

## 6 Status of the breeding population of Great Cormorants in Bosnia and Herzegovina in 2013

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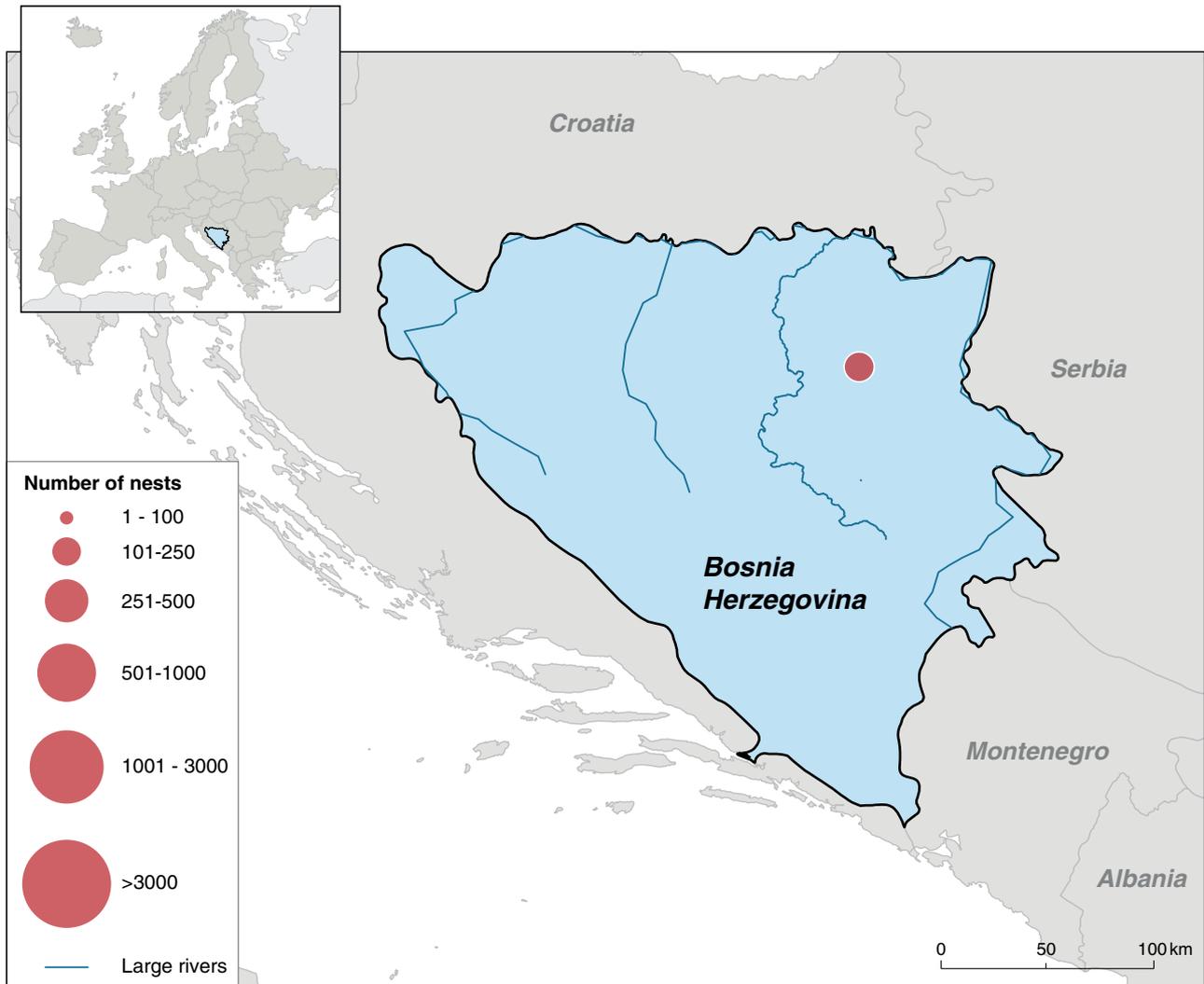
### National summary

In 2013 Bosnia and Herzegovina had 171 breeding pairs of Great Cormorants (*Phalacrocorax carbo sinensis*) in one colony. The colony was located at Prokosovići on Modrac Lake in north-western Bosnia. In 2011 this colony had 120-150 nests and another colony with 4 nests was recorded in the south west of Bosnia and Herzegovina in 2011 (Sjeničić & Kotrošan 2013).

