

Orzeł przedni *Aquila chrysaetos* w polskiej części Karpat w latach 2008–2011**Golden Eagle *Aquila chrysaetos* in the Polish part of the Carpathians in 2008–2011**MARIAN STÓJ¹, BOGUSŁAW KOZIK², BARTOSZ KWARCIAŃY³

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W latach 2008–2011 na obszarze około 8860 km² polskich Karpat stwierdzono występowanie 27 par orła przedniego *Aquila chrysaetos* (zagęszczenie 0,30 pary/100 km² pow. całkowitej), a populacja wykazywała fluktuację w stosunku do wyników z dwóch poprzednich okresów badań: niewielką tendencję wzrostową w porównaniu do lat 1993–1996, a malejącą w stosunku do lat 1997–2007. W Karpatach Wschodnich zaobserwowano 13 par, a w Karpatach Zachodnich 14. Średni sukces gniazdowy dla czteroletnich badań wyniósł 63%, liczba piskląt na parę przystępującą do lęgu – 0,68, a liczba młodych na parę z udanym lęgiem – 1,08. Parametry rozrodu karpackiej populacji były jednak zmienne w poszczególnych latach. Straty całkowite (20 przypadków, 37% lęgów) były wynikiem m.in. niekorzystnych warunków pogodowych oraz działalności człowieka. Wysoki sukces gniazdowy (78,6 i 76,5%) orły przednie odniosły w latach 2008 i 2011, a niski (27,3%) w 2010 roku. Sukces gniazdowy zależał głównie od warunków atmosferycznych, dostępu do ofiar, kurczenia się łowisk na skutek zalesień oraz powstawania niekontrolowanej, rozproszonej zabudowy. Po wejściu Polski do Unii Europejskiej, dzięki dopłatom bezpośrednim dla rolników nastąpił powrót do użytkowania gruntów w górach poprzez koszenie i wypasanie łąk, co w konsekwencji przyczynia się do poprawy stanu łowisk orła przedniego i dobrze rokuje na utrzymanie karpackiej populacji tego gatunku w przyszłości.

SUMMARY

The paper summarizes the results of monitoring of the golden eagle carried out in the Polish part of the Carpathians (ca. 8860 km²) in 2008–2011. Many small populations of the golden eagle in Europe are threatened with extinction. Also in Poland, it is included among high risk species, highly threatened with extinction. In 1993–1996 the occurrence of 21–24 pairs was confirmed and in the subsequent years (1997–2007), the number of breeding pairs was assessed at 29–32.

In 2008–2011, the presence of 27 territorial pairs was confirmed in the studied area, including 25 pairs with a known nest. Seven pairs were nesting in the Sanocko-Turczańskie Mts, six pairs in the Western Bieszczady Mts and six pairs in Beskid Niski (Mts), two pairs in Gorce (Mts), and one pair in Beskid Sądecki (Mts), the Spisko-Gubałowski Foothills, Pieniny (Mts) and the Tatras. Single pairs without a known nest were also observed in Beskid Żywiecki (Mts) and Beskid Wyspowy (Mts). The report on the monitoring results includes also four pairs from the borderland home ranges, which also made nests on the other side of the border – 2 pairs in Ukraine (Bieszczady Mts, Sanocko-Turczańskie Mts) and 2 pairs in Slovakia (Beskid Sądecki Mts, Pieniny Mts). Nearly half of the golden eagle population occurs in the Eastern Carpathians, with the density of 0.52 pair/100 km². Golden eagles in the Polish Carpathians prefer fir and fir-beech forest stands located in the vicinity of extensive deforested and semi-open lands. They nest in areas located near the summit, between 400 and 1450 m asl., in small ground depressions sheltered from wind, but usually with a good view over the surroundings. Altogether, 45 nests were inspected in 25 home ranges, including 41 nests (91.1%) on a fir tree *Abies alba*, and one nest (2.2%) on the European black pine *Pinus nigra*, one nest (2.2%) on larch *Larix decidua*, one nest (2.2%) on beech *Fagus sylvatica*, and one nest (2.2%) on the rock. The average height of a nesting tree was 35 m (range 21–41 m, *N* = 38), and its average perimeter (measured at 1.3 m) – 258 cm (range 147–380 cm, *N* = 38). On average a nest was placed 25 m (range 11–35 m, *N* = 38) above the ground. The outer diameter of nests was ca. 132 cm (range 110–200 cm, *N* = 35), the inner diameter was 53 cm (range 45–80 cm, *N* = 35), the height of a nest 80 cm (range 30–200 cm, *N* = 35), a the depth of a nesting basin 10 cm (range 8–15 cm, *N* = 16). Individual pairs had from 1 to 5 nests in their home ranges. During four monitored seasons (2008–2011), 63% (*N* = 54 clutches) of incubations were successful, altogether 37 young birds left their nests during that time. The average number of nestlings per breeding pair was 0.68, and 1.08 per pair with a successful incubation. High nesting success (78.6 and 76.5%) was recorded in 2008 and 2011, and low nesting success in 2010 – when only 3 nestlings per 11 breeding pairs left a nest (27.3%). Twenty cases of complete clutch losses were recorded. Among those with a known cause, the following were confirmed: water soaking and hypothermia of nestlings (2 cases), abandonment of nests during incubation of eggs as a result of forest works (2 cases), predation (1 case), sliding down of a nest during incubation of eggs (1 case), suspected theft of eggs by man (1 case), poisoning of a breeding pair (1 case). The nesting success in 2008–2011 (on average 63%) was lower than the result in 1993–1996 (on average 68%), and slightly higher than the nesting success (62.3%) in 1997–2007. After accession of Poland to the EU, owing to direct subsidies for farmers and agri-environmental programmes, actions aiming at the reduction of succession have been undertaken, and extensive farming has been resumed, which gives hope for the long-term preservation of areas that are hunting grounds of the golden eagle.