# AUSTRALIAN ABORIGINAL ETHNO-LINGUISTICS

Dori Peers (Brian Codding)
Anthropology Department

Australian Aboriginal populations have astonishingly high ethnolinguistic diversity. There are approximately 574 different Aboriginal tribes in Australia, each having their own language within their territories (Birdsell 1953). These tribal units vary in size from 300 to 600 people and averaging 500. Few tribes however can range in size from 1,000 to 2,500. Current research has involved analysis of subsistence and how oceanic environments, river fronts and the availability of rainfall have an influence on the sizes of each tribe (Birdsell 1953). This research is to study what explains Australian Aboriginal hunter-gatherer territory size, by conducting studies of the functionality of hunter-gathering ethnic group size, and the factors that cause ethnic diversity. The hypothesis that territory size varies with environmental productivity.
Net primary production (NPP), is a measurement of vegetation growth that is calculated by a measure of estimated photosynthesis activity. By evaluating territory size and adding in the NPP value, we can predict a territorial population size based on environmental activity. A tribe's mobility is also a factor into this equation. Hunter gatherers are more mobile than pastoral and agricultural groups and therefore their group size might be smaller. Tribal areas with more rainfall and near coastal regions tend to be higher in population verses dryer areas reliant upon rainfall.

This research outlines patterns in the Aboriginal ethnolinguistic territories relative to environmental productivity. Our results show that smaller territories occur in more productive environments, also suggesting that population density is higher in smaller territories, mainly along the coast. Studies of the functionality of hunter-gatherer ethnic group size, and the factors that cause ethnic diversity, suggest that ecosystems with high net primary productivity—ecosystems such as oceans, estuaries, and rainforests—have a higher carrying capacity (Codding and Jones 2013), possibly allowing for greater social complexity (Currie and Mace 2009, 2012). Our findings also suggest that the underlying environmental drivers of ethnic diversity are the same that drive biodiversity, thereby supporting the conclusions from previous research (e.g,. Harcourt 2015) showing that healthy ecosystems with high net primary productivity also have greater biodiversity. This research confirms our prediction that smaller territory sizes have higher environmental productivity. Future work will continue to build on these data by examining the relationships between NPP, territory size, population density, and social organization.