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NOTES FROM THE EDITOR

In this issue we conclude a series of Memorial Statements for the late Tom Harrisson. All readers of the Bulletin are indebted to those persons who knew Tom as scholar, counselor and friend, and prepared these statements.

We call particular attention to two notices which appear in this issue. First, David Alan Miller has prepared A Checklist of the Works of Tom Harrisson. This compilation is being produced as a special publication of the Council, and may be ordered from the Editor (see notice on page 15). Second, the Borneo Research Council will meet on December 1 during the American Anthropological Association Annual Meeting in Houston, Texas. Persons interested in presenting field reports or papers are invited to contact the Editor.

We are grateful to the following persons who have made financial contributions for the support of the Bulletin: E.K. Adams; Dr. George N. Appell; (continued p. 48)

MEMORIAL STATEMENTS

TOM HARRISSON

Wilhelm G. Solheim

Tom Harrisson and Borneo Archaeology

This is not the time to try and present a definitive account of Tom's archaeological research in and on Borneo. While he has published a large number of papers on or partly concerned with Borneo archaeology and prehistory, probably more of his research remains unpublished than has been published. Much of this unpublished material is of great importance to Borneo and Southeast Asian prehistory and at least a considerable portion of this will hopefully be published in time. Until this work has been published, any attempt at a detailed critique of Tom's archaeological work would be premature. This is, therefore, only a subjective and brief account of the work done by Tom Harrisson on Borneo archaeology and prehistory.

I have no knowledge of any background in archaeology that Tom might have had before he was appointed Government Ethnologist and Curator of the Sarawak Museum in 1947. From conversations with him I do know, however, that he had some interest in cultural remains in the ground previous to 1947 and had done something about this interest. I have been able to find nothing in print about this, and in one or two places where he might logically have mentioned this he said nothing. This had to do with the iron working industry of Santubong, Sarawak.

The major publication on the Santubong sites (Harrisson and O'Connor 1969) includes very little history of the work at Santubong. According to this publication, excavation was begun in the area in 1948. Quantities of iron slag were the major remains in the sites, and for this slag "Mine detectors were employed, and large areas of iron-positive ground thus mapped" (Vol. 1:5). On the previous page it was remarked that research in the Sarawak River delta started after 1947. In his first summary report on archaeological work done in Borneo, Tom (1954) mentions no work done before 1949, refers to the "Initiation of Work, 1949" (189) and puts down "Santubong I" for 1952 (140). In a history of
archaeological research in the Niah Caves (1958:565), he mentions that the first organized archaeological digging done by the Sarawak Museum was in 1949 at Santubong.

The first work done by Tom in Santubong that I know of was in 1946 or 1947 while he was still in the British military service as Officer Administering Interior. Somehow he had knowledge of a considerable quantity of iron slag in the Santubong area. He told me that he convinced the military that the Japanese had laid out a considerable mine field in the delta area of the Sarawak River and that he should be put in charge of clearing the area. In this way he was able to direct a number of professional operators with the best mine detecting equipment available at that time and mapped in detail the extent of the Santubong iron slag deposits. He did not mention the quantity of mines found, if any. This at least suggests that Tom's interests and some activity in Bornean archaeology go back to 1946 or at least to 1947.

In 1947 Tom visited the Niah Caves to check on the birds nest collecting there and noticed some human bone and pottery in one of the small caves. He reported that 'Apart from secondary burial material in the Kelabit country, including in the prehistoric stone-vats of the very headwaters of the Baran River...these were about the first non-contemporary remains I had seen in Borneo' (1958:565).

The first report that I know of of an excavation in Sarawak concerned the excavations at Bau, near Kuching, in 1950 (Harrisson and Tweedie 1951). Here Harrisson mentions starting a long-term study of megaliths in British Borneo (164) in 1947. Actual investigation of the Bau Caves began in 1949 when Harrisson and Tweedie visited them to plan the following year's excavation (165). I would, therefore, place the beginnings of Tom's research in archaeology in 1947 and from the lack of evidence suggesting otherwise that he was largely self taught on this subject.

The one person whom Tom brought in to help him with the early archaeology was M.W.F. Tweedie, the Director of the Raffles Museum in Singapore at that time. Tweedie was not a trained dirt archaeologist, but he had worked with good archaeologists in Malaya and certainly could be considered as an experienced prehistorian. He worked with Tom both at the Bau sites and at Niah during the first exploratory excavations in 1954 (Tweedie 1976:149; Harrisson 1958:565, 571; Solheim n.d.).

The first ten years of Tom's archaeological activities (1947-1956) were concentrated within a radius of about 20 miles of Kuching. This might be considered a training period in Sarawak archaeology. Tom was not only training his staff for future archaeological excavation at Bau and Santubong (Harrisson 1958:566; Solheim n.d.), but he himself was learning as well. He was exploring other caves for their archaeological potential, but the only cave testing done was at Niah (Harrisson 1958:567). He and Barbara also did some exploratory work in Brunei (Harrisson T. and B.1956). It was at this time that I had my first contact with Tom, by mail. He wrote to me in the Philippines in 1954 inviting me to come to Sarawak to work with the earthenware pottery that they had excavated from the Santubong sites. This letter did not catch up with me until the early fall of 1954 when I was back in the United States at the University of Arizona. We hoped to work this out so that I could get there in 1956 (Harrisson 1955:xx), but it did not develop until 1958. Tom's archaeological publication during this period was primarily on surface finds of artifacts, heirloom pieces, preliminary thoughts on outside relationships suggested by the Santubong work or papers on the stoneware and porcelain recovered from Santubong excavations. The three partial or preliminary site reports from this period were all coauthored (Harrisson and Tweedie 1951, Harrisson T. and B.1956; Harrisson T. and B. 1957), and the latter two of these were much or primarily concerned with porcelain and stoneware. Later studies of ceramic collections were largely left to Barbara Harrisson and other collaborators.

The second period of Tom's Borneo archaeology, and to a lesser degree of Borneo archaeology itself, was from 1957 to 1962. This was the period of Niah Cave concentration. I have covered this in some detail elsewhere (n.d.), so I skip over it here. While Tom himself published only a moderate number of papers on the Niah work, you can see the concentration on Niah from the large number of papers that appeared in the Sarawak Museum Journal, following his introduction to this work in 1958, through 1963. With the Brunei rebellion and Confrontation with Indonesia in 1963, Tom stopped working at Niah himself though the Niah research continued under Barbara's direction (Harrisson, B. n.d.).
The third and last period of Sarawak fieldwork in Tom's Borneo archaeology was from 1962 until he left in 1967. This work concentrated again on Santubong and led ultimately to Tom's major archaeological data report, done with Stanley J. O'Connor (1969). After he left Sarawak, Tom continued writing a variety of archaeological papers on a variety of subjects having to do with Sarawak, Brunei, Sabah, West Malaysia and general papers on Southeast Asia, including his and Barbara's book on Sabah (1969-70). He continued until his death as a consultant to the Brunei Museum and was involved in archaeological work there.

The above has been a generalized account of Harrisson's archaeological activities in Borneo through time. For more details on actual field methods and related activities, my article on Tom's work at Niah (n.d.) applies to all of his work. The Journal of the Malaysian Branch Royal Asiatic Society (probably Part I for 1977) is putting out a memorial issue to Tom (Asian Perspectives 20 (1)) which will also include one or more papers about Tom and a bibliography of his archaeological publications, so among these three publications there is considerable coverage.

