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The houses of New Guinea

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FROM THE COLLECTION OF THE BUREAU OF ETHNOLOGY

THE HOUSES OF NEW GUINEA

1937

A. C. HADDON



WELLESINGTON 1937

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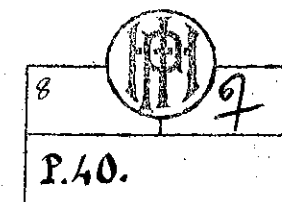
THE HOUSES OF NEW GUINEA

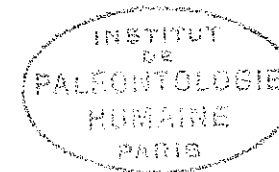
BY

A. C. HADDON



HELSINGFORS 1912





THE HOUSES OF NEW GUINEA.

As I happen to be interested at the present time in the variation and distribution of the native houses of New Guinea, it has occurred to me that I might put a few of the conclusions at which I have arrived in the form of an essay. My main object, however, is to lay a tribute of affection and respect at the feet of my old friend Edward Westermarck, whose writings and friendship have been a source of inspiration and pleasure to me.

Even at the present time our knowledge of the ethnic history of New Guinea is very imperfect and it has proved to be unexpectedly complicated. We are now justified in recognising at least two indigenous elements, the Negrito and the Papuan. Evidence is accumulating that the main stock of the Australians probably belongs to that race to which the name Pre-Dravidian has been applied, and if that be the case the migration must have passed through at least a portion of New Guinea; but, except for the unconfirmed observations of Moszkowski in Geelvink Bay (*Z. f. Ethnol.* XLIII, 1911, p. 317), there is no evidence for any trace of this race in that island. It is now recognised that the Melanesian islands to the east and south-east of New Guinea are inhabited by a mixed population, probably consisting in the main of a sub-stratum of Papuans mixed in variable degrees with relays of Proto-Polynesians, and modified by immigration in places of true Polynesians, while other influences have made themselves felt from the north. The eastern and south-eastern portions of New

Guinea have been subject to several migrations and numerous cultural drifts from Melanesia. Similarly the northern part of New Guinea and to a much less extent the western portion have been influenced by their propinquity to the East Indian Archipelago, where, again, there has been much race mixture and cultural complexity. The general facts of the case have long been known to ethnologists, but until more data had been acquired no profitable generalisations could be made — nor indeed have we at the present time sufficient for our purpose. An attempt in this direction has been made mainly by our German colleagues, formerly by A. B. Meyer, and more recently by Graebner, Foy, Neuhauss, and Friederici from the cultural point of view, the two most important studies being Graebner's »Kulturkreise und Kulturschichten in Ozeanien» (*Z. f. Eth.* 1905) and »Die melanesische Bogenkultur und ihre Verwandten» (*Globus*, 1909). In the latter, Graebner distinguishes the following culture-complexes: I. The oldest Australian cultures, the more primitive of these two being the Tasmanian; II. The totemic culture, which he does not find easy to distinguish from the older cultures; III. The culture of the mother-right two-class system; IV. The Melanesian bow culture; V. The Polynesian culture. He also recognises a Micronesian and an Indonesian culture. The researches of Graebner initiate a great advance in ethnological method and the general principles he has laid down will persist even if many of his details and conclusions may be modified.

The problem to be solved is: How far are the different types of houses in New Guinea and their distribution connected (1) with the racial elements or (2) with culture-complexes.

The characteristic feature of most of the houses of New Guinea is that they are built on piles, and equally characteristic over a considerable portion of the island is the occurrence of long communal houses inhabited by numerous families

and of houses the use of which is reserved for men. We can briefly classify the houses, into (1) family dwelling houses, (2) communal dwelling houses, and (3) the men's-houses where the unmarried men live and to which married men resort and where they frequently reside. Other varieties will be noted in due course.

Unfortunately our information concerning the details of construction of houses is extremely meagre, and it would be very useful if investigators would employ in their descriptions the terms used by architects so far as they can be applied. All that would then be necessary would be for someone to publish a comparative table of these terms. If this were done precision would be obtained, descriptions could be made succinctly, and comparisons could readily be drawn.

Absence of houses: Dr. A. B. Meyer says that the naked, nomadic Tarúgaré of the east coast of Geelvink Bay have no houses, and they attack all strangers they come across and eat their own dead; he saw only their camping places (*K. K. Geogr. Ges. Wien*, 1873). De Clercq and Schmeltz briefly refer to these Taroenggare (*Ethnogr. Besch. van de West- en Noordkust van Nederlandsch Nieuw-Guinea*, 1893, p. 112). Van der Sande was told that »bush men» inland from Siari, E. Geelvink Bay, had no fixed abode, »and only in case of heavy rain sought shelter under joined leaves», they were simple collectors and hunters and did not cultivate the soil; but he did not meet any. He also states that many tribes of the south-west coast of New Guinea are also supposed to be nomads (*Nova Guinea*, 1907, p. 127).

Cave dwellings: None have been reported from New Guinea.

Houses in New Guinea fall into two groups: (1) those erected directly on the ground and (2) those whose floor is raised on piles above the ground. I shall give a very brief description of the essential structure of the more important

types of ground-houses and pile-houses of the different regions of New Guinea, west, south, east, and north, and also indicate the relation of the houses to the social life of the people. Finally I shall make a few general remarks and suggestions.

WEST NEW GUINEA, N. N. G.¹: The flimsy and frequently removed houses of the Mimika district, western N. N. G., are simple rectangular structures erected on the ground, an average size is 9 feet long and 12 deep. Some have a shed roof, but in most cases there is a central ridge-pole, the back slope of the roof being longer and extending lower down than the front; the walls are made of mats of pandanus leaves. One house is built on to the end of another so that there may be a row of fifty or sixty of them joined together; as the dividing walls are removed, a single long house is produced, without partitions, but each family keeps to its particular section and uses its own private entrance. (A. F. R. Wollaston, *Pygmies and Papuans*, 1912, p. 96). The same type of house but larger and better built is found high up Island River, but at thirty miles from the sea some houses are built on piles, others in trees; the latter are square, with ridge-pole roof, and are entered through a hole in the floor, which is reached by a ladder (p. 217). Still lower down the river a few of the pile dwellings were of the usual small size but the majority were huge barn-like communal houses, some perhaps 150—200 feet in length (p. 218). The Mimika people are Papuans in an extremely low stage of culture, they have the bow and arrow but no pottery, and cultivation of the soil is practised to a very slight extent by the people of only one or two villages. Nothing is known about the social condition of the

¹ The following abbreviations will be used: N. N. G. (Netherlands New Guinea), B. N. G. (British New Guinea or Papua), and G. N. G. (German New Guinea or Kaiser-Wilhelmsland).

inhabitants of western N. N. G., or whether there are men's-houses.

The houses of the Tapiro pygmies who live on the Nassau Range are greatly superior to those of their Papuan neighbours of the coastal region. They are built on piles, about 4—10 feet high; the walls and floor are made of long laths of split wood covered with bark; the gable-roof has a fairly steep pitch, it is covered with palm leaves. The house consists of one nearly square room, about 10 feet each way, the fireplace is in the centre. There is a narrow platform at the front end over which the roof projects, the entrance has a very high sill (*l. c.* p. 205).

SOUTH NEW GUINEA, WEST OF THE FLY RIVER: Van der Sande says, »simple dwellings, built on level ground, have also been noticed on the S.W. coast by Modera [1830] only 5 feet high and 6 feet broad, and also very long» (*l. c.* p. 129). The Tugeri (Kayakaya) about Merauke, south N. N. G. build gable-roofed houses on the ground, the roof is of very low pitch and is supported by a central and lateral rows of posts (Pösch, *Journ. R. Geogr. Soc.*, 1907 p. 616). In the neighbourhood of the Bensbach and Morehead Rivers, just within the border of B. N. G., the houses consist of low rounded roofs, covered with bark, resting on the ground; they are open in front and sometimes behind as well (C. G. Seligmann, *J. R. G. S.*, 1906, p. 227). Farther east are the Budgi (Bugi), Dabu, and Toga, the houses of the two latter are about 15×10 feet and about 5 feet high, and are made of tea tree bark laid over a few curved boughs tied together, with open ends (MacGregor, *Ann. Rep. B. N. G.* 1890—91 [1892] p. 43). Dr. G. Landtman has kindly given me the following information which he has gathered during his recent expedition. Some of the bush tribes of Daudai now live in oblong ground-houses which are poorly made and have a gable-roof of variable pitch, the walls are frequently made of bamboo

stems or midribs of sago palm leaves placed horizontally, the single entrance is at one end. The men's-house has usually the same structure, but has no walls. The Masingara men's-house formerly consisted of a gable-roof nearly reaching to the ground, supported by two rows of posts on each side, there were no walls, MacGregor describes them as about 50 or 60 feet long (p. 46); the same kind of men's-house is still found in Dragere and Dibaru, west of Masingara. In the neighbouring tribes there are also several pile-dwellings; among the Dragere and Dibaru only the women's-houses are on piles (Landtman). In 1891 all the houses of the Masingara seem to have been built on the ground, but now all the dwelling houses are on piles. Formerly every family of the Masingara apparently had its own house, but now two to four may live together. MacGregor says the Badu tribe had similar houses to those of the Masingara (p. 47). Wilkin describes some huts we saw at Old Mawata built by people from Parama. Most had a ridge-pole supported by several median posts, the gable-roof was slightly arched and reached to the ground, a few had side-walls distinct from the roof. There was either an entrance at each end or two or three entrances on the leeward side. The occupants slept on the ground; one hut, 33 × 15 × 6 feet, contained three fireplaces and therefore accommodated three families. There was also one small pile-house, 16 feet long, with a door at one end. (*Rep. Camb. Exped. Torres Straits*, IV, 1912, p. 115).

