

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.

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NOTES FROM THE EDITOR

We begin this issue with "Obituaries and Memorial Statements" for Tom Harrisson and Bruce Sandilands, whose deaths were announced in the last issue of the Bulletin. It is appropriate that we give primacy to these two men who contributed much to our knowledge of Borneo.

We are grateful to those persons who have contributed statements about Tom and Bruce. Another memorial statement by Wilhelm G. Solheim II on Tom's work in archaeology will appear in the next issue.

Our gratitude to the following persons who have made financial contributions for support of the Bulletin: George N. Appell, Robert Austin, Richard W. Beales, J. Golson, Han Sin-Fong, and Ida Nicolaisen.

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
(continued p. 129)

OBITUARIES AND MEMORIAL STATEMENTS*

TOM HARRISSON

Benedict Sandin

Datok Seri Lela Tom Harrisson, D.S.O., O.B.E., the late Government Ethnologist and Curator of Sarawak Museum, was a famous British Explorer, Conservationist and Anthropologist. His untimely death in a road accident near Bangkok in Thailand shocked all his friends and colleagues round the world, particularly in Sarawak, Britain and the United States, where he had worked for many years.

Datok Harrisson first came to Borneo as a leader of the Oxford Expedition in 1936, exactly forty years ago, while still a young man. He was later the first white man to parachute into Sarawak at the end of the Second World War in 1945.

At the end of the war, Datok Harrisson was offered the post of Government Ethnologist and Curator of Sarawak Museum. At this time the Sarawak Museum was still a small institution, which published only a small irregular yearly journal, where the prewar Curator published the results of his research. Tom enlarged the publication, and by the 1960s he published over four hundred pages of scholarly papers.

From the beginning of his attachment as Curator, Tom worked very hard to renovate the museum building and to rearrange the exhibition displays. Sarawak was extremely lucky that very few of the museum collections were lost during the war years. During these early years, Tom and his small staff worked tirelessly to accumulate specimens and artifacts to replace and expand the old collections. In the early 1950s the museum had already collected and purchased a considerable number of new specimens including the botanical and natural history specimens collected in all divisions and districts in Sarawak.

In order not to cramp the old building with exhibits, a new office building was built nearby for the staff, library, archives and workshop in 1953-54, which also housed a large number of ceramics, archaeological finds, skins of birds, animals, and arts and crafts collected

* A selected bibliography of Tom Harrisson's writings appears at the end of this issue.

during the years. Behind this building a small zoo was maintained where captured animals, birds, snakes and turtles were reared for experiment.

Datok Harrisson loved Sarawak and its people dearly. During his tenure of office at the Sarawak Museum, he devoted himself to the study of the Punan, Kayan, Penan, Kenyah and Kelabit of Ulu Baram, Limbang and Rajang. He did very little work on the Iban, Bidayuh (Land Dayak), Melanau and people of other races along the coast, except the Malays near Kuching and along the Santubong Delta. Above all he endeared himself to the Kelabit people in Bario, where he was given magistrate power to deal with native disputes.

Tom made a major contribution to archaeological research in Sarawak, Brunei and Sabah. He unearthed many historical and invaluable specimens and artifacts whose complete history was yet to be written at the time of his death.

Now that Tom is gone, all his friends in Sarawak and around the world would welcome the publication of the results of his archaeological work at Niah Caves which he did for more than a decade, and which represent not only a major investment in time and funds, but are of very considerable scientific importance to our knowledge of the prehistory of Sarawak and all of Southeast Asia.

Datok Harrisson was a great man. Everyone who knew him, and anyone who ever studied Borneo, will be saddened by his tragic death.

The people of Sarawak thank Tom with gratitude, for without his foresight and energy, the State might not have one of the best museums in Southeast Asia as it is today.

David W. McCredie

Tom Harrisson's untimely death in a road accident in Thailand in January 1976 was indeed sad news to those who had known and worked with him. Borneo and Southeast Asia will miss his momentous contribution to their literature. Formerly Curator of the Sarawak Museum, he visited Sabah many times gathering material to add to the very great amount already gathered in Sarawak and Brunei. We, in the Sabah Society, were fortunate to have the fruits of his vast endeavours in the "Prehistory of Sabah" co-authored with Barbara Harrisson. This our first and only (to date) monograph laid the basis for archaeological research in the State, and at the same time gave abundant facts and stories not known by the general public.

This abundance is indeed a true word to use of his rather journalistic, may we say, inimicable style of writing? In this journal, as well as many others more august, there were contributions on anthropology, archaeology, natural history, and a wealth of other subjects. One only has, as a student of Borneo, to look at any bibliography to find the name *Harrisson, T.* not once but manyfold times. A cantankerous and *kenspeckle* character of Kuching and Kelabit country, he certainly will have no equal for all his fundamental works in the museum and literary world. The Society hopes that much of this will be carried on by Dr. Barbara Harrisson.

Lucas Chin, Curator
Sarawak Museum

Tom Harrisson and the Green Turtles of Sarawak

Tom Harrisson took a great interest in marine turtles, and devoted much time to the study and conservation of these reptiles during his twenty years (from 1947 to 1967) of service in Sarawak. Initially, little was known about the biology, ecology, and ethology of these great marine reptiles. Starting in the early 1950s, Tom Harrisson carried out a series of observations and experiments on the breeding, hatching, and tagging of these turtles, which will be briefly summarized below. The success of his work attracted international interest and stimulated other marine biologists to adopt similar methods in other parts of the world.

The Turtle Islands

The three "Turtle Islands" of Sarawak are Talang Talang Besar and Talang Talang Kecil, lying off the mouth of the Sematan River between Lundu and Cape Datu, and Satang, lying off the Santubong entrance of the Sarawak River. They are almost exclusively frequented by the Green Turtle (*Chelonia mydas*), though a few Hawksbills (*Eretmochelys imbricata*) come ashore in the early months of each year.

These islands served as a resort for pirates before James Brooke established his government in Sarawak in 1841. Until World War I, the collection of turtle eggs on these three islands was the monopoly of a few leading Malays. But the industry was unsatisfactorily run, and as a result the Rajah (Charles Vyner Brooke) felt obliged to take over the control, vesting sole authority in the Curator of the Sarawak Museum in 1941. The Curator, then E. Banks, initiated a long-term conservation program. But this was interrupted by the Japanese Occupation of the country during World War II.

When Tom Harrisson took over as Curator in 1947, the situation was chaotic and the conditions of the turtles deplorable. The Japanese had built an airstrip opposite Pulau Satang at Sibulaut, and frequently used Talang Talang Kecil as a bombing practice target. They also killed and ate many turtles - something hitherto unknown in Sarawak waters.

Tom soon had to face another set-back. Under the Colonial Service system, one-man rule was unacceptable. It was felt that too much power was vested in the Curator. A reform was initiated, by which the Financial Secretary and then a "Turtles Board" eventually assumed authority. The Curator became the Executive Officer of the Turtles Board, with no voting right. However, despite these bureaucratic formalities, Tom was able to initiate tests and experiments on the turtles.

Breeding

Tom began by investigating the turtles' breeding season. Statistics collected on the three islands indicated that the Green Turtles laid throughout the year despite the very stormy sea conditions during the monsoon between November and April, as shown by 1950 collections (which totalled 2,357,674 eggs):

<u>Month</u>	<u>Talang Talang Besar</u>	<u>Talang Talang Kecil</u>	<u>Satang</u>
January	10,748	11,026	2,490
February	11,634	12,256	2,315
March	18,290	21,464	3,044
April	39,645	30,862	4,740
May	94,601	67,477	9,432
June	182,099	108,604	24,830
July	293,912	150,844	50,435
August	277,294	159,144	67,280
September	184,608	129,068	56,950
October	83,399	75,859	34,970
November	35,743	38,538	15,841
December	17,908	20,427	9,897
Total	1,249,881	825,569	282,224

Copulation, however, was apparently more frequent in the non-monsoon months. Males rode high out of the water above the back of the females in a "clumsy" manner. The mounting lasts from a brief period of a minute to as long as one hour. Copulation occurred close to the breeding beaches and took place after the female had just laid her eggs.

Hatching and Rearing

Tom Harrisson first attempted to rear hatchling turtles in a floating tank. The idea was to rear baby turtles until they were tough enough to resist attack by predatory fish and sea-birds. A wire case four-and-a-half feet by two-and-three-quarters feet was securely anchored and floated in the most sheltered water off Talang Talang Besar, in about three fathoms.

The baby turtles survived for four days in the cage; but on the fifth day seven died, evidently owing to the constant up and down motion within the enclosed space, consequent upon the big tide fall and strong current common to this coastline. And on the following day the whole cage was smashed to pieces by a shark.

Observations were then made on young turtles kept in captivity in concrete vats, on land, from the moment of hatching for as long as three months. It was observed that the newly hatched turtles had a powerful orientation toward light and away from land, but no initial urge to feed. The young turtles could live for some days on

their reserves of yolk material, and subsequently could subsist on a diet of fish and prawns without any vegetable matter. It was also discovered that marine turtles would grow for a while in fresh water, but eventually succumbed to a "fungus disease" on the eyes. Experiments also proved that pure sea-water was the best medicine for young turtles. Artificially mixed substitutes did not suffice, and fresh-water led to high mortality at an early stage.

Artificial Incubation of Turtle Eggs

On the three islands where the Green Turtle breeds the beaches are small and exposed. Over an acre of beach as many as 100 female turtles (in the early 1950s) might stagger, crawl, trample and dig to lay eggs within one night. In the process they re-excavated clutches left by other turtles, with fatal results. Furthermore, in rough weather the sea swept the beaches and washed out or killed the eggs.

As early as 1951 under the direction of Tom, Lo Suan Hian (who was then an administrator in the Sarawak Civil Service) began a series of experiments on turtle hatching. Mr. Lo first put turtle eggs under a broody hen, which promptly pecked and broke them. In his next experiment he put the eggs to hatch in a discarded refrigerator inner enamel shell which was exposed to the sun during the day and covered up at night and during rainy periods. After some 60 days nothing happened, and all the eggs were found to have shriveled. A friend then suggested a kerosene-fueled chicken incubator thermostatically controlled, but alas the turtle eggs were roasted.

Observations were then made to test the temperature range and the water content in the sand at the island beaches, and an incubator designed to match these conditions. The first batch of eggs after 70 days showed no sign of life, were dug out and found to be dehydrated. Two similar experiments were conducted but were no more successful. It was then suspected that the eggs might have been damaged during the process of digging them from the nest. When more care was then paid, ten percent of the eggs put in the incubator hatched in the fourth experiment. Later experiments improved the percentage of hatching.

The system adopted for conservation purposes involved the collection and replanting of a proportion of the eggs each season. These eggs were buried within a protective fence, and allowed to hatch under natural conditions. Since the young are bouyant (with unabsorbed yolk) for the first few weeks of life, Tom decided that each batch should be kept in tanks, suitably fed, until they were able to dive. They were then released at sea.

Inspired by F.W. Moorhouse's experiments carried out in Australia in the late 1930s and early 1940s, Tom had at an early stage initiated a program of tagging, which he hoped would establish a basis for a census of the breeding population. Several methods of marking had already then been tried elsewhere. These included branding the shell, wiring, drilling identification holes on the edge of the carapace in set patterns, decorating various parts of the body with special paints, etc. Tom, however, had to take into consideration that his procedures must be in accord with the strong sentimental and semi-religious feeling for these reptiles held by Sarawak people.

After several abortive attempts with various shapes and sorts of metal markers, attached at various points, a clip-in, long, over-folded tag was approved and tried, in cooperation with Dr. John Hendrickson of the then University of Malaya (now University of Singapore), who made several visits to the islands. After some initial difficulties, this clip and the powerful pliers to apply it were perfected. Series of these tags, suitably coded, made of hardened monel metal, were then ordered from the U.S.A. These tags were attached to the rear edge of the forward flipper of the turtles while they were laying, and were effectively operated for the first time in 1953.

Up to 1955, 4,000 adult female turtles were thus tagged. But during these first three years, not a single tagged female returned to the islands from one season to the next. This caused some anxieties, and the tagging operation was suspended. At last, on May 16th, 1956, the first return took place on Talang Talang Kecil, much to Tom's relief and gratification. More tagged turtles soon returned to the islands and laid. By June 1959, reports were received that turtles tagged in the Sarawak islands had been found in North Borneo (now Sabah) some 500 miles away, and in some Indonesian islands.

Results of tagging thus proved that the Green Turtles, after laying in one season, would not return to the same islands to lay again until three or more years later. In the interim, tagging had also shown that individual females frequently laid more than once during a season at the Sarawak beaches. Consequently, the number of clutches of eggs in any year must considerably exceed the number of laying females. Population estimates based on nesting data were, therefore, liable to gross exaggeration.

