

AOTEAROA: A STUDY IN HISTORICAL GEOGRAPHY

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About the tenth century A.D., Aoteara, "The land of the Long White Cloud,"—pre-European New Zealand—was receiving settlers from the tropical Pacific. Whether immigrants arrived by accidental drift or by purposeful voyaging we may never know, but it appears certain that they came from the islands of eastern Polynesia, for many features of the cultural pattern of the Tahiti region were faithfully reproduced in the alien environment of New Zealand.

The climatic contrast between the tropical Pacific and mid-latitude New Zealand may not have been quite so marked as it is today, for there is evidence that early colonization coincided with a relatively warm, moist climatic phase before cooler and drier conditions returned after the fourteenth century A.D. Forest seems to have prevailed in areas of the eastern South Island where tussock grasslands were to become dominant. But the physiographic and geological variety of continental New Zealand presented resources unrivalled in the atolls and basaltic 'high islands' of tropical Polynesia. If something was lost when the tropical islands disappeared beyond the horizon, the more extensive and varied complex of mountains and plains, rocks and soils, flora and fauna, provided an infinitely more substantial resource base for the elaboration of a neolithic economy.

The first immigrants—the Archaic Maori or Moa-hunters—relied heavily upon the native fauna and flora. Native land mammals—with the exception of bats—were lacking, but the avifauna was rich. Various species of flightless *moa*—ranging from the huge ostrich like *Dinornis* to the small *Megalaptery*—were hunted to extinction. The bone-littered campsites, strategically placed beside the estuaries of the eastern littoral of the South Island and scattered into the intermontane basins, testify to the steady depletion of the moa population of the coastal and, later, the interior grasslands. But the moa was by no means the only resource: quite apart from other species of birds, fishing and gathering of berries and roots provided an abundance of food for the settlements dotting the eastern seaboard of both islands (see map).

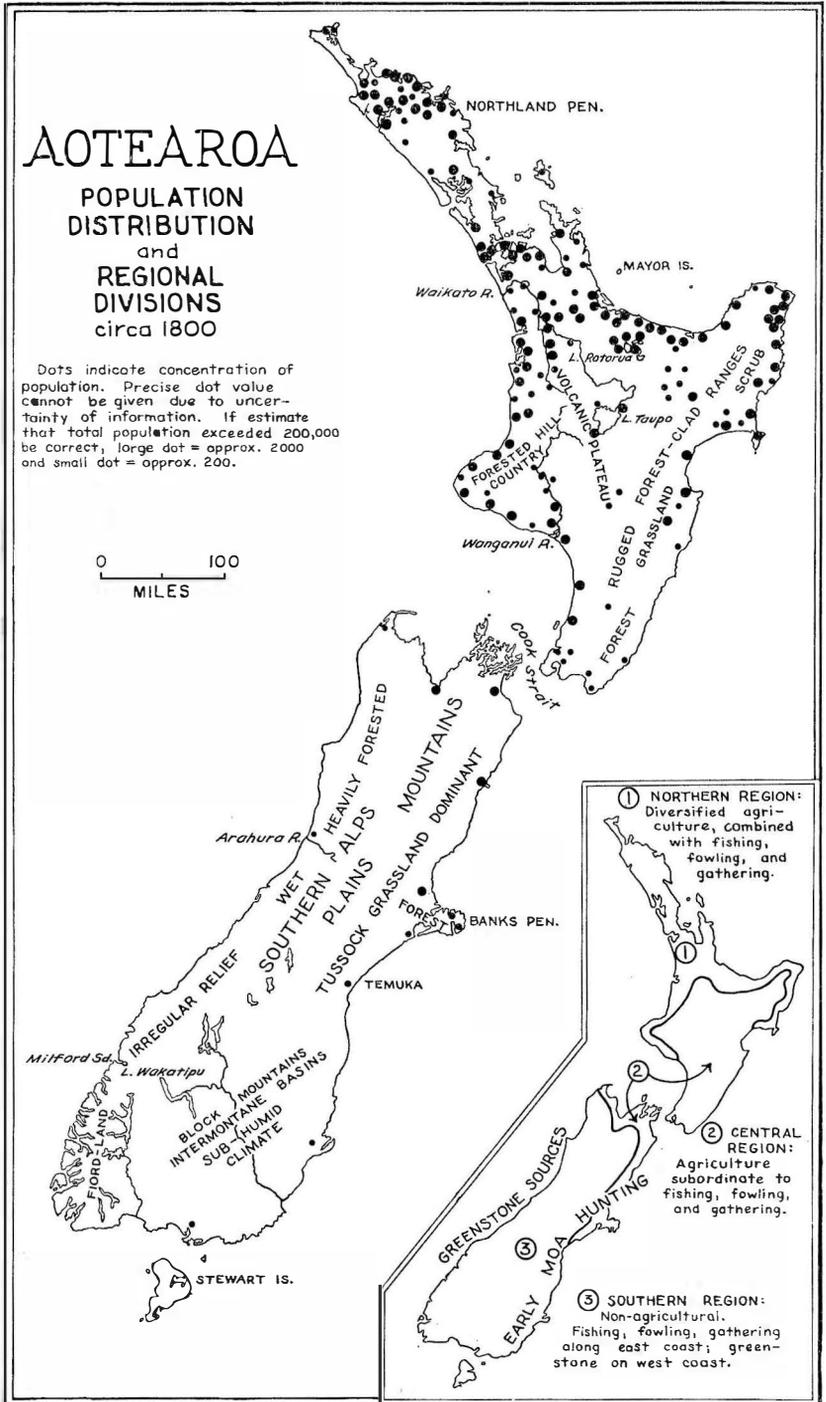
Whether or not the "moa hunters" possessed cultivated crops—and the question is yet undecided—horticulture became basic in the Maori culture. The relationship between "Moa-hunter" and "Classic" phases is blurred, for traditions are not uncorrupted and archaeological evidence is still meagre, but local evolution seems to have been stimulated by renewed fourteenth century migration from the Tahiti region. It may well be that the South Island rivalled the North in population during the moa-hunting era, but the balance emphatically favored the North during the Maori period. When regular European contacts were established after 1800, fully nine-tenths of the population of 200,000 or more lived on the North Island. Only in the far South and the remote Chatham Islands did

