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NOTES FROM THE EDITOR

In the September 1987 issue of the Bulletin, we noted "indications of interest in and openness to research by administrators of the four political units of Borneo" [19(2):86]. With the mailing of that issue, we also distributed notices of workshops and a symposium on cultural heritage planned as part of the celebration of Sarawak's 25th anniversary of independence in Malaysia. Workshops were held for each of the major ethnic groups in Sarawak--Malays, Bidayuh, Orang Ulu, Iban, Indians, Chinese, and Melanaus--in June and July, and the Symposium on Sarawak Cultural Heritage took place in Kuching from July 31 through August 5. The Government of Sarawak and the Organizing Committee are to be congratulated for the success of all events. A major result of the programs is the establishment of a foundation for the preservation of the cultural heritages of Sarawak's societies, a development we heartily applaud.

As is obvious upon a scanning of the contents of this issue, much attention is devoted to research among the Penan. Peter Brosius reviews the research and publications of Carl Hoffman based upon Brosius' three-year research among the Penan of Sarawak. Bernard Sellato provides a review from his lengthy research experience in Kalimantan. And Lars Kaskija contributes an analysis of literary sources on the Penan.

We also include articles from Kukila by Stephen and Anne Nash and by A. Prieme and M. Heegaard. These reports add considerably to the ornithology of Borneo.

We express our gratitude to all who have remitted payments, and especially to the following persons who have sent contributions for the work of the Council. (If our records are inaccurate and anyone's name is omitted, we lay the blame on our computer system--excluding processors--and ask that you notify us.) Contributors are: George and Laura Appell, Most Rev. Dr. Michael C. Coomans, John Elliot, Dr. Mohd. Yaakub Hj. Johari, Clive W. Marsh, Rex Marshall, James Schweithelm, and (TAD) East Kalimantan Technical Cooperation for Area Development Project.

RESEARCH NOTES

A SEPARATE REALITY: COMMENTS ON HOFFMAN'S
THE PUNAN: HUNTERS AND GATHERERS OF BORNEO

J. PETER BROSIUS

It has been many decades since anthropologists abandoned what Radcliffe-Brown condemned as "conjectural history" in favor of analyses based on extended field studies of particular communities. In the present study, however, we have, both in field method and in manner of argument, a return to this earlier tradition. The work serves as a reminder of why anthropologists do what they do, and illustrates the shortcomings of a method characteristic of an earlier time in our discipline. It is unfortunate that, in providing this reminder, the ethnographic record should have been so distorted. This is perhaps not so serious for Borneo specialists who are able to read the work with a critical eye. But for others with no previous exposure to Bornean ethnography, particularly those with a more general interest in hunter-gatherers, the misrepresentation of ethnographic reality is a serious concern.

In the following discussion, I take rather serious exception to much of what Hoffman has written. As this review proceeds, the reasons for my criticisms should become clear. I would prefer to avoid excessive attention to detail, but the failures of this work are such that this is sometimes necessary to set the ethnographic record straight. The fallacies of Hoffman's central argument are built up by cumulative misuse of ethnographic minutiae. In any anthropological discussion there are two levels of dialogue: presentation of the data themselves, and the interpretation of those data. Differences of opinion over the interpretation of a given body of data are of no great consequence for our discipline, and in fact are usually where its theoretical growing points are to be found. But such dialogue requires a reliable foundation of ethnographic data. When, to support a particular interpretation, a writer intentionally or unintentionally misrepresents the data, the basis for any further discussion is eroded. Herein lies the

primary shortcoming of Hoffman's work: through both omission and commission, Hoffman seriously misrepresents the ethnographic record. Thus the first task at hand must be to demonstrate how and where the writer has erred. In the following, I address not simply Hoffman's interpretation, but the questionable factual foundation upon which it rests.

Undoubtedly a major source of the inaccuracies found in this book lies in Hoffman's choice of field method. Hoffman worked in Kalimantan from August 1980 to November 1981, a period of some 15 months. During this time he visited perhaps a dozen Penan/Punan groups in Eastern and Central Kalimantan. It is impossible to determine precisely how many communities he visited or for how long but, by inference and by his own admission (personal communication), he spent no more than a few weeks with any single group. A broad-ranging survey may be an important preface or supplement to in-depth field research within a single community, but it is no substitute. By survey alone, field data inevitably lack depth and are of limited value. The question is, are survey data sufficient, and was the quality of Hoffman's field survey good enough to serve his purpose: to explain the ethnogenesis of the Penan/Punan? The quality and usefulness of information based on such a survey derives, as in any scientific endeavor, from the quality and rigor of the methodology employed.

The lack of ethnographic depth is aptly illustrated in chapter two, a "descriptive overview", where various aspects of Penan/Punan ethnography are treated in very cursory fashion: no topic, other than the distribution of Penan/Punan, is given more than 5 1/2 pages, and most are given on the order of 2 to 3 pages. With the exception of vague particulars on the distribution of various groups there is, ethnographically-speaking, virtually nothing in this section, or elsewhere in this book, that has not been said in previous publications dealing with Penan/Punan.(1) The presentation of ethnographic data is highly general, trivial and anecdotal, and one has the impression at times of reading a sort of generic hunter-gatherer ethnography. Given such a field method, there is also the danger that misconceptions may be reinforced rather than resolved, and this is precisely the source of many of Hoffman's errors.

Hoffman's methodology gives rise to another problem, which was his lack of opportunity to develop proficiency in any single Penan/Punan dialect. As Hoffman correctly points out, there is no single language spoken by Penan/Punan in Kalimantan. Thus all his communications, and all the quotations provided in the book, are in the medium of Bahasa Indonesia. One wonders why he bothers with such quotes. Indeed nowhere in the book does a single item of Penan/Punan vocabulary appear, with one exception, and here it is used incorrectly (Payau, Pg. 26). Elsewhere he provides only Indonesian vocabulary, and presents it as if it were Penan/Punan, such as when he tells us that the traditional Penan/Punan shelter is called a pondok (Pg. 30). Numerous other examples abound - babi hutan, sumpit, cawat, prahu, parang, and others. I am not aware of any other ethnographic monograph where this has been done. Nowhere does he indicate to readers that quotes are in Indonesian, which may mislead non-Indonesia/Malaysia specialists.

It is with regard to linguistic information that one of the primary shortcomings of Hoffman's work is revealed. On numerous occasions Hoffman makes assertions about the linguistic affiliations of various Penan/Punan groups, and about the linguistic relatedness of Penan/Punan dialects to those of sedentary agriculturists. Nowhere does he present linguistic evidence to support these assertions. Given his chosen field method, survey, one would at least have expected Swadesh word lists to have been collected, and perhaps included in an appendix. Such data would have enhanced his argument tremendously - or perhaps not - but would certainly have been invaluable for others in assessing the validity of his arguments regarding both the grouping and sub-grouping of Penan/Punan populations and their relationship with other Bornean populations.

Nowhere do we have any evidence that such word lists were collected. In two instances he mentions word lists (Pp. 15, 19), but it is unclear whether these were collected by him or by others. This is a critical area of omission, since a key part of his argument is based on the assertion, or on the creation of the impression, that adjacent Penan/Punan and sedentary agricultural groups speak nearly identical languages (Pp. 14, 20, 24, 25, 39, 58, 60, 62, 63). Such an assertion is highly suspect - it certainly does not

accord with the ethnographic situation in Sarawak.(2) In Sarawak there are two primary dialect-groups of Penan (ignoring for now the Punan Busang and sedentary Punan Bah) which Needham termed Eastern and Western Penan. These two dialects, though significantly different, are mutually intelligible. What is significant is that this relatively unitary linguistic unit is surrounded by sedentary agricultural peoples of over a dozen linguistic groups: Kelabit, Berawan, Kayan, Badang, etc. This is clearly a much more complex situation than that described by Hoffman.

Penan languages in Sarawak are part of the Kenyah language family. The question then is, would this not appear to support Hoffman's contention that Penan/Punan are retrograde agriculturalists? Clearly one could argue for the opposite perspective, that many contemporary agricultural societies derive from hunter-gatherer populations. In fact, this is what oral traditions suggest for groups such as Kenyah Lepo Tau (Whittier 1973) and Sebop. It is also more consistent with historical trends, since there are a large number of former hunter-gatherers in both Sarawak and Kalimantan who have settled in historical times, as Hoffman himself notes. It is often assumed that the process of settlement of nomads is largely a recent, post-colonial phenomenon. In fact, it is likely that this process is of much greater time depth. One cannot ignore, either, the relative valuation between rice and sago assumed by many Bornean peoples, for whom success in rice cultivation is held in high regard, and the consumption of sago the precise opposite. Penan are well aware of this attitude, and the rice ethos may have been a force in the gradual sedentarization of hunter-gatherers. The point here is that rarely if ever does the process work in reverse fashion, i.e. successful rice farmers abandoning this for a sago-based subsistence system.

One of the most severe shortcomings of this book is in the basic nature of its argument, which can be faulted on two counts. First, this is a classic straw man sort of argument. Hoffman sets this up for us in the first chapter dealing with the "Punan problem". We are led to believe that to this very day nobody has yet succeeded in "figuring out" the Penan/Punan, that they are still universally regarded as "wild men of the forest", and that he has been

the first to comprehend the significance of trade. He traces this conception back to Bock (Pg. 2), and provides for us a series of late 19th/early 20th century quotes which purportedly illustrate the persistence of Bock's conception. Such a conception is indeed interesting, and is consistent with Victorian evolutionism/historicism, but it does not originate with Bock. Hoffman could have presented an interesting discussion on the development of such notions in the light of 19th century assumptions. He certainly would have found that such assumptions were not limited to Penan/Punan, but had much wider currency, for instance concerning such peoples as Negritos in the Philippines and Peninsular Malaysia (See Rosaldo 1982). Hoffman does hint at this, particularly in his discussion of the Phi Tong Luang (Pp. 95-98), but not in the context of constructing his larger argument. Nevertheless, the heart of his argument is that such assumptions persist up to the present and are uncritically accepted. Yet the two most recent quotes he provides in support of this are those by Dalton in 1977 (Pg. 8) and Rubenstein in 1973 (Pg. 8). The first is a travel writer, while the second is a poet - both lack qualification regarding Bornean ethnography. The fact that he is unable to cite any recent anthropological observers in support of his central contention suggests that he is battling windmills.

Equally disturbing here are a number of serious omissions. The importance of trade among Southeast Asian hunter-gatherers is not an issue which has been ignored among anthropologists (Peterson 1977, 1978a, 1978b; Dunn 1975; Estioko-Griffin & Griffin 1975; Endicott 1974; Hutterer 1974, 1976, 1977; Benjamin 1973; Rambo 1979; Fox 1969). Yet Hoffman does not cite any of this literature. One wonders whether this omission is simple lack of awareness, or whether it is deliberate in order to convey an impression of originality to his argument. Some clarification of this by Hoffman would be welcome.

Given Hoffman's inattention to such a large and significant body of literature, the stridency of tone in much of his presentation is very irritating. Directly or by implication he accuses those who have worked in Borneo of being possessed of a certain "peculiar idea" (Pg. 1) or "colorful conception" (Pg. 1) with regard to Penan/Punan, that we persist in seeing them as "wild people of the woods" (Pg. 8), that this results from the neglect of Borneo

by anthropologists, and thus that "our misconceptions about the Penan are...inexcusable"(Pg. 9). Hoffman seems to believe that the Penan/Punan are "as much an enigma in 1982 as they were in 1882" (Pg. 55), because anthropologists "have insisted upon seeing these people as being somehow distinct, outside, and apart from the general pattern of Borneo's traditional life" (Pg. 55). He goes on to ask "a question perhaps more important to our understanding of the ethnographic picture of Borneo than many of us ever expected...just who are these Punan and what are they doing here?" (Pg. 61, emphasis original). Only a few "have noticed something amiss in the general conception of Punan as mysterious, rapidly vanishing aborigines" (Pg. 63). Of course, this delusion we have suffered is the result of our own intellectual rigidity. We apparently have difficulty escaping from our "usual conceptions of generalized, unilinear social evolution"(Pg. 98). Another misconception under which we labor derives from the 1966 Man the Hunter conference, where "the basic, widespread conception that modern day hunters and gatherers are vanishing relics of the paleolithic was codified and perpetuated" (Pg. 100). (3) As for Borneo specialists, "we need to stop thinking of Borneo as though it were another New Guinea" (Pg. 103).

And yet at times, Hoffman hints, we have come so tantalizingly close to a state of revelation, as when Cole (1945, 1947) denied the existence of Penan/Punan: "We are now...able to appreciate just how close Cole came to making my fieldwork unnecessary. For he correctly perceived, albeit for the wrong reason, that groups called Punan are not a single, distinct people, and he displayed remarkable intuition with his reference to the gathering of jungle products" (Pg. 93). Our whole problem, according to Hoffman, has been that "previously published information concerning Punan has been narrow in scope and highly specific to small individual localities" (Pg. 63). This is presumably a reference to standard, long-term participant-observation research. We have been hindered by "the utter lack of comparative field data on Punan groups in general" (Pg. 63). Needham, who surveyed Penan widely in Sarawak, might wish to differ on this point. Nevertheless, Hoffman tells us, "such a study has now been made, and I believe as a result of it we are presently able to answer some longstanding questions and resolve certain mysteries" (Pg. 63).

The second major fault with Hoffman's central argument is that the "issue" he raises is really no issue at all. The problem he is essentially addressing concerns the origin of the Penan/Punan - whether they are forest dwellers primeval or feral farmers who at some point made a rational decision to abandon agriculture in order to cash in on the benefits of trade. This problem is a non-problem in that it is unresolvable, except by resorting to the most tenuous sort of conjectural history. Other than detailed genealogical and oral historical accounts and external historical documents linking Penan to agricultural ancestors, which to my knowledge do not exist, I cannot think of any type of evidence that would resolve this issue. As noted, the existing historical evidence suggests precisely the opposite trend, that of hunter-gatherers settling and adopting agriculture. Genealogical links between Penan/Punan and sedentary communities do exist, but these links are uncommon and occur between members of two clearly distinct communities. This does not represent the transition of agricultural communities into hunter-gatherers, nor does it indicate a fluid and permeable boundary between nomadic and sedentary communities. With lack of any evidence, either direct or indirect, suppositions of this sort can rest only on conjecture. It is with good reason that anthropologists long ago abandoned issues of this sort.

Having dealt with the general issues raised by Hoffman, I now wish to examine the extent to which the data he presents accords with ethnographic reality. There are problems here as well. The first point concerns the relative proximity of Penan/Punan bands to longhouse communities. Hoffman states that Penan/Punan communities live in the forest "adjacent and contiguous to an area occupied by a specific sedentary agricultural people...this has usually entailed a Punan group living at the headwaters and tributaries of a river that is occupied - in its lower reaches - by a specific sedentary people with whom the Punan group is affiliated" (Pg. 24). This is true as far as it goes, but is misleading. Elsewhere (Pg. 56), he speaks of Penan/Punan living in "relatively close proximity" to longhouse peoples and states that "the dispersed encampments of the Punan group are generally no more than a day's walk from...sedentary villages". This is followed by several examples (Pp. 56-57), derived primarily from settled Penan/Punan communities, which give the impression that

proximity is generally even greater, a matter of a few hours travel. Here again the book reads like a generic Southeast Asian hunter-gatherer ethnography, since this is a point that has repeatedly been made with reference to other hunter-gatherers in the region. Here Hoffman's book (though not his argument) would have benefitted from some sense of geographical scale. Most of the groups for which he gives examples of proximity have been long settled, which he notes elsewhere, but not here. Had Hoffman had more intimate exposure to Penan/Punan, he doubtless would have provided a very different picture. Having previously done fieldwork with Philippine Negritos, what has so struck me about Penan/Punan in Sarawak is their degree of isolation from longhouse peoples, in most cases a minimum of two days travel from the nearest longhouses. Furthermore, Penan are completely self-sufficient in terms of subsistence. This is in great contrast to other Southeast Asian hunter-gatherers, and is one of the key features that make Penan/Punan ethnographically significant.

With regard to Penan/Punan subsistence, Hoffman again presents a highly distorted picture. In his first paragraph he speaks of "two species of large wild deer called Payau and rusa" and "the kancil or mouse deer" (Pg. 26). No person who has more than a fleeting familiarity with interior Sarawak or Kalimantan (especially in a Penan/Punan context), or has familiarized themselves with the ecology of Borneo forests, would make such a mistake. Payau is an almost generic Orang Ulu(4) term for the Sambar deer (Cervus unicolor), while rusa is the Malay term for this same species. There is also the small barking deer (Muntiacus muntjac), called Telao in many Orang Ulu languages, which seldom stands taller than 25 inches at the shoulder - certainly not large. Finally there is the mouse deer (Tragulus sp.), called Kancil or Pelandok in Malay and Pelanuk in many Orang Ulu languages.

As to the assertion that the Penan adaptation is as much riverine as it is forest-oriented (Pg. 28), this is rather debatable. Rivers are important to Penan in terms of landscape knowledge (see Brosius 1986). They do occasionally camp along the larger rivers, and are familiar with a number of fishing technologies, but this hardly represents a "riverine adaptation" in the sense that this might apply to sedentary longhouse peoples. Among

traditional nomadic Penan, fish is considered almost a hardship food, to be eaten only when no other meat is available. Cast nets and fixed nets (Pg. 28) are recent introductions. The production of salted dried fish (Pg. 29) is certainly not a traditional Penan/Punan enterprise, as anyone who would try to prepare this in the shaded, humid forest would soon discover.

On these same pages (Pp. 28, 29) Hoffman discusses the gathering of wild fruits. Wild fruits certainly are important to Penan/Punan, but are highly seasonal in their occurrence and not casually gathered on a year-round basis. The fruit season is of such importance to Penan/Punan that one would have expected some mention of this. With regard to honey, this may be important to coastal groups, but it is highly questionable whether this resource is of much significance to more interior Penan/Punan on a year-round basis. In three years with Penan Gang, I have seen honey consumed on only one occasion.(5) On Page 44 Hoffman speaks of "food gathering" as a women's activity. Indeed, one of the more significant features of Penan, counter to the "man as hunter, woman as gatherer" generalization is that, except for occasional fishing, the place of women in Penan subsistence is rather minimal and circumscribed, limited primarily to participation, with men, in sago processing. Groups of women almost never travel alone into the forest unaccompanied by men or at least boys.

Hoffman's treatment of Penan/Punan social and political organization is facile and inaccurate, again reflecting Hoffman's extension of generic assumptions about hunter-gatherers to the Penan/Punan. His first mistake is in asserting that these groups have "fairly uniform patterns of social structure and political organization" (Pg. 36), and using the Punan Batu and Punan Binai as typical examples. In fact, Penan/Punan social-political organization is fairly variable. Undoubtedly some groups, such as Eastern Penan in the Baram River watershed, are small, of fluid composition, and lack strong institutions of leadership. However, two groups as culturally and linguistically dissimilar as Penan Gang and Punan Busang share several notable similarities which are quite at contrast with the description provided by Hoffman, leading one to think that such features are probably shared by a number of groups in Kalimantan as well. One feature these groups share is

relatively large band size - 50-150 members - and long-term stability of band composition. These are certainly not the "amorphous unit with fluid composition and vague social boundaries" (Pg. 37) depicted by Hoffman. With regard to leadership, both Penan Gang and Punan Busang claim the existence of aristocrats, and this has a strong genealogical basis. This is a complex issue, and a full discussion will not be attempted here. The point is that, among these groups, leadership is not "temporary and ad hoc" (Pg. 36), and Penan/Punan groups are not "an acephalous unit of identity" (Pg. 37).