Declining Numbers

In 1961, although more than a million eggs were collected in the course of the year, analysis of the long-term figures available (back to 1927) prompted Tom to utter preliminary warnings of an accelerating downward trend in egg harvests. In the next few years, this trend rapidly became more acute. For the quinquennium 1961-65, the average combined annual egg yield of the three islands fell drastically to 442,817; over comparable past periods, this figure had always exceeded one million.

In 1966, the egg collection plummeted further, to a mere 99,307. The Turtle Board faced a deficit of \$20,000, and was clearly unable to continue in its existing state. As a final valedictory to Sarawak turtles, in 1967, the first year of his retirement, Tom prepared a report on the past and present situation, inevitably recommending that the employed staff of the Turtle Board should be reduced, and the scope of its activities curtailed. Action was taken on these lines, and under arrangements which broadly follow his proposals, the Board continues to operate from an office in the Sarawak Museum. Egg collections have recovered since the 1966 disaster, but continue to show a downward trend. There is some evidence that Green Turtles are increasingly coming ashore to lay on the mainland near Sematan; it is not known whether these have originated from the islands.

On the Turtle Islands, the conservation procedures established by Tom continue to be observed. Each season, a proportion of eggs is set aside to be hatched under protected conditions, and hatchlings are ultimately released. Young turtles are now liberated soon after hatching, without a rearing period. In 1973, The Fauna Preservation Society provided a grant to support an

intensified hatching program, and the Turtle Board of Management at a meeting in 1976 resolved to improve its conservation program in the next five years, 1976 to 1980.

<u>Year</u>	<u>Eggs Laid</u>	<u>Eggs Replanted</u>	<u>Percentage Hatched</u>
1967	478,622	1,203	96
1968	200,731	707	65
1969	516,581	2,252	70
1970	269,151	2,227	70
1971	194,289	180	80
1972	265,525	992	80
1973	323,734	8,533	80
1974	207,695	1,191	80
1975	203,140	991	80

Lord Medway

Tom Harrisson the Ornithologist, and Bornean Ornithology

All his life Tom Harrisson was attracted by birds. He had the good bird-watcher's flair for identifying a flicker of feathers scarcely glimpsed, and the natural ornithologist's discernment of the rarity, unusual behavior or other significant detail. As a young man he was closely involved in early censuses and population studies of British birds. In Borneo, as collector, curator, and administrator, he was a decisive agent in events leading up to the publication of B.E. Smythies' Birds of Borneo - perhaps the best single-volume bird-book for any part of the Malaysian/Indonesian region - and also himself produced notes on a wide variety of ornithological topics.

As a schoolboy he was already a keen bird-watcher, and also showed his talent for organizing cooperative research. During 1925-30, with the help of his brother W.R.D. Harrisson and friends, he accumulated observations on the status and distribution of birds in the Harrow district, published in the London Naturalist (1930). In 1928 he assisted in the British Birds national census of heronries. In 1930 (although not a member of that university) he took part in the Oxford University Exploration Club's expedition to Arctic Lapland, where he studied birds. In 1931 his first letter to Nature, London, was published, on the altitude

of bird migration. In the same year he organized, with P.A.D. Hollom, the national Great Crested Grebe survey and also participated in an ornithological survey of the Scottish island of St. Kilda. Shortly afterwards, between further expeditions, with H.G. Hurrell he carried out an investigation of the Great Black-backed Gull in England and Wales, published in 1933. Summarizing this intense activity, E.M. Nicholson (in *This* vol. 118, no. 4) has written: "If it is accepted that the decade between 1926 and 1936 was that in which British ornithology received its modern shape and gained its greatly accelerated impetus, Tom Harrisson's imagination, demonic energy, immense powers of organization and his many other gifts must always be entitled to a significant share of the credit."

In 1932, with a further Oxford Exploration Club expedition, Tom Harrisson made his first visit to Sarawak. Although in the field his activities and interests ranged widely, he concentrated his zoological effort on the birds. About 1,000 skins were collected, and in a joint paper with C.H. Hartley ten new subspecies were described. Not all of these have withstood the scrutiny of taxonomists, but two of their names are still recognized as valid.

On the third of his Oxford expeditions, this time to the New Hebrides (1933-34), he collaborated with J.R. Baker (the expedition's leader) and A.J. Marshall in the historic first intensive survey of the breeding cycles of birds in the humid tropical environment, and in exploration and collecting which led to the discovery of, among other things, an undescribed species of starling confined to the inhospitable rain-drenched mountain peaks of the interior of Espiritu Santo island.

On his wartime return to Sarawak and in the first years of his appointment as Government Ethnologist and Curator, he spent much time among the Kelabit people of interior northeastern Sarawak. His essay, "Birds and Men in Borneo" (Chapter 4 in *Birds of Borneo*), presented many ethno-ornithological observations of this period, including an account of the Kelabit bird calendar (also recounted in *World Within*). During this period (1945-51) he also obtained over 2,000 bird skins. This collection was sent to the American Museum of Natural History, for study by Dean Amadon; half was later returned to the Sarawak Museum. Dr. Amadon's taxonomic report amounted

to some 150 typescript pages. The description of one new subspecies of bulbul appeared under joint authorship, and the work was drawn on in part for other publications; but regrettably the plan to incorporate it with field notes by Tom Harrisson in a monograph of Kelabit was not in the end possible.

A larger and more significant collection of skins was made in the early 1950s. This arose through the interest and support of the amateur ornithologist and bird photographer, Loke Wan Tho. In January 1950 Loke Wan Tho, wishing to obtain a collection of Bornean birds for the Peabody Museum, Yale, wrote to Tom Harrisson suggesting a cooperative venture. It is clear from copies of correspondence kindly made available by the Executors of the estate of Loke Wan Tho (deceased) that the proposal met an immediate response. Ideas were exchanged during the year, and by the start of 1951 a working basis was agreed; a funding account was opened in the names of H.T. Rigden and Tom Harrisson; a .410/.22 combination was to be purchased in Singapore, along with varied ammunition, and an air-conditioned store was to be installed in Kuching; James Bangga was appointed senior collector, to train and supervise a network of other men who would cover all Sarawak; all specimens were to bear a special label identifying them as the "Loke Wan Tho/Tom Harrisson collection;" in any published result the general indebtedness of the project to Loke was to be clearly indicated; ultimately, the collection was to be divided equally between the Sarawak Museum and any repository named by Loke (T.H. to L.W.T., 9 February 1951).

Under these arrangements, Loke Wan Tho provided \$5,000 annually from January 1951 to the end of 1954. At the close of the first half-year, one collector (Jomel bin Bogol) was working at Santubong and another (R. Nyandoh anak Kadir) in the Land Dayak districts; Michael Buma at Betong, Sebom Ujang at Sibul, Nawang at Long Akah, and Lian Labang in the Kelabit country were trained and installed in their home areas, and two men were about to be recruited from the S. Trusan; Tom Harrisson himself had taken two Kelabit youths to the Usun Apau, where nearly 100 skins had been collected (T.H. to L.W.T., 16 July 1951). By the end of 1951, ten men were at work outstation, and two in training; 1,700 skins had been received in Kuching (T.H. to L.W.T., 11 January 1952). In 1952 Tom Harrisson took a Museum party to Kinabalu, but with this exception collecting was confined to Sarawak. At the close of the project over 7,300 specimens had been obtained, and those

representing the commoner 100 species were sorted and divided early in 1957 (T.H. to L.W.T., 10 February 1957). The Peabody Museum received a consignment of 3,319 skins in May of that year; a later shipment in the spring of 1960 added 1,034 skins.

Meanwhile, encouraged by the interest of Sir Anthony Abell, then Governor of Sarawak, and of Loke Wan Tho (who ultimately financed the color plates), Tom Harrisson had urged B.E. Smythies to begin work on a handbook of Bornean birds (T.H. to L.W.T., 28 September 1954, 5 November 1954). In 1956, Smythies was attached to the Sarawak Museum for three months to name and catalogue the collection. All records of significance were included in his checklist of the birds of Borneo (1957). This document was the first step toward the book, Birds of Borneo, ultimately published in 1960. In this, the species accounts included much field information obtained in part from Tom Harrisson's specimen labels ("I like large labels as I like to write on plenty of field data;" T.H. to L.W.T., 9 February 1951) and also, as Smythies explained in his acknowledgments, "by the simple expedient of passing over to him for criticism the first draft of this book; he found so much that was either outrageous, or irritating, or plain inadequate, that he was goaded into a fury of constructive comment. Thus the book, however inadequate it may be, is a much fuller and more accurate account of the birds of Borneo than I could have written without his help."

Although it may be true, as Smythies also wrote (and was not contradicted), that Tom Harrisson "found life too interesting to accept the discipline of writing long bird papers," ornithological literature is nevertheless punctuated by a mass of his short notes. The preoccupations of archaeological excavation, ethnological research or plain administrative tasks were never great enough to prevent him watching birds. Often, when apparently wholly concentrated on other work, he would in fact simultaneously have in hand some ornithological project, and would intermittently desert his main activity to watch keenly the behavior of the bird or birds in question. For instance, as Executive Officer of the Turtle Board, he regularly visited the Sarawak Turtle Islands - and wrote about the sea-birds, land-birds or migrants encountered. As Curator, he was technically in control of harvesting schedules in the birds' nest caves, and was naturally fascinated by their denizens; he published notes on edible nests, swiftlet breeding seasons, echolocation and cave guano.

From his writing-table in Kuching he researched the birds of his garden and the urban environment. At work at Niah, he noted the birds that frequented the cave mouth. Characteristically, during Confrontation, when his duties entailed regular flights by helicopter, he produced two papers on the birds seen above the forest canopy. Finally, after retiring from Kuching, on periodic visits to Brunei he compiled a series of notes on birds seen from the Rest House verandah, in particular documenting the progressive spread of the Tree Sparrow at this spearhead of its invasion of Borneo.

I am grateful for assistance given in the preparation of this note by Dr. Dean Amadon, Dr. S. Dillon Ripley, and Mr. B.E. Smythies.

D.A. Hooijer
Rijksmuseum van Natuurlijke Historie, Leiden

Some Paleontological Results from Excavations
at Niah Caves, Sarawak

The excavations in Niah Caves, Sarawak, by Tom and Barbara Harrisson, have brought to light an enormous collection of vertebrate remains, reported on in various issues of the Sarawak Museum Journal. Since the original, full reports are easily available, no more than a summary of results is presented here, in memory of the Harrissons who were such friends of mine, on the interesting material they entrusted to me for study and report. I am indebted to Lord Medway for valuable comments on the first draft of the present paper.

The most important element to the Niah Caves fauna that I have had the privilege to study, at levels C14 dates at 40,000 years B.C., undoubtedly is the extinct giant pangolin, *Manis palaeojavanica* Dubois, originally described by Dubois from Middle Pleistocene deposits in Java. The Niah bones, a metapodial and two phalanges (Harrisson, Hooijer and Medway 1961; Hooijer 1961a) indicated the presence in the deeper strata at Niah of this very rare species the type skeleton of which, from Kedung Brubus in Java, indicated a length from head to tail of 2.5 m, against only about 1 m in the living Java pangolin, *Manis javanica* Desmarest. A metapodial from another Middle Pleistocene site in Java, Gunung Butak, is 0.7 the

length of its homologue in the type skeleton (Hooijer 1974). The Niah bones are 0.8 times the length of their homologues in the type skeleton from Kedung Brubus, and thus the Niah *Manis palaeojavanica* is clearly within the range of variation in size of the Javan Middle Pleistocene population, and presumably indistinguishable from it.

In my work on Pleistocene and prehistoric mammals from Southeast Asia, I usually find microevolution in situ with diminution in size, which means that when we trace the history of the various forms back in time in their own area, the teeth or bones are larger the older the deposits they are from (e.g., Hooijer 1949). The orang-utan teeth from cave deposits in Central Sumatra proved to be sixteen per cent more robust, on an average, than their homologues in the living Sumatran orang-utan, with primitive characters such as relatively larger canines and anterior premolars (Hooijer 1948). In this collection from Sumatra, comprising well over 3,000 specimens, the teeth that can be sexed show that the females balance the males in numbers, and that there are surprisingly few milk teeth, only 43, or 1.4 ± 0.2 per cent of the total. In the collection of orang-utan teeth from Niah Caves, likewise, the larger teeth are mostly from the deep levels, but there is an interesting difference in the sex ratio: the females at Niah are more numerous than the males, more than twice as many female as male canines having been found in the sample examined by me. Further, the milk teeth make up 14.4 ± 3.3 per cent of the total number of teeth (Hooijer 1961b), a percentage that is significantly higher than that found for the milk teeth of the orang-utan in the Sumatran caves. This disparity may be explained thus that the Sumatran caves were uninhabited by man, the remains representing a "natural" accumulation, whereas the Niah Caves remains are from animals used for human food. The early hunters frequenting these caves must have killed more female than male orang-utans, and a good many babies besides. This is an interesting parallel to what we see today: females carrying babies are still preferred targets.

