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The Peregrine Falcon *Falco peregrinus* in Poland – its situation and perspectives for reinstatement

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Abstract. Since the middle of this century, the Peregrine Falcon was a species which – although rare – was still resident throughout Poland, with the lowland population nesting in trees. However, the nesting population disappeared almost totally from the 1960's onwards, with only three proven instances of nesting in the period to 1994, as well as several observations of birds of unknown status. It is the considered opinion of the authors that the natural re-establishment of a tree-nesting population of Peregrine Falcons in Poland is improbable in the foreseeable future, and that reintroduction measures will therefore be required if the species is to be reinstated in the country within a realistic time frame.

Key words: Peregrine Falcon *Falco peregrinus*, Poland, endangered species, reintroduction, birds of prey.

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INTRODUCTION

The present work is based on data in the literature as well as information obtained from other sources in relation to current observations of the Peregrine Falcon in Poland. The basic historical data have been taken from Tomiałojć (1990) and from Pielowski *et al.* (1992).

HISTORICAL DATA

The earliest Polish work concerning birds was a manual ["Hunting birds"] by Mateusz Cygański (1584). The description given there allows it to be judged that the Peregrine Falcon was a widely-encountered bird in the Poland of the 16th century. In turn, in the 19th century, it was considered a rare breeding bird of large forest complexes throughout the country (Wodzicki 1858, Taczanowski 1882). In the view of Taczanowski (1860), forests with areas of about 2000 ha generally had 2-3 nesting pairs of Peregrine Falcons: a figure that would seem exaggerated in the light of present knowledge. The species still

occurred throughout the country at the beginning of the present century. Indeed, as recently as in 1933, it was still possible for Sokołowski to refer to it as a species nesting throughout Poland, albeit as a rarity everywhere. At around that time it was still present in some numbers in Silesia, the Poznań area, the Lublin area and Western Pomerania (Pax 1925, Schnurre 1936, Uttendorfer 1939). However, the greatest frequency of occurrence was in the former East Prussia, where Tischler (1941) estimated that there had been 100 nests in the Olsztyn area alone in 1935. Uttendorfer (1939) and Knabe (1941) referred to the presence of birds in the majority of Grey Heron *Ardea cinerea* colonies. The densities occurring at the time in the Mazury region and Puszcza Piska (the Piska Forest) may be estimated at 5.3-8.0 pairs/1000 km² (Pielowski *et al.* 1992).

There are few reliable observations of the nesting of Peregrine Falcons in Poland in the period between the end of World War II and the 1960s. Puchalski (1957) described two cases of breeding in the Mazury region in the years 1947-1948. One of these concerned a nest in a lime *Tilia sp.* near Lake Dobskie in which five eggs produced five nestlings which were sub-

sequently taken before flight from the nest by a White-tailed Sea Eagle *Haliaeetus albicilla*. Domaniewski (1951) and Sokołowski (1956) described the Peregrine Falcon as a rare species nesting in forested areas – often in the vicinity of heronries, as well as in the Tatras. Indeed, it must have been around 1950 that the catastrophic decline in numbers began. As in other countries, the cause should be sought in the influence of DDT and other pesticides (Tomiałoć, 1990), although it seems possible that other factors were also involved, since the decline had begun even before the use of these products had become widespread in Poland. There is an unfortunate lack of data by which to describe the size and rate of the decline, and it is left to checks carried out at heronries in north-western Poland to indicate the rapidity of the process. Only 7 cases of breeding were observed in this area after 1945, and the last of these instances was in 1961 (Bednorz 1962, Wiegner 1959, Tomiałoć 1990). The species nested in Warsaw after 1945, but the last recorded nest was in 1950 (Luniak *et al.* 1964). Other last dates of breeding are: 1957 for the Białowieża Forest (Fischer 1961); 1959 for the Kampinoski Forest near Warsaw

(Mierzwiński 1965), 1962 for the Mazury region (Tomiałoć 1990), 1964 for the Tatra Mountains and for the country as a whole (a nest in the Barycz Valley referred to by Tomiałoć 1990) (Fig. 1).

It was thus very probably in the 1960s that the breeding population of Peregrine Falcons in Poland ceased to exist.