One of the more naive contentions defended by Hoffman is that Penan/Punan are little more than portable Kayan (or Kenyah, or whatever). He states (Pg. 49) that "'Punan culture' is precisely what one would expect of nomadic Dayaks" (emphasis original). He mentions this in the context of material culture (Pp. 30-31), subsistence technology (Pg. 29), and religion (Pp. 47-49). Of course, Penan/Punan do share many ethnographic features with their sedentary neighbors - this might in part be due to the fact that they maintain social interactions with them. Such a simplistic argument not only does violence to the ethnographic record but also, in effect, dismisses the entire anthropological enterprise as irrelevant, since it must then be assumed that variations between Penan/Punan groups, and between these and sedentary longhouse communities, are unimportant.

Consider the contention that "The traditional religions of Punan groups are abridged, trimmed-down or 'portable' versions of those adhered to and practiced by their sedentary Dayak neighbors" (Pg. 47), and that "Rather than being essentially different from sedentary Dayak religion generally, the religion of Punan groups is a scaled-down version, stripped to a bare utilitarian minimum to serve the somewhat specialized needs of nomadic hunters and gatherers" (Pg. 49). This is roughly like saying that Quakerism is a stripped-down version of Roman Catholicism. One wonders how anyone could make significant statements about religion, a sensitive and difficult subject in all fieldwork, after only very brief acquaintance with any single group. Around 1900 a German anthropologist by the name of Gunther Tessmann conducted a similar survey of South

American tribes in which he detected no trace of religion in the great majority of them (Tessmann 1930).

Hoffman devotes two pages to explicating his backpack theory of religion, in an account which could easily have been derived from Hose, Roth, Elshout or others. This account, which states specifically that "Punan religion derives (emphasis mine) from sedentary Dayak belief systems" (Pg. 49), shows ignorance of the richness and complexity of Penan/Punan religion. Omenology certainly was an important aspect of traditional Penan/Punan religion, but a very circumscribed aspect of it. Hoffman ignores, or was never aware of, a vast body of beliefs and practices relating to thunder, animal mockery, food-mixing, death, and a rich and poetic figurative vocabulary involving the addressing of the supernatural world and the concealment of human activities from malevolent spirits. What Hoffman failed to realize is that the Penan/Punan use omenology as an idiom of reference to the traditional religion. When one asks Penan Gang, who are presently followers of Bungan, to describe their traditional religion, they inevitably refer to the importance of omens.

With regard to similarities in subsistence technology, Hoffman does not claim that Penan/Punan subsistence is a portable version of that practiced by sedentary agricultural communities. However, he does argue that "The subsistence activities and techniques that Punan have practiced are common among sedentary peoples as well" (Pg. 29). True enough. He then argues that "There is...no qualitative difference between the subsistence technology of Punan groups and that of sedentary agricultural peoples. Stated simply: with regard to subsistence, Punan groups do nothing that is not done by sedentary people as well. The difference is one of emphasis" (Pg. 29). Apparently the services of ecologically-oriented anthropologists are no longer needed.

Next, it is necessary to examine the manner in which Hoffman deals with the ethnic complexity of East and Central Kalimantan. A minimum expectation of such a work is that it should clarify the ethnographic record. Here however we have a work that confuses and obscures things further. There are two respects in which this is done: (1) ethnic nomenclature, particularly concerning the

"Penan/Punan" issue, and (2) the nature of ethnicity, between Penan/Punan groups, and between these and longhouse groups.

Concerning ethnic nomenclature, before wading through Hoffman's confused account, I feel it might be useful to explain how the terms Penan and Punan are used in Sarawak. I would not claim that this is precisely how they are used in Kalimantan, but this may give us some perspective. This is indeed a complicated issue, but one which we should expect a field researcher to be able to clarify for his audience. Hoffman seems to remain confused: I certainly was after reading his account. Among both Eastern and Western Penan in Sarawak, the autonym they apply to themselves is Penan, followed by some locational term-Penan Gang, Penan Silat, Penan Serungo, etc. Then there are the Punan Busang, of which there are presently two communities in Sarawak.⁽⁶⁾ Finally, there are the fully agricultural, sedentary Punan Bah of the Balui, Kakus and Pandan Rivers. One complicating factor is that Kayan refer to all hunter-gatherers as Punan, while Kenyah and Penan use the word Penan. Among all groups - Kayan, Kenyah, Penan and others - the words Penan and Punan are used in a generic sense to include such non-Penan/Punan former hunter-gatherers as Buket (Ukit), Sihan, Lisum, Bukitan and even, following my descriptions of them, Philippine Negritos (Penan Pilipin) and American Indians (Penan Merika). The fact that the term Penan is used by Penan Gang as a generic term does not diminish its significance as a meaningful autonym among Penan themselves.

In his book, Hoffman uses the term Punan indiscriminately, not only in referring to groups which are almost certainly Penan but groups who, though former hunter-gatherers, are neither Punan nor Penan - Lisum and Beketan. He does note that there are significant linguistic and cultural differences between various "Punan" groups, but such a statement by itself is largely meaningless. We are given no linguistic or other criteria for judging this, nor are we able to form any picture of the relatedness of various groups to each other. An ethnography should be something that others can build on. In my own work I have found Hoffman's account hopelessly confusing in trying to determine, for instance, the relatedness of Sarawak Penan

to various groups in Kalimantan. Much more useful have been works by Whittier, Hildebrand, and others.

Part of the problem is apparently Hoffman's own confusion about nomenclature. When referring to the "Penan/Punan" terminological debate, Hoffman concludes that "both sides of the argument are probably correct" (Pg. 7). Elsewhere, in what appears to be an attempt to overstate his case by playing down the Penan/Punan as distinctive ethnic groups and merely mobile appendages of longhouse communities, he makes the completely fallacious statement that "the word Punan was far more commonly a term of reference applied to nomads by sedentary peoples than an actual label of identity for the nomads themselves" (Pg. 17). He continues by stating that they "will on occasion, refer to themselves as Punan, but they are usually more prone to speak of themselves using some local lexeme meaning 'us'. In either case, Punan is rarely a meaningful ethnic name in the minds of peoples so termed" (Pg. 17). Given the fact that he then provides the "Punan Lisum" as an example of this, displays his ignorance of various ethnic identities in his field area. He then makes an amateurish attempt to find an original meaning for the word "Punan" from various lexica (Pp. 17-18). He concludes with the wholly absurd statement that "for native peoples of Kalimantan, the use of the word Punan to designate groups of people involves more a description of locational and behavioral characteristics than assumptions of ethnic origins" (Pg. 18, emphasis original).

As was noted, the words Penan or Punan are also used in a generic sense, even among Penan themselves, but Hoffman either missed or ignores the significance of this word as the autonym applied by the majority of hunter-gatherers in central Borneo to themselves (excluding groups such as Buket, Sihan, Lisum, and Bukitan). He further misconstrues the use of geographical referents (for example Penan Berun) in Penan/Punan autonyms. Such referents are not unimportant to Penan. Any given Penan/Punan group may refer to itself by any of several different names, but this does not mean that these names are unimportant. True, there is no single name which is the name for any particular group. What Hoffman failed to recognize is that various names are used in a sort of segmentary fashion, with an historical and genealogical referent. To give a brief example, Penan in Long Jek may refer to themselves

as Penan Apat, Penan Gang, Penan Belaga or Penan Long Jek. No single name is the correct name, but depends on the immediate context of inclusiveness in reference to other Penan groups. This inclusiveness is an artifact of historical and genealogical commonality. Yet Hoffman states that such group names are "rarely a label of identity by which people refer to themselves" (Pg. 18), and that in "trying to ascertain the 'real names' of Punan groups was a matter far more important to me than it was to the Punan themselves" (Pg. 18). This statement must be seen as entirely misinformed.

It appears to me however that, rather than innocently misinformed, Hoffman engages in a bit of fast footwork in order to lend strength to his argument and, in so doing, does violence to the ethnographic record. In the scant 1 3/4 pages in which he discusses "linguistic affinities" (Pp. 19-20), Hoffman notes accurately that various Penan/Punan languages vary widely, and may be more closely related to the dialects of various sedentary agricultural groups than to those of each other. In Sarawak, for instance, Penan Gang and Kenyah Badang are much more closely related to each other than either is to the completely mutually unintelligible Punan Busang. Certainly I would agree with Hoffman that "The Punan do not form any sort of linguistic isolate; they do not speak languages unrelated to those spoken by sedentary agricultural peoples" (Pg. 20). It is the conclusions he draws from this where he engages in a bit of slippery obfuscation. He states that "linguistic evidence does not support the assumption that the 'Punan' comprise a single, uniform people who are ethnically distinct from sedentary agriculturalists" (Pg. 20). What he is doing here is linking the correct idea that the Penan/Punan are not a single people (which has never been claimed by any reliable observer) with the fallacious claim that they are indistinct from sedentary peoples.

The above is not an isolated case. There are numerous other examples where Hoffman takes liberties with the ethnographic record. He uses the vague phrase "culturally affiliated" (Pg. 24) with reference to the relationship between Penan/Punan bands and sedentary communities, and on the next page (Pg. 25) slips into the single term "affiliated" with reference to several such specific relationships in a manner that seems intended to create the

impression that Penan/Punan bands are mere off-shoots of specific longhouse communities. He states that Punan have a "cognitive map" distinguishing nearby "people of our kind" and more distant "people of other kinds" (Pg. 24). According to Hoffman:

"People of our kind" have included the Punan group and the specific sedentary people with whom this group is economically interdependent, and with whom it shares similarities in customs, historical traditions, and sometimes language as well. Those belonging to the second category, "people of other kinds", are culturally and historically different; the members of the Punan group have perceived them as being jauh or "distant" - distant culturally as well as geographically (Pg. 25).

He further suggests that Penan/Punan labor under a sort of "mental constraint" which prevents them from straying "too far from 'our kind'" (Pg. 25). He carries this misrepresentation to absurd lengths, and displays his own ignorance, when he claims that the basis of the relationship between Penan/Punan and sedentary communities is "a strong sense of ethnic similarity" (Pg. 38). He attempts to convey the fallacious idea that cultural and linguistic differences between Kenyah Lepo Tau and Punan Oho, and Kenyah Lepo Timai and Lisum are negligible (Pg. 39). He considers such relationships the "maximal unit of social organization" (Pg. 39). This is quite at odds with what anthropologists would normally consider social organization to be. If Hoffman wishes us to believe that Kenyah and Penan/Punan society are isomorphic, he has either been deceived himself or is attempting to mislead us in support of his argument. Likewise when he states that "the adhesive element that bonded nomadic hunting and gathering families to a specific sedentary people was ethnicity" (Pg. 39, emphasis original).

Hoffman would have benefitted from some degree of historical perspective. We are given the impression from his discussion that the relationships between nomadic and sedentary communities are of great time depth. In reality, Penan and Punan with whom I am familiar have generally formed close relationships with a series of longhouse communities through time. Such relationships may endure

for several generations, but they are equally likely to be severed after relatively brief periods or to be intermittent. The Penan Gang, over the past century, have variously had close relationships with Seping, Sebop, Lirong, Lahanan, Kenyah Sambop, Kenyah Uma Pawa, Kayan and others. Furthermore, whereas many Penan groups do remain in the same general area over many generations, even when longhouse communities with which they have been associated move away, other Penan groups move great distances, to areas which they never previously inhabited. This is clearly a very different picture from that presented by Hoffman.

In defense of Hoffman, observers may be confused by the manner in which both Penan/Punan and sedentary peoples talk about their relationships. Hoffman presents numerous examples where individuals assert solidarity, affinity and even kinship (Pp. 24, 38-39, 58-60, 62). Indeed, I myself have heard many such statements made by Penan, Kayan and Kenyah. A Penan, for instance, may claim emphatically that a certain Kayan is a "real, true sibling" (atek padi lan), or that people of a certain longhouse are of the same origin as themselves. But no competent anthropologist would accept such statements at face value. In some cases, such claims may be made because of the past temporary fosterage of a Penan child by a particular longhouse family. Another reason may be a past Sebila relationship, originating in a blood pact made by two individuals. Thirdly, such statements may be the result of actual genealogical relationships resulting from particular marriages between Penan and longhouse persons, often more than a century previously. Finally, the most usual context in which such statements are heard is when Penan and longhouse peoples are together. In such cases the assertion of kinship is a matter of etiquette. On several occasions Penan and Kayan have reciprocally made such claims in my presence. When later asking Penan about the genealogical particulars of such purported relations, I was told that they were not actually kin, but that this was said out of politeness and good manners. It would be useful to know the context of the statements Hoffman records, whether they were made in the presence of Kayan, Kenyah or other longhouse-dwelling guides. Hoffman apparently took such statements literally without perceiving what was behind them. He also failed to consider that such statements might be made out of a feeling of inferiority. Penan/Punan are

treated patronizingly by longhouse peoples and government agents, and are made to feel that their past or present lifestyles are something to be ashamed of. Settled Penan/Punan groups in particular may be quite eager to separate themselves from their past by claiming affinity to longhouse peoples.

In pressing his point concerning the relatedness of nomads to sedentary communities, Hoffman further errs in making sloppy use of the literature. For instance, in quoting Beccari's statement concerning the relatedness of Kejaman, Sekapan, Kayan and "Punan", and Brooke's note on the relatedness of "Punan" and Melanao, Hoffman fails to realize that it is the sedentary, agricultural Punan Bah who are being referred to (Pg. 62). He also misrepresents Urquhart's account concerning the relatedness of Penan Silat and Kenyah Nyamok (Pg. 62). I have collected this same account, with further genealogical details. It refers to the marriage between a Kenyah woman and a Penan man, rather than to any purported isomorphism between these two groups, a point which is clear in Urquhart's account. Hoffman further misrepresents Blust's assignment of Sarawak Penan languages to the Kenyah language group. Blust states that "there are no linguistic grounds for regarding Penan dialects as distinct from Kenyah" (Pg. 63). Blust does not claim that Penan themselves are indistinct from Kenyah.

Finally, it is necessary to review Hoffman's treatment of the issue of trade. He begins with an anecdotal account of an incident he experienced early in his fieldwork of realizing that Penan/Punan have traded rattan and other forest products with Kayan from "long, long ago" (Pg. 64). This objectionable rhetorical device seems intended to transport us along with Hoffman in his amazement, and his "discovery" that such trade has great historical time depth, when in fact it appears to demonstrate that either Hoffman was not terribly familiar with the literature on the Penan and other Southeast Asian hunter-gatherers before going to the field, or engages in a deliberate attempt to use simplistic rhetoric ("my mind racing") to woo those not familiar with the literature to his argument. I address this part of his account because it seems illustrative of the overall way that he constructs his argument.

With regard to trade, it is Hoffman's contention that "It is trade...that has been what these Punan of Borneo are all about. It is trade...that has generated the particular type of hunting and gathering adaptation known to three generations of western travelers and scholars. It is trade that has created and perpetuated a specific ecological niche that has been occupied by groups of people known as Punan" (Pg. 85). Elsewhere Hoffman rejects Needham's statement that Penan/Punan "need to trade with the settled peoples...in order to remain nomads" (1972:177-178), and instead argues that:

Punan do not trade in order to remain nomads; they have instead remained nomads in order to trade. Punan do not collect forest products to support themselves while hunting; they hunt - and gather the fish (sic) - to support themselves while collecting forest products. Trade is not just another thing the Punan do; it is essentially the thing that Punan do. It is, I believe, the collection and trade of forest products, and not hunting, that historically has been the *raison d'etre* of nomadic, primary forest groups known as Punan. It has been both the demand for these forest products and the local need for the goods they bring in exchange that have led to the hunting and gathering adaptation that modern-day westerners have observed - the existence of groups called Punan (Pg. 89).

Conjectural history at its finest. What evidence does Hoffman adduce in support of this contention?

He first makes a point about hunting. In contradiction of earlier statements, that Penan/Punan are to be found at no great distance from longhouse settlements, he must admit that they dwell "in deep forest areas" (Pg. 89), by which he presumably means beyond hunting range of longhouse peoples. The point he makes is that Penan/Punan do not live in the deep forest in order to hunt, since they could as easily find an abundance of pig in areas adjacent to longhouses. This is an arguable, though not necessarily fallacious, point. Let us grant him this. The argument then is that, since Penan/Punan are not in the deep forest to hunt, they can only be there for the purpose of collecting

forest products for trade. Hoffman rather conveniently forgets to mention that sago (Eugeissona utilis) is not an unimportant food resource to Penan/Punan. Pig can indeed be found just about anywhere if one looks hard enough (and one does have to look rather harder in the vicinity of longhouses). But unlike pig, sago is immobile. Penan/Punan must thus locate themselves in proximity to sago concentrations. They have a clear idea of the relative abundance and location of sago groves throughout their foraging areas. Any Penan/Punan one cares to ask will explicitly articulate that it is the relative abundance of sago in various locations in the forest that determines the location and duration of Penan/Punan settlements. Had Hoffman not heard this himself, he could have found numerous statements to this effect in the literature.

I do not wish here to underemphasize the importance of trade to Penan/Punan. Certainly trade has been an important facet of their forest adaptation for untold generations. But it is one thing to say that trade is important to them, and even that they cannot exist in the forest without it, and something else again to claim that this is what they are "all about" (a less than rigorous concept), their *raison d'etre*, or that this explains their origins. Along with Penan, virtually all Southeast Asian hunter-gatherers do rely on trade. What has impressed me, as I have come to know the Penan, is how relatively much more self-sufficient they are in terms of subsistence and in their reliance on external goods. Many Negrito groups, both in the Philippines and in Peninsular Malaysia, may have almost daily contact with agricultural peoples, at least during certain parts of the year. Many Penan, by contrast, may have contact with longhouse peoples perhaps only two or three times a year. One would then have to claim that, to a much greater extent than Penan, trade is what these phenotypically distinct Negritos are "all about", and that this explains their origins.

If one wishes to believe Hoffman, one would have a hard time rectifying the actual nature of Penan trade resource exploitation. Hoffman's description would lead one to believe that Penan are forever in search of trade goods. This may be true for some of the coastal groups discussed by him, but most certainly is not the case in more interior areas. One aspect of my research has been to collect the

sequence of settlements for a single Penan band from ca. 1925 to the present. One thing this sequence shows is that trade-related collection and production occurred in bursts of activity, in anticipation of making a trading trip. When such a trip is anticipated, either an entire band or several families will move to an area where, for instance, damar or rattan is plentiful. Resources such as damar are not ubiquitous, but occur in isolated clumps in certain higher elevation areas, and visits may be made to these areas for the express purpose of collecting these resources. Once sufficient damar has been collected, or mats and baskets produced, the group returns to areas where sago is more available and resumes its normal round of activities.

Hoffman's argument raises other questions. If people decide to specialize in trade, there must presumably be some particular advantage to this. But being on the supply end of a trading enterprise in the Borneo forest is neither easy nor profitable. If it were profitable, we should expect to find bands of nomadic Foochoos roaming the forests of Borneo. The products traded by Penan are notoriously difficult to collect, produce or transport. A single mat can easily take over three weeks to produce. Damar is less difficult to collect, but it must be transported over long distances packed in baskets which may weigh up to 100 lbs. Bezoar stones are only rarely found. The large quantities of rattan brought to trade by settled Penan mentioned by Hoffman (Pg. 64) are certainly not characteristic of nomadic groups.

