INFLUENCES OF GEOGRAPHIC ENVIRONMENT

ON THE BASIS OF RATZEL'S SYSTEM OF ANTHROPO-GEOGRAPHY

BY

ELLEN CHURCHILL SEMPLE

AUTHOR OF "AMERICAN HISTORY AND ITS GEOGRAPHIC CONDITIONS"

NEW YORK
HENRY HOLT AND COMPANY
LONDON: CONSTABLE & COMPANY LTD.
CHAPTER XIII

ISLAND PEOPLES.

The characteristics which mark peninsulas, namely, ample contact with the sea, small area as compared with that of the continents, peripheral location, more or less complete isolation, combined, however, with the function of bridge or passway to yet remoter lands, are all accentuated in islands. A list of the chief peninsulas of the world, as compared with the greatest islands, shows a far larger scale of areas for the former, even if the latter be made to include the vast ice-capped land-mass of Greenland (2,170,000 square kilometers or 846,000 square miles). New Guinea, the largest habitable island, has only one-fourth the area of Arabia, the largest of the peninsulas. Therefore, both the advantages and disadvantages incident to a restricted area may be expected to appear in an intensified degree in islands.

Peninsulas are morphologically transition forms between mainland and islands; by slight geological changes one is converted into the other. Great Britain was a peninsula at the end of the Tertiary period, before subsidence and the erosion of Dover Channel combined to sever it from the continent. It bears to-day in its flora and fauna the evidence of its former broad connection with the mainland. In Pliocene times, Sicily and Sardinia were united by a land bridge with the Tunisian projection of North Africa; and they too, in their animal and plant life, reveal the old connection with the southern continent. Sometimes man himself for his own purposes converts a peninsula into an island. Often he constructs a canal, like that at Kiel or Corinth, to remove an isthmic obstruction to navigation; but occasionally he transforms his peninsula into an island for the sake of greater protection. William of Rubruquis tells us that in 1253 he found the neck of the Crimea cut through by a ditch from sea to sea by the native Comanians, who had
taken refuge in the peninsula from the Tartar invaders, and in this way had sought to make their asylum more secure. 4

The reverse process in nature is quite as common. The Shantung Peninsula rises like a mountainous island from the sea-like level of alluvial plains about it, suggesting that remote time when the plains were not yet deposited and an arm of the Yellow Sea covered the space between Shangtung and the highlands of Shansi. 5 The deposition of silt, aided often by slight local elevation of the coast, is constantly tying continental islands to the mainland. The Echinades Archipelago off the southwest coast of ancient Acmansia, opposite the mouth of the Achelous River, Strabo tells us, was formerly farther from shore than in his time, and was gradually being cemented to the mainland by Achelous silt. Some islets had already been absorbed in the advancing shoreline, and the same fate awaited others. 6 Farther up this western coast of Greece, the island of Leucas has been converted into a peninsula by a sickle-shaped sandbar extending across the narrow channel. 7 Nature is working in its leisurely way to attach Sakhalin to the Siberian coast. The strong marine current which sets southward from the Okhotsk Sea through the Strait of Tartary carries silt from the mouth of the heavy laden Amur River, and deposits it in the "narrow" of the strait between Capes Lusarve and Pogobi, building up sandbars that come dangerously near the surface in mid channel. 8 Here the water is so shallow that occasionally after long prevailing winds, the ground is left exposed and the island natives can walk over to Asia. 9 The close proximity of Sakhalin to the mainland and the ice bridge covering the strait in winter rob the island of much of its insular character and caused it to pass as a peninsula until 1852. Yet that five-mile wide stretch of sea on its western coast determined its selection as the great penal station of the Russian Empire. The fact that peninsular India accords in so many points of flora, fauna and even primitive ethnic stock with Madagascar and South Africa, indicates its former island nature, which has been geographically cloaked by its union with the continent of Asia.

Islands, because of their relatively limited area and their clearly defined boundaries, are excellent fields for the study of floral, faunal, and ethnic distribution. Small area and isolation cause in them poverty of animal and plant forms and fewer species than are found in an equal continental area. This is the curse of restricted space which we have met before. The large island group of New Zealand, with its highly diversified relief and long zonal stretch, has only a moderate list of flowering plants, in comparison with the numerous species that adorn equal areas in South Africa and southwestern Australia. 10 Ascension possessed originally less than six flowering plants. The four islands of the Greater Antilles form together a considerable area and have all possible advantages of climate and soil; but there are probably no continental areas equally big and equally favored by nature which are so poor in all the more highly organized groups of animals. 11 Islands tend to lop off the best branches. Darwin found not a single indubitable case of terrestrial mammals native to islands situated more than three hundred miles from the mainland. 12 The impoverishment extends therefore to quality as well as quantity, to man as well as to brute. In the island continent of Australia, the native mammals, excepting some bats, a few rodents, and a wild dog, all belong to the primitive marsupial subclass; its human life, at the time of the discovery, was restricted to one retarded negroid race, showing in every part of the island a monotonous, early Stone Age development. The sparsely scattered oceanic islands of the Atlantic, owing to excessive isolation, were all, except the near-lying Canaries, uninhabited at the time of their discovery, and the Canary Islanders showed great retardation as compared with their parent stock of northern Africa. [See map page 105.]

Despite this general poverty of species, island life is distinguished by a great proportion of peculiar or endemic forms, and a tendency toward divergence, which is the effect of isolation and which becomes marked in proportion to the duration and effectiveness of isolation. Isolation, by reducing or preventing the intercrossing which holds the individual true to the normal type of the species, tends to produce divergences. 13 Hence island life is more or less differentiated
from that of the nearest mainland, according to the degree
of isolation. Continental islands, lying near the coast,
possess generally a flora and fauna to a large extent ide-
tical with that of the mainland, and show few endemic species
and genera; whereas remote oceanic islands, which isolation
has claimed for its own, are marked by intense specialization
and a high percentage of species and genera found
nowhere else. Even a narrow belt of dividing-sea suffices
to loosen the bonds of kinship. Recent as are the British
Isles and near the Continent, they show some biological
diversity from the mainland and from each other.

The influence of an island habitat upon its human occup-
ants resembles that upon its flora and fauna, but is less
marked. The reason for this is twofold. The plant and
animal life are always the older and therefore have longer
felt the effects of isolation; hence they bear its stamp in an
intensified degree. Man, as a later comer, shows closer
affinity to his kin in the great cosmopolitan areas of the
continents. More than this, by reason of his inventiveness
and his increasing skill in navigation, he finds his sea
boundary less strictly drawn, and therefore evades the full
influence of his detached environment, though never able
wholly to counteract it. For man in his lower stages of civiliza-
tion, as for plants and animals, the isolating influence is
supreme. With man's higher development and advancing nau-
tical efficiency, islands assume great accessibility because of
their location on the common highway of the ocean. They
become points of departure and destination of maritime naviga-
tion, at once center of dispersal and goal, the breeding place
of expansive national forces seeking an outlet, and a place of
hospitality for wanderers passing those shores. Yet all the
while, that other tendency of islands to segregate their
people, and in this aloofness to give them a peculiar and
indebted national stamp, much as it differentiates its plant
and animal forms, is persistently operative.

These two antagonistic influences of an island environment
may be seen working simultaneously in the same people, now
one, now the other being dominant; or a period of undis-
turbed seclusion or exclusion may suddenly be followed by

one of extensive intercourse, receptivity or expansion. Recall
the contrast in the early and later history of the Canaries,
Azores, Malta, England, Mauritius and Hawaii, now a lonely,
half-inhabited waste, now a busy mart or teeming way-
station. Consider the pronounced insular mind of the globe-
trotting Englishman, the deep-seated local conservatism
characterizing that world-colonizing nation, at once the most
provincial and cosmopolitan on earth. Emerson says with
truth, "Every one of these islanders is an island himself, safe,
tranquil, incommunicable." Hating innovation, glorifying
their habits, always searching for a precedent to justify
and countenance each forward step, they have nevertheless
led the world's march of progress. Scattered by their
colonial and commercial enterprises over every zone, in every
dime, subjected to the widest range of modifying environ-
ments, they show in their ideals the dominant influence of the
home country. The trail of the Oxford education can be
followed over the Empire, east to New Zealand and west to
Vancouver. Highschool students of Jamaica take Oxford
examinations in botany which are based upon English plant
life and ignore the Caribbean flora! School children in
Ceylon are compelled to study a long and unfamiliar list of
errors in English speech current only in the London streets,
in order to identify and correct them on the Oxford papers,
distributed with Olympian impartiality to all parts of the
Empire. Such insularity of mind seems to justify Bernard
Shaw's description of Britain as an island whose natives
regard its manners and customs as laws of nature. Yet these
are the people who in the Nile Valley have become masters
of irrigation, unsurpassed even by the ancient Egyptians;
who, in the snow-wrapped forests of Hudson Bay, are
trappers and hunters unequalled by the Indians; who, in the
arid grasslands of Australia, pasture their herds like nomad
shepherd or American cowboy, and in the Tropics loll like
the natives; but somehow manage to do a white man's stint of
work.

In Japan, isolation has excluded or reduced to controllable
of the national development or invade the integrity of the

The case
national ideal. Japan has always borrowed freely from neighboring Asiatic countries and recently from the whole world; yet everything in Japan bears the stamp of the indigenous. The introduction of foreign culture into the Empire has been a process of selection and profound modification to accord with the national ideals and needs. 34 Buddhism, coming from the continent, was Japanized by being grafted on to the local stock of religious ideas, so that Japanese Buddhism is strongly differentiated from the continental forms of that religion. 35 The seventeenth century Catholicism of the Jesuits, before it was hospitably received, had to be adapted to Japanese standards of duty and ritual. Modern Japanese converts to Christianity wish themselves to conduct the local missions and teach a national version of the new faith. 36 But all the while, Japanese religion has experienced no real change of heart. The core of the national faith is the indigenous Shinto cult, which no later interloper has been permitted to dislodge or seriously to transform; and this has survived, wrapped in the national consciousness, wedded to the national patriotism, lifted above competition. Here is insular conservatism.

Japan's sudden and complete abandonment of a policy of seclusion which had been rigidly maintained for two hundred and fifty years, and her entrance upon a career of widespread intercourse synchronously with one of territorial expansion and extensive emigration, form one of those apparently irreconcilable contradictions constantly springing from the isolation and world-wide accessibility of an island environment; yet underlying Japan's present receptivity of new ideas and her outwardly indiscriminate adoption of western civilization is to be detected the deep primal stamp of the Japanese character, and an instinctive determination to preserve the core of that character intact.

