior to dabbling in environmental issues. My own initial research on this issue was done with the advice of two experienced tropical swidden soils specialists, one of whom has worked in Borneo. The agronomic fallacies of the environmental arguments used in this debate, particularly that of precipitation data, were actually first pointed out by these gentlemen and not I.

Bibliography: Dove, Michael R. 1982. Epistemological Problems in the Analysis of Land Tenure in Borneo: A Reply to Weinstock. Borneo Research Bulletin 14(1):27-34. Weinstock, Joseph A. 1979. Ecological Determinism: Is the Appell Hypothesis Valid? Borneo Research Bulletin 11(1):3-13. 1981. Weighing Environmental Factors as Determinants of Dayak Land Tenure. Borneo Research Bulletin 13(2):107-113.

The Leathery Turtle in Sabah

G. S. de Silva

Until 1977, the Leathery Turtle or Luth (Dermodochelys coriacea) was not recorded anywhere in Sabah waters. However, on 13th July, 1977,

Jenkins observed two individuals swimming near Pulau Boheydulang (de Silva 1978). Its second occurrence was reported to the writer by Charles Phillips, Botanist, Forest Department, Sandakan, East Malaysia. He said that on 28th March, 1982 at 10:30 a.m. while at Pulau Sulug (which is within the Tunku Abdul Rahman National Park) he had observed a dead Leathery Turtle on the southern beach. The carcase was several days old and highly decomposed. About 50 mm of its tail appeared to have been amputated. Dorsally, no other wounds were visible.

This is the first record of a Leathery Turtle carcase on Sabah territory. The carcase may have been washed ashore by the tide but the cause of its death and the reason for the amputation of the tail is unknown and cannot be established.

As there are no known Leathery Turtle rookeries anywhere in Sabah, it is speculated that the animal was a stray, or was heading for a hitherto unknown rookery in Sabah waters or migrating when it came to grief.

On 14th May, 1982, the writer visited Pulau Sulug with an Assistant Park Ranger and searched the beach at low tide for the remains of the turtle. Only a few bones were found scattered among the beach debris. These were collected for examination and will be described in a later issue of this journal.

Bibliography: de Silva, G. S. 1978. Turtle Notes, Borneo Research Bulletin 10(1):23-24. Phillips, C. 1982. Personal Communication. National Park; Sandakan files. 1982. No. TINP/11/3/102 of 1st April.

Request for Information on the History of Missions in Borneo and on their Impact on the Indigenous Peoples

The following request has been received from Laura P. Appell, Cazenove Hall, Wellesley College, Wellesley, Massachusetts 02181:

I am writing an honors dissertation in the Department of Anthropology at Wellesley College on the social change that has been produced by Christian missions among the indigenous peoples of Borneo. I would like to correspond with anyone who has worked in Borneo and has information on this subject.

CORRECTION - Professor J. B. Avé has written to indicate the following correction regarding citations and references appearing in the last issue of the Bulletin:

In the last issue of the BRB, Vol. 14, No. 1, you cited several annotations from 'Flora Malesiana' (pages 43-45-46-47) and also mentioned 'Flora Malesiana' in the Notes from the Editor (p. 2). Actually, there are two different publications:

Flora Malesiana is an illustrated systematic account of the Malaysian (in its wider sense) flora, including keys for determination, diagnostic descriptions, references to the literature, synonymy, and distribution, and notes on the ecology of its wild and commonly cultivated plants. It is published under the auspices of the Kebun Raya Indonesia (Botanical Garden of Indonesia) in Bogor (Java) and of the Rijksherbarium, Leiden (Netherlands). C.G.G.J. van Steenis is the general editor. It is issued in two series, each consisting of several volumes.

The review and abstracts reproduced in the BRB, however, are taken from the Flora Malesiana Bulletin, an annual issue, published by the Rijksherbarium, Leiden, and edited by N. Jacobs. The Bulletin provides information and contacts between institutes and individual botanists of Malaysia and the tropical parts of Asia, Australia, and the Pacific, in the fields of descriptive botany, ecology, plant-geography, exploration, and bibliography.