Penan conduct trade generally in one of two ways—either by transporting goods to longhouses, trade meetings or market centers, or by longhouse traders travelling to Penan. In the former case the problem is one of transport, if not bringing the goods to market, then transporting salt, sugar, metal, cloth, tobacco and other goods back to the Penan community. In the latter case, the problem for Penan/Punan is in the terms of trade. For goods transported to them, Penan/Punan get very little in return. Longhouse peoples often remark how easy it is for them to cheat the Penan. For the Penan, trade is by no means a profitable enterprise. I might remark, incidentally, that these trade relationships between Penan communities and particular longhouse traders, who are usually aristocrats, are a vital aspect of the trade relationship and one which is

totally ignored by Hoffman. There is no mention of Sebila relationships. Since trade is at the center of his argument, this is a serious shortcoming. It is also curious that he makes no mention of actual transactions occurring between nomadic and sedentary individuals or communities, and we have no idea of the terms of trade.

Finally one must ask two rather obvious questions. First, does one have to be nomadic to collect forest resources? Certainly it helps, but by no means is it necessary. In the 1970's the price of garu wood rose, and large numbers of Kayan, Kenyah and others scoured the forests of the upper Balui, areas inhabited by Penan, in search of this resource. Earlier in the century large numbers of Iban likewise travelled throughout the forests of Sarawak in search of rhinoceros horn. It is also significant that presently settled Penan throughout Sarawak and Kalimantan continue to collect and trade forest resources. Also, concerning this relation between trade and nomadism, one might ask why, with the imposition of colonial governments and the increase in trade volume which resulted, one does not observe any trend toward sedentary communities becoming increasingly nomadic or, as Hoffman would have it, becoming Punan.

Secondly, how would Hoffman account for the distribution of hunter-gatherers in Borneo? A look at a distributional map of nomads in Borneo will show that they occur in an east-west band through the middle of the island, being absent from Sabah and from the southern part of Kalimantan.(7) Hoffman does refer to this distributional pattern (Pg. 11), but not with much clarity. Certainly there are (or were) abundant forests in those areas, and a number of important entrepot trade centers. My own guess is that it has something to do with the distribution of Eugeissona utilis in Borneo, though this may well be mistaken. Any comment from readers concerning the presence or absence of this species in various areas of Borneo would certainly be welcome. The question is why there are no hunter-gatherers in large areas of northern and southern Borneo, and what implications this has for Hoffman's argument.

There are numerous other shortcomings of Hoffman's work which I have chosen not to focus on, but which must be considered by serious readers of this book. In a very

general way he ignores or does not comprehend many critical aspects of Penan/Punan subsistence, settlement and social organization that make them notable among the world's documented hunter-gatherers: large group size, long-term stability of group composition, long duration of settlements, and others. He almost completely ignores the immense body of Dutch sources on Kalimantan. He ignores a number of important references, such as Stohr's discussion of Bornean funerary customs (1959), articles by Nicolaisen (1976a, 1976b), Langub (1972, 1974), Urquhart (1951), Ellis (1972), Arnold (1958) and except for scattered references, almost completely ignores the work of Needham. Though most of these works concern Sarawak Penan, they contain information highly relevant to Hoffman's argument. He makes no attempt to relate his distributional or nomenclatural data to the works of Whittier, Hildebrand or others. This would have been extremely helpful, as would have been a more detailed map specifying the locations of groups he visited. As noted, the inclusion of wordlists would have been invaluable.

Hoffman devotes 5 1/2 pages to what he calls "residence", when in fact he is talking about settlement systems (Pp. 21-26). His discussion of the antiquity of Chinese trade in Borneo is extremely amateurish and includes, for instance, Heine-Geldern's imaginings about stylistic similarities between Chinese and Bornean motifs (Pg. 65), the purported infusion of Chinese blood into Murut, Dusun and Penan/Punan populations (Pp. 67-68), and the derivation of place names (Pg. 67). The latter two considerations in particular do not merit inclusion in a serious anthropological discussion. Hoffman attempts to create the impression that those who reject his argument are hopeless adherents to unreformed 19th century unilinear evolutionism (Pp. 85, 98), another of his slippery rhetorical devices that may persuade those not familiar with Bornean ethnography. At the same time, Hoffman seems to be adhering to a naive sort of decision theory of adaptation, that individuals or communities make conscious decisions to occupy a niche when they perceive some immediate material advantage. Congruent with this is the notion that the Penan/Punan are forest nomads because it pays off. Such an assumption denigrates the Penan/Punan adaptation as unworthy in its own right. These are enduring, self-perpetuating societies which, though most certainly shaped

by ecological forces and constraints, exist independent of direct material benefits. Though widely divergent linguistically and culturally, each society has its own ethos, its own genealogical charter, and its own deeply historical relationship to the surrounding forest. Bornean nomads are not Kayan on the hoof, nor are they generic forest entrepreneurs. They are Penan Gang or Penan Luda or Punan Busang. What anthropologists should be doing is not dismissing or obscuring this, but trying to understand it. One cannot help but wonder what form Hoffman's argument would have taken had he remained with a single Penan/Punan group.

There are numerous other shortcomings of this book which I have chosen not to focus on, so as not to detract from what I feel are the central issues: not merely the unreliability of his data, and the weaknesses of his arguments and conclusions, but what appears to me to be a purposeful attempt to obscure the shortcomings of his data, to ignore certain data that run counter to his argument, and to use the available literature in a partial manner. Further, the rhetorical devices he employs have no place in anthropological discourse, particularly when these result in the misrepresentation of ethnographic reality. It seems he tries to strengthen with rhetoric what his argument is lacking in evidence. At base, this work is little more than a litany of assertions: the texture conferred by ethnographic detail is conspicuously absent. This is a classic case of an investigator allowing his preconceived conclusions to determine the shape and content of his argument, rather than following one's data wherever it may lead. To paraphrase the quote provided for us at the beginning of his book, I have stared a long time at Hoffman's book, and its strangeness has yet to disappear.

NOTES

1. An observation first made by K. L. Hutterer.
2. Nor in many parts of Kalimantan. G. N. Appell (personal communication) reports that in the area of Kalimantan Timur where he worked, the languages of

neighboring Belusu and Punan are not mutually intelligible.

3. Here again Hoffman ignores a major body of literature, concerning the place of ethnographic analogy in archeological theory and in speculations about human evolution. It is precisely the effort to deal with this issue that has generated a great deal of theory in research related to hunter-gatherers, particularly in the past decade.
4. Here I use the term Orang Ulu in the sense in which it is used in Sarawak, referring to non-Ibanic peoples of the interior - Kayan, Kenyah, Kajang, Penan/Punan, Lun Bawang, Kelabit and others.
5. As I was leaving the field in September 1987, it appeared as though a very large honey season was in store, from the Tutoh River all the way to the Plieran/Seping area. I had nothing like this in the previous three years.
6. In 1984 the Punan Busang Kihan moved from the Iwan River in Kalimantan, to Lg. Unai, in the far headwaters of the Balui.
7. This point was originally made by G. N. Appell.

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THE NOMADS OF BORNEO:
HOFFMAN AND "DEVOLUTION"

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The following comments deal mainly with Carl L. Hoffman's original Ph.D. dissertation (1983) and subsequent contribution to Carmel Schrire's book Past and Present in Hunter Gatherer Studies (1984). Other writings by Hoffman, such as his contribution to Michael Dove's book in Indonesian and two papers in this Bulletin (see References List), will not be considered here.

Hoffman's thesis, as provocatively stated in Dissertation Abstracts International, is the following:

It is suggested in conclusion that the 'Punan' of Borneo are in fact an ethnically diverse assortment of peoples, that they derive originally from various sedentary agricultural groups, and that their nomadic hunting and gathering way of life is a relatively recent 're-adaptation' that revolves essentially around the collection of forest products for trade.

Before discussing the crux of the question raised (and allegedly solved!) by Hoffman, that is, ultimately, that of the origin of the nomadic hunter-gatherers of Borneo, I would like to point at a number of weaknesses and shortcomings in Hoffman's ethnographic field work, as well as background, data, and in the use he makes of it. As Brosius puts it, interpretation is a subject for discussion, but the data on which it rests should be reliable, and no anthropologist with a reasonably good knowledge of Bornean ethnography will accept Hoffman's data at face value.

The following will be presented as a parody of the layout of Hoffman's contribution in Schrire (1984).

1. Hoffman and the Literature

One first question one asks oneself when reading the list of references at the end of Hoffman's dissertation is: Is Hoffman aware that the Dutch have been present in Borneo during several centuries, and in the hinterland, where most nomads live, since the turn of this century? His bibliography amounts to some 80 entries, of which only one refers to a Dutch source, and yet the author's name is misspelt and the title given is that of an unknown manuscript dated 1901, referring probably to an article published in 1903. When working on my own dissertation, I was able to find some 40 Dutch documents (out of over 250 bibliographical entries), a number of them dealing at least partly with the nomads of Borneo. There were probably more to be found, since my survey of Dutch archives was incomplete and my command of the Dutch language rather poor.

Dutch colonial officers, physicians and missionaries, although most of them were not trained ethnographers, provide a lot of valuable, yet scattered, information on a wide range of nomadic groups dwelling in regions, and speaking *linguae francae*, of which those Dutchmen had a fair knowledge. I found those bits and pieces of ethnographic data generally very reliable.

Besides Dutch sources, one can mention a smaller number of German sources, some of them prominent, and, although the post-independence Indonesian literature on the nomads is not rich, it provides several relevant documents,

be they local manuscripts or government reports, that Hoffman could have read. Instead, only one Indonesian source is cited.

It is a pity that this rich corpus of bibliographical data has remained absolutely untapped in Hoffman's work. One can only wonder whether this was deliberately so or due to a total lack of command of foreign languages. It appears anyway that Hoffman did not bother to improve his access to this literature in his subsequent work, since his 1984 bibliography does not list a single non-English item!

It is true that English-language sources, mostly British documents on Sarawak, part of them recent, are very valuable, but Hoffman worked in Kalimantan. Besides, some of his references, such as 19th century adventurer Bock (seemingly his favorite), or the American Miller, were definitely not authorities on the subject of the nomads, not to speak of this travel-guide compiler by the name of Bill Dalton.

An outcome of this partial use of the literature, intentional or not, is a strong bias in Hoffman's background data, and presumably a subsequent bias in his interpretation. A geographical bias, first, since he uses side by side his own field data from the East-Kalimantan and literature data referring to Sarawak, as if one could reach relevant conclusions about the farmers of central France by drawing information from Belgian archives. It is beyond doubt that the situation of the Punan Batu of Berau and that of the Penan Gang of Sarawak were and still are quite different. A historical bias, then, since historical information on the Penan of Sarawak, however reliable, is not perfectly relevant to the study of the Punan Batu. The result, as can be seen in Hoffman's dissertation, is methodologically confused and confusing. This may just be what the author was aiming at.

2. Hoffman and Languages

As has been said above, one can suspect that Hoffman was not familiar with the Dutch language. How did he deal with linguistic matters while in the field?

Hoffman visited some fifteen nomadic or formerly nomadic groups, according to his map (1983:33), presumably spending very little time among each of them. He apparently communicated with them in Indonesian, more probably than not in a pidgin Indonesian, as most of these groups speak a poor version of the national language. Hoffman, however, gives us items of vocabulary without even mentioning that they are Indonesian, inducing us to believe he could communicate in the Punan languages. As Brosius has correctly stated, there does not appear a single item of vocabulary in any "Punan" language in Hoffman's work. Instead, we are faced with Indonesian words, some obviously confused with regional terms (like rusa and payau), some too vague (paku, 1983:56, is not "a type of fern", but the generic term for "ferns"), some misspelt (like dinda, 1983:84, kayu reba, 1983:99, kamarau, 1983:143). It therefore appears that Hoffman's command of the Indonesian language was well below the minimum necessary to carry out a field study among any ethnic group in Indonesia.

Let us go back to the "Punan" languages. It seems fair enough that Hoffman could not reasonably learn fifteen dialects or languages. But he could reasonably collect basic, Swadesh-type, vocabularies for each of them. I am inclined to believe that he did not. Every now and then in his dissertation, we come across statements like "the Punan Kelai insisted that their language was very close to that of the Segai" (1983:40), "the Punan Lisum told me that the language they speak is similar and mutually intelligible with (that of) the Kenyah Lepo Timai" (1983:40; also 78; emphasis in both sentences is mine). What evidence does he provide for such assumptions? Didn't he care to check? While the first assumption seems correct, and confirmed by Guerreiro in this Bulletin (1985), the second is not. Wordlists of these two languages, collected by myself, show less than 30% cognates. Now, one sees no reason why the Punan Lisum and the Kenyah Lepo Timai should have a similar language since the Lisum came a long way across from Sarawak not so long ago and contrary to what Hoffman states, have had therefore only a recent association with the Lepo Timai. This typical case of insufficient investigation, followed by hasty conclusions, inevitably casts a doubt on the rest of his assumptions that he fails to support with an acceptable evidence.

3. Hoffman and Time

As for languages, Hoffman offers a number of blunt statements concerning the history of the nomadic groups he has surveyed. Some of those statements appear groundless. He was told, he writes (emphasis mine), by Kenyah Lepo Tau that they and the Punan Oho are descendants of a common ancestor (1983:77); these two people have been economically symbiotic for as long as anyone can remember (1984:131); he was told, again by the Punan Lisum that they and the Kenyah Lepo Timai have always had the same customs and almost the same language, that they were "the same people" (1983:78; 1984:133). However, he acknowledges that the Punan Oho (1983:26) and the Lisum (1983:29) came from Sarawak (while the Kenyah did not). Had Hoffman investigated further in languages, he would have found out that Punan Oho and Punan Lisum languages not only show marked affinity (1983:28), but are one language (my wordlists are clear enough on this). In fact the Punan Oho are Lisum. Had he investigated further in their oral tradition and in the literature, he would have discovered that the Punan Lisum lived in the Belaga area of Sarawak and left between 1910 and 1920 to settle in the Apo Kayan and start their "affiliation" to the Lepo Tau (see Deshon, 1901a, 1901b; Anonymous, 1907; Elshout, 1926:243).

The Punan of the Murung have been settled since the 1930s, according to Hoffman (1983:29), and this is true of those of Tumbang Topus (who were the last to do so). But Hoffman states that, being part of the same culture complex as the Siang and Ot Danum, they have "since time immemorial" buried their dead in the Ot Danum fashion, that is with a major feast including the sacrifice of a number of pigs, or even a buffalo (1983:94-95). Who ever heard of forest nomads breeding pigs and buffaloes? With some more insight in their oral tradition (and a bit of common sense), Hoffman would have learnt, as I did, that the Punan of the upper Murung were "affiliated" to the Long-Gelat of the Mahakam long before falling under the cultural influence of the Ot Danum, and that they did not adopt the Ot Danum type of funerals before 1900, that is about 30 years after the establishment of the first Punan village (see Sellato, 1986:222 thru 288).

But it appears that Hoffman is not interested in history. Such a lack of concern for the historical background of the local groups he visited is puzzling, as he is supposed to show us what none of us has ever been able to see, that is, the real origin of the nomads of Borneo.

4. Hoffman in the Mind

Now, why is it that Hoffman does not care about the literature, linguistics or history? A hint was provided to me during one of my visits to a Punan Murung village, some time after Hoffman's visit. He had spent just a couple of days in that particular village. As I was looking for elderly people to interview, we came to talk about him. Extract from my notebook:

Q: Did he ask questions?

A: Not much; he told us stories about other suku.

Q: What questions did he ask?

A: Oh, he did not ask, he knew already everything about us.

This candid, matter-of-fact statement shows where the heart of the problem probably lies. This is also why Hoffman carried out his fieldwork the way he did, surveying a score of scattered groups, among whom he spent but a few days or weeks, instead of focusing on one chosen group. He went to the field, not in order to check his preliminary ideas and theories, but in search of some selected bits of information to support them. And, sure enough, he found what he wanted. This is why we come across so many statements like "I was told that...", "they insisted that...", "They say that...", without further cross-checking. In his point of view, Hoffman is satisfied with that. Consistently, he carefully avoids providing specific ethnographic or linguistic data (if he ever collected it) beyond the scope of vague generalities, and so this work provides us with no new data. Evidently, as has been shown for specific cases above, such data would have contradicted his idées préconçues.

When Hoffman set off for the field, he had already discarded all the ethnographic data on Borneo nomads, as

having been collected by amateurs. "The subject was obviously ready for some clarification at the hands of 'real' anthropologists" (1983:7). May the gods of the Punan (if they have any) protect us from that brand of anthropologists. I would rather rely on data collected by amateurs.

5. Hoffman (and Borneo Nomads) in General

As we have by now established that Hoffman's data are not reliable, we can proceed to discuss his interpretation. Some may decide that, the former not providing firm ground, the latter should not be considered. However, I feel there are several issues that are worth a brief discussion.

A specific hunter-gatherer culture or not?

I am not intending to give here a discussion already developed at length in my dissertation (1986) and in my book (in press). There the reader will find complete bibliographical references that cannot be included here for lack of room.

A first point is unquestionable: apart from some headhunting pack on the war path or a Kenyah family occasionally going to the jungle for a year, nobody in Borneo, but the nomads, permanently obtains his subsistence from the primary forest. This point is already discriminating *per se*. Not only is the forest a viable environment, but it allows for a complete subsistence autarky. This too is a point that nobody who is aware of recent studies on the nomads of Borneo can deny. Harrisson himself, the initiator of the theory of "secondary primitivity" concerning the Borneo nomads (1949), acknowledged that none of the three main trade items (salt, tobacco, metal) is absolutely indispensable to them (1949:139). Besides, it is established that, to this day, some nomadic groups still have very little trade activity.

Although Hoffman dismisses too hastily the sago, the nomads' main staple diet, it is true that many highland rice cultivators also resort to it in case of famine. And it is not completely wrong that "none of the subsistence

techniques... are peculiar to Punan alone" (1983:58), at least nowadays. Let us note, however, that historical inter-borrowing of techniques has occurred. Fish-nets and fish-traps are recent borrowings among some Penan (Nicolaisen 1976a:50), as is perhaps the fish-hook. So is the canoe, as a score of authors have noted. Generally speaking, the nomads, contrary to Hoffman's statement, feel very uneasy when travelling by river and many cannot swim. The fact that, in some groups, women hunt and fish like (if not as much as) men also shows a notable discrepancy with the agriculturalists' habits. Vegetal poisons, both for hunting and fishing, pertain to a forest technology, that has probably been only partly transferred by the nomads to the agriculturalists, the latter still often acquiring the poisons by trade. Now, what sense can be made of this statement, often found in the literature, that the nomads have an aversion for the taste of rice, if they were former rice-cultivators?

As for social and cultural features, it seems evident that the nomads have heavily borrowed from whatever other group they have been in relations with. This can account for "the broad divergence among Punan groups with respect to customs surrounding marriage, divorce, death, burial..." (Hoffman, 1983:109). But had Hoffman read the literature more extensively or inquired more in-depth in the field, he would have found that what he calls "the bury-and-run type of funeral" (1983:95) or, as I would rather write, "leave the corpse and run", is a widespread attitude among nomadic groups all over Borneo (see a number of references in Sellato, 1986:496-497), the dead person's hut or the whole camp being pulled down or not before being abandoned. This attitude is in strong contrast to that of the various groups of agriculturalists, who generally hold rituals to accompany the soul of the deceased to its resting place and maintain contact with it. A number of other issues, concerning marriage and bridewealth, social organization and system of leadership, territoriality, collective activities, endogamous practices, could be raised here and argued upon to suggest that the nomads of Borneo represent a cultural and social type quite distinct from those of the agriculturalists.

The problem of "Punan" languages should be briefly discussed here. As we have seen above, the languages of

the Lisum and that of the Kenyah Lepo Timai, allegedly "the same people", are quite different. In many cases, there is no particular linguistic affinity between a given nomadic (or formerly nomadic) group and the geographically, economically or politically closest agriculturalist group. On the other hand, nomadic groups, residing at a great distance from one another, may share the same language. The Beketan, formerly associated with the Iban of the Rejang and now on the Balui, and those living now on the Belayan speak the same language and share a common history. The Bukat on the Kapuas, those of the Balui and those of the Mahakam are historically the same group and all speak the Bukat language, although they have been associated with various groups of agriculturalists. So the nomads have their own languages and language groups that are, in many instances, distinctive. It cannot be denied, however, that each specific "Punan" language may have undergone transformations under the influence of languages of neighboring sedentary groups, and that some "Punan" languages are actually related to those of some sedentary groups.