Tom was without question the father of East Malaysian prehistory. A few short notes on artifacts from surface collections or heirloom pieces had been published by various authors, including I.H.N. Evans, before Harrisson came on the scene. Tom was the first one to organize a systematic program of prehistoric research in Borneo and a program of publication on prehistory. He was largely self-taught in archaeology and, as a result, both his field and laboratory methods were not up to the standards of first class archaeology of the world at that time; but the work he did was better than most of the archaeological work done before the second World War in Southeast Asia and stands up to the standard of much of the archaeology being done in Southeast Asia at the same time. Without a traditional training in archaeology he operated in many ways as a more free and open researcher than a trained person would have. His ecological approach to the Niah Caves research and the inclusion of a large variety of specialists in this research were years ahead of his time. Unfortunately, without the pulling together of the results of this research in a final report on the Niah research program, we have not reaped the benefits of his approach. I believe that it will still be possible to gain these benefits through the use of Tom's notes and papers at the Sarawak Museum. Though it will cost considerable time and effort, it will not cost as much as a new program of field excavation.

Tom's close contact with Kelabits and other interior ethnic groups in Sarawak no doubt gave him a different viewpoint of his archaeological work and findings than that of many other archaeologists. He was doing what amounted to ethnoarchaeology which no doubt gave him at least a partial vision of the cultures he was digging up as living and functioning cultures.

Delineation of group boundaries presents intriguing and vexatious difficulties, nowhere more marked than in Island Asia where cultures have overlapped, intermingled, and left few records of their peregrinations. One interesting group boundary problem appears on Borneo in the distinctive Brunei Malay collective referent terms.

People culturally identifiable as Brunei Malays live in coastal areas of Western Borneo from Kota Kinabalu, Sabah, to Kuching, Sarawak. The main locus of the culture is Bandar Seri Begawan (formerly known as Brunei-town), Brunei. Until a century ago, Bruneis were traders and entrepreneurs who ranged the seas from Singapore and the Malay Peninsula to the Philippines, Java, and around much of Borneo. Today Brunei is a prosperous country, widely famed for its golden-domed mosque.

The Brunei Malays consider themselves patrilineal, and have a word, panchir, for the patrilineage. Their explanation of conception is patrilineally oriented: the woman is the vessel, the man the imbuer of vitality. In contradistinction to this orientation is the fact that matrilineal relatives are not terminologically distinguished from patrilineal ones, although as in English the distinction can be made by saying, sa balah mana, on the mother's side, sa balah bapa, on the father's side. The system distinguishes seven ascending and seven descending generations, but has no concept of a "zero" generation as used in anthropological kinship studies; because, people respond in answer to questions, everyone is part of a parent-child relationship. Degrees of lineality and affinity are distinguished. Cousins are calculated as in English, one's first cousin being a person with whom one has a grandparent in common. First cousin marriage is preferred and often practiced, the only restriction being that the parent of the groom should be the elder sibling of the parent of the bride.

A distinctive aspect of Brunei Malay kinship is a collective referent terminology, specialized terms identified as constituting a specific type of terminology, which were in common usage half a century ago but which are seldom encountered in ordinary speech today, usually occurring only in folktales, as versus the more general group referent terms which do still occur in everyday speech. Collective referents label a conglomerate of people in terms of their relationship to each other. The particular use of collective referents is identification of a group of people approaching a house. Comparable terms for this ephemeral referent in other cultures have seldom been reported. These specialized terms are of prime concern for their group boundary aspects, but must be seen against the background of the more general group referent terms.

The question, "Who is coming?" elicits such answers as banyak abisidia, just two or three, orang inda dikenal, someone I do not know, or other general phrase. The speaker may describe the people's relationship to himself (or herself), thus, peranaku, my children, or may describe the people's relationship to a specified ego, thus, bagas minantu abdul, the spouses who have survived Abdullah's deceased children. Brunei Malay does not grammatically distinguish singular and plural, but since these terms are here being applied to a group, they are understood to be plural. The foregoing are all general-use words here applied to groups.

The broadest referent terms describe kinsmen in general, sa gumoulan - collection, group sa lupak - big puddle stalaga - a well or any conglomerate of descendants, piut baput - grandchildren chuchu bachuchu - grandchildren anak beranak - children.

Other general referents appear to have a more limited range, pupu bapupu - cousins adiberadi - siblings kaka bakaka - siblings balaki laki - husbands bebini bini - wives barindong babapa - parents patuan patuan - aunts and uncles patuan kuku - aunts and uncles (of mine) beranak babuah - nieces and nephews.
However, since these relatives may be accompanied by ascendants, descendants, collaterals and affinals of any number, the terms are far more broad; babarindong would mean, "the parents and senior relatives plus assorted others." These, then, are the group referent terms.

In contradistinction, the collective referent terms apply only to a specific combination of relatives, those close enough (in kinship terms) that they can beganding, mutually aid each other. The basic meaning of ganding (or sanding) is "to graft on," "graft together," or "stand up together" as a marital couple on their wedding day. But the meaning of ganding as used with reference to kinship is besama sama, the same, betulong betulong, mutually aiding. Thus, grandparent, parent, child, and grandchild are extremely close; but other relatives are also considered ganding. Virtually all combinations of ganding relatives occur in special referent terms. These terms consist of a kinship word proper preceded by a number indicating the count of individuals encompassed. The following list gives the collective referent terms with their most frequently used numbers; but for larger groups higher numbers would be used.

- **saberanakan** - one child
- **dua sapachuchuan** - one grandparent and one grandchild
- **dua sapaminian** - one grandparent and one parent-in-law
- **dua saparindungan** - one parent and one grandchild
- **dua spardian** - two siblings
- **dua beranak** - one male and one female, that is, husband and wife
- **dua saparbinian** - husband and wife
- **dua sakawan** - two friends
- **dua spardatuan** - two people of the same omni-lineage
- **dua sakaluraga** - two people of the same extended family
- **tiga saparbinian** - one husband and two wives
- **tiga saperanakan** - two parents and one child
- **tiga sapachuchuan** - one grandparent and two grandchildren; or two grandparents and one grandchild; or any combination of grandparent and grandchild or of grandparents and grandchildren, with or without children, which has four people

Descriptive phrases serve the function of collective referents for groups of relatives not covered by the special terms, for example, anak beranak minantu beminantu = 2 parents + 4 children + spouse of child; biras bebiras minantu beminantu = 2 parents + 1 child + 1 child-in-law + 2 parents-in-law; ipar baipar = any number of children + 1 spouse; or, any number of siblings-in-law.

Analytically, the collective referent terms proper break down into four components.

1. **sa** (or syllabic s), indicating similarity
2. **par, pa, pi, ber** (empty morpheme), indicating collectivity
3. kinship term
4. **an, Ø** (empty morpheme), final particle indicating that the word is a nominal.

For example, saparanakan breaks down into sa+par+anak (child)+an. The empty morphemes, Ø, occur in: skawan, stawan (friend)+Ø; spardian, stpardian (sibling)+Ø; sakaluraga, sa+kaluraga (family)+Ø; and sapanchir, sa+panchir (patrilineage)+Ø; while beranak and jaki bini are exceptions to the whole pattern.

Any of the collective referent terms minus the sa/s prefix can be used as a general referent. Thus, saparindahan means "generationally senior in-laws." This shows that sa is still an active prefix in Brunei Malay. The sa/s is widely used to indicate "one" or "a unity," "group," as in stusin (sa+usin), a cent, and sa puhon piasau, or piasau sa puhon, a coconut tree.
Quite different is the case of the other prefix-suffix elements of the collective referent terms; these elements now appear only in a few set words or phrases, and as standard archaisms in traditional literature and folklore. Two set word examples of the par+an pattern are partangahan, in the middle, from par+tangah (middle)+an, and parmentaan, a request, from par+menta (to take)+an. An archaism is parmabilan, taking, from par+ambil (to take)+an; the normal modern form being pengambilan. In general, the modern equivalent of the par+an prefix-suffix pattern is peng+an if the prefix is followed by a vowel, as in the word pengambilan cited above, and pen+an if the prefix is followed by a consonant, as in pambutan, a thing made, from pam+butan (do)+an, whose archaic form is parbutan, from par+butan.