In the south-west from Merauke River, N. N. G., to the Dabu and Toga tribes of Daudai, B. N. G., the typical arrangement seems to have been for the women and children to live in communal houses on the ground, and for all the men to live in a similar separate house or houses. The Masingale (Masingara) had family houses on the ground for the women and children, but now they build family pile-dwellings and more than one family may occupy a house (Landtman). The men's-house was formerly on the ground in this and neigh-

bouring bush tribes. Among the Djibaru, Dragare, and Aliplé (Aripara) the women and children now live in small communal or even family houses on piles, while those of the Drimu (Dirimo) live in small communal houses on piles as well as in very small houses on the ground.

Daudai is thus an area of »contact metamorphism» in which the influence of the pile-dwellers of the Fly River and coastal tribes is making itself felt.

TORRES STRAITS: The ground-houses of western B. N. G. found their counterpart in the ancient houses of the western islands of Torres Straits, except in the most northerly (Saibai, Dauan, and Boigu) where small pile-dwellings occurred. In one or two islands there was at least one men's-house on piles, and probably in most islands there were simple houses on the ground for the use of the men of the island and male visitors. Formerly on the islands nearest to Cape York there were wall-less dome-shaped, gable-roofed, or moderately long arched huts on the ground, which resembled the huts of North Queensland, they were covered with tea tree bark (*Melaleuca leucadendron*); and also roofed sleeping platforms on piles. The eastern islands were characterised by round houses on the ground, with a central pole and one or two tiers of sleeping platforms. The existing houses of Torres Straits vary in type owing to modern conditions, most of them are »South Sea houses».

The Western Torres Straits Islanders were a patrilineal totemic community. As there was a marked tendency for members of the same totem clan to live near one another, we may assume that the elongated ground-huts described by earlier travellers were inhabited by two or more families of the same clan. In each inhabited island there was at least one ceremonial ground, *kwod*, tabooed to women, where youths were initiated and other ceremonies took place. In Mabuiag the young men, at all events, slept in two *kwikwi uit*

(»head-houses»), long-houses on piles with a door at each end and festooned with human skulls and jaws. In them weapons, and skulls of enemies were kept and there were four fireplaces, one for each clan. They were the men's club-houses and the conversation it is said turned mostly on fighting and the taking of heads. When the head-houses were too hot or overcrowded some of the men and youths repaired to a quadrangular flat-roofed structure, that was also called *kwod*, and was used to lodge male visitors. No woman or small boy was allowed to enter the head-houses. The pile-house seen by Jukes at Damut was probably of the same nature (*Reports*, IV, p. 96). There was also a men's-house at Saibai. The Eastern Islanders had round houses on the ground, which were occupied by one or more families. The people were not divided into totemic clans. There was no clubhouse for the men, and the two sacred houses, which resembled the dwelling houses, merely served to house the masks of the Bomai-Malu ceremonies. It is possible that formerly the initiates were lodged in a special house. (*Reports Camb. Anth. Exped. to Torres Straits* IV, 1912).

FLY RIVER DELTA, B. N. G.: This district is characterised by enormous long-houses on piles, which in the main consist of communal dwelling houses for the women and children, and men's-houses. The structure of a typical Kiwai house has been fully described by Wilkin (*Rep.* IV, p. 111). The piles on which the floor rested were from 6 to 8 feet high. The gable-roof, which had slightly convex sides, was supported by a row of posts on each side; it dipped slightly towards each end and overhung (but in the more modern type the ridge is quite horizontal and there is no overhanging at the gable-end — Landtman). The low side-walls were nearly hidden by the eaves, and were interrupted by several doors. The gable-ends were walled in, and had a central entrance at each end with a ladder. There was a broad gangway running down the

centre of the interior, and at the sides was a series of compartments, each being the abode of the women and children of a family and having its separate fireplace. At Gaima and north of the Delta between the Fly and Bamu Rivers, the eaves of the roof practically reach the ground, and the walled gable-ends are recessed to form a deep verandah, the angle of the outer gable being filled up with transverse bamboos. The small central entrance at each end, which does not reach to the floor, leads into a median roomy corridor, the men's quarters, separated by a high wall on each side from the women's quarters, which are entered by gaps in the eaves from which ladders run to the side doors (Landtman).

The houses on the Bamu River have been described by Jukes (*Voy. of Fly.*, 1847, I, p. 271) and MacGregor (1892, p. 51). The latter noted as characteristic of this region small houses, on posts 4 feet high, suitable for one or several families (in addition to very long houses), the rounded low roof often comes down to the floor, the gable projects over a platform, and the entrance is very small.

Kadawa or Mawata, and Turituri are extensions from the Fly River along the coast of Daudai, and we may take the social conditions of Kiwai Island as typical of the whole region of the delta and probably at least some distance up the Fly River and to the east. Here we have typical communal pile-dwellings. The walled-in ends of some of these »long-houses» are partitioned off from the main chamber and are used by men only, the women and children entering only by the side doors; in Auti, Kiwai, MacGregor saw trophies of fifty human skulls in one of these end chambers (*Report* 1888—1889 [1890] p. 39); this type may occur when there is, or was, no *darimo*. In other cases where there was no *darimo* the youths slept in a small pile-house, and this still frequently happens; or they may have places allotted to them in a long-house. Formerly the long-houses were inhabited by a single totemic clan, but sometimes two clans, or possibly three, may occupy



separate parts of the same house. At Oromosapua, Kiwai, there is but one house, 154 m. in length, in which, naturally, all the clans reside (Landtman). Married men now habitually live with their families. Occasionally small family houses are built, but this is due to modern influence. The *darimo*, or men's-houses, were always of very large size; there may have been more than one in a village, each of which belonged to a group of totemic clans, or a village might have been without one, in which case the people visited a neighbouring *darimo* for dances and ceremonies. A few very old women frequented all the *darimo* and had there certain functions to perform. The unmarried men lived in the *darimo* and the married men frequently slept there, but it was essentially a ceremonial structure, particularly connected with warfare (Landtman).

FLY RIVER, B. N. G.: Long-houses extend up the Fly River at least as far as Everill Junction, 243 miles from the mouth of the river. About 370 miles up the river the houses are built on piles, they are about 30 feet square, and have no gable-ends. A little higher up the houses are about 20—30 feet long. High up the Fly River D'Albertis found a square house on piles 25 feet high, the interior was divided lengthwise by a partition of bark, the main door was in the centre of the front, which had four small windows, another small door was in the middle of the floor, and there were 10 rectangular sunken fireplaces. The people smoked tobacco and chewed betel, the women's petticoats resembled those of the Motu (*New Guinea* 1881, II. p. 85). At the highest point reached by him D'Albertis found a similar house divided into three compartments, it contained several human bones but no skulls. A short distance off an umbrella-like roof sheltered a platform on which were two skeletons wrapped in bark (*l. c.* pp. 95—103). On the Palmer River MacGregor saw a similar house on piles about 12 feet high, it was about 20 feet square. The entrance was in the floor at the middle of

one end, and was divided in two, so as to lead into the two rooms, the floor of one of which was 18 inches lower than the other; besides the central partition there was a screen on each side of the entrance. Each room had three sunken square fireplaces along one side. The walls were 6 or 7 feet high, and those of the men's room were pierced with loop-holes. (*Ann. Rep.* 1900, pp. 50—59). Thus in the interior of New Guinea close the Victor Emanuel Range there is a distinct type of house.