As a conclusion to the lines above, I suggest that 1) the subsistence economy of the nomads may have been totally autonomous before the introduction of new technological items like metal, and that the nomads may have therefore lived without any trade contact with outsiders; 2) the nomads of Borneo pertain to a cultural entity of hunter-gatherers that is distinct from that/those of the surrounding agriculturalists; and 3) this hunter-gatherer culture is unique throughout Borneo.

The importance of trade?

Markets for forest products already existed on the coasts of Borneo over a millennium ago. At that time, as primary forests were much more extended than they are now (see what Hildebrand, 1982:34, writes about it), such a trade involved nomadic bands living on the periphery of sedentary settlements, on the middle reaches of rivers, while deep hinterland bands, such as those of the Müller mountains, may have remained for a long time virtually untouched by the trade networks.

Such remote bands did use stone implements until recent times (Nicolaisen, 1976a:44; 1976b:229), as did some isolated highland agriculturalists like the Kelabit (Harrison, 1984:317). In some places, the dogs are also a recent introduction to those groups (see references in Sellato, in press). The absence of metal and the dog suggests, if not a total lack of contact, at least a marked isolation from regional trade networks. Later, with the reduction of the primary forest owing to agriculturalists' progress toward the interior and the sedentarization' progress toward the interior and the sedentarization of peripheral nomads, the remote bands of the hinterland came progressively into contact with the agriculturalists and became involved in trade activities.

I have tentatively reconstructed the processes of economic change among such a band. The reader will find a fully developed discussion with specific historical cases in Sellato, 1986 and in press. Here only a short summary will be given. Obtaining metal and dogs from their neighbors, the nomads not only had to pay for them but, at the same time, were give the opportunity, with those new and efficient technological implements, to save time on their subsistence activities and devote it to commercial collecting. In what may seem a paradoxical step, settling down and taking up some simple agricultural practices (cassava, banana) allowed them to devote more time to the collecting for trade. In a later stage, some of these groups took up rice cultivation and subsequently, becoming more or less fully agriculturalists, abandoned progressively the trade of forest products or relayed it to other more isolated, still nomadic, bands and acted then as middlemen.

But many nomadic or half-settled bands, once they had become collectors for trade, did not care to switch to fuller agricultural practices and, instead, developed a mixed economy, including collecting for trade and a subsistence system combining wild sago and cultivated cassava (with or without some paddy).

So it seems unlikely that "the existence of 'Punan' groups in Borneo arose initially from the demand for various jungle products.." (Hoffman, 1983:197), or that "it is trade that has generated the particular type of hunting and gathering adaptation.." (1983:164). However, in my opinion,

it is correct to assume, as Hoffman did (1983:171) against Needham (1972:177-78), that the "Punan" (at least those who had already become "professional" collectors for trade and were under pressure to take up agriculture) chose to remain nomadic, or at least semi-nomadic, in order to carry on their trade activities. But we should not forget that a number of nomadic groups still today have but a very limited trading (or other) interaction with outsiders.

Relations between hunter-gatherers and agriculturalists

Let us now, in light of the pages above, evaluate what Hoffman misleadingly calls "affiliation" of a nomadic band to a sedentary group. We have seen that this affiliation was originally, in most of the cases, neither cultural nor linguistic. It was economic and political. The processes of the establishment of economic and political domination of the sedentary agriculturalists over the nomads have been described in detail in my dissertation (1986:501-513). The main outlines are given here below. It appears that trade forms the starting point of this domination.

To the demand from the coasts for forest products, the agriculturalists seem to have responded in two ways: either they themselves went out to the primary forest to collect (like the "pioneer" Iban, or the populations of the upper Barito), or they established connections with neighboring nomads (if there were any around) who would collect for them (that was the case with most Kayan-Kenyah groups). We should keep in mind that it is the agriculturalists who primarily need this trade with the nomads, since they act as middlemen (ancient sources made this clear). Particularly in the case of stratified sedentary societies, this trade represented a big part of the aristocrats' income (and related prestige). The chief Kwing Irang of the Mahakam Kayan, who had no nomads around, had to call for professional collectors from the Barito to come and exploit the forest resources of his territory (Nieuwenhuis, 1904-07:1, 276).

The agriculturalists resort to various strategies to lure the nomads to them and establish themselves as their patrons. Economic strategies involved setting the nomads in the situation of debtors by providing them with trade items,

including, besides iron, salt and dogs, such things as tobacco and beads, that they should pay for in forest products. This utang (or credit) system is still in use today. Political strategies included alliance, both by blood-exchange and marriage (therefore Hoffman's contention that nomads and agriculturalists have common ancestors, 1983:77), that prevented the nomads from looking for other trading partners. In further stages of contact, after some inter-marriage, with in-marrying agriculturalists becoming prominent leaders of the half-settled nomads and reinforcing the control over forest resources, political domination was added to economic domination, and the nomads were drawn into their patrons' armed conflicts, head- or slave-hunting raids against other groups. In later stages, along with the process of sedentarization, the former nomads were politically and finally culturally integrated to their patrons.

But patrons sometimes become too demanding, or start taking heads among "their" nomads, and the latter may decide to move to another watershed and establish relations with another sedentary group. The Punan Kohi of the Langasa deserted their Uma' Suling patrons who treated them like slaves. Conversely, if a specific sedentary group appears to be a good patron, a nomadic band may be convinced to move along with them to a new area.

Another point needs further clarification. Nomadic groups are definitely not restricted to a given tract of territory. Some may move over long distances: the Beketan, for instance, having left the middle Rejang, went as far as the Belayan in East Kalimantan; the Lisum moved over a similar distance, being acquainted successively with a number of different patrons.

Finally, what remains of Hoffman's "affiliation"? Not ethnic, not cultural, not linguistic, this affiliation is only of a political-economic nature and is limited in time, more often than not just a matter of conjuncture: it is because the Lisum were driven out of Sarawak by the Iban that they took refuge near the Kenyah Lepo Tau; the various bands of Punan of the upper Murung moved back and forth across the watershed between the Mahakam and the Murung because the Long-Gelat and the Ot Danum were competing to be their patrons. As the nomads commonly wander in an enclave between the territories of several sedentary groups,

they usually can choose their patrons. Hoffman's assumption that "each group known as 'Punan' has tended to confine itself to a tract of primary forest adjacent and contiguous (sic) to an area occupied by a specific sedentary agricultural people ... with whom the 'Punan' group is affiliated" (1983:47; emphasis original) is then definitely misleading.

Devolution?

Now, what can be said of those concepts of "cultural devolution", "secondary primitivity", or "secondary hunter-gatherers" in the context of Borneo?

A basic premise in Hoffman's tentative revitalization of those ideas is the combination of Harrisson's technological arguments (1949) and Blust's conclusion that the Austronesians who populated Borneo were already rice-cultivators (1976). Technology and comparative linguistics became allies to make the nomads clearly deriving from sedentary agricultural peoples (Hoffman, 1983:195).

As for the technological arguments, namely that a culture using a hardwood blowpipe could not exist without the prior knowledge of metallurgy, I have suggested (in press) that the hardwood blowpipe may have replaced, when metal became available, either a bamboo blowpipe similar to that used by some Orang Asli, or the bow and arrow, the former existence of which may be induced by some evidence (see Nicolaisen, 1976a:49; 1976b:230; Avé and King, 1986:127). The sophisticated poison technology of the nomads, in any case, suggests a weapon with poisoned arrows. As it is most likely that some groups have managed to survive until not so long ago with stone axes to fell the sago trees, and with bamboo or fire-hardened spears and no dogs to catch game, it may then well be that the hardwood blowpipe is a relatively recent transformation or adaptation of a former type of weapon, the way the modern hunt with dogs is a modified version of the former beat hunt.

The linguistic argument finally can also be turned around. Until someone can prove that the nomads actually came to Borneo as rice-cultivating Austronesians, the only conclusion of Blust is that the nomads (or at least the

Penan) speak an Austronesian language. This does not take us very far. The Northern French, being of Celtic and Germanic ethnic stock, speak a Latin language and adhere to a religion coming from the Orient. A given group may be of ethnic origin A, speak language B and have been assimilated by culture C, and one cannot infer an ethnic origin from a language. Then, there is absolutely no firm ground to conclude for "cultural devolution". Hoffman himself seems to step back from his categorical 1983 conclusions to a slightly more cautious "they remain and possibly even became nomads in order to trade" (1984:142; emphasis mine).

Hoffman goes on introducing, parallel to the opposition between "primary" and "secondary hunter-gatherers", a second opposition between "subsistence hunter-gatherers" and "commercial hunter-gatherers". Whereas this may have a relevance in other parts of the world, I have suggested that in Borneo both existed and still exist side by side, and that the same people, diachronically or just geographically, shifted slowly from the former to the latter: in the first half of the 19th century, some Bukat were already assimilated to the neighboring Kayan, some were half-settled upstream as collectors for trade, while some others were roaming as fully nomadic subsistence hunter-gatherers at the sources of the Mendalam river.

Now, if we do have to consider some sort or other of "evolution", I would then completely agree with Brosius in that all existing historical evidence leads one to conclude that, at least during the last two or three centuries, the nomadic groups of Borneo have been progressively settling and, as I have shown in the case of the Aoheng (1986), the process had already begun well before the Dutch colonial administration took the matter from the hands of the agricultural groups.

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CARL HOFFMAN AND
THE PUNAN OF BORNEO

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Some years ago, Carl Hoffman presented a Ph.D. thesis, in which is paid special attention to the identity and history of the Punan of Borneo. He there suggests that "the existence of 'Punan' groups in Borneo arose initially from the demand for various jungle products desired by Chinese" (1983a:197). The Punan are therefore not a homogeneous group of aboriginals, but a heterogeneous category of "secondary" or "commercial" hunters and gatherers. At an early stage, the large-scale trade in forest products led individuals and groups of sedentary swidden cultivators to specialize in the collection of these products. The trade created a niche that demanded a nomadic existence, and that niche became occupied by previously sedentary peoples. Hoffman isolates several factors which, according to him, support his hypothesis, such as the racial, cultural and linguistic similarities that exist between separate groups of Punan and their immediate sedentary neighbors. Several of his arguments are very convincing, and on the whole it appears strange that these questions have not previously been discussed seriously and at length. His thesis makes an important contribution, not least through pointing out the inadequacy of earlier interpretations.

Although Hoffman refers particularly to his own data, collected among several groups of Punan in East and Central Kalimantan (1983a:21-33), he is "concerned primarily with trying to determine just who exactly these 'Punan' are and what they mean in terms of the ethnographic picture of Borneo as a whole" (op. cit. 15). His main arguments thus deal with Punan in general.

I find it rather unfortunate that Hoffman neglects taking into consideration, those empirical data that contradict or obstruct his own interpretation. It is particularly odd that he pays no attention to Needham's dissertation or the three papers presented by Johannes

Nicolaisen - the only studies on the Punan, based on long-term fieldwork in the classical sense.(2) In addition, Peter Kedit's survey on the Punan of Gunung Mulu is not mentioned - a study that presents important material for Hoffman's discussion.

DISCUSSION

Some examples of data, (mainly from Sarawak) that contradict or obstruct Hoffman's arguments concerning the history and origin of the Punan in general, follow below.

Traditional patterns of residence. According to Hoffman, "each group known as 'Punan' has tended to confine itself to a tract of primary forest adjacent and contiguous to an area occupied by a specific sedentary agricultural people" (1983a:47; of 104). This would indicate, according to Hoffman, a common origin. The argument is not particularly convincing, however, as there may be a very complex background. A simple, synchronic description of the contemporary situation is not enough. In addition, several groups of Punan, such as those in the Balui, live quite far away from their sedentary neighbors (Johannes Nicolaisen 1976b:35-40; Rousseau 1984:88). But, even where the distance between groups is quite short, this does not necessarily mean that there are regular contacts (Needham 1965:71).

Hoffman also argues that different groups of Punan have contact only with their sedentary neighbors, and not with each other. Some groups "cannot recall having had much of any contact with other Punan at all" (1983a:112). There is no reason to doubt this, but it is not true for all groups of Punan (cf. Needham 1953:56-78). Johannes Nicolaisen states that "very close contact and some marriages are contracted even between members of groups living very far from each other" (1976b:41).

Linguistic affinities. Hoffman concludes that "linguistic evidence does not support the assumption that the 'Punan' comprise a single, uniform people who are ethnically distinct from sedentary agriculturalists" (1983a:40). This is probably

correct; the Punan are a very heterogeneous category of people. It does not tell us, however, whether all groups of Punan, or only some of them, or none of them are descended from their sedentary neighbors. In the case of the Kenyah in the Apo Kayan area, the linguistic similarities can be interpreted the other way around (Whittier 1973:22f).

It is also important to point out that individual Punan normally speak several languages. According to Rousseau, they are often eager to imitate their neighbors, and "in areas where Kenyah are dominant, ... assimilation is facilitated by the linguistic similitudes between Kenyah and Penan" (Rousseau 1975:42). Linguistic similarity between nomads and swidden cultivators is quite a common phenomenon, even when the nomads are physically distinct, as is the case of the Filipino-Negritos (LeBar 11:24).

Why the Punan became hunters and gatherers. According to Hoffman, the sedentary Dayaks did not have the time to collect forest products; they lived too far away from primary forest - where the commercial products are to be found. In addition, warfare "kept horticulturalists more bound to their regions than they are today" (1984:143). This has "prevented most sedentary Dayak groups from being able to devote sufficient attention and energy to gathering jungle products" (1983a:136). This is also the reason, according to Hoffman, why sedentary agriculturalists became hunters and gatherers: "they specialized" (1983a:164).

The cultivation of hill-rice does not in itself prevent the farmers from devoting time to other activities, such as the collection of forest produce (cf. Miles 1976:9-13; Freeman 1970). I would instead argue that other factors - especially the socially and culturally defined motivations behind the production and the subsistence activities - play a much more significant role in this context (cf. Sahlins 1972; 1978). If the swidden cultivators prefer to obtain forest produce "through the nomads" (Rousseau 1974:153), the reasons are probably more cultural than practical.

None of the reasons given by Hoffman - time, distance and warfare - is a satisfactory explanation. The swidden cultivators of Borneo have the time to gather forest

produce, and they do not always live particularly far away from primary jungle - especially not in the past. The prevalence of warfare, however, certainly had considerable effects on the lives of local peoples. Judging from St. John (1863), the Sarawak Gazette and other sources, this is particularly true for the 19th century. Earlier, during the 17th and 18th centuries, pirates "went plundering villages for goods and slaves" (Ida Nicolaisen 1976:77), even as far inland as the Belaga area. During this time, "Trading was hampered almost to a point of stand-still, a fact that certainly had its effect on the inland groups" (ibid.). If warfare restricted farmers' possibilities to gather forest produce, it probably also restricted the trade itself, sometimes "to a point of stand-still" (ibid.).

An important aspect to consider in relation to a proposed shift from swidden agriculture to hunting and gathering is the implications this would have had for the women. However, Hoffman does not include this aspect in his discussion (cf. Johannes Nicolaisen 1976a:228, note 10).

Trade - the center of Punan's economy? The migrations and settlement-patterns of the Punan are determined, according to Hoffman, by their trading relations with their sedentary neighbors. Several factors do indicate that movements and settlement-patterns have a much more complicated background, at least among the Punan of Sarawak, where cultural and ecological factors - especially the supply of sago - play an important role (Kedit 1978:18-24; Needham 1953:79-80; Johannes Nicolaisen 1976b:42; Hühne 1959:201). Or, as one Punan individual expressed it, "We go from Pa Tepen slowly, with wife and child. Whenever there is much sago, there we stay a long time, perhaps ten days" (Harrisson 1949:136).

There is therefore reason to question Hoffman's argument, that "Punan do not trade in order to remain nomads, they have instead remained nomads in order to trade" (1983a:171). According to Rousseau, "this description applies to the Punan Batu and Punan Binai, but it is not generally true of Borneo hunter-gatherers. Indeed, in the interior of Borneo, opportunities for trade are usually too limited to make it the centre of nomadic economy" (Rousseau 1984:90). Rousseau therefore concludes that

"Hoffman's argument that nomadism arose out of trade is not compelling" (op. cit. 92).

Religious beliefs. "The traditional religions of Punan groups are ... 'portable' versions of those adhered to and practiced by their sedentary Dayak neighbors" (Hoffman 1983a:96; 1983b; cf. Johannes Nicolaisen 1976b:46, 51). It is very difficult to say anything about this, as we know so little about the religious and cosmological beliefs of the Punan. We do not even know whether or not the documented similarities - such as the beliefs in omen-birds (Hoffman 1983a:96ff) - have the same structural significance for the Punan as for the sedentary groups (cf. Turnbull 1965:33). The religious situation in north-central Borneo is a very complicated matter, as "the entire culture area is characterized by variation and borrowing of bewildering complexity" (Metcalf 1976:114). The religious similarities can also be explained in the opposite way, and the religious systems of the sedentary Dayaks can be viewed as elaborations of cosmologies of the "portable" type.

Important differences do exist, e.g., Punan cannot "be persuaded to help in the fields because of their fear that heat will rot their brains" (Needham 1953:46), and they "do not believe in the 'rice mother' and the customs of sacrificing live animals is very much against their religious belief" (Johannes Nicolaisen 1976b:44). Obviously, Hoffman is compelled by his argument to suggest that such symbolically significant beliefs, as these, were simply abandoned when the Punan became hunters/traders. He seems to assume some kind of economic-ecological rationality behind this reduction: "The Punan have ... extracted from these complex and elaborate religious systems the bare utilitarian essence needed to provide a supportive ideology for their relatively simplified way of life" (1983a:96; cf. also p. 100). How then should we interpret the importance of death-names among the Punan? Johannes Nicolaisen "found no less than 43 death-names" (1978:31) among the Punan of the 7th Division, while their sedentary neighbors only have a few (cf. also Needham). It is rather surprising that Hoffman avoids discussing the significance of this phenomenon - especially as he does mention several articles that particularly deal with the Punan necronyms (Needham 1954c; 1965).

Neither Needham nor Nicolaisen present much information on the religious beliefs of the Punan. Nevertheless, both seem to be very much aware of the richness and complexity characterizing the traditional religions of the Punan. Hoffman seriously underestimates this complexity; he makes the cosmologies of the Punan rather simple constructs. Another weakness with Hoffman's interpretation is its lack of processual explanations.

Punan - a heterogeneous category. Hoffman also points out the differences between different groups of Punan as a factor that supports his hypothesis. They are different because they originate from different groups of sedentary farmers, Hoffman argues. Perhaps this is true, in some cases, but not in all. We do know that Punan is a heterogeneous category, but this does not necessarily tell us anything about the origin of these groups of hunters and gatherers. Our knowledge is too fragmentary to allow any final conclusions on this matter.

CONCLUSIONS

I do not suggest that Hoffman's conclusions are invalid. In reference to specific groups of Punan, most of his conclusions are perhaps correct. But if we are talking about Punan in general - which Hoffman does - things get much more complicated.

His basic hypotheses concerning the importance of trade and the Punan involvement in a wider, regional context are most certainly correct. No group of Punan has been isolated, "distinct, outside, and apart from the general pattern of Borneo's traditional life" (Hoffman 1983a:101). They have all been part of a wider socio-economic system, although we do not know how or to what extent different groups of Punan have participated in these relations.