The percentage of milk teeth in the collection from the Sumatran caves is the same as that found for the Pleistocene orang-utans from limestone caves in southern China, ca. 1.3 per cent (ca. 20 milk teeth against ca. 1,500 permanent teeth: Von Koenigswald 1974). Robinson (1956) found a percentage of 17.4 for milk teeth of *Australopithecus*, and of 13.9 for *Paranthropus*

from South African cave sites. Now, from these data, Von Koenigswald inferred that in the orang-utan the young have a greater survival chance than in the australopithecines. However, the data on the Niah Caves orang-utan, which Von Koenigswald left out of consideration, demolish this statement: the percentage of milk teeth in the Niah Caves orang-utan tooth collection examined (14.4) is as high as that in the collections of *Australopithecus* and *Paranthropus* described by Robinson (1956). In the teeth of this evidence, it is certainly incorrect to venture the conclusion that australopithecine babies have a lesser survival chance when the mothers are lost to them than orang-utan babies, or that baby and child care, dependence on the mother for survival rather than early fossilization were significantly different in the early hominids from that in the apes. In my opinion, as stated before (Hooijer 1962: 487), it all depends on whether the cave collection was formed under "natural" conditions, without human or other predator interference (the Sumatran and Pleistocene Chinese orang-utans), or the teeth being the food debris of predators (the Niah Caves orang-utan and the australopithecines). A different agency responsible for accumulation of teeth in caves is the answer in my opinion, and no sweeping conclusions based on incomplete evidence such as advanced by Von Koenigswald are warranted.

Gibbons (genus *Hylobates*) are scarce in Niah Caves, only a few mandibular portions of unknown sex having been reported upon (Hooijer 1963). These remains are indistinguishable from the recent gibbon of Borneo, *Hylobates muelleri* Martin.

Of the langurs, or leaf monkeys, there are both *Presbytis* and *Trachypithecus* in Niah Caves, the former being more commonly represented than the latter, in the sample that I studied (Hooijer 1963). This material carries the suggestion that the cave teeth are larger, on an average, than their homologues in the living forms of these genera in Borneo, and in this they only conform to the general rule. No specific identification of *Presbytis* has been attempted: *Presbytis* spec., but the *Trachypithecus* specimens from Niah may safely be attributed to the silvered leaf monkey, *T. cristatus* (Raffles), which does not occur today in the immediate surroundings of Niah (Medway 1959). The most abundantly represented monkey at Niah Caves is the longtail macaque,

Macaca fascicularis (Raffles), a species that, as Medway (l.c.) noted, freely enters the caves when man is absent. The pigtail macaque, *Macaca nemestrina* (L.), is very rarely found at Niah, remains of only six individuals having been reported (Hooijer 1963) against at least seventy of *M. fascicularis*.

Since, as already said above, all or most of the Niah Caves remains represent animals brought in for food by man, it is not feasible to draw any conclusions as to the relative abundance in the cave area of the various species at the time of deposition of the remains. Man is a selective hunter when food animals are abundant. As to Niah Caves man, the remains studied by Brothwell (1961) point to *Homo sapiens* L. They derive from the oldest Niah Caves deposits, dated at 40,000 years, thereby being among the earliest records of our species in the world (Pilbeam 1972).

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Tom Harrisson and the Literature of Place

When he was a schoolboy, Tom Harrisson helped found a club to encourage other boys to take "more enterprising holidays and find out about other sorts of people" (1959: 155). With surprising consistency - for anyone as various as Tom - he remained faithful to his boyhood enthusiasm until it all suddenly ended at night in a tour bus in Thailand. In between there was continual journeying and a profusion of landscapes, races, and strategies for making sense of the world. His delight in adventure, his readiness to be amazed, to celebrate the sheer plenitude of existence, never dimmed; it is present like a line of force in all that he ever wrote.

Tom Harrisson was many things - explorer, anthropologist, archaeologist, naturalist, soldier, museum director - but he was never ever merely subsumed in any of these categories in the sense of having "a career." He worked prodigiously, exuberantly, at whatever he was doing, and although he advanced knowledge in an extraordinary array of disciplines, his approach to any of them seemed always to exhibit the breadth of interest and enthusiasm that distinguishes cultivated and humane literacy from the more disabling aspects of specialization. He resisted with sturdy independence both the division of intellectual labor and the disconnection of thought from action.

The seamlessness of Tom's interests is everywhere visible in his encyclopedia of Malay life in the Sarawak river delta (1970). Everything, sketched in its sharp particularity, flows into everything else - children's games, the price of turtle eggs, the caulking of boats, recipes for preparing tapioca, the methods of rubber-tapping, weather, tides - and almost nothing is left out. It is something of a delta itself built up the way a landscape painter builds an equivalence parallel to nature by repeated touches, bringing it all along together, strengthening here, adding there, everything moving - light, stars, birds, houses. For over two

decades he immersed himself in the delta life, living two or three months of the year in Santubong village, much as he had lived in Lancashire in the 1930s to get the feel of the lives of English industrial workers. But, while recording the daily round of Santubong, Tom was also intermittently digging up its buried past so that his sociology slid into archaeology and the contemporary interpenetrated the prehistoric.

When I first worked with Tom Harrisson in 1966 in the delta, I was astonished at the scope and complexity of his various projects and responsibilities. While excavating there, he was also in touch with the archaeological program at Niah Caves, then under the capable daily leadership of Barbara Harrisson, he directed the Museum staff by telephone link and weekly personal visits, edited the Sarawak Museum Journal, did a variety of radio interviews, maintained an incredible diversity of correspondence and publication on animal preservation, ceramic studies, anthropology and much, much more. He was usually in motion somewhere in that fluid and open world of mud flats, river and swamp, mostly by boat, perched on the cabin wearing a strange leather cap and scanning the horizon with a pair of field glasses for birds, monkeys, or whatever else presented itself.

On one of those trips Tom insisted that we go ashore at a charcoal burner's post several miles above Santubong. By then it was evident that charcoal was the fuel for the ancient iron hearths at Santubong, and it was typical of his approach to recovering archaeological material that he should interpolate it into the lived world of the present. As we stood in the cool domed oven in a clearing on the river bank, Tom's conversation turned through the growth pattern of mangrove trees, the price of charcoal, the movements and values of Malay wood gatherers, the pig and coconut raising of the Chinese owners, the fragrance of food cooking over charcoal in Kuching, the use of palm fronds for sails over the firewood boats. And, then shifting slightly but without perceptible break, back down into the deep trenches where the charcoal mixed with iron slags and Chinese stoneware sherds from the Sung dynasty. It was rather like taking up residence in the shifting, transparent planes and interpenetrating space of a cubist painting.

When he came to Cornell in 1967, after his retirement as Curator of the Sarawak Museum, he moved, roamed

really, across the boundaries of the three categories - physical science, social science and humanities - into which all learning is now considered to be divided, and in all of which he had published distinguished original studies. It was not uncommon for him to speak in the evening about birds in the Laboratory of Ornithology after an afternoon discussion with students about ceramics, or, say, the recovery and interpretation of oral traditions. All this polymathic learning is of course well known and is, anyway, immediately evident from even a small sample of his scientific papers and books. But what is most worth recalling is that his mind was not just stocked with discrete bits of knowledge that encountered each other in solid separateness but that things mingled, were promiscuously present to each other. One problem, idea, fact, exerted pressure, resonance on another so that his writing was always richly complex, crowded, qualified, accented, sometimes convolute, or, as he might have added in his self-ironic way, just occasionally rococo.

The expansive pressure of his energies was present in the driving sweep, the tumult and kinetic tension of his speech, and, of course, it carried directly into his writing. He was incapable of that purgation of individual voice, the prim recessiveness that frequently characterizes "academic" discourse. Tom was engaged and present all along the page, but this should not be confused, however, with either subjectivity of judgment or the mere exhibition of personality. Those who have watched him study, or, better, confront, some phenomena would be struck by his capacity to bracket out all prior assumptions and personal predispositions, so that whatever came under his regard could announce itself in its full integrity. Paradoxically, Tom, whose sheer overflow of presence inscribed itself in speech and movement, was capable of the most radical self-abandonment in investigating whatever engaged his attention.

One of the last things he wrote (1975) was an introduction and commentary on photographs of Blackpool taken by Humphrey Spender in the late 1930s. This was part of the Mass Observation Archives on which Tom had been working at the University of Sussex since 1970. He comments on the importance of the photographs as social documentation of the thirties and then suddenly refers to "...two kids huddled pissing on the waste ground,

the graffiti on the wall, the two women behind the tombstone...": poetry erupting from the daily, sticky, wayward, disorder of the world's abundance.

It is always present, constantly flashing to the surface in the thousands of sheets of paper that Tom Harrisson filled with birds, caves, pubs, turtles, people. He translated life into words as he lived it with warmth, humor and a watchful attentiveness to what is most marvelous in the common stuff of experience. He wrote constantly, easily. He rarely aimed at the closed, the final and definitive in his discrete works. But, if all his writing were laid out end to end, it would look, I think, like a great reef of living language. Seen in this perspective, it might reveal that the project of his life, now closed and definitive, was to build a portrait of the world, making visible the totality of its relationships, the most ambitious aim both of science and the literature of travel.

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TOM HARRISSON AND THE PHILIPPINES

Early in 1958 an international conference was held in Bangkok called the SEATO Round Table. Its topic: the impact of modern technology upon certain aspects of Asian culture. It was on that occasion that I first met Tom Harrisson. He was a full member of the conference, and I a mere observer invited to attend as a guest of the United Kingdom; but on the eve of my departure from Manila, the British Ambassador to the Philippines, Sir George Clutton, said to me: "You will meet a man in Bangkok named Harrisson. I have given him a card of introduction to you."

Harrisson proved to be a burly, short-tempered, solidly-built man who stood for no nonsense and who liked to call a spade a spade. Like some other members of the Round Table, he had little patience for some of the fuzzy thinking that was aired at the conference. He demanded precise facts. On one occasion during a discussion he sent a note to me (I was sitting in the fringes among the observers) asking: "Do you recall the date when Ricci and the other Jesuits first went to China?"

Later when the whole group went by air to Cambodia to visit Angkor, we managed to sit together in the plane. It was during that flight that he asked me if I would like to visit Borneo.

In due course an official invitation came to visit Borneo as a guest of the Sarawak Museum. At my request the invitation was expanded to include a companion, Father Francisco Araneta (at the time my colleague, later my boss). We arrived in Kuching and were treated with great kindness by Tom and Barbara Harrisson. With perceptive consideration they arranged lodgings for us at the Catholic Mission conducted by the Dutch and British missionaries of the Mill Hill Congregation, who received us with a warm welcome. For the rest of the visit, wherever we went in Sarawak, Brunei and North Borneo (Sabah), wherever possible we were put up by the Mill Hill Fathers, except in Brunei Town (and briefly in Labuan) where we stayed at a hotel.

After being shown what there was to see in the Kuching delta we proceeded to Brunei. Our principal interest at the time was to visit the Bisayans who lived up river, and Harrisson arranged for a trip by air, land, seashore and river under the guidance of two of his best men. One was a Christian Iban, Mr. George Jamuh, at the time Deputy Curator of the Sarawak Museum. The other was a young Muslim trainee from Brunei, today the distinguished Curator of the Brunei Museum, Pengiran Shariffuddin. Through the kindness of these two men and of many others, we were shown a good deal of Bornean life and culture. One aspect of our findings was afterwards published by Harrisson in the Sarawak Museum Journal.

On our first visit to Kuching, Harrisson arranged for Father Araneta and myself to meet some of the more

prominent leaders of Kuching society, both Asian and British. Later, on my return from Brunei (Father Araneta did not return with me but had gone ahead to Sabah), Harrisson arranged for me to give a lecture in Kuching, which was attended by a large audience who seemed to be eager to hear something of Philippine life and culture.

For this wonderful Bornean hospitality, Father Araneta and I were able, in a small way, to make some return both to Tom Harrisson himself and to George Jamuh. We were able to provide Jamuh with a scholarship to attend whatever courses he cared to take at the Ateneo de Manila. He was also able to make a tour of the island of Mindanao. As Harrisson was preparing Jamuh to replace him as Curator of the Sarawak Museum, it was hoped that this exposure to Philippine culture might help to widen his horizons and to establish closer contact between Bornean scholars and those of the Philippines. Unfortunately, this was not to be: shortly after his return to Borneo, Jamuh died. We learned afterwards from Malaysian officials that at the time of his death Jamuh was being considered for appointment as the first native-born Governor of Sarawak. His death was a big loss.