PAPUAN GULF, B. N. G.: In the Purari Delta a new variety of house makes its appearance, which may be compared with the Gulf houses. The roof gradually rises from behind forwards, but more rapidly at the front end, where it forms a high peaked projecting gable, the edges of which are fringed, as are also the purlins and ridge pole in the interior. The back gable-end is walled but the front one may be open. Two rows of lateral posts support the roof. The eaves overhang the low side-walls, which are made of bark and have no doors. The ridge of the men's-house is horizontal and the gable-ends are provided with a screen of leaves (Landtman).

The dwelling or women's-houses of the Elema tribe may be taken as typical of the coast and interior of the Papuan Gulf. The floor is 6 feet from the ground, the walls 3 feet high, the roof may or may not be brought down to within three feet of the entrance platform in front of the house, it is often draped with long grasses so that the entrance is hidden. The men's-house, *eravo*, stands on higher piles and is a much larger and more imposing structure, but otherwise is very similar to the women's-houses. The roof is supported by a median and lateral rows of posts, and the ridge generally extends three feet beyond the thatch. When the front end is open any male resident or visitor can enter, but it is closed when the secluded lads inside are awaiting their initiation and when masks are being made (I. H. Holmes, MS.).

Comparatively little is known about the ethnology of the fascinating district of the Papuan Gulf. »It is customary in many places to have large 'man-houses' for the males and 'woman-houses' for the women and children. The 'man-houses' are sometimes several hundred feet long; those for the women are always smaller» (MacGregor, *British New Guinea*, 1897 p. 85). The large dwelling houses seem to be merely the residences of the women and children, as it has been definitely stated that all married and single men sleep in the *eramo* or *eravo*. Boys of the Elema tribe enter the *eravo* when ten years of age and do not leave it till they have reached the stage of *semese* or warrior, when they are free to marry (I. H. Holmes, *J. Anth. Inst* XXXII, 1902. p. 418). All objects connected with religious ceremonies are kept in these houses, hence they have been termed »temples» (Holmes, *Man*, 1905, p. 3). I have not been able to find any precise information as to the connection between one of these houses and the men who use it. We appear to have in the Gulf a cult of manes and of recognised gods superimposed upon an older totemic cult; it is obvious that the religion of these people is also to a certain extent a war cult. The gaping front end of an *eravo* has often led travellers to call these buildings »alligator houses», but it has not this significance for the natives as they say it represents the head of a warrior (Holmes, MS.).

MEKEO DISTRICT, B. N. G.: The culture of the Papuan Gulf extends eastward to about Cape Possession; in the Mekeo District we meet the western extremity of the culture of the Central District, but naturally there is some overlapping, and the mixture of cultures which obtains here is shown in the variation that occurs in the styles of the houses. At Waima and Kevori the houses are said to be generally on the ground, though with but few exceptions all the houses of the district are on piles. As in the whole of B. N. G.

further east, all the dwelling houses are occupied by single families. A common form is oblong with rounded ends and distinct walls. The ridge-pole roof has slightly convex sides, the gables do not project, and the ends are curved to match the end-walls; there is a single- or double-storied platform in front. Sometimes the front end is open. In some the ends are flat. Occasionally the verandah and door are at the side. The slope of the roof of some houses is flat; the roof may extend as far as the floor. (A. Wilkin MS.).

The men's-houses are larger than the dwelling houses and often elaborately decorated in various ways, they are frequently open in front. The front gable usually projects to a considerable distance, overhanging the single or double platform. The ridge commonly projects still further. The roof extends to the floor at the sides and back, so that often no side-walls are necessary.

The Roro-speaking tribes of the coastal portion of the Mekeo District contain numerous patrilineal, exogamous clans, *itsubu*; sometimes a small settlement consists of a single clan, but villages consist of two or more clans. Each local group of each clan should have at least one *marea* which is the clubhouse of the men. The family dwelling houses of a clan are situated near its clubhouse. In each local group of an *itsubu* there is a main chief who takes the principal part in ceremonies and proclaims taboos, next to him is a second chief who enforces the orders of the other and has other functions. Formerly there was one *marea* for these two chiefs each being responsible for his half, the first chief taking the right; now each has his own *marea*. There are also two or more war chiefs who each possesses a *marea* called »battle *marea*», which also serves as an arsenal; if a second chief is also a war chief he has a *marea* for each office. There were also a limited number of *marea* formerly used for initiation ceremonies or for ceremonies concerned with the magical aspect of warfare. The youths, *ibitoe*, now

sleep in the closed inner chamber of the high chief's *marea* until they are married and often afterwards. Strangers are received here also. All the *marea* are richly decorated especially with the badges of their clans. In the more inland Mekeo tribes each local group of a clan, *pangua*, should possess at least one clubhouse, *ufu*, which corresponds to the chief *marea* but is less elaborate, the carved designs of the posts are the distinctive badge of the clan chief who has hereditary charge of the *ufu*. The war chiefs may also possess their own *ufu*. The *ngove* is an ordinary house, sometimes built on especially high piles, which is the clubhouse only of the men of the family, *ikupu*, who built it; any headman of a family may build one. No women may enter it. (C. G. Seligmann, *The Melanesians of British New Guinea* 1910.)

The Kuni, who live south of the middle portion of the St. Joseph River, have been well described by V. M. Egidi (*Anthropos* IV, 1909 p. 387). There are two types of houses.

The *tsimia* has a more or less square framework with a central pole, and the floor is on piles not more than 5 feet high. The thatch is supported by a framework of hoops and diverging rafters, as it is conical and extends close to the ground these have usually been regarded as bee-hive huts, but it would appear that they are not ground-houses but masked pile-houses. Anything serves as a wall to close the space between the floor and the roof. The entrance is a low gap in the eaves. Seligmann (*J. R. G. S.* 1906, p. 235) says, »there may or may not be a raised floor of planks», which would indicate a further degeneration.

The *afaiva* has a ridge-pole supported by two or more posts, and a gable-roof, side-walls are generally present, there are always front and back walls, the floor is raised on piles, and as in the *tsimia* there is a central fireplace. There is a small platform in front. A village consists of dwelling houses of the women, where they give hospitality for the night to

their women friends, and more rarely to their husbands and male friends; the men's-house, *kufu*, of which there may be one or several according to the number of influential men, here the men generally sleep and in it are kept weapons, nets and trophies of the chase; the house, *loe*, for elderly bachelors and widowers, which served probably in the first instance as a watch-tower as it was often built on some trees at 2 or 10 m. from the ground, the ladder being easily thrown down. In peaceful times the old men finding themselves more quiet outside the *kufu*, build less elevated houses for their exclusive use, which are still called *loe*. There are also small cooking houses, and houses, *kape*, outside the village, ill-built and generally on the ground, near a stream, for the use of sick people and of women who have to be isolated, or for conjugal relations. The *eva kufuna*, or dancing *kufu*, is merely a gable-roof supported on poles, without a floor, it may be 20—30 m. long. Finally there are storehouses for yams.

The houses of the Mafulu (Mambule), who live further inland, have been carefully described by R. W. Williamson (*The Mafulu*, 1912). The dwelling houses are oblong or nearly square, on very low piles, sometimes the roof is supported by one central post, the convex eaves reach to the ground; when present the platform is very narrow, the single front entrance is very small; an apse-like porch-roof projects from the front gable-end. The floor slopes up on each side from the sunken fireplace which extends along the whole centre of the floor. The men's-house (or houses), *emone*, is larger than the dwelling houses, on higher piles and the roof does not reach the ground; the front platform is fairly large, there is an entrance (with a high sill) and a porch-roof at each end. One *emone* belongs to the chief of the village; these houses are used in connection with ceremonies and as living houses for the men, especially the unmarried men, and for male visitors; women may not enter them. They are not

decorated. Williamson considers that the Mafulu, who speak a Papuan language, are partly of pygmy descent.

About twenty-five miles to the south-east at Neneba on Mount Scratchley, MacGregor discovered precisely similar houses, except that the floors were about 6 or 8 feet above the ground.

CENTRAL DIVISION, B. N. G.: Further east we come to the Motu and allied coastal tribes who extend to Cheshunt Bay.

There is a general uniformity in their houses. They are always on piles, oblong, and with a gable-roof. There is a single or double platform at the front end, which may be sheltered by the projecting gable-eaves, or as in most cases by a separate shed- or lean-to-roof jutting from the gable-end, the porch sometimes forms a kind of hip-roof and occasionally has side-walls. The houses of the several villages on the fringing reef in the sea do not differ essentially from those on the land.