As has been documented by Hoffman, the trade and exchanges carried out between coast and inland during the last millennium have had considerable effects on all the peoples of Borneo. Large-scale socio-cultural changes have taken place over time, and the flow of people between different ethnic units and different subsistence strategies

has been considerable (cf. King 1982:35-36). It is, therefore, of course, erroneous to project the contemporary ethnic and socio-economic situation into the past. Until further research has been carried out, it is, I believe, not possible to draw a clear picture of the dynamic and highly varied role of the Bornean foragers in relation to the regional processes. Nor is it possible to document the role of this regional context in the world of the Punan.

NOTES

1. I wish to thank Alf Hornborg and Christer Norstrom for stimulating discussion on topics relevant to this paper, and Enid Nelson, for correcting my English.
2. Between 1973 and 1975 Johannes Nicolaisen spent, in total, "one year among the Penan" (J. Nicolaisen 1976b:35), while Needham carried out his fieldwork "from May 1951 to May 1952" (Needham 1953:35). Hoffman's study, on the other hand, is more correctly described as "an ethnographic survey" (Hoffman 1983:21). Between 1980 and 1982 he visited a large number of Punan settlements in East and Central Kalimantan. The interviews were most likely conducted in Bahasa Indonesia, not in the local languages (op. cit. 48, 107, 111, 152, etc.).

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THE LONGEVITY OF PENAN DART POISON

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The traditional hunting weapon of the Penan, in both the eastern and the western tribes, was a hardwood blowpipe. From this were propelled featherweight darts made from the midrib of a palm leaf. In themselves the darts were too light and insubstantial to inflict harm on any but the smallest creatures such as birds and lizards; larger animals such as monkeys, pig, and deer, which were the principal game, would be merely pricked by them. To be effective in hunting, the points of the darts had to be smeared with poison (Penan, tajem). This was made from latex tapped from the bark of *Antiaris toxicaria* (Penan kayeu tajem, poison tree), a gigantic tree growing wild and widely dispersed in the forest. Among the western Penan (at any rate the Penan Silat) the latex could be mixed with the sap of a poisonous creeper (ipu W), probably a species of *Strychnos*, and certain other vegetable substances (from another creeper, the bark of a different tree, etc.). The typical practice of the eastern Penan was to mix the dried latex with a little plain hot water, and this was said to necessitate using more poison than was the case with the western Penan concoction. There is much to be written about the use and idiom of dart poison among the Penan, and an account (with references and incidental details) forms part of an ethnographic monograph that is in the course of preparation. The present note is concerned with the length of time that the poison retains its virulence, and the purpose is to report a decisive finding. The particular material in question is of eastern Penan provenance, but the pharmacological result applies to the dart poison as used by both of the Penan tribes.

The Penan explanation for the efficacy of the poison was that the tree pu'un baléi (E), i.e. it possessed or was characterized by a spiritual presence or association, though there was no individual named spirit (baléi) or class of spirits, such as Baléi Tajem, connected with the tree. The allusion to baléi conveyed, rather, that some extraordinary virtue or capacity was immanent in the tree and its product. This kind of efficacy was distinct from that of what is translatable as "medicine" (tawan E, tabat W), such as indigenous healing substances or imported drugs. This latter concept also covered other forms of effective action; e.g. the fact that white men could make airplanes was explained by saying that they pu'un tawan(E), i.e. they possessed that unusual ability, much as their penicillin ointment was able to cure conjunctivitis. The conception of such medicine was essentially pragmatic; it was something that human beings could somehow work out for themselves, whereas the efficacy of dart poison was mystical, a sign of the immanence of spirit.

Nevertheless, the actual operation of the poison was the subject of practical assessment. Different trees were said to provide poison of differing strengths; some were known to be especially strong. The poison, when mixed with water or the sap of sago palm (*Eugeissona utilis*) roots, might be made in too low a concentration. When applied to the darts, it might be smeared on too thinly, or patchily. A dart, when fired, might not pierce the animal deeply enough to convey the poison at sufficient strength into the bloodstream, or else, in the case of a gibbon or a monkey, it might be snatched out too quickly for the poison to work. Although the dart was notched around the shaft below the tip or head, so that it should break off in the wound, the incision might not be deep enough, or the shaft might be unusually resistant, so that the projectile could be dragged out by the animal brushing against leaves or branches and remain intact. Any of these possible factors could be taken into account to explain why an animal, although struck by a dart, was not killed by the poison. It would sometimes happen, also, that a creature which had been killed was found to have the broken tip of a previous dart embedded in its flesh, surrounded by incrustation or hardened tissue, showing that poison had entered its system but had not been lethal. Failures of these kinds were explained in

practical terms, without reference to the mystical aspect of the poison.

In addition to such explanations there was another means of understanding how it might be that the poison did not procure its due effect. This was to infer that it had simply lost its efficacy, with the passage of time, and that it was no longer "alive" (murip). This failure too was not ascribed to the action or inaction of spirit (baléi), but was accepted as part of the ordinary course of things. In the case of human beings, it was understood that there was a gradual physical decline throughout adult life, and that this would lead eventually to debility and death. Although there were various explanations for terminal illness in the comparatively young and the strong, no special diagnosis was called for at the death of an old person; "he was very old, and he died because he was old." In the case of dart poison, there was a vague premise that it too had a finite life and that after a time it would be dead. (It was rather as we say of a flashlight battery that it is dead--an idiom shared by the Penan, incidentally, when they had become acquainted with such things.) The length of this period was variously estimated; by a number of men, in different groups of both tribes, the term was set at five to ten days, or a year, or one to three years.

It is most unlikely that any of these estimates rested on a deliberate reckoning of time or on quasi-experimental observation. The expectable life of dart poison was not, so far as I ever heard, a subject of spontaneous discussion among the Penan; the matter arose only when I asked about it. The Penan, although enabled by their language to speak of the lapse of days, months, and years, had in their ordinary life practically no occasion to make a calendrical reckoning of the passage of time. An apparent exception was the use of a knotted strip of cane (tebukeu) to ensure that they returned to a trading post on the right date. Each knot represented a day, and one was undone or cut off every day until it was time to return to the longhouse or other point on the river where the trading meeting was to be held. The number of days (commonly 110-120) was set, however, by the administrative officer in charge of trade with the Penan; and the Penan themselves, in order to return by the correct date, were not required to make any calculations other than to make sure that they left

themselves enough days towards the end in which to cover the final stages of their return to the post. They did not use the *tebukeu* as a calendar by which to date intermediate events. Naturally, they could place events in time relative to other events such as trading meetings or fruit seasons or deaths, but it was not their practice to keep track of time or to generalize about periods of time. Given that they took dart poison to have a set life, it was only to be expected that those who were prepared to say anything about how long it was should come up with some period or other; but the range of the estimate--from five days to three years--tends to indicate that the period had not been measured. It may be significant, also, that there was no received idea, reflected in a general agreement, as to how long the poison ought to remain alive. Another reason for doubt is that the darts were quite easily made in large number, in tens or up to fifty or more at a time, and they were rapidly expended. If a man went hunting every day, with a quiver containing about twenty-five darts, a batch of freshly prepared darts would be used up in a few days, so that there would be no occasion to observe whether or not the poison on them lasted for so long as a year, let alone three years. Then there is the factor that handfuls of darts were commonly made over as gifts, either as ordinary tokens of friendship (especially when men of different groups met at a trading post) or in response to requests, so that a given man's darts might bear poison from different sources and of different ages. In these circumstances, however occasional, a man could not be sure how old was the poison on any particular dart or whether, if it failed to kill, it was or was not still alive. This last was the only test, moreover: if a poisoned dart struck an animal squarely and the creature did not die, the possibility was presented that the poison was dead.

A separate consideration is the potency of the poison while it was still in the block of concentrated latex. Such a block could last for months and perhaps for a year or more; one that I was given by Penan Akah weighed 9 grammes and was said to be sufficient for one man for two years, though the length of time a block might last was not usually counted and this estimate was probably no more likely to be exact than any other such estimate made by eastern Penan. Certainly they had no way of telling if the poison were still alive other than by introducing it into the

bloodstream of an animal. They might think that it gradually lost its potency, but there was no external change, as of color or consistency, that indicated as much; the block, which was usually kept dry in a container made of bamboo or a gourd hung from the waistband of the loincloth, kept its tar-like appearance indefinitely and was changed only in form and weight as scrapings were taken from it. The Penan did not say, either, that there was any difference in the poison on the dart and as it was while still in the block, and indeed there was no obvious reason to think there might be. The latex was concentrated by evaporation until it was solid, and then it was reliquified by admixture with heated water in order to apply it to the darts. There was no patent change, in the basic procedure, such as might affect its degree of virulence or its life. In these respects there was nothing, so far as the Penan or the ethnographer could see, to bear out any of the Penan statements as to the longevity of the dart poison.

Scientifically, however, there has been definite progress over the decades. In 1902, Seligmann reported a test of Kenyah dart poison made from the sap of *A. toxicaria*. A sample collected in a tightly corked vessel retained its color and its strength for months; in fact, he found, "it appears to keep indefinitely, and samples which have lain for over two years in an ordinary tin box have in no degree lost their potency." In 1952, a block of poison given to me by the Penan Akah was tested by Judith A. Robinson and H. W. Ling, of the department of pharmacology at the University of Oxford, and was found to cause death by arresting the heart in systole. The age of the poison when I acquired it was not noted, but since it was relatively large (9g.) it could have been prepared not long before mid-May 1952. The report of the test, in which the researchers alluded to the sample having been "recently" received by them, was dated in the latter part of September 1952. The poison, that in minute doses was quickly lethal to cats and rabbits, was therefore about six months old, at least, and it was still highly potent. In February 1988, Dr. A. David Smith, professor of pharmacology at Oxford, tested a tiny amount of the poison and found it lethal to the test animal, an anaesthetized cat. The sample, weighing a little over 2 grammes, had been in my possession since 1952 and was evidently the unexpended portion of the block that had been tested in that year. It had not been preserved with

any special care, e.g. in a hermetically sealed container, though neither had it been exposed to extremes of temperature or humidity; it was in a paper envelope and was left in a cardboard box file in my rooms. This block of eastern Penan dart poison had retained, at the least, "most of its potency" after nearly thirty-six years.

The conclusion to be registered is that dart poison consisting of the latex of *Antiaris toxicaria*, or of which this is a principal component, remains potent for an indefinite length of time. It does not have, as the Penan used to think it did, a set term of life. A practical consequence is that museum curators will do best to treat poisoned blowpipe darts from Borneo, acquired however many years before, as very likely to be still deadly.

AN ANNOTATED CHECKLIST OF THE BIRDS OF
TANJUNG PUTING NATIONAL PARK,
CENTRAL KALIMANTAN*

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and
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(Submitted 5 August 1987)

INTRODUCTION

Tanjung Puting National Park is located near the south-western corner of the island of Borneo, in Central Kalimantan province at 112°E, 3°S, and covers an area of 296,800 hectares. The park contains the largest and best representation of southwestern Borneo's original coastal plain habitats, particularly the predominant heath and peat swamp forests, which occupy a much larger extent here than in any other protected area in Borneo.

Tanjung Puting is considered to be of World Heritage Quality (IUCN 1985), and in 1977 was approved as a UNESCO Man and the Biosphere reserve, an example of one of the world's major eco-systems (Robertson 1985). In

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Indonesia's National Conservation Plan the park is singled out as an area of particular conservation importance for the country (FAO 1981), yet for all its importance and potential, the faunal diversity of the park had never been examined in detail, through systematic faunal surveys. Under the World Wildlife Fund Project 1687, in association with the Directorate General of Forest Protection and Nature Conservation (PHPA), the authors surveyed the birds in representative areas both inside the park and in some cases, outside, for the purpose of starting a faunal data bank on which future management strategies may be based. Occurrence and distribution data collected in these surveys are presented herewith.

The observations presented here are entirely our own records, obtained between May and September 1985, and no reference is made to previous records of other observers (see Galdikas et al, 1985, Bohap & Galdikas, 1987). A much more detailed account of the Park's ornithology is given in Nash & Nash (1986).

METHODS

Information on the birdlife of the park and its surrounding area was gathered in two ways: compiling continuous field observations, and conducting a systematic bird capture-and-release program, in as many of the park's principal habitat/vegetation types as was possible. Between the months of May and September 1986, observations were made on 109 days, amounting to well over 3000 man-hours of observation time. Netting was carried out on 80 days, in 31 localities of which 6 were outside the present park boundaries. Twelve to fifteen standard mist-nets were used, for just over 6200 net-hours (a net-hour is equal to opening a standard 12-meter net for one hours).

SURVEY AREA

The survey area was as follows (see figure 1): from the village of Kumai to the mouth of the Sekonyer river; the Sekonyer river past Tanjung Harapan to the main fork; the right fork as far as the Orangutan Research and Conservation study site; the left branch past Natai Lengkuas

and Nantai Pelanduk to Gedung Sintuk and the grass swamps beyond; from the mouth of the Sekonyer south along the coast to Teluk Pulai, and to the Buluh Kecil river; up the Buluh Kecil river approximately 20 kilometers; from the mouth of the Buluh Kecil south to the Buluh Besar river; up the Buluh Besar river for approximately 15 kilometers; from the mouth of the Buluh Besar south to the Arutebal river. Occasional observations were made on Kumai Bay, and at the west side of the Kumai estuary, at Tanjung Keluang and Tanjung Kubu. Observations made in the forests were not usually farther than 3 kilometers away from the river.

HABITATS AND VEGETATION

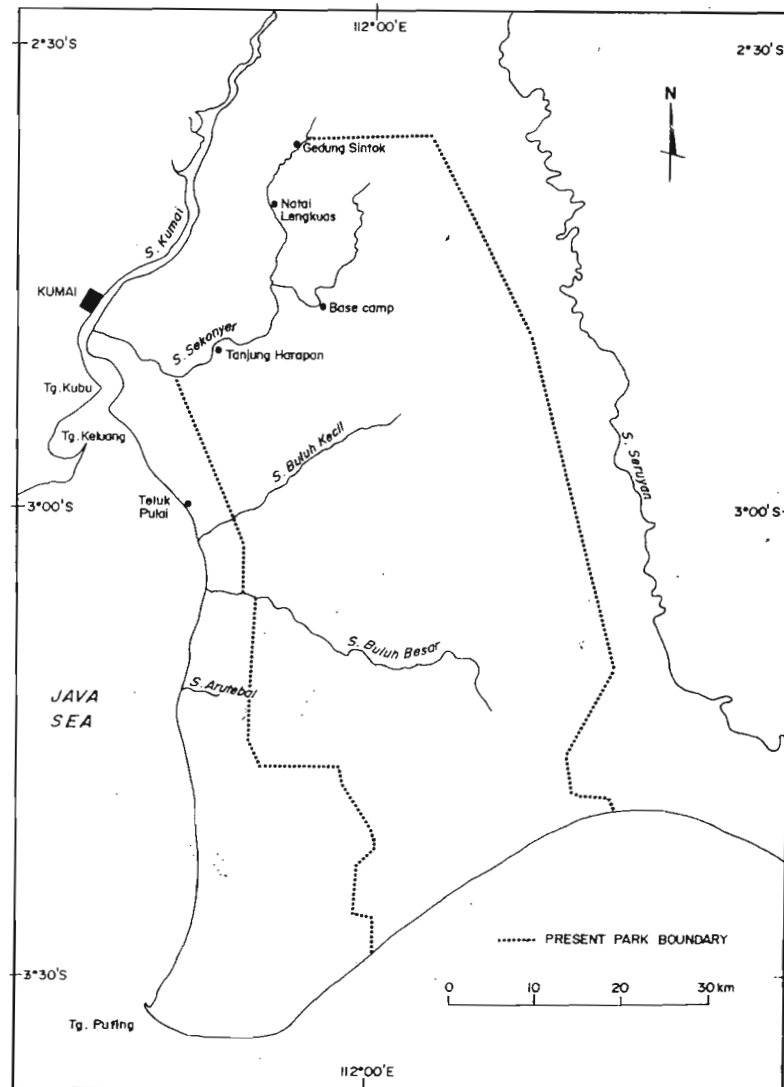
Habitats and vegetation types for the Tanjung Puting areas have recently been described in Nash and Nash (1986). Those covered in the survey are freshwater swamp forests (combining the immediate riparian growth along the river systems, alluvial swamp forest, and past basin margins; true peat swamp was not surveyed), mature kerangas (tropical heath forest), young (pole stage) kerangas, fire-padang scrubland (degraded kerangas), ladang (reclaimed cultivation), grass swamp, nipa-mangrove, coastal fringe (heavily degraded mangrove), and cultivation plots (coconut, etc.). Tanjung Puting habitats not surveyed are true peat swamp forest, true beach vegetation, and alang-alang grassland.

RESULTS

During the survey, 207 species of 48 families were recorded within the park's boundaries and the immediate region, composed of 200 resident species (46 families) and 7 seasonal visitors and migrants. Specifically, 160 species were recorded in swamp forest, 102 species in mature kerangas, 69 species in young kerangas, 78 species in fire-padang scrubland, 29 species in ladangs, 61 species in grass swamp, 68 species in coastal fringe forest, and 23 species in (coastal) cultivated land. The netting program yielded 1367 captures (92 species).

LOCATION MAP

Figure. 1



SPECIES ACCOUNTS

Included in the species accounts is information on relative abundance, distribution, breeding records and chronology, and behavioral notes, where relevant. For the abundance rating, "common" indicates that the species would usually be encountered in the course of a day in appropriate habitat; "uncommon" indicates that the species would be occasionally encountered, in appropriate habitats, over a period of several days or weeks.

The following habitat symbols are used against each species: S = swamp forest, K = mature kerangas, k = young kerangas, FP = fire-padang scrub, L = Ladang, Cf = coastal fringe, G = Grass swamp, C = cultivated land. Both edge and aerial species are included within these classes. Rivers are considered part of swamp forest.

Oriental Darter Anhinga melanogaster S, Cf, G
Uncommon. Found singly along all the major rivers, and regularly at the coast, also in groups of 2 or 3.

Dusky-Grey Heron Ardea sumatrana Cf
Recorded only once, a single bird at the coast near the Arutebal river, on 16 August. Being a bird of mud flats and nipa (Batchelor 1959, Smythies 1982), this species is probably not found south of the Arutebal river on the western side of the point.

Purple Heron Ardea purpurea S, G
Uncommon. Usually seen singly in riparian edge and grass swamp.

Little Heron Butorides striatus S, Cf, G
Common. Recorded along the main river systems and along the coastal mud flats and mangrove.

Large Egret Egretta alba Cf, G
Recorded three times, single birds in the Sekonyer river headwaters grass swamp, and the estuaries of the Buluh Besar and Buluh Kecil rivers. This species is believed to breed in the 'bird lake' south of the Buluh Besar river (Galdikas et al 1985), but evidence of a large still active breeding population is lacking.

Common Night-Heron Nycticorax nycticorax S
Recorded only once, along the Sekonyer river at Natai Lengkuas on 3 July.

Black Bittern Dupetor flavicollis G
Recorded only once, two separate birds along the upper reaches of the Sekonyer river in grass swamp and Pandanus edge, on 4 August. As this sighting is too early for migrant birds (see Nash and Nash 1986), these birds may represent a resident population.

Storm's Stork Ciconia stormi S
Uncommon. Found singly, or in 2's or 3's along the main rivers. One pair seen daily near the Buluh Kecil PHPA guard post in August, apparently feeding along the mud banks of the river. On 7 August, 4 birds seen soaring high over the Buluh Kecil river (these did not include the usual pair).

Lesser Adjutant Leptotilus javanicus Cf
One seen on 16 August, 3 km south of the mouth of Buluh Besar river, at the coast. Also, on 2 August, one seen soaring over Gedung Sintuk.