AOTEAROA

POPULATION DISTRIBUTION and REGIONAL DIVISIONS circa 1800

Dots indicate concentration of population. Precise dot value cannot be given due to uncertainty of information. If estimate that total population exceeded 200,000 be correct, large dot = approx. 2000 and small dot = approx. 200.

0 100
MILES



- ① NORTHERN REGION:
Diversified agriculture, combined with fishing, fowling, and gathering.
- ② CENTRAL REGION:
Agriculture subordinate to fishing, fowling, and gathering.
- ③ SOUTHERN REGION:
Non-agricultural.
Fishing, fowling, gathering along east coast; greenstone on west coast.

a small population retain strong elements of the archaic culture. Elsewhere the aggressive Maori culture prevailed, with its emphasis on elaborate wood-carving, the use of greenstone (nephrite), carefully fortified villages (*pa*) reflecting intensified warfare, and cultivation strongly supplementing fishing, fowling, and gathering.

The emphasis on agriculture varied with geographic environment rather than tradition, for there is no evidence that cultivation was extended to its climatic limits. Land was cleared by slashing and burning the rainforest or, preferably, the scrubland and fern; it was carefully prepared with digging-sticks, fertilization, amelioration of the soil, and sometimes construction of brush fences to break the wind. The hardy *kumara* or sweet potato (*Ivomea batatas*) became the dominant crop in New Zealand, but taro (*Colocasia antiquonim*), yam (*Dioscorea aata*), and gourd (*Lagenaria vulgaris*) were also successfully established in the warmer areas. The geographical pattern, as well as the seasonal emphasis, of each crop varied with its ecology. *Kumara* was cultivated as far south as Banks peninsula or even Temuka, and the gourd may have proved almost as adaptable. Taro was more restricted (though it may have survived in some warmer pockets of the South Island), and yam was strictly limited to the north and northeast. The tree-crops—so significant in tropical Polynesia—were virtually eliminated: the coconut was precluded, the paper mulberry was reduced to a shrub surviving in the warmer parts of the North Island, and certain species of *Cordyline* may also have been introduced. The Polynesian livestock trio of pig, dog, and chicken was reduced to the dog: the rat was the only other mammal introduced—and that by accident. Thus climatic factors and probably fortuitous circumstance reduced the agricultural complex of the Maori and shaped the distributional patterns within Aotearoa.