The Editor regrets the confusion and is grateful to Professor Avé for sending along this information.

NEWS AND ANNOUNCEMENTS

Forest Destruction - Can We Stop It in Time?

Conservation of plants has increasingly to concentrate on the preservation of samples of vegetation, of communities and ecosystems, rather than of individual species. The Threatened Plants Committee (TPC) of IUCN has done a great deal of work on the conservation status of individual species in Europe and the Mediterranean, and the first IUCN Plant Red Data Book was published in 1978. Now the work has expanded to take in North Africa, the Middle East and the Americas, and other organizations are also producing Red Data Books or status lists for plants. But these are mainly for temperate countries; the majority of species at risk occur in the tropics, and in the main they are largely at risk because of the threat to the ecosystems they inhabit.

Tropical moist forest is difficult to define. Myers describes it as 'evergreen or partly evergreen forests, in areas receiving not less than 100 mm of precipitation in any month for two out of three years, with mean annual temperature of 24°C+ and essentially frost-free; the forests usually occur at altitudes below 1300m (in Amazonia up to 1800m and

generally in South-east Asia up to only 750m); and in mature examples of these forests, there are generally more or less distinctive strata¹.

The tropical moist forest, so defined, occupies an estimated 9-11 million sq km. This is six per cent of the earth's land surface, but in terms of species diversity, it contains about half of all the species, plant and animal, on the planet. Four-fifths of it occurs in just nine countries: Bolivia, Brazil, Colombia, Peru and Venezuela in Latin America; Indonesia and Malaysia in South-east Asia; Gabon and Zaire in Africa.

1. The losses are rapid in most of Australia's lowland tropical forests, where little may be left by 1990 if not earlier, and also in much of the lowland forest of Bangladesh, India, Indonesia, Sumatra and Sabah, peninsular Malaysia, Melanesia, the Philippines, Sri Lanka, Thailand, Vietnam, parts of Brazil, Central America, Colombia, Ecuador, Madagascar and West Africa, as well as the upland or mountain forest of some of these areas and also of East Africa.
2. Moderate losses at intermediate rates are occurring in parts of the lowland forests of Burma, Papua New Guinea, Amazonia, Brazil, Colombia (Pacific), Amazonia (Ecuador and Peru), Cameroon.
3. Little change is occurring in much of Brazil's western Amazonia lowland forests, the rainforests of French Guiana, Guyana and Suriname, or much of the Zaire basin.

Professor V. H. Heywood, Botany Department, Plant Science Laboratories, University of Reading, Whiteknights, Reading RG6 2AS (Oryx, May 1981, pp. 27-30).

Sinaut Agricultural Training Centre

An agricultural project on the Sinaut site dates from 1964 when Brunei Shell Petroleum Company Limited put forward proposals to the Brunei Government to develop a farm management project which could contribute towards the development of the agricultural industry within the State. The Government gave the Company every encouragement and, after exploring several possible areas, a site was chosen at Mile 21 adjacent to the main highway between Bandar Seri Begawan and Tutong in Kampong Sinaut.

The 21 hectare holding, which illustrated the majority of the soils and topographic features encountered within the farming areas of the State, was cleared and four smallholder units established, each with a major and one or two subsidiary enterprises. The former were rubber, pepper, rice and beef cattle. Reports on the progress of the project appeared annually from 1966 to 1973 and as time went on it became possible to evaluate the economic viability of the major crop and livestock enterprises under prevailing Brunei smallholder conditions. A composite farm management study was published for Government in 1974.

Concurrently, in 1974, discussions were held with the Honourable State Secretary, the Director of Agriculture and Members of the Agriculture, Fisheries and Forestry Sub-Committee of the State 1975-1979 Five Year National Development Plan on the future of the Sinaut project. It was mutually agreed to use the experience gained in the farm management project as a basis for an agricultural training programme and subsequently, following approval by His Highness The Sultan, Sinaut was established as the Agricultural Training Centre for the State.