But in Kawi, or Old Javanese, the language of medieval Javanese empires and states, the par+an prefix-suffix was an active formant, often in the form pa+an. When applied to nouns this yielded such words as pakadangan, group of relatives, from pa+kadang (relatives)+an. Applied to verbs it yielded forms such as pa+butan, that which can be seen, from pa+butan (to see)+an, whose archaic form is parbutan.

Kawi also used the prefix sa as a formant in much the same way that modern Brunei Malay does. Thus sakadatwan, all the individuals in a government, derived from sa+kadatwan (government). And sapanglayang, all the ones flying together, derived from sa+panglayang (flying together). Panglayang itself being derived from penglayang (to fly). The early appearance of the modern form of the old par prefix suggests that the Kawi-Brunei Malay linguistic relationships are far from simple and warrant further study.

The important point to consider here is that the Brunei Malay collective referent terms use the par+an prefix-suffix in an active manner. This is seen in the possible but laughingly awkward term dua sapardatwan, meaning "a group of a great-grandfather and great-grandchild." People even use more remote kinship terms to make collective referents on this pattern as a joke and to explain the word forming process; they would never actually use such terms.

Despite the difficulties and incomplete nature of the evidence, this Kawi-type active use of the par+an elements strongly suggests that during its formative period Brunei Malay culture received Old Javanese influence. This is further borne out by the presence in Brunei Malay of a unique dual counting system for the numbers twenty-one to twenty-nine, best seen in a list.

<table>
<thead>
<tr>
<th>Normal</th>
<th>Unique</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 dua puloh satu</td>
<td>sa likor</td>
</tr>
<tr>
<td>22 dua puloh dua</td>
<td>dua likor</td>
</tr>
<tr>
<td>23 dua puloh tiga</td>
<td>tiga likor</td>
</tr>
<tr>
<td>24 dua puloh ampat</td>
<td>ampat likor</td>
</tr>
<tr>
<td>25 dua puloh lima</td>
<td>lima likor</td>
</tr>
<tr>
<td>26 dua puloh anam</td>
<td>anam likor</td>
</tr>
<tr>
<td>27 dua puloh tujoh</td>
<td>tujoh likor</td>
</tr>
<tr>
<td>28 dua puloh lapan</td>
<td>lapan likor</td>
</tr>
<tr>
<td>29 dua puloh sambilan</td>
<td>sambilan likor</td>
</tr>
</tbody>
</table>

The "normal" count is found also in modern Standard Malay. The unique Brunei likor count occurs, significantly, in Old Javanese. Although from this the fact of contact may be adduced, the precise nature of the boundaries involved remains unknown.

However, there are some interesting clues as to the nature of those group boundaries. Legend states that Brunei Malay culture originated at least in part from Murut culture. Nor can the presence of some Murut words in Brunei Malay, such as mulih, return, and buhup, book, be dismissed as due merely to contact; buhup is also the Iban word for book, suggesting that it is a word of Bornean province. Further, a number of words in Murut and Brunei Malay show distinct similarity, thus, Murut abadi, slave, Brunei Malay abadi, Murut laut, sea, Brunei Malay laut. The interrelationship of the Murut and Brunei Malay languages needs further study. The legend mentioned above also tells of an Arab Sultan who married a Murut chief's daughter and so brought Islam to Brunei. This suggests several group boundary problems, but not the one under consideration here.

For direct evidence bearing on Brunei Malay-Old Javanese group boundaries, the main source of information is the Sa'er Awang Simeun which recounts that the Javanese peasants who were brought in to grow rice became the Kadayans, one of the present-day cultural groups in Brunei. The Sa'er Awang Simeun also states that Brunei royalty married into Javanese royalty and
in connection with the wedding received certain regalia from the Javanese royal house. However, the chronology and details of these movements are not clear. Thus it appears that there was contact between Javanese and Brunei Malay groups during the formative time of Brunei Malay culture, but the precise nature of that contact is unclear in detail. On the basis of folktales evidence not discussed here, the time of contact may be tentatively placed at 1200 A.D. or earlier.

This still leaves a question of, "why the peculiar collective referent terms?" Perhaps it was originally a case of devising Malay-Javanese terms to describe extant cognatic kinship groups which had non-Malay-Javanese names. Or for some reason not now known it may have been important to verbally identify groups of approaching relatives and hence a specialized terminology developed to meet the demand. In the absence of data the problem of why these particular group boundaries were established and named must remain unsolved. The collective referents themselves stand as a distinct and interesting feature of Brunei Malay kinship terminology.

Consideration of the linguistic peculiarity of Brunei Malay collective referents, which indicate a specific set of kinsmen in terms of their relationship to one another, regardless of their relationship or lack of it to the speaker or hearer, has led from the cognatic kinship group boundaries involved to the consideration of Brunei Malay-Kawi group boundaries. Linguistic and folk literature evidence tends to confirm the existence of actual contacts between the two groups, including the Javanese origin of some Brunei Malay royal regalia. An exhaustive analysis of Kawi (Old Javanese) linguistic structures, loanwords, proper nouns, and tale motifs appearing in Brunei Malay language and literature might elucidate the probable extent, nature, and duration of the Brunei Malay-Old Javanese group boundaries some eight-hundred years ago.

Notes

1. Data for this paper were gathered during fieldwork in Brunei during 1969-1971, supported in part by an ADCA grant from the National Academy of Science, and by a travel grant from the Ohio State University.

2. The opposite marriage, where the parent of the husband is the younger sibling of the parent of the bride is permissible, but considered "hot," hence not good, because it will be difficult for the couple to obtain sustenance.

3. Brunei Malay also does not grammatically distinguish masculine and feminine.

4. The transcription used here is broadly phonetic. The letters should be given the pronunciation they have in the normal romanized transcription of Standard Malay of 1963, before the spelling reform.

5. For a description of Kawi, the reader is referred to A.S. Teselkin, Old Javanese (Kawi), translated and edited with a preface by John M. Echols, Translation Series, Modern Indonesia Project, Southeast Asia Program, Cornell University, Ithaca, New York, 1972.

6. The Sa'er Awang Simaun (Awang Simaun Epic) referred to here is a romanized transcription of the epic made during fieldwork while a Malay villager read from a Jawi (Arabic script) manuscript.

Notice: The Editor announces the publication of A Checklist of the Works of Tom Harrison (1911-1976), compiled by David Alan Miller of the Ohio University Library.

The Checklist--fifty pages in typed form--may be ordered from the Editor at $2.50 per copy.
RESEARCH NOTES

COHORT SURVIVAL RATIOS AND THE 1970 AGE STRUCTURE OF SARAWAK'S POPULATIONS

Robert F. Austin
University of Michigan

In the course of research on Iban internal migration, several methods have been used to analyze the available data. The results from one type of analysis are somewhat surprising and worthy of comment, as they cast serious doubts on the accuracy of the age distributions data presented, for Sarawak, in the 1970 Census of Malaysia (Chander 1973).

Background

Net migration may be estimated in a number of ways, including a method known as "survival ratio analysis." This method is based on the following logic. "If two censuses are taken exactly z years apart, the population that is age x at the first census will be age x+z at the second" (Bogue 1959:492). Death and migration will influence the size of the age group, or cohort, during the intercensal period. These relationships may be expressed as follows:

\[ P_x = P_{x+z} + D + M, \]

where \( P_x \) is the population that is age \( x \) at the first census, \( P_{x+z} \) is the population \( x \) after \( z \) years, \( D \) is the number of deaths in the age group \( x \) during the intercensal period, and \( M \) is the number of net in-migrants or net out-migrants in age group \( x \) during the intercensal period.