It is this marked national individuality, developed by isolation and accompanied often by a precocious civilization, in combination with the opposite fact of the imminent possibility of an expansive unfolding, a brilliant efflorescence followed by a wide dispersal of its seeds of culture and of empire, which has assigned to islands in all times a great historical rôle. Rarely do these wholly originate the elements of civilization. For that their area is too small. But whatever seed ripen in the wide fields of the continents the islands transplant to their own forcing houses; there they transform and perfect the flower. Japan borrowed freely from China and Korea, as England did from continental Europe; but these two island realms have brought Asiatic and European civilization to their highest stage of development. Now the borrowers are making return with generous hand. The islands are reacting upon the continents. Japanese ideals are leavening the whole Orient from Manchuria to Ceylon. English civilization is the standard of Europe. "The Russian in his snows is aiming to be English," says Emerson. "England has inoculated all nations with her civilization, intelligence and tastes." 37

The recent discoveries in Crete show beyond doubt that Ancient Cretan civilization was in that island. Ancient Phoenicia, Argos, even Mycenae and Tiryns put off their mask of age and appear as rosy boys learning none too aptly of their great and elderly master. 38 Borrowing the seeds of culture from Asia and Egypt, 39 Crete nursed and tended them through the Neolithic and Bronze Age, transformed them completely; much as scientific tillage has converted the cotton tree into a low shrub. The precocity of this civilization is clear. As early as 3000 B. C. it included an impressive style of architecture and a decorative art naturalistic and beautiful in treatment as that of modern Japan. 40 From this time till the zenith of its development in 1450 B. C. Crete became a great artistic manufacturing and distributing center for stone carving, frescoes, pottery, delicate porcelain, metal work, and gems. 41 By 1800 B. C., seven centuries before Phoenician writing is heard of, the island had matured a linear script out of an earlier pictographic form. 42 This script, partly indigenous, partly borrowed from Libya and Egypt, gives Crete the distinction of having invented the first system of writing ever practised in Europe. 43

Yet all this wealth of achievement bore the stamp of the indigenous; nearly every trace of its remote Asiatic or Egyptian origin was obliterated. Here the isolation of an
ISLAND PEOPLES

island environment did thoroughly its work of differentiation, even on this thalassic isle, which maintained constant intercourse with Egypt, the Cyclades, the Troas, and the Greek peninsula." Minoan art has a freshness, vivacity, and modernity that distinguishes it fundamentally from the formal products of its neighbors. "Many of the favorite subjects, like the crocus and "wild goat, are native to the islands... Even where a motive was borrowed from Egyptian life, it was treated in a distinctive way," made tender, dramatic, vital. "In religion, as in art generally, Crete translated its loans into indigenous terms, and contributed as much as it received." The curator of Egyptian antiquities in the New-York Metropolitan Art Museum examined five hundred illustrations of second and third millennium antiquities from Gournia and Vasiliki in Crete, made by Mrs. Harriet Boyd Hawes during her superintendence of the excavations there, and pronounced them distinctly un-Egyptian, except one vase, probably an importation. All this was achieved by a small insular segment of the Mediterranean race, in their Neolithic and Bronze Age, before the advent of those northern conquerors who brought in an Aryan speech and the gift of iron. It was in Crete, therefore, that Aegean civilization arose. On this island it had a long and brilliant pre-Hellenic career, and thence it spread to the Greek mainland and other Aegean shores.

A small cup soon overflows. Islands may not keep; they are forced to give, live by giving. Here lies their historical significance. They dispense their gifts of culture by levying upon the resources of other lands. But finally more often than not, the limitation of too small a home area steps in to arrest the national development, which then fades and decays. To this rule Great Britain and Japan are notable exceptions, owing partly to the unusual size of their insular territory, partly to a highly advantageous location. Minoan Crete, in that gray antiquity when Homeric history was still unborn, gave out of its abundance in art, government, laws and maritime knowledge to the eastern Mediterranean world, till the springs of inspiration in its own small land were exhausted, and its small population was unable to resist the flood of northern invasion. Then the dispenser of gifts had to become an ainsa-taker from the younger, larger, more resourceful Hellenic world.

The same story of early but short lived preeminence comes from other Aegean islands. Before the rise of Athens, Samos under the great despot Polycrates became "the first of all cities, Hellenic or barbaric," a center of Ionian manners, luxury, art, science and culture, the seat of the first great thalassocracy or sea-power after that of Cretan Minos, a distributing point for commerce and colonies. Much the same history and distinction attached to the island of Rhodes long before the First Olympiad, and to the little island of Aegina. If we turn to the native races of America, we find that the Haida Indians of the Queen Charlotte Archipelago are markedly superior to their Tlingit and Tsimshian kinmen of the nearby Alaskan and British Columbian coast. In their many and varied arts they have freely borrowed from their neighbors; but they have developed these loans with such marvelous skill and independence that they greatly surpass their early masters, and are accredited with possessing the creative genius of all this coast. Far away, on the remote southeastern outskirts of the island world of the Pacific, a parallel is presented by little Easter Isle. Once it was densely populated and completely tilled by a people who had achieved singular progress in agriculture, religion, masonry, sculpture in stone and wood carving, even with obsidian tools, and who alone of all the Polynesians had devised a form of hieroglyphical writing. Easter Isle to-day shows only abandoned fields, the silent monuments of its huge stone idols, and the shrunken remnant of a deteriorated people.

Isolation and accessibility are recorded in the ethnic stock of every island. Like its flora and fauna, its aboriginal population shows an affinity to that of the nearest mainland, and this generally in proportion to geographical proximity. The long line of deposit islands, built of the off-scourings of the land, and fringing the German and Netherlands coast from Texel to Wangeroog, is inhabited by the same Frisian folk which occupies the nearby shore. The
people of the Channel Isles, though long subject to England, belong to the Franco-Gallic stock and the langue d'oil linguistic family of northern France. The native Canary Islanders, though giving no evidence of previous communication with any continental land at the time of their discovery, could be traced, through their physical features, speech, customs and utensils, to a remote origin in Egypt and the Berber regions of North Africa prior to the Mohammedan conquest. Sakhulin harbors to-day, besides the immigrant Russians, five different peoples—Ainos, Gilyaks, Orochons, Tungus, and Yakuts, all of them offshoots of tribes now or formerly found on the Siberian mainland a few miles away.

Where the isolation of the island is more pronounced, owing either to a broader and more dangerous channel, as in the case of Madagascar and Formosa, or to the nautical incapacity of the neighboring coast-peoples, as in the case of Tasmania and the Canary Islands, the ethnic influence of the mainland is weak, and the ethnic divergence of the insular population therefore more marked, even to the point of total difference in race. But this is generally a case of survival of a primitive stock in the protection of an unattractive island offering to a superior people few allurements to conquest, as illustrated by the ethnic history of the Andaman and Kurile Isles.

The sea forms the sharpest and broadest boundary; it makes in the island which it surrounds the conditions for differentia
tion. Thus while an insular population is allied in race and civilization to that of the nearest continent, it nevertheless differs from the same more than the several sub-groups of its continental kindred differ from each other. In other words, isolation makes ethnic and cultural divergence more marked on islands than on continents. The English people, despite their close kinship and constant communication with the Teutonic peoples of the European mainland, deviate from them more than any of these Germanic nations deviate from each other. The Celts of Great Britain and Ireland are sharply distinguished from the whole body of continental Celts in physical features, temperament, and cultural development. In Ireland the primitive Catholic Church underwent a distinctive development. It was closely bound up in the tribal organization of the Irish people, lacked the system, order and magnificence of the Latinized Church, had its peculiar tonsure for monks, and its own date for celebrating Easter for nearly three hundred years after the coming of St. Patrick. The Japanese, in their physical and mental characteristics, as in their whole national spirit, are more strikingly differentiated from the Chinese than the agricultural Chinese from the nomadic Burial shepherds living east of Lake Baikal, though Chinese and Japanese are located much nearer together and are in the same stage of civilization. The Eskimo, who form one of the most homogeneous stocks, and display the greatest uniformity in language and cultural achievements of all the native American groups, have only one differentiated offshoot, the Aleutian Islanders. These, under the protection and isolation of their insular habitat from a very remote period, have developed to a greater extent than their Eskimo brethren of the mainland. The difference is evident in their language, religious ceremonies, and in details of their handicraft, such as embroidery and grass-fiber weaving. The Haidas of the Queen Charlotte Archipelago show such a divergence in physique and culture from the related tribes of the mainland, that they have been accredited with a distinct origin from the other coast Indians.

The differentiating influence is conspicuous in the speech of island people, which tends to form a distinct language or dialect or, in an archipelago, a group of dialects. The Channel Isles, along with their distinctive breeds of cattle, has each its own variant of the langue d'oil. According to Bocaccio's narrative of a Portuguese voyage to the Canaries in 1451, the natives of one island could not understand those from another, so different were their languages. The statement was repeated by a later authority in 1455 in regard to the inhabitants of Lancrote, Fuerlventura, Gomera and Ferro, who had then been Christianized. A partial explanation is supplied by the earlier visitors, who found the Canary Guanches with no means of communication between the several islands except by swimming. In the Visayan group
of the Philippines, inhabited exclusively by the civilized Visayan tribes except for the Negritos in the mountainous interior, the people of Cebu can not understand their brethren in the adjacent islands; in Cuyos and Calamianes, dialects of the Visayan are spoken. [See map page 147.]

The differentiation of language from the nearby continental speech may be due to a higher development, especially on large islands affording very advantageous conditions, such as Great Britain and Japan. Japanese speech has some affinity with the great Altaic linguistic family, but no close resemblance to any sub-group. It presents marked contrasts to the Chinese because it has passed beyond the agglutinative stage of development; just as English has sloughed off more of its inflectional forms than the continental Teutonic languages.

More often the difference is due to the survival of archaic forms of speech. This is especially the case on very small or remote islands, whose limited area or extreme isolation or both factors in conjunction present conditions for retardation. The speech of the Sardinians has a strong resemblance to the ancient Latin, retains many inflectional forms now obsolete in the continental Romance languages; but it has also been enlivened by an infusion of Catalan words, which came in by the bridge of the Balearic Islands during the centuries of Spanish rule in Sardinia. Again, it is in Minorca and Majorca that this Catalan speech is found in its greatest purity to-day. On its native soil in eastern Spain, especially in Barcelona, it is gradually succumbing to the official Castilian, and probably in a few centuries will be found surviving only in the protected environment of the Balearic Isles. Icelandic and the kindred dialects of the Shetland and Faroe Islands had their origin in the classic Norse of the ninth century, and are divergent forms of the speech of the Viking explorers. The old Frisian tongue of Holland, sister speech to Anglo-Saxon, survives to-day only in West Friesland beyond the great marshlands, and in the long-drawn belt of coastal islands from Terschelling through Helgoland to Sylt, as also on the neighboring shores of Schleswig-Holstein. This region of linguistic survival, insulated partially by the marshes or completely by the shallow "Wattenmeer" of this lowland coast, reminds us of the protracted life of the archaic Lithuanian speech within a circle of sea and swamp in Baltic Russia, and the survival of the Celtic tongue in peninsular Brittany, Cornwall, Wales, in Ireland, and the Highlands and islands of Scotland.

Islanders are always coast dwellers with a limited hinterland. Hence, their stock may be differentiated from the mainland race in part for the same reason that all coastal folk in regions of maritime development are differentiated from the people of the back country, namely, because contact with the sea allows an intermittent influx of various foreign strains, which are gradually assimilated. This occasional ethnic intercrossing can be proved in greater or less degree of all island people. Here is accessibility operating against the underlying isolation of an island-habitat. The English to-day represent a mixture of Celts with various distinct Teutonic elements, which had already diverged from one another in their separate habitats—Jutes, Angles, Saxons, Danes, Norse and Norman French. The subsequent detachment of these immigrant stocks by the English Channel and North Sea from their home people, and their arrival in necessarily small bands enabled them to be readily assimilated, a process which was stimulated further by the rapid increase of population, the intimate interactive life and unification of culture which characterizes all restricted areas. Hence islands, like peninsulas, despite ethnic admixtures, tend to show a surprising unification of race; they hold their people aloof from others, and hold them in a close embrace, shut them off and shut them in, tend to force the amalgamation of race, culture and speech. Moreover, their relatively small area precludes effective segregation within their own borders, except where a mountainous or jungle district affords a temporary refuge for a displaced and antagonized tribe. Hence there arises a preponderance of the geographic over the ethnic and linguistic factors in the historical equation.