### Records of breeding colonies 1976-2013

In 1976 the first breeding Great Cormorants were reported in Bosnia and Herzegovina at Dugopolje fish farm at Bardača Lake located in the north of the country, close to the Croatian border (Kotrošan et al. 2012). The colony contained nine nests but five of these were destroyed by man, and in 1977 no breeding took place at this site. The next record of breeding Great Cormorants was in 1983 when a colony with 2 nests was found at Hutovo Blato, a nature reserve in the south west of the country (Kotrošan et al. 2012). By the end of the 20th century, these two colonies had disappeared and the Great Cormorant was again declared a nationally extinct species.

Since 2005 Great Cormorants have been surveyed as a part of regular ornithological monitoring in Bosnia and Herzegovina. In 2008 Great Cormorants began breeding again at Hutovo Blato, with 5 nests (Kotrošan et al. 2011). However the breeders were scared away and breeding ceased at this location. In 2010 a breeding colony with 80 nests was reported at Lake Modrac in the north east of the country and numbers in this colony had increased to 120-150 nests (108 nests counted) in 2011. In this year, a second colony with 4 nests was reported at Livanjsko Polje in the south west of the country.



**Figure 6.1.** Location of the breeding colony of Great Cormorants in Bosnia and Herzegovina in 2013.

In the literature there are reports of attempted unsuccessful breeding at additional sites and reports of breeding which have not been confirmed. At Prokosovići near Lake Modrac there are unconfirmed reports of Great Cormorants breeding in a mixed colony in 2003. At Lake Buško in the south west four pairs were reported to be breeding between 2009 and 2011 but it is not known whether these attempts were successful (Kotrošan et al. 2012).

In 2013 breeding took place at one location in Bosnia and Herzegovina (Fig. 6.1). The breeding colony was located in north-western Bosnia at Prokosovići on Modrac Lake and had 171 occupied nests. The nests were located in the tree tops in a Grey Heron (*Ardea cinerea*) colony. Within the mixed colony 114 trees were used (70 by Great Cormorants, and 44 by Grey Heron) with a total of 123 Grey Heron nests in the colony. The number of Great Cormorants breeding at this location was 120-150 breeding pairs (108 counted) in 2011 and 80 breeding pairs in 2010. Information available suggests that the colony was established in 2003.

### **Human intervention in colonies and other factors**

In the period 2002-2009 Great Cormorants were protected from shooting by hunting laws adopted in Bosnia and Herzegovina. Legal protection of Great Cormorants prohibits deliberate killing. Despite this, Great Cormorants are

killed across the country, especially in fish pond areas, but as far as we know, no actions took place in the breeding colonies in 2013. However, human interference in Great Cormorant colonies has been recorded in earlier years in areas where commercial or sport fishing is popular. On Modrac Lake the breeding colony is located in an isolated place, away from traffic and places of interest to people. Therefore the direct influence of people is limited, but conflicts with fishermen and harassment using speedboats and other motor boats have been recorded.

The 2013 count revealed that a second colony, which was active in 2011, had been abandoned. The colony was located at Hutovo Blato in northern Herzegovina (Buško Lake), and was abandoned due to disturbance by tourists, bathers and local people. Culling of adult birds takes place in Bosnia and Herzegovina but there are no accurate records of numbers culled. We have records of cases of Great Cormorants being shot in Central Bosnia (Visoko), Northern Bosnia (Modriča, Čelinac), Western Bosnia (Šipovo) and North-East Bosnia (Tuzla). In most cases a single Great Cormorant was found shot. The only exception was in Visoko where four Great Cormorants were found shot.

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A Great Cormorant colony on Modrac Lake. Photo: Dejan Kulijer.