In analysis, if age-specific mortality data is not available, national age-specific survival ratios can be calculated and migration between districts or states may be estimated using a derivation from Formula 1.

\[ M = P_x - P_{x+z} - D. \]

The age cohorts may of course be examined for differentials by sex, community group, or any other characteristic for which census data is available. (For a complete description of this method, see Shryock, Siegel and Associates 1973:627ff.)

Analysis

In the case of Sarawak, the 1970 Census of Malaysia (Chander 1973) does not provide a breakdown of the population in age groups by district. However, data by community groups is available for the state of Sarawak as a whole. In theory, analysis of the state-level data should merely indicate a decrease in the population of each individual age-cohort (that is, the age specific survival ratios). For example, the number of Ibans age 15-19 in 1960 should not, in theory, increase during succeeding years. Yet analysis of the 1960 Census of Sarawak (Jones 1962) and the 1970 Census of Malaysia (Chander 1973) shows that certain cohorts of Sarawak's population did increase in size between 1960 and 1970.

The computed cohort survival ratios for selected community groups in Sarawak and for the state as a whole are presented in Tables 1, 2, and 3, which are derived from census materials. The ratios are obtained by dividing the 1970 population of a given cohort by the 1960 census count of the same cohort (for example, by dividing the 1970 population of Ibans aged 10-14 by the 1960 population of Ibans aged 0-4).

Discussion

Limitations of space preclude a graphic presentation of the data in Tables 1-3; however, several patterns are immediately apparent. Perhaps the most obvious pattern is the high survival ratios for females aged 10-14 in 1960 (20-24 in 1970). This is a not uncommon phenomenon in developing states (van de Walle 1966:555), and is attributed to the understatement of the ages of unmarried females in 1960. Verification of this interpretation must wait until the next census, at which time the trend should reoccur if the interpretation is correct.

A second pattern which is obvious is that for Chinese aged 0-4 in 1960 (10-14 in 1970), both male and female. It is argued that this is due to (a) differences between the two censuses in the conversion of Chinese ages to Western ages, and (b) cultural attitudes toward the reporting of young children. Although this latter point might also explain the ratio of 1.0155 for Land Dayak male children aged 0-4 in 1960 (10-14 in 1970), it is argued that since this does not appear to be...
TABLE 1. 1960-1970 Cohort Survival Ratios for the Total Populations of Selected Sarawak Community Groups.

<table>
<thead>
<tr>
<th>1960 Age Group</th>
<th>1970 Age Group</th>
<th>Iban</th>
<th>Land Deayak</th>
<th>Malay</th>
<th>Melanau</th>
<th>Other Indigenous</th>
<th>Chinese</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10-14</td>
<td>.7226</td>
<td>.9748</td>
<td>.9642</td>
<td>.9314</td>
<td>.8898</td>
<td>1.1228</td>
<td>.9483</td>
</tr>
<tr>
<td>5-9</td>
<td>15-19</td>
<td>.7154</td>
<td>.8288</td>
<td>.8778</td>
<td>.7910</td>
<td>.7604</td>
<td>.8412</td>
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<td>10-14</td>
<td>20-24</td>
<td>1.2123</td>
<td>1.0455</td>
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Total Column includes other community groups in Sarawak.


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Total Column includes other community groups in Sarawak.
There are several possible explanations for the remaining discrepancies which appear in the cohort survival data. One is the possibility of what is called "digit preference" or cultural preference for one final digit over another when stating ages. A Myers' Test for Digit Preference was conducted in conjunction with the 1970 Census of Malaysia to check for this phenomenon, and findings suggest that, for the state as a whole, there is a preference for the digits 0 and 5 (Chander 1973:197-98). However, it must be assumed that this digit preference occurs throughout the range of cohorts and not just in selected cohorts. In addition, assuming that these specific digit preferences also existed in 1960, they should have little, if any, effect on the cohort survival ratios (see Jones 1962:41).

A second possible explanation is widespread, although differential, census error. In looking at the state total in Table 1, we find that only the cohort aged 20-24 in 1960 (30-34 in 1970) survived at a rate higher than that of the other more literate or semi-literate populations (van de Walle 1966). Because of this, it is argued that the specific variations are a function of cultural variation, rather than census error. Undoubtedly some errors occurred, but we cannot judge the degree to which errors are responsible for the observed distributions until the next census is reported.

A third possible, and indeed probable, explanation is migration. That is, by being replenished from outside the system, the cohorts would appear to be surviving at a rate higher than 100 percent. In the case of Iban males, it may well be argued that the observed survival ratios (in, we might note, the prime ages for bejalai) are a function of continuing immigration from Kalimantan. In the same way, we may attribute a portion of the observed excess survival of Malay males to the Federation's Malaysian Migration Fund Board programs, and to the provision of predominantly Malay soldiers during the sensitive period of the 1960s and Konfrontasi. Until such time as total figures on Malay troop movements are released (and it is doubtful that such information is forthcoming), confirmation of this hypothesis is not possible. However, age profiles of Iban and "Other Indigenous" migrants from Sarawak show that...
Kalimantan would provide, in combination with the data in Tables 1-3, confirmation of continuing immigration, suspected by several observers.

Conclusions

The 1960 Census of Sarawak, in its age distributions, provides no evidence of misreporting, and indeed matches the expected age distributions for the state's stage of development. For the reasons cited above, and until such time as the next census is conducted and reported (and verification of the processes involved thereby made possible), the age distribution data of the 1970 Census of Malaysia for Sarawak must be considered suspect. Although this conclusion is perhaps not the most useful one possible for the researcher, it must be considered in any examination of age distributions in Sarawak which compares 1960 and 1970 data. If the next census shows each of these cohorts moving up in the age pyramid, then the phenomenon is genuine, and for the higher age ranges we may definitively argue that migration was the cause. If these features appear in the same age ranges as in 1970, we may argue that age misstatement is the primary cause. In either case, we must currently use the available data with caution.

Bibliography:

The author wishes to thank Dr. James D. Clarkson and Dr. Paul Siegel for their comments on this paper. Responsibility for any errors in interpretation must remain with the author.
a residual category, in that any group which did not fit in elsewhere was included here. So we have a mixture of Islamic and non-Islamic communities like the Rungus and Brunei, of major and minor groups like the Sungai and Maragang. Having such varied community groups under one heading reduces its usefulness. Thus the increased categories in this case has led to problems of classification, problems which have to be resolved, before the detailed data can be usefully interpreted.

Following the pattern of West Malaysian Censuses and that of earlier censuses of North Borneo, the primary division of communities in Sabah is that between the indigenous and non-indigenous. However, this division is not as clear cut in Sabah as in West Malaysia, primarily for two reasons. Firstly, the indigenous people of Sabah are separated into two main groups—the non-Islamic and Islamic. Secondly, it has to be recognized that the Islamic indigenous and the Islamic non-indigenous have a lot in common. In Sabah, the Indonesians who compose 6.1 percent of the population and the rising number of Filipinas are primarily Muslim. In time these groups will gradually merge into the Islamic Indigenous. This is not a new process in Sabah. The Bajaus, Brunei, Kadayans, Sulus, i.e., the major Muslim groups, have at some time in the past migrated to Sabah from different homelands. Yet they have, in common usage, and by the government, always been regarded as indigenous. So, in Sabah the categories of Indonesians and the Muslim components of the "Others" group have to be considered not totally apart from the Islamic Indigenous.

It is thus submitted here that the Census data can usefully be reclassified in the following way:

A. NON-ISLAMIC INDIGENES
   Kadaesan
   Murut
B. MUSLIM PEOPLES
   Muslim indigenous
      Coastal peoples
      Islamized indigenous
   Others
C. CHINESE
D. OTHERS

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Source: 1970 Population and Housing Census of Malaysia
This classification which consists of four major groupings owes much to Roff and Appell. Roff suggested that Sabah's population can be usefully classified in terms of non-Islamic Indigenes, the Malayo-Muslim peoples, and Chinese (Roff 1974:20). In the present classification, the term Malayo-Muslim peoples has been modified to Muslim peoples alone, as many Islamic groups see themselves as very different from the Malays. In the classification of the Muslim peoples, Appell's grouping of the Muslim indigenous into two groups has been followed (Appell 1968:250-51).