The uniformity in cranial type prevailing all over the British Isles is amazing; it is greater than in either Spain or Scandinavia. The cephalic indices range chiefly between
77 and 79, a restricted variation as compared with the ten points which represents the usual range for Central Europe, and the thirteen between the extremes of 75 and 88 found in France and Italy. Japau stands in much the same ethnic relation to Asia as Britain to Europe. She has absorbed Aino, Mongolian, Malay and perhaps Polynesian elements, but by reason of her isolation has been left free to digest these at her leisure, so that her population is fairly well assimilated, though evidences of the old mixture can be discerned. In Corsica and Sardinia a particularly low cephalic index, dropping in some communes to 73, and a particularly short stature point to a rare purity of the Mediterranean race, and indicate the maintenance here of one ethnic type, despite the intermittent intrusion of various less pure stocks from the Italian mainland, Africa, Phoenicia, Arabia, and Spain. The location of the islands off the main routes of the basin, their remoteness from shore, and the strong spirit of exclusiveness native to the people, bred doubtless from their isolation, have combined to reduce the amount of foreign intermixture.

...Islands do not necessarily derive their population from the land that lies nearest to them. A comparatively narrow strait may effectively isolate, if the opposite shore is inhabited by a natively inefficient race, whereas a wide stretch of ocean may fail to bar the immigration of a seafaring people. Here we find a parallel to the imperfect isolation of oceanic islands for life forms endowed with superior means of dispersal, such as marine birds, bats and insects. Iceland, though relatively near Greenland, was nevertheless peopled by far away Scandinavians. These bold sailors planted their settlements even in Greenland nearly two centuries before the Eskimo. England received the numerically dominant element of its population from across the wide expanse of the North Sea, from the barren but seal-breeding coasts of Germany, Denmark and Norway, rather than from the nearer shores of Gaul. So the Madeira and Cape Verde Isles had to wait for the coming of the nautical Portuguese to supply them with a population; and only later, owing to the demand for slave labor, did they draw upon the human stock of nearby Africa, but even then by means of Portuguese ships.

Owing to the power of navigation to bridge the intervening Double spaces of water and hence to emphasize the accessibility rather than the isolation of these outlying fragments of land, we often find islands facing two or three ways, as it were, tenanted on different sides by different races, and this regardless of the width of the intervening seas, where the remote neighbors excel in nautical skill. Formosa is divided between its wild Malay aborigines, found on the eastern, mountainous side of the island, and Chinese settlers who cultivate the wide alluvial plain on the western side. Fukien Strait, though only eighty miles wide, sufficed to bar Formosa to the land-loving northern Chinese till 1644, when the island became an asylum for refugees from the Manchu invaders; but long before, the wider stretches of sea to the south and north were mere passways for the sea-faring Malays, who were the first to people the island, and the Japanese who planted considerable colonies on its northern coasts at the beginning of the fifteenth century. [See map page 103.]

In a similar way Madagascar is divided between the Malayan Hovas, who occupy the eastern and central part of the island, and the African Sakalavas who border the western coast. [See map page 105.] This distribution of the ethnic elements corresponds to that of the insect life, which is more African on the western side and more Indo-Malayan on the eastern. Though the population shows every physical type between Negro and Malayan, and ethnic diversity still predominates over ethnic unity in this vast island, nevertheless the close intercourse of an island habitat has even in Madagascar produced unification of language. Malayan speech of an ancient form prevails everywhere, and though diversified into dialects, is everywhere so much alike that all Malagasystr can manage to understand one another. The first inhabitants were probably African; but the wide Mozambique Current (330 miles), with its strong southward flow, was a serious barrier to fresh accessions from the mainland, especially as the nautical development of the African tribes was always low. Meanwhile, however, successive relays of sea-bred Malay-
Polynesians crossed the broad stretch of the Indian Ocean, occupied the island, and finally predominated over the original Negro stock. Then in historic times came Arabs, Swahili, and East Indians to infuse an Asiatic element into the population of the coasts, while Portuguese, English, Dutch and French set up short-lived colonies on its shores. But despite this intermittent foreign immigration, the fundamental isolation of Madagascar, combined with its large area, enabled it to go its own slow historical gait, with a minimum of interference from outside, till France in 1895 began to assume control of the island.

Small thalassic islands, at an early date in their history, lose their ethnic unity and present a highly mixed population. The reasons for this are two. The early maritime development characterizing enclosed seas covers them with a network of marine routes, on which such islands serve as way stations and mid-sea markets for the surrounding shores. Sailors and traders, colonists and conquerors flock to them from every side. Such a nodal location on commercial routes insurs to islands a cosmopolitanism of race, as opposed to the ethnic differentiation and unity which follows an outlying or oceanic situation. Here the factor of many-sided accessibility predominates over isolation.

The prevailing small area of such thalassic islands, moreover, involves a population so small that it is highly susceptible to the effects of intercrossing. Too restricted to absorb the constant influx of foreign elements, the inhabitants tend to become a highly mixed, polyglot breed. This they continue, to be by the constant addition of foreign strains, so long as the islands remain foco of trade or strategic points for the control of the marine highways. Diomede Island in Bering Strait is the great market place of the polar tribes. Here Siberian Chukches and Alaskan Eskimos make their exchanges. The Eakimo of St. Lawrence Island in Bering Sea, from long intercourse, have adopted certain articles of dress, the boats and part of the vocabulary of the Chukches. Kilwa, located on a sand-bank at the eastern end of Ceram, on the border between Malayan and Papuan island districts, is the metropolis of native traders in the Far East. Here gather the prows of the sea-faring Bugis bringing manufactured goods from Singapore, and boats laden with the natural products of New Guinea. The smaller these island marts and the wider their circle of trade, the more mixed is their population. Thursday Isle, an English coaling-station in Torres Strait, is a port of call for all steamer bound from Europe or China for east Australian ports, besides being a center of a big local trade in pearl shell and tripping. Hence its population of 526 souls comprises 270 Europeans of various nationalities, including British, Germans, Scandinavians, Danes, Spaniards, Portuguese, French and Australians of European origin, besides 256 South Sea Islanders, Papuans, Africans, Filipinos, Chinese and other Asians.

Antiquity shows the same thing on a smaller scale, which grew, however, with the expansion of the circle of commerce. Ancient Aegina in the Saronic Gulf received inhabitants from Crete, Argos, Epidauros in eastern Argolis and Athens; it became a central maritime market and its people sea-traders, whose goods of a certain small kind became known as "Aegina wares." Delos at the crossroads of the Aegean was the center of longer radii. It became the inn for travelers and merchants sailing from Asia and Egypt to Italy and Greece, and hence drew to itself the trade and people of the whole Mediterranean basin. The northwestern Indian Ocean had a similar emporium in the ancient Dioscorides, (Sokotra) which focused on itself the trade between Arabia and eastern Africa. Ceylon's location made it in ancient and medieval times the common meeting place for Arab traders from the west and Chinese merchants from the east; it thus became the Sicily of the semi-enclosed North Indian Ocean. To-day its capital Colombo is "the Cinnamon Junction of the Eastern Seas," where passengers change steamer for China, India and Australia; a port of call for vessels passing from the Straits of Malacca to the Persian Gulf or Mediterranean. Hence Ceylon's solid nucleus of Singhalese and Tamil population, protected against absorption by the large area of the island (45,865 square miles) is interspersed in the coastal
districts with Arabs, Portuguese, Eurasians dating from the old Portuguese occupation, and some ten thousand Europeans. The island of Gotland, located at the crossroads of the Baltic, was early adopted by the Hanseatic merchants as their maritime base for the exploitation of Swedish, Finnish, and Russian trade. Here were "peoples of divers tongues," so the old chronicles say, while the archeological finds of Byzantine, Cufic, Roman, Anglo-Saxon and German coins testify to the wide circle of trade whose radii focused at this nodal point of the Baltic.

The great importance of such islands has been due solely to their location. Their size and resources are negligible quantities, but their natural position as way stations lent them preeminence so long as navigation held to short "laps," and was restricted to enclosed seas. In the wide expanse of the open ocean, similar sparsely scattered isles, like Ascension, St. Helena, the Canaries and Hawaii, assumed importance in proportion to their scarcity. Though nearer the centers of close intercourse like Delos and Gotland, those lying conspicuously in the track of commerce have succeeded in drawing to themselves the typical polyglot nodal population. Mauritius, located at the southwestern entrance of the Indian Ocean about equally distant from Aden, Ceylon, Bombay, Singapore and West Australia, and possessing the best harbor within many hundred miles, has been held successively by Dutch, French and English, and to-day has a dense population of French, English and Hindus. A situation at the northeast entrance to the Caribbean Sea, key-stone of the vast arch formed by the Greater and Lesser Antilles, made the island of St. Thomas a natural distributing point for this whole basin. Facing that much traveled Virgin Passage, and forming the first objective of vessels bound from Europe to Panama, it became a great ship rendezvous, and assumed strategic and commercial importance from early times. We find the same political owners here as in Mauritius and in the same order—Dutch, French and English, though in 1871 the island was occupied by the Danes, then from 1807 to 1815 by the English again, and finally secured by the Danes. The history of the Falkland Islands is a significant reflection of their location on the south oceanic trade route, where they command the entrance to the Magellan Straits and the passage round the Horn. Here on the outskirts of the world, where they form the only break in the wide blank surface of the South Atlantic, they have been coveted and held in turn by the chief European powers having colonies in the Orient,—by France, Spain, England, Spain again, England again, by Argentina in 1820, and finally by England since 1833. Their possession was of especial advantage to Great Britain, which had no other base in this part of the world intermediate between England and New Zealand.

Islands located in enclosed seas display the transitional character of border districts. They are outposts of the surrounding shores, and become therefore the first objective of every expanding movement, whether commercial or political, setting out from the adjacent coasts. Such islands are swept by successive waves of conquest or colonization, and they carry in their people and language evidences of the wreck left behind on their shores. This has been the history of Aegina, Cyprus, Rhodes, Crete, Malta, Corfu, Sicily and Sardinia. That of Cyprus is typical. It was the first island base for the ancient Tyrian fleets, and had its Phoenician settlements in 1045 B.C. From that time it was one of the many prizes in the Mediterranean grab-bag for the surrounding nations. After the decline of Tyre, it was occupied by Greeks, then passed in turn to Assyrians, Egyptians, Persians, Romans, Saracens, Byzantines, and in 1191 was seized by the Crusaders. Later it fell to Egypt again; but in 1878 was taken by Genoa, in 1468 by Venice, in 1571 by the Turks, and finally in 1878 was consigned to England. All these successive occupants have left their mark upon its people, speech, culture and architecture. In the same way Sicily, located at the waist of the Mediterranean, has received the imprint of Greeks, Carthaginians, Romans, Saracens, Normans, Spaniards and Italians. Its architectural remains bear the stamp of these successive occupants in every degree of purity and blending. The Sicilians of to-day are a mixture of all these intrusive stocks and speak a form of Italian corrupted by the infusion of Arabic words. In 1071 when
the Normans laid siege to Palermo, five languages were spoken on the island,—Greek, Latin, Hebrew, Arabic and vulgar Sicilian, evidence enough that it was the meeting ground of the nations of Europe, Asia and North Africa. Polyglot Malta to-day tells the same story of successive conquests, the same shuttlecock history. Almost every language of Europe is spoken here; but the native Maltese speech is a corrupt form of Arabic mixed with modern Italian and ancient Phoenician words. The whole island is ethnographically a border hybrid of Europe and North Africa. The Channel Isles are to-day the only spot in Europe where French and English survive side by side as official and commercial languages. French and Italian meet on equal terms in Corsica. Chinese, Japanese and Malays have traded and warred and treated on the debatable land of Formosa. The Am, Ke, and other small archipelagoes of the Banda Sea link together the pure Malay and the pure Papuan districts, between which they lie.

