

## NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER



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## PA DISTRIBUTION IN NEW ZEALAND

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When the distribution of Maori fortifications or pa throughout New Zealand is plotted, it may be noted that the current generalisation that the great majority of these sites are clustered in the northern half of the North Island (that region termed by geographers "Iwitini"), is confirmed. However, it is most apparent when the distribution is considered in detail that pa densities vary greatly within Iwitini. Most of these gaps correlate with rugged terrain or infertile soils but there is a significant number of regions where, despite what would appear to be a very high environmental potential, pa seem underrepresented or are absent. It is probable that some of these gaps are in distributional knowledge, but this does not apply in other cases. In the area about Pukekohe, south of Auckland, inland from Whangarei, and in a number of coastal regions, pa are not found or are few in This contrasts with many areas, such as some coastal areas in Northland and, in particular, the Bay of Islands, Taranaki, and the Bay of Plenty, where densities are high.

If <u>pa</u> clusters are recognised as indicators of relatively high population density, then something can be said of the relationship between environment and population density. It must be recognised that, in general, the areas of greatest population distribution are in areas of high environmental potential: that is, they fall within Iwitini associated with fertile soils and/or coastal resources. However, this relationship cannot be stated in deterministic terms. That is, there is no absolute correlation between easy environments and population density.

It is therefore suggested that what is needed to consider the environment/population density relationship, is some form of stochastic (chance) model that recognises the possibilistic conditions inherent in easy environments.