

BORNEO RESEARCH BULLETIN

Vol. 2, No. 1	June, 1970
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The Borneo Research Bulletin is published twice yearly (June and December) by the Borneo Research Committee. Please address all inquiries and contributions for publication to G. N. Appell, Editor, Borneo Research Bulletin, Phillips, Maine 04966, U.S.A.

- Carved design from Bajau boat

I.U.C.N. in arranging permission for this relocation of study site. The Rodmans entered the new study area in early May, 1970. At the present time a camp has been established and the study area prepared with a grid of paths to locate the various primates accurately. The Rodmans are currently gathering data on the orang population there as well as on the associated primate species.

Dr. Horr plans to reenter the field in May, 1971, to continue his work and to provide continuity for the project after the Rodmans leave in the late summer of 1971.

Conservation in Kalimantan

The East Coast of Kalimantan is currently being developed as a logging area, with a number of concessions granted to foreign companies and logging operations already underway. The Kutai area is envisioned as a protected area for many species, but in particular the orang-utan and the rhinocerous, both of which evidently exist in some concentration there. The Harvard University project will serve as an initial study of the area, preparatory to further work in orang conservation there by the Indonesian government.

ARCHAEOLOGY AND HISTORY OF THE GRAMINEAE

R. O. Whyte*

Work on this long-term project has commenced, at the suggestion of the Director, Royal Botanic Gardens, Kew, England. Attention will be devoted first to Asian countries, and within that scope, Borneo plays an important part. The objective is to collect and analyze all the information obtainable from studies on the archaeology, history and taxonomic geography of the Gramineae--the food cereals, sugar cane, the grasses cultivated for animal feed or other economic purposes, and the wild grasses in the natural vegetation.

Information from Borneo will be correlated with that from other Asian countries into a regional Asian picture, to show, for example:

- (a) a summary of current views regarding the history of the vegetation and flora of Borneo in terms of geological and climatic history;
- (b) significance of the Asian routes of plant migration through Borneo, proposed by C. G. G. J. van Steenis, and discussed by the writer in his Grasslands of the Monsoon (Faber and Faber, London; F. A. Praeger, New York, 1968);
- (c) history, in geological and climatic terms, of the relict genera and species of temperate members of the Gramineae, found on Mt. Kinabalu, in relation to those other high altitude relict areas in Indonesia and other islands of Southeast Asia, and the nearest

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high altitude points on the Asian mainland. (Discussed in a preliminary way in the writer's chapter on "Grasses and Grasslands" in the forthcoming UNESCO publication, The Natural Resources of Humid Tropical Asia);

- (d) history of the first arrival and subsequent introduction of rice, whether from the Asian mainland or insular Southeast Asia; its effect on the nutritional ecosystems of the Borneo peoples;
- (e) introduction of the African fodder grasses, Napier, Guinea, Para, etc.--when, in what form and amounts, with what degree of genetic variability, and from which country or continent?

This research should in due course represent a major contribution to the understanding of the taxonomic relations and geographical distribution of the tribes, genera and species within the most important of all plant families, the Gramineae. It will also assemble data on the genetic composition, past and present varieties or cultivars of the major food cereals, and indicate where and whether it may be desirable to conserve gene resources in ancestral or related wild plants in primitive areas of natural vegetation. (Discussed by writer in "Conservation of Wild Species," Genetica Agraria 1968, and the subject of current concern among plant breeders.)

The writer would be most grateful for any assistance which specialists on Borneo may be able to provide, with regard to archaeological evidence, pollen analyses and modern or historical records of plant introductions. In due course it should be possible to prepare an article dealing specifically with the problem as it relates to Borneo, with a wider regional study to follow later.

NEW SUBGROUPING OF THE LANGUAGES OF WEST BORNEO

Robert A. Blust

The writer has collected fairly extensive material on the Bario dialect of Kelabit from a native speaker of the language who is presently a student at the University of Hawaii. The existence of double reflexes of certain Proto-Austronesian phonemes in a handful of morphemes soon became apparent. Further research, based principally on word lists in Ray (1913), revealed the existence of double reflexes in the same morphemes in a number of the languages of northern Sarawak and adjoining areas. A preliminary report of these findings has appeared in Blust (1969).

It is planned to continue this inquiry with linguistic field work in the Baram District, Sarawak, commencing, it is hoped, sometime late in 1970. Emphasis will be on the collection of lexical materials needed if further progress is to be made toward the solution of a set of interrelated problems involving the subgrouping of certain of the languages of Borneo and changes in the reconstruction

of certain Proto-Austronesian morphemes. The concrete research objectives of this work will be: (1) to test the hypothesis, advanced in Blust (1969), that there is a clearly-defined subgroup of Austronesian languages in northern Sarawak that cross-cuts traditional classification; (2) if the West Borneo subgroup hypothesis stands up under closer scrutiny, to determine at least the major outlines of the internal structure of this group; (3) to determine the nature of the double reflexes of certain Proto-Austronesian phonemes in these languages; (4) to use the evidence of languages in this putative subgroup--particularly of Lemeting and Long Kiputto support or disconfirm changes that have been proposed in the reconstruction of some Proto-Austronesian morphemes.

Bibliography: Blust, Robert A., 1969, Some new proto-Austronesian trisyllables, Working Papers in Linguistics No. 10, Department of Linguistics, U. of Hawaii; Ray, Sidney H., 1913, The languages of Borneo, Sarawak Museum J. 1, 4:1-196.

INVENTORY OF URGENT ANTHROPOLOGICAL RESEARCH FOR BORNEO: II

G. N. Appell

This inventory is concerned with identifying those cultures, language and societies that are dying out from a variety of causes or that are undergoing such rapid change that their indigenous patterns are in danger of disappearing in the near future without notice. The urgency of this problem is becoming more and more acute each year, particularly with the recent development of interest in the forest resources of Borneo (cf. BRB 2:16-17). The first section of this inventory appeared in the Borneo Research Bulletin 1:10-12. Blank inventory cards are available from the Editor for anyone who would like to contribute to this inventory. It is planned to publish these contributions periodically in this Bulletin in order to draw the attention of the research community to the nature of the problem with the hope that research will thereby be encouraged.