From the border character of many islands there follow often far-reaching historical effects. Like all border regions they are natural battlegrounds. Their historical episodes are small, often slow and insidious in their movement, but large in their final content; for they are prone to end in a sudden dramatic dénouement that draws the startled gaze of all the neighboring world. It was the destiny of Sicily to make and unmake the fortunes of ancient Carthage. Ceylon, from the dawn of history, bred traders who enriched and conquered who oppressed peninsular India. The advance of Spain to the Canary Isles was the drowsy prelude to the brilliant drama of American discovery. The island of Tsushima in the Korean Strait was seized by the forces of Kublai Khan in 1280 as the base of their attack upon Japan; and when in 1857 the Russian bear tried to plant a foot on this island, Japan saw danger in the movement and ordered him off. Now we find Japan newly established in Sakhalin, the Elliot Islands and Formosa, by means of which and her own archipelago she blankets the coast of Asia for twenty-two hundred miles. This geographical situation may be productive of history.

Islands are detached areas physically and readily detached politically. Though insularity gives them some measure of protection, their relatively small size and consequently small populations make them easy victims for a conquering sea power, and easy to hold in subjection. The security of an island habitat against aggression therefore, increases with its size, its efficiency in naval warfare, and its degree of isolation, the last of which factors depends in turn upon its location asthalassic or oceanic. Islands of enclosed seas, necessarily small and never far from the close encircling lands, are engulfed by every tide of conquest emanating from the nearby shores. Oosel and Dago have been held in succession by every Baltic power, by the Teutonic Orders, Denmark, Sweden and Russia. Gotland has acknowledged allegiance to the Hanseatic League, to Denmark and Sweden. Sardinia, occupying the center of the western Mediterranean, has figured in a varied series of political combinations,—with ancient Carthage, Rome, the Saracens of North Africa, with Sicily, Fissa, Aragon, Piedmont, and finally now with united Italy. To the land-bred Teutonic hordes which swept over western Europe in the early centuries of our era, a narrow strip of sea was some protection for Sicily, Corsica, Sardinia, Malta and the Balearic Isles. Hence we find these islands slow in succumbing to their non-maritime conquerors, and readily regained by the energetic Justinian. Later they fell victim to the sea-wise Saracens, but again gravitated back to their closer and more natural European connections.

More often the small area of an island facilitates its retention in bondage, when the large and less isolated continental districts have thrown off an unwelcome yoke. Athens, with her strong navy, found it an easy task to whip back into the ranks of the Delian Confederacy her rebellious island subjects like Naxos, Samos and Thasos; but her mutinous cities in peninsular Chalcidice and isthmian Megara, incited to revolt and aided by their neighbors, were less at her mercy. This principle was recognized by Thucydides, and taken advantage of by the Lacedemonians during the great war for Spartan supremacy. England has been able to hold Ireland in a vice. Of all her former French territory, she retains only the Channel Isles. Cuba and Porto Rico
remained in the crushing grasp of Spain sixty-four years after Mexico and the continental states of Central and South America, by mutual help and encouragement, had secured independence. The islands found that the isolation which confines protection from outside aggression meant for them detachment from friendly sources of succor on the mainland. The desultory help of filibuster expeditions, easily checked at the port of departure or landing, availed little to supplement the inadequate forces of rebellion peeping up on their relatively small areas. By contrast, Mexico's larger area and population, continually stirred by American example and encouragement, reinforced by American volunteers and even by United States army officers, found revolt from 1812 to 1824 a comparatively easy task.

Cuba suffered from its geographic aloofness. So did little Crete, which submitted to Turkish oppression sixty years after the continental Greeks had made good their claim to freedom. Nor was this the first time that Cretan liberty had suffered from the detachment of an island environment. Aristotle recognized the principle when he wrote: "The people of Crete have hitherto submitted to the rule of the leading families as Comosi, because the insular situation of Crete cuts off the interference of strangers or foreigners which might stir up rebellion against the unjust or partial government." And then he adds that this insular exclusion of outside influence long rendered the fidelity of the Perioeci or servile-like peasants of Crete a striking contrast to the unhappy spirit of the Spartan Helots, who were constantly stirred to revolt by the free farmers of Argos, Messinia, and Arcadia. Thus ancient like modern Crete missed those beneficial stimuli which penetrate a land frontier, but are cut off by the absolute boundary of the sea.

Island fragments of broken empires are found everywhere. They figure conspicuously in that scattered location indicative of declining power. Little St. Pierre and Miquelon are the last geographical evidences of France's former dominion in Canada. The English Bermudas and Bahamas point back to the time when Great Britain held the long-drawn opposite coast. The British, French, Dutch, as once
monotonous political history of outlying islands like the Shetland, Faroes, Iceland, Canaries, Madeira, Cape Verde, Azores, St. Helena, Ascension and Hawaii. The Norse colony of Iceland, as a republic, maintained loose connections with its mother country from 874 to 1064; then for nearly six centuries it followed the political fate of Norway till 1814, when an oversight left it in the hands of Denmark on the dissolution of the union of Denmark and Norway. The Azores have known no history except that which came to them from Portugal; even their discovery goes back to a Saracen navigator who, in 1147, sailed from the mouth of the Tagus a thousand miles straight into the sunset. For two hundred years thereafter extreme isolation kept them outside the pale of history till their rediscovery by Prince Henry, the Navigator.

Land-masses, as we have found, are independent by location or independent by size. Large islands, especially where they occupy an outskirt location, may long succeed in maintaining an independent national existence; but to render this permanent, they must supplement their area by the acquisition of continental lands, according to the law of increasing territorial aggregates. Great Britain and Japan, though ethnically and culturally appendages of the nearby mainland, were large enough, aided by the dividing seas, to maintain political autonomy. They absorbed all the insular fragments lying about them to extend their areas, and then each in turn entered upon a career of continental expansion. To Japan this movement as a determined policy came late, only when she faced the alternative of absorbing territory or being absorbed by all-devouring Russia. The isolation of Madagascar resulted in only slight community of race with Africa, and combined with large area, has kept the island to a great extent distinct from the political history of Africa. The impulses which swept the eastern coast of the continent reached the outlying island with abated force. Arab, Portuguese, Dutch and English only scratched its rim. The character of its western coast of its vigorous Malayan population, and of the intervening Mozambique Current rendered conquest difficult from the African shore.

Its large size, with the promise of abundant resources, offered a bait to conquest; yet put a barrier in its way. Hence we find that not till 1895, when the partition of continental Africa was almost accomplished, did the French conquest of Madagascar occur.

By contrast, the closely grouped East Indies, long coveted for their tropical products, suffered a contagion of conquest. The large size of these islands, so far from granting them immunity, only enabled the epidemic of Portuguese and Dutch dominion to pass from one to the other more readily, and that even when the spice and pepper trade languished from a plethora of products. But even here the size of the islands, plus the sub-equatorial climate which bars genuine white colonization, has restricted the effective political dominion of Europeans to the coasts, and thus favored the survival of the natives undisturbed in the interior, with all their primitive institutions. The largest islands, like Borneo and Sumatra, have vast inland tracts still unexplored and devoted to savagery, thus illustrating the contrast between center and periphery. When Australia, the largest of all the Pacific island group, became an object of European expansion, its temperate and sub-tropical location adapted it for white colonization, and the easy task of conquering its weak and retarded native tribes encouraged its appropriation; but the natural autonomy which belongs to large area and detached location asserted itself in the history of British Australia. The island continent is now erected into a confederation of states, enjoying virtual independence.

In New Zealand, we find the recent colonists taking advantage of their isolation to work out undisturbed certain unique social theories. Here, against a background of arrested aboriginal development, another race evinces a radical spirit of progress; and to these contrasted results equally the detached island environment has contributed its share.

The historical development of island peoples bears always in greater or less degree the stamp of isolation; but this isolation may lead to opposite cultural results. It may mean in one case retardation, in another accelerated development. Its geographical advantages are distinctly
opportunity for universal contact over the vast commons of the sea.

Excessive isolation may mean impoverishment in pursuance of progress even for an advanced race. Ireland has long suffered from its outskirt location. It lies too much in the shadow of England, and has been barred by the larger island from many warming rays of immigration, culture and commerce that would have vitalized its national existence. The "round barrow" men of the Bronze Age, the Romans, and the Normans never carried thither their respective contributions to civilization. The Scandinavians infused into its population only insignificant strains of their vigorous northern blood. In consequence the Irish are today substantially the same race as in Cesar's time, except for the small, unassimilated group of antagonistic English and Lowland Scotch, both Teutonic, in Ulster.* Barred by Great Britain from direct contact with the Continent and all its stimulating influences, suffering from unfavorable conditions of climate and topography, Ireland's political evolution progressed at a snail's pace. It tarried in the tribal stage till after the English conquest, presenting a primitive social organization such as existed nowhere in continental Europe. Property was communal till the time of the Tudors, and all law was customary. Over-protected by excessive isolation, it failed to learn the salutary lesson of political co-operation and centralization for defense, such as Scotland learned from England's aggressions, and England from her close continental neighbors. Great Britain, meanwhile, intercepted the best that the Continent had to give, both blows and blessings, and found an advantage in each. The steady prosecution of her continental wars demanded the gradual erection of a standing army, which weakened the power of feudalism; and the voting of funds for the conduct of these same wars put a whip into the hand of Parliament.

The history of Iceland illustrates the advantage and subsequently the drawback of isolation. The energetic spirits who, at the end of the ninth century, resisted the centralization of political power in Norway and escaped from the turmoil and oppression of the home country to the remote
asylum offered by Iceland, maintained there till 1262 the only absolutely free republic in the world. They had brought with them various seeds of culture and progress, which grew and flowered richly in this peaceful soil. Iceland became the center of brilliant maritime and colonial achievements, the home of a native literature which surpassed that of all its contemporaries except Dante's Italy. But after the decay of the Greenland colonies converted Iceland from a focal into a remote terminal point, and after the progress of the world became based upon complex and far-reaching commercial relations, the blight of extreme isolation settled upon the island: peace became stagnation.

The concomitant of isolation is protection. Though this protection, if the result of extreme isolation, may mean an early cessation of development, history shows that in the lower stages of civilization, when the social organism is small and weak, and its germs of progress easily blighted, islands offer the sheltered environment in which imported flowers of culture not only survive but improve; in less protected fields they deteriorate or disappear. When learning and Christianity had been almost wiped out on the continent of Europe by the ravages of barbarian invasion between 450 and 800 A.D., in Ireland they grew and flourished. In the seventh and eighth centuries, the high scholarship of the Irish monks and their enthusiastic love of learning for its own sake drew to their schools students of the noblest rank from both England and France. It was from Irish teachers that the Picts of Scotland and the Angles of northern England received their first lessons in Christianity. These fixed their mission stations again on islands, on Iona off southwestern Scotland and on Lindisfarne or Holy Isle near the east coast of Northumbria. It was in the protected environment of the medieval Iceland that Scandinavian literature reached its highest development.

Insular protection was undoubtedly a factor in the brilliant cultural development of Crete. The progress of the early civilization from the late Stone Age through the Bronze Age was continuous; it bears no trace of any strong outside influence or sudden transition, no evidence of disturbance like an invasion or conquest by an alien people till 1800 B.C. when the latest stage of Minosian art was crushed by barbarian incursion from the north.