Harrisson himself came to the Philippines on several occasions. On his first visit, I had the pleasure of arranging for him to give a public lecture in our Ateneo Auditorium in the Padre Faura campus - perhaps the first ever given in the Philippines on the subject of Bornean culture. Despite the short notice, the lecture drew a large and distinguished audience.

His other visits were made later, after he had left Kuching and was connected with Cornell. One visit had to do with conservation of wildlife. Harrisson was particularly interested (as was Lindbergh) in the largest known species of eagle - the "monkey-eating" eagle of Mindanao - which was rapidly disappearing.

On another visit (probably his last) he came as one of the experts invited to participate in the international Seminar on Chinese Trade Pottery, held in Makati from the 16th to the 24th March 1968. Organized by a group of dedicated, determined and highly intelligent young Filipina matrons, that seminar was one of the best planned and most efficiently run conferences I have

ever seen. Harrisson's contribution to it was not inconsiderable.

As can be seen from the foregoing, Tom Harrisson had only tenuous connections with the Philippines. But we who knew and liked him would like his friends to know that we join them in mourning his death.

BRUCE SANDILANDS

D.R.A. Sandilands

Bruce went on his last expedition into the interior and uninhabited tropical rain forest about mid-November by helicopter. Meeting his four laborers there, then a short sortie out and back to Padang Lima. After a further four days trek due to shortage of food, fever, Singapore foot, and uncertainty of making destination, he agreed to go back the way they came. According to the full account recorded in his Diary, they rested and on their way back about 10 a.m., he told them to cut ahead the path and to wait each half hour for him. They did but not long enough, so they continued leaving him with only a tin of sardines on the 5th December 1975.

They arrived foot sore no shoes on 18th at 4 p.m. Intensive searches were mounted six then eleven parties, together with helicopter search.

The family first knew well after Christmas, speculation, agonized period with no news. On the 4th February I flew to Sabah as there was still hope, a man of his experience was still alive. Stayed night father Lomax, Singapore. All have received me here with friendliness and help. The Permanent Secretary to the Chief Minister, Datuk Egoh, his assistant Mr. Stanley Yee, offered all facilities for land and air search. On the 9th February 1976, a watch, compass, water bottle, clothing, and remains of B.W. Sandilands were found. Other items were later recovered, most important his Diary kept by him till his death. The automatic watch had stopped at the 23rd, his diary the 22nd.

The entries clearly rule out physical attack, state the lack of food, 18 days of deteriorating health. Quote 8/12/75, "This may be the last day I can walk, so water and shelter 12* apart can I make it? 19 days without food in all. He wishes us a peaceful Christmas with joy and recalls a prayer.

I wanted to be able to give you as full a picture as I can. But now time will drag as I have waited several days to have a funeral as the remains have not been sent back from Kuala Lumpur Forensic Department. I am sorry not to have better news but I am sure you would like to know. Bruce's character comes through well in his last days. He was a great Brother and a sad loss to the family.

David W. McCredie

Bruce Sandilands died on or about the 23rd December 1975 in the Borneo forest about thirty miles east of Pensiangan, Sabah, Malaysia. Whilst on a preliminary reconnaissance to clear and establish trig points for the survey of the Kalimantan-Sabah border in uninhabited mountainous jungle, he became separated unintentionally from his survey laborers. He was suffering from a progressive infection of his feet. His remains were found and identified some two months later by a party of Border Scouts from personal belongings and equipment which included maps, compass, waterbottle, and a diary in which he kept short notes almost to his dying day.

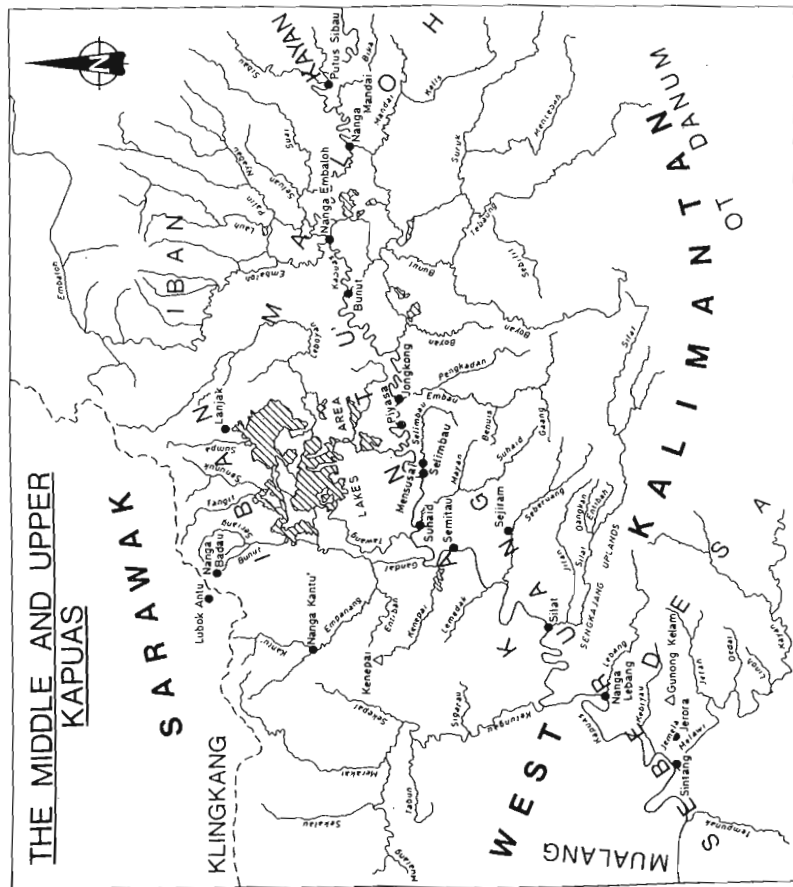
He had worked as a Government Surveyor and land development officer in Sabah between 1948 and 1972 and established most of the primary trig points. In so doing he travelled in outlying and relatively unknown areas. After an absence of four years, when he worked with the Greater London Council, he returned to Sabah at the age of 54 for a further contract appointment just two months previous to his death. His keen interest in Sabah has been intimated previously in the B.R.B. Vol. 6 No. 2 pp. 36, 62-63.

RESEARCH NOTES

THE PEOPLES OF THE MIDDLE AND UPPER KAPUAS:
POSSIBLE RESEARCH PROJECTS IN WEST KALIMANTAN*

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I have already set out some of the main avenues for possible research in West Kalimantan in a research note for the *Borneo Research Bulletin* (1974: 31-38). At that time I pointed to the existence of a large and scattered population in the middle and upper Kapuas which Hudson labelled "Ibanic" in his linguistic survey of western Borneo (1970: 304,306; see also Dunselman 1955: 279). This category includes the Iban, Kantu', Seberuang, Mualang, Desa (not listed by Hudson), and most, if not all those "river-based" groupings in the Ketungau (e.g. [Air] Tabun, Sigarau, Sekalau, Sekapat, Bugau, Banjar, Sebaru', Demam, Maung, etc.). Hudson designated this "Ibanic" complex as a subgroup of a wider category provisionally called "Malayic Dayak," and this in turn comprises a large number of other peoples including the Selako, Banana', Kayung (in Ketapang), Kendayan, Suhaid, Semitau (?), Delang, and Keninjal (pp. 302,304). He also listed Taman, Mbaloh (Embaloh), and Kalis, together termed "Tamanic," as another partly distinguishable subgroup of "Malayic Dayak" (pp. 304,306). I prefer the term "Maloh" for this subgroup, and although on linguistic grounds there is a case for including it in the "Malayic Dayak" category, using other criteria, particularly material culture, custom, beliefs and ritual, I would prefer to differentiate it from the other peoples above in a more definitive way.

Much earlier than Hudson's study, van Kessel (1850: 166) demarcated a broad category of Dayak peoples in West Borneo which he lumped together as the "Malay

* This article originally was to have been included in the special issue of the *Sarawak Museum Journal* on "The People of Central Borneo," but was not completed by that issue's publication time.

race." These he distinguished from the "Northwestern race" (Hudson's "Land Dayak"). This distinction was then taken up by Bouman whose "northwestern group" (not to be confused with van Kessel's "Northwestern race") or "true Dayak" (*echte Dajaks*) approximates to van Kessel's "Malay race" (1924a: 184-85, 194-95; 1924b: 158). Perhaps it might be useful to list those peoples whom Bouman classified in this "northwestern group" (see map). They include the Batang Lupar (Iban) and Kantu', the Ulu Sungai (in the Tebaung River, a tributary of the Bunut), the Mayan, Jongkong (Embau?) and Benuis (in the Selimbau area), the Suhaid, Seberuang and Silat (each from the rivers of these names to the south of the Kapuas), the Rambai and Belaban (from the region of the Kenepai uplands between the Empanang and Ketungau rivers), the Ketungau peoples, the Lebang and Desa (in the Sintang region), the Randu', Linoh, Nyadum and Munta (in the Melawi River), the Laman Tawa, Laman Tuha, Landau, Gelata, Keluas, Batu, Sandai and Rangkang (in the Pinoh, a tributary of the Melawi) and finally the Mualang (and possibly (?) the Sekubang and Sekujam in the Sepauk River). Comparing this list with that of Hudson there is an appreciable overlap, but since Bouman's experience was in the middle and upper Kapuas he made no mention of such groups as the Kendayan and Selako. On the other hand he listed a number of other peoples absent from Hudson's survey. I have virtually no information on Bouman's Melawi and Pinoh peoples although Hudson's Keninjal, which he included as "Malayic Dayak," are located in the Pinoh region. Bouman also excluded the Maloh from this list seeing them as something of a hybrid arising from the meeting and intermingling of his "northwestern group," the "southern group" (e.g. Ot Danum) and the "central group" (e.g. Kayan and Kenyah) (1924a: 173-74). He also saw other peoples as transitional between his main groups. He suggested that the Suruk and Mentebah, inhabiting the Bunut River, are in terms of language and female adornment more closely related to the "true Dayak," but in custom are similar to the Ot Danum further south (1924a: 177; 1952: 48); and that the Kalis are transitional between the "Taman" (Maloh), whom they resemble in language, and the "true Dayak" (1952: 49).

Until more detailed surveys are carried out in the Kapuas region, it is impossible to state positively the status of these various peoples. But Bouman's broad classification seems plausible, if perhaps difficult to verify at this stage. Interestingly Bouman also made

the distinction (found in Hudson's paper) between the Ibanic complex as such and other "Malayic" peoples such as the Suhaid and Silat (1924b: 159, 182, 184).

In this paper I simply present some sketchy fieldwork notes (and Dutch historical material) on some of the groups broadly categorized as "Malayic Dayak," in the hope that it may stimulate further research in an understudied, yet ethnographically rich, region. My main area of interest is the southern tributaries of the Kapuas (Lebang, Silat, Seberuang, Suhaid, Selimbau, Embau and Bunut) stretching from the important regional center of Sintang to the former Malay "state" of Bunut. I have deliberately excluded the Kantu' from this brief survey since my material on them has already appeared elsewhere (King 1973: 254-57), and more recently, Michael Dove of Stanford University has been undertaking fieldwork among them in the Nanga Kantu' area of the Empanang River. However, it is probably true to say that those people in Indonesian Borneo who from a Sarawak perspective have been called Kantu', embrace a large number of differently named groups which prefer to distinguish themselves from the Kantu' proper. As Pringle has already stated, "In the Saribas context (i.e. Second Division Iban) ... the term 'Kantu' came to mean, quite vaguely, almost any enemy in the generally hostile territory south of the Klingkang border range" (1970: 22). This is demonstrated in the peacemakings in the 1870s and 1880s sponsored by the Dutch between the Iban on the one hand and the Kantu', Belaban, Rambai, Ketungau, Seberuang and Suhaid on the other (Bouman 1952: 82-83).

In late 1972 I paid a visit to Jerora, a 26-door Desa longhouse on the Jemela River, a left tributary of the Kapuas about three miles upstream of Sintang. The Desa say that they originally came from the Batang Lupar in Sarawak and settled in the Ketungau. Some then moved to the Jemela and Lebang rivers near Sintang (also see Bouman 1924: 194). Here they mixed with the original population of Lebang people (van Naerssen 1951-52: 140). From there they spilled over into other rivers such as the Dedai, Linoh and Kayan, right-hand tributaries of the Melawi (Enthoven 1903: 241, 453). They are also found further west in two left tributaries of the Kapuas the Tempunak and Sepauk (Enthoven, 1903: 568).