OBSERVATIONS AFTER 1970

Sporadic observations of the presence and breeding of Peregrine Falcons have been made in the period. A breeding pair was recorded near Świdnica, Silesia in 1970 (Fig. 1), but the birds deserted the nest without rearing young successfully (Tomiałoć 1972). Cichocki (1986) reports his finding in 1980 of a Peregrine Falcon nest originally built by Ravens *Corvus corax* and situated in a spruce *Picea abies*. The find was unusual, since it was made in the Tatra Mountains (Fig. 1) – a region where the species had traditionally nested in rocky niches. In contrast, the tree-nesting habit is characteristic of the population in the lowlands of central Europe. A pair of Peregrine Falcons was noted in the Tatras for two further years, but a nest was not discovered. Another nest in a tree was found in north-eastern Poland in 1990 by R. Kalski and M. Mellin (Faunistic Commission 1993) location in Fig. 1. Three young birds flew from the nest in the year of discovery, but falcons were not observed in subsequent years (M. Mellin – personal communication).

The above observations are augmented by several others whose final status is unknown. Information on these is cited in Table 1. Some of the cases (particularly nos. 4, 5 and 6 in the Table) could not be verified by the Faunistic Commission and are thus given for additional information only.

CURRENT RECONNAISSANCE WORK

The 150 ornithologists (including 30 ornithologists active in field work) associated with the Eagle Conservation Committee have carried out annual checks on the nests of the rarest birds of prey since 1981. The species in question are the White-tailed Sea Eagle *Haliaeetus albicilla*, Osprey *Pandion haliaeetus*, Spotted Eagle *Aquila clanga*, Lesser Spotted Eagle *A. pomarina*,

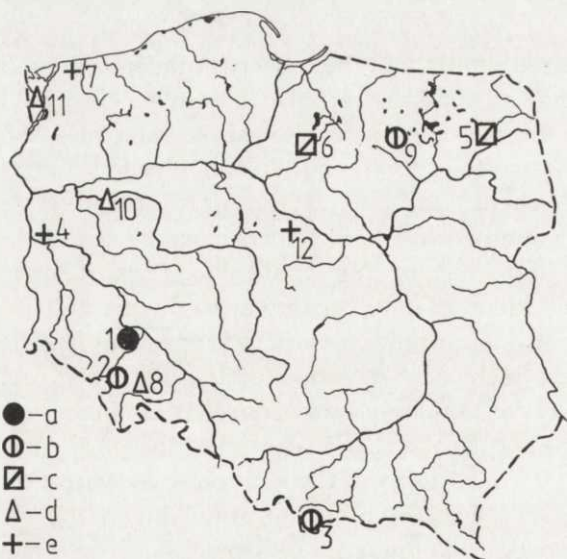


Fig. 1. Distribution of records of Peregrine in Poland since the time of the population crash (data – see Tab. 1); a – last known nesting before the crash, b – recorded nesting, c – probable nesting, d – possible nesting, e – status unclear. Numbers of localities as in Table 1.

[Ryc. 1. Rozmieszczenie stwierdzeń sokoła w Polsce od czasu kryzysu populacji; a – ostatnie znane gniazdo przed kryzysem populacji, b – stwierdzone gniazdo, c – gniazdowanie prawdopodobne, d – możliwe gniazdo, e – status niejasny. Numery stanowisk jak w tab. 1.]

Table 1. Records of the Peregrine Falcon in Poland since the time of the population crash (localities – see Fig. 1). * – reintroduced birds.

[Tabela 1. Stwierdzenia sokoła wędrownego w Polsce od czasu kryzysu populacji (rozmieszczenie – patrz ryc. 1). * – ptaki reintrodukowane.]

No	Time	Locality	Occurrence	Source
1	1964	Barycz valley	last known nesting before disappearance of population	A. Mrugasiewicz (Tomiałojć 1972)
2	1970	Świdnica area	breeding pair not rearing young successfully	W. Janek (Tomiałojć 1972)
3	1980	Tatra Mountains	nesting in spruce tree	Cichocki 1986
4	VI 1980	area of Krosno Odrzańskie	status unclear	inf. A. Karnaś
5	1980–1985	Biebrza Marshes	probable nesting	inf. K. Majewski (Maciorowski 1993, Dyrz 1984)
6	1989	Brodnica Landscape Park	probable nesting	inf. M. Tomoń.
7	V–VI 1988	Gryfice Forest District	pair, no nest found	inf. E. Glazer
8	spring 1989	Otmuchowski Reservoir	two adults, possible nesting	inf. J. Lontkowski
9	1990	NE Poland	nest, 3 young	Kalski & Mellin (Faunistic Commission 1993)
10	V 1991	Sieraków Zatom	2 birds, female ad., nest not found	inf. M. Dylawski
11	spring 1992	Szczecin area	displaying pair	inf. M. Kalisiński
12	1994	Włocławek area	displaying pair	Sielicki & Sielicki 1995*

