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ABSTRACT BOOK

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A twist of fate: Conservation of Lake Prespa's iconic snakes

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Golem Grad island, better known as "Snake Island" due to the large population of dice snakes (*Natrix tessellata*) is a strictly protected area within National Park Galičica (North Macedonia). From 2008, the snakes' tale started slowly unravelling, thanks to the start of mark-recapture monitoring. More than 6.000 snakes were marked during >15 years. Opportunistic dissections provided information about fecundity and body condition. Three distinct colour morphs coexist: 'green back with dark spots' is the most common, but uniformly green and melanistic individuals are not rare either. Furthermore, this population exhibits gigantism, possibly due to the abundance of food: the largest island male and female measured 113cm and 129cm, respectively, in contrast to maximal body sizes from other populations reported in literature: 95cm and 122.5cm. Worryingly, this island population faces serious threats, especially fish poaching. Hundreds of snakes meet their untimely fate tangled and ultimately drowned in fishing nets, or even persecuted, while small individuals are crushed by the rocks they hide under by wandering tourists. Despite continuous conservation efforts, this snake population is rapidly declining, particularly since 2011 when poaching pressure increased. More recently, additional dice snake population surveys were launched in Prespa, in Konjsko village (MK) and on Mal Grad Island (AL). The conservation status differs among the three localities. According to IUCN Red Lists, the dice snake is considered as Near Threatened (NT) in North Macedonia, while in Albania it is still classified as Not Evaluated (NE; however in the new, updated list of 2019 (still unpublished) it has been evaluated as Least Concern (LC)). We plan to use genetics and recapture analyses to assess the genetic structure and the degree of (possible) connectivity among sites. This information will be especially useful in order to understand how viable Prespa Lake's dice snake population(s) are, despite the various pressures they face. Efficient conservation actions rely on such insight, while a species conservation action plan at the transboundary level is required.

Key words: Monitoring, dice snakes, island populations, ecotourism, poaching