Van Naerssen, in his brief survey of the Desa and Leban at one point appeared to distinguish them from the

"Iban-related" groups such as the Mualang, Ketungau and Seberuang (1951-52: 138). But there is no doubt that on linguistic grounds the Desa should be placed within the broader Ibanic complex and certainly their history of migration suggests a close relationship with the Iban proper. In more recent years they have inter-mixed more extensively with the Lebang, Seberuang and some of the Ketungau peoples such as the Sekapat and Sebaru' (Bouman 1924: 185). They should be distinguished from another people called Desa further west in the Tayan, who are said to be of Javanese origin (Enthoven 1903: 794-805).

There appears to be little clustering of Desa long-houses. One house constitutes a separate village, and the nearest one to Jerora is Tembawang Pada, about one hour's walk away. The longhouse at Jerora consists of a raised and covered gallery (*ruai*) running its whole length. On a lower level and immediately outside the apartment doors is the *telok*, which serves as the "village street;" this is also where rice mortars are stored and rice-pounding takes place. Family apartments (*bilek*) are divided one from the other by thin bark walls, but some have connecting doorways. The hearth (*dapur*) is usually at the rear of the house in a separate room connected to the *bilek* by a covered corridor, but in some cases it is against one of the walls of the apartment. Rice and agricultural equipment are stored in a loft (*sadau*) above the *ruai* and *bilek*. There is no open verandah like the Iban *tanju* attached to the *ruai*. Instead there are several separate, raised drying platforms (*pemantar*) built at the front of the house. The headman's *bilek* is located in the center of the longhouse.

The Desa's main economic concern is dry-rice cultivation, but they also plant some swamp rice. There is now very little virgin forest here for swidden agriculture, and the usual fallow period of about three to four years is dangerously short. In most years Desa are not self-sufficient in rice and have to buy it with money earned by the men who find employment in Sintang or cut timber for the numerous timber companies operating out of Pontianak. The Desa also grow vegetables for sale in the local market at Sintang. In the dry season when river levels are low, fishing is also very important in the small lakes and river cut-offs in the vicinity of Sintang. Perhaps because of the unsuitable terrain and soil, there seems to be very little rubber cultivation

(van Naerssen 1951-52: 142). Pigs and chickens are raised for sale or ceremonial purposes.

In the 1890s Enthoven noted that this low-lying swampy area to the east of Sintang was generally unsuitable for agriculture and yields from dry rice were generally poor (1903: 480-81). In the Lebang River, however, the Dayak had mainly established their villages on the southern slopes of the Sengkajang uplands which were not so exposed to periodic flooding. Van Naerssen also noted in 1949-50 that the Lebang people, in particular, were short of food and much of the area in the environs of Sintang was covered with *lalang* (1951-52: 144-45). This was my impression in 1972. The land situation is exacerbated by the proximity of the large population of Sintang. People employed in the town or living near it clear forest and plant dry rice. Timber for building projects in Sintang is also taken from surrounding areas.

In the circumstances one of the alternatives for the government is resettlement and the introduction of wet rice cultivation. In fact, there is already a scheme of this kind designed for the Desa, which also involves the construction of a road between Sintang and the Desa areas around Gunong Kelam. In 1972 the road was still under construction. I have no details on the scheme itself nor its effects on the Desa, but I gained the impression that despite some people moving into single-family dwellings, longhouses were still a viable and acceptable mode of habitation for the Desa, and many villages still preferred swidden cultivation.

Overall I was struck by the relative poverty of this Desa longhouse compared with some of the rice-surplus areas in the upper Kapuas. Supplies of tobacco, sugar and coffee were largely absent as were such items as outboard motors and radios. Much of the traditional heirloom property such as gongs and jars had disappeared long ago (van Naerssen 1951-52: 144). It had been bartered with the Chinese in Sintang during periods of rice shortage.

Van Naerssen remarked on a series of important Desa rites, especially for the first-born child at birth, first bathing, name-giving, the cutting of the first tooth, tooth-filing, and hair-cutting (1951-52: 141). As far as I could ascertain some of these were still

held, and the institution of the shaman was still strong. In particular, I witnessed a curing ceremony for a sick child. The *manang* plants a red-colored tree (*sabang*) in front of the longhouse in line with the apartment of the sick child. The roots of the tree are identified with one of the souls of the child, and the planting is thought to strengthen this soul (*nampang ayu*). The older generation of Desa has also retained some of its mythology and ritual which again exhibit strong affinities with Iban. Sengalang Burong is the "high god" and previously the "god of war." Puyang Gana is the main spirit propitiated in agricultural rites (van Naerssen 1951-52: 142-43). Desa also have the same omen birds as the Iban.

Van Naerssen pointed out that cousins may marry, but he did not specify the degree of cousinship (1951-52: 141). I was told that first cousin marriage is prohibited, although it is possible with the payment of a heavy ritual fine. Second cousin marriage is permitted, but third cousin marriage is preferred. It seems that there is a greater tendency for males to move to the wife's apartment or village after marriage, but in general post-marital residence is flexible. I did not establish, with any certainty, the rules of inheritance, but I have some evidence that an out-marrying individual does not sever his ties with his natal *bilek* at marriage but retains rights in it.

Van Naerssen also contrasted the original Lebang population with the Desa in terms of their material culture. The Desa were apparently fine mat- and basket-makers and skilled weavers, whereas Lebang handicrafts were fairly crude (1951-52: 144-45). The Lebang also showed greater signs of culture change, while a number of Desa at that time had still resisted both the influence of Islam and Christianity (1951-52: 142-43). More recently the Desa have come under both Protestant and Catholic influence; the Protestant mission is based at Nanga Lebang and the Catholics at Sintang. Van Naerssen felt he could not explain the contrast between Lebang and Desa, but perhaps one or two remarks might be made on this distinction. From my observations, and remarks in the Dutch literature (e.g. Burgemeestre 1934: 19; van Lijnden 1851: 621; Bouman 1924: 186) it seems that those peoples located in or originating from the general Ketungau region (the "Ibanic" complex) are characterized by their skills in weaving. It is less well-developed or non-existent among the peoples south of

the Kapuas. In general, the Ketungau have also been more resistant to change and have retained much of their traditional culture, although some such as the Desa and Kantu' who moved further south have been increasingly subject to outside influences (King 1973: 254-57). The overall traditionalism of the Ketungau may be partly due to the relative isolation of the area from the influence of the former Malay states along the Kapuas River; and the difference in the degree of Malay-Dayak involvement, particularly in the eighteenth and nineteenth centuries seems to be, in part, the reason for the broad distinction within the "Malayic Dayak" category in the middle and upper Kapuas (i.e. between Ibanic groups and other "Malayic Dayak" such as the Suhaid, Silat, Selimbau and Embau). I am not suggesting here that "Malayic Dayak" in the upper Kapuas originate from a heavily Malayized autochthonous population. I agree with Hudson that Malays proper and Malayic Dayak groups are of a common stock and none should be seen as initially taking precedence over another (1970: 302-03). Nevertheless, it may be that in the more recent past some Dayak groups have subsequently come under greater influence from Muslim Malay culture (also see Ave 1969: 277-78 for a slightly different interpretation).

It is difficult to determine when the Malay states were founded, but as Enthoven pointed out most were probably formed from an original core of Dayak people who lived at strategic points for control of trade along the Kapuas River and its tributaries, and who eventually converted to Islam. Veth considered the sixteenth century as the period when Islam first made an important impact on the coast of west Borneo with the establishment of the Muslim dynasties of Sambas, Sukadana and Landak (1854, vol. I: 193; see also Irwin 1965: 3). Probably Sekadau and Sintang further up the Kapuas became Muslim states during the seventeenth century (Enthoven 1903: 672-74). Beyond Sintang there were also the small states of Silat, Suhaid, Selimbau, Piyasa, Jongkong and Bunut. Enthoven indicated that myths relating to the early period of these states are frequently contradictory (1903: 135-36). But Bunut, the furthest upstream state, appears to have been founded in the early nineteenth century by Abang Barita, a Malay trader of Dayak descent from Selimbau (Enthoven 1903: 94; Bouman 1952: 69). His early subjects comprised Embau, Bunut and Maloh Dayak who had recently converted to Islam (Bouman 1952: 56). However,

downstream centers such as Silat, Suhaid and Selimbau probably went over to Islam much earlier (Bouman 1952: 55-56) and as Islam spread outwards Piyasa, Jongkong and Bunut were subsequently established. The ruling families of these different states claimed to be related through blood and affinity (e.g. Enthoven 1903: 128,158). From the "royal" genealogy of Selimbau (Enthoven 1903: 166), and allowing about 20 years as a rough estimate for each reign (cf. Harrisson 1968: 181) conversion to Islam probably took place there at the beginning of the seventeenth century under the ruler Abang Mahidin.

In the nineteenth century the "capitals" of these Malay states above Sintang were little more than overgrown villages and, in general, the majority of the Malay population was concentrated there for purposes of security. Van Lijnden listed the number of households in these settlements in the 1840s, and they ranged from 50 at Selimbau to 10 at Piyasa (1851: 573). Malay rulers reckoned their power not in terms of amount of territory, which to a large extent was uninhabited and economically undeveloped, but by the number of Dayak under their authority from whom they could expect tribute (1851: 567). Boundaries between the states were, therefore, ill-defined and fluctuating (Van Lijnden 1851: 570).

This power seems to be based on two main factors. First and most importantly the position of these Malay settlements at the mouths of the main tributaries of the Kapuas meant that they could control the flow of crucial trade goods. The Dayak relied on the Malays for their main supplies of salt, tobacco, iron and cloth (Bouman 1952: 71). Secondly, by means of this monopoly of trade and by skillful intermarriage with leading Dayak families, the Malay rulers could also exploit the situation of endemic hostility between Dayak groups. They allied themselves with certain Dayak against others whom they wished to suppress or punish (cf. Enthoven 1903: 158-61). A Malay ruler could also mobilize other Malay states through his kinship links and alliances with their ruling families.

According to most of the early Dutch writers on this region the relationship of the Malays to their Dayak subjects was mainly characterized by exploitation (cf. Adatrechtbundels 1917: 279-86). I have called into question this rather extreme view of Malay rule, but

on the whole it is true that some Dayak were subject to various kinds of relatively heavy taxation (King 1972: 99). There were two main kinds of levy, the *hasil* and the *serah* (Veth, vol. II: 337-39; Enthoven 1903: 193). The *hasil* was a direct and fixed head or door tax in kind, and the *serah* was, in practice, a system of forced trade whereby the Dayak delivered such items as rice and forest products in return for salt, tobacco and so on at grossly inflated exchange rates (also see van Lijnden 1851: 632-33). If, for any reason, an individual could not meet these demands, he could be taken into debt-slavery (Veth, vol. II: 339). Veth also stated that Dayak captured in raids also became slaves, and sometimes Malay expeditions were organized with the sole purpose of taking slaves (vol. II: 335-36). On certain special ritual occasions such as births, marriages, and deaths, within the Malay ruling family, the Dayak also had to deliver certain goods (Enthoven 1903: 790-92; Veth, vol. II: 339-40).

On the other hand, not all Dayak were tied to a Malay state. For example, there were the so-called *mardaheka* Dayak ("free Dayak") such as the Maloh and Iban (Enthoven 1903: 193, 452-54) located in some of the remoter northern regions of the Kapuas and east of Bunut. Then there were the "serah Dayak" near Sintang and in the more accessible Silat, Suhaid, Selimbau, Embau, and Bunut rivers. The majority of the Dayak in the low-lying southern hinterlands of the Malay states were subject to taxation. Islam and Malay culture also spread along these rivers, and a large number of them were converted to Islam and ultimately "became Malay" (see below). The above distinction might, therefore, be significant in the Desa/Lebang context. Although both peoples were subject to levies by the Malay ruler in Sintang (Enthoven 1903: 561), the Desa were later arrivals in Lebang and perhaps Malay influence had been more intense and prolonged on the original Lebang population.

Like the Desa, the Seberuang, a neighboring group, also fall within the Ibanic complex. Their original homeland was in the Seberuang, a left tributary of the Kapuas between the Silat and Suhaid. The mouth of the river had never been dominated by a Malay state. Perhaps this relative freedom from Malay influence was one of the main reasons for the establishment in the 1890s of a Dutch Roman Catholic mission at Sejiram, some distance up the Seberuang River. At this time

the more hilly right bank of the river was populated by Seberuang and Suhaid people (Enthoven 1903: 216,219). In the Sejiram area some Kantu' had settled, as well as a few Chinese and Malay families; and there were also apparently some Mayan there from the Selimbau area (de Groot quoted in Bouman 1952: 79). But on the left bank there was less settlement because the land was flat, swampy and less suitable for agriculture (Tromp 1879: 108).