A:4 Illanun

Location: Lower Tempasuk River and coastal Plain near Pandasan, Sabah, Malaysia.

Submitted by: C. Sather.

Population: 4000 in Sabah (1960).

Comments: Considerable genealogical materials and traditional histories could be collected. But owing to political and social changes it is becoming increasingly difficult to learn the meaning of these materials and the uses to which they were traditionally put in validating claims to authority for higher social status. If recorded, these data would be exceedingly valuable for a number

of reasons: (1) for understanding the traditional Illanun political system and how it was related to the systems of the Tausug, Brunei, and Maranao; (2) for the answers it would provide to historical questions, e.g. the history of Illanun settlement in Sabah, slave trading, and piracy, the changing political fortunes of the Brunei and Sulu Sultanates and so forth; and (3) intergroup relations with neighboring Bajau populations. There is the danger that this material will be lost if not collected soon.

Ref.: Sather, C., 1967, Social rank and marriage payments in an immigrant Moro community in Malaysia, Ethnology 6:97-102.

A:5 Tidong

Location: Extreme S.E. coast of Sabah in Tawau District.

Submitted by: C. Sather.

Linguistic Classification: Appear to be linguistically a heterogeneous group though primarily composed of Murutic speakers of Idaqan (Ida'an) linguistic family.

Population: Approximately 4500 in Sabah (1960).

Comments: The Tidong appear to be one of the few indigenous populations converted to Islam and an important study could be made of their relation with the so-called "Tawau Murut," who seem to be closely allied linguistically, in order to discover the social and cultural consequences of Islamization.

Ref.: With the exception of Beech's brief account (Beech, M. W. H., 1908, The Tidong dialects of Borneo, Oxford, Clarendon Press) virtually nothing is known of this group.

A:6 Kajang

Location: Upper Rejang, Sarawak.

Submitted by: Sharon Thomas.

Cultural Trends: The long-houses of these people are much reduced. \overline{R} . Lasah has gone from a two long-house complex of about 700 (estimated from the number of doors the people say there were) to 400 in the past 30 years. There is intermarriage with Kayan, Sihan, and Malay, and customs are becoming blurred and forgotten.

Comments: The groups involved are the Kejaman, Lahanan, Sekapan, and the Punan in the Punan Bah area on the Rejang and the Punan in the Ulu Bintulu area on the Batang Kemana.

Ref.: Thomas, Sharon, 1968, Women's tattoos of the Upper Rejang, Sarawak Museum J. 16:209-234.

A:7 Baukan (Lowland Murut)

Location: Upper Sook River in Keningau District.

Submitted by: D. J. Prentice.

Alternative Names: Bokun, Bokon, Baokan, Ulun-no-Bokon.

Linguistic Classification: Lowland Murut, section of Murutic subfamily of Idaqan (Ida'an) linguistic family.

Population: Approximately 1000 (1968).

Cultural Trend: A relatively isolated group until the completion of a road into area about 1966. There is little change as yet.

Comments: The only remaining Lowland Murut group not missionized and still maintaining most traditions. Women still wear short black tapiq, basketwork still made, etc. Baukan live on inland mountain plain, have both wet-rice and hill-rice cultivation. About half the dwellings are long-houses and the other half individual, elementary family houses.

Ref.: Keith, H. G., 1936, Ulun-no-Bokan (Murut) folklore, J.
Malaysian Branch Royal Asiatic Soc. 14:323-326; Prentice,
D. J., 1969, The Murut languages of Sabah. Ph.D. dissertation, Australian National U.

A:8 Kiring Among the Non-nomadic Punans

Location: Sarawak, on the Batang Kemaha and Rejang River from Punan Bah to Ramah Lasah, ulu Belaga.

Submitted by: | Sharon Thomas.

Comments: The Kiring grave monuments are no longer made, and, since they are made of wood and often avoided (there are spirits near them that may be threatening), they are deteriorating quickly. These burial monuments characteristic of the Punan are some of the best examples of carving in the area. One of these is a sort of combination kiring and sulong, another type of burial structure.

Ref.: Leach, E. R., 1950, A Kajaman tomb post from the Belaga area of Sarawak, Man 50:133-136.

POTTERY MAKING BY DUSUNIC AND BAJAU GROUPS IN SABAH

Michael Pike

[Editor's note: In a recent article (Appell 1968) and in one coauthored with Robert Harrison (Appell and Harrison 1969--please see Bibliography section of the Bulletin for full references), I observed that there was no evidence now available to indicate that pottery was still being made by any Dusunic group. The Curator of the Sabah Museum, Michael Pike, very kindly wrote me to correct this erroneous impression. I suggested that to correct the record a note on pottery making in Sabah for the Bulletin would indeed be most welcome. Mr. Pike sent the following information on pottery making that comes from two labels in the Sabah Museum explaining items on display. I would like to take this opportunity to thank Mr. Pike for this kind correction. The scientific record should be as free from error as humanly possible, and, furthermore, there may be someone who would be interested in making a study of the techniques of pottery making in Sabah before they disappear. The Editor thus welcomes such corrections and would be most pleased to receive any further corrections to Borneo ethnography that readers might like to make.]

Sabah Native Pottery (Bajau)

All the pottery on this shelf was made by Bajau in Kampong Taun Gusi, Kota Belud. First a yellowish clay is collected by rake from an old meander of the River Tempasuk. It is dried and sieved to separate the coarse material and sticks from the fine clay and is then pounded in a rice pounder, until it is fine and smooth. A small amount of fine river sand is then added with water and the clay kneaded by hand into the desired shape with the help of wooden and stone implements. Spinning wheels are not used. The pot is then left for about four days and is then fired for thirty minutes to an hour on a fire of dry bamboo and possibly lalang, preferably on a windy day. A fair percentage of breakage during firing is usual. As soon as the pottery is lefted out of the fire and while it is still hot a coating of resin (damar) is applied to the outside to make the pot water-proof. Very few natives still make pottery. All but two of the items on this shelf were presented by Mr. Peter Harris, of Gaya College. The fireplace was presented by Mr. and Mrs. J. A. Fryer.