The *dubu* is the structure at which centres much of the ceremonial life of a village. It consists of an uncovered platform (formerly there were two, one above the other) supported by four carved posts. Seligmann gives evidence to show that the open *dubu* and its associated customs may have originated in the neighbourhood of Taborogoro (Mount Giles) among the Sinaugolo or a cognate tribe; its use spread in a south-westerly direction towards the coast and westwards in the mountains, but never took any firm hold of the purest of the Motu immigrants (l. c. p. 18).

The Koita, who have been studied by Seligmann, are a Papuan tribe modified by the Western Papuo-Melanesian Motu. They are now scattered along the coastal region of the Central Division for a distance of forty miles, extending from Pari (7 miles S. E. of Port Moresby) to Manumanu in Caution Bay. The inhabitants of every Koita village — and

this applies to the Motu also — are divided into a number of patrilineal groups, *iduhu*, which also occur in other villages; each *iduhu* has a right to its own *dubu*, and every *dubu* of an *iduhu* must bear the same name. The badges of the *iduhu* are carved on the posts of the *dubu*. The *dubu* is in a limited sense sacred to the spirits of the dead, it is the meeting place of the men when serious matters have to be discussed, and except during the *tabu* ceremony no woman may come on the *dubu* and then only certain unmarried girls. The corner posts are named and owned by important men, the most honourable is the front right post of the chief of the local *iduhu*, the next in importance is the front left post, then the back right and the back left; every plank is the hereditary property of an individual who is responsible for its upkeep. A number of *iduhu* may combine to build a *dubu*. A *dubu* is built in preparation for a *tabu* feast near the houses of the *iduhu* that owns it, the front faces the direction of the *dubu* of the *iduhu* which is expected to give the next *tabu*.

In the region of Hood Bay the place of the open *dubu* is taken by a house, *koge*, which is much finer and larger, and stands higher than the others; one gable is prolonged into a high steeple, which is triangular in section. Sometimes when the house decays its very large and decorated front platform may be continued in use as an open *dubu*. From Redscar Bay eastwards as far as the open *dubu* occurs, skull trophies are not kept, but directly the open *dubu* gives place to the house *dubu* an area is reached where skulls were collected and hung upon the *dubu* (Seligmann, p. 20).

Further east in the Aroma district an open *dubu* of some sort occurs. According to O. Finsch (*Mitt. Anth. Ges. Wien* XVII, 1887) the houses at Maopo (»Maupa») in Keakaro Bay have a roof with convex sides that nearly reaches the floor, the ridge rises towards the front gable, on which is fastened a kind of shield, and the gable-end walls are

flat and not recessed. The floor is about 3 feet from the ground, there are no walls, a ladder leads to the sleeping loft.

The Koiari, who live in the mountains behind Port Moresby, build gable-roofed houses on low piles. The platform is narrow, sometimes it and the entrance are at one end, but more frequently both are at the side and as the roof overhangs on this side there is a verandah running the whole length of the house. A third type is the tree-house, this is a simple gable-roofed structure which is, or rather was, built by many mountain tribes of the Central Division. Tree-houses were merely places of refuge, and were occupied only when danger threatened; they were always well supplied with spears and stones as missiles. They also occur at Gewaduru and Dugare on the Musa River that flows into Dyke Ackland Bay.

MacGregor discovered a thatched lean-to, which he calls a hunting-house, on Mount Belford at 3,500 feet and one on Mount Knutsford at 8,815 ft. On Mount Musgrave at 5,000 ft., he found a house about $25 \times 10 \times 6$ feet, the roof was covered by the leaves of a dwarfish pandanus.

THE MASSIM DISTRICT, B. N. G.: The extreme south-east end of New Guinea including Orangerie and Goodenough Bays, and all the outlying islands constitute a well-marked ethnographical district to which the name Massim has been applied. It is mainly inhabited by the Eastern Papuo-Melanesians, as Seligmann terms them.

So far as I am aware, the only adequate description of a house is that of one on Brierley I. (a small island southeast of Tagula) by Macgillivray, illustrated by sketches of Huxley's (*Voy. of Rattlesnake*, 1852, II, p. 224). It is built on four posts, which hold up and pass through the floor and project beyond it to carry a framework, which serves as a loft, and also to support the sides of the roof, which is dome-shaped in section and extends to the floor

so that there are no walls. This is what is called the inverted »boat-shaped roof», the »keel» however is convex and not straight. There is usually an entrance at each end and in the centre of one side. Just below the floor each post passes through a disc of wood, which prevents rats from climbing into the house, this is a common feature of the Massim District. The roof extends beyond the floor at each end, thus forming a porch. I have a photograph by H. O. Forbes of a somewhat similar house from Wari (Teste I.) in which the loft is extended some distance beyond the room, and under it is a platform.

MacGregor says the houses of Misima (St. Aignan I.) are much the same as those of Tagula (Sudest I.) and Yela (Rossel I.) but have ends more or less open which admit of entrance instead of requiring one to ascend through a trap door in the floor as at Rossel. Skulls of the vanquished are suspended from or over the verandah in front of the houses [Oct. 1888] (1890, p. 250). Seligmann (l. c. pl. LXXIX) gives a photograph of a large boat-shaped house on Misima. O. Finsch (*Samoafahrten*, 1888, p. 280) figures houses on Wari which, according to a photograph by H. O. Forbes, have essentially the same structure as the Brierley I. house, except that the roof has a gothic arch section and the ridge is deeply concave ending in two high peaks, the gable-ends of which are walled with matting; this is the saddle-shaped roof. There is a small platform in front sheltered by a shed- or pent-roof of matting. Seligmann (l. c. 1910 pl. LI) gives a photograph of Forbes's which shows that the saddle- and boat-shaped houses occur side by side in Wari. Finsch also refers to a house 40 feet long, oval in shape with a high dish-shaped roof. Saddle-roofed houses with walls are found in Duau (Normanby I.), skulls are often displayed on a shelf over the door (Finsch, p. 217; MacGregor, p. 253), but MacGregor (p. 262) noted on Morata (Goodenough I.) long houses with a tunnel-like roof tapering away from the front.

Finsch figures a canoe-house on Dobu (Goulvain I.) consisting of a gable-roof on the ground, a large number of skulls were placed on a shelf over the entrance (p. 224). A canoe-house of this kind occurs in the Solomons.

The saddle-roof obtains at Murua (Woodlark, I.) and Nada (Laughlan I.), there is a low wall but the house stands on the ground. The high-peaked saddle-roofed houses of the Trobriands are stated to be on the ground, to which at all events the roof reaches. Seligmann (pl. LXXV) gives a photograph of a chief's house which clearly shows that the floor is supported on very low piles. The yam-houses are built on high piles and the space below the floor may be partially walled in; the roof extends a short distance below the level of the floor on each side.

The Milne Bay houses appear in the main to be similar to the saddle-roofed houses of the D'Entrecasteaux Group. At Baragom Finsch (p. 271) saw a canoe-shed exactly like the one on Dobu, which also contained a number of oval and rectangular shields, it was evidently a *potuma*. He also figures a tree-house which he saw in course of erection. The Bentley Bay houses are built only of bamboo, they are on piles, have a straight gable-roof and side-walls (Finsch, p. 237). A few of the somewhat similar houses of Bartle Bay (S. shore of Goodenough Bay) are built on piles but most are on the ground (Seligmann p. 430). R. Pöch says the structure of the houses at Uira (Goodenough Bay) is very peculiar. The houses, as in most of the islands, stand directly on the ground. On entering a house one finds the actual separate dwelling room resting on piles; strictly speaking it is a pile-house though the space underneath between the piles is enclosed by side-walls (*Globus* XCII, 1907, p. 281). Elsewhere he says: »In Goodenough Bay two different types of house-building are in close juxtaposition: houses on piles, built by Papuan inland tribes; and houses resting immediately on the ground, built by the immigrant Melanesians of the

D'Entrecasteaux islands» (*Geog. Journ.* 1907, p. 612). At Wamira and Weda the houses are on the ground, the walls are of matting and there is no floor (Copeland King, MS.). R. Pöch states that at Ladine (at the head of Goodenough Bay) the houses stand on the ground as on Mosquito Island, but an hour's march inland they are erected on high piles.

At Cape Vogel the residential part of the house is the verandah under the long roof, the smaller upper portion is merely a receptacle for pots, etc.; but in Collingwood Bay the upper storey is more important (Copeland King, MS.). Pöch (*Mitt. Anth. Ges. Wien*, XXXVIII, 1908, p. 32) describes the Kworafi of Cape Nelson as living in »totem-group-houses» (figs. 1 and 2); these are gable-roofed pile-houses with separate sleeping places for each family, which are entered by trapdoors from the verandah along one side.