This partial impoverishment was fully compensated by other resources. Vegetable foods procured from forest and planted grove included the fruits of the karaka tree and a variety of other berries, and more significantly, the fern root. The numerous bird life included the wood-pigeon, *kaka*-parrot, flightless *weka* and *kiwi*, and waterfowl such as *pukeko* (swamp-hen) and duck. The beech (*Nothofagus*) forest yielded the introduced rat, while marsh, river and sea provided fish in plenty. The Maori was an expert angler: river and swamp were intersected with eel-traps, while huge nets facilitated coastal fishing.

Forest, swamp, and varied rock-types also provided the raw materials of simple industry. Timber was required for building and canoe-making, shaping and carving was eased by obsidian from Mayor Island, local stone, or the precious greenstone procured from the west coast of the South Island. Native birds and feral dogs provided the wherewithal for cloaks, but the main "textile" plant (replacing the paper-mulberry of the tropics) was the swamp-loving flax (*Phormium tenax*), with fibrous and pliable leaves which were scraped, dyed, and plaited or woven into garments.

This complex of resources, combined with the perils of warfare, shaped the pattern of settlement. The central *pa* or fort, with its carved tribal meeting house and humble *whares*, was usually constructed on hill

or peninsula, scarped and trenched, and protected by heavy timber palisades and watch-towers. But the *kainga*, unfortified village, was located for convenience, in proximity to fishing, fowling, or gathering grounds, or near the cultivated plots. These villages, occupied seasonally and temporarily rather than permanently, were usually simply constructed and lightly defended—perhaps by a single palisade—for the retreat to the central *pa* was favored in time of danger. There was that local and seasonal shifting of settlement, limited by careful attention to tribal boundaries and by the location of resources. With almost predictable regularity, the more elaborate villages occupied sites accessible to the trilogy of water-body, cultivation-ground, and forest.

This local pattern was reflected in the general distribution of population and economy throughout Aotearoa. The northern peninsula and shores or the North Island were preferred by the later Maoris. The patterns of settlement and economic basis, indeed, suggest a broad division of Aotearoa into geographic regions. The Northland peninsula and the eastern and western shorelines undoubtedly accommodated the majority of the Maori population, for there an intricate coastline with unusually abundant fish resources, a more varied and less marginal horticulture utilizing a relatively warm, moist climate, and a greater range of forest products were available. The Rotorua thermal region with its forest-fringed lakes also proved attractive, and the Waikato river funneled colonization into the interior. Along the west coast, the Taranaki shores were closely occupied. In this northern region the villages were larger and more thickly clustered, while woodcarving and other features of Maori culture reached their highest degree of elaboration. But the axial ranges with their monotonous beech forest, and the poorer soils and the cooler climate of the volcanic plateau were less easy to colonize: settlement clustered into rather isolated pockets where fowling and gathering were more significant than cultivation. Settlement thickened along the Wanganui River where eel and forest resources were abundant, and on both shores of Cook Strait, where these resources were supplemented by sea fishing and *kumara* cultivation. Taro and gourd were probably present but in insignificant amount.

While the northern inlets and the northeastern fringe of the island as far south as Banks Peninsula sustained some *kumara* cultivation, the great mass of the South Island supported only a meager and largely nomadic population which relied almost wholly upon the yield of fishing, fowling, and gathering grounds, occasionally supplemented by the products of northern agriculture exchanged for potted "muttonbird" (shearwater) and especially precious greenstone. For the latter, though sometimes procured directly by northern tribes, was also secured by parties who tapped the resources of the Lake Wakatipu area or carried the stone from the rain-soaked western districts of Milford and Arahura through tortuous Alpine passes to be accumulated and fashioned in the settlements of the eastern coast. Thus the resources of the far southwest were quarried for the Polynesian population that fished and cultivated by the warm northeastern shores.