Natural meadow communities are absent and coastal scrub is limited in its distribution to a single small area in the south-east. Except in two places, coincident with easier slopes and low cliffs, where coastal forest reaches to the shoreline, it is impossible to land on or to climb the steeply rising series of peaks (100ft to 300ft high) that characterize this central island chain. Along some of the cliffs the rhyolitic breccias so typical of the Alderman Islands are replaced by an intrusion of columnar, weather-pitted rhyolite. These rock columns are closely adjacent to each other and appear to be precariously perched. Similar columnar rhyolite occurs on the high western cliffs of Ohena, Mercury Islands, to the north. These columnar cliffs, even more than the weathered breccia so typical of all the islands except Hongiora, are generally completely devoid of vegetation.

The coastal forest pockets on the "Middle Island" are very similar to unmodified coastal forest found on the southern and eastern shores of Hauturu or Little Barrier Island (Kirk, 1868; Hamilton, 1961). Groves of the "bird-catcher tree", parapara (*Heimerliodendron brunonianum*), karaka (*Corynocarpus laevigata*), *Metrosideros excelsa* and profusely growing *Brachyglottis repanda* occur along with a variety of other species. Amongst the latter are tall *Paratrophis banksii*, shrubby waiatua (*Rhabdothamnus solandri*), hangehange (*Geniostoma ligustrifolium*) and most of the shrubby trees found on the other islands of the group. *Coprosma repens, C. robusta, Hymenanthera novae-zelandiae, Pittosporum crassifolium* and *Myoporum laetum* along with kawakawa (*Macropiper excelsum*), *Peperomia urvilleana* and *Asplenium lucidum* form a fairly dense undergrowth. This contrasts with the relatively less dense undergrowth beneath the areas of pohutukawa (*Metrosideros excelsa*) forest that covers much of this island chain. Whau (*Entelia arborescens*) occurs on the northern portions of Middle Island as an active initial colonizer of moist slip faces. This species is later replaced by vigorously growing *Brachyglottis repanda* and *Coprosma* spp.

HONGIORA

Hongiora, a lower, gently sloping island, is at complete variance with the precipitous peaks of the "Middle Island" and is by contrast the antithesis of the steep slopes of the two larger islands, Ruamahua-nui and Ruamahua-iti. Though rising in near vertical but irregularly turreted cliffs from the sea most of the twenty-eight acres of Hongiora are gently undulating. This island is formed of rocks from a lava flow in which breccias appear absent. Hongiora is much lower than the other Alderman Islands and slopes gradually down to the east and to the south. In the south the irregularly rectangular island terminates in a narrow fishtail peninsula that is approximately a quarter of a mile long (Fig. 1).

Apart from pohutukawa (*Metrosideros excelsa*) forest at the higher cliff edges and two small areas of natural meadow in the north and east of the island a dense and in places an almost impenetrable coastal scrub covers the greater part of the entire island (Fig. 2). *Hebe* spp. occur frequently, but the shiny-leaved naupata (*Coprosma repens*) and *Hymenanthera novae-zelandiae* are conspicuously dominant. Breaking the otherwise even, windshorn canopy of the coastal scrub are occasional karo (*Pittosporum crassifolium*), *Paratrophis banksii, Myoporum laetum* and *Metrosideros excelsa* trees.

Although the Alderman Islands still support very heavy bird and tuatara (*Sphenodon punctatus*) populations, they reach a maximum on Hongiora. Near cliff margins in positions favoured by sea birds the ground is often devoid of undergrowth apart from occasional *Phormium tenax* bushes and clumps of *Asplenium lucidum*. Seedling establishment is difficult, but the heavily manured, well aerated and often loose soils do, however, allow a very vigorous and luxuriant mature vegetation to flourish. Many intersecting passages through the dank