A disease referred to as Tilapia Wasting Disease has been recognized in the Mandri and Santa Teresa Lagoons near Humacao in eastern Puerto Rico at least since the 1980s. This disease is associated with mass mortalities of Mozambique Tilapia, *Oreochromis mossambicus* and Blue Tilapia, *O. aureus*. Fishes had sunken abdomens, rough and hemorrhagic skin, and frayed fins. Infections were also marked by the presence of numerous granulomas throughout the skin and internal organs, especially the spleen, kidney, heart, liver, and gill tissues. Lesions showed the classical histopathological picture characteristic of other systemic hyphomycoses in piscine hosts, including the presence of invading hyphae, hyphal fragments, conidia, and mixed cellular and caseous material surrounded by fibrous connective tissue of varying thickness. Other fungi and bacteria were not recovered from lesion material suggesting this fungus was the etiological agent. Further studies to test Koch’s Postulates, and to determine the source and route of infection are required.