Despite their relative freedom from Malay control when compared with the Dayak of the Silat, Suhaid and Selimbau areas, the Seberuang were subject to taxation by the ruler of Sintang up until 1850. After 1850 the status of the Seberuang was left in some doubt since Pangeran Haji Mohammad Abas of Selimbau considered them to fall within his sphere of influence. Eventually in about 1880 the Dutch placed the area under their direct rule (Enthoven 1903: 219,457). Although the precise period is difficult to establish, before 1850 there was an exodus of Seberuang from their homeland. Bouman stated that this was a result of attacks against them and movement into the Seberuang basin by the neighboring Suhaid (1952: 52). But perhaps this out-movement was also due to the exhaustion of large tracts of farming land in the Seberuang. Even in the 1890s, apart from the more remote upstream regions, Enthoven noted that the middle Seberuang consisted of areas of scrub and *lalang*, and rice shortage was common (1903: 216,221). Longhouses had also been abandoned among the Suhaid and Seberuang in favor of smaller two- to three-family houses or single-family dwellings (Enthoven 1903: 220; Werkman, n.d.: 7). This may have been due to Malay influence, but Burgemeestre (1934: 9) also pointed out that longhouses were frequently neglected because of the requirements of dry rice cultivation. Perhaps the overworking of land resulted in people farming even further away from the main house and living for longer periods in farm-huts. This would have been even more likely given less need for security with the spread of the *Pax Nederlandica* in the region.

The Roman Catholic mission was established at Sejiram in 1892 amidst a large pagan Dayak population. The earlier establishment of a Dutch government post at nearby Semitau also perhaps influenced the decision to set up the mission here (Burgemeestre 1934: 5). Initially there was resistance to Christian teaching, and

in 1898 missionary work came to a standstill because of the lack of priests (Burgemeestre 1934: 5). There was renewed interest when the mission was taken over by the Capuchin order, and its missionaries began work in 1906 (Scheuer 1932: 14). From then on the Catholics had a certain amount of success (Werkman, n.d.: 13). After the Second World War the Montfort fathers resumed the work of the Capuchins, and they still have a mission station at Sejiram. Thus during this fairly long period of missionary activity a number of social and cultural changes must have taken place among the Seberuang, Suhaid and Kantu' in this area. Even in the 1870s Tromp noted that the Seberuang had forsaken some of their traditional ways and many had adopted Malay dress (1879: 112).

As a result of their out-migration, the Seberuang are found in large numbers scattered in the middle Kapuas (van Kessel 1850: 177; Bouman 1924b: 167), particularly in the Belimbing (a tributary of the Melawi), Lebang, Belitang, Sepauk, Tempunak, Selimbau and Silat rivers (Enthoven 1903: 394,453,523,561-62,700). They are, therefore, close neighbors of the Lebang, Desa, Mualang, Selimbau, Sekubang, and Sekujam peoples. In all these areas in the past the Seberuang were subject to taxation by various Malay rulers, particularly those of Sintang and Selimbau (Enthoven 1903: 561,568,570).

The village of Mensusai which I visited in late 1972 is a mixed village of Seberuang and Suhaid in the hinterland of Selimbau (see Mohammed Amin 1926: 253-66 on Seberuang and Suhaid *adat*). It is situated in an extremely low-lying area subject to fairly frequent flooding in the rainy season. The village consisted of 46 solidly-built single-family dwellings, and was considered by local government officials to be the most "advanced" and well-kept village in the Selimbau area. Some dry rice is grown but there is also an integrated fish pool and wet rice cultivation project which was sponsored by the government Inland Fisheries Service (*Dinas Perikanan Darat*) at Selimbau. Swamp rice is cultivated too, and even in the 1930s Selimbau was noted as an important area for *padi paya* (Burgemeestre 1934: 11). Most of the pigs were penned beneath the houses and not allowed to roam free in the village.

In the literature on the Seberuang, two other Ibanic-related groups called the Rambai and Belaban (Melaban) are also often mentioned (cf. Tromp 1879: 108-19;

Enthoven 1903: 212). In the 1870s Tromp (1879: 109) stated that there were 17 Rambai longhouses, and in the 1890s Enthoven estimated that there were about 100 families there (1879: 217). Tromp's comparison of Rambai and Seberuang in the 1870s revealed that the latter were farming poorer areas and were less prosperous than the Rambai (1879: 109). But Enthoven noted that there were also rice shortages in the Kenepai (1903: 213, 218-19). However, the Rambai could supplement their rice with fish and the collection of *getah* and rattan, which were not viable alternatives in the Seberuang (Tromp 1879: 109).

Semitau, which is now an important government and trading center and was early on the post of a Dutch controller for the upper Kapuas, was probably formerly a Rambai settlement (Enthoven 1903: 214). At one point, perhaps at the end of the seventeenth century, the Rambai were under the authority of Abang Tajak, the ruler of Selimbau (Enthoven 1903: 158, 217). In the mid-eighteenth century they, along with the Kantu', Belaban and Suhaid, turned to Sintang (Enthoven 1903: 158), and after 1880 the Dutch established direct control over the Kenepai area.

During my fieldwork my informants did not mention the terms Rambai and Belaban (Melaban), and it was said that the Kenepai was inhabited by Kantu' and Malays. Even in the past the identification between Rambai and Kantu' was close (Tromp 1879: 110-11; Waisvisz 1938: 19-20). They were often allies against the Iban, and apparently some Rambai moved from their homeland along with the Kantu' from the Empanang after 1880 (Enthoven 1903: 170) while others settled in the Ketungau. Therefore, with the characteristic Bornean flexibility of nomenclature, Rambai may be designated today as Kantu', or indeed, they may have been absorbed by Kantu'. Whether they are still a distinguishable entity remains a problem for future fieldwork. What is important to note about this whole Ibanic complex is that its distribution in the middle Kapuas coincides almost exactly with the main migration routes of the Iban before their movements into Sarawak. In Iban oral tradition, migrations went to the Mualang country, the Ketungau, Melawi and Semitau (Morgan 1968: 159). Although "historical" reconstruction is problematical, it is tempting to suggest that the Iban, Ketungau, Mualang, Desa, Seberuang, Rambai, etc. are of a common stock, and the Iban

are simply a more mobile, pioneering element of these middle Kapuas peoples. In other words although distinctions are made within the complex, they constitute minor variations on the same socio-cultural theme.

It remains now to describe briefly the other "Malayic Dayak" peoples, e.g. Silat, Suhaid, Selimbau, Embau and Bunut, in this area of West Kalimantan. Again they exhibit strong affinities with the Ibanic groups in terms of language and custom, although there seems to have been a more marked differentiation from them through time. A key variable in this process, although this is tentative, may have been the more intense Islamic-Malay influence in these southern tributaries.

In the 1890s Enthoven reported that Malay settlements were to be found extensively in the Silat River, and only a few Dayak longhouses remained in the middle and upper Silat (1903: 185). He distinguished four "river-based" groupings - the Dangkan, Selimuh, Jitan ("serah Dayak") in the middle course of the river, and the Entibab (Entibah) ("free Dayak") in the upper course (1903: 196-97). Early on a ruler of Silat, Pangeran Agung, had suppressed most of these Silat Dayak (Bouman 1952: 70). There was also some early Chinese influence because of the working of alluvial gold (Veth, Vol. I: 52). I have very little information on the present situation here, although Islam has definitely spread further and more Dayak have "become Malay." In addition, there now seem to be some Seberuang communities in the Silat River.

Suhaid further upriver was a very early center of Islam, and the Dayak here had long been taxed by the Malay ruler at the mouth of the Suhaid, although at one point they were also subject to Silat (Bouman 1952: 56, 71-73). The Suhaid also allied with the Suhaid Malays to combat the Iban who were constantly attacking this region. When the Dutch established direct control over the Seberuang area in 1880, a number of Suhaid gradually left their homeland and moved into the Seberuang to escape Malay taxation. The Suhaid basin was also infertile and subject to frequent flooding (Enthoven 1903: 180, 216). In the 1890s only a few Suhaid remained; they were poor and were gradually abandoning their longhouses. They had also been heavily influenced by the Malays and had lost much of their traditional custom (Enthoven 1903: 170, 181-82). Some Suhaid custom-laws which were recorded in the 1920s by Mohammed Amin, the

Demang of Semitau, were broadly similar to those of other neighboring groups, such as the Seberuang and Kantu' (1926: 255-60). According to Enthoven some Menapar (?) and Bantal (?) Dayak from the Selimbau area had moved into the Suhaid (1926: 170), and they had a few "insignificant" settlements in the middle course of the river (1926: 177).

Before the Dutch arrived, the most important Malay settlement in the upper Kapuas was Selimbau. At one time it claimed hegemony over the Embau, Pengkadan, Penyaki and Bebuah peoples in the Embau River, the Rambai, Belaban, and Kantu' in the Empanang region (Enthoven 1903: 141-42) and the Benuis, Mayan, Jongkong (Embau?), Menapar and Bantal Dayak of Selimbau (1903: 170). It also claimed the Suhaid and Seberuang (Bouman 1952: 73-74), and in the mid-eighteenth century even brought the Ulu Sungai Dayak of the Bunut into its sphere of influence (Bouman 1952: 159). Selimbau also fought against but did not subject various Maloh peoples (Bouman 1952: 73-74). However, control over some of the Dayak was probably more apparent than real, and real authority was itself variable in time and space.

It was only in the mid-nineteenth century that Pangeran Haji Mohammad Abas, the ruler of Selimbau and a fervent Moslem, began to spread the Islamic faith to the Embau, especially its tributary, the Pengkadan, and Bunut rivers (Enthoven 1903: 162, 205, 206; Bouman 1952: 81). At that time the large community of "Embau Malays" emerged, some of whom still lived in longhouses (Enthoven 1903: 205, 210; Veth, Vol. I: 54). In addition, to the south of Selimbau the so-called *orang pengaki* (Enthoven 1903: 168-69) or Pekaki Malays (Bouman 1924a: 185), also comprised Dayak recently converted to Islam. These too continued to live in longhouses and follow some Dayak customs such as drinking rice-wine and eating pork. Whether these "transitional" communities are still to be found in the Embau and Selimbau regions is again a matter for future enquiry, although my information suggests that there are still some villages of this type in existence.

After the Dutch brought the Embau region under direct rule in 1880, a number of Selimbau Dayak such as the Benuis and Jongkong moved there away from Selimbau Malay control (Bouman 1924a: 205). Others moved to the Suhaid (1924a: 170), and very few Dayak proper

remained in Selimbau (Bouman 1924a: 172). Also as a result of conversion to Islam, apart from the Dayak migrants from Selimbau, the Embau River settlements in the 1890s consisted mainly of Embau Malays (Bouman 1924a: 205). In my earlier survey I lumped together the Embau, Suruk and Mentebah Dayak, suggesting their classification was problematical (King 1974: 34). According to the Dutch literature the Embau at least were akin to other "Malayic Dayak" further downriver. But again I am not sure how far the Islamization process has progressed in the Embau, and whether isolated communities of Embau Dayak are still to be found there.

Further east the Bunut area came under Islamic influence spreading from the state of Bunut in the mid-nineteenth century. The "capital" of Bunut originally comprised Islamized Embau and Bunut Dayak (Bouman 1924a: 94), and under its ruler, Abang Barita, a sizeable Malay population came into being in the Bunut River (Bouman 1924a: 100-102). The non-converted Dayak of the Bunut and Mandai rivers apparently accepted Abang Barita as their nominal ruler, but, with a few exceptions such as the Ulu Sungai Dayak in the Bunut, they were not subject to taxation (Enthoven 1903: 108; Bouman 1924a: 78). After 1881 the Mandai peoples were then placed under direct Dutch rule within the *Gouvernementslanden Boven-Kapoevas*.

Because of its proximity to the Malay center of Bunut, the Bunut River and its tributaries, the Boyan, Tebaung, Semangut, Sebilit, Mentebah and Suruk soon contained a number of Malay settlements. However, in the 1890s there were still a number of Suruk, Mentebah and Ulu Sungai Dayak who had not gone over to Islam (Bouman 1924a: 108), and there were also some "transitional" communities as in Selimbau and Embau. Enthoven indicated that these Dayak still lived in longhouses, but that they were poorly built (1903: 111-12). The population here spent long periods of time away from the main house during farming and the gathering of forest products (Enthoven 1903: 112). But their fragile houses contrasted markedly with their well-built padi store-houses (*jurung*) found in the vicinity of the main house. Enthoven indicated that rice shortages also occurred in the Bunut, although the collection of forest products helped to compensate for misfortunes in agriculture. The Mentebah at that time also seemed to be more prosperous than the other two groups

(Enthoven 1903: 114). Bouman has suggested that the Suruk-Mentebah Dayak are transitional between his "true Dayak" and the Ot Danum. Certainly further east, and north and south of the Bunut region, and with the exception of the Kantu' and to a certain extent the Iban who have moved into the Putus Sibau region, there are the rather different Maloh, Kayan and Ot Danum. The Bunut might, therefore, be considered the easternmost boundary of the "Malayic Dayak" people. My information suggests that there are still Suruk and Mentebah communities in the remoter regions of the Bunut which have not converted to Islam.