The early history of the Singhalese monarchy in Ceylon from 250 B.C. to 416 A.D., when even the narrowmost of Palk Strait discouraged Tamil invasions from the mainland, shows the brilliant development possible under even a slight degree of protection. However, in the case of these Ceylon Aryans, as in that of the Icelandic Norse, we must keep in mind the fact that the bearers of this culture were picked men, as are early maritime colonists the world over. The sea selects and then protects its island folk. But the seclusion of Ceylon was more favorable to progress than the mainland of India, with its incessant political and religious upheavals. Japan, in contrast to China's long list of invasions, shows the peace of an insular location. She never suffered any overwhelming influx of alien races or any foreign conquest. The armada sent by Kublai Khan in 1281 to subdue the islands paralleled the experience of the famous Spanish fleet three centuries later in English waters. This is the only attempt to invade Japan that recorded history shows. In the original peopling of the island by Mongolian stock at the cost of the Aino aborigines, there is evidence of two distinct and perhaps widely separated immigrations from the mainland, one from Korea and another from more northern Asia. Thus Japan's population contained two continental elements, which seem to have held themselves in the relation of governing and governed class, much as Norman and Saxon did in England, while the Ainos lingered in the geographical background of mountain fastness and outlying islands, as the primitive Celts did in the British Isles. In the case both of England and Japan, the island location made the occupation by continental races a fitful, piecemeal process, not an inundation, because only small parties could land from time to time. The result was gradual or partial amalgamation of the various stocks, but nowhere annihilation.

But island location was not the sole factor in the equation. Similarity of race and relative parity of civilization between the successive immigrants and the original population, as so factor.
found an asylum on the Pribilof Islands of Bering Sea, where their concentration and isolation have enabled them to become wards of the United States government, though this result they did not foresee. The last Rhyta or Arctic sea-cow was found on an island in Bering Strait.\textsuperscript{9} So the Veneti of Northern Italy in the fifth century sought an asylum from the desolating Huns and, a century later, from the Lombards, in the desolate islands at the head of the Adriatic, and there found the geographic conditions for a brilliant commercial and cultural development. Formosa got its first contingent of Chinese settlers in the thirteenth century in refugees seeking a place of safety from Kublai Khan's armies; and its second in 1644 in a Chinese chief and his followers who had refused to submit to the victorious Manchus.\textsuperscript{10} In 1637 Formosa was an asylum also for Japanese Christians, who escaped thither from the persecutions attending the discovery of Jesuit conspiracies against the government.\textsuperscript{11} The Azores, soon after their rediscovery in 1431, were colonized largely by Flemish refugees,\textsuperscript{12} just as Iceland was peopled by rebellious Norwegians. To such voluntary exiles the dividing sea gives a peculiar sense of security, this by a psychological law. Hence England—owing to its insular location, and also to its free government, has always been an asylum for the oppressed. The large body of Huguenot refugees who sought her shores after the revocation of the Edict of Nantes added a valuable element to her population.

Islands find their populations enriched by the immigration of this select class who refuse to acquiesce in oppression and injustice. But the geographic conditions which make islands natural asylums make them also obvious places of detention for undesirable members of society; these conditions render segregation complete, escape difficult or impossible, and control easy. Hence we find that almost all the nations of the world owning islands have utilized them as penal stations. From the gray dawn of history the Isles of the Blessed have been balanced by the isles of the cursed. The radiant Garden of Hesperides has found its antithesis in the black hell of Norfolk Isle, peopled by the "doubly condemned" criminals whom not even the depraved convict citizens of
Botany Bay could tolerate. There is scarcely an island of the Mediterranean without this sinister vein in its history. The archipelagoes of the ancient Aegean were constantly receiving political exiles from continental Greece. Augustus Caesar confined his degenerate daughter Julia, the wife of Tiberius, on the island of Pandateria, one of the Ponza group; and banished her paramour, Sempronius Gracchus, to Cereria in the Syrtis Minor off the African coast. Other Roman matrons of high degree but low morals and corrupt officials were exiled to Corsica, Sardinia, Sicily, Amorgos and other of the Cyclades. To-day Italy has prisons or penal stations in Ischia, the Ponza group, Procida, Nisida, Elba, Pantelleria, Lampedusa, Ustica, and especially in the Lipari Isles, where the convicts are employed in mining sulphur, alum and pumice from the volcanic cones.

In modern times many remote oceanic islands have gotten their first or only white settlers from this criminal class. Such are the citizens whom Chile has sent to Easter Island twenty-five hundred miles away out in the Pacific. The inhabitants of Fernando Noronha, 125 miles off the eastern point of South America, are convicts from Brazil, together with the warders and troops who guard them. In 1898 Ecuador began to use the uninhabited Galapagos Islands, lying 700 miles west of its coast, as a penal settlement. The history of St. Helena is typical. Its first inhabitants were some Portuguese deserters who in punishment were marooned here from a Portuguese ship with a supply of seed and cattle. They proved industrious and had cultivated a good deal of the land when four years later they were removed to Portugal. The next inhabitants were a few slaves of both sexes who escaped from a slave ship that had stopped here for wood and water. These multiplied, worked and restored the overgrown plantations of their predecessors, till a Portuguese vessel about twenty years later was sent to exterminate them. A few escaped to the woods, however, and were found there in prosperity in 1888. From 1815 till 1821 St. Helena was the prison of Napoleon.

Many of these penal islands seem chosen with a view to their severe or unhealthy climate, which would forever repel free immigration and therefore render them useless for any other purpose. This is true of the French Isles du Salut off the Guiana coast, of Spanish Fernando Po in the Gulf of Guinea, of the Andaman and Nicobar Islands, notoriously unhealthy, which receive the criminals of British India, and of numerous others. A bleak climate and unproductive soil have added to the horror of exile life in Sakhalin, as they overshadowed existence in the Falkland Islands, when these were a penal colony of Spain and later of Argentina.

In the case of political offenders and incorrigibles, the island prison is as remote and inaccessible as possible. The classic example is Napoleon's confinement to Elba and subsequently to St. Helena, whence escape was impossible. Spain has sent its rebellious subjects, even university professors of independent views, to Fernando Po in the Gulf of Guinea and Tenerife in the Canaries. Russian political offenders of the most dangerous class are confined first in the Schléssberg prison, situated on a small island in Lake Ladoga near the mouth of the Neva. There they languish in solitary confinement or are transferred to far-off Sakhalin, whose very name is taboo in St. Petersburg. During our Civil War, one of the Dry Tortugas, lying a hundred miles west of the southern point of Florida and at that time the most isolated island belonging to the American government, was used as a prison for dangerous Confederates; and here later three conspirators in the assassination of President Lincoln were incarcerated. Far away to the southeast, off the coast of South America, are the Isles du Salut, a French penal station for criminals of the worst class. The Isle du Diable, ominous of name, lies farthest out to sea. This was for five years the prison of Dreyfus. Its other inhabitants are lepers. Isles of the cursed indeed!

What islands have they tend to hold, to segregate, to secrete from meddling hands, preserve untouched and unaltered. Owing to this power to protect, islands show a large percentage of rare archaic forms of animal and plant life. The insular fauna of Australia, Tasmania, New Guinea and Madagascar display a succession of strange, ancestral forms going back to the biological infancy of the world.
Canaries in the Atlantic and Celebes in the Pacific are museums of living antiquities, some of them dating probably from Miocene times. Such survivals are found elsewhere only in high mountains, whose inaccessible slopes also offer protection against excessive competition. Hence some of the antiquated species of insular Celebes, Formosa, Japan and Hainan occur again on the Asiatic mainland only in the Himalayas. For man, too, islands and their sister areas of isolation, mountains, are areas of survivals. The shrinking remnants of that half-dwarf Negrito stock which may have formed the aboriginal population of southern Asia are found to-day only in the mountains of peninsular India and in island groups like the Andaman and the Philippines. But even in the Philippines, they are confined either to the mountainous interiors of the larger islands, or to little coastal islets like Polillo, Alabat, Jomalig, and others. [See map page 147.] Yero, Sakhalin and the Kurile Isles harbor the last feeble remnants of the Ainu, a primitive people who formerly occupied a long stretch of the Asiatic coast south of the Amur mouth. The protected environment of these islands has postponed the doom of extinction toward which the Ainu are hastening. With insular conservatism they dress, live and seek their food on the sea to-day, just as depicted in Japanese art and literature at the dawn of history. [See map page 103.]

It is chiefly on islands of harsh climatic conditions, like Sakhalin, or of peculiarly restricted resources and area, like the Andaman, or of remote, side-tracked location, like Iceland, Sardinia and Cape Breton, that the stamp of the primitive or antiquated is strongest. Even when not apparent in race stock, owing to the ubiquitous colonization of maritime peoples, it marks the language and customs of even these late-coming occupants, because an island environment asserts always some power to isolate. This is due not only to the encircling moat of sea, but also to the restricted insular area, too small to attract to itself the great currents of human activity which infuse cosmopolitan ideas and innovations, and too poor to buy the material improvements which progress offers. If the tourist in Sicily finds the women of Thornina or Girgenti spinning with a hand spindle, and the express trains moving only twelve miles an hour, he can take these two facts as the product of a small, detached area, although this island lies at the crossroads of the Mediterranean. Corsica and Sardinia, lying off the main routes of travel in this basin, are two of the most primitive and isolated spots of Europe. Here the old wooden plow of Roman days is still in common use as it is in Crete, and feudal institutions of the Middle Ages still prevail to some extent, a fact which recalls the long survival of feudalism in Japan. The little Isle of Man, almost in sight of the English coast, has retained an old Norse form of government. Here survives the primitive custom of orally proclaiming every new law from the Tynwald Hill before it can take effect, and the other ancient usage of holding the court of justice on the same hill under the open sky. The Faroe Islands and Iceland are museums of Norse antiquities. The stamp of isolation and therefore conservatism is most marked in the remoter, northern islands. Surnames are rare in Iceland, and such as exist are mostly of foreign origin. In their place, Christian names follow by the patronymic prevail; but in the Faroes, these patronyms have in a great many cases become recognized as surnames. So again, while the Faroese women still use a rude, spinning-wheel introduced from Scotland in 1671, in Iceland this spinning-wheel was still an innovation in 1800, and even to-day competes with spindles. Hand-quirns for grinding wheat, stone hammers for pounding fish and roots, the wooden weighing-beam of the ancient Northmen, and quaint marriage customs give the final touch of aloofness and antiquity to life on these remote islands.

As all island life bears more or less the mark of isolation, effects of so it betrays the narrow area that has served as its base. Though islands show a wide variation in size from the 301,000 square miles (771,900 square kilometers) of New Guinea or the 291,000 square miles (745,650 square kilometers) of Borneo to the private estates like the Scilly Isles, Gardiner and Shelter islands off Long Island, or those small, sea-fenced pastures for sheep and goats near the New England coast
and in the Aegean, yet small islands predominate; the large ones are very few. Islands comprise a scant seven per cent. of the total land area of the earth, and their number is very great,—nine hundred, for instance, in the Philippine group alone. Therefore small area is a conspicuous feature of islands generally. It produces in island people all those effects which are characteristic of small, naturally defined areas, especially early or precocious social, political and cultural development. The value of islands in this respect belongs to the youth of the world, as seen in the ancient Mediterranean, or in the adolescence of modern primitive races; it declines as the limitations rather than the advantages of restricted territory preponderate in later historical development.

This early maturity, combined with the power to expend the concentrated national or tribal forces in any given direction, often results in the domination of a very small island over a large group. In the Society Islands, Cook found little Balaobals ruling over Ulietca (Huahine) and Otahe, the former of these alone being twice the size of Balaobals, whose name commanded respect as far as Tahiti. The Fiji Archipelago was ruled in pre-Christian days by the little islet of Mbaus, scarcely a mile long, which lies like a pebble beside massive Vit. Levu. It was the chief center of political power and its supremacy was owned by nearly all the group. The next important political center was Rewa, no larger than Mbaus, which had for its subject big Meninga. In the same way, the Solomon group was ruled by Mongusia and Simbo, just as tiny New Laubeng lorded it over the larger islands of the Bismarck Archipelago. When the Dutch in 1618 undertook the conquest of the coveted Spice Isles, they found there two rival sultans seated in the two minute islets of Ternate and Tidore off the west coast of Giolo. Their collective possessions, which the Dutch took, comprised all the Moluccas, the Ke and Banda groups, the whole of northeastern New Guinea, and Mindanao of the Philippines.