From the table below, one notes that in Sabah the main community groupings are as follows:

- Non-Islamic Indigenes: 37.6%
- Muslim Peoples: 38.9%
- Chinese: 21.4%
- Others: 2.1%

The 1970 Census, unlike the censuses of North Borneo of 1951 and 1960, has not given growth and distribution patterns for the different community groups in Sabah in any detail. Thus two major changes have remained un-noted. The first is the startling increase in the Malay population. In 1960, 1,645 Malays were enumerated, while in 1970, the figure rose to 18,365, accounting for a percentage increase of 1016.41. It is all the more dramatic as between 1951 and 1960, there was a percentage decrease of 14.94. Part of the increase after 1960 can be explained by increasing migration of Malays from other states to Sabah. However, precise figures are not available as immigration statistics before 1970 were only given under the main headings Indigenous, Chinese and Others. But according to the Annual Bulletin of Statistics, Sabah for the years 1970-1974, one notes that a total of 10,335 Malays from other states migrated to Sabah. This accounts for 49.83 percent of the estimated increase between 1970 and 1974. Moreover, the male/female ratio for the Malay population in 1970 is 1,000/638. It reflects an imbalance which is not characteristic of the other indigenous community groups of Sabah.

The variation in the Malay population in Sabah has also to be seen against the fact that there has been a major shift in the classification of the term "Malay."
TABLE 2. Reclassification, cont'd.

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In censuses previous to that of 1970, the "Malays" were included among the non-indigenous, in the residual category of "Others," whereas in 1970 "Malays" became one of the main Indigenous groups. This change in some cases led to a bias toward returning oneself as Malay.

In Labuan, the area of greatest Malay concentration, there is decided evidence that this came about by a change of classification on the part of the "Brunei" and "Kadayan" to that of Malay. Between 1951 and 1960, the Other Indigenous group in Labuan, which is nearly wholly composed of Brunei and Kadayan, increased by 79.45 percent. But between 1960 and 1970, this group decreased by 26.52 percent, while the Malay population between 1951 and 1970 increased by 2726.92 percent.

The decrease in the Sulu population between 1960 and 1970 can also be explained by a probable shift in classification from Sulu to Malay. Comparative figures for the Sulus according to district for 1951 and 1970 show that in Lahad Datu and Kudat, the decrease in Sulu population was accompanied by an increase in the Malay population.

Some of the increase in the Malay category could also be due to people previously enumerated under "Others" returning themselves as "Malay" in 1970, as it allies them to the major indigenous group of West Malaysia.

The second major change is the distribution pattern of the Muslim groups. Comparison is generally with the 1951 figures as the 1960 Census did not give the data for districts according to detailed community groups. And even for 1951, the data is not available separately for the Bruneis, Kadayans, Bisayas, Idahan, and Paitan. But for the other Muslim community groups, the greatest increases in population have taken place in the districts containing the large urban areas. The Bajaus are still concentrated in Semporna and Kota Belud, but it is the districts of Tawau, Sandakan and Kota Kinabalu which have shown the largest increases of 158.7 percent, 74.0 percent and 62.7 percent between 1960 and 1970. In the case of the Malays, no comparative data is available, but in 1970 they were mainly concentrated in the districts of Labuan, Sandakan, Kota Kinabalu and Tawau. The Sulus also increased by 117 percent in Sandakan, and 76.7 percent in Tawau between 1951 and 1970, while decreasing in Lahad Datu and Kudat. In line with this, the greatest increase among the Orang Sungai for the same period has been 198.2 percent in Sandakan. For the Tidongs, there has been a movement from the Labuk and Sugut area to the districts of Tawau and Sandakan. The Indonesians also have registered the greatest increases in Tawau and Sandakan. So that in 1970 in each case where data is available, there has been a movement of the Muslim community groups to districts containing the large urban areas.

Two recent articles in the Borneo Bulletin (Anon. 1977 and Larissa Uyau 1977) discuss the possible development of the Usun Apau, a plateau which forms the Rejang (Baluy)-Baram watershed. It would be artificial to delimit with precision the limits of the Usun Apau, but it was defined approximately in 1956 by Tama Ukat Tugah of Long Buroi as "the whole area stretching from the Dapoi to the Julan to the Pliran down to Long Saoh" (Arnold 1956:169). To be more exact, the upper reaches of the Julan are in the northern part of the Usun Apau, while the upper Dapoi occupies its western section. The Pliran, above its confluence with the Danum, forms its southern limits. It is no accident that Tama Ukat Tugah did not indicate any eastern limit. The Usun Apau is part of the central Borneo plateau which forms the watershed between a number of major river basins.

These central plateaus were traditionally inhabited by such groups as the Kayan and the Kenyah. The Kelabit, further north, still occupy such an ecosystem, and this suggests comparisons between the two areas. In their highlands, the Kelabit have traditionally practiced irrigated rice cultivation and raised buffaloes; these highlands are at an altitude of approximately 4,000 feet, with a cooler climate, which makes it possible to grow various cultivated plants. In the January issue of the Borneo Bulletin, a correspondent from the Kuching campus of the Mara Institute of Technology (Anon. 1977) suggests that the Usun Apau be developed along the same lines:

Because of the fact that Usun Apau is a fertile area and has a cool climate, conditions are ideal for plant growth. Consequently, it must be regarded as one of the major untapped sources of potential agricultural land.

One can look for a parallel in the development that has taken place in Peninsular Malaysia centralised around the areas of the Cameron Highlands and Fraser Hills, both of which are at an altitude of about 4000 ft.

Temperate plants such as quality tea, coffee and cinchona (a tree yielding a bark valued for medicinal purposes) have been grown with success. There is a cattle and buffalo rearing without difficulty.

...There is a potential in mining, for coal is believed to be in abundance under the southwestern part of this upland.

The Usun Apau is at a lower altitude than the Kelabit highlands or the Peninsular Malaysia highlands, being almost entirely below 4,000 feet, and this may create different climatic conditions. Nevertheless, the agricultural potential of the area is obvious. In the last century, the Usun Apau, like the other Borneo highlands, was inhabited by shifting cultivators, especially by the Kenyah (Low 1882, Arnold 1956). Before that, the Apau Kayan, in what is now Kalimantan, had been occupied by the Kayan. Afterwards these highlands became depopulated, maybe at first due to increased headhunting and epidemics, but certainly afterwards because the availability of trade goods attracted people to settle near navigable rivers, and the disappearance of headhunting made this easier. In the same way, the Linau basin was abandoned by the Kayan. The Usun Apau, however, is not a no-man's land, being occupied by nomadic Penan, most of which are now becoming agriculturalists.

The agricultural potential of the Apau Kayan and, for that matter that of the watershed between the Rejang-Baluy and the Kayan rivers, is clear. The construction of a road between Bintulu and Belaga will also create new economic possibilities and facilitate the development of heretofore remote areas. At the same time, it will create a number of human problems which are already becoming evident.

In the following issue of the Borneo Bulletin, Larissa Uyau (1977) responded to the previously-quoted article by raising the question of ownership of the Usun Apau:

The villagers of the Julan [a tributary of the Baram] lay fierce claim to not only the land of the river but also that of Usun Apau:
itself. They say it is theirs by customary and ancestral rights.

At the moment these rights are being threatened not only by other villagers of the Ulu Baram but also by some other bodies who have been to survey certain parts of the plateau for development projects of the future.

