

Ecological niche for the establishment of *Oestrus ovis* L. (Diptera:Oestridae) in Cuba

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Oestrus ovis was ever reported in Cuba before 1995 when emerge in the Guantánamo province, coinciding one of the hottest places of the entire country. Guantánamo relief influences three consistently different weather conditions useful to identify ecological niche for the establishment of *O. ovis*. To identify the environmental and climatic variables affecting the distribution of *O. ovis* geographic point data of oestrosis outbreaks were interpolated with layers of: sheep population density, altitude above sea level, mean of humidity, mean of minimum temperature and climate types according to the TorthWhite classification. According to Pearson correlation, the outbreak density was no related to susceptible animal density nor humidity or altitude above sea level. However X2 test demonstrated that arid and semi-arid areas concentrated a significant higher proportion of oestrosis outbreaks. Oestrosis outbreaks mostly coincided (70%) with these types of weather, indicating that its optimal breeding conditions are present in import areas of the territory, as well its importance for fighting against the parasite. The main climatic characteristics of the semi-arid areas in Guantánamo did not differ from those internationally recognized for semi-arid areas of the world. Dry lands were characterized by their dry weather to very dry, and irregular, with herbaceous or shrub and rarely tree vegetation, which is unevenly distributed and offers very little ground cover. The temperature was the climatic variable that better explain outbreaks distribution with an adjusted coefficient of determination of $R^2 > 0.8863$. According to projected climate change *O. ovis* could become endemic in new areas. The currently oestrosis distribution suggests emphasized fighting again its causal agent before its establishment in new areas.