inlabruSDMs: an R Package to Facilitate the Modeling of Integrated Species Distribution Models

Data integration of disparate datasets is a rapidly growing research area in the field of quantitative ecology due to both the rise in species' occurrence data, as well as the proven statistical benefits of using such methods. However, the general tools and software to construct integrated species distribution models from data obtained from a variety of sampling procedures is lacking. We present the R package, inlabruSDMs: an easy to use package which aims to facilitate the construction of marked integrated species distribution models, by using the integrated nested Laplace approximation methodology to approximate the model. The package is illustrated through a case study studying the relationship between the underlying environment and the distribution of three Warblers, using data obtained from both citizen science records and formal bird sighting surveys obtained across Pennsylvania state.