Wandering Whistling Duck Dendrocygna arcuata G
One group of 25-30 birds was found on 23 June in the flooded grass swamp at the headwaters of the left branch of the Sekonyer river.

Crested Honey-Buzzard Pernis ptilorhynchus FP, G
Single birds recorded twice in fire-padang at Gedung Sintuk.

Bat Hawk Machaerhamphus alcinus S, G
Single birds twice seen at Buluh Kecil river PHPA guard post, and once at Gedung Sintuk.

Brahminy Kite Haliatur indus S, Cf, G
Common. Occasionally seen inland, but most common along the coast.

White-bellied Sea-Eagle Haliaeetus leucogaster S, Cf
Uncommon. Several sightings from the upper Sekonyer river, but most common along the coast.

Lesser Fish-Eagle Ichthyophaga nana S
Uncommon. Seen only along the major river systems, and markedly less common than the following species.

Grey-headed Fish-Eagle Ichthyophaga ichthyaetus S, Cf, G
Uncommon. Seen along the major rivers, and occasionally along the coast.

Crested Serpent Eagle Spilornis cheela S, K, k
Common. Usually seen near a river's edge, but also encountered well inland.

Japanese Sparrow-hawk Accipiter gularis S
One bird believed to be this species seen on 14 September in alluvial swamp forest (Sekonyer river).

Crested Goshawk Accipiter trivirgatus S, K
Common. Found in all forested areas.

Black Eagle Ictinaetus malayensis
Uncommon. Only seen soaring very high over forested areas.

Black-thighed Falconet Microhierax fringillarius S, FP
A single bird recorded only twice, along the Sekonyer river at Tanjung Harapan. This species should be common, but it is noticeably absent from all suitable habitats. We have no explanation for this.

Black Wood-Partridge Melanoperdix nigra K, k
Uncommon. One pair with hatchlings was seen on 19 July, with several young present, but only one well seen, being completely downy, with an overall rufous color. Another male was seen 75 m away at the same time the pair was watched. One nest was found on 12 September containing one infertile egg and a pipped egg shell. The complete egg measured 38.5 x 32.3 mm, was a broad ellipse, with a dull white ground color. The nest was a simple depression 13 cm across, lined with dead leaves. A pair of adults was seen close to the nest, but had evidently abandoned it. We presume the clutch hatched approximately the previous day. This is the first description of the nest of this species, and only the sixth nest known to science (see Coomans de Ruiter 1946, Robinson and Chasen 1936). The young

mentioned above, with this nest, represent the only breeding records for Kalimantan south of Pontianak.

Crested Wood-Partridge Rollulus rouloul K
One male seen in kerangas-alluvial forest transition, at Natai Lengkuas.

White-breasted Waterhen Amaurornis phoenicurus G
Recorded only once, at the riverine edge of grass swamp along the upper Sekonyer.

Lesser Golden Plover Pluvialis dominica CF
Two birds in winter plumage seen on 16 August along the coast near Arutebal river; 3 birds seen on 19 August at Teluk Pulai, of which one was in partial breeding plumage (black face, centre of breast black).

Common Redshank Tringa totanus CF
1 to 5 birds at Teluk Pulai, 19-23 August.

Common Sandpiper Actitis hypoleucos S, Cf
First recorded on 6 August, found along the main rivers and the coast.

White-winged Tern Chlidonias leucopterus G
Two birds seen on 22 May in flooded grass swamp near the headwaters of the Sekonyer river, in mainly winter plumage.

Little Tern Sterna albifrons CF
Commonly seen around Kumai Bay.

Great Crested Tern Sterna bergii Cf
Commonly seen around Kumai Bay.

Thick-billed Pigeon Treron curvirosta S
Occasionally seen in riparian habitats along the Sekonyer river at Natai Lengkuas.

Cinnamon-headed Pigeon Treron fulvicollis
S, K, k, FP, L, Cf
Common. Favors swampy areas as well as open scrub.

Little Green Pigeon Treron olax S
Uncommon. Only a few sightings from the Natai Lengkuas area. This species is said to prefer sub-montane localities (Smythies 1981), perhaps explaining its scarcity in the park.

Pink-necked Pigeon Treron vernans S, FP, Cf
Common. Recorded in most forest areas.

Large Green Pigeon Treron capellei S
Occasionally seen around open habitats along the Sekonyer river, near Natai Lengkuas. Usually only single birds seen. Banks (1935) suggested that T. capellei replaces Ducula aenea in some areas. The large number of the latter species in the area may explain the scarcity of the former.

Jambu Fruit-Dove Ptilinopus jambu S
Uncommon. Recorded only in alluvial forest edge at Natai Lengkuas, in fruiting shrubs.

Green Imperial Pigeon Ducula aenea S, K, k, FP, Cf
Very common. Found in most habitats. One nest found in coastal fringe vegetation at Teluk Pulai on 21 August. An adult was flushed from the nest, but the contents were not seen. Nuptial flights commonly observed.

Spotted Dove Streptopelia chinensis FP, Cf, G, C
Common only in the open areas and fire-padangs of the upper Sekonyer river, and near village (Tanjung Harapan, Teluk Pulai). Three nests were found on 1 August at Gedung Sintuk, two with 2 eggs, one with 1 egg.

Emerald Dove Chalcophaps indica S, FP
Uncommon in drier forest areas and scrub edges.

Long-tailed Parakeet Psittacula longicauda
S, K, k, FP, Cf, G
Very common. Generally small groups of less than 20 seen, but during the month of June at Natai Lengkuas, groups of 40-60 were common, and from 28 June to 2 July morning and evening flights totalled over 800 birds each day, but by 7 July only the regular small groups were seen. One active nest was found on 1 June adjacent to open grass swamp, occupied by an adult female. One pair was seen exploring a nest cavity on 23 June.

Blue-rumped Parrot Psittinus cyanurus S, K, k
Uncommon. Observed mainly in day forest areas, kerangas.

Blue-crowned Hanging Parrot Loriculus galgulus S, K, k, Cf
Common. Seen in most forested areas. One male seen displaying on 1 July at the edge of open scrub. One pair seen inspecting a nest hole on 9 June.

Indian Cuckoo Cuculus micropterus S.
Uncommon. Only heard in the peaty alluvial forests of the Buluh Kecil area.

Plaintive Cuckoo Cacomantis merulinus S, k, FP, G, C
Common. One female with an unshelled egg felt in its oviduct on 5 June. One fledged young seen in alluvial forest edge on 25 May and 7 July.

Violet Cuckoo Chrysococcyx xanthorhynchus
S, K, k, FP, L, G
Common in the Natai Lengkuas area.

Drongo Cuckoo Surniculus lugubris S, k, FP, L
Common in the Natai area.

Chestnut-bellied Malkoha Phaenicophaeus sumatranus
S, k, FP
Common. One adult with 2 fledged young on 26 July at Tanjung Harapan near the PHPA guard post (park side) in dense riparian growth over a small stream. Both young with near-adult plumage were begging food from the adult. One bird seen depositing a faecal sac on 12 July in young kerangas at Natai Lengkuas.

Raffles' Malkoha Phaenicophaeus chlorophaeus S, FP, G
Common. On 23 June one male seen carrying food in flooded riverine forest.

Red-billed Malkoha Phaenicophaeus javanicus S, L, G
Uncommon but regular in the Natai Lengkuas area.

Chestnut-breasted Malkoha Phaenicophaeus curvirostris S, Cf
Uncommon. Recorded in forest areas and in coastal vegetation.

Greater Coucal Centropus sinensis S, FP, Cf, G
Common, especially along the Sekonyer river banks.

Lesser Coucal Centropus bengalensis G, C
Uncommon. A resident of ladangs and cultivated areas.

Reddish Scops-Owl Otus rufescens S
Uncommon. Recorded only in the Natai Lengkuas area in alluvial swamp forest (voice records only).

Collared Scops-Owls Otus bakkamoena S, L, G, C
Common. Most easily found in the alluvial forests of Natai Lengkuas.

Barred Eagle-Owl Bubo sumatranus S
Uncommon, but possibly overlooked. Records from the Natai Lengkuas area only.

Buffy Fish-Owl Ketupa ketupu S
Recorded only in one area, near the Buluh Besar PHPA guard post, 1 bird regularly heard at dusk and early evening.

Brown Hawk-Owl Ninox acutulata S, FP
Uncommon. Heard at night in the Natai Lengkuas area in association with the ladang and other open areas. Also heard at the Buluh Kecil PHPA guard post.

Brown Wood-Owl Strix leptogrammica S
Uncommon. Recorded around the Buluh Kecil PHPA guard post only, but very regularly. Circumstantial evidence suggests that this species will eat birds.

Large Frogmouth Batrachostomus auritus K
Status uncertain. Two birds were flushed from low perches at the edge of kerangas forest on 28 June, Natai Lengkuas.

Javan Frogmouth Batrachostomus javensis S
Status uncertain. Single birds heard at night in alluvial swamp forest at Natai Lengkuas on 28 and 27 June and 21 July were identified at this sp. from the call (all presumed males).

Malaysian Eared Nightjar Eurostopodus temminckii
S, K, FP, L, G
Common, though more so around Natai Lengkuas than in any other area surveyed. One roosting bird was flushed from young kerangas vegetation.

Edible-nest Swiftlet Collacalia fuciphaga S, Cf, C
Common, but more so along the coast. Identified from the deeply forked tail.

White-bellied Swiftlet Collocalia esculenta S
Uncommon. Observed in the Natai Lengkuas area only, but it may have been overlooked.

Brown Needletail Hirundapus giganteus S
Recorded only once on 26 June over the Sekonyer river at Natai Lengkuas (one bird).

Silver-rumped Swift Rhaphidura leucopygialis S, k, FP, L, G
Common, usually over water.

House Swift Apus affinis S, FP, L, Cf, G, C
Occasional near buildings or seen in flight. One nest found on 6 July containing 2 young attended by 2 adults, in the eaves of the PHPA Buluh Kecil guard post. This nest was found destroyed on 27 August, but one bird was seen rebuilding on the same spot.

Asian Palm-Swift Cypsiurus batasiensis Cf
Recorded only once, a population roosting in the coconut plantations of Teluk Pulau.

Crested Treeswift Hemiprocne longipennis S, K, k, FP, Cf, G
Common. Recorded over most habitats, but most common along the coast. On 17 August, 2 adults with fledged young were seen in coastal fringe vegetation, the young begging food from the adults.

Whiskered Treeswift Hemiprocne comata S, G
Uncommon. Recorded only in the Natai Lengkuas area, and markedly less common than H. Longipennis.

Red-naped Trogon Harpactes kasumba S, K
Uncommon in forest areas. One newly-fledged young netted on 27 June in kerangas.

Diard's Trogon Harpactes diardii S, K
Uncommon, in forest areas.

Scarlet-rumped Trogon Harpactes duvaucelii S, K
Uncommon to common, in most forest areas. One immature male netted on 28 August.

Blue-eared Kingfisher Alcedo meninting S, K, k, FP, Cf, G
Common, in almost all habitats. One nest in kerangas on 2 June, the adult flushed from the nest burrow. Interestingly, the burrow was dug into almost level ground. Fledged young were netted on 30 May and 1 July, and 1 was seen on 27 May in swampforest.

Black-backed/Rufous-backed Kingfisher Ceyx erithacus/Ceyx rufidorsus S, K, k, Cf
Common. Recorded in all forest habitats, including the coastal fringe. One juvenile mostly erithacus seen on 5 June. Virtually all individuals seen were erithacus-rufidorsus hybrids, showing greater affinity to one of the other principal form. Voous (1961) and Thomson (1966) state that hybrids are very common in Borneo, and Smythies (1957) declared that 58% of museum specimens were hybrids.

Stork-billed Kingfisher Pelargopsis capensis S, FP, Cf, G
Common. Found along all rivers and the coast. On 10 September 2 immatures were observed.

Ruddy Kingfisher Halcyon coromanda S, Cf
Uncommon. Netted in coastal fringe vegetation at Teluk Pulai (wing = 100 mm, endemic Sunda race minor), and observed in riparian swamp forest at the Buluh Kecil PHPA guard post.

Collared Kingfisher Halcyon chloris Cf, G
Uncommon to common. Occasionally seen inland in the grass swamps, but most common at the coast.

Sacred Kingfisher Halcyon sancta Cf, C
Migrant. On 17 August, 2 birds were seen in coastal fringe vegetation south of the Buluh Besar river. One bird seen in scrub around Teluk Pulai on 21 August.

Blue-throated Bee-Eater Merops viridis S, K, k, FP, L, Cf, G
Common. On 3 June a fledged young was seen begging food from an adult.

Bushy-crested Hornbill Anorrhinus galeritus S, K, k
Common in all inland forest areas. The most frequently encountered group size was 7.

Wrinkled Hornbill Rhyticeros corrugatus S
Uncommon. Occasional around Natai Lengkuas. Overall, the least often encountered hornbill.

Black Hornbill Anthracoceros malayanus S, K, k
Uncommon, though regular around Natai Lengkuas.

Southern Pied Hornbill Anthracoceros convexus S, k
Common. Found in all riparian habitats on the interior.

Rhinoceros Hornbill Buceros rhinoceros S, K, FP
Common. Recorded in all inland forest areas, including peat swamp.

Red-crowned Barbet Megalaima rafflesii S, K, k, FP, L
Very common in most areas, though uncommon in mature kerangas.

Red-throated Barbet Megalaima mystacophanos K
Uncommon. Recorded only in kerangas forest, where it appears to displace the preceding species.

Blue-eared Barbet Megalaima australis S, K, k, FP
Very common. Heard in all inland forest habitats. One adult was seen excavating a nest cavity in kerangas forest on 15 June.

Brown Barbet Calorhamphus fuliginosus S, K
Uncommon. Occasionally observed in forest areas.

Rufous Piculet Sasia abnormis S, K, k, FP, L, Cf, G
Common in all forest and scrub areas. One adult was seen carrying food on 31 May. In all, 8 juveniles were netted between 19 June and 23 August.

Rufous Woodpecker Micropternus brachyurus S
Very uncommon. Only one record, of a pair seen excavating a nest cavity on 24 August, in swamp forest.

Crimson-Winged Woodpecker Picus puniceus S
Uncommon. Recorded only in the Natai Lengkuas area, in forest.

Banded Woodpecker Picus miniaceus K, Cf.
Uncommon, but less so than the preceding species, in forest area.

Common Goldenback Dinopium javanense Cf.
Common, but along the coast only.

Olive-backed Woodpecker Dinopium rafflesii; S
Very uncommon. Recorded only once in swamp forest, at Natai Lengkuas.

Buff-rumped Woodpecker Meiglyptes tristis S
Very uncommon, but possibly overlooked. Recorded in alluvial swamp forest at Natai Lengkuas.

Buff-necked Woodpecker Meiglyptes tukki S, K, k, FP
Common. Recorded in all inland forest areas. One fledged young seen begging food from 2 adults on 27 June.

Great Slaty Woodpecker Mulleripicus pulverulentus S, k
Common. Mostly found in the Natai Lengkuas area. One male was seen excavating a nest cavity on 27 June, in a large tree on the edge of a ladang.

White-bellied Woodpecker Dryocopus javensis S, K
Common. Usually associated with riverine swamp forests.

Brown-capped Woodpecker Picoides moluccensis FP, Cf, G
Uncommon. Recorded only in the grass swamp areas near standing dead trees, and along the coast. One bird seen carrying a faecal sac out of a nest cavity on 14 June; one bird seen entering a nest cavity on 14 June (not the same bird as just mentioned); one nest found on 23 June in grass swamp, and another nest found at the edge of scrub on 27 July (contents of both not seen).

Grey-and-Buff Woodpecker Hemicircus concretus S, K, k
Uncommon, but possibly overlooked. One active nest was found on 9 June in swamp forest edge.

Orange-backed Woodpecker Chrysocolaptes validus S, K
Uncommon. Occasionally seen in the Natai Lengkuas area in kerangas and swamp forest.

Black-and-Red Broadbill Cymbirhynchus macrorhynchus S, K, k, FP, Cf, G

Common in all riparian habitats and the sea coast. On 21 May along the Sekonyer river 2 separate nests were seen with adults leaving, and 1 nest with an adult still inside was also noted. On 7 June another nest was found along the Sekonyer, freshly made and decorated with green moss. On 7 June one bird was seen carrying nest materials. On 3 Sept. one family group of 2 adults and 2 fledged young was seen along the Buluh Kecil river.

Banded Broadbill Eurylaimus javanicus S
Encountered only near the Buluh Kecil area (in peat basin margins). This species is reportedly rare in swampy coastal districts (Robinson, 1927); its scarcity in kerangas, compared with E. ochromalus is surprising in view of the comments in Holmes & Burton (1987).

Black-and-Yellow Broadbill Eurylaimus ochromalus S, K, FP, Cf
Common in all inland forest areas.

Green Broadbill Calypotomena viridis S, K, k
Common, in all inland forest areas, though more common in kerangas. One newly-vacated nest was found on 30 June in kerangas, 1 m from the ground. Family groups of 4 birds were occasionally encountered.

Garnet Pitta Pitta granatina S
Recorded only once along the Buluh Kecil river, in alluvial forest, on 29 August. The red crown of the race granatina was visible.

Barn Swallow Hirundo rustica S, FP, L, Cf, G, C
Common (in migration) everywhere. First arrival data was 4 August.

Pacific Swallow Hirundo tahitica S, k, FP, L, Cf, G, C
Common everywhere. On 21 May, 2 nests were found at Natai Lengkuas under the eaves of buildings. In the same area 1 bird was seen building another nest on 9, 12 and 17 June. On 26 July, 1 fledged young was seen perched in pandanus, and 2 fledged young were seen attended by 2 adults in pandanus edge two days later.

Black-winged Flycatcher Shrike Hemipus hirundinaceus S, Cf
Common in inland forest areas, usually close to rivers.

Large Wood-Shrike Tephrodornis virgatus K
Encountered only once, in kerangas, on 2 June.

Bar-bellied Cuckoo-Shrike Coracina striata K
Recorded only once, in kerangas, on 1 June.

Lesser Cuckoo-Shrike Coracina fimbriata S, FP
Common at the edge of riverine swamp forest.

Pied Triller Lalage nigra Cf, C
Only found in open areas near cultivation, and along the coast.

Fiery Minivet Pericrocotus igneus S, k
Common around Natai Lengkuas. One juvenile was seen begging food from an adult male on 11 August in the Buluh Besar river area.

Scarlet Minivet Pericrocotus flammeus S
Common, but less so than preceding species.

Green Iora Aegithina viridissima S, K, k, FP, G
Common as an edge species, and in the upper canopy of kerangas.

Common Iora Aegithina tiphia S, K, FP, Cf, G
Common in cleared areas, and very common in coastal fringe vegetation. On 23 June 1 male was seen displaying in a riverside clearing on the Sekonyer; the bird flew between the same four perches with stiff wings, holding its tail downwards, fully exposing the long white flank feathers.

Lesser Green Leafbird Chloropsis cyanopogon S, K, k
Common, especially in the Natai Lengkuas area.

Greater Green Leafbird Chloropsis sonnerati S, K, k
The most common leafbird in the park. On 16 July 1 juvenile was netted. On 1 July an unidentified Chloropsis female was seen gathering nest materials.

Blue-winged Leafbird Chloropsis cochinchinensis S
Uncommon, only encountered in the Buluh Kecil drainage area.

Black-and-White Bulbul Pycnonotus melanoleucos S, L
Uncommon. Recorded only in the Sekonyer river area.

Black-headed Bulbul Pycnonotus atriceps S
Uncommon. Occasionally recorded in the Natai Lengkuas area.

