SETTLEMENT PATTERNS IN MALAYA

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THE study of settlement pattern in equatorial environments is ordinarily prohibited by the lack of adequate topographic maps. In Malaya, however, a considerable proportion of the country has been mapped in a style comparable with that of European countries; in fact, two-thirds of the Malay Peninsula is covered by maps on a scale of one inch to the mile.

THE MALAYAN ENVIRONMENT

The physical environment of Malaya is as difficult for men to control as any other equatorial landscape. Although the altitude is more than seven thousand feet in places, it does not cause any break in the continuity of dense forest, and the population on the heights remains negligible. Until the last few years, when two hill stations have been created, the mountains were completely negative to settlement. Altitude induces a change of plant species but does not alter the entangled and varied vegetation normal to equatorial jungle.

The chief variant within this cover of evergreen forest is marsh; often the jungle itself stands in marsh. Hundreds of square miles of the marsh landscape are occupied by a bushy vegetation of which mangrove is the marine type; the fresh-water swamps carry tall grasses, lalang, as well as bushes. The combination of jungle and swamp dominates the natural landscape and has controlled rigidly the manner and patterns of man’s settlement.

The topography of Malaya is that of an ancient land mass which has been subjected to erosion for a longer period than most surfaces in this part of Asia. Moreover, it is exposed to a most powerful type of weathering. The high temperatures, heavy rainfall, and highly acid subsurface water due to rotting vegetation have evolved a lateritic cover of material from rock weathered in situ to depths of 50 and even a hundred feet. The long continuance and uniformity of the processes have reduced the surface material to a type predominantly uniform from place to place and not obviously related to the geological substructures from which it is derived. The deep lateritic soil conceals the solid rock. Natural exposures of rock are rare in Malaya;

1 Strictly speaking, lalang is the spear grass *Imperata arundinacea* (see A. S. Corbet: Biological Processes in Tropical Soils, Cambridge, England, 1935, p. 30); on the topographic map of Malaya it is used to describe a mixed vegetation in which *Imperata arundinacea* predominates and reeds may be included.
Figs. 1-3—Maps illustrating the distribution of population in Malaya. On Figure 1 see G. A. Vlieland's article "The Population of the Malay Peninsula: A Study in Human Migration," *Geog. Rev.*, Vol. 24, 1934, pp. 61-78. The 1931 census recorded a total population of some 4½ millions in British Malaya; of these 39 per cent were Chinese and 14 per cent Indians.
The configuration of Malaya has markedly guided the patterns human settlement has assumed. The southern third of the peninsula is a low peneplain with an irregular drainage pattern, carrying large swamps well inland. The frequency of swamps in this Johore peneplain probably accounts for its continued low density of population. The northern two-thirds of Malaya may be divided into two major physiographic units. The first, in the northeast, is the roughly square Trengganu Plateau, the average altitude of which is about 2500 feet; it isolates the Kelantan plains, in the extreme northeast corner of Malaya. The second unit consists of several roughly parallel mountain ranges. The innermost and highest is also the longest; it abuts the Trengganu Plateau and runs north-south through two-thirds of Malaya, to fade out in the state of Negri Sembilan. The ranges farther west are much shorter and are not continuous; an outlier of one range constitutes the island of Penang.

These northern highland masses are separated from the coast by comparatively broad belts of low land. The coastal plains tend to be swampy or have been converted into paddy fields. On the lower flanks of the ranges and in the troughs between are the densest concentrations of people. Indigenous people have been attracted by land suitable for rice, immigrant people by the alluvial ores in the valleys.

The Malayan Communities

It is impossible to analyze the settlement types in Malaya without considering the three distinct cultural groups that have been concerned in the populating of the peninsula.

In the first group are the aboriginals, the Sakai, the Negritos, and the Semelai, who do not make much mark on the landscape. They are forest migrants and seldom remain permanently in one place. Their dwellings are rarely more than a lean-to of leaves and branches; their cultivation is almost negligible. Most of them now live in the jungles of the highlands, for which reason they are known as “the mountain people.” Some tribes live in the little-known swamps of the middle east of Malaya. These people are the hunters and gatherers of the jungle; their standard of life is extremely low.

The second group is the Malay population, the indigenous people of Malaya. They are fairly uniformly distributed on the coasts, along the rivers, and in the main valleys and are concentrated on the coastal swamps where
Fig. 4—Panorama of a small Malayan town showing its rectilinear form and forest environment.

Fig. 5—Kuala Lumpur, Malaya's chief inland town and capital of the Federated States. This is a confluence town; its name means "muddy confluence."
FIG. 6—Malay houses fringing a paddy field and set among fruit trees. Buffaloes graze freely when there is no paddy in the fields.