Sabah Native Pottery (Kadazan)

All the pottery on the shelf (except the pot on the extreme left which was made in 1968 in Kampong Torolobou, Ranau) was made by Kadazan in Kampong Indai, Tuaran. The process is basically the same as that described above though some minor differences may be noted. The clay used is pale blue or pale brown. The potters have a choice of designs for decoration, but they have no special significance. The resin (damar) is applied both inside and outside the pottery. During the firing, the potter believes that others must keep away or they will laugh, and laughing during firing causes leaks and breakages. Very few Kadazan still make pottery. The last time the "surabayan" for serving rice was made was over twenty years ago. The local name for the various types from left to right are kurun, bonggi, popogong (below) (all for cooking) surabayan (above) (for serving rice), tarang (for water) and belanga (for cooking).

THE PUNAN OF EAST KALIMANTAN

Herbert Whittier

After talking with many government officials and otherwise knowledgeable persons in East Kalimantan, it became quite clear that one of the best places to carry out research on the Punan would be in the headwaters of the Berau River. While throughout East Kalimantan there exists an official policy of encouraging the Punan to settle down and maintain long-houses and ladang, most of them refuse and continue to pursue their nomadic ways. Several people tried to encourage me to do work among the Punan of this area. It has relatively easy access (five days by boat from Tandjungselor), and there are evidently large numbers of Punan in the area, though the bands average 25 to 35 people. The local mission people whom I talked with indicate that they have had little success trying to convert the Punan who rigidly maintain their animist ways. It is true that there are Punan in all of the kabupatens of East Kalimantan, but it appears that the Berau might be the best place for research.

NOTES ON THE SA'BAN LANGUAGE

Iain F. C. S. Clayre

The Sa'ban are a small tribe of some 1000 equally disposed among three villages of the Baram headwaters and the corresponding region on the Indonesian side of the border. Since World War II they have come over from Indonesia and now inhabit Long Peluan jointly with the Kelabit on the Baram proper at the limits of Kelabit territory on the Lio Matu-Long Banga'-Bario footpath; Long Banga' on the Puak, which is the last village in Sarawak on the footpath from Lio Matu to the Sungei Angau region of Kalimantan; and Long Balong/Malong jointly with the Kenya at the confluence of Pei' Puak and the Baram proper.

The Sa'ban language is an oddity among Borneo tongues, having a range of voiceless nazals not found again (to my knowledge) until Burmese on the Mainland; and a series of long/short contrasts (alternating in the stops and plosives with fortis/lenis contrast) at the beginning of words. Tradition links it with Kelabit and Kenya as descendants of the now defunct Murik tongue of the Lio Matu area.

BRIEF COMMUNICATIONS

MALAYSIA AND RELATED RESEARCH FROM JAPAN

From Tom Harrisson

If not the largest certainly the most effective university unit connected with Southeast Asian studies outside Europe and North

America is the Center for Southeast Asian Studies of Kyoto University, the most important of Kyoto's many universities. The Center's latest report, "The First Five Years, 1963-1968" (issued in December, 1969), gives an impressive fifty pages of listed personnel, research projects and numerous publications in English as well as Japanese--some 200 titles.

Situated in an old wooden building on a quiet back street, the Center is overdue for transfer to excellent new premises inside the main campus complex. The move has been delayed by severe student riots--beside which the American style pales into insignificance. The facilities have been occupied and largely dismantled by the students, whose communist element have also confronted the Center with damaging effect. This is not because the staff fail as teachers or liberals. In fact, the whole Academic staff of sixteen (including specialists in Economics, Econometrics, History, Leprology, Forest Ecology, Social Anthropology, Linguistics, Paleontology, Geomorphology, and Soil Science) is relieved of all teaching responsibilities. They are all free to devote their whole time to research, a situation unique on this scale in Asia and very rare elsewhere. The Japanese government, through the University (Kyoto is an "Imperial University"), pays all salaries at full scale. Until last year, the Center's funds were supplemented by an important Ford Foundation Grant.

This special character of the Center, its reliance on Imperial and American funds, has been the focus of student complaint, which has loudly stated that the Center itself is imperialst, neocolonialist, etc. As a result, the Ford Foundation relationship has had to be terminated. This and other difficulties have delayed much of the field program (e.g. Prof. Tsubouchi's continuing study of Malay village life). Now, the Center is seeking supplementary aid from industrial and other interests concerned with Southeast Asia, where of course Japan is rapidly becoming once more an ascendant economic power--now surpassing the U.S. in industrial development aid for Indonesia, for instance.

This "semi-official" role of the Center is indeed vulnerable to student criticism. There can be no doubt that the unit is indirectly implicated, naturally enough, in Japanese economic expansion. At the same time, through its able new Director, Professor (of Econometrics) Shin'ichi Ichimura, a skillful administrator and diplomat, the Center emphasizes its intellectual independence, while necessarily putting emphasis on the essentially Japanese character of the whole operation. Indeed, if one had to find a fault with the general run of the research publications, it might be that some have been less then generous to the work of previous Western investigators. The effect is to support the national emphasis in the reference and acknowledgements.

So far the Center has not immediately involved itself in any projects within Borneo. But conversations there in December 1969 and January 1970 showed that several of the staff were very interested indeed in extending their activities to East Malaysia, to Brunei,

and in particular to Kalimantan, where huge areas of terrain, whole exciting themes remain untouched by modern study techniques, notably in the fields of natural science with which this Center is just as concerned as with the social sciences, in an impressive network of interdisciplinary approaches not surpassed elsewhere.

There can thus be no doubt that in the near future Kyoto (and Japan generally) will be sending new men into the Borneo research field; and it is from this point of view, the shape of things to come, that the present note is contributed. As American intellectual influence follows western European in a general decline of overall prestige and of close natural interests in the area from Vietnam and Laos east to Timor and Irian, Japan to the north and Australia to the south are bound to have increasing and soon sharply accelerating concerns with many levels of Southeast Asian study and factfinding generally.

Meanwhile, the Kyoto people have developed continuing projects in Thailand (led by agricultural economist Professor Takeshi Motooka) and Malaysia (with an energetic team of young anthropologists, now in their sixth year of study). In addition, there are individual or small groups studies over an exceptionally wide range of interests from Islamic rites in Malaya through political organization, rice irrigation, padi soil surveys, upland crops, dental diseases, the mechanism of landslides and the formation of the Mekong River delta and much else. A series of Symposia held at Kyoto have produced useful--again wholly "Japanese"--regal volumes on Malayan rice agriculture, "Japan's Future in Southeast Asia" (1965), Water Resources in Southeast Asia, Medical Resources, area agricultural techniques, and "Medical Problems in Southeast Asia" (1968).

