

1086-D5-1128      **Gabriella Marie Muscat\*** ([muscat.gabriella@gmail.com](mailto:muscat.gabriella@gmail.com)), 211 Post Hall, Adelphi University, 1 South Ave., Garden City, NY 11530, and **Salvatore P Giunta** ([sgiunta@adelphi.edu](mailto:sgiunta@adelphi.edu)), 211 Post Hall, Adelphi University, 1 South Ave., Garden City, NY 11530. *Analyzing the Bald Eagle Population: Difficulties and Successes*. Preliminary report.

One application frequently covered in Mathematical Modelling courses is an analysis of statistical data. We will discuss a common project topic: given a set of population data (including age distribution, migration patterns, and life expectancy), fit curves to the data and project future populations. In particular, we discuss the practical difficulties students may encounter in trying to gather real-world data of this form, specifically with (formerly) endangered species such as the Bald Eagle; low population numbers may call into question the statistical significance of the available data. We also present a case study incorporating the Bald Eagle and Golden Eagle Protection Act into our data to explain why these populations suddenly stopped decreasing. (Received September 19, 2012)