The Eastern Papuo-Melanesians are grouped in exogamic totemic clans with matrilineal descent, each clan possesses a number of linked totems of which a bird is the most important throughout the greater part of the area (Seligmann). On the mainland and some of the adjacent small islands there are no head chiefs, clan chiefs or war chiefs, but merely leaders of war parties. Characteristic of the area is that members of the same totem clan live in small groups of houses forming what Seligmann calls a hamlet; a cluster of hamlets he calls a hamlet-group, as it has not the compactness or solidarity of the villages that occur in other parts of New Guinea and even in the Trobriands; hamlets often shift their location in a remarkable manner (l. c. p. 9).

In Milne Bay there are clubhouses, *potuma*, which no woman may enter, they differ little from the ordinary family dwelling houses, but are decorated all round with painted boards; skulls of enemies were formerly kept in some of them. Feasts are not held nor is food cooked in the *po-*

tuma, but men habitually eat on the platform in front. Every clan should have its own *potuma*, but a man of any clan may sleep in any one of them; the younger men use the *potuma* more than the elder, though there is always one or more to which the old men habitually resort and where no young man may come uninvited. The »old man's *potuma*« was and is a perfectly definite institution, in which only the important affairs were discussed. Certain houses, also called *potuma*, are dedicated to the use of unmarried girls above the age of puberty who usually pass the night there and receive their lovers; it is generally an old house that is made over to them. The front half of any well-built dwelling house, especially in places where there is no *potuma*, is for the use of men only, and no woman may go there; Copeland King (MS.) also noticed this in the mountains at the back of Weda. On the island of Tubetube there were no clubhouses nor houses for girls, but here and in some places in Milne Bay and at Rogea Island they had open ceremonial platforms, *naka*, strictly comparable with the *dubu* of the Motu. Very widely spread is the occurrence of heaps of stones or stone circles (*gahana*, *baru*, etc.) where the men congregate and discuss matters, women may not approach them, some were associated with cannibalism. The conditions in Goodenough Bay closely resemble those of Milne Bay.

The northern Massims include the Trobriands, Woodlarks, etc. In each of the Marshall Bennet Islands one of the clan chiefs is also a paramount chief. On the Trobriands there are village chiefs and a paramount hereditary chief who is overlord of the village chiefs of all the villages in his district. The houses of paramount chiefs, those of their wives, as well as their yam-houses are the only houses on which carved and painted boards are displayed. The paramount chiefs have more influence and receive more deference than occurs elsewhere in B. N. G., it appears that they

alone may keep pigs in their own name. Women are allowed upon all platforms except those of the yam-houses of paramount and village chiefs; these are strictly reserved for the men, and on them, or hanging above them under the eaves of the house, the drums of the village are kept habitually. There are no clubhouses. In the larger villages of Murua houses are set apart for the use of boys and girls respectively, in small villages the boys sleep in the house of the headman.

GERMAN NEW GUINEA: The best general account of the ethnography of German New Guinea is that by R. Neuhauss (*Deutsch Neu-Guinea* I. 1911). He says that deviations from the usual pile-dwelling arise when the inhabitants are forced by attack, flood or earthquake to abandon their village, and when in constant dread of the same thing they do not take the trouble to build proper houses on piles but make shift with wretched ground-huts. Houses on the ground also occur where rock prevents pile-driving, as on Huon Gulf near the British border; but with greater security from enemies the rocks are left for the plains, though the old style of house persists. When constant attacks are feared houses may be built on very high piles 3—4 m. (10—13 feet) high. Round houses, with the roof supported by a central post, are now practically obsolete in the coast regions. The people at Sissanu occasionally copy them from their friends some miles inland. About Sattelberg also the form was originally round, but is now obsolete. He considers the original form of the Papuan hut to have been round (p. 215), but from its extreme rarity in other parts of New Guinea, this seems to be improbable.

There are family houses, men's-houses, women's-houses, bachelors'- or assembly-houses, and sacred houses. Only in scattered parts do husband, wife and children live together, as among the Kai about the Sattelberg and on the north shore

of Huon Gulf. Sometimes a house is shared by two families, without a partition between them. Besides these houses there are primitive shelters (as all over New Guinea) for people working in their gardens or on the coast. There is no uniform type of house, especially for the men's- and women's-houses; generally more care is spent on the former and the posts are sometimes artistically carved, in Sialum and Sissanu strings of pigs' jaws are hung between the posts as a memento of feasts.

The bachelors'-house (called *lum* in Huon Gulf) is the residence of the bigger boys and young unmarried men, to which the fathers sometimes withdraw, it is also the meeting house for all the men of the village. The usual type has a walled-in sleeping room under the roof; about 1 m. above the ground is a platform where men spend their leisure time, councils are held, feasts and revenges planned, and guests (including Europeans) received. The walls of the upper room consist of boards artistically carved with snakes, fish, starfish, human figures, etc. It may not be entered by women, so things are kept here that women may not see, especially objects used at the circumcision ceremonies, *balum*. The roof of one at Labo is supported by a purlin on each side which rests on posts in the walls.

In the western portion of G. N. G. spirit-houses have an important rôle, they are absent in Huon Gulf and Cape König Wilhelm region; there are various types of these, even in the same village. Little is known about them as the natives do not like strangers to enter them. One at Warupu (about lat. 3° S.) contained some ornamented skulls, a circumcision dance mask and a sorcerer's outfit. Those on the islands of Seleo and Tumleo (near Berlinhafen, also on Finsch Coast,) contained skulls taken from graves as soon as the soft parts had decayed, ornaments for dances, and ancestor figures. Everywhere the aim is to conceal from women certain objects, especially those connected with circumcision (p. 236).

HUON GULF. G. N. G.: Neuhauss found oblong houses on the ground on the Waria River and at Morobe (Adolfhafen), they have a gable-roof with a shed-roof at one end which runs up to the gable, moderately high walls, and a door at the end or side. At Morobe there was a house with two storeys, both the men's- and the women's-houses are on the ground. At Peihowa he slept in a large assembly-house of a special type, it had a gable-roof, the walls were closed in to the ground and in the middle was a great two-storeyed framework on which people sleep with a free passage around it. Here and among the Ka-iwa of Nassau River there is said to be a special assembly-house for the women. On Labo I. (Herzogsee) there are pile family dwellings on the land and in the sea. They are oblong, the gable-roof has a variable pitch, sometimes very low, there is a shed-roof running up into the gable overshadowing the single front platform.

To the north, inland among the Mumung-Lae-Womba, there are several kinds of houses. One is something like the boat-shaped house of the Louisiades, it is on four piles, has side-walls, and the roof projects at each end. The women's-house (for here the sexes live apart) has a gable-roof, one side of which covers a floor on which are inclined sleeping-benches, it appears to be slightly raised above the ground, and is walled in on the three outer sides with bamboos placed horizontally; the other side of the roof nearly reaches the ground and is not walled in. There are also huts composed of a convex gable-roof that reaches the ground, with open ends. Similar structures have the upper part enclosed and floored to make a living chamber, the square entrance is at one gable-end and is reached by a notched pole; some are high, others quite low. There are also ground-huts with straight gable-roof and walls, the roof portion being converted into a loft for storing domestic utensils.

CAPE KÖNIG WILHELM AND MACLAY COAST, G. N. G.: The Labo type of house is found at Bulesom, at Sialum (Cape König Wilhelm) where the house is often much broader and the pitch of the roof lower, and also at Kelana to the north. Finsch (*Samoafahrten* p. 173) speaks of the fine houses of Finschhafen which resemble those of the Motu (B. N. G.), except that they are better built and the walls are made of planks which are often painted. He figures houses with two storeys. Tree-houses also occur here.

In the Sattelberg district, among the Kai (who are a Papuan people with possibly pygmy admixture) husband and wife live in the same hut, but further west inland they live separately, and here they have no separate bachelors'-house because all the males except small boys share a special house. In the Sattelberg there are tree-houses and formerly there were round huts; further inland and at Hupe (Kai country) there are ground-huts with ridge-pole, the grass roof of which reaches the ground all the way round except at the entrance.

On Mandok (Siassi Is.) the houses are on piles, they have walls and a door at the side, the ridge-pole is shorter than the floor, the lower part of the roof splays out and is continuous round both ends; one house figured by Neuhauss (fig. 35) has two dormer ventilators.

Finsch first noticed at Singor (Dörfer Bay, Maclay Coast) a difference in house construction from what occurs at Astrolabe Bay, we may describe it as the Sialum-Motu type.