Grey-bellied Bulbul Pycnonotus cyaniventris S
Recorded only once along the Sekonyer river in degraded riverine vegetation on 21 May.

Puff-backed Bulbul Pycnonotus eutilotus S, K, k, FP
Common in all inland forests.

Yellow-vented Bulbul Pycnonotus goiavier S, k, FP, L, G, C
Common in open areas, especially ladangs. One Juvenile was netted on 13 July.

Oliver-winged Bulbul Pycnonotus plumosus S, K, k, FP, L, Cf, G, C
A common bird of riverine edge/and open scrubland. Five juveniles were noted between 28 May and 13 August.

Red-eyed Bulbul/Cream-vented Bulbul Pycnonotus brunneus/simplex S, K, k, FP, L, Cf
Common in all inland forest areas. As plumage characters are very similar between the two species, and eye colors decidedly polymorphic and confusing, (Nash and Nash, in prep.), the authors have combined observations and netting records for these species. Precise identification of individuals both in the field and in the hand, particularly involving immatures, was not always possible. On 13 June, 2 juveniles were observed begging food, in swamp forest.

Spectacled Bulbul Pycnonotus erythrophthalmos S
Only one record of this species, 2 birds in swamp forest at Natai Lengkuas on 23 May. This species was almost certainly overlooked.

Yellow-bellied Bulbul Criniger phaeocephalus S, K
Common in inland forest areas, most common in kerangas. A family group of 2 young and 2 adults was netted on 16 July in kerangas.

Hook-billed Bulbul Setornis criniger S, K, k, FP
Common in inland forest areas. Family groups were noisy and frequently heard. One newly-fledged young was netted on 28 May.

Hairy-backed Bulbul Hypsipetes criniger S, K
Common in inland forest areas. Two juveniles were netted on 18 and 19 July.

Buff-vented Bulbul Hypsipetes charlottae S, K
Only one record of this species, of 4 birds in kerangas on 18 July, but probably overlooked and common in forests.

Bronzed Drongo Dicrurus aeneus S
Locally common in the Buluh rivers area, in riparian habitats.

Greater Racket-tailed Drongo Dicrurus paradiseus S, Cf
Common in the Buluh rivers area, and curiously absent from the Natai Lengkuas area.

Dark-throated Oriole Oriolus xanthonotus S, K
Common in inland forests. A juvenile was seen begging food from an adult male on 11 Sept., in kerangas.

Asian Fairy Bluebird Irena puella S, K
Common in all inland forest areas.

Crested Jay Platylophus galericulatus S, K
Recorded only once in the Natai Lengkuas area, at the edge of a ladang.

Black Magpie Platysmurus leucopterus S, FP
Recorded only once in scrub at Tanjung Harapan.

Slender-billed Crow Corvus enca S, K, k, FP, L, G
Common in all habitats and areas.

Velvet-fronted Nuthatch Sitta frontalis S, FP, Cf, G
Common, but easily overlooked. One bird was seen carrying food on 1 June. The nest was found on 10 June, with both birds watched carrying food to the next, and taking away faecal sacs, in riverine swamp forest edge. On 17 August a family group of 2 juveniles and 2 adults was seen feeding in coastal forest.

Rail Babbler Eupetes macrocerus K
Recorded only once on 28 June in kerangas. The call is well known to the authors, so it is unlikely that this species was seriously overlooked.

Black-capped Babbler Pellorneum capistratum S, K
Common in inland forests. On 27 June one fledged young was seen attended by an adult, in kerangas.

Short-tailed Babbler Trichastoma malaccense S, K, k, FP
Common in inland forest areas, preferring dry ground. On 25 June one juvenile was netted with an adult in kerangas.

White-chested Babbler Trichastoma rostratum S, K, k, FP, G
Common, usually in riverine habitats.

Ferruginous Babbler Trichastoma bicolor S, K
Uncommon in inland forest areas.

Horsfield's Babbler Trichastoma sepium S, K
Common, but perhaps local, in inland forest areas. Two separate juveniles were netted in alluvial forest (peat basin margin) on 3 and 4 Sept.

Abbott's Babbler Trichastoma abbotti FP, Cf
Common, but only in association with nipa. On 15 August, 1 juvenile attended by 2 adults was netted.

Moustached Babbler Malacopteron magnirostre S, K
Uncommon. Juveniles were netted on 24 May (1), 3 June (2), 4 June (1), and 30 June (1 bird) in forest.

Sooty-capped Babbler Malacopteron affine S, K
Uncommon. One juvenile was netted on 31 May in kerangas, and 1 was seen on 2 June in kerangas.

Scaly-crowned Babbler Malacopteron cinereum S, K
Common in forests. Sympatric with the following species. Two juveniles were netted on 25 June, and 1 on 16 July, in kerangas. One nest was found on 28 August in alluvial forest (peat basin margin) containing 1 egg at 0600 hours, then 2 eggs by 1100 hours. Eggs measured 20.0 x 14.3 mm and 20.5 x 14.0 mm, and were pale green, densely spotted with pale brown, with a subterminal ring of black-brown spots and splotches at the larger end.

Rufous-crowned Babbler Malacopteron magnum S, K, k
Common in all inland forest areas. Two possible juveniles were netted on 12 Sept. in kerangas.

Grey-breasted Babbler Malacopteron albogulare S, K
Uncommon, or common but skulking, in dense forest. One still downy fledged young was netted on 28 June in kerangas.

Chestnut-rumped Babbler Stachyris maculata S, K, FP
The least common Stachyris. A juvenile was netted in kerangas on 11 Sept.

Black-throated Babbler Stachyris nigricollis S, K, k, FP
Common in inland forests. An adult was seen carrying food on 31 May in kerangas. Two fledged young with 2 adults were seen on 7 July in alluvial forest. Juveniles were netted on 7 July, 1 Sept. and 12 Sept. in kerangas.

Chestnut-winged Babbler Stachyris erythroptera S, K, k, G
Common to very common in inland forest areas. Two juveniles were netted on 22 June in young kerangas.

Striped Tit-Babbler Macronous gularis
S, K, k, FP, L, Cf, G, C
Common, around edge and open clearings. One nest was found on 21 May containing 2 eggs, in ladang edge. An adult was seen feeding still-down fledged young on 6 June in swamp forest edge. One pair was seen building a nest in an alluvial forest clearing on 7 July. One nest found in a ladang on 4 August contained 2 eggs. One newly-fledged

downy young was netted on 5 June, and other juveniles were netted on 7 June, 2 and 3 August.

Fluffy-backed Tit-Babbler Macronous ptilosus S, K, k, FP, G
Common in edge habitats. On 24 May a juvenile with an adult was netted in alluvial swamp forest edge. On 12 June 1 adult female was netted in which a shelled egg low in the oviduct could be felt.

Brown Fulvetta Alcippe brunneicauda K
Recorded only once on 18 July when a female was netted in kerangas at Natai Lengkuas. Although this species usually has a sub-montane range (Fogden 1976, Smythies 1981), it has been recorded in the lowlands (see Kidd and Beales 1977) and appears to be found at this altitudinal level in restricted numbers.

Magpie Robin Copsychus saularis S, k, FP, L, Cf, G, C
Common in open areas, cultivation and coastal fringe forests. One immature with a spotted throat was captured on 2 August in fire-padang.

White-rumped Shama Copsychus malabaricus S, K, k, FP, Cf
Common in all forest areas, including coastal fringe forest. One fledged downy young was captured on 25 June, and 8 other juveniles were netted between 27 June and 12 August.

Rufous-tailed Shama Copsychus pyrropygus S, K
Uncommon. Observed in most forest areas.

Flyeater Gerygone sulphurea S, FP, Cf
Common. Easily found in coastal areas and in fire-padang.

Dark-necked Tailorbird Orthotomus atrogularis S, K, Cf, G
Uncommon. The least common of the tailorbirds. A partially -downy fledged young was netted on 23 August in coastal fringe vegetation.

Ashy Tailorbird Orthotomus ruficeps
S, K, k, FP, L, Cf, G, C
Common in edge habitats and open areas. Two fledged young were seen begging food on 11 June. On 8 July a bird was seen building a nest between two leaves at the edge of alluvial forest. On 11 July an adult was seen depositing a faecal sac at the edge of a ladang. Family groups (usually

with 2 young) are common. Juveniles were netted between 2 June and 23 August.

Rufous-tailed Tailorbird Orthotomus sericeus

S, K, k, FP, Cf, G

Common in edge habitats and open areas. One bird of a pair was seen doing a display flight on 4 June near alluvial swamp forest edge. A bird was seen depositing a faecal sac in scrub behind coastal vegetation on 21 August.

Yellow-bellied Prinia Prinia flaviventris FP, L, G, C

Common to very common in ladang areas, uncommon to common in fire-padang/scrub habitat. One fledged young was seen begging food from an adult on 20 July in ladang. One nest containing 3 eggs was found in a ladang on 21 July. On 31 July all 3 eggs hatched. A fledged young was seen begging food at the edge of a ladang on 11 Sept.

Grey-chested Flycatcher Rhinomyias umbratilis S, K

Common, especially in dry kerangas. Juveniles were netted on 27 June, 18 and 19 July, and 20 August.

Rufous-chested Flycatcher Ficedula dumetoria K

Recorded twice in kerangas. A juvenile male was netted on 29 and 30 June. Although Smythies (1957) states that this species is "occasional" in the lowlands, the presence of a breeding population in this extreme lowland site, so far from sub-montane habitats, appears to be significant.

Malaysian Blue Flycatcher Cyornis turcosa S, k, FP, G

Common in riverine habitats. On 1 July a fledged young was being attended by an adult female. Newly-fledged still downy young were netted on 11 and 12 July, and juveniles were netted between 5 June and 12 August.

Mangrove Blue Flycatcher Cyornis rufigastra Cf, C

Common, but along the coast in nipa-mangrove, coastal scrub, and sometimes in coastal coconut plantations. A juvenile was netted on 15 August.

Spotted Fantail Rhipidura perlata K

Uncommon, in kerangas. Juveniles were netted on 26 and 29 June.

Pied Fantail Rhipidura javanica S, k, FP, L, Cf, G, C

Very common in riverine habitats. All nests were found on riverside pandanus stems, with the exception of one nest at the apex of an emergent Crinum sp. leaf. Nests: on 4 June, a nest containing 3 eggs; on 4 July, 2 nests with sitting hatched young (the second egg hatched by 6 August); on 10 August, 1 nest with a sitting bird, and another nest with 2 eggs, and the Crinum nest with a sitting bird; on 29 August 2 nests with 2 eggs each; on 31 August, 1 nest with sitting bird, both sexes sharing the incubation duties; on 4 Sept., 1 nest with 2 eggs, this nest being depredated by the next day, and the pair started to build another nest nearby; on 1 August a newly-fledged young was being attended by two adults; on 4 August a fledged young was seen feeding alone. Juveniles were netted on 27 July, and 2 and 22 August.

Black-naped Monarch Hypothymis azurea S, K, k, FP

Common in inland forest areas, with a preference for mature kerangas. A male was seen displaying to a female on 1 June. A juvenile was seen begging food from a female on 25 June. Two males were observed in a territorial fight on 25 June. A pair was seen building a nest on 1 July, with mosses and down. Both birds were around the nest, but only the female was seen adding materials. A nest found on 19 July contained 1 egg, and both sexes were seen incubating. On 7 August this nest was found depredated. Juveniles were netted on 18 and 27 July.

Rufous-winged Flycatcher Philentoma pyrhopterum

S, K, k, FP

Common in most inland forest areas. A juvenile was netted on 14 June.

Mangrove Whistler Pachycephala cinerea S, K, k, FP, Cf

Common in inland forest areas, particularly in kerangas.

White-breasted Wood-Swallow Artamus leucorhynchus Cf, C

Occasionally seen around cultivated areas along the Sekonyer river (at Tanjung Harapan), but most common along the coast, near open areas. On 23 August 1 fledged young was being attended by 2 adults, in coastal fringe vegetation.

Long-tailed Shrike Lanius schach C

Not actually recorded within the park, but common in the scrub land around the town of Kumai. It is likely that this species occurs in similar habitats within the park.

Bornean Bristlehead Pityriasis gymnocephala S, K, k, FP
Uncommon. More frequent in the Natai Lengkuas area. Usually encountered in pairs or small groups. One bird was noted in very low scrub at Tanjung Harapan, otherwise all sightings were made in the mid-and upper canopy levels of forest. On the basis of calls, which had a strong similarity to those of the Black Butcherbird Cracticus quoyi in Irian Jaya, we would support the inclusion of this species in the Cracticidae of Australia and New Guinea (see Ahlquist et al. 1985).

Philippine Glossy Starling Aplonis panayensis S, Cf, C
Common, but local. A large evening roost of several hundred birds was present in the coconut plantations of Teluk Pulai, with many immature birds evident, on 18-23 August.

Hill Myna Gracula religiosa S, K, k, FP, L, G
Common in the Natai Lengkuas area. A pair was seen exploring a tree cavity on 3 June, in riverine forest edge. Single birds were seen exiting separate nest cavities on 14 and 23 June, in riverine forest.

Plain Sunbird Anthreptes simplex S, K
Common in inland forest areas, preferring kerangas. A juvenile with fresh feathers was netted on 2 July.

Brown-throated Sunbird Anthreptes malacensis
S, K, k, FP, L, Cf, G, C
Common in edge habitats and scrub. A nest with 2 eggs was found on 23 May. Both eggs hatched on 7 June, and fledged on 22 June. A nest was found on 1 July, possibly still under construction. Both these nests were on the edge of a ladang. On 20 July a juvenile was seen begging food. Juveniles were netted between 2 and 22 August.

Red-throated Sunbird Anthreptes rhodolaema S, K, FP
Uncommon, in clearings and scrub. A nest was found on 11 June, and it appeared that only the female builds the nest, with the male occasionally inspecting it. The male displayed

to the female at the nest, by pointing its head downwards, its tail up, while lowering its wings and uttering high-pitched trills. Thompson (1966) believed that A. rhodolaema and A. malacensis may be allopatric, but this rhodolaema nest was less than 50m away from an active malacensis nest, disproving the hypothesis.

Ruby-cheeked Sunbird Anthreptes singalensis S, K, k, FP, Cf
Common, as a forest edge and clearing species. On 28 June a female was seen building a nest in kerangas edge. Juveniles were netted on 18 June and 27 July.

Purple-naped Sunbird Hypogramma hypogrammicum S, K
Common in edge and scrub habitats. Juveniles were netted on 3 and 6 August.

Purple-throated Sunbird Nectarinia sperata K, K, k, FP, G
Common in edge and scrub habitats, juveniles were netted on 3 and 6 August.

Copper-throated Sunbird Nectarina calcostetha Cf
Common, but only in association with nipa-mangrove vegetation.

Olive-backed Sunbird Nectarina jugularis FP, Cf, G, C
Common in scrub and fire-padang. Juvenile was netted on 2 and 6 August.

Crimson Sunbird Aethopyga siparaja S, k, FP, G
Common in scrub and fire-padang. A juvenile was netted on 26 June.

Little Spiderhunter Arachnothera longirostra
S, K, k, FP, Cf, G
Very common in most areas. Juveniles were netted between 20 July and 6 August.

Thick-billed Spiderhunter Arachnothera crassirostris S
Occasionally recorded in the Natai Lengkuas area.

Long-billed Spiderhunter Arachnothera robusta S
Only recorded once in swamp forest on 2 August. This species was probably overlooked.

Spectacled Spiderhunter Arachnothera flavigaster S
Occasionally recorded in the Natai Lengkuas area.

Yellow-eared Spiderhunter Arachnothera chrysogenys S
Uncommon, in forests around Natai Lengkuas. A juvenile was netted on 13 June.

Scarlet-breasted Flowerpecker Prionochilus thoracicus
S, k, FP
Uncommon, mostly observed in scrub habitats. Juveniles were netted on 14 and 20 July.

Yellow-breasted Flowerpecker Prionochilus maculatus
S, K, k, FP, G
Very common, in forest edge habitats as well as closed forest. Juveniles were netted between 23 May and 29 August.

Crimson-breasted Flowerpecker Prionochilus percussus
K, k, FP
Uncommon, mostly observed in scrub habitats. Juveniles were netted on 20 and 27 July.

Yellow-vented Flowerpecker Dicaeum chrysorrheum S, L
Recorded only once at the edge of riparian swamp forest at Natai Lengkuas on 22 May.

Orange-bellied Flowerpecker Dicaeum trigonostigma
S, K, k, FP, L, Cf, G
Common as an edge species. A juvenile was seen on 22 May and juveniles were netted between 23 May and 17 July.

Plain Flowerpecker Dicaeum concolor FP
Recorded only in one locality, Tanjung Harapan, in open scrub, but this species is easily overlooked.

Scarlet-backed Flowerpecker Dicaeum cruentatum FP
Common in scrub habitats.

Scarlet-headed Flowerpecker Dicaeum trochileum S, FP
Uncommon but widespread in edge habitats. This appears to be the western limit of its presently recorded range in Kalimantan.

Javan White-Eye Zosterops flava Cf
Local, common in the coastal fringe vegetation of Teluk Pulau. On 21 August a fledged young was seen begging food from an adult. A juvenile was netted on 23 August. A few birds were heard at Tanjung Kubu (west side of Kumai Bay) on 8 Sept.

Dusky Munia Lonchura fuscans S, k, FP, L, G, C
Common in grassy areas. One bird seen carrying nest materials on 17 June. Nests were found on 2, 9 and 21 August, with birds seen exiting the nests.

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A VISIT TO GUNUNG NYIUT IN WEST KALIMANTAN*

by
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and
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Almost no ornithological fieldwork has been done in the montane regions of Kalimantan in recent decades (Holmes and Burton 1987).

We spent 10 days from 28 August to 6 September 1986 observing birds in Gunung Nyiut Wildlife Refuge, West

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Kalimantan (110°E, 1°N) and hope that our record will contribute to the distributional knowledge of the avifauna of Borneo.

The wildlife refuge covers 140,000 ha. of mainly submontane forest. The highest elevation at the summit of Gunung Nyiut is 1701 m. Between 800 and 1500 meters very little change in vegetation can be seen, but above this elevation and up the steep slopes of Gunung Nyiut the trees become quite low, only reaching 10-15 m in height.

The following is an annotated checklist of birds recorded above about 800 m - our altitudes are estimates and therefore they are only indicative. Unless otherwise stated, all birds were seen in primary, submontane forest.

Macropygia ruficeps Little Cuckoo-Dove: Common.

Harpactes oreskios Orange-breasted Trogon: One at 1000 meters.

Megalaima monticola Mountain Barbet: Common - its distinctive call being one of the characteristic sounds above 1000 meters.

Megalaima eximia Black-throated Barbet: A single bird seen at 1200 meters. It was observed at about 15 meters range for several minutes, tapping on a dead trunk like a woodpecker.

Hirundo rustica Barn Swallow: A small flock around summit of Gunung Nyiut.

Criniger ochraceus Ochraceous Bulbul: Common.

Hypsipetes flavala Ashy Bulbul: A few.

Dicrurus leucophaeus Ashy Drongo: A few.

Trichastoma pyrrhogenys Temminck's Babbler: One observation.

Pomatorhinus montanus Chestnut-backed Scimitar-Babbler: One observation.

Napothera crassa Mountain Wren-Babbler: Common at 1200-1400 meters, frequenting low bushes, seen in pairs or small groups.

Napothera epilepidota Eye-browed Wren-Babbler: Singles noted around 1200 meters in dense undergrowth. It proved somewhat difficult to identify the Wren-Babblers because of skulking behavior and similar plumage. Mountain Wren-Babbler was identified by larger size, all white throat and breast, faintly streaked upper parts, and by lighter brown color. Eye-browed Wren-Babbler could be confusing due to a wide range of plumages, but when seen the white spots on wing-coverts were conclusive.