Undoubtedly the arrival of the Dutch in the middle and upper Kapuas stemmed the tide of Islam which was gaining momentum in the mid-nineteenth century. In those regions relatively less tied to local Malay rulers, the Dutch instituted direct rule and established Christian missions. However, despite the fact that by 1916 the previously semi-autonomous Malay states (*landschappen*) along the Kapuas had also been brought under direct Dutch rule and deprived of their remaining powers, the spread of Islam still continued although in a more diluted form (Ozinga 1940: 85).

The above description is brief and incomplete, but there seem to be two main areas of research worth pursuing. First, there is the possibility of investigating some of the Ibanic-related groups in West Kalimantan. My discussion has revealed that some of these were, in general, less influenced by Malay culture than other "Malayic Dayak" in the eighteenth and nineteenth centuries, although more recently such peoples as the Desa, Seberuang and Kantu', depending on their location, have been increasingly subject to not only Islamic influence but also the work of Christian missions and government development programs. In the light of these forces of socio-cultural change and the fact that people such as the Seberuang, Kantu' and so on have spread themselves widely in the Kapuas and intermingled with other Dayak groups, it would be interesting to examine a range of these communities to determine to what extent they have maintained an independent identity in relation to traditional customs, and how far they have accepted various outside influences. Secondly, there are the other "Malayic Dayak" people who have been subject to longer and more intensive influence from the Malay states. Among these it still seems

possible to observe communities (e.g. Suhaid, Suruk, Mentebah) which have retained their Dayak identity; in other cases there may be an opportunity to study former Dayak peoples in the Silat, Selimbau, Embau and Bunut regions who are in various stages of transition from Dayak to Malay. This might also include a more thorough investigation of various kinds of Dayak-Malay relationships, some of which have been touched on in this present paper.

There are also two more general topics of interest which have emerged in the course of this discussion. First, there is the problem of ethnic classification and inter-Dayak relations. I have speculated on the possible relationship between the Iban and other closely related groups. I have also suggested that the degree of Malay-Islamic influence may be a key variable in the progressive differentiation of groupings within the "Malayic Dayak" category. On the other hand, since we have to rely largely on oral tradition and speculation, and realize the fact that the Dayak population in this region was extremely mobile in the past, then perhaps it may be impossible to establish the relative importance of progressive internal differentiation and fission of relatively homogeneous groups on the one hand and cultural exchange and merging between originally relatively distinct groups on the other. Nevertheless, Bouman, whether one agrees with his explanations or not, has pointed to the interesting phenomenon of "transitional" groupings in the upper Kapuas. The second area of interest, which I have already mentioned elsewhere (King 1974: 33), is the ecology of the middle and upper Kapuas. It seems that large areas have already been overfarmed, and are no longer suitable for dry rice swidden cultivation. This has resulted in frequent rice shortages. On the other hand the extensive low-lying, swampy flood-plain of the Kapuas has provided the opportunity for an emphasis on swamp rice and fishing, and more recently for experiments in wet rice cultivation. We already have detailed studies in Borneo of dry rice ecosystems in hill areas, but there is still a need for the description and analysis of the rather different lowland ecosystems found in this region of West Kalimantan.

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A Study of Malays in Sandakan - In Preparation

Supriya Bhar

My examination of Malay society in Sandakan was focused in two specific ways.

Firstly, I was looking at the Malay community in Sandakan as an urban group. This is noteworthy because Malays are better known and studied as the rural component of Malaysian society. And when they are studied in the urban setting, it is often from the rural point of view, related to problems of rural-urban migration or changes in their values and organization. Here, they are studied not with reference to their respective villages, but seen as a group within the urban society of Sandakan. Although the majority of the Malays are rural, the urban Malays have to be studied not only as a variation from type, but in their own right. This is in line with the kind of change in emphasis that is seen in studies of African communities.

Secondly, a conscious attempt was made to focus the enquiry on the nature and extent of interracial relations among the Malay community in Sandakan.

Malay society in Sandakan was studied within the wider theme of Malaysian culture. This has been most often discussed at the level of group interaction and policy formulation. The problem most often highlighted is that of welding three different cultural traditions - the Malay, Chinese and Indian - into one distinctive and representative culture. There seems to be a hesitancy in taking it and examining it at the individual level, as a problem of everyday life. When one comes down to the essentials, the whole problem is how a Malay, Chinese, or Indian can become Malaysian in his way of life. When one studies the issue, one sees not three groups standing apart, but three different traditions influencing one individual. If the blending of the different traditions is to be meaningful, it must be reflected in the individual life, in the orbit of family relationships. The kinds of interracial relationships being investigated here were not the casual day-to-day ones like buying bread from a Chinese shopkeeper, but those that affected the pattern of life, like food habits, dress, house decor and leisure activities.

A major focus of this study was to examine how the differences in community structure of West Malaysia and Sabah influence the concept of "Malay" and "Malaysian." The question, "What is a Malay?", is not always answered in the same way in Sandakan as in Kuala Lumpur. Moreover, the whole concept of Malaysian culture is based on the West Malaysian demographic situation, where there are three major community groups. In Sabah, even the distinctness of each community group is sometimes more a question of Census categories than actual social awareness. And then the relations between these different community groups are often not capable of being represented in terms of clear-cut dichotomies as in West Malaysia. Thus the whole concept of Malaysian culture may well mean something different in the context of Sabah and is a problem that warrants examination.

These were the major themes of the study.

The study of Malays in Sandakan was based on guided interviews with 95 women in Sandakan between May 1974 and January 1976, while staying in Sandakan from June 1971 to the present. The main sections of the interview guide covered Personal Characteristics, Urban-Rural Relations, Pattern of Daily Life, Leisure Activities, Festivals and Family Celebrations, Attitudes and Beliefs. As the study progressed, the significance of some questions changed, as those on Urban-Rural relations and on community classification. It was a cumulative process, in that points raised in one interview were often checked in succeeding interviews. It was used more as a pliable instrument and in different areas involved very different approaches.

Women were interviewed for two reasons. Firstly, it fitted in better with the social context. Being a woman, it was not considered odd to ask questions about marriage and daily life which might even seem to be rather personal. It would have been awkward to interview a man in the same manner. Secondly, by concentrating on the women, I was able to get a detailed picture of the basics of their way of life and could get a closer look at their pattern of life, than would otherwise have been possible.

These women were mainly from three different areas: Rumah Murah, Kampong Bokhara and Police Barracks. These areas shared the fact that they were predominantly Malay,

but otherwise differed in very significant ways. Rumah Murah is a low-cost cooperative housing scheme with houses built on different *lorong* or avenues. One *lorong* was studied. This was predominantly Malay, but surrounded on both sides by Chinese *lorong*. Kampong Bokhara is one of the oldest settlement areas of Sandakan, and is nearly wholly Semenok in composition. Unlike Rumah Murah, the residents vary in economic level, but are a very cohesive unit due to ethnic homogeneity and ties of kinship. The Police Barracks was the third area to be studied. Unlike the other two, here there were a large number of Malay families living side by side, with Kadazan, Murut and Chinese, all sharing the same occupational and income pattern.

Studying women from these different areas gave the data a wider range and introduced more variables in the study than might otherwise have been achieved. Moreover, it solved one of the primary problems of the study - that of access to the women for interviews. In each area there was an initial contact, and from that introduction the interviews proceeded. Each woman was visited at least twice, as generally, she would effect an introduction for the next interview. Some were visited as many as nine times.

There was one other group of random interviews with women living in other urban areas of Sandakan - areas which were not necessarily Malay. However, because of difficulty of access, they were too few and disparate for systematic examination as a group. But the data from these interviews has been examined to complement that elicited from the area interviews. On the basis of these interviews, the pattern of life of the Malays in Sandakan has been studied.

B R I E F C O M M U N I C A T I O N S

The following has been received in a letter from Jérôme Rousseau:

"A comment about Dietrich Kühne's article in Borneo Research Bulletin 7(2):60. His account of Rumah Kejaman Lasah is misleading. The people of this longhouse frequently go to Belaga. His figures for the population are incorrect. He gives 154 for 1960, while it was 222; and 180 in 1970, while it was 261 in 1971 (my figures are from the administrative surveys which are fairly accurate). It is very unlikely that Kejaman women had no opinion about contraception: the Government is offering free sterilization, and Kayan women (who live further upriver, and are much more isolated) talked frequently about it. The Kejaman practice uxori-locality (in a proportion of approximately 75 percent), not ambilocality. His evaluation of monetary income is quite inadequate."

CORRECTIONS: In the April 1976 number of the Bulletin, Yeh, Stephen, ed., 1975, Public Housing of Singapore, was listed as published by University Education Press, Singapore. This title was published by Singapore University Press (which is distinct from Singapore: University Education Press).

The address given by Tom Harrisson in his "Borneo Sculpture in the West End," page 31 of the Borneo Research Bulletin, Vol. 8, No. 1, April 1976: Divine Gifts, is obtainable from Gallery 43, No. 28 Davies Street, W.1, London, England, price £2.50.0 per copy, not Brook Street, as given.

NEWS AND ANNOUNCEMENTS

The Borneo Research Council will offer a symposium entitled, "Contributions to the Study of a Changing Social Environment," at the annual meeting of the American Anthropological Association in the Washington Hilton, November 17-21. The symposium will meet at 8 a.m., Thursday, November 18. There will be an open meeting of the Council from 5:00 to 7:00 p.m. on the same day in the Map Room of the Hilton. Richard Fidler, chairperson of the symposium, has provided the following abstract:

The decline in colonialism in the last quarter century stimulated extensive changes in social environments worldwide. Malaysian Borneo as a microcosmic environment provides scientific opportunities to study the nature and process of social change, to test our hypotheses and to develop new theoretical models. These six papers, all based on field studies in Sarawak and Sabah, demonstrate the response of research anthropologists to the challenge of these opportunities and propose additional approaches. Borneo cultures have been challenged by rapid change: how have they responded, and why?

Allen R. Maxwell begins the session by examining a traditional native view of time and change, the "raw material" from which social responses are drawn. Peter Metcalf reports why new, introduced patterns may be selected over revitalized forms of the traditional responses, while Herbert Whittier uses a case of functional replacement of a traditional pattern to investigate the nature and cultural definition of *adat* customary behavior. Changing social environments have presented new alternatives to traditional life styles. George Appell proposes modifications to our concepts of structure to incorporate the influences - the input - of opportunity. Vinson Sutlive compares two cases of that frequent response to change - migration - in his study of urbanization. Research methodology must also respond to the challenges of a changing social environment; Richard Truckey and Richard Fidler suggest some adaptations and innovations.

The Asia Society (Education Resources Section, 112 E. 64th Street, New York, New York, 10021) will send free copies of their detailed analysis of their original Ford-funded review, Asia in American Textbooks; An Evaluation, 1976, upon request.

Southeast Asia Teaching Materials Evaluation Project

The Educational and Professional Development Committee of SEARC is reviewing and evaluating Southeast Asia materials currently being used (or suitable for use) in U.S. schools, especially secondary schools and introductory undergraduate courses. An initial examination by the Asia Society of more than 300 books treating the whole of Asia has revealed significant errors of fact and unsympathetic biases of presentation and approach.

The Asia Society-SEARC evaluations of Southeast Asian materials will be published in a form that will make them available to teachers and other interested persons. We hope as well to make publishers aware that the scholarly community is critical of both accuracy and authenticity in materials marketed currently.

At present the project is confined to the evaluation of books only; eventually it may be possible to extend the review to audio-visual materials. People are needed to help with two aspects of the evaluation: people who know Southeast Asia (to check facts and biases), and people who can judge whether or not the materials are good for classroom use. If you are willing and able to help with either or both of these tasks, please write: Ms. Jane Ragsdale, Center for Southeast Asian Studies, 1156 Van Hise, University of Wisconsin, Madison, Wisconsin 53706.

The Library of the School of Oriental and African Studies, University of London, recently purchased (about two years now) a large collection of manuscript and printed material on North Borneo from Francis Edwards (the bookseller). This has been catalogued as 26 items and covers the years 1824-1926. There are some official publications, some diaries and miscellaneous papers concerned with North Borneo and the British North Borneo Company.

Aberdeen-Malaya Project on the Reproductive Biology of Some Malaysian Rain Forest Trees

Whereas the drought in parts of Britain has been met by little but gloomy prognostications, a similar severe drought in Malaysia, the second longest in the past 107 years, has been celebrated by a massive flowering of dipterocarps and other forest trees, the first since 1968. This could not have come at a better time for our project, and the research students have spent the last two months almost continuously in the field.