ASTROLABE BAY, B. N. G.: At Bongu Finsch found ground-houses, the gable-roof had convex sides and reached the ground when no wall was present, it projected beyond the front end where the door was; the door may have a platform in front of it and may be protected by a shed-roof; there were sleeping benches and the fireplace was in the

centre. The men's assembly-house, *buambramba*, was like the above, but the ends were open, it was not decorated, in it were kept the large wooden signal drums. The assembly-house, *dschelum*, of Bilibili was very similar, the front central post was carved to represent men and women standing upon one another, painted carvings of birds, reptiles and fish were suspended from the cross-beams of the gable, and there were other carvings; it contained a large number of shields, drums, etc., the greater part of the interior was occupied by a sleeping platform, 8 feet high. The dwelling houses resembled those of the Motu and sheltered more than one family (pp. 46—82). Neuhauss refers to a two-storied house at Bogadjem with an outside door for each storey (p. 226). W. Semayer (*Beschr. Cat. eth. Samm. L. Biro's*, 1901, p. 19) refers to five types of houses in Astrolabe Bay. 1. Tree-houses on Karkar (Graget I.), like the ground-huts; they are look-outs and refuges only, there is a rope ladder. 2. Dwelling houses, private property, either on piles or not, the main support of the roof is a central pole, which is often beautifully carved, the entrance is closed with a mat. Characteristic are the low food-tables in front of houses, noted by Finsch. 3. Typical men's-houses. 4. Formerly there was a sacred house, *asa* or *ai*, in every village for the ancestor cult, initiation of youths, and sacred dances, women might not approach it. The men's-house is now taking its place owing to European influence. 5. Beehive huts as reported by Powell have not since been confirmed.

SEPIK, KAISERIN-AUGUSTA RIVER, G. N. G.: A dwelling house, 140 km. up the river, is a long pile-house with a gable-roof that gently rises to a peak at each end which projects upwards and forwards; the roof does not hide the walls, there appears to be only one entrance at one end. Like other buildings, the spirit-houses on this river are of a size, finish and beauty not known elsewhere in G. N. G.

They are oblong, on high piles, with a gable-roof of high pitch, the concave ridge is produced at the gables to two high spires, surmounted by a bird. The gable-end wall is painted, in the upper angle there is represented a large face with a huge open toothed mouth and protruding tongue. [It is worth while recalling that the Elema of the Papuan Gulf state that the end of the *eravo* represents the head of a warrior; the Elema also assert that they came from the mountains of the interior.] The space below the floor may be open or partially or wholly walled in, there is generally a shed-roof at the front end; Friederici points out that these buildings recall those in Padang, west coast of Sumatra, and in Siam (p. 76). The gable-end has numerous curious holes out of some of which skulls peep; in the upper room are carved figures, dance-masks, great earthen vessels and other utensils whose occurrence in G. N. G. is very surprising; in the underneath space stand in alcoves great carved signal-drums, and here are hung skulls modelled over with clay (Neuhauss, p. 235).

FINSCH COAST, G. N. G.: Finsch saw at Rabun large dwelling houses $40 \times 50 \times 24$ feet, on low piles, with a straight flat gable-roof and flat gable-ends, there was no front platform, the entrance being reached by a ladder; large houses have two compartments for two families. The two assembly-houses were long narrow buildings on low piles with a dish-shaped roof.

According to Friederici, Wakau, Berlinhafen, is the westerly limit of the great area of rectangular gable-houses on piles 1 m. above the ground; a little ladder leads to the entrance which is not in the centre of the gable-end and is closed with a flap. Often, especially in Walman District (the eastern part of the coast), there is a hip-roof projection of the gable.

The spirit- or ancestor-houses, *parak*, of Seleo and Tumbleo Islands, Berlinhafen, are small nearly square pile-houses, the roof has a steep pitch and the ridge, which has its own eaves, is produced into two large spurs which project outwards and upwards; the bark walls are curiously painted, the building is further decorated with carvings and fringes. The bachelors'- or assembly-house, *alol*, on Seleo is an elongated building on piles with horizontal ridge-spurs. These houses are characteristic of the district. The spirit-houses contain ornaments for dances, images of ancestors, and skulls which are taken from graves as soon as the soft parts have decayed (Neuhauss, p. 235).

A few miles inland from Eitapé District, besides the coast types, there are in the region of Kopoam-Kabine gable-houses on piles 6—7 m. high. Not far east, still in the hinterland in Afur-Palai region, there are family houses on the ground, this sort of hut also seems characteristic of the Nori people who have recently come from the mountains to the coast between Sër and Leitere, but they also had pile-houses with saddle-roofs. The character of the Afur-Palai huts is that, like those of the Nakanai in New-Britain, they are built together at the gables, so that several together form a long low hut [cf. the Mimika huts p. 4]; the gable-ends form a rounded hip-roof; the entrances are along the sides and at the ends. The longest in Afur was 28 m., there were three long-houses, two sheds and one »temple» on piles in the coast style. In Nakanai it is the same case: in Watu on the open bay are long-houses (the longest was 23 m.), the outer gable has a slightly curved hip-roof. Thus two different and remote tribes, Nakanai and Afur-folk, one Melanesian the other Papuan-speaking, closely resemble each other in house-building and mode of settlement: again, in many parts of New-Guinea and the Archipelago, where women's-houses are pile-huts, men's-houses are built on the ground and in form rather resemble a single section of a

Nakanai or Afur long-house. Now it might seem that from the west came colonising Polynesians, Proto-Polynesians, Proto-Melanesians or whatever they may be called, bringing a rectangular house on the ground which they reserved for themselves as men, while they married aboriginal women and adopted their pile-houses. But the difficulty is, that the hinterland peoples of the regions mentioned above from whom these colonists must have adopted pile-houses do not have that type but build houses on the ground. This mixture of pile-houses and ground-houses is very common in Melanesia (Friederici, pp. 74—76).

According to Neuhauss there are women's- and men's-houses and spirit-houses at Sissanu. The women's-houses are often of large size, oblong, on piles, with a convex gable-roof which in most cases nearly touches the ground, while the rafters are supported on the ground, there is a second storey (which has no outside entrance) and a loft. The ends are rounded and as the ridge-pole is shorter than the length of the house there is a hip-roof. Sometimes there is a platform in front of the entrance, or the entrance may be sheltered by a shed-roof the platform being absent. Neuhauss figures a house at Ramo (inland from Sissanu) in which the roof does not hide the walls and the long platform is sheltered by a yet longer shed-roof; all the eaves bear long fringes. The men's-houses figured by him are on high piles, mostly with an open platform underneath, the houses themselves are usually circular, with a pointed conical roof, the wall may be hidden by fringes, but he also figures an oval men's-house, with a gable hip-roof. The houses for the candidates for circumcision during the *balum* feast have artistically decorated posts. There is also considerable variation among the spirit-houses, some are like the women's-houses, in these before reaching the interior one has to crawl through a passage going nearly all round the hut. Others are oval buildings on high piles with a deep-eaved gabled hip-roof; the

ridge is prolonged into two straight or upward-turning long spurs; the side-walls of bark are painted with designs as at Seleo I. and the adjacent mainland further west (p. 227).

At Warapu (close to and S. E. of Sissanu) the houses are on piles, oblong, with a gable-roof of high pitch which is continued round the gable-ends, the roof extends to the level of the floor, hiding the low side-walls. At Ramo (to the S.W.) the houses are somewhat similar, but the roof does not hide the walls and it projects beyond the gable-end and over a narrow platform; in some there is a shed-roof running up the gable in front. In a spirit-house at Warapu [p. 24] were some ornamented skulls, a circumcision dancemask and a sorcerer's outfit (Neuhauss, p. 235).

From the great mixture of types in the Berlinhafen region we pass into the area of great beehive huts from Malol to Sera (Sia) inclusive. They are on piles, but the roof reaches the ground covering the space under the floor which is used for storage; they are oval in plan, and a ladder leads up to the entrance on the narrow end. From Sera eastwards there are little burial-places inside the village, they are absent from Leitere westwards.

From Leitere westwards we enter the region of pyramidal huts on piles, but in the Sekó district they have higher piles than in Angriffshafen and Wutung. The pyramid-roofed houses have a square ground-plan, but the pyramids frequently appear conical because wedge-shaped covering bands of sago leaves are added to the corners to keep out the rain. Quite distinct are the magnificent »temples« which look like giant cones, of which the framework is pyramidal but the thatch is supported by a conical arrangement of rafters and hoops [cf. the *tsimia* of Kuni, p. 14]. These houses are very high, and generally at the top a second pyramidal or conical roof is added. With the exception of a »temple« at Wutung which is built more in the Eitapé or Berlinhafen style, all the houses are pyramid-huts

on piles, as are also all the women's-houses and »temples» in Yako, Waremo, Wanimo and Leitere, but men's-houses about Angriffshafen and two in Leitere are rectangular gable-houses on piles (Friederici, p. 73). Van der Sande says all the buildings at Oinâke (which seems to be the same village as Wutung) are pyramidal (p. 134).

