This paper uses a qualitative case study of the fishing industry and occupation in Nyanza province, Kenya, to highlight and illustrate two consequential but perhaps underemphasized aspects of trying to understand the demography of disease and in particular that of the HIV epidemic. The first aspect is that ecology and the physical environment matter in health outcomes; the second is that the gendered structure of local economies can have consequences for individual health outcomes. The paper first presents theoretical background, followed by a description of the data, setting, and methods. Mojola then discuss Lake Victoria and its physical environment, both as experienced by the Luo, as well as discussed in the ecological literature. She then turns to exploring the fishing occupation and the lives of Luo-Nyanza fishermen and shows how their sexual relationships and sexual mixing patterns were as much a function of the changing ecological environment in which they fished, as they were about the gendered structure of the fishing economy.