FIG. 7—Aspects of an east coast fishing village. In the small sailing boats drawn up on the foreshore Malays go well out to sea.
Fig. 8—Detail of a poorer type of Malay fisherman's house on the east coast.

Fig. 9—Sakai dwelling in a clearing on the central range. Although the hut is the normal type, the Sakai family here has an exceptionally elaborate costume.

Fig. 10—Farmer's house with the typical laterite feet, verandah, and withdrawable steps. Malacca.

Fig. 11—House of a Chinese small holder set in a few acres of rubber.
Fig. 12—Buildings on a fairly large rubber estate: right, the coagulating shed; center, the smoking house; left, hut for laborers.

Fig. 13—Tamil Indian temple standing completely isolated within a rubber estate whose working people are entirely Tamil.

Fig. 14—Settlement landscape in the alluvial tin mining valleys. Some of the buildings shown are Chinese miners' houses, others shelter mining machinery. On the right an old alluvial quarry, now filled with water.

Fig. 15—A Chinese-populated village of shops along a main highway.
these give way to rising ground. The greatest density of Malays is now in the extreme northeastern and extreme northwestern coastal plains, and there is a considerable Malay population on Singapore Island (Fig. 2).

The third group, representing about half of the present population of Malaya, is nonindigenous and consists chiefly of Chinese and Indian immigrants. Some have been settled for several generations in Malaya but still retain their own culture and the immigrant attitude. Most of them are concentrated in the western valleys and on the flanks of the western ranges, so that a long belt of nonindigenous peoples extends southward along the west coast of Malaya toward Singapore, stretching inland for about forty miles.

House Materials

The materials of which all settlements are built relate directly to the jungle. Most houses are made of timber roofed with dried palm. Structures of stone, brick, and cement are limited to the centers of the larger towns. It must not be thought that the universal use of timber in construction implies that all trees of the Malayan jungle are equally suitable for the purpose; unfortunately, durable timbers form only a small part of the jungle. The details of house structure, the walls, and the covering to the floors are generally of woven palm.

Lateritic soil lends itself readily to brickmaking, yet bricks are seldom used for building by either immigrants or natives. This is the more surprising because all the immigrants bring a cultural background of brick structures. The use of laterite for structures is confined to supporting the stilts on which Malay houses are built. The wooden legs of the house throw great pressure on a few square inches of ground; to distribute the pressure on the nonresistant and damp soil, feet of dried laterite are used, which give the stilts a clubfooted appearance. The laterite is usually vesicular, which when sun-dried becomes hard and resistant to weathering.

Thatched wooden houses are not limited to rural areas; they form the majority even in the larger towns. One of the problems they create in the highly congested urban slums is the danger of fire. The topographic map has a symbol distinguishing what it calls “temporary buildings.” The criterion is not occupation but structural material: “temporary buildings” are made of

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timber and thatch. Urban officials deplore their general use, and frequently municipal regulation attempts to reduce the number of them.

**Settlements of Indigenous People**

The most widely distributed settlement pattern on the Malayan topographic map is that of the Malays. Their community forms the greater part of the rural population, and their conventions of settlement predominate in the rural landscape.

Several interesting points arise from a study of Malay villages, locally known as “kampongs.” Although the Malay village is set within, and has evolved from, a forest environment, the village pattern bears no resemblance to the settlement pattern that evolved in temperate forests. In northern Germany and Russia the typical forest village is circular: a compact nucleus of farms is surrounded by a circular zone of cultivation and this in turn by a roughly circular forest edge. This form has no counterpart in Malaya.

Only one circular village of this kind has been found in Malaya: the Tan Chin Tuan Estate, a settlement in one of the most isolated parts of Johore, has a central nucleus surrounded by a circular zone of rubber plantation set within unroaded jungle (Fig. 17). But it is not an indigenous settlement; its population is immigrant Chinese.

Another distinguishing feature of Malay kampongs is the absence of defensive forms. Inasmuch as the peninsula was once controlled by many local potentates, it might be expected that defense would be the keynote of the village pattern. It is not. Possibly the open, straggling plan of Malay villages is a result of a century of supervision by the British, during which time internal friction has been minimal. Possibly older defensive features such as stockades and compact forms disappear from the equatorial environment during a generation or so of undisturbed peace. Even though a settlement might occupy the same site for a long period, the houses and materials used would not last, and the village would have to renew and reshape itself at intervals; and, when the need for defense had been removed, the village could readily spread outside the original stockade. Although there is no design for defense in the arrangement of a Malay village, the house form itself is defensive. Houses on stilts are well protected: in rural areas where wild animals still roam, the house steps are raised at night. The marshy environment in which many Malay villages are set has probably acted as principal protection of one community from another.

Water supply has significantly controlled Malay village pattern. It is a