

Abstract

The gray partridge (*Perdix perdix*) is a bird species living in hiding and nesting on the ground in the open landscape. Even though this species uses several well-known anti-predator adaptations and strategies, its nests are often predated. The range of nest predators and the circumstances of predation have not, however, been satisfactorily described yet. This diploma thesis summarizes the results of experiments carried out on artificial nests and is supplemented by the description of nest behaviour of two incubating hens obtained from video shooting their nests. This work also includes the results of video shoots of predators on artificial nests, the most common of them being the marten. The successful survival of nests in all experiments was influenced mainly by hiding the nest in vegetation. However, the presence of feather odour of adult birds increased the risks of predation even for well-hidden nests. Nests placed in grass biotopes survived the best regardless their covering. What mattered most in other biotopes (along the edges of field roads, forests or groves and field biotopes off any lines) was the covering of nests with vegetation. Partridges nesting close to the edge of a forest or a grove are not very safe from predators. The fact that both nesting partridges and nest predators prefer a similar microhabitat implies that the partridge has got into an ecological trap at the level of the micro-biotope. The influence of structural variety of the field landscape on the risks of nest predation has not been proved. However, the data showed a tendency towards better survival in field areas with the highest structural variety. Nests with five pheasant eggs were predated more often than nests with one quail egg. The occurrence of multiple repeated predation incidents on pheasant nests was significantly higher compared to the quail nests. The energetically richer pheasant clutch was probably the motivation to repeated visits from mostly mammalian predators. Recurring predation incidents also on quail nests together with the absence of predation on many other nests imply that predators repeatedly used the same routes. This can be related to the finding that artificial nests placed at positions of real predated nests of last year or the year before last fell prey to predation again. This work emphasises that the gray partridge with its energetically very demanding clutch and a long lasting incubation period nesting in the present agricultural landscape with insufficient nest coverage is in spite of its anti-predator adaptations very vulnerable to predation.

Key words: gray partridge, nests predation, artificial nests, vegetation cover, feather odour, repeated predation, predation event