It was no unusual thing for classic Aegean isles to control and exploit goodly stretches of the nearest coast, or to exercise dominion over other islands. Aristotle tells us that Crete's location across the southern end of the Aegean Sea confirmed it by nature the early naval empire of the Hellenic world. Minos conquered some of the islands, colonized others, and, according to the story of Theseus and the Minotaur, laid Athens under tribute; but his suppression of piracy in these waters and his conspicuous leadership in the art of navigation point to a yet more significant supremacy. So insular Venice ruled and exploited large dependencies. The island of Zealand, strategically located at the entrance to the Baltic, has been the heart and head and strong right arm of the Danish dominion, through all its long history of fluctuating boundaries. England's insularity has been the strongest single factor in the growth of her vast colonial empire and in the maintenance of its loyal allegiance and solidarity. The widely strung plantation of her colonies is the result of that teeming island seed-bed at home; while the very smallness of the mother country is the guarantee of its supremacy over its dependencies, because it is too small either to oppress them or to get along without them. Now an Asiatic variant of English history is promised us by growing Japan.

Though political supremacy is possible even to an island of insignificant size, both the advantages and the grave disadvantages of small area are constantly asserting themselves. Some developments peculiar to large territory are here eliminated at the start. For instance, robbery and brigandage, which were so long a scourge in peninsular Greece, were unheard of on the small Aegean islands. Sheep-raising was at an early date safer in England than on the Continent, because wolves were earlier exterminated there. Biogeography shows an increasing impoverishment in the flora and fauna of small islands with distance from the mainland. In the Pacific Ocean, this progressive impoverishment from west to east has had great influence upon human life in the islands. In Polynesia, therefore, all influences of the chase and of pastoral life are wanting, while in Melanesia, with its larger islands and larger number of land animals, hunting still plays an important part, and is the chief source of subsistence for many New Guinea villages. Therefore a corresponding decay of projectile weapons is to be traced west to east,
and is conspicuous in those crumbs of land constituting Polynesia and Micronesia. The limit of the bow and arrow includes the northeastern portion of the Philippine group, cuts through the Malay Archipelago, so as to include the Moluccas and Flores, includes Melanesia as far as Tonga or the Friendly Isles, but excludes Micronesia, Polynesia and Australia. Even in Melanesia, however, bows and arrows are not universal; they are lacking in peripheral islands like New Caledonia and New Ireland. The restriction of trees, also, with the exception of the coco-palm and pandanus, has had its effect upon boat making. This general impoverishment is unmistakably reflected in the whole civilization of the smaller islands of Polynesia and Micronesia, especially in the Paumotu and Pekew groups. In the countless coraline islands which strew the Pacific, another restricting factor is found in their monotonous geological formation. Owing to the lack of hard stone, especially of flint, native utensils and weapons have to be fashioned out of wood, bones, shells, and sharks' teeth.

Nor does the geographical limitation end here. Islands have proportionately a scanty allowance of fertile alluvial lowlands than have continents. This follows from their geological history, except in the case of those low deposit islands built up from the waste of the land. Most islands are summits of submerged mountain ranges, like Corsica and Sardinia, the Aegean archipelagoes, the Greater Antilles, Vancouver, and the countless island groups; or they are single or composite volcanic cones, like the Canaries, Azores, Lipari, Kurile, Fiji, Ascension, St. Helena and the Lesser Antilles; or they are a combination of highland subsidence and volcanic out-thrust, like Japan, the Philippines, the long Sunda chain and Iceland. Both geological histories involve high reliefs, steep slopes, a deep surrounding sea, and hence rarely a shallow continental shelf for the accumulation of broad alluvial lowlands. Among the Aegean Isles only Naxos has a flood plain; all the rest have steep coasts, with few sand or gravel beaches, and only small deposit plains at the head of deep and precipitous embayments. Japan's area of arable soil is to-day only 15.7 per cent. of its total surface, even

...after the gentler slopes of its mountains have been terraced up two thousand feet. Some authorities put the figure lower, at 10 and 12 per cent.

Yet in spite of limited area and this paucity of local re- sources, islands constantly surprise us by their relatively dense populations. More often than not they show a density exceeding that of the nearest mainland having the same zonal location, often the same geologic structure and soil. Along with other small, naturally defined areas, they tend to a closer packing of the population. Yet side by side with this relative over-population, we find other islands uninhabited or tenanted only by sheep, goats, and cattle.

In the wide Pacific world comprising Australia and Oceanica, islands take up fifteen per cent. of the total land area, but they contain forty-four per cent. of the population. The insular empire of Japan, despite the paucity of its arable soil, has a density of population nearly twice that of China, nearly three times that of Korea, and exceeding that of any political subdivision of continental Asia; but Japan, in turn, is surpassed in congestion only by Java, with a density of 587 to the square-mile, which almost equals that of Belgium (643) and England (600). Great Britain has a density of population ($53$ to the square mile) only exceeded in continental Europe by that of Belgium, but surpassed nearly threefold by that of the little Channel Isles, which amounts to 1,254 to the square mile. If the average density of the United Kingdom is greatly diminished in Ireland, just as Italy's is in Sardinia and France's in Corsica, this fact is due primarily to a side-tracked or overshadowed location and adverse topography, combined with misgovernment.

If we compare countries which are partly insular, partly continental, the same truth emerges. The kingdom of Greece has fifteen per cent. of its territory in islands. Here again population reaches its greatest compactness in Corfu and Zante, which are nearly thrice as thickly inhabited as the rest of Greece. Similarly the islands which constitute so large a part of Denmark have an average density of 209 to the square mile as opposed to the 112 of Jutland. The figures rise to 215 to the square mile in the Danish West
INDIAN PEOPLES

In all these cases, if economic status be taken into account, we have a density bordering on congestion; but the situation assumes a new aspect if we realize that the crowded inhabitants of small islands often have the run of the coco-plantations and fishing grounds of an entire archipelago. The smaller, less desirable islands are retained as fish and coco-palm preserves to be visited only periodically. Of a low, cramped, monotonous coral group, often only the largest and most productive is inhabited, but that contains a population surprising in view of the small base, restricted resources and low cultural status of its inhabitants. The population of the wide-strewn Paunon atolls was estimated as about 10,000 in 1840. Of these fully one-half lived on Anaa or Chain Island, and one-fourth on Gambier, but they levied on the resources of the other islands for supplies. The Tonga Islands at the same time were estimated to have 20,000 inhabitants, about half of whom were concentrated on Tongatabu, while Hapai and Vavao held about 4,000 each.

This is one of the sharp contrasts in island life, here density akin to congestion, there a few miles away a deserted reef or cone rising from the sea, tenanted only by sheep or goats or marine birds, its solitude broken only by the occasional cruising of a boat's keel upon its beach, as some visitant from a neighboring isle comes to shear wool, gather coco-nuts, catch birds or collect their eggs. All the 500 inhabitants of the Westman Isles off the southern coast of Iceland live in one village on Heimey, and support themselves almost entirely by fishing and fouling birds on the wild crags of the archipelago. An oceanic climate, free contact with the Gulf Stream, and remoteness from the widespread ice fields of Iceland give them an advantage over the vast island to the north. Only twenty-seven of the ninety islands composing the Orkney group are inhabited, and about forty smaller ones afford natural meadows for sheep on their old red sandstone soil, but Pomona, the largest Orkney has 17,000 inhabitants on its 207 square miles of territory or 85 to the square mile. The Shetlands tell the same story—29 out of 100 islands inhabited, some of the holms or smaller islets
serving as pastures for the sturdy ponies and diminutive cattle, and Mainland, the largest of the group, showing 53 inhabitants to the square mile. This is a density far greater than is reached in the nearby regions of Scotland, where the county of Sutherland can boast only 13 to the square mile, and Invernesshire 20. Here again insularity and contracted area do their work of compressing population.

The causes of this insular density of population are not far to seek. Islands can always rely on the double ladder of land and sea. They are moreover prone to focus in themselves the fishing industry of a large continental area, owing to their ample contact with the sea. Shetland is now the chief seat of the Scotch herring fishery, a fact which contributes to its comparatively dense population. The concentration of the French export trade of Newfoundland fish in little St. Pierre and Miquelon accounts for the relatively teeming population (70 to the square mile) and the wealth of those scraps of islands. So the Lofoden Islands of Norway, like Iceland, Newfoundland and Sakhalin, balance a generous sea against an unproductive soil, and thus support a population otherwise impossible.

For these far northern islands, the moderating effect of an oceanic climate has been a factor in making them relatively populous, just as it is on tropical isles by mitigating heat and drought. The prosperity and populousness of the Bermuda Islands are to be explained largely by the mild, equable climate which permits the raising of early vegetables and flowers for English and American markets. Like climatic conditions and a like industry account for the 2,000 souls living on the inhabited islands of the Scilly group. Here intensive horticulture supports a large force of workmen and yields a profit to the lord proprietor. Syros in the Cyclades fattens on its early spring vegetable trade with Athens and Constantinople.

In the Mediterranean lands, where drought and excessive heat during the growing season offer adverse conditions for agriculture, the small islands, especially those of fertile volcanic soil, show the greatest productivity and hence marked density of population. Though the rainfall may be slight,

except where a volcanic peak rises to condense moisture, heavy dews and the thick mists of spring-quickened vegetation. This is the case in Malta, which boasts a population of 2,000 to the square mile, exclusive of the English garrison. Little Lampedusa and Pantellaria, the merest fragments of land out in the mid-channel of the Mediterranean, have a population of 200 to the square mile. The Lipari group north of Sicily average nearly 400 on every square mile of their fertile soil; but this average rises in Salina to 500, and in Lipari itself, as also in Ponza of the Pontine group, to nearly 1300. Here fertile volcanic slopes of highly cultivated land lift vineyards, orchards of figs, and plantations of currents to the sunny air. But nearby Alicuri, almost uncultivated, has a sparse population of some five hundred shepherds and fishermen. Panarea and Filicudi are in about the same plight. Here again we find those sharp island contrasts.

The insular region of the Indian Ocean, which is inhabited by peoples quite different in race and cultural status from those of the Mediterranean; yet again demonstrates the power of islands to attract, preserve, multiply and concentrate population. This is especially true of the smaller islands, which in every case show a density of population many times that of the neighboring mainland of Africa. Only vast Madagascar, continental in size, repeats the sparsity of the continent. An oceanic climate increases the humidity of the islands as compared with the mainland lying in the same desiccating tradewind belt. Moreover their small area has enabled them to be permeated by incoming Arab, English, and French influences, which have raised their status of civilization and therewith the average density of population. This culminates in English Mauritius, which shows 340 inhabitants to the square mile, occupied in the production of sugar, molasses, rum, vanilla, aloes, and copra. In Zanzibar this density is 250 to the square mile; in Reunion 280; in Mayotte, the Comores and Seychelles, the average varies from 100 to 145 to the square mile, though Mahe, in the Seychelles group has one town of 20,000 inhabitants.

In the Malay Archipelago, an oceanic climate and tropical location have combined to stimulate fertility to the
of the islands. For instance, about the densely populated region of the Gulf of Naples, Procida has 14,000 inhabitants on its one and a half square miles of area, while fertile Ischia and Capri have 1400 to the square mile. Here a rich volcanic soil, peaks which attract rain by their altitude and visitors by their beauty, and a mild oceanic climate delightful in winter as in summer, all contribute to density of population. Sicily, Malta and Corfu, also gain in the same way in winter. The Isle of Man owes some of its recent increase of population, now 29,000 to the square mile, to the fact that it has become the summer playground for the numerous factory workers of Lancashire in England.