Golden Eagle *A. chrysaetos* and Short-Toed Eagle *Circus gallicus*. Some nests belonging to Red Kites *Milvus milvus* and Black Kites *M. migrans* are also checked, along with colonies of Grey Heron *Ardea cinerea* and Great Cormorants *Phalacrocorax carbo*. As an example of the Committee's work, it may be noted that almost 900 nests of the aforementioned species were checked in 1994 (Komitet Ochrony Orłów 1994). It is surely of significance that such intensive efforts have not so far revealed a single nest belonging to Peregrine Falcons. Whilst this does not exclude the possibility that the species exists, it does certainly indicate that the breeding population is close to zero. The multitude of claimed observations of Peregrine Falcons by impartial observers have all failed to gain acceptance when attempts have been made to verify them.

PERSPECTIVES

A build-up in the numbers of Peregrine Falcons is continuing steadily in Western Europe. The population for the continent as a whole (excluding the former USSR) was estimated at around 5000 pairs in the years 1985–88. Of these, 800 were in Great Britain, 600 in France, 550 in Italy and 2000 in Spain (Gensbol & Thiede 1991). As of 1994 there were certainly more, since Great Britain alone had about 1500 pairs and Germany about 400. It should be recalled that Europe has three subspecies of Peregrine Falcon, of which the

one from the Mediterranean area *Falco peregrinus brookei* is the most numerous.

Some ornithologists (Tomiałojć & Szymkiewicz 1992) have expressed the view that the reintroduction of the Peregrine Falcon to Poland is not indicated on account of the excessively contaminated environment. However, the level of contamination does vary greatly from area to area within the country, and the areas of environmental disaster like Upper Silesia may be set against little-polluted regions such as the lakeland belt in the north of the country. Furthermore, another contamination-sensitive species, the White-tailed Sea Eagle *Haliaeetus albicilla*, is continuing to increase in Poland and is showing one of the highest levels of breeding success (number of young per pair) noted anywhere in Europe (Mizera 1990, Mizera & Szymkiewicz 1991). This success is being noted in the face of very variable levels of internal contamination with toxins such as mercury and lead (Falandysz *et al.* 1988, 1994).

The references made by Tomiałojć & Szymkiewicz (1992) to the example of Switzerland, where numbers rose from 1 to over 100 pairs without any reintroductions, is to some extent unjustified as reintroductions were in fact made in neighbouring countries. Furthermore, any discussion on reintroducing the species must take account of the most significant issue, namely the nesting habit of the birds in Poland. From The Netherlands to Western Siberia, lowland-breeding Peregrine Falcons have nested in trees. In contrast,

those in the remainder of Western Europe have chosen rocks, cliffs and manmade structures. Kirmse (1989) was of the opinion that the falcons characterized by these different nesting habits did behave as separate populations. Trommer (1994) gave support to this contention by stating that, on the basis of a review of the literature, there were no known cases of spontaneous changes from the rock-nesting habit to the tree-nesting habit. However, a change in the other direction may be possible.

Only a few cases of such behavioural changes are known from other falcons (specifically the Saker Falcon *Falco cherrug*). However, these affected whole populations, rather than just single individuals. The cases in point were referred to by Piluga & Tille (1991), who described many years of observation of the Saker Falcons using the nests of other large birds in the forest habitat of Ukraine's forest-steppe zone. The population remained stable until the end of the 1970s, but then disappeared in 1981. It moved to breeding in open steppe habitat, using the nests of Ravens *Corvus corax* on pylons carrying high-voltage cables which had been erected in the 1970s and early 1980s.

A second example has been noted in the Lower Volga region, where Saker Falcons "disappearing" from river banks were found two years later in colonies of Rooks *Corvus frugilegus*. In this case, the change in nesting habit had been accompanied by a change in diet from small rodents to Rooks (V. Flint – pers. comm.).

