

### **Why are so important bird conservation projects?**

We must understand that everything is connected by the ecosystem chain. Animals and organisms are connected to contribute to the environment system in a perfect synchrony and mutualism. Now a days, the anthropogenic impact on the animals and in the environment is heavy, threatening since the small to the biggest organism on earth. Overfishing, bycatch and marine litter have an impact directly on marine birds, decreasing the population in the colonies drastically together with climate change. The Common and Roseate Tern colonies in Europe have projects of conservation continuously working since 1968 that is why they are considered Least concerned in the IUCN Red List. Only because of that effort, of many and many believing people and spending their time with a small bird that makes a huge difference in the environment. They are highly migratory birds which means that the migratory stations also must be preserved to complete the life cycle of this birds. They are a precious element for the biodiversity in the marine ecosystem and are considered sentinels when we have to analyze our waters. That is why we have to search partners to develop projects and understand more about the real situation affecting our colonies. As their diet are composed mainly of fish, they bioaccumulate xenobiotics and behave as host for many parasites, remembering that the fish they eat likely have commercial value. In Ireland, Colonies of Roseate Tern and Common Tern take their places in Rockbill Islands and Kilcoole. The previous studies show that the population is increasing but still there are many dead chicks found in the nests and in no other study they have reported any health assessment of this population. My study is aimed at accessing any possible information about the chick's death among the colony identifying parasites, and organs alterations using histological tool analysis. The microscopic method will make me dive deep at the cell level, and the results will help me to come with a conclusion. The analysis of the body for me is something from another world, understand the organs alterations and outcome with possible death cause is priceless. The ante mortem and post mortem signs can be very subtle but the microscopic method many times certify the information in a cellular basis. I chose to dedicate my time with these birds because we can have big surprises inside of these organisms. The environment is changing giving more chances to infections and new diseases to show-up specially in a highly active animal. We already know that a long-term study is needed to keep up with the generations and record the annual trend, as the possible pathologies affecting the population. My study will be a support information to compare with other researches carried out by other institutions in other places that are migratory stations for these birds.