BETWEEN THE G. N. G. BOUNDARY AND HUMBOLDT BAY, N. N. G.: Van der Sande states that from Oinâke westwards the pyramid-roof becomes increasingly mixed with a ridge-pole roof. Thus, there are two of the latter at Thaë and at Kajo Entsaú, while at Ingrás (Humboldt Bay) the pyramidal roofs are quite in a minority; still more to the west, at Sâgeisârá and in the eastern part of Lake Sentani, only a few special houses have this roof, the type is absent in Tana Merah Bay. The pyramid-houses have no central post, there is a loft half-way up the roof, the floor is a short distance above the ground, the low side-walls are generally hidden by the eaves; those built on land are entered by a small trap-door through the floor, and below these houses firewood is often piled up round a central space for pigs (p. 135). This type probably originated in the eastern part of its zone of distribution, whence it may have been taken by western neighbours who use it only for special purposes. Thus, at Tobadi only certain people may live in them and in Ingrás exclusively those who are related with Tobadi people. West of Humboldt Bay, e.g. on Lake Sentani and at Sâgeisârá, no private person, not even the village chief, lives in one, they are used as watch-houses or temples. In all cases they must have a wooden human image on the top of the roof, which in Tobadi is called *korwar* (p. 137). On the Sëká coast gable-houses with a straight ridge-pole begin to appear, according to Van der Sande's fig. 84 there is a hip-roof beyond which the ridge-pole projects, and the same occurs at Ingrás, the ridge may be slightly concave.

HUMBOLDT BAY, N. N. G.: The villages are built in the sea, the houses often being connected by large platforms. The dwelling houses are of two kinds: 1) pyramidal, with a door and platform at each end, lodging one or more families; 2) gable-roofed, the ridge being either straight or slightly concave (Finsch, p. 355).

The assembly-houses (community-houses), to which women are by no means forbidden but are as a rule visited by men only, are always four-sided, with a pyramidal roof ending in a short horizontal ridge-pole, the ends of which may be carved. That at Tobadi has an erection on the top »like the Mohammedan missigits, the ridge-pole continued at both ends into ornaments. It stands exactly between the house of the village chief and the temple, near the corner of the platform, where a horizontal beam has been carved into the figure of a woman in child-birth» (Van der Sande, p. 279). Meyer and Parkinson call it *jainpa*, and Bink heard it and the temple called *kârëwâri*. Young men work and sleep there. These houses occur throughout the district.

Tobadi has also a large pyramidal house for young men, in which boys from 12 to 16 years of age live before they are allowed in the temple, all this time their hair is dressed to resemble a cock's comb as it was when they were small boys, and they must keep aloof from women. At Ingrás a look-out is kept in the youths' house, so it is built at the end of the village.

Van der Sande points out that there is a similarity in a good many respects between the large pyramidal houses of Humboldt Bay and neighbourhood and the spirit-houses, *parak*, of Berlinhafen district. He calls these buildings »temples», avoiding the names, »rum sëram, missigit, tabu-house» as they are connected with religion, with which »the Papuan society of these parts is entirely impregnated» (pp. 287, 288). He says they are originally four-sided, but usually become octagonal by a ridge on each wall; on the apex

of the roof is built another four-sided pyramid, on the point of which there is always a wooden human figure, *korwar*; otherwise the construction is similar to other buildings of this type. Those built over water have one door only, opening on to the platform; those on land have usually two doors. All are decorated on the outside, that at Tobadi being the finest in this respect; Finsch found that this one was 40—50 feet square and 60 feet high (p. 356); the centre-pole hung from the roof to about 1.5 m. from the floor, it was decorated, and on it were hung a number of bamboo flutes. When the centre-pole is a supporting post as at Jambuë, Thaë, Oinäke, Nächeibe, etc. it is always used for holding the flutes; the presence of these flutes is another similarity with the *parak*. In Humboldt Bay the blowing of them is a religious act and the natives do not like to see them touched by strangers. Blowing of flutes indicates that *kärëwäri* (the spirit) is hungry, the men are not allowed to go out fishing, and the women have to prepare food for the inhabitants of the temple — the same is reported for the *parak* of Tumleo I., G. N. G. The men behave with reverence in the temple, novices live and sleep there during a considerable time (in Tobadi often more than one year) and are not allowed to have connection with the parental home nor to be seen closely by any woman (as in the *parak*). The principal spirits reside in the temples, feasts in commemoration of the dead take place in them, and here the religious life of the people is concentrated.

LAKE SENTANI, N. N. G.: The common type of house is a long oblong structure with a simple gable-roof which hides the side-walls. There is a door at the gable-end facing the store, where the floor is continued as a platform, in the side-walls are holes through which the women pass when getting into or out of their boats. These pile-dwellings are always built in the water either parallel to or at right angles

to the shore, according to the depth of water, the chief's house is at the end of the double row of houses. In all the villages there are quadrangular or octagonal pyramid-houses with large platforms, which are used as watch-houses, *öbe*, where men and boys meet, sleep and keep a regular look-out; they do not appear to contain drums or bamboo flutes (Van der Sande, p. 255). Generally attached to the chief's house is the assembly-house, the tree trunks which support the roof are placed upside down, the roof is carved and crocodiles and human figures are carved on the trunks; weapons are kept inside. Women often go inside, thus excluding a religious significance for these houses (p. 279). On the Sekanto and Jafuri rivers Van der Sande saw ground-huts which were little more than gable-roofed shelters with imperfect walls; he says, »These are the first permanent dwellings (on the ground) which have been met with in this part of North New Guinea» (pp. 128, 129).

BETWEEN HUMBOLDT BAY AND GEELVINK BAY, N. N. G.: The form of the house is like that of Geelvink Bay, long oblong on piles, but without the middle corridor and the beak-like projection at the men's end. This type is represented at Sentani Lake (Friederici, p. 72).

De Clercq and Schmeltz state (p. 180) that the greatest festivals take place east of Cape Durville in buildings which in size and construction far excel the ordinary houses, they are called *roemah karawari*, but the European name of temple is not wholly erroneous for in them men call upon the spirits of their forefathers to ward off harm from those going on a projected journey. Also feasts are celebrated on starting for and returning from a fight. Especially are they connected with shark-fishing, with which the whole life of the men is bound up. Ceremonies take place during the whole of the west monsoon or fishing season, and only



cease whilst the east monsoon lasts as the fishing also ceases then.

GEELVINK BAY, N. N. G.: The houses here are very characteristic, typically they are of large size, rectangular in plan, with a slightly curved roof which the natives liken to the back of a turtle, this is gabled only on the women's side, at the men's side it overhangs far forwards; it is pomegranate-shape seen from above. The oblong interior is divided in three lengthwise, a long passage-way down the centre with a row of little living rooms on each side, with a door into each, there is a hearth in the corridor and one in each room. At Mokmer, Wiak I., the rooms are reached only from the corridor, on Japen I. each has also an outside door; in the Mokmer style the roof descends at the sides nearly to the level of the floor, while in the Japen style the side-walls are visible. Again in Mokmer the great turtle-roofed houses stand alone in the sea, each connected with the shore by a narrow bridge-way, whereas in Pom Inlet, Japen I., the thirty houses are unconnected with each other or with the land. At the neighbouring Sirewen the houses are along the shore, the gable-end (women's) is always shorewards and the men's end seawards. These Nufoor people speak a Melanesian language with Papuan elements (Friederici, p. 72). Some of the houses on Lake Jamur have turtle-roofs, there is thus a cultural relation with Geelvink Bay, despite the linguistic affinities with the west coast; a house on Angadi I. has one terminal verandah with a door facing the lake and another along one side with two doors, the interior is not divided. Tree-houses occur on Gragat (Raketa) Island.

There are no assembly-houses in Geelvink Bay the large front platforms of the dwelling houses serving as meeting-places for the men (Van der Sande, p. 281).