The general character of many of these research operations involves (i) one or more faculty staff using often several graduate students in field work; (ii) this field work generally intensive rather than extensive, and seldom lasting more than one year; (iii) some field workers rely on local (official) guides, questionnaires and interpreters; (iv) to tackle basically short-term problems in a practical, quick-result way; (v) wives and families are not taken into the field; (vi) funding is adequate and field planning generally more competent than in equivalent American and European studies known to the present writer from Borneo and adjacent experience; (vii) publication tends to be rapid, not over-elaborate, and seldom other than descriptive, factual direct, and occasionally rather limited in scope.

Those who wish for further information on the Center may write for the above-mentioned five-year report to: Center for Southeast Asian Studies, Kyoto University, Sakyoku, Kyoto, Japan.

A good series of staff papers made up a complete special issue of Asian Survey (Inst. International Studies, U. of California, Berkeley) VIII, 10:819-871, Oct. 1968. Dr. Ichimura also edits a more academic quarterly, Tonan Ajia Kenkyu, reporting the staff's field work with a few English summaries of Japanese texts. Most of the symposia reports, already mentioned are still also available (free) on application.

PUBLICATIONS OF THE TOWN AND COUNTRY PLANNING BRANCH OF THE

SABAH LANDS AND SURVEYS DEPARTMENT

From J. F. Robertson

In the Town and Country Planning Branch of the Sabah Lands and Surveys Department some urban research has been carried out and published in the form of "Town and Country Bulletins." Those numbered 1 to 5 were minor in nature and are no longer available. The rest are outlined here below.

Bulletin No. 6--"Survey of the Needs of the Rising Gneration, Kota Kinabalu 1966" (1968; 25 pp., 60 tables; M\$10). Forms were filled in by 641 Senior Secondary School Students giving by sex, form, age, and race answers on: (a) type of housing now occupied; (b) type of housing preferred; (c) inclination to sports; (d) projected age at marriage; (e) projected number of children; (f) which 2 of 7 factors are most important in locating a home.

Bulletin No. 7--"Survey of Land Use in Commercial Areas, Kota Kinabalu 1968" (1968; 40 pp., 40 tables, half of which are illustrated with pictogrammes; M\$10). The Introduction reads:

This study has been undertaken to assess the present usage of space in private buildings in the Commercial areas of Kota Kinabalu. ... By analysis of the present usage it should be possible to project the future expansion of the commercial areas to suit both commercial and public interests.

The survey and analysis herein should also prove useful to developers, architects, and financial organizations who will be concerned in the future expansion.

Bulletin No. 8--"A Social Survey in Penampang, 1968" (1968; 14 pp., 24 tables; M\$2). The Introduction reads:

Penampang is the name given to a group of Kampong about five miles out of Kota Kinabalu. Two or three generations ago the population consisted of a small number of farmers and part time hunters and fishermen with plentiful land at their disposal, enabling them to obtain a fair level of prosperity by bartering rice which they grew surplus to their own needs.

Late in the nineteenth century a mission was established which brought literacy to the villagers and this combined with the growth of Jesselton (now Kota Kinabalu) led many of their sons into clerical occupations. Consequently Penampang has been transformed from an area dependent on farming into a suburban commuter community, still in a rural setting but with a greatly increased population and a shortage of available residential land.

These changes require soundly based town and country planning and this survey is part of the process to evolve the principles on which the physical planning should be found. Bulletin No. 9--"Sabah's Rate of Population Increase" (1970; 30 pp., 45 tables; M\$3). The Summary reads:

In both of the Census of Population held in Sabah in 1951 and 1960 a percentage of the people of all races avoided the Census count.

The population in both 1951 and 1960 was more than the total counted but the total for 1960 was more nearly correct.

The rate of natural increase as worked out from the Census was distorted by this. The annual rate of increase would be nearer to 1.7% than the 2.9% declared in the 1960 Census Report.

The extreme fluctuations in the Murut population which appeared in the Census report are largely fictitious.

Bulletin No. 10--"Survey of Library Users Travel Patterns, Kota Kinabalu 1968" (18 pp., 31 tables; M\$12). The Introduction reads:

In planning the extension of State's Capital, it will be necessary to allow for the prestigeous site of adequate size and convenient location for the Central Library.

It was the aim of this study to measure the present patterns of Library use. Further studies will be required at later dates and from these it will be possible to establish some parameters for forecasting the growth in the use of the library.

Bulletin No. 11--"Survey of Land Use - Central Business Area, Sandakan 1968" (1969; 8 pp.; M\$2). Tabulation and analysis of land use in Sandakan.

Bulletin No. 12--"Survey of Family Households in the Central Business Area, Sandakan 1969" (1969; 29 pp., 32 tables; M\$3). The Introduction reads:

The surveys which resulted in Town Planning Bulletin No. 11 showed that within the Commercial Zone ... 48.51 per cent of the total floor area within the Commercial Zone [were used for residential purposes].

This gives rise to some problems:

The two main problems are the provision of parking space for residents' cars and the provision of open space for recreation. This is especially needed for the young people.

When Sandakan was being reconstructed after its war time destruction the planning of the layout was oriented towards shophouses of two stories. This was the traditional form. It was dictated by the technology which prevailed up to the 1930's. The post war advent of a capacity to design and construct reinfoced concrete framed buildings had a very marked effect. Buildings got higher with a lot more residential usage contained therein. At the

same time the motor car gradually became more readily available. The booming timber trade put money in peoples' pockets, credit finances for cars is very easy to obtain, and a very keen competition among manufactures has kept the price within the reach of many people. Sandakan has now a car ownership ratio of about one car to seven/eight people.

The environmental conditions which were aimed for in the original Town Plan have long since disappeared. The pedestrian walks at the back of the shophouse blocks are busy traffic arteries. They were meant to be the play areas for children living in one floor of residential use. They have gone but there are from two to six floors of residential use.