In contrast, it has been shown experimentally that imprinting in nestlings ensures that those falcons raised on buildings will go on to establish their own nests in the same kind of site. It would thus seem that there is only one available method by which to reinstate Poland's tree-nesting population.

The whole belt of northern Poland would appear to be ideally-suited to such efforts, on account of the presence of many nests of White-tailed Sea Eagles, Black Storks *Ciconia nigra*, Ravens and other large birds which could serve as breeding sites for Peregrine Falcons.

The return of the Peregrine Falcon to Poland, as a breeding bird, may take many years, so Trommer (1994) announced a proposal by which to accelerate the process which involved the collection of 200–300 young birds from the largest (British) population in the course of 2–3 years and with 1–2 birds taken from

each nest. Having been reared appropriately, these birds would be released with a view to reinstating the tree-nesting population. Such an action would require the great efforts and engagement of a large number of professionals but does have a precedent in the work to build up populations of White-tailed Sea Eagles and Red Kites in the United Kingdom. The population of Goshawks *Accipiter gentilis* is also entirely derived from continental individuals. In our opinion such projects make sense, and would be sensible in Poland also. Populations of other tree-nesting species, like those of Ospreys *Pandion haliaetus* in Scotland, have built up spontaneously, but have again derived from immigrants – in this case from Scandinavia where the population is considerable.

Reintroduction work has a positive role in education, and in the promotion in society of the idea of nature conservation. The impact would be still greater if it were possible to re-create a free-living Polish population of Peregrine Falcons in a relatively short period of time. The success of such an action would also allow for an end to the aviary breeding with a view to reintroduction which constitutes a source of conflict between ornithologists and falconers.

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REFERENCES

- Bednorz J. 1962. [Heron (*Ardea cinerea* L.) and Cormorant (*Phalacrocorax carbo sinensis* Shaw. et Nodd.) in N-W Poland]. *Bad. fizjogr. Pol. Zach.* 10:75–131.
- Cichoński W. 1986. [Some species of breeding birds in Tatra National Park]. *Parki Narod. Rezerw. Przym.* 1986, 7: 57–62.
- Cygański M. 1584. *Myślistwo ptasze* [Bird game]. Kraków, (reprint WAiF Warszawa 1979).
- Domaniewski J. 1951. [Game ornithology]. t. II, Warszawa.
- Falandysz J., Jakuczun B., Mizera T. 1988. Metals and organochlorines in four female White-tailed Eagles. *Marine Pollution Bull.* 19, 10:521–526.
- Falandysz J., Yamashita Y., Tanabe S., Tatsukawa R., Rucińska L., Mizera T., Jakuczun B. 1994. Congener-specific analysis of polychlorinated biphenyls in White-tailed Sea Eagles *Haliaeetus albicilla* collected in Poland. *Arch. Environm. Contamination and Toxicol.* 26:13–22.
- Faunistic Commission. 1993. [Rare birds observed in Poland in 1991]. Report No. 8]. *Not. orn.* 34:347–358.
- Fischer W, 1961. *Ornithologische Beobachtungen in der Bialowiezer Heide und in der Pilica-Niederung bei Smardzewice (Polen)*. *Falke* 8,9 & 12: 320–323, 418–421.

