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13 Status of the breeding population of Great Cormorants in Italy in 2012

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<http://dce2.au.dk/pub/TR22.pdf>

National summary

In 2012, the breeding population of Great Cormorants (*Phalacrocorax carbo sinensis*) in Italy was estimated at 3,914 occupied nests (range 3,865-4,016) in a total of 48 colonies. This is an increase of ca. 750 nests (24%) compared to the breeding numbers from 2011 (3,170 nests, range 3,085-3,280 nests) and an increase of ca. 1,770 nests (82%) compared to 2006 (2,142 nests; Bregnballe et al. 2006). Two small colonies in Piedmont were not visited during the 2012 breeding season and data from the 2011 census are used in this report. It is estimated that almost complete coverage of all breeding cormorants was obtained during the 2012 census. In 2012 five new colonies were discovered, ranging in size from one to 25 nests. Furthermore two sites where breeding took place in 2011 (1-2 pairs) were abandoned in 2012.

Distribution

Colonies were found across the country, but the majority of colonies and of the entire breeding population were located in northern Italy, especially in the western Po plain along the Po River and its tributaries, and in freshwater wetlands and lagoons along the upper Adriatic coast (Fig. 13.1). Cormorants bred in 11 different regions with the largest number of breeders found in the Emilia-Romagna region. This region contained almost half of the total breeding population (44%, 1,724 nests in 13 colonies). Large numbers of breeders were also reported in Lombardy (22%, 878 nests), Piedmont (15%, ca. 600 nests) and Veneto (12%, ca. 480 nests) regions (Fig. 13.2). Colonies located in Friuli Venezia Giulia, Tuscany, Latium, Campania and Apulia have only been established in recent years and host only a small number of breeding pairs. Small colonies in Sardinia and Sicily were found in traditional breeding areas which have been occupied since the 1960s and early 1990s respectively. Breeding numbers in these colonies were more or less the same as recorded in earlier years.

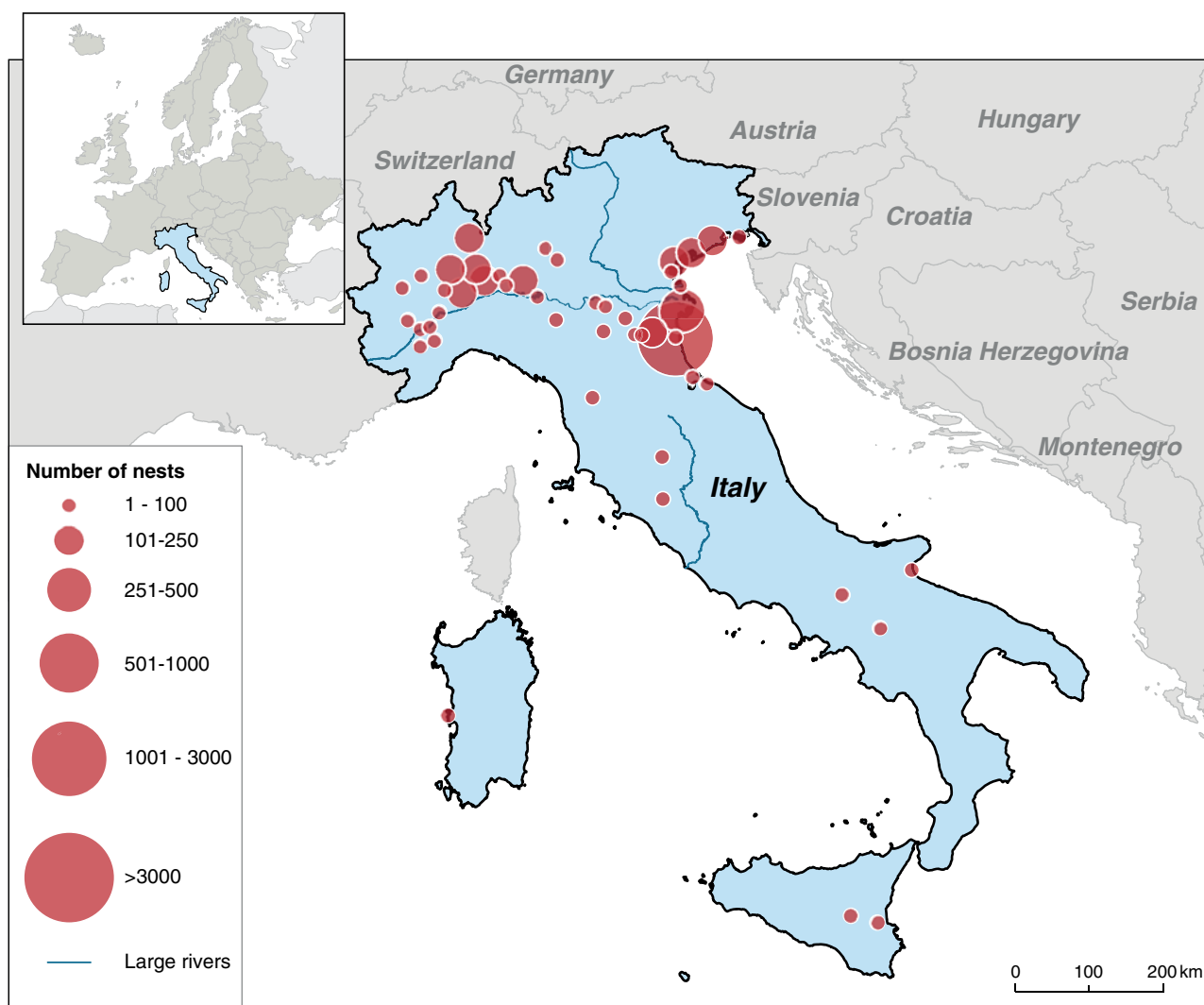
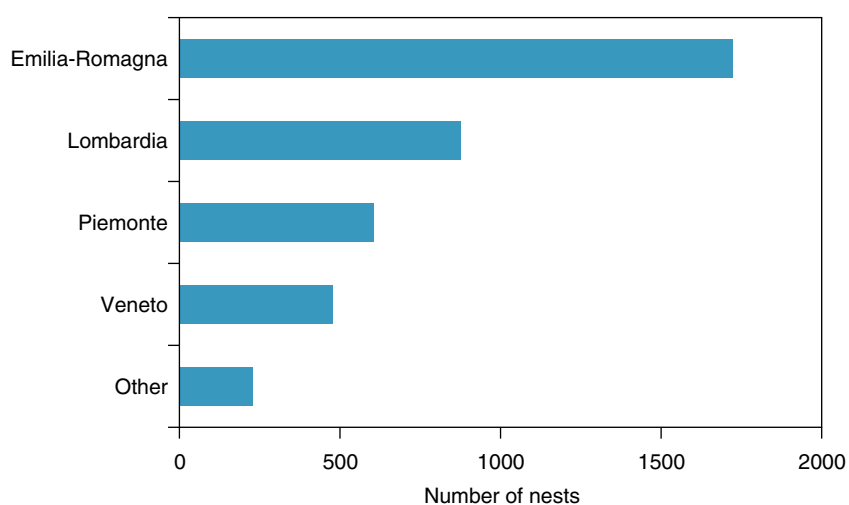