We did not know how many families there were, or how many children they had, or how many cars they parked permanently in the town's shopping streets. We did not know what the future patterns of land use in the Central Business Area might be. It was basically for these reasons that this survey was undertaken.

Bulletin No. 13--"Survey of the Needs of the Rising Generation, Sandakan 1969" (29 pp., 59 tables; M\$3). This is similar to the study in Bulletin No. 6.

NOTES ON BORNEO RESEARCH*

From Tom Harrisson

I. Sabah

The Sabah government has found it necessary, for security reasons, to restrict field work by foreign scientists seeking to work in rural areas, at least for the time being. Several persons mentioned in the previous <u>Bulletins</u> as having research projects in the state have therefore been unable to complete these or had to switch. The position of Mr. and Mrs. Peter Rodman of Harvard, who were continuing David Horr's primate field study in the upper Kinabatangan, also became involved (see <u>BRB</u> 2:2-3).

On the other hand, two Spanish ethnologists were granted permission by the National Operations Council to work briefly in the area. These gentlemen, Messrs. Alberto Folch and Endaldo Serra, visited Sabah during November 1969.

Mrs. Barbara Harrisson was invited to visit the northwest islands of Balambangan and Banggi in January, 1970, to extend the archaeological survey of the state made by both Harrissons (to be published by the Sabah Society). This area had not been involved

^{*} These notes were contributed by Mr. Harrisson in January, 1970, during his most recent visit to Borneo.--Ed.

in the main survey, which only covered offshore islands from Labuan to Usakan, well south of Kudat. Preliminary results are rather negative.

Meanwhile, the aforesaid archaeological survey, which runs to 500 pages of foolscap and about 100 illustrations, is with the printer and should be published late in 1970. The project has been assisted by a grant from the Asia Foundation.

II. Brunei

The Brunei Museum is developing rapidly. The fine new building at Kota Batu (Brunei's prehistoric capital) will be finished about May 1970, and should be at least partly open to the public by 1971. The Curator, Pengiran Shariffudin, has been acquiring important collections of ceramics, bronze and gold in the area to widen the collection of important local materials. Although the Museum will be firmly based on the outlook from Brunei, it will not be confined to Brunei things.

The first (1969) issue of the Brunei Museum Journal (see BRB 1:13) has been distributed. Copies are still available, on exchange or purchase. The second issue, which will expand to about 300 pages of print, 80 black and white and one color plate, is now in advanced preparation. It will include papers by Curator P. M. Shariffudin, research assistant Lim Bok Jeng, Pehin Dato Ibrahim bin Mohammed Ja'afar, Allen Maxwell (on Kedayans), Linda Kimball (on a Brunei child's first words in speech), Robert Tate (State Geologist, on textiles) and B. Harrisson (a major new classification of Ming and other porcelains excavated at Kota Batu).

Allen Maxwell from Yale is continuing his linguistic and other field work among the hitherto unstudied Kedayans into late 1970. He has clearly won the confidence and respect of these retiring Moslems. His results should make a valuable new contribution in this field for Borneo.

Linda Kimball, a graduate student from Ohio State University, arrived recently to study child raising. She is living with the headman of a Moslem village where I was able to visit her. She is able to keep detailed inside observation on the family and its interactions with the rest of the village, in a lovely, friendly, rural setting in the Temburong village. Methodology is direct participant observation, extensive notes and photography. Scholars who desire further information may write to Miss Kimball c/o Brunei Museum. She expects to be there at least one year.

Other developments of interest in Brunei at this time include the nearing-to-completion of the Winston Churchill Museum being built there, with a lavish marine aquarium in parallel; the discovery by Dr. R. Tate of inland gravel beds rich in telekites with some related archaeological (mid-Pleistocene?) potential; I was able to visit these by helicopter and photograph (a preliminary note will be published in Brunei Museum Journal). For later phases, a long

series of radiocarbon (c-14) analyses are now being made in U.S.A. for charcoal and wood specimens previously excavated at Kota Sulu, which should enlarge our knowledge of post-Pleistocene sequences in West Borneo--where no other open site has previously provided much suitable laboratory material of this kind (the results may be preliminarily reported in a future <u>Bulletin</u>).

III. Sarawak

The Sarawak Museum continues to prosper and is receiving additional new space in the old Library building shortly. In late January, 1970, the Curator, Mr. Benedict Sandin, was engaged in extending his well-known Iban text studies for publication with the help of Mrs. Judy Hudson. Dr. and Mrs. Hudson were then working in Kuching for some months, as part of a Borneo linguistic survey.

Mrs. Beavitt was also in residence, but anthropologist Paul Beavitt (L.S.E.) was away in London for medical treatment. It was expected that he would be able to return to Sarawak refreshed in February.

Miss Stephanie Morgan is back at Cornell, but planning further studies in the area as part of her graduate work in anthropology.

(The 1968 Sarawak Museum Journal is due for distribution in March, 1970, edited by Mr. Sandin.)

KALIMANTAN TIMBER CONCESSIONS POSES CHALLENGE TO URGENT RESEARCH

According to <u>Business Week</u> (June 27, 1970, p. 51) 168 timbering concessions have been granted in Kalimantan. Nine of these have gone to United States corporations while the others have gone to Japanese, Filipino, French, Korean, and Malaysian firms. Few companies have actually started logging, but it is expected that they will later this year. The Georgia-Pacific Corporation of Portland, Oregon, is reported to be further along than any other American company. They hold an 800,000-acre concession in East Kalimantan and are expected to spend some US\$8-million to develop it. Also in East Kalimantan Weyerhaeuser Corp. of Tacoma, Washington, is reported to have an initial concession of 240,000 acres, and ITT-Rayonier is seeking a major concession. Boise Cascade of Boise, Idaho, expects to receive a concession of 2.5 million acres and proposes to spend US\$50-million to develop a forest products industry.

The concessionaires, according to <u>Business Week</u>, must develop the concessions in four stages: first they are only allowed to take out logs; then in succeeding steps, a sawmill, a veneer plant, and eventually a pulp and paper mill must be built. Weyerhaeuser intends to build entire villages for its workers' families with schools, churches, and hospitals. It will start logging late this year.