Brunei Shell Petroleum Company contributed the twenty one hectare developed and equipped site and the Brunei Government the capital to build a sixty four bed residential block, classrooms and office facilities. The operating costs are shared more or less equally between the two partners with the Brunei Shell contribution covering the salaries of the senior teaching staff, the purchase of books and a variety of ancillary items. The building and farm development programmes were started in mid-1975, the first trainees enrolled in January, 1976 and the facilities finally completed in June, 1977.

The main emphasis of the full-time residential training programme during 1976 and 1977 was the training of young men to become commercial farmers. This was thought to be an important contribution towards the expansion of commercial farming within the State and an appropriate level at which to initiate training at a new Centre. This latter objective provided an opportunity to concentrate on teaching skills and farming procedures so that from the start all the teaching work could be based on a sound knowledge and ability to practical farming.

During 1978 it was decided to establish two further courses at junior technician level. One of these was orientated to train personnel for the Government rice production scheme and the other to provide qualified Bruneian staff to man Government and commercial livestock projects. Both were established during 1979.

Discussions with the Department of Agriculture during 1980 resulted in a decision by the Advisory Board to suspend the Rice Technician course on an interim basis because of the shortage of job opportunities for successful participants. However, this was only expected to be a temporary set back to the demand for technicians. Also, a number of employment opportunities remained available for successful crop and livestock technicians. Therefore, the Advisory Board agreed to the establishment of a broad-based agricultural technician training programme.

This has been programmed to be a two year course demanding the same entry requirements as those for the previous technician courses. A wide range of crop, livestock and mechanisation subjects are included plus opportunities for specialization during the second year of the training programme.

Sinaut Agricultural Training Centre, Annual Report 1981. Brunei, Borneo. WPC.3187d, March, 1982

REGIONAL NEWS

J. B. Avé read two papers on Borneo at universities in the Federal Republic of Germany. He read a paper at the university of Bielefeld, Dept. of Sociology, on June 26, 1982, on "The internal development of subsistence systems in Borneo and the drastic changes in recent years." At the General Meeting of the German and Austrian Societies of Anthropology in Minister, on October 5, 1981, he read a paper on "Das traditionelle Subsistenzsystem auf Borneo in Lichte gegenwärtiger Veränderungen."

BOOK REVIEWS, ABSTRACTS, AND BIBLIOGRAPHY

The following publications have been received and are available at the respective agencies:

Hatch, Timothy, and C. P. Lim. 1978. Shifting Cultivation in Sarawak, A Report Based Upon the Workshop on Shifting Cultivation Held in Kuching on 7-8th December, 1978, Jabatan Pertanian (Department of Agriculture), Kuching, Sarawak, Malaysia.

Perhutani (Agro-Forestry), Jabatan Hutan (The Forest Department), P. O. Box 1407, Sandakan, Sabah, Malaysia.

Soysa, Chandra, Lin Sien Chia, and William L. Collier, Editors, 1982. Man, Land, and Sea, Coastal Resource Use and Management in Asia and the Pacific, The Agricultural Development Council, Siam Thanakarn Building, 133 Soi Asoke, Sukhumvit Road, Bangkok 10110, Thailand (or, 1290 Avenue of the Americas, New York, N.Y., 10104, U.S.A.).

Thapa, R. S., 1982. Termites of Sabah, Sabah Forest Record No. 12, Pusat Penyelidikan Hutan (Forest Research Center), P.O. Box 1407, Sandakan, Sabah, Malaysia (price, M\$25 plus postage \$2.50, in Singapore, elsewhere, US\$16 inclusive of surface mail postage).

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1981 'Morphophonemics of Labuk Kadazan.' Linguistics across continents: Studies in honor of Richard S. Pittman, edited by Andrew Gonzalez and David Thomas (Manila: The Linguistic Society of the Philippines and the Summer Institute of Linguistics), pp. 46-53.

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drawing attention to urgent research problems; (4) to coordinate the flow of information on Borneo research arising from many diverse sources; (5) to disseminate rapidly the initial results of research activity; and (6) to facilitate research by reporting on current conditions. The functions of the Council also include providing counsel and assistance to research endeavors, conservation activities, and the practical application of research results.

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