The *rum sĕram* are buildings characteristic of Geelvink Bay and are the sleeping place of the unmarried men. That at Dore, according to de Clercq and Schmeltz (p. 179), is long and narrow and has a roof shaped like a boat with long thin upward-pointing ends and a long projection in the middle, on a ratan extending between the two high ends is suspended an object which secures abundant food, trouble would follow its removal. The ends of the posts which project below the level of the floor are carved to represent crocodiles and human figures, with unmistakable sexual organs, it is said a member is cut off one of them when a youth is married; a large beam along the length of the floor is carved at one end to represent a pair *in coitu* and on the same beam is a hollow containing water which serves as a looking glass. »Goudswaard (1863) saw young men going there before the evening meal, the food being brought by slaves, whilst a single aged woman inside had to rub several parts of their body with oil, provide them with medicines and instruct them in sexual matters» (Van der Sande, p. 301). Sometimes as at Ron, Windesi, Jaur and Mios Korwar the *rum sĕram* have the ordinary turtle-roof. That at Wandamen has a gable-roof, the ridge of which is prolonged upwards as a vertical wall, the middle and side posts of the apartment project below the floor and the carvings represent the male and female organs (de C. & S. p. 178). At Mor there is no *rum sĕram*, at Weinami it has the same form as at Ron, elsewhere in Waropen there are none. The shed attached to the chief's house, which has been mistaken for a *rum sĕram*, is where a widow stays until the funeral ceremonies for her husband are completed. It was repeatedly asserted at Ansus Surui and Ambai that the custom prevails for the young men to live in the chief's house (de C. & S. pp. 178, 179). As Van der Sande points out, it is clear that the *rum sĕram* of Geelvink Bay, the *kĕrĕwĕri* of Humboldt Bay, and the *parak* of Berlin Hafen have their

origin in the same fundamental ideas, though the ceremonies have much diminished in the case of the *rum sĕram* (p. 302).

NORTHERN PENINSULA OF N. N. G.: Van der Sande says the settlements on the Manikion always consist of one building, which is built on very long, thin poles many going crosswise as in Arfak in the Insé delta, MacCluer Gulf, Angadi and Nagramadu; a notched pole serves as a ladder as in Arfak dwellings. There is a narrow verandah at the front and back, at Hiri there is only one bar. The gable-roof is of variable pitch. The very low side-walls are of bark as is also the case among the people of Ajambori, Arfak, Hätam and Menam all tribes living more or less in the interior of the north-western part of New Guinea, to the north of MacCluer Gulf. There is an entrance at each end. The houses of the Horna tribe of the Manikion are square, along the right hand wall, divided by pieces of bark up to a man's height, are a few separate rooms with fireplaces for the married people and children; along the whole left wall raised sleeping places for men and boys are sometimes to be found, below is a fireplace, and weapons are hung on this wall; close to the openings of the doors hang bodies of deceased relatives, which have been dried over the fire and wrapped in a squatting position in matting; lower jaws of pigs are stuck in the roof. The houses of the Menam, living more to the north, are similar, but the rooms are in the corners both right and left. On the slope of the Arfak Mountains D'Albertis saw a tolerably large pile-house raised high above the ground, the side which faces east had a verandah along its whole length, the other side which faced the mountain had only a small platform. The women occupy the left of the house, the men the right; each family had a fireplace (I. p. 100). Lower down on the Arfak Mountains D'Albertis saw a rectangular house, large enough for four families; it was built on piles 20—25 feet above the ground (I, p. 88). At the

extreme north-west of New Guinea, near Sorong I., a few miles up the small Ramoi River, D'Albertis saw a village of four or five houses, the foremost built on piles about twenty feet high was assigned to him. »In its rear were the others inhabited by the natives. In one, a long building with earthen floor, the women and children live» (I. p. 47). Evidently the men's-houses are on piles and the women's-houses are on the ground,

GENERAL REMARKS.

Although, as Pöch and Friederici suggest, the ground-houses on the east of New-Guinea may be due to direct Melanesian influence, but at all events in some cases this cannot be the case for the ground-houses in the south-west and west of New-Guinea, and I am inclined to regard the latter as essentially belonging to the true Papuan culture, as they appear to be most numerous where that racial element has been least modified. The simplest forms of ground-houses which occur in Melanesia may very well be due to the same cause. Break-winds and dome-shaped huts which are so common in Australia are not recorded from New Guinea. So far as is known the round ground-houses of the Eastern Islanders of Torres Straits have no counterpart in Australia or New Guinea, and for the present we must regard them as a special development. They cannot be equated with the oval or rounded houses of the Kuni, Mekeo District, as these are essentially square houses with a masking conical roof; but on the other hand these seem to degenerate in some instances by the loss of the square raised floor into apparently simple conical ground-huts. The gable-roofed ground-houses with distinct walls are different from the simple huts of western parts of New Guinea, and it is possible that they are part of a definite culture-complex, which

has spread directly in some cases and indirectly in others from Melanesia.

The pile-houses which, as we have seen, are so characteristic of New Guinea certainly belong, at least in the main, to a very definite culture.

From the north of New Guinea to the western islands of Torres Straits we find the association of pile-houses with a more or less marked separation of the sexes; frequently the women and children live in one house or part of a house, while the youths and men live in a separate house or in part of the common house, the men's quarters or the men's-houses being indicative of important social relations. It is not certain, in my opinion, that the separation of the sexes was introduced with the pile-houses, it may have belonged to an older culture, if such can be shown to have been the case, the new culture undoubtedly increased this tendency.

In various parts of New Guinea we find that there may be several kinds of men's-houses to which women are not admitted. Head-hunting seems to be a strongly marked trait of this culture, the skulls of the victims of treacherous murder or of enemies slain in warfare are commonly kept as trophies in men's-houses. Care must be taken, however, to distinguish between skulls kept as trophies and those of relatives which are kept for divinatory or religious purposes. These latter are frequently the appurtenances of a manes or ancestor cult — a cult which is very widely spread throughout New Guinea. In some cases the manes cult seems to have developed into a hero cult, more especially in relation to warfare, and there is no doubt that certain men's-houses are very largely connected with fighting.

Men's-houses are very generally the places where the youths are secluded during the interval which separates the time when as small boys they lived with their mothers and played with other children and that when they live in the

society of men. Very frequently elaborate ceremonies are held during the initiation of the youths, which take place in certain men's-houses or in connection with them; but initiation ceremonies and seclusion of lads at puberty are not necessarily criteria of this culture, though they might be reinforced by it. This culture was certainly non-totemic. In the southern portions of B.N.G. as is well known, it is associated with totemism, but the totemism was there previously, indeed it is highly probable that the introduction of this culture was one of the chief means of breaking down the totemic system wherever it came in contact with it, as it impressed on the community the new social idea of a local solidarity which is practically alien to a totemic society. At first each totem clan would have its own men's-house, but it is difficult for a council of old men to regulate a house in which many people live. So the gerontocracy of the totem clan system would be replaced by a headman of a house, and when the men of several totem clans lived in a long-house, there can be little doubt that the interests of the several clans would become merged into the interests of the house as a whole. The co-ordination that a long-house would necessarily induce must have been an important factor in enhancing the political strength of the community, especially when the culture was combined with an aggressive war cult.

Further researches will probably indicate whether the pile-houses were associated with a single culture, the bow-culture of Graebner, or whether there were several cultures, or perhaps phases of one general culture, which influenced New Guinea at various times.

Our knowledge of the structure and social relations of the houses in New Guinea is still too imperfect to make it possible to draw any very satisfactory ethnological conclusions, and so many other data have to be taken into account that an adequate discussion would occupy a great deal of

space. All I can now do is to draw attention to certain points for future investigation and consideration: To what racial element do the simplest ground-huts belong? Have the gable-roofed ground-houses more than one origin? Is there a connection between the square pile-houses found in the extreme north-west of New Guinea and those at the upper sources of the Fly River? How far is there a continuity between the communal long-houses of Geelvink Bay and those of the Papuan Gulf, and is there any connection between the warrior-faced men's-houses of Kaiserin Augusta River and those of Elema? Have tree-houses independently arisen in different places from pile-houses? What is the relation between the quadrangular houses with conical roofs of the Kuni, Mekeo District, and the square houses with pyramidal or conical roofs in the Berlinhafen-Humboldt Bay area? The problems of the south-eastern peninsula of New Guinea and the adjacent archipelagoes, like several of those of the coastal regions of G. N. G. depend for their solution on comparative studies in Melanesia on the lines that Graebner and Friederici have begun, but with far more detail. We may probably take it for granted that the open platform *dubu* is merely the isolated platform of a chief's *dubu* house, and that the houses with straight ridge-poles belong to a different racial element from those with concave ridge-poles.

Very interesting results will follow a consideration of the relations of the pile-house culture of New Guinea with that of the East Indian Archipelago or even further afield.

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