june 2011

ZOO report

the magazine for friends of the Brno Zoo

BRNO

Sea Eagles Nest Again in the Czech Republic

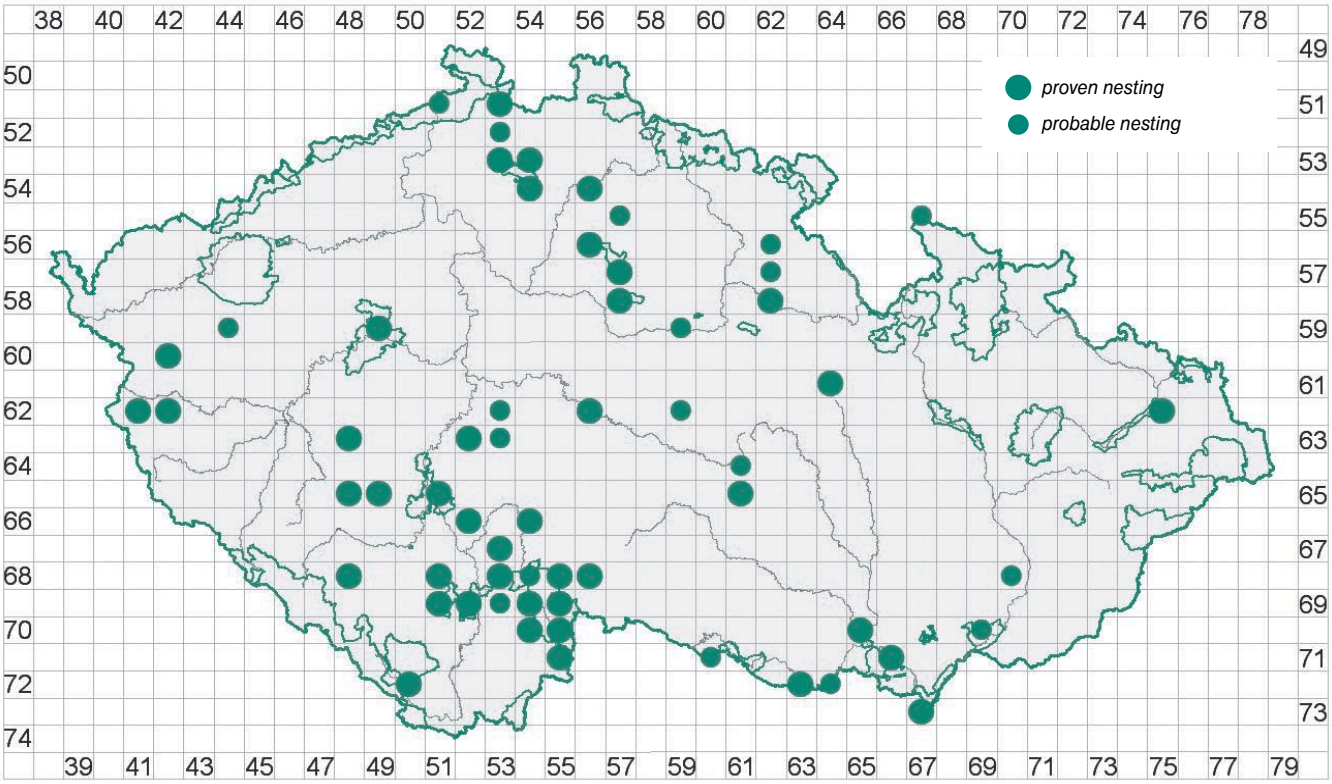
Sea eagle sitting in nest *Photo by Libor Dostál*

The sea eagle [*Haliaeetus albicilla*], a majestic bird of prey [the order of *Accipitriformes*] of the Accipitridae family, is the biggest European eagle and, with a wing-span of up to 2.4 m, hardly anybody would mix one up with another bird of prey in our countryside. The species area is a wide strip going through Eurasia from the west of Europe up to the eastern coast of Asia. Sea eagles also live in South Greenland. In our continent, the sea eagle, we might say, has come back from the death´s door. In previous centuries, people assiduously hunted, and finally eradicated, them in the major part of west, central, and south Europe. The targeted protection, which commenced at the end of the 20th century, has only recently returned the sea eagle to numerous original nesting places, and its numbers have now increased. The basis for the European population is couples nesting in Scandinavia and Russia: Sea eagles are still rare in western Europe. They insularly nest especially in northern, central, and eastern Europe. The present European population is estimated to be 5,000-6,600 couples, which is more than 50% of the world population.