As more of these strangers appeared on the scene, the two kampungs living closest to the plateau, feeling they had the most right to it, decided to stake a claim.

They sent in a team to place markers on the plateau as an indication that its acres were the subject of natives' customary ownership rights.

It is clear that the villagers of Long Julan and Long Apu do not lay claim to the whole of the Usun Apau, but to the area near them. One can imagine that the other groups that surround the area might do the same. This clearly creates the basis for two conflicting principles: local autonomy vs. state supremacy.

It will take some time before the highlands are developed; however, considering that the population is steadily increasing, this is likely to happen eventually. For the time being, it is probably more economical to limit the development of intensive agriculture to easily accessible areas, but eventually the highlands will seem more attractive. This creates two possibilities: either the highland groups will be encouraged to settle on the plateau, or people from coastal areas will be brought there. The latter choice would have serious consequences for the highland people, as they would feel themselves deprived of land which has traditionally been theirs. This deprivation would be all the more strongly felt at a period when their population is growing rapidly and their need for land is becoming more evident. Furthermore, the social problems of bringing together groups which are very different culturally could be serious.

In any case, the development of central Borneo will have major ecological, sociological and economic consequences, and it is important to work these out now before such changes come into being.

Bibliography:

BRIEF COMMUNICATIONS

Reply to Rousseau

Dietrich Köhne

The following letter has been received in response to Dr. Jérôme Rousseau's note which appeared in the Bulletin (8:2, p. 109):

My Research Note on Rumah Kejaman Lasah and Rumah Nyala (published in B.R.B. 7:2) has met with criticism by Mr. J. Rousseau in the latest Bulletin's Brief Communications (8:2, p. 109). There were objections made in five points, and I feel they need a reply.

Point 1: Mr. Rousseau writes that the people of R. Kejaman Lasah "frequently go to Belaga," while I wrote that they "hardly ever undertake a canoe trip" to that place "unless combining official matters with some shopping." This may be overemphasized, but I think it is a more semantic problem.

Point 2: Mr. Rousseau writes that my population figures on R. Kejaman Lasah are "incorrect," his figures being 222 instead of 154 for 1960 and 261 (for 1971) instead of my 180 in 1970. This raises two questions, namely about my methods practiced, and about some control data sufficiently neutral. At first, the way I came to my figures: The survey took three days, and covered all doors that were found occupied within this time. I made a systematic enquête, using one
questionnaire for each household. Most of the inter-
views were done in the evening hours (i.e., when the
people had returned from their fields) to avoid gross
underenumeration. It was also asked whether the house-
holds had huts in their fields. The result of this in-
vestigation was a total of 180 villagers, giving the
basis for the 1960 figure which was computed from the
births, deaths, in- and out-migrations reported for the
decade in question. The beginning of the decade was
clearly defined with the 1960 Population Census, an
event the villagers could remember very well. At
second, a certain control may be found by comparison of
Mr. Rousseau's figures and mine with the official Cen-
sus statements: Mr. Rousseau's source of information
speaks of 261 inhabitants in 1971, which is no less
than 45 percent beyond my figure for October 1970. At
my request the Malaysia Department of Statistics,
Kuala Lumpur, informed me (by letter, dated 17th Feb.
1977) that the 1970 Population Census, which was two
months earlier, counted 194 inhabitants. This is
roughly 8 percent above my figure. Earlier details are
not available, the Department says. I do not claim
perfect accuracy for my findings, but it seems that
they have the standard of a very solid sample.

Point 3: Mr. Rousseau writes that "it is very unlikely
that Kejaman women had no opinion about contraception"
and that "Kayan women (who live further upriver, and
are much more isolated) talked frequently about it." In
fact, I did not ask the women upriver, I only asked
the 38 women at Rumah Kejaman Lasah who had reported
births since 1960.

Point 4: Mr. Rousseau writes that "the Kejaman prac-
tice uxorilocality (in a proportion of approximately
75 percent), not ambilocality." Perhaps I should not
go so far as to quote Hose and McDougall (1912,1:85-96)
or Leach (1950, §§ 307-308), and I willingly follow Mr.
Rousseau's approximate 75 percent, since my own record
is even less favorable. But there is no reason to
ignore the rest.

Point 5: Mr. Rousseau ends with the remark that my
"evaluation of monetary income is quite inadequate." I
compared with my Iban informants at Rumah Nyala (the
other village, which reported a much higher inflow of
money), the Kejaman answered but vaguely to this ques-
tion. On the other hand, the contrast of both villages
in the use of modern goods of all kinds was very simi-
lar to the contrast of incomes reported.

When I left Sarawak in 1964, it was suggested that I
prepare a new dictionary of Iban. The two existing
dictionaries could be improved upon: Howell and Bailey
was published in 1900 and is out of date; and Scott,
published in 1956 and much easier to use, suffers be-
cause the author relied on a single informant and did
not visit Sarawak at all.

My own qualifications are similar to those of Bailey,
in that I was also an Administrative Officer and Magi-
strate in Sarawak for a quarter of a century and saw
most service in Iban areas of the Rejang and the Second
Division. I attempted the dictionary for several rea-
sions: it allowed me to pursue an abiding interest, and
I had a reputation to justify; several of my predeces-
sors knew as much as I did but had never written any-
thing down; there was a need for a new work. The need
has been expressed to me by officers now serving in
Sarawak, and others, but there is also a use for it in
future research. A Chinese or Malay posted to an Iban
district, or a researcher in the social sciences would
be able to get on with his job sooner and better if the
basic and background information can be had without
asking a lot of ignorant and tedious questions. Fur-
ther, in any kind of enquiry, knowing a thing or two
beforehand helps enormously: it displays a real inte-
rest and is most likely to elicit more information.

Once started I found it was all easier said than done.
Fluent speech and a degree of understanding were not
much use in the research needed or in setting down in-
formation briefly and precisely. Other commitments
have left only evenings and weekends for the work, and
made me slow in completing the alphabet. I am now re-
vising the draft to make sure of consistency and bre-
vity, remove repetitions and unnecessary (if interest-
ing) statements, and to insert any further entries that
I collect. This work should be completed and the re-
sult faired in 1977.

I am trying to provide a handbook for ordinary social
contact and, by making it as exhaustive as I can, sup-
ply the need for a reference tool in aid of future

An Iban-English Dictionary
A.J.N. Richards
University of Cambridge
investigations and academic research. I have added to the two existing works all the information I collected and used in Sarawak, and all that I have found in published and unpublished material since 1964. Besides sorting out my own notes and memories, I have culled words from the Sarawak Museum Journal, the Sarawak Gazette, Sarawak Karang Samlinggu (Sarawak by the Week), Borneo Literature Bureau publications in Iban, relevant works in specialized fields strange to me on birds, snakes, textiles, trees, mammals, palms; and much other material. In the usual introduction I have dealt with spoken stress, which I think has not been done before. I have added to it an English-Iban list of key-words as a guide to the longer and more important entries, and a bibliography of works consulted numbering about a hundred.

I have adopted Scott's systematic spelling, with an eye on the reformed spelling of Malay, because it makes reference very easy, because it is used for Iban in Sarawak (officially, at least), and because my purpose would not be served by entering into debate with those who are trained in linguistics in an amateur effort to discover a better system. References to related words are liberally provided: this has made it possible to collect detail together under one extended entry, and to enable a reader to enjoy "hunting" also, I hope, will enable a reader to enjoy "hunting" a subject through its ramifications. I have entered loan words, words used in urban life, and terms belonging to the fields of adat law and custom, ritual, belief and oral literature.

I am beginning to know where the gaps are, that can only be filled by further research. Questions that need answering include:

1. The Sarawak Museum has a case of the Iban omen birds but no recording of the sounds they make: can anyone try to remedy this with explanations?