Timber operations on such a large scale obviously disturb the ecosystem; they further threaten endangered species such as the orang-utan; and they dislocate the indigenous populations before anthropologists have had the opportunity of recording their cultures. Thus, the potential loss to world knowledge is immense. This is particularly the case with regard to the pharmacopea of the indigenous peoples and their cultivars. The loss of the local pharmacopea is to be deplored. And it should be a major concern to both the research community and those involved in this timber development as much of the pharmacopea of modern medicine has had its origin in the traditional medical knowledge of various indigenous peoples around the world (cf. Appell, G. N., 1970, "Partial Social Models and Their Failure to Account for the Pernicious Effects of Development," paper presented at the meetings of the Society for Applied Anthropology, Boulder, Colorado).

The contamination and loss of indigenous cultivars of the Kalimantan peoples also poses a major concern to the research community. The development of modern disease resistant, higher yielding crops depends on cross breeding with just such indigenous cultivars which are the result of thousands of years of selection within the interior of Borneo. But there has not yet been to my knowledge any major effort to preserve in genetic banks the unique germ plasm of these indigenous cultivars of Borneo (see BRB 2:17-18). Thus, the impending loss of indigenous cultivars as the area shifts to a timber economy poses a major threat to the development of tropical agriculture. It can only be hoped that the research community in conjunction with those corporations that plan these timber developments can rise to this challenge and initiate research and investigations of these endangered areas before the loss is irretrievable. (G. N. Appell)

THE GENETIC EROSION OF THE INDIGENOUS CULTIVARS OF BORNEO

AND THE SALVAGING OF VALUABLE GERM PLASM

With the introduction of improved varieties of cultivated plants through agricultural development projects, the genetic resources of the indigenous crops of Borneo are threatened with destruction. These indigenous cultivars of the peoples of Borneo contain unique genetic material as the result of thousands of years of careful selection by local agriculturalists for the development of strains that are adapted to the various ecosystems of Borneo. These so-called primitive cultivars thus contain valuable genetic materials for cross breeding to develop higher yielding, more disease-resistant varieties. The situation in Borneo has reached a crucial point where, if action is not taken in the near future, the loss to the agricultural sciences, plant breeders, and mankind will be inestimable. The Editor of the Bulletin plans to publish in the next issue a Research Note discussing the situation further with regard to Borneo. In this issue we are bringing attention to the threat that new timber operations pose for the indigenous cultivars (see BRB 2:16-17); to the emergency survey of present

gene banks of cultivars by the Food and Agriculture Organization of the United Nations; and to the interest of the United States Department of Agriculture in salvaging genetic materials from Borneo. Many additional gene banks are needed to preserve adequately the unique genetic materials of the indigenous cultivars of Borneo, and we would be most pleased to publish from time to time information on other organizations willing to serve as such gene banks. We would also be most interested in carrying from time to time Research Notes on the status of the indigenous cultivars of Borneo and their prospects for preservation. For those interested in further information please see: Bennett, Erna (ed.), 1968, Record of the FAO/IBP Technical Conference on the Exploration, Utilization and Conservation of Plant Genetic Resources, Rome, F.A.O.; Frankel, O. H., 1970, Genetic Conservation of Plants Useful to Man. Biological Conservation 2:162-169; Frankel, I. A. and E. Bennett (eds.), 1970, Genetic Resources in Plants--Their Exploration and Conservation, IBP Handbook No. 11, Oxford, Blackwell.

Preservation of Genetic Materials of Borneo Cultivars

For those interested in collecting representative samples of the cultivars of Borneo, instructions for collectors, seed packets, labels for shipping, field note books, and shipping instructions may be obtained from Quentin Jones, Assistant Chief, New Crops Research Branch, U. S. Department of Agriculture, Beltsville, Maryland 20705, U.S.A.

F. A. O. Emergency Survey of Genetic Resources of Cultivated Plants

The Crop Ecology and Genetic Resources Branch of the Plant Production and Protection Division, Food and Agricultural Organization of the United Nations, is developing a number of activities aiming at the exploration, introduction, evaluation, and conservation of the main crop genetic resources. Special emphasis is being laid on the crops which have major food or economic importance or of which primitive cultivars and wild types are most endangered by extinction.

As a systematic long-term program for exploration and conservation of crop genetic resources can only be worked out when sufficient information is available on the present status of crop genetic stocks, it has been decided to conduct an emergency survey of the world's resources of cultivated plant species and closely related wild species which are at present held in plant and seed collections in institutions of various kinds in every country. It is urgently necessary to assess the extent of these available resources, so that the collection of plant materials essential for plant breeding programs may be organized before reserves in the world's centers of genetic diversity are lost.

This is an arduous task which will require the active cooperation of many institutions and individuals all over the world who are interested in the extremely important problem of preserving the valuable genetic resources of our crops, some of which are disappearing at an alarming rate.

As a preliminary step to conducting such a detailed survey, which should result in as complete a register as possible of all genetic resources in existence today, the Division thought it useful to establish a list of all institutions and individual scientists who might best be in a position to collaborate with us in the collection of information on available crop genetic resources.

Any individual or organization that would like to participate in this survey or who would like further information on it should contact: R. J. Pichel, Chief, Crop Ecology and Genetic Resources Branch, Plant Production and Protection Division, Food and Agricultural Organization of the United Nations, Via delle Terme di Caracalla, 00100-Rome, Italy.

ANNOUNCEMENTS

CONTRIBUTIONS TOWARD PUBLICATION COSTS OF THE BULLETIN

The costs for publishing and mailing the <u>Bulletin</u> are currently being met by members of the Borneo Research Committee and by contributions voluntarily made by some of the readers. We would welcome further contributions by anyone who would care to support the furthering of Borneo research and the expansion of its coverage in the <u>Bulletin</u>. Such contributions may be sent to the Borneo Research <u>Bulletin</u>, Phillips, Maine 04966, U. S. A.

DISTRIBUTION AND READERSHIP OF THE BULLETIN

The <u>Bulletin</u> is distributed free of charge by the Borneo Research Committee to approximately 500 individuals, institutions, and organizations who are interested in Borneo research in the social, biological, and medical sciences. This readership includes scholars in all fields, 92 government departments and officers in Borneo, 15 funding institutions supporting Borneo research, 20 development agencies or missions, and 71 other institutions and libraries concerned with research in Borneo.