Figure 13.1. Distribution and size of breeding colonies of Great Cormorants in Italy in 2012. Source: S. Volponi & CorMoNet.It

Figure 13.2. Regional distribution of the breeding population of Great Cormorants in Italy in 2012. Source: S. Volponi & CorMoNet.It.



Colony size

In 2012, the cormorant population in Italy bred in 48 colonies. The largest colony contained 1,075 nests and was located in the Punte Alberete nature reserve (see photo) on the southern side of the Po river delta. This single colony, founded in 1995, contained almost one third (27%) of the national breeding population. Since the end of the 1990s this colony has been the largest colony in Italy and the only one to house more than 400 nests. There were 14 colonies of intermediate size (i.e. with 51-400 nests) which held over half of the breeding population (57%, ca. 2,240 nests). The majority (33) of the Italian cormorant colonies contained less than 50 nests (Fig. 13.3) and together these had only 15% of the total population of breeders (Fig. 13.4).

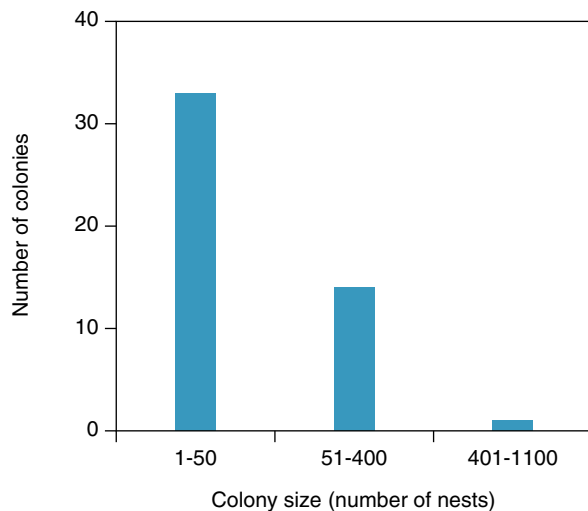


Figure 13.3. Size distribution of Great Cormorant colonies in Italy in 2012. Source: S. Volponi & CorMoNet.It.

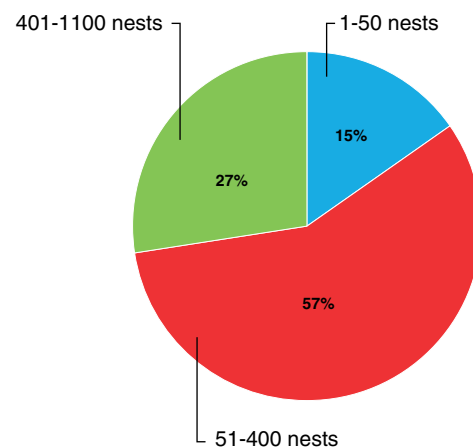


Figure 13.4. Distribution (%) of the total breeding population of Great Cormorants in relation to colony size in Italy in 2012. Source: Volponi & CorMoNet.It.

Almost all cormorants breeding in Italy were nesting on stand of hygrophilous vegetation. Breeding took place in flooded marshlands and on river banks or small islets in freshwater wetlands and lagoons. Cormorants built their nests on tall trees including white poplar (*Populus alba*), white willow (*Salix alba*), elm (*Ulmus* sp.) and ash (*Fraxinus* sp.) or hedgerows of bushy tamarisk (*Tamarix* sp.) and grey willow (*Salix cinerea*). The only exception is the colony located on the west coast of Sardinia (see photo) where cormorants build their nests on sea cliffs as is typical of shags (*P. aristotelis desmarestii*; also breeding in the area) and of the nominate subspecies of the Great Cormorant *P. c. carbo* breeding along the Atlantic coasts of France, United Kingdom, Ireland, Iceland and Norway.

Human intervention in colonies and other factors

In Italy, the majority of the breeding colonies (85%) are located in areas protected by law and are not subject to any management actions aiming to reduce or stop cormorants from breeding. Most colonies are located in nature reserves (19 colonies) and/or regional or national parks (10 colonies). At least 40 colonies are found in areas which