2. Correlation of Iban and western scientific terms is almost entirely lacking except for trees, birds, and mammals: is anyone interested to collect and correlate terms for other plants and wild life?

3. There has always been an alleged connection between the Iban and Sumatra: in what does it consist and how and when did it come about?

4. Much of the oral literature, belief and ritual seems to have Indian affinities: how close are they, and is the easy assumption of simple derivation from Malays to remain not proven?

There is no prospect of publication of the dictionary at present, in spite of my having received a subsidy, because it seems that the whole production cost must be met first.


Hunting Pressure on Orang-Utans in Sarawak

In Sarawak a comparatively new development is that orang-utans are being hunted for food, often with great cruelty. The Government is aware of the threat to the population, and special reserves are being considered. Lord Medway (Oryx 13:332-33) points out that only a change in local sentiment will save the orang-utans even in sanctuaries--they already have full legal protection--and suggests an appeal must be made to people to return to traditional ways.

Corrections

Tom Harrison first came to Sarawak with the Oxford Expedition in 1932, not 1936, as stated in the Bulletin (8:2, p. 61).

Colin Crisswell's biography is of Rajah Charles Brooke, not Clarks as reported in the Bulletin (8:2, p. 117).

In the April 1975 issue of the Borneo Research Bulletin it was erroneously noted that The Asia Foundation
provided the funding for Poems of Indigenous Peoples of Sarawak: Some of the Songs and Chants, Parts 1 and 2, by Carol Rubenstein, Special Monograph No. 2, Sarawak Museum Journal double-issue, Vol. 21, No. 42.

The correct information is as follows: The Ford Foundation awarded a grant to Miss Rubenstein for her project in cooperation with the Sarawak Museum, 1971-1974. The Ford Foundation also kindly provided funds for publication as Special Monograph No. 2 in the Sarawak Museum Journal series, thereby greatly facilitating and speeding the dissemination of the work on the entire project. To cover rising publication costs, The Asia Foundation kindly provided necessary supplementary aid. The Bulletin regrets the error in communication.

NEWS AND ANNOUNCEMENTS

Borneo Research Council Meeting

The Borneo Research Council will hold a business meeting on December 1, 1977, during the Annual Meeting of the American Anthropological Association in Houston, Texas. In addition to considering business, the Council also invites presentations of field reports and volunteered papers by students of Borneo. For more information, please write the Editor.

Brunei’s New Agricultural Training Centre

"The Brunei State Development Programme 1975-79 emphasizes the diversification of the State economy through effective agricultural and industrial development. In this connection the initiation of this Agricultural Training Centre to provide training to young farmer groups who will be ready to go to the land is highly commendable.

"We are all aware that at present most of Brunei’s agriculture is a part-time occupation for part-time farmers. A continuous effort devoting knowledge and skill must be applied to change this situation and to develop and establish a really sound group of full-time farmers who are dependent upon their agricultural holdings for their living. If initially the output of such full-time farms is not export-oriented, at least every effort must be devoted to improving the standard of output of farm produce for local consumption.

"The achievement of self-sufficiency should motivate all the inhabitants of the State whose livelihood is dependent wholly or partly upon agriculture in accordance with the declared aims of the State Development Programme.

"I believe that this new Agricultural Training Centre will be able to teach and produce farmers with a sound knowledge of modern farming."

This is how Brunei’s State Secretary, Dato Haji Abdul Aziz Umar opens the foreword to the booklet on the newly established Sinaut Agricultural Training Centre (SATC).

The Centre is situated at Mile 21 on the main Bandar Seri Begawan to Tutong highway. Built for use by the Department of Agriculture and jointly sponsored by Government and Brunei Shell Petroleum Company Limited, the Training Centre has grown up on the site of the Sinaut Agricultural Centre, a smallholder agricultural investigation project started there by Brunei Shell in 1965.

The accommodation consists of double study/bedrooms for 32 trainees, modern workshop and classroom facilities and staff housing. These are all conveniently set on a hundred and forty acres farm. The farm consists of a wide range of active crop and livestock enterprises which are laid out to illustrate the possibilities of profitable smallholder farming. The major crops are rice, pepper, coffee, citrus and a range of other fruit trees and arable crops, whilst on the livestock side the main areas of interest are beef cattle, goats and poultry.

The major training course at the Centre lasts for 24 months and requires the trainees to remain in residence for the majority of this time. The aim of the training is to provide young men with a sound practical as well as theoretical knowledge of agriculture.
to enable them to become efficient and capable farmers in their own right. Thus the trainees have daily experience of crops and animals under farming conditions.

Equal emphasis is given to theory and practical work during training. All teaching is given in small instruction and discussion groups, and the topics covered in the classroom during the first six months of the course are:

1. Soils and Plant Growth
2. The Living Plant
3. Keeping Animals
4. Crop Production
5. Plant Protection
6. Farm Business
7. Farm Mechanization

Each of these subjects is followed up in the field so that the trainees have practical proficiency in handling and growing crops and livestock, in the use and maintenance of farm equipment and machinery, in the use and safety aspects of plant protection and veterinary chemicals and in the principles of maintaining records and accounts.

To reinforce the practical aims of the course, the trainees, on a group basis, rear and maintain small flocks of poultry and grow a variety of vegetable crops.

During the second half of the first year, the trainees are divided into common interest groups and study one major and two subsidiary crop or livestock enterprises in detail as a farming system. Then, in the second year, they move into full-time work with these enterprises to gain the necessary experience before establishing similar units in their home Mukims.

Accepted trainees are provided with free hostel accommodation, free food and free tuition and uniforms, raincoats, and rubber boots are provided for field work. Also an allowance of $75.00 per month is paid to cover other out-of-pocket expenses.

Candidates at the moment must be male and citizens of H.H. The Sultan between the ages of 18-28. They must have worked through Form III and be able to write fluently in the Malay language. The second year intake is expected to start their training during February 1977.

World Wildlife Fund to Support Survey of Pulau Balambangan

The World Wildlife Fund's 1977-78 campaign, The Seas Must Live, will raise funds for a number of marine programs. These include a survey of Pulau Balambangan, Sabah, to provide data to support proposals that this island (important for migratory birds and rich coral reefs) be a national park and to draw up the management plans for it. The cost of the project is estimated at $485.5. This program has been prepared and will be developed in conjunction with the International Union for the Conservation of Nature.

Royal Geographical Society Mulu Expedition

A 15-month expedition to Borneo will be leaving Britain in July 1977. The leader is Robin Hanbury-Tenison, and 40 leading British and Malaysian scientists will be taking part for periods ranging from a month to over a year. It is the R.G.S.'s main expedition for 1977-1978 and is being undertaken with the support and participation of the Sarawak State Government.

The location is to be the recently gazetted Gunong Mulu National Park in Sarawak which contains some of the most remarkable and diverse tropical rainforest in existence. Access to the base camp, 150 miles upriver from the coast, will be by two jet boats to be loaned by the New Zealand manufacturers, Hamilton Marine.

Within the Scientific Programme there will be three main research projects, namely:

1. The Future Management and Development of Gunong Mulu National Park
As a result of these studies, an inventory of the flora and fauna will be produced and in addition specialists will investigate several of the lesser known endemic species. These include the mountain and smooth tailed tree shrews, the maroon and Hose's leaf monkeys, and the Whitehead pigmy squirrel. The scientific results should be of great value both through increasing our understanding of rain forest management and to developing nations in terms of natural resource uses and environmental conservation.

The World Wildlife Fund is making one of their largest grants ever to a scientific study, and Sir Peter Scott, Chairman, and Mr. Harold Coolidge, Hon. President of the I.U.C.N., have strongly supported the expedition. Financial and material help is being provided by many British firms with interests in the Far East, notably Shell, John Swire & Sons, Inchcapes and Harrisons & Crossfield, and a substantial grant from Cluff Oil. A campaign to raise funds for further participation of local scientists is being launched by the Malaysian WWF.