As a nesting species, the sea eagle did not reappear in our country for more than a hundred years due to direct hunting. The last nesting places in Bohemia became extinct in the middle of the 19th century but they probably still nested in Moravia in the 1920s. In the following period, they only wintered in our country in south Moravia and at Trebonsko, south Bohemia, where our strongest wintering population was – and has been – known. As Trebonsko also provided conditions for nesting (i.e. suitable forests and a sufficiency of food), in 1978–1985 nine young sea eagles were released there from the breed of Claus Fentzloff, a German falconer. The preservation programme had a well-elaborated methodology but it did not have a significant influence on the recovery of the nesting population: It only helped spontaneous spreading of the species at that time and the origination of the natural nesting population. Due to the fact, probably, that sea eagles mature at the age of five years, the first nesting of a couple formed from the released eagles was only proven in 1984, with successful nesting only in 1986. We can conclude from later findings of old nests at two locations that couples from populations wintering at Trebonsko nested there in 1971 and 1981–1982. Successful nesting was not recorded in south Moravia before 2004. Since the 1980s, sea eagles have returned again to our countryside as a nesting species. Their numbers have increased in the course of time and (as shown in table), we estimate our present population to be 45–60 couples. The number of wintering birds has also increased; it is estimated to be more than 150 individuals in previous year. The map show the distribution of the nesting or wintering population in our territory. The positive population trend can also be seen in neighbouring countries, where the nest-

Estimate nesting population of the Sea eagle in the Czech Republic

period	*Number of nesting pairs*	*occupation (occurrence in quadrates of the united zoological mapping of the Czech Republic)*
1985–89	7–10	17 quadrates, nesting 5 quadrates
1994	10–15	
2000	17 + 4–8 possible	83 quadrates, nesting 23 quadrates
2006	25–30	
2007–10	40–45, maybe even 60	



Nesting occurrence of the Sea eagle in the Czech Republic in 2005–2007 (Hora et al. 2010)

ing population in Germany is estimated to be 360 couples; in Poland, 500 couples; in Hungary, about 90 couples; in Slovakia, up to 5 couples; and in Austria, 4 couples.

While adult central European birds are usually stable, young ones wander after being let out. The wanderings of young birds from northern nesting places often have the character of a passage, and part of the adult population from these parts of Europe probably also fly to the south. We can see these birds of prey especially

Young eagle in the nest *Photo by Libor Dostál*

Young eagle near the nest *Photo by Libor Dostál*

in lowlands around big ponds, water reservoirs and other bigger water surfaces. Outside the period of nesting, they can fly farther from the water. Their nesting area is usually 24–45 km^2, and they can fly up to 20 km from the nest for food.

They nest on rocks off the coast of northern Europe; inland (i.e. in our country), they nest on trees only. They significantly prefer widespread forests. They build a nest in the fork of the main stem of a tree, or on a thick side branch near the stem and top. They most frequently choose a pine in south Bohemia, or a beech in south Moravia, but they can also nest on other leafed trees or spruce. The position of the tree is an important criterion. Eagles tend to select a place near the edge of an older growth, with a good possibility of flying into the open air, several hundred meters above the water surface. They use their nests for many years and put finishing touches to them every year which means that these structures are quite robust, having a diameter of 100–160 cm, a height of over 2 m, and a weight of several hundred kilograms. Eagles form stable lifelong couples. They appear at nesting places in December, when we can watch engagement flights, which become more common from the middle of January. They later change into wedding flights, when mating occurs. Young birds leave their nest in the middle of June, and their parents accompany them for at least another month. In case of a young bird´s falling from the nest, its parents are still able to raise the surviving youngsters out of the nest as well. A female only lays replacement eggs if the nest is destroyed very early on.

They most frequently live on fish and water fowl, and to a lesser extent on mammals – these are usually injured, weak, or dead animals, which means that the sea eagle belongs to a so-called "sanitary species". In winter it often lands on carrion, and at feeding places. It daily consumes about 700 g of food, which corresponds to approximately 500 g of muscle. The most frequent kill is a fish weighing 1–2 kg, which it is able to consume at one go, but it can also make a kill weighing 5–6 kg.

According to valid Czech legislation, the sea eagle belongs among endangered species, i.e., those with the strictest protection. It is listed as critically endangered in the Red Books of the Czech Republic, as well as IUCN. Due to its listing in Annex I to the Bird Directive, it is protected in three bird areas of the Czech Republic (Trebonsko, Pálava, and the Medium Reservoir of the Nové Mlýny Dam). This species is evaluated as rare in Europe and, globally, as almost endangered. As with all of our birds of prey and owls, it is included in species with the strictest protection within the Convention on International Trade in Endangered Species (CITES). Unfortunately, these legislative measures are insufficient for its protection.