The mass flowering has delayed the student visits to the U.K. However, Miss Yap Yik Yuen arrived in Aberdeen for her final visit on 23 April, and Mr. Yap Son Kheong (final visit) and Mr. Ha Chee On (first visit) will arrive in May.

Activities of the International Foundation for Science

G.N. Appell
Brandeis University

The International Foundation for Science (IFS) was founded in 1972. It is a nongovernmental organization based on scientific academies and research councils in 32 countries. It was established to promote and support meritorious research in developing regions of the world in the fields of the natural and social sciences and in technology.

The Foundation is governed by an international Board of Trustees, and the Secretariat is located in Stockholm,

Sweden. At present the annual budget is approaching one million dollars and is contributed by seven governments directly to the Foundation through academies or research councils.

Grants Program

The granting program of the IFS is at present limited to biological and related sciences. There are six priority areas: agriculture; animal production; vegetables; mycorrhiza studies and afforestation problems; food fermentation and other methods for food preparation; and natural products.

Grantees must be native to and carrying out the research in a developing country. The Institutes of the grantee contribute in terms of salaries and overhead. Grants should normally cover expenditures for equipment, expendable supplies, scientific literature, transports for field work, or other specific parts of a research project. IFS also endeavors to arrange visits by experienced scientists to its grantees. Direct contact between grantees with similar subjects is also encouraged. The aim is to develop regional networks of the IFS grantees in cooperation with senior experts within the developing regions of the world.

Grants Having Relevance to Borneo Research

The following grants have been made that have relevance to Bornean research:

Aquaculture

Dr. T.E. Chua, School of Biological Sciences, Universiti Sains Malaysia, Minden, Penang, Malaysia. "Rearing of Groupers with Floating Cage Culture." 1974.

Dr. M.P. Sivalingam, School of Biological Sciences, Universiti Sains Malaysia, Minden, Penang, Malaysia. "Culture of Local Mulluscas in Malaysia." 1975.

Vegetables, Pulses, Tubers, and Forage Crops

Dr. S. Padmanabhan, School of Biological Sciences, University of Malaya, Kuala Lumpur, Malaysia. "Rhizobia in Tropical Legumes." 1974 and 1975.

Mr. S. Sastrapradja, National Biological Institute, P.O. Box 110, Bogor, Indonesia. Mr. Sastrapradja is conducting an inventory of *Colocasia*, *Curcuma* and *Dioscorea* in Indonesia, 1974. Morphological as well as genetical variation is being studied, and the genetic characters, which are important for cultivation, are being evaluated. Tuber crops in Indonesia are a valuable source of carbohydrate, and some are also used medically. Many species of these genera are growing wild in the forest and have not been evaluated scientifically. There are indications that many of them undergo erosion, and the existing varieties must be collected and evaluated before they are completely lost. By doing this, superior stocks which are disease resistant, good in taste and high in yield, might be found.

Dr. I. Lubis, National Biological Institute, Bogor, Indonesia. Dr. Lubis is conducting an inventory of Indonesian minor legumes with emphasis on the following genera: *Canavalia ensiformis* (jack bean), *Mucuna pruriens* (velvet bean), and *Psophocarpus tetragonolobus* (winged bean), 1975. They all grow in regions of poor soil fertility, where soybeans cannot be grown.

Dr. B.S. Jalani, Jabatan Biologi Universiti Kebangsaan Malaysia, Kuala Lumpur 22-12, Malaysia. "Improvements of Selected Vegetable Crops in Malaysia." 1975. At the Universiti a research group is working on the collection of genetic resources. This includes conservation and breeding studies of vegetable crops, cultivated or growing wild, and especially *Brassicaceae*, *Solanaceae*, leguminous crops and mushrooms. Little scientific work has been done on a number of these species in Malaysia. There are indications that some of them undergo erosion, and it is of great interest to evaluate their importance as food crops, to examine possibilities for genetical improvement, and to develop better methods for backyard and large-scale farming.

Dr. I.M. Nitis, Universitas Udayana, Jl. Panglima Besar, Studirman, Benpasar, Bali, Indonesia. "Lucerne (*Stylosanthes guianensis*) as Companion Crop to Cassava (*Manihot esculenta*)." 1975.

Food Fermentation

Dr. S. Saono, Treub Laboratory, National Biological Institute, Indonesian Institute of Science, Bogor,

Indonesia. "Preserving Microbiological Cultures." 1974. Dr. Saono's research is to improve techniques to preserve cultures of nonpathogenic microorganisms and to establish a collection of different strains. Many of the microorganisms found in traditionally fermented foods of Indonesia and other parts of Southeast Asia are still unknown or poorly defined.

Dr. F.G. Winarno, Fatemeta Department of Agricultural Products Technology (IPB), Bogor Agricultural University, Jalan Gunung Gede, Bogor, Indonesia. "Microbial Fermentation of 'Tauco' (Fermented Soybean Paste)." 1974 and 1975.

Dr. Ho Coy Choke, University of Malaya, School of Biological Sciences, Kuala Lumpur, Malaysia. "Ontjom Fermentation." 1974.

Dr. I. Gandjar, Nutrition Research Institute, Semboja Unit, Jalan Semboja, Bogor, Indonesia. "Tempe benguk Fermentation." 1974.

Further information on the activities of the IFS can be obtained from the International Foundation for Science, Box 5073, S-102 42 Stockholm 5, Sweden.

Bibliography: International Foundation for Science, Annual Report 1974; Annual Report 1975; Granting Programme 1976; and The First 100 Research Grants, Stockholm: IFS.

Postdoctoral Research Grants for Southeast Asia

The new Committee on Southeast Asia, jointly sponsored by the American Council of Learned Societies and the Social Science Research Council, and funded by the Ford Foundation, is pleased to announce a grant competition for social scientists, humanists, and specialists in socioeconomic development, to conduct research on Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Thailand, Singapore, and Vietnam. There are no citizenship requirements, but applicants must hold the Ph.D., or have equivalent research experience.

Applications are welcome for research on all aspects of the societies and cultures of historical and contemporary Southeast Asia. Research may be carried out in Southeast Asia or any other appropriate locale. Collaboration and affiliation with Southeast Asian scholars is encouraged where appropriate. Grants are available for from 3-12 months and will not ordinarily exceed \$14,000. They may be used for travel, research expenses, and maintenance if necessary, and to supplement sabbatical salaries or awards from other sources. Maintenance and travel of dependents may also be included if full-time research will be conducted outside of the grantee's home country for more than six months. Funds are limited, and all applicants are encouraged to seek other sources of support as well.

Application forms will be available as of September 1976, and the deadline for the receipt of the completed forms is December 3, 1976. Applicants will be informed of the results of the competition by April 1977, and grants may begin as early as May 1977. In requesting application forms, please indicate your academic degree and field of specialization and provide a brief statement describing the proposed research, including locale, relevant dates, and an estimated budget.

For further information and forms, contact:

The Southeast Asia Program
Social Science Research Council
605 Third Avenue
New York, New York 10016

New Publication on Asian Affairs

The Asia Mail, subtitled "American Perspectives on Asia and the Pacific," will begin publication with the October 1976 issue.

The monthly, in tabloid newspaper format, will aim at Asia-interested Americans within the United States. Initial circulation will be 30,000.

Articles will be written by academic specialists, journalists and businessmen active in U.S.-Asian relations.

"An effort will be made to include frequent articles by undergraduate Asian studies majors," said Associate Editor Donna Gays.

A Board of Consulting Editors includes such familiar names as Tillman Durdin, Stanley Karnow, Russell Brines, Edward Neilan, Ruth Lor Malloy, and Earl Voss.

Advertising in the publication will include books on Asian topics and jobs and executive positions open to persons with Asia area interests and backgrounds.

Charter subscription rates, which represent a saving over regular rates, are offered through December 31, 1976. Charter rate for one year is \$9 within the United States and \$15 in foreign countries. The charter rate for students is \$7 per year.

Subscription orders should be sent to The Asia Mail, Subscription Department, P.O. Box 942, Farmingdale, New York 11735.

B O R N E O N E W S

Regional News

BARBARA HARRISSON was appointed Visiting Fellow at the Western Australian Institute of Technology in Perth during July 1976. She is primarily serving the Department of Asian Studies in the School of Social Sciences at W.A.I.T. (Hayman Road, South Bentley, 6102, West. Australia).

Sarawak News

A biography of Rajah Clarks Brooke, by COLIN CRISSWELL, is the first to be written, and has been accepted for publication by Oxford University Press. It will appear late 1976 or early 1977.

During this past summer, DEREK FREEMAN visited Sarawak where he engaged in discussions at the Sarawak Museum on the future of Iban studies, and visited MOTOMITSU UCHIBORI, an Australian National University Research Scholar, in the Ulu Skrang, where he is studying Iban eschatology. Dr. Freeman also revisited the Iban communities in the Baleh region where he lived and worked in 1949-51 and 1957-58.

B O O K R E V I E W S , A B S T R A C T S A N D
B I B L I O G R A P H Y

BOOK REVIEWS

H.K. Airy Shaw: "The Euphorbiaceae of Borneo," Kew Bulletin Additional Series IV. Her Majesty's Stationery Office. 245 pp; 1 map. 1975. £10.

This important work is number four in a series which so far has not related to Southeast Asia. The previous titles cover plants from Tropical Africa, the Mediterranean and Venezuela, and the fifth to be published shortly, the Sudan. It is tremendously encouraging, therefore, to have from Kew a work on plants of Borneo and, in particular, of a family which is large, complex, and of considerable ecological importance.

Mr. Airy Shaw has been working on Euphorbiaceae for many years, and it is not ironic that his work room at Kew is almost the highest point in the building for this work is of a very high standard and marks, I hope, a high point in Kew's interest in the Flora Malesiana. The book consists of a short introduction, a tentative scheme for possible natural grouping of genera, followed by a useful generic key. Although clearly set out, it does demonstrate the innate problems of indented keys when one turns to page 14 to find each line only two and one-half words long. The map on page 22 is simple, and useful, although some arrangement for showing the classic localities, particularly in Kalimantan, would have been

welcomed. The main part of this work is 200 pages of alphabetical enumeration of all species of Euphorbiaceae so far found in Borneo. Such a list, with thumb-nail sketches of each species and distribution clearly set out, provides for the student of plants, of any of the countries of Borneo, a definitive listing which has not been equalled except for those families already covered by Flora Malesiana. The genera *Euphorbia* and *Macaranga* are treated by Mr. A. Radcliffe-Smith and Dr. T.C. Whitmore, respectively, and are no doubt of a similar high standard to the other genera. It would, however, have been more convenient to put the whole of *Macaranga* in alphabetical order as the groupings are adequately covered by the synopsis of sections.

There are a minimum of errors; one such is on page 58, under *Borneodendron borneense*. Temburong District, Kuala Belalang is in Brunei, and therefore this plant does not occur in Sabah as stated. A larger type face for the generic headings would have been advantageous. These are, however, minor details in an excellent and useful work.

It is a pity that Her Majesty's Government has to market this book without any illustrations or photographs and bound only in card at the exorbitant price of £10. The Siam enumeration, 73 pages shorter, was published in Kew Bulletin, and it would have helped the distribution of this book if it, too, could have been squeezed in, or subsidized. (P.F. Cockburn)

ABSTRACTS

The Towkays of Sabah: Chinese Leadership and Indigenous Challenge in the Last Phase of British Rule

Edwin Lee, Singapore University Press, 1976. Casebound, 284 pages, illustrated with photographs; Singapore \$25.

This is a study of the Chinese of Sabah in their dual role as traders and leaders in the halcyon time of colonial rule, and the abrupt transition to the Malaysian era. The few whose success and *elan* brought wider notice are seen in relation to a favorable colonial establishment

and an ever-assertive indigenous consciousness. These few exemplified the power of the Chinese in the economy and society and the Chinese counterbalance to indigenous representation in the government. The combination of Chinese economic superiority, zeal in social organization, and equipoise in politics was an issue to which the indigenous leaders must give challenge. The Malaysia scheme presaged an accession to power by the indigenous leaders sufficient to fuel their challenge.

The Chinese fought against the Malaysia scheme. The dynamics in full play during the strife between the scheme's Chinese opponents and indigenous advocates is subject to close analysis. At the same time, due emphasis is put on rivalry within the Chinese camp, on other groups of towkays whom events had bestirred to give contention to the few. The motives, maneuvers and issues regarding Malaysia, the strategies and memoranda attendant on a commission sent to enquire into Bornean opinion, the terms bargained over at the inter-governmental level, and the rapid politicization - parties, alliances, elections - are interpreted in the single, continuous yet shifting perspective of elite conflict. External complications arising from the Malaysia scheme are viewed from within Sabah, and the impact on internal contingencies is shown. The study includes the post-Malaysia years up to 1967, and considers how successful the Sabah towkays had been in weathering the change of regime.

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