Stachyris nigriceps Grey-throated Babbler: Common.

Pteruthius flaviscapis White-browed Shrike-Babbler: One at 1000 meters.

Alcippe brunneicauda Brown Fulvetta: Common.

Yuhina everetti Chestnut-crested Babbler: Very common from 500 meters and upward.

Enicurus leschenaulti White-crowned Forktail: A single bird at 1000 meters in swampy forest near a slow moving stream.

Chlamydochaera jefferyi Black-breasted Thrush: One pair seen feeding their fully grown young - once presumably with a tiny fruit. Observed at 1200 meters, and always keeping to low branches of small to medium-sized trees. A further single individual was seen in the same habitat and altitude.

Abroscopus superciliaris Yellow-bellied Warbler: A few.

Seicercus montis Yellow-breasted Warbler: Common.

Phylloscopus trivirgatus Mountain Leaf-Warbler: Common.

Orthotomus cuculatus Mountain Tailorbird: Common above 1000 meters in dense thickets.

Ficedula hyperythra Snowy-browed Flycatcher: Two records.

Ficedula westermanni Little Pied Flycatcher: One.

Cyronis concreta White-tailed Flycatcher: One.

Rhipidura albicollis White-throated Fantail: Common. They had the paler underparts of R.a. sarawacencis and a narrower white throatstripe compared to the illustration of R.a. kinabalu in Smythies (1981); sometimes this stripe was barely visible.

Pachycephala hypoxantha Bornean Mountain Whistler: Common.

Aethopyga siparaja Crimson Sunbird: One male at 800 meters.

Aethopyga mystacalis Scarlet Sunbird: Several records at 800-1000 meters.

Arachnothera longirostra Little Spiderhunter: Two records.

Chlorocharis emiliae Mountain Black-eye: Several seen near summit of Gunung Nyiut in small trees.

Most of these species are widely distributed in Borneo, or known from the nearby Penrissen and Poi ranges in Sarawak. However, major extensions of known range, to the order of 350 km, are indicated for the Mountain Barbet, and of 500 to 700 km for the Black-breasted Thrush, Mountain Wren-Babbler and Mountain Tailorbird (Smythies, 1957 and 1981). From the lowlands one species deserves mention: In typical lowland dipterocarp forest a single Caprimulgus concretus Bonaparte's Nightjar was seen perched in a small tree about 3 meters above the ground in full daylight for 4-5 minutes. The bird, of typical nightjar appearance, was generally dark brown, had two small but distinct white patches on the outer tail feathers, a white throat patch (as the bird usually held its bill pointing down this patch was partly hidden), a barred dark and buff upper breast, bordered below by an indistinct white breast band, and a barred brown and buff belly. It lacked any markings in the wing and lacked the ear tufts of Eurostopodus temminckii Malaysian Eared Nightjar. Although not a reliable field indicator, the size appeared to be small.

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NEWS AND ANNOUNCEMENTS

Mental Illness in Sarawak and Australia: A Cross Cultural Comparison

Major psychotic illness, especially schizophrenia, has been at the center of contemporary cross-cultural research into mental illness. A great deal of attention has been focused on the varying clinical manifestations of schizophrenia in different social contexts and in particular, on the significant variation observed in the prognosis of schizophrenia in different cultures. This latter issue has excited interest among psychiatrists and anthropologists ever since two large-scale, cross-cultural projects (World Health Organization 1979; Sartorius et al. 1986) showed that the long-term outlook for patients suffering from schizophrenia was considerably more favorable if they lived in a developing country than if they lived in the developed world. The conclusions of these two World Health Organization sponsored studies were in agreement with the consensus of research opinion (Warner 1985). Since the Second World War, no less than fourteen major cross-cultural projects

have shown schizophrenia to have a more favorable outcome in Third World countries.

What factors might account for this difference? So far there are no definitive answers to this question, but it is unlikely that differences in outcome are related to the clinical features of the disease per se. Thus the more favorable prognosis in Third World countries holds true for all clinical varieties of schizophrenia, whether the disease is acute in onset or whether it is a chronic type of illness with an insidious onset.

Instead, most available evidence points to the crucial role of social and cultural factors in influencing a patient's recovery from psychotic illness. For example, the World Health Organization studies found that an absence of social isolation and an agricultural occupation were both associated with a good prognosis. Paradoxically, patients with the lowest level of education had the best outcome, most probably because in developing countries it was this group whose milieu provided the highest level of support.

In association with the Sarawak Museum and the Sarawak Medical Department I am presently setting up a comparative study of schizophrenia in Sarawak and Australia in an attempt to look at the social and cultural factors which might influence recovery from the disorder. This project is being carried out under the auspices of (and with the financial support of) the National Health and Medical Research Council in Canberra, Australia.

One part of the project will be located in Adelaide, Australia, and will examine Western, city-dwelling patients within a developed, welfare-capitalist society. The other part will be located in the First and Second administrative divisions of Sarawak and will focus on one ethnic group, the Iban. This will enable comparison between patients living in a developed economy with those who live in a rapidly developing economy. There are many reasons to locate one part of the study among the Iban. It is a large ethnic group with a single language. Earlier studies of Schmidt (1964) indicate that the prevalence of mental illness among the Iban is not high, suggesting that the recovery rate from psychotic illness is good in this group. Furthermore, there is an emerging Iban middle and lower class living in large

population centers, including Kuching and Sri Aman. Patients from this sector of Iban society may provide an interesting sub-group to compare with Australian patients on the one hand and with rural Iban patients on the other hand.

Of necessity, this is a long-term project. Initially I will carry out a detailed psychiatric examination of each patient, paying particular attention to the patient's family and kinship structure, to family attitudes toward the patient (degree of tolerance, capacity to support, ability to provide him or her with a valued role) and to the patient's own perceptions of his or her illness. Of great importance is the interpretation which the patient places on auditory hallucinations or "voices": whether these experiences are viewed as stemming from brain disease, from the patient's own thoughts or unconscious mind, or from super-natural agents such as spirits or perhaps extra-terrestrial influences. Follow-up examinations will be undertaken after two years and again after five years in order to assess the extent to which the patient has recovered. Instead of using a clinic-based approach, I plan to carry out these assessments in the patient's own dwelling, be it longhouse, suburban home or, in the case of Adelaide patients, urban dwelling. This usually allows for a more intimate appreciation of the problems faced by both patient and family. The analysis of these data will seek to identify the social conditions which are conducive to recovery from schizophrenia or which alternatively tend to perpetuate this psychotic illness.

An important methodological aspect of the study is the combined use of psychiatric and anthropological field research techniques, drawing on my training in both disciplines. The first stage, which has been completed, was an ethnographic study of a psychiatric hospital in Australia (Barrett 1987). It examined the social organization and culture of the mental hospital, focusing on schizophrenia and its social definition. I approached this subject not from a psychiatric stance but from the perspective of the sociology of knowledge, treating psychiatric knowledge of mental illness as itself a form of ethno-science which is located within a distinctively Western cultural framework. Indeed the very definition of schizophrenia is rooted in Western values and institutional formations.

The second stage, currently in progress, is an ethnographic study of Iban culture, examining Iban conceptions of personhood and Iban cultural notions of illness in general and mental illness in particular. This stage is expected to take 14 months. The ethnography is being undertaken in a longhouse in the Saribas area of the Second Division, a location which provides an opportunity to examine the traditional healing practices of the many manang who are active in that area.

As a result of this extended preliminary anthropological field work both in Adelaide and in Sarawak, I expect the comparative psychiatric study to be grounded in a thorough ethnographic understanding of each culture. My initial observations are that there are indeed patients in both cultures who are diagnosed as suffering from schizophrenia and who are sufficiently similar (delusions, hallucinations and thought disorder) that they bear comparison. Furthermore, Iban and Australian patients are sufficiently different that the comparison should be fruitful.

For example, both Iban and Australian patients experience auditory hallucinations, usually in the form of voices talking to them and instructing them to do things. Iban patients, much more so than their Australian counterparts, tend to interpret these voices within a spiritual context. Commonly they attribute them to antu. Family members frequently agree with such views, so lessening the likelihood of a conflict of interpretations between patient and immediate kin. Indeed the framework within which patients and their families make sense of the symptoms of the illness is usually compatible with core aspects of traditional Iban culture. In Australia it is more common to find patients and their families in persistent disagreement over the meaning and possible cause of auditory hallucinations and other symptoms of schizophrenia. And in many instances, patients' conceptions of their illness (seeing it as caused by malign influences, being poisoned or perhaps as a result of telepathic interference with the brain) are dissonant with core aspects of secular, materialist Australian culture.

Aside from these differences in the way people define and understand their illness in each setting, there is a striking difference in patients' kin structures. While it is

true that there are some similarities between the bilik and the Australian nuclear family, the bilik is embedded within a wider kaban structure and also, for rural Iban, within the longhouse organization. In these respects the bilik is fundamentally different to the suburban Australian family. An important part of this study will be to examine how these differences affect the process of recovery from schizophrenia.

It is anticipated that this research may help to throw some light on the fundamental nature of schizophrenia and develop our theoretical understanding of mental illness. At a more practical level, it is hoped that the findings of the study may have important clinical implications for the treatment of patients with schizophrenia as well as health policy implications for the development of psychiatric services both in Australia and in Malaysia. (Dr. R. J. Barrett, Neil Hamilton Fairley Research Fellow, The University of Adelaide, Department of Psychiatry, Royal Adelaide Hospital, North Terrace, Adelaide, South Australia 500, AUSTRALIA)

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B O R N E O N E W S

Regional News

Jakarta: More than a year ago, Indonesia banned the use of 57(1) pesticides in its rice fields. Only 10(2) pesticides escaped the ban. The agrochemical companies howled and tried to apply counter-pressure by laying off workers. There was initial resistance from farmers who feared being overrun by pests.

But the ban is working. Farmers got the same yields in 1987 using only half as much insecticide as they used before. And the brown hopper population, which had wiped out thousands of hectares of rice in the past, seems to be declining.

'It is too early to come to any definite conclusions. But the information we have collected so far shows a decrease in the number of hoppers,' said Dr. Soejitro, an entomologist with the Bogor Research Institute for Food Crops (BORIF).

The pesticide ban came into force in November 1986, as part of an integrated pest management programme for rice. It is a revolutionary new strategy in the on-going war with the brown hopper, based on the discovery that pesticides were simply breeding bigger and better super-pests.

Said Minister of National Development, in an explanation of the new strategy in January 1987: 'The broad use of pesticides, a part of agriculture in Indonesia...for some twenty years, does more harm than good because it does more to eliminate the natural enemies of pests than the pests themselves.'

The programme is described by Dr. Peter Kenmore, United Nations specialist attached to the International Rice Research Institute in Manila, as 'the most modern, flexible and scientifically sound field pest management system in the development world'. Its implementation is possible because pesticides for rice farmers are subsidized by the government and therefore their distribution is controlled through government agencies.

The motive behind the ban is concern about maintaining self-sufficiency in rice, Indonesia's most political crop. But the impact of a ban on pesticides on the health of rice farmers and their environment is also likely to be considerable.

The brown plant hopper, which sucks the sap from the rice shoot and destroys it, is the major pest in Java's west rice fields.

The Green Revolution package, which combined irrigation and high-yielding rice strains, allowed continuous cropping - and so created an all-year-round playground for the hoppers to proliferate. The Green Revolution transformed an occasional pest into a scourge.

In 1977, shortly after the high-yielding varieties spread through Java, the hopper wiped out more than 700,000 hectares of rice. The farmers, in response, whacked on more and more insecticides, all subsidized by the government. By 1984, Indonesia was using 40,000 tons of pesticides a year (on all crops), more than four times the amount used in 1979.

At the same time Indonesia's scientists raced to develop rice strains resistant to the hopper. But research at BORIF showed that the hoppers which survived the insecticides actually laid more eggs than before, while their natural enemies were killed off, leading to an upsurge of super-hoppers in the next season.

And as soon as the scientists came up with a rice strain resistant to hopper attacks, the hoppers would produce a new biotype which could munch through that strain as well.

As a result there was an upsurge of hopper attacks in 1983 and again in 1986, the year that the pesticides were banned.

Integrated pest management replaces this losing struggle with another mix of weapons, mainly natural. They include controlling planting patterns so that all fields in one area are cleared (and foodless for hoppers) at one time, planting resistant varieties, and the use of insecticides only

when the hopper population rises above an 'economic threshold', where the damage becomes unacceptable.

The 10 insecticides farmers are still allowed to use 'were selected because they kill the hopper at the right doses but they do not kill its natural enemies', Soejitro explained.

They are also less likely to kill the farmer. Most of the 10 are carbamate insecticides, which although toxic do not have a cumulative effect on the body and are seldom life-threatening. Amongst those banned are the organophosphate insecticides, which are rapidly absorbed through the skin and cause the most number of pesticide deaths worldwide.

BORIF has now turned its research energies onto cultivating the hopper's natural enemies. A team of entomologists are breeding three varieties of insect and one fungus which can put the hopper out of action.

This two-year-old research project has reached the stage where the predators are being released into experimental fields to track their effect on the hopper population. It will be another year before they are ready for general release to farmers, Soejitro estimates.

If this method of natural control is successful, it could point the way towards reducing the use of pesticides even further - and in other crops besides rice.

It cannot come too soon for the health of Indonesia's farmers. For years Indonesia has been a prime target for the export of pesticides which are banned or restricted in the West. Seventy percent of its total pesticide production comes from formulation plants owned by four multinationals - Bayer, ICI, Dow Chemicals and Chevron.

A recent survey by the International Organization of Consumers Unions found glaring violations of the pesticides code in Indonesia (IOCU, Violating the Pesticides Code, 1987).

They found toxic insecticides routinely repackaged and marketed to farmers in unmarked bags or bottles with no warnings or directions for use.

They also noted unethical promotions of pesticides through lotteries and advertisements which gave no warning of the dangers of pesticide spraying. One calendar, by Du Pont, showed a pretty model spraying a tobacco crop wearing no more protection than a tight sarung and a sexy smile - Third World Network Features.

NOTES

1. The 57 banned pesticides are: Agrothion 50 EC (fenitrothion); Azodrin 15 WSC (monocrotophos); Bassazinon 45/30 EC (diazinon + BPMC); Basmiban 20 EC (chlorpyrifos); Basminon 60 EC (diazinon); Basudin EC 60; Bayrusil 250 EC (quinalphos); Bayrusil 5 G (quinalphos); Basudin 10 G (diazinon); Brantasan 450/300 EC (diazinon + BPMC); Carbavin 85 WP (carbaryl); Cytrolane 2G (mephosfolan); Dharmasan 60 EC (phenthoate); Dharmathion 50 EC (fenitrothion); Diazinon 60 EC (diazinon); Dicarbene 85S (carbaryl); Dimaphen 50 EC (fenitrothion); Dimecron (phosphamidon); Dursban 20 BC (chlorpyrifos); Dursban 15/5 E (chlorpyrifos + BPMC); Byfonate 5 G (fonofos); Ekalux 25 EC (quinalphos); Ekaluz 5 G (quinalphos); Ekamet 5G (etrimfos); Elsan 60 EC (phenthoate); Elstar 45/30 EC (phenthoate + BPMC); Eumulthion TM (trichlorphon + azinphos-methyl); Folimat 500 SL (omethoate); Fomadol 50 EC (malathion); Gusadrin 150 CS (monocrotophos); Hostation 40 EC (triazophos); Karbathion 50 EC (fenitrothion); Lannate 25 WP (methomyl); Lebaycid 550 EC (fenthion); Lirocide 650 EC (fenitrothion); Miral 2 G (isasofos); Monitor 200 LC (methamidophos); Nogos 50 EC (dichlorvos); Nuvacron 20 SCW (monocrotophos); Ofunack 40 EC (pinidafen-tion); Padan 50 SP (cartap); Pertacide 60 EC (phenthoate); Petroban 20 EC (chlorpyrifos); Phylodol 50 EC (dichlorvos); Reidan 24 EC (chlorpyrifos-methyl); Sematron 75 SP (acephate); Sevin 5 D (carbaryl); Sevin 5 G (carbaryl); Sevin 85 S (carbaryl); Sumibas 75 EC (BPMC + fenitrothion); Sumithion 50 EC (fenitrothion); Sumithion 2 D (fenitrothion); Surecide 25 EC (cyano-

fenphos); Tamaron 200 LC (methamidophos); Thiodan 35 EC (endosulfan); Trithion 4 E (carbophenothion); Trithion 95 EC.

2. The 10 pesticides still allowed are: Applaud 10 WP; Mipcin 50 WP; Hopcin 50 EC; Bassa 50 EC; Baycarb 50 EC; Dharmabas 50 EC; Kiltop 50 EC; Furandan 3 G; Curater 3 G; Dharmafur 3 G.

(Halimah Todd, Third World Network Features).

Sarawak News

Penan Material Culture Collection at the University of Michigan

A collection of Penan Gang material culture was recently deposited at the Museum of Anthropology, University of Michigan. This collection consists of some 206 items collected over a period of three years by Peter Brosius. Most of the items are from the Penan community of Lg. Jek, Belaga District, Seventh Division, Sarawak. Collection emphasized items for general domestic use, implements used in hunting and sago production, and items produced for trade, particularly ajat baskets. An attempt was made to collect as complete a range of items of Penan Gang material culture as possible. This collection is available for study by interested scholars.

BOOK REVIEWS, ABSTRACTS, AND BIBLIOGRAPHY

LIAN, Francis Jana, Farmers' Perceptions and Economic Change - The Case of Kenyah Farmers of the Fourth Division, Sarawak. A thesis submitted for the degree of Doctor of Philosophy at the Australian National University, July 1987.

This thesis seeks to understand and explain change in economy of the Kenyah people of the Fourth Division of Sarawak, Malaysia, from a Kenyah point of view. Four main hypotheses are examined: first that the aim, direction and nature of change are shaped by 'inner' forces; second that social and cultural factors are no hindrance to change; third that change in Kenyah society as a whole is an aggregate of individually motivated change rather than the result of communal efforts; finally that the Kenyah consider their current economy as a logical system within the contemporary social and economic environment.

Kenyah are able to initiate economic change by themselves. They engage actively in both subsistence and cash economies, making all use they can of the currently active timber industry. Swidden has undergone significant changes. Kenyah social and economic systems possess internal mechanisms which drive them to search for new opportunities. The roles of social rivalry and conflict are emphasized. Indifference to certain agents of change is not a sign of unresponsiveness; it reflects a desire to adopt changes that suit their objectives. Conflict with the State lies in terms of approaches and objectives to change.

The thesis first views Kenyah, their environment, history and economy, at macro-scale. Most data are, however, drawn from micro-scale research among sample longhouses and families. In conclusion policy implications of the research are indicated and the 'populist' approach to rural development is examined; some sources of reservation are outlined.

REVUNENKOVA, E. V. - *Obraz risa v obriadakh lecheniia i pogrebeniia u daiakov plemeni ngadzhu (Iuzhnyi Kalimantan)*. - *Mify, kul'ty i obriady narodov zarubezhnoi Azii I* ed. by N. Zhukovskaia. - Moscow: "Nauka" Publishing House, 1986. - Pp. 73-88.
= Bornean; Dayak; death; rice; rites;

Images of rice used in the healing and funerary rites of the Ngaju Dayak are analyzed based on texts collected by H. Schärer. The author focuses on the concept of the soul of rice (hambaruan parei i canan tawur, behas parei). She stresses the interrelationship between the rites and the texts which accompany or explain them. She also examines

the identity of the mythological soul of the rice and the priestess who conducts the rites.

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