FIELD METHODS IN ETHNO-ZOOLOGY: NEW PUBLICATIONS AVAILABLE

For those who are interested in the indigenous classification and terminology of the native fauna of Borneo and for those interested in the problems of identifying animals of significance to Borneo cultures, Professor R. N. H. Bulmer's paper entitled Field Methods in Ethno-zoology with Special Reference to the New Guinea Highlands is extremely valuable. In this Dr. Bulmer discusses the elementary pitfalls in the identification of animals; problems of using scientific taxonomies for glossing items in the folk taxonomies;

problems in obtaining adequate identification of particular groups of animals; collecting; and collaboration with zoologists. Of particular relevance is Dr. Bulmer's discussion of the limitations and dangers of using illustrations for eliciting local names of animals and birds. This paper is available from Professor Bulmer, University of Papua and New Guinea, Boroko, Territory of Papua and New Guinea.

FLORA MALESIANA BULLETIN

Flora Malesiana Bulletin provides information and contact between institutes and individual botanists of Southeast continental Asia, Malesia, Australia, and the Pacific in the fields of descriptive botany, ecology, plant geography, exploration, and bibliography. The Bulletin is edited for the Foundation Flora Malesiana and Rijksherbarium by Dr. C. G. G. J. van Steenis, Director Rijksherbarium, Schelpenkade 6, Leiden, Holland.

REQUEST FOR ETHNOGRAPHIC COLLECTIONS FROM BORNEO

The State University of New York at Stony Brook is soon to begin a teaching museum for which small representative collections from all parts of the world are being sought. "Art" objects which are well documented or a limited amount of material of uncertain provenience would be considered, but the preference is for utilitarian or household objects, or objects in use in the culture which are well documented. Funds for the purchase of such collections are limited but will be available. Please address inquiries to D. Newton, Instructor-Curator, Department of Anthropology, SUNY at Stony Brook, L. I., N. Y. 11790.

THE SCREENING OF GYMNOSPERMS FOR ANTI-CANCER ACTIVITY

BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

The United States Department of Agriculture is currently screening gymnosperms from all over the world to determine whether they contain any anti-cancer constituents. To date the screening of gymnosperms for anti-cancer activity has included over 400 samples representing 146 species in 28 genera. Sixty species in 16 genera have shown sufficient anti-cancer activity to justify chemical fractionation to isolate and identify active constituents.

Further screening of gymnosperms is urgent as the probability that other valuable compounds will be detected is high. Thus, the U.S. Department of Agriculture is currently attempting to obtain additional samples of gymnosperms (conifers and cycads in Borneo) from as many species as available and would welcome the cooperation of any interested persons in Borneo.

Some of the cancer-active plant constituents with which the Department has had experience occur in all parts of the source plant. Others are concentrated in a single structure. In still others, while the constituent may be present throughout the plant, it tends to concentrate in one or more structures and cannot be detected if only constituent-poor structures are tested. The Department therefore prefers to receive samples of each plant part. For example, a tree might yield separate samples of roots, bark, bark-free wood, twigs, leaves, and fruit. Shrubs can often be separated into roots, wood with bark attached, twigs, leaves, and fruit. For most plant parts, samples are needed that when air-dry will weigh between 1 and 2 pounds. Samples of many barks and woods are low in extractives, and for those plant parts we prefer to receive 2 to 3 pounds of each. Roots and fruits are often impractical to collect because of difficulty in digging the former and time required to collect the latter. They are welcome when available, but not essential.

Samples from botanical-garden or other cultivated specimens are welcome. In such cases it is evident that samples of roots and bark are impractical to collect. But we will appreciate receiving samples of twigs, leaves, and fruit from such plants.

Samples should be air-dried sufficiently to prevent spoilage. If heat is used in drying, it should not exceed 140°F.

The Department would appreciate receiving an herbarium specimen of each species collected if such a specimen can be provided. Notes indicating location, size, habit, etc., of the plant will be welcome.

Special entry permit labels, a book for field notes on specimens collected, and shipping instructions may be obtained from:
Robert E. Perdue, Jr., New Crops Research Branch, Plant Industry Station, Beltsville, Maryland 20705, U.S.A.

BORNEO NEWS

Regional News

DR. WOLFGANG MARSCHALL will be spending the 1970-71 academic year as a Visiting Professor at Antioch College in the U. S. He has recently published an article in Tribus, vol. 18, in which he has used ethnographic data from Borneo for the interpretation of the pickaback statuette of Dông-so'n.

DR. JEAN GROSSHOLTZ, Department of Political Science, Mount Holyoke College, South Hadley, Massachusetts 01075, is working on a comparative study of Malaysian and Philippine political parties.

MOHD. TAIB OSMAN, Director, Malay Studies Department, University of Malaya, Kuala Lumpur, writes that the Department offers a second year course entitled "Ethnography and Ethnology of the Indigenous Groups in Malaysia," which deals partly with the peoples of Sabah, Sarawak, and Brunei and is taught by Dr. Haji Iskandar Carey, who has joined the Department since retiring from the post of the Director, Jabatan Orang Asli, Malaysian Barat. Che Asmah Hj. Omar, a lecturer in the department, is now writing a transformational grammar of Iban which will form her thesis for the Linguistics Department, University of London.

E. N. ANDERSON, JR., of the Department of Anthropology, University of California, Riverside, is considering field work among Chinese fishermen in Malaya and would be interested in any information on Chinese fishing in Borneo.

IAIN F. C. S. CLAYRE (41 Paislet Avenue, Edinbrugh, EH8 U.K.) is involved in research on the Melanau language in close collaboration with Dr. H. S. Morris. This will form the basis for his doctoral thesis at Edinburgh University. Mr. and Mrs. Clayre previously worked with the Borneo Evangelical Mission. During this time Mr. Clayre collected materials on the Sa'ban language for Biblical texts and Mrs. Clayre in addition to her work on the languages of Sabah collected a considerable amount of materials on some dozen Sarawak languages for purposes of reconstructing the proto-languages of the indigenous peoples of Sarawak. Mr. Clayre is also engaged in revising his Biblical texts in Sa'ban and is preparing a short article on the phonology of that language, one of those which he writes was doomed to extinction before they recorded it.