Sometimes climatic advantages are reinforced by a favorable focal point, which brings the profits of trade to supplement those of agriculture. This factor of distributing and exporting center has undoubtedly contributed to the prosperity and population of Réunion, Madeira, Mauritius and Zanzibar, as it did formerly to that of ancient Rhodes and modern St. Thomas at the angle of the Antilles. Barbados, by reason of its outport location to the east of the Windward Isles, is the first to catch incoming vessels from England, and is therefore a focus of steamship lines and a distributing point for the southern archipelago, so that we find here the greatest density of any island in the West Indies. The 9605 inhabitants of Charlotte Amalie on St. Thomas and the 15,000 of Willemsted on Curacao give these also a characteristic insular density. Samos, blessed with good soil, an excellent position on Aegean maritime routes, and virtual autonomy, supports a population of 900 to the square mile.

Focal location alone can often achieve this density. Syros, one of the smallest and by nature the most barren of the Cyclades, though well tilled is the great commercial and shipping center of the Aegean, and has in Hermoupolis with its 17,700 population by far the largest town of the archipelago. This development has come since Greece achieved its independence. It reminds us of the distinction and double also-population that belonged to Delos in ancient days. Advantageous commercial location and density of population characterize Kilauau and Singapore at the east and west extre-
ties of the Malay Archipelago. The Bahrein Islands, which England has acquired in the Persian Gulf, serve as an emporium of trade with eastern Arabia and have a local wealth in their pearl fisheries. These facts account for the 68,000 inhabitants dwelling on their 240 square miles (600 square kilometers) of sterile surface. The concentration of population in these favored spots of land with inelastic boundaries, and the tendency of that population to increase under the stimulating, interactive life make the restriction of area soon felt. For this reason, so many colonies which are started on isles or from motives of protection have to be transferred to the mainland to insure a food supply. A settlement of Huguenots, made in 1555 on an island in the harbor of Rio Janeiro, found its base too small for cultivation, but feared the attack of the hostile Indians and Portuguese on the mainland. After three years of a struggling existence, it fell a prey to the Portuguese. De Monts' short-lived colony on an island in the mouth of the St. Croix River in 1604 had an excellent site for defence, but was cut off by the drifting ice in winter from mainland supplies of wood, water and game, while no cultivation was possible in the sandy soil. Such sites suffice for mere trading posts, but are inadequate for the larger social group of a real colony. The early Greek colonists, with their predilection for insular locations, recognized this limitation and offset it by the occupation of a strip of the nearest mainland, cultivated and defended by fortified posts, as an adjunct to the support of the islands. Such a subsidiary coastal hem was called a Paraea. The ancient Greek colonies on the islands of Thasos and Samothrace each possessed such a Paraea. The Aeolian inhabitants of Tenedos held a strip of the opposite Troad coast north of Cape Lekton, while those of Lesbos appropriated the south coast of the Troad. In the same way Tarentum and Syracuse, begun on inshore islands, soon overflowed on to the mainland. Sometimes the island site is abandoned altogether and the colony transferred to the mainland. The ancient Greek colony of Cyrene had an initial existence on the island of Platea just off the Libyan coast, but, not flourishing there, was moved after an interval of several years to the African mainland, where "the sky was perforated" by the mountains of Barca. De Monts' colony was removed from its island to Port Royal in Nova Scotia. Where an island offers in its climate and soil conditions favorable to agriculture, tillage begins early to assume an intensive, scientific character, to supply the increasing demand for food. The land, fixed in the amount of area, must be made elastic in its productivity by the application of intelligence and industry. Hence in island habitats, an early development of agriculture, accompanied by a parallel skill in exploiting the food resources of the sea, is a prevailing feature. In Oceanica, agriculture is everywhere indigenous, but shows greatest progress in islands like Tonga and Fiji, where climate and soil are not only lavish but niggardly in their gifts, but yield a due return for the labor of tillage. The Society and Samoan Islands, where nature has been more prodigal, rank lower in agriculture, though George Forster found in Tahiti a relatively high degree of cultivation. The small, rocky, coraline Paulinas rank lower still, but even here plantains, sugar-cane, sweet potatoes, yams, taro and solanum are raised. The crowded atolls of the Gilbert group show pains-taking tillage. Here we find coco-palms with their roots fertilized with powdered pumice, and taro cultivated in trenches excavated for the purpose and located near the lagoons, so that the water may percolate through the coral sand to the thirsty roots. To lonely Easter Isle nature has applied a relentless lash. At the time of Cook's visit it was woodland and boatless except for one rickety canoe, and therefore was almost excluded from the food supplies of the sea. Hence its destitute natives, by means of careful and often ingenious tillage, made its parched and rocky slopes support excellent plantations of bananas and sugar-cane.

The islands of Melanesia show generally fenced fields, terrace farming on mountain sides, irrigation canals, fertilized soils, well trimmed shade trees and beautiful flower gardens, proof that the cultivation of the ground has advanced to the aesthetic stage, as it has in insular Japan.
In Tonga the coco-palm plantations are weeded and manured. Here, after a devastating war, the victorious chief devotes his attention to the cultivation of the land, which, soon assumes a beautiful and flourishing appearance. In Tongatabu, which is described by the early visitor as one big garden, Cook found officials appointed to inspect all produce of the island and to enforce the cultivation of a certain quota of land by each household. Here agriculture is a national concern.

In the minute land fragments which constitute Micronesia, fishing is the chief source of subsistence; agriculture, especially for the all important taro, is limited to the larger islands like the Pelews. In the vast islands of western Melanesia, agriculture is on the whole less advanced. New Guinea, where the chase yields support to many villages, has large sections still a wilderness, though some parts are cultivated like a garden. In the smaller Melanesian islands, such as New Hebrides, New Britain and the Solomon group, we find extensive plantations laid out on irrigated terraces. In New Hebrides and the Banks Islands every single village has its flowers and aromatic herbs. But it is in Fiji that native island agriculture seems to culminate. Here a race of dark, frizzly haired savages, addicted to cannibalism, have in the art of tillage taken a spurt forward in civilization, till in this respect they stand ahead of the average European. The German asparagus bed is not cultivated more carefully than the yam plants of Fiji; these also are grown in mounds made of soil which has been previously pulverized by hand. The variety and excellence of their vegetable products are amazing, and find their reflection in an elaborate national cuisine, strangely at variance with the otherwise savage life.

West of Melanesia, the Malay Archipelago shows a high average of tillage. The inhabitants of Java, Madura, Bali, Lombok and Sumbawa are skilled agriculturists and employ an elaborate system of irrigation, but the natives of Timor, on the other hand, have made little progress. In the Philippines a rich and varied agriculture has been the chief source of wealth since the Spanish conquest early in the sixteenth century, proving a native aptitude which began to develop long before.

The dense population of the Mediterranean islands is the concomitant of an advanced agriculture. The connection between elaborate tillage and scant insular area is indicated in the earliest history of classic Aegina. The inhabitants of this island were called Myrmidons, Strabo tells us, because by digging like ants they covered the rocks with earth to cultivate all the ground; and in order to economize the soil for this purpose, lived in excavations under ground and abstained from the use of bricks. To-day, terraced slopes, irrigation, hand-made soils, hoe and spade tillage, rotation of crops, and a rich variety of field and garden products characterize the economic history of most Mediterranean islands, whether Elba, the Lipari, Ponza, Procida, Capri, Ischia, Panellaria, Lampedusa, or the Aegean groups. The sterile rock of Malta has been converted for two-thirds of its area into fertile gardens, fields and orchards. The upper stratum of rock has been pulverized and enriched by manure; the surface has been terraced and walled to protect it against high winds. In consequence, the Maltese gardens are famous throughout the Mediterranean. In the Cyclades every patch of tillable ground is cultivated by the industrious inhabitants. Terraced slopes are green with orchards of various southern fruits, and between the trees are planted melons and vegetables. Fallow land and uncultivated hillsides, as well as the limestone islands fit only for pastures, are used for flocks of sheep and goats.

It is in Japan that agriculture has attained a national and aesthetic importance, reached nowhere else. Of the 150,000 square miles constituting Japan proper, two-thirds are mountains; large tracts of lowlands are useless rock wastes, owing to the detritus carried down by inundating mountain torrents. Hence to-day arable land forms only 15.7 per cent of the whole area. During the two hundred and fifty years of exclusion when emigration and foreign trade were forbidden, a large and growing population had to be supplied from a small insular area, further restricted by reason of the configuration of the surface. Here the geographical effects
of a small, naturally defined area worked out to their logical conclusion. Consequently agriculture progressed rapidly and gave the farmer a rank in the social scale such as he attained nowhere else. His methods of tillage are much the same as in overcrowded China, but his national importance and hence his ranking in society is much higher. In Japan to-day farming absorbs 60 per cent. of the population. The system of tillage, in many respects primitive, is yet very thorough, and by means of skilful manuring makes one plot of ground yield two or three crops per annum. Every inch of arable land is cultivated in grain, vegetables and fruits. Mountains and hills are terraced and tilled far up their slopes. Meadows are conspicuously absent, as are also fallow fields. Land is too valuable to lie idle. Labor is chiefly manual and is shared by the women and children; mattock and hoe are more common than the plow. Such elaborate cultivation and such pressure of population eventuate in small holdings. In Japan one hectare (2 1/2 acres) is the average farm per family.

While Japan’s agriculture reflected the small area of an island environment, and under its influence reached a high development, England’s from the beginning of the fifteenth century, declined before the competition of English commerce, which gained ascendancy owing to the easy accessibility of Great Britain to the markets of Europe. The ravages of the Black Death in the latter half of the fourteenth century produced a scarcity of agricultural laborers and hence a prohibitive increase of wages. To economize labor, the great proprietors resorted to sheep farming and the raising of wool, which, either in the raw state or manufactured into cloth, became the basis of English foreign trade. A distinct deterioration in agriculture followed this reversion to a pastoral basis of economic life, supplemented by a growing commerce which absorbed all the enterprise of the country. The steady contraction of the area under tillage threw out of employment the great mass of agricultural laborers, made them paupers and vagrants. Hence England entered the period of maritime discoveries with a redundant population. This furnished the raw material for her colonies, and made her territorial expansion assume a solid, permanent character, unknown to the flimsy trading stations which mark the mere extension of a field of commerce.

Even when agriculture, fisheries and commerce have done their utmost, in the various stages of civilization, to increase the food supply, yet inaural populations tend to outgrow the means of subsistence procurable from their narrow base. Hence islanders, like peninsula peoples, are prone to emigrate and colonize. This tendency is encouraged by their mobility, born of their nautical skill and maritime location. King Minos of Crete; according to Thucydides and Aristotle, colonized the Cyclades. Greece, from its redundant population, peopled various Aegean and Ionian islands, which in turn threw off spores of settlements to other isles and shores. Corcyra, which was colonized from the Peloponnesus, sent out a daughter colony to Epidamnos on the Illyrian coast. Andros, one of the Cyclades, as early as 654 B.C., colonized Acanthus and Stagirus in Chalcidice. Paros, settled first by Cretans and then by Ionians, at a very early date sent colonies to Thasos and to Parium on the Propontis, while Samos was a perennial fountain emitting streams of settlement to Thrace, Cilicia, Crete, Italy and Sicily. [Map page 251.]

