

Discerning the Origins of the Negritos, First Sundaland People: Deep Divergence and Archaic Admixture

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Abstract

Human presence in Southeast Asia dates back to at least 40,000 years ago, when the current islands formed a continental shelf called Sundaland. In the Philippine Islands, Peninsular Malaysia, and Andaman Islands, there exist indigenous groups collectively called Negritos whose ancestry can be traced to the “First Sundaland People.” To understand the relationship between these Negrito groups and their demographic histories, we generated genome-wide single nucleotide polymorphism data in the Philippine Negritos and compared them with existing data from other populations. Phylogenetic tree analyses show that Negritos are basal to other East and Southeast Asians, and that they diverged from West Eurasians at least 38,000 years ago. We also found relatively high traces of Denisovan admixture in the Philippine Negritos, but not in the Malaysian and Andamanese groups, suggesting independent introgression and/or parallel losses involving Denisovan introgressed regions. Shared genetic loci between all three Negrito groups could be related to skin pigmentation, height, facial morphology and malarial resistance. These results show the unique status of Negrito groups as descended from the First Sundaland People.

Key words: Negritos, Southeast Asia, admixture, population genetics, Denisovan.

Introduction

The question of how and when anatomically modern humans made the journey out of Africa and into all corners of the world has been of great interest. It is widely acknowledged that humans have been in Southeast Asia (SEA) at least 40–50 thousand years ago (ka). Indeed, human remains found in Niah Cave in Borneo (Barker et al. 2007), Callao Cave in the Philippines (Mijares et al. 2010) and Tam Pa Ling in Laos (Demeter et al. 2012) were dated to approximately that time period. Then, the current islands of Sumatra, Java and Borneo were connected

with the Asian mainland, forming the landmass known as Sundaland. A cluster of islands separate Sundaland from another landmass called Sahul, made up of what is now New Guinea and Australia.

There are several human populations scattered throughout SEA that are thought to be descendants of the “First Sundaland People.” They are collectively known as Negritos and are currently found in the Andaman Islands, Malay Peninsula and several islands in the Philippines. They have been traditionally associated with a hunter-gathering lifestyle, and also exhibit physical features that are distinct from their