

NATURAL COLONIZATION OF LOGGERHEAD TURTLE EGGS BY THE PATHOGENIC FUNGUS *FUSARIUM OXYSPORUM*

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Abstract

Sea turtle nests are exposed to different environmental risks that may affect their hatching success. Human exploitation, predation by wild or domestic animals, nest flooding or severe beach erosion or accretion are common causes of egg mortality. However, there is very little information about the impact of microorganisms on turtle eggs. We analyzed loggerhead turtle eggs from Boavista Island (Republic of Cabo Verde) which were incubated under different environmental conditions in order to evaluate the presence and impact of fungus. We have isolated *Fusarium oxysporum* from dead and live eggs after three days of incubation. This fungal species is a very well known plant pathogen that attacks a great variety of species including important commercial crops. The fungus grows imbedded within the eggshell and can colonize the yolk and the embryo. It is usually spherical and can present bright yellow, blue or orange colorations. Many fungus-colonized eggs die within a short period of time. We have also found the fungus in shells of hatched eggs. Hatchlings from infected eggs may suffer several physiological problems such as bronchopneumonia. We only detected fungus in eggs that were incubated in natural substrates. Freshly laid eggs isolated directly from the female cloacae did not show fungus development. Similar results were found when those eggs were incubated in sterilized sand. Fungus spores may be common in nesting beaches and represent a potential risk for the species conservation. Any activity that favours the presence of this fungus in the nesting beaches should be avoided.