Although any use of poisons against animals living in free countryside has been illegal for more than 40 years, not only beasts of prey but also other animals annually die after eating poisoned decoys such as internal organs, meat, or eggs injected with carbofuran. A similarly serious problem is the illegal shooting by hunters of birds of prey which have still been considered undesirable species, formerly called "vermin". In 2004–2005 six sea eagles were provably poisoned and, in 2006, nine more; one bird was shot. Many other cases have not been revealed and we have neither succeeded in tracing, nor punishing, offenders. The Free Wings programme was therefore established under the Czech Society for Ornithology to protect birds of prey against liquidation by poisoning and shooting, and the public has also actively been involved. There are cases of robbing nests by egg collectors, as well as various breeders, for falconry purposes but, compared to direct hunting, these activities have only a minor influence on the population. Every year, several birds die of electric shock, which is a general challenge for the protection of birds of prey and owls as well as other big birds because high voltage lines are insufficiently protected in the countryside.

Other negative factors include disturbances at nests or destruction of nests both during forest exploitation or intentionally. These negative phenomena can be prevented by targeted

Adult bird leaving the nest with a young one *Photo by Libor Dostál*

preservation activities, such as bans on entry of people or stops to logging and other works within 300 m of a nest, particularly in the early stages of nesting. In 1960–2007, 172 birds were marked with rings. Ringing the birds can be a risky activity, but the results give us important information. Its necessity should be thoroughly considered by every ringer.

Intensive additional feeding of wintering birds with fish and other veterinary wholesome meat has a clearly positive effect on the development of the sea eagle population. Liberal hunters leave shot animals to the eagles as food in some locations. Several artificial nests have been built. Thanks to the additional feeding, a strong wintering population has survived in south Bohemia from the 1980s, which became a foundation for our currently strongest nesting population.

Three zoos (Chomutov, Liberec, and Ostrava) and Aves (a rescue station for injured and handicapped animals in Kladno) are involved in the European Protective Programme of the sea Eagle. Upon the agreement of the European coordinator of this rescue breed, a twenty-year-old male born in the Chhomutov Zoo has paired with a three-year-old handicapped female living in the Kladno Aves station. There, the couple should breed their young, which will be released to the free countryside if the breeding is successful, and after meeting all legal conditions.

We can say the same about the protection of sea eagles as we mentioned in the introduction to the article about black storks (published in the previous edition of Zooreport): To maintain and develop the population of both these species, the numbers of which have been growing to the delight of ornithologists and environmentalists, it is necessary to ensure that locations suitable for nesting do not cease to exist due to bad forest management. A sufficient number of nesting trees must be left in forests. Within protective measures, it is also important that authorities in charge ensure the postponement of forest work and movement of people (i.e., undesirable disturbance) to the end of the nesting period or, better, to the period after the young birds leave their nests. It has been proven that, thanks to the long-term and targeted protection of birds, and through special measures in forest management, the numbers of the species protected by law have been increasing, including those that had vanished from our country in the past.

Mgr. Anna Hoffmannová,
Zoologist of the Krivoklátsko
Protected Landscape Area Administration

Literature:

CEPÁK, J., KLVAŇA, P., ŠKOPEK, J., SCHRÖPFER, L., JELÍNEK, M., HORÁK, D., FORMÁNEK, J., et ZÁRYBNICKÝ, J., 2008: Atlas migrace ptáků České a Slovenské republiky. Aventinum, Praha. 607 str. – HORA, J., BRINKE, T., VOJTĚCHOVSKÁ, E., HANZAL, V., KUČERA, Z. (eds.), 2010: Monitoring druhů přílohy I směrnice o ptácích a ptačích oblastí v letech 2005–2007. AOPK ČR. – HUDEC, K. (ed.), 1994: Fauna ČR a SR. Ptáci 1. Academia Praha. – HUDEC, K., ŠŤASTNÝ, K., et al., 2005: Fauna ČR Ptáci 2/I. Academia Praha, 572 str. (druhé přepracované a doplněné vydání) – ROSENVALD, R., et LÖHMUS, A., 2003: Nesting of the black stork (Ciconia nigra) and white-tailed eagle (Haliaeetus albicilla) in relation to forest management. Forest Ecology and Management 185: 217–223. – ŠEVČÍK, J., et VERMOUZEK, Z., 2006: Pták roku 2006 – orel mořský. ČSO a AOPK ČR, 16 str. – ŠŤASTNÝ, K., BEJČEK, V., et HUDEC, K., 2006: Atlas hnízdního rozšíření ptáků v České republice, 2001–2003. Aventinum, Praha. 463 str.