Nesting Habitat Selection and Breeding Distribution of Two Sympatric Insular Eagle Populations: The Golden Eagle and the Bonelli’s Eagle on the Island of Crete, Greece

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In the current study we present data collected during the last two decades on the island of Crete (Greece) regarding the nesting habitat of two sympatric species namely the Golden Eagle (Aquila chrysaetos) and the Bonelli’s Eagle (Aquila fasciata) on the o-ve Krίt (Греция). The factors that determine the species nest site selection were identified via a logistic regression model and nesting habitat suitability maps were constructed by using maximum entropy models and a Geographic Information System. At the spatial scale considered, the best predictors of nesting habitat were topographical variables such as altitude and slope indicative for the requirement of rugged terrain. The predictive maps represented by the subset of topographic variables were also able to predict nest-site selection by both species more adequately than subsets of bioclimatic or human disturbance variables. Based on the overlap of the available nesting habitat of the two eagle species, an ecological separation was detected most probably related to their diet spectrum and consequently foraging range. Compared to the Golden Eagle the Bonelli’s Eagle was found breeding on lower altitude, more often on sea cliffs or the ends of gorges and in the periphery of mountain areas. In the latter case human-induced mortality and land use changes are regarded as significant factors for the observed pattern.