This moving picture of Greek emigration is duplicated in the Malay Archipelago, especially in the smaller eastern islands. Almost every Malay tribe has traditions based upon migrations. The southern Philippines derived the considerable Mohammedan element of their populations from the Samal Laut, who came from Sumatra and the islands of the Strait of Malacca. A Malayan strain can be traced through Polynesia to far-off Easter Isle. Sometimes the emigration is a voluntary exile from home for a short period and a definite purpose. The inhabitants of Bouton, Binungku, and the neighboring islets, all of them located southeast of Celebes, have for the past twenty-five years come in great numbers to the larger islands of Ceram, Buru, Ambon and Banda, where they have laid out and carefully cultivated plantations of maize, tobacco, bananas and coco-palms. Generally only the men come, work two years, save their profits and then return home. These ambitious tillers look like ‘savages,' are
shy as wild things of the woods, and work naked to the waist. 187
Polynesia, Melanesia, and Micronesia, where every condition of land and sea tends to develop the migratory spirit, form a region of extensive colonization. 188 Settlements of one race are scattered among the island groups of another, making the ethnic boundaries wide penumbras. In some smaller islands of Melanesia the Polynesian colonists have exterminated or expelled the original inhabitants, and are found there now with all their distinctive race characteristics; but in the larger islands, they have been merged in the resident population, and their presence is only to be surmised from the existence of Polynesian customs, such as father-right in New Hebrides and Solomon Island side by side with the prevailing Melanesian mother-right. 187 In small islands, like Tongatabu, Samoa and Fiji, emigration becomes habitual, a gradual spilling over of the redundant population and hence not a formidable inundation. In this insular region of the Pacific, the impulse to emigration is so persistent, that the resulting inter-insular colonization obliterates sharp distinctions of race; it annuls the segregation of an island environment, and makes everywhere for amalgamation and unification, rather than differentiation. 188

Among highly civilized peoples, where better economic methods bring greater density of population and set at the same time a higher standard of living, emigration from islands is especially marked. Japan has seen a formidable exodus since an end was put to its long period of compression. This has taken the form of widespread emigration to various foreign lands, notably the Hawaiian Islands and the United States, and also of internal colonization in its recently acquired territory in Formosa and Korea. 189 The Maltese have spread from their congested island, and are found today as gardeners, sailors and traders along all the Mediterranean coasts. 190 Majorca and the more barren Cyclades 191 tell the same story. The men of Capri go in considerable numbers to South America, but generally return home again. The Icelanders often pull themselves out of the stagnation of their lonely, ungenerous island to become thrifty citizens of western Canada.

Emigration from islands readily throws itself into the channel of navigation and foreign trade. The northern Sporades, especially Skiathos and Skopelos, are the home of sailors who can be found over all the world. 192 In this aptness for a nautical career, small inshore islets are often distinguished from the neighboring mainland. Nearly all the masculine population of the Frisian Islands were seamen, prior to 1807. In the eighteenth century a third of the Hamburg vessels were commanded by captains from the little island of Sylt, and a third of the Greenland fleet of the Netherlands by natives of Fohr. 193

In England the exodus took the form of trading expeditions and the foundation of commercial colonies long before the food resources of the island had been even considerably developed. The accessible sea offered lines of least resistance, while the monopoly of the land by a privileged aristocracy and the fiercely defended corn laws made the limitations of a small area more oppressive. In Ireland, a landless peasantry in a grainless land, dulled by deprivation of opportunity, found in emigration an escape from insupportable evils.

While emigration draws off the surplus population, there Artificial checks to population tend to develop in islands, as also in barren highlands where population early reaches the point of saturation, various devices to restrict natural increase. The evils of congestion are foreseen and guarded against. Abbé Raynal, writing of islanders in general, remarked as far back as 1795, “It is among these people that we trace the origin of that multitude of singular institutions which retards the progress of population. Anthropophagy, the castration of males, the infibulation of females, late marriages, the consecration of virginity, the approbation of celibacy, the punishments exercised against girls who become mothers at too early an age,” he enumerates as such checks. Malthus, in his Essay on Population, commenting on this statement, notes that the bounds to the number of inhabitants on islands, especially small ones, are so narrow and so obvious that no one can ignore them. 194

The checks to population practiced on islands are either
preventive or positive. The extreme measure to restrict marriage is found among the wretched Budumas who inhabit the small, marshy islands of Lake Chad. Tribal custom allows only the chiefs and headmen to have wives. A brass crescent inserted in the ear of a boy indicates the favored one among a chief's sons destined to carry on his race. For his brothers this is made physically impossible; they become big, dull, timid creatures contributing by their fishing to the support of the thinly populated villages. The natives of the Shari River delta on the southern shore of Lake Chad use Buduma as a term of contempt for a man.193

Polyandry. In islands, as in unproductive highlands where hunger stalks abroad; marriage readily takes the form of polyandry. On the Canary Islands, at the time of their conquest in 1402, polyandry existed in Lancerote and possibly in Fuerteventura, often assigning one woman to three husbands; but in the other islands of the group monogamy was strictly maintained.194 In Oceanica polygamy, monogamy, or polyandry prevails according to a man's means, the poverty of the islands, and the supply of women. A plurality of wives is always the privilege of the chiefs and the wealthy, but all three forms of marriage may be found on the same island. Scarcity of women gives rise to polyandry in Tahiti,195 and consigns one woman to four or five men. In old Hawaii, where there were four or five men to one woman a kind of incipient polyandry arose by the addition of a conterminous paramour to the married couple's establishment.196 Robert Louis Stevenson found the same compliant arrangement a common one in the Marquesas, where the husband's deputy was designated by the term paka in the native vocabulary.197 Polyandry existed in Easter Isle, among whose stunted and destitute population the men far exceeded the women, and children were few, according to reports of the early visitors.198 Numerous other instances make this connection between island habitat, deficiency of women, need of checking increase, and polyandrous marriages an obvious one.199

Infanticide. This disproportion of the sexes in Oceanica is due to the murder of female infants, too early child-bearing, overwork, privation, licentiousness, and the violence of the men.200 The imminence of famine dictates certain positive checks to population, among which infanticide and abortion are widespread in Oceanica. In some parts of the New Hebrides and the Solomon groups it is so habitual, that in some families all children are killed, and substitutes purchased at will.201 In the well-tilled Fiji Islands, a pregnant girl is strangled and her seducer slain. The women make a practice of drinking medicated waters to produce sterility. Failing in this, the majority kill their children either before or after birth. In the island of Vanua Levu infanticide reaches from one-half to two-thirds of all children conceived; here it is reduced to a system and gives employment to professional murderers of babies, who hover like vultures over every child-bed. All destroyed after birth are females.202 And yet here, as on many other islands of Melanesia and Polynesia, such offspring as are spared are treated with foolish fondness and indulgence.203 The two facts are not incompatible.

Geographic conditions made infanticide a state measure in these crowded communities. On the small coral atolls, where the food supply was scant, it was enforced by law. On Vaitupu, in the Ellice group, only two children were allowed to a couple; on Nukufetau, only one. Any violation of this unique sumptuary law was punished by a fine.204 On the congested Gilbert atolls, a woman rarely had more than two children, never more than three. Abortion, produced by a regular midwife, disposed of any subsequent offspring. Affection for children was very strong here, and infanticide of the living was unknown.205 In Samoa, also, Turner found the practice restricted to the period before birth; but in Tahiti and elsewhere it was enforced by the tribal village authorities on the born and unborn.206 In pre-Christian Hawaii, two-thirds of all children, and especially girls, were killed by their parents either before or after birth. The result was a decay of the maternal instinct and the custom of farming out children to strangers. This contributed to the excess of infant mortality, the degeneration of morals and the instability of the family.207 So in Japan the pressure of population led to infanticide and the
sale of daughters to a life of ignominy, which took them out of the child-bearing class. Nor was either custom under the ban.

The result is a deterioration of morals, an invasion of the family bond, and a decay of the finer sentiments therewith connected. Captain Cook in 1770 found in Tahiti Eareeote or Arreygö societies, which were free-love associations including in their number “over half of the better sort of the inhabitants.” The children begotten of these promiscuous unions were smothered at birth. Obscene conversations, indecent dances and frank unchastity on the part of girls and women were the attendant evils of these loose morals. Cook was sure that “these societies greatly prevent the increase of the superior classes of people of which they are composed.” Malthus reports a similar association in the Marianne Islands, distinguished by a similar name, devoted to race suicide. Everywhere in Oceanic marriage is unstable, and with few exceptions unchastity prevails. Stevenson thinks it chiefly accountable for the decline of population in the islands. However, in the detailed taboos laid upon women in Fiji, Marquesas, and other Polynesian islands we have the survival of an early measure to increase reserve between the sexes, long after regard for chastity has vanished.

The constant pressure of population upon the limits of subsistence throughout Oceanica has occasioned a low valuation of human life. Among natural Hawaiians, though a good-natured folk, were relentless towards the aged, weak, sick, and insane. These were frequently stoned to death or allowed to perish of hunger. In Fiji, the aged are treated with such contempt, that when decrepitude or illness threatens them, they beg their children to strangle them, unless the children anticipate the request. In Vate (or Efate) of the New Hebrides, old people are buried alive, and their passage to another world duly celebrated by a feast. However, in the Tonga Islands and in New Zealand, great respect and consideration are shown the aged as embodying experience. The harsher custom recalls an ancient law of Argean Creos, which ordained that all persons over sixty years of age should be compelled to drink hemlock, in order that there might be sufficient food for the rest.

Many customs of Oceanica can be understood only in the light of the small value attached to human life in this island world. The overpopulation which lies back of their colonization explains the human sacrifices in their religious orgies and funeral rites, as also the widespread practice of cannibalism. This can be traced in vestigial forms, or as an occasional or habitual custom from one end of the Pacific to the other, from the Marquesas to New Guinea and from New Zealand to Hawaii. All Melanesia is tainted with it, and Micronesia is not above suspicion. The cause of this extensive practice, Stevenson attributes to the imminence of famine and the craving for flesh as food in these small islands, which are destitute of animals except fowls, dogs and hogs. In times of scarcity cannibalism threatens all; it strikes from within or without the clan. Hatzel leans to the same opinion. Captain Cook thought the motive of a good full meal of human flesh was often back of the constant warfare in New Zealand, and was sometimes the only alternative of death by hunger. Cannibalism was not habitual in the Tonga Islands, but became conspicuous during periods of famine.

In far-away Tierra del Fuego, where a peculiarly harsh climate and the low cultural status of the natives combine to produce a frightful infant mortality and therefore to repress population, cannibalism within the clan is indulged in only at the imperative dictate of mid-winter hunger. The same thing is true in the nearby Chonos Archipelago.

These are the darker effects of an island habitat, the vises of its virtues. That same excessive pressure of population which gives rise to infanticide also stimulates agriculture, industry and trade; it develops ingenuity in making the most of local resources, and finally leads to that widespread emigration and colonization which has made islanders the great distributors of culture, from Easter Isle to Java and from ancient Crete to modern England.
NOTES TO CHAPTER XIII

1. Table of areas of peninsulas and islands, Justus Perthes, Taschen Atlas, Gotza, 1905.
15. Ibid., p. 370-371.
16. Emerson, English Traits, chap. VI.
20. Emerson, English Traits, chap. III.
22. Ibid., chapters IV and V.
27. Ibid., 136-137.
33. Strabo, Book VII, chap. VI, 16.
54. Ibid., p. 303.
64. A. R. Wallace, Malay Archipelago, pp. 368, 386, 381. New York, 1889.
470  ISLAND PEOPLES

131. Ibid., p. 60.
132. Ibid., p. 57.
133. Ibid., p. 53.
134. Ibid., pp. 37, 67.
137. Ibid., p. 229.
142. Ibid., p. 314.
150. Longmans Gazetteer of the World, Ambotina.
158. Ibid., pp. 253-252.
161. Ibid., Vol. IV, pp. 20-33.

173. Strabo, Book VIII, chap. VI, 16.
175. Ibid., pp. 426.
206. Ibid., p. 38.
214. Ibid., p. 52.