Brunei News

The Brunei Museum Department is planning to conduct social research in Kampong Ayer. This will be carried out jointly by LIM JOCK SENG, Assistant Curator, and ABD. LATIF BIN HAJI IBRAHIM, Research Assistant.

Kalimantan News

WILLIAM L. COLLIER, Participating Consultant, the Agricultural Development Council, Inc., P. O. Box 62, Bogor, Indonesia, is assisting the Agri-Economic Survey of the Indonesian Ministry of Agriculture. Research is being carried out on transmigration into ebbland flow tidal irrigation projects in the Bandjarmasin area and the marketing of export commodities in South and West Kalimantan. Previously Collier studied land tenure in Sarawak, Brunei and Sabah.

DAVID H. MOORE, Acting Director of Studies, Jaffray School of Missions, Nyack, New York 10960, writes that the school often has students engaged in research on East and West Kalimantan as part of an Indonesian area study.

PROFESSOR WILLIAM CONLEY, St. Paul Bible College, Englewood at Hamline, St. Paul, Minnesota 55104, spent ten years in East Kalimantan as a missionary. Since his return he has become involved in anthropology, and he writes that, if he can be of any assistance in future research as a result of his experience in the area, he would be delighted to do what he can.

WARREN CHASTAIN, 2850 Forest Street, Denver, Colorado 80207, spent two years at Pontianak and is currently a graduate student at the University of Colorado with a special interest in Southeast Asian history.

Sarawak News

DR. DAVID McKAY of the Hooper Foundation (University of California ICMRT Project) at the Institute for Medical Research, Kuala Lumpur, Malaysia, and assessment of the nutritional status and intestinal parasitic infections in five Iban communities in the Second and Third Divisions during the last two weeks of July, 1969. The results of this investigation appeared in a paper entitled "Some Observations on Health and Environment in the Longhouse."

VINSON H. SUTLIVE, JR., a doctoral candidate in anthropology at the University of Pittsburgh, is currently employed in the Methodist Theological School and doing field work in the Sibu District on urbanization among the Iban of this district.

WILLIAM M. SCHNEIDER, a doctoral candidate in anthropology, Department of Anthropology, University of North Carolina, is now residing in Kampong Pueh, Lundu District, First Division, to study the social organization and language of the Selako Land Dayak.

H. S. MORRIS will be spending the academic year of October 1970 to June 1971 at Ohio State University working on preparing his research data for publication.

SHARON THOMAS is currently studying anthropology at the State University of New York at Binghamton. Miss Thomas spent two and a half years in the ulu Belaga, Sarawak, from 1965 to 1968, teaching primary school at Rumah Lasah (Kejaman). As the result of her stay there she has published an article in the Sarawak Museum J.

(see Bibliography section) on tattoos of the women of the Upper Rejang. In it she discusses designs, styles of wearing them, the vocabulary and customs of the Kayan, Kenyah, Sebapan, Lahanan, non-nomadic Punan, and Kejaman. She also did some research on Kejaman language and funeral practices.

Sabah News

MICHAEL PIKE, Curator, Sabah Museum, writes that the Museum reopened in its new premises in Nosmal Court opposite the General Post Office on the 1st August 1969 and is proving very popular.

JOHN L. LANDGRAF has recently assumed the position of Executive Secretary, Committee on International Exchange of Persons, Conference Board of Associated Research Councils, 2101 Constitution Avenue, N.W., Washington, D. C. 20418.

WILLIAM MEIJER, Associated Professor, Botany Department, University of Kentucky, Lexington, Kentucky 40506, was formerly a member of the Sabah Forestry Department from 1959-1968. He writes that his main activity beside botanical exploration and description of trees was research on forest types and of the ecological impact of poison girdling (wholesale killing) of so-called non-commercial trees in the logging areas. Simiar work was done by Dr. P. S. Ashton (now of the Botantical Department of the University of Aberdeen) in Brunei and Sarawak, who has published two books on the Dipterocarps of Brunei and Sarawak and one on the forest types of Brunei. Most of the information on Dr. Meijer's work can be found in the Flora Malesiana Bulletin and in his own Botantical Bulletins which may be found in the major Botantical Institutes in the U.S.A. Dr. Meijer wrote with G. H. S. Wood a book on the Dipterocarps of Sabah, which is available from the Conservator of Forests, Sandakan (M\$20). Precursory studies for a second book, Jungle Trees of Sabah, can be found in Meijer's Botanical Bulletins Nos. 4-11. Dr. Meijer is currently preparing for publication some papers on forest regeneration and forest types in Sabah. He also has in manuscript form a book entitled Elements of Forest Botany in Sabah, which includes keys and illustrations for 120 of the most common larger trees.

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History: The Publications of L. R. Wright

LEIGH R. WRIGHT, Senior Lecturer, Southeast Asian History, Department of History, University of Hong Kong, has been working for the past ten years on Borneo both in the field and in European

colonial archives. His work has centered mainly on the 19th century and involves almost wholly the areas of Malaysian Borneo and Brunei. Dr. Wright invites contact with new scholars interested in Borneo studies. His bibliography, excluding reviews, is as follows:

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INFORMATION FOR CONTRIBUTORS

The following types of contributions may be accepted:

Research Notes: These should be concerned with a summary of research on a particular subject or geographical area; the results of recent research; a review of the literature; analyses of state of research; and so forth. Research notes differ from other contributions in that the material covered is based on original research; or the use of judgement, experience and personal knowledge on the part of the author in the preparation of the material so that an original conclusion is reached. Such contributions will appear under the name of the author, and they should be of such quality that they would qualify for inclusion in the author's bibliography.

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

Bibliographic Section: It is planned to carry a bibliography of recent publications in each issue of the Bulletin, and, consequently, reprints or other notices of recent publications would be gratefully received by the Editor.

Other Items: Personal news, brief summaries of research activities, recent publications, and other brief items will appear without the source specifically indicated.

All contributions should be sent to the Editor, Borneo Research Bulletin, Phillips, Maine 04966 U.S.A.

STYLE FOR CONTRIBUTIONS

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

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



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