A further £20,000 is still needed to meet the expedition's budget.

Third Inter-Congress of The Pacific Science Association

The first Inter-Congress of the Pacific Science Association was held in Malaysia in 1969 and the second in Guam in 1973. During the thirteenth Congress of the Association which was held in Vancouver, Canada, August 18-30, 1975, it was decided that the third Inter-Congress would be held in Indonesia. It is a great pleasure to announce that the third Inter-Congress will be held in Bali, Indonesia, July 18-22, 1977, sponsored by the Indonesian Institute of Sciences.

The theme selected for the forthcoming Inter-Congress is: "APPROPRIATE TECHNOLOGY."
preserving plant specimens with documentation as to location, community group, local names and uses. To date most collection has been carried out among Bidayuh communities in the First Division and has been done in the course of general field collection of botanical specimens. The botanical section of the Department has drying and mounting facilities, and the ethnobotany collections are being added to the extensive, existing collection of mounted plant specimens maintained by the Department. Mr. Chai plans to publish the results of the project serially in the Sarawak Museum Journal, and the first paper, entitled "Ethnobotany--Part I," has already appeared (Vol. xxiii, No. 44, pp. 37-51).

BENEDICT SANDIN has received an award from the urgent anthropology small grant program, Smithsonian Institution, for completion of a study of Iban rites of curing (pelian) begun while Mr. Sandin was senior fellow at the Universiti Sains Malaysia. The results of this study will be contained in the fourth and final volume of a series of monographs on Iban ethnography by Mr. Sandin to be published under the editorship of Dr. Clifford Sather by the Universiti Sains. The award makes it possible for Mr. Sandin to travel extensively to gather materials in the Second, Third, Fourth, Sixth and Seventh Divisions, Sarawak.

CHIN SEE CHUNG, a graduate student in the Forestry School, Yale University, is studying shifting cultivation and the use of local flora by the Kenyah.

BOOK REVIEWS, ABSTRACTS AND BIBLIOGRAPHY

BOOK REVIEWS

Oral literature originally in song form was collected and translated from August 1971 to September 1974 while the author was in Sarawak. Seven major groups with distinct characteristics are included (Iban, Bidayuh, Melanau, Kelabit, Kayan, Kenyah, Penan). Both English language and indigenous language versions are provided. Preface is by Benedict Sandin, former Curator of Sarawak Museum. Acknowledgments lists assistance rendered by Museum staff and other assistants, informants, and reviewers. Introduction of 33 pages notes 1) background of the project; 2) urgency of the research; 3) preparations for an expedition; 4) noting surroundings while on an expedition; 5) life-cycle structure for each section; 6) word-by-word procedures for deriving precise meanings; 7) production of final version; 8) transcription and collating with translation; 9) interrelationship with other disciplines; 10) possible directions for future research; 11) poet's comment; and 12) brief bibliography.

Each section is introduced by a Notes paper, describing the expedition and detailing influences and derivations. Animal and plant names are also given (indigenous, Malay, and Latin). An introduction to each poem provides specific notation as regards derivation. The place and date of collecting and name of informant is also given.

The collection of poems is comprised of a wide range of utterances originally performed with a rhythmic base and often in an archaic or formalized song-language variation of the indigenous dialect spoken.
in the area. Spells, charms, prayers, chants, songs, lyric and epic, of public and private, religious and secular nature as still found in Sarawak are presented. (Carol Rubenstein)


This book is another unique work produced by the Sarawak Specialist Society—a group of philatelists studying this subject as it applies to British Borneo (Sarawak, Brunei, British North Borneo, and Labuan). Previous publications have dealt with Sarawak by Handbook (1956), Supplement (1972), and Catalogue of the stamps and postal history (1974). Now Mr. Shipman has produced the first volume of an eventual trilogy covering North Borneo from its first postage stamp in 1883 to the pre-pictorial stamp year 1893. Where appropriate the Labuan issues, under North Borneo Company control from 1890, have been included.

This original work covers details of the stamp printings, provisional issues, forgeries and all other philatelic matters relating to the territory over the period with comprehensive coverage of plating, postmarks, postage rates and associated postal history material. The book is a tribute to Mr. Shipman's research into the Public Record archives and his collection of information supplied by his fellow collectors.

When the trilogy is completed, it will form a unique record of this specialized field, and most persons interested in the area—even if they are not stamp collectors—will be sure to find much to interest them. (D.A. Pocock)

BIBLIOGRAPHY


NOTES FROM THE EDITOR (continued from p. 2)

William L. Collier; Dr. Richard C. Fidler and Dr. Ruth Carol Barnes; David Fortier; Philip Goldman; John P. Heiman; A. J. H. Hepburn; Prof. Y. L. Lee; Alastair Morrison; Dr. Carsten and Inge Niemitz; Christine Padock; Mr. A. J. N. Richards; Dr. William M. Schneider; See Chung Chin; Robert O. Tilman; Peter D. Weldon; and William E. Wilder.

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 the social, biological, and medical sciences 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 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 conservation activities, and the practical application of research results. Support for the activities of the Council comes from subscriptions to the Borneo Research Bulletin, Fellowship fees, and contributions. Contributions have played a significant part in the support of the Council, and they are always welcomed.

Fellows of the Borneo Research Council

The privileges of Fellows include: (1) participation in the organization and activities of the Council; (2) right to form committees of Fellows to deal with special research problems or interests; (3) support of the Council's program of furthering research in the social, biological, and medical sciences in Borneo; (4) subscription to the Borneo Research Bulletin.

The Fellows of the Council serve as a pool of knowledge and expertise on Borneo matters which may be drawn upon to deal with specific problems both in the field of research and in the practical application of scientific knowledge.

Fellowship in the Council is by invitation, and enquiries are welcomed in this regard.

INFORMATION FOR AUTHORS

Research Notes: These should be concerned with a summary of research on a particular subject or geographical area; the results of recent research; a review of the literature; analyses of state of research; and so forth. Research Notes differ from other contributions in that the material covered should be based on original research or the use of judgement, experience, and personal knowledge on the part of the author in the preparation of the material so that an original conclusion is reached.

Brief Communications: These differ from the foregoing in that no original conclusions are drawn nor any data
included based on original research. They also differ in consisting primarily of a statement of research intentions or a summary of news, either derived from private sources or summarized from items appearing in other places that may not be readily accessible to the readers of the Bulletin but which have an interest and relevance for them. They will be included with the contributor's name in parentheses following the item to indicate the source. Summaries of news longer than one or two paragraphs will appear with the contributor's name under the title and prefaced by "From."

Bibliographic Section: A bibliography of recent publications will appear in each issue of the Bulletin, and, consequently, reprints or other notices of recent publications would be gratefully received by the Editor.

Other Items: Personal news, brief summaries of research activities, recent publications, and other brief items will appear without the source specifically indicated. The Editor urges those contributing such news items to send them in the form and style in which the contributor wishes them to appear rather than leaving this to the discretion of the Editor.

All contributions should be sent to the Editor, Borneo Research Bulletin, c/o Department of Anthropology, College of William and Mary, Williamsburg, Virginia, 23185, U.S.A.

STYLE FOR CONTRIBUTIONS

Please submit all contributions double-spaced. Research Notes and Brief Communications should be limited to approximately eight double-spaced pages. Footnotes are to be avoided wherever possible. Bibliographies should be listed alphabetically by author at the end of contributions; author should appear on a separate line, then date, title of article, journal, volume, number, and pages. For books include place of publication and finally publisher. References in the body of contributions should be cited by author's last name, date, and page numbers as follows: (Smith 1950:36-41). For punctuation and capitalization, refer to Bibliographic Section.

Names mentioned in the News Section and other uncredited contributions will be capitalized and underlined.