The relationship between agriculture and social complexity is a complicated one through both time and space; this is no less true in prehispanic Mesoamerica. Human occupation of the Pacific Coast of Guatemala prior to Spanish contact was affected by the human relationship within a physical environment, including the vegetation and climate. I examined multiple lines of evidence, including phytolith, pollen, and settlement data, seeking to detect changes within the paleoenviromental, paleoclimatic, and socio-cultural records from the Middle and Late Formative (1000 BC to AD 150) through the Classic (AD 150 to 600) and Post-Classic (ca. AD 1000) periods. This work reveals that social complexity on the Pacific Slope of Guatemala developed alongside agricultural intensification. More significantly, however, it also reveals that while there was a population collapse on the Pacific Slope at the end of the Late Formative period, there was not the correlating drought or decline in agriculture seen in other areas of the Maya homeland.