- Gensbol B., Thiede W. 1991. Greifvogel, Alle europäischen Arten, Bestimmungsmerkmale, Flugbilder, Biologie, Verbreitung, Gefährdungsgrad, Bestandsentwicklung. BLV Verl., München, Wien, Zürich, 390 pp.
- Kirmse W. 1987. Zur Habitatstruktur und Brutökologischen traditionsbildung bei Baumbreitenden Wanderfalken *Falco peregrinus* Tunstall. in: Stubbe M. (ed.), Populationsökologie Greifvogel- u. Eulenarten. Wissenschaftliche Beiträge 1987 / 14 (P 27), Halle (Salle), pp. 99–110.
- Knabe G. 1939. Ostpreussische Fischreihersiedlungen und der Zug ostpreussischer Fischreiher *Ardea cinerea* auf Grund sechsjähriger Bestandsaufnahmen und Beringungsergebnisse nach dem Stand vom 1 October 1937. Schr. Physo.-konom. Gesselschaft, 70,1:10–51.
- Komitet Ochrony Orłów, 1994. Bulletin No 6
- Luniak M., Kalbarczyk W., Pawłowski W. 1964. [Birds of Warsaw], Acta orn. 8,6:175–285.
- Maciorowski G. 1993. [Birds of prey of the central Biebrza basin], MSc thesis – manuscript in Libr. Agricult. Univ. Poznań, 72 pp.
- Mierzejewski W. 1965. Contributions to the avifauna of Poland. III *Falco peregrinus* Tunst. Sokół wędrowny. Acta Orn. 9, 3 : 125.
- Mizera T. 1990. The White-tailed Sea Eagle *Haliaeetus albicilla* in Poland: the present status and prospects. Baltic Birds, 2:17–23.
- Mizera T., Szymkiewicz M. 1991. Trends, status and Management of the White-tailed Sea Eagle *Haliaeetus albicilla* in Poland. Birds of Prey Bull. 4:1–10.
- Pax F. 1925. Wirbeltierfauna von Schlesien in Gebrudev Brontraeger. Berlin.
- Pielowski Z., Głowaciński Z., Profus P. 1992. [Peregrine *Falco peregrinus*] in: Głowaciński Z. (ed.) [Polish Red Data Book of Animals], Warszawa, pp. 142–145.
- Piługa W., Tille A. 1991. [Adaptation of Saker to antropogenic environment in N–W Black Sea stronghold]. in: Ilyitchev V. (ed.) [Mat. X All-Union Ornith. Conf.], Minsk, pp. 147–148.
- Puchalski W. 1957. Wyspa Kormoranów, Warszawa, 179 pp.
- Schnurre O. 1936. Ein Beitrage zur Biologie des deutschen Uhus. Beitr. Fortpfl. Biol. Vogel, 12:1–12, 54–69.
- Sielicki C., Sielicki J. 1995. Reintroduction of the Peregrine *Falco peregrinus* by hacking in the region of Włocławek (Poland) – method and preliminary results, Acta orn. 30:93–96.
- Sokołowski J.B. 1933. Przy gnieździe sokoła wędrownego, PROP, Nr 36, Warszawa.
- Sokołowski J.B. 1956. Ptaki drapieżne. PZWS, Warszawa.
- Sokołowski J. B. 1972. Ptaki Ziemi Polskich, II. PWN, Warszawa, 457 pp.
- Taczanowski W. 1860. O ptakach drapieżnych, Warszawa.
- Taczanowski W. 1882. Ptaki krajowe, Kraków.
- Tischler F. 1941. Die Vogel Ostpreussens und seiner Nachbargebiete. Königsberg/Berlin.
- Tomiałojć L. 1990. [Birds of Poland,] Warszawa 393 pp.
- Tomiałojć L., Szymkiewicz M. 1992. Zagadnienia ochrony ptaków drapieżnych w Polsce i problem sokolnictwa. in: Ołaczek R. (ed.) [Active Protection of Animals], Warszawa, pp. 79–105.
- Trommer G. 1994. Re-establishment of tree-nesting Peregrine Falcons. In: Newsletter of the World Working Group on Birds of Prey & Owls (WWGBP), No. 19/20:18–21.
- Uttendorfer O. 1939. Die Ernährung der deutschen Raubvogel und Eulen und ihre Bedeutung in der heimeschen Natur. Berlin
- Wodzicki K. 1858. O sokolnictwie i ptakach myśliwskich. Warszawa.
- Wiegner B. 1959. [Heron colonies of Wielkopolska and Lubuski regions] Przyr. Pol. Zach. 2, 1:55–67.

STRESZCZENIE

[Sokół wędrowny w Polsce – występowanie i perspektywy restytucji]

Praca jest oparta o dane z literatury oraz ostatnie obserwacje sokoła wędrownego w Polsce. Na początku XX wieku był to gatunek rozpowszechniony w całym kraju. Najliczniej występował na Warmii i Mazurach (dawne Prusy Wschodnie), gdzie tylko na terenie regionu Olsztyńskiego Tischler (1941) w 1935 roku ocenił stan na około 100 gniazd. Po II wojnie światowej aż do lat 60-tych dane na temat liczebności i rozmieszczenia sokoła wędrownego w Polsce są bardzo skąpe.

Około 1950 roku nastąpił katastrofalny spadek liczebności. Dane powojenne nie pozwalają określić czasu i tempa tego spadku. Jedynie kontrole czaplińców w północno-zachodniej Polsce pokazują szybkość tego procesu. W latach 60-tych populacja lęgowa sokoła wędrownego w Polsce przestała istnieć.

Późniejsze obserwacje sokołów i ich lęgów są sporadyczne.

W 1970 roku koło Świdnicy na Śląsku stwierdzono parę lęgową (Tomiałojć 1972), lecz opuściła ona gniazdo nie wyprowadzając młodych.

W 1980 roku Cichocki (1986) w Tatrach znalazł wyjątkowe gniazdo sokoła, które znajdowało się w starym gnieździe kruka na świerku (!).

W 1990 roku R. Kalski i M. Mellin (Komisja Faunistyczna SOPTZool. 1993) znaleźli gniazdo sokoła wędrownego na drzewie w północno-wschodniej Polsce. Wyleciały z niego 3 młode. W latach następnych nie zaobserwowano tam sokołów.

Ponadto znanych jest kilka obserwacji o nie pewnym statusie, przytoczonych w Tabeli 1.

Ornitologzy zrzeszeni w Komitecie Ochrony Orłów (ok. 150 osób, w tym ok. 30 aktywnie pracujących w terenie) kontrolują corocznie większość gniazd najrzadszych ptaków drapieżnych, a także kolonie czapli i kormoranów. Do tej pory nie stwierdzono w wyniku tych prac ani jednego gniazda sokoła wędrownego.

Nie wykluczając jego istnienia można jednak stwierdzić, że liczebność tego gatunku jest niewątpliwie bliska zeru.

W Europie zachodniej trwa obecnie odbudowa populacji sokoła wędrownego. Niektóre populacje wdzięczą ten wzrost reintrodukcji dokonanej przez sokolników, inne odbudowały się w sposób samoistny.

Niektórzy ornitolodzy (Tomiałojć & Szymkiewicz 1992) wyrażają pogląd, że reintrodukcje sokoła w Polsce nie są konieczne, ze względu na skażenie środowiska i przykład naturalnej odbudowy populacji w Szwajcarii. Poziom skażenie środowiska w Polsce jest bardzo zróżnicowany. Wrażliwy na skażenia gatunek – bielik – stale zwiększa u nas swoją liczebność, a nawet osiąga tu jedne z najwyższych w Europie parametry rozrodu. Przykład Szwajcarii, gdzie populacja szybko wzrosła z 1 do ponad 100 par bez żadnych reintrodukcji także nie jest uzasadniony, gdyż reintrodukcji dokonywano w krajach sąsiednich.

W dyskusji nad reintrodukcją sokołów nie bierze się pod uwagę najistotniejszego problemu jakim jest sposób gniazdowania sokołów wędrownych w Polsce. Sokolicy na terenach nizinnych Europy od Holandii po Zachodnią Syberię gnieździły się na drzewach, zaś w Europie Zachodniej – na skałach, klifach i budowlach.

Nie są znane przypadki samorzutnej zmiany sposobu gniazdowania ze skał na drzewo. Wykazano

natomiast eksperymentalnie, że wdrukowanie na miejsce urodzenia (imprinting) u piskląt powoduje, że sokoły wypuszczane na budynkach zaczęły gniazdować także na budynkach. Wydaje się zatem, że jest to jedyna dostępna metoda przywrócenia naszej lęgowej populacji nadrzewnej.

Przywrócenie sokoła wędrownego jako ptaka lęgowego może zająć wiele lat. Zgłoszono (Trommer 1994) projekt zintensyfikowania tego procesu: z najliczniejszej populacji brytyjskiej w ciągu 2 lat pozyskać 200–300 młodych, które po odchowaniu w odpowiedni sposób zostałyby wypuszczone w celu przywrócenia populacji nadrzewnej. W podobny sposób odbudowano populację bielika i kani rudej na Wyspach Brytyjskich.

Prowadzenie reintrodukcji ma niewątpliwie pozytywną rolę wychowawczą i promuje idee ochrony przyrody. Być może wkrótce każdy będzie się mógł naocznie przekonać o właściwości takiego rozwiązania.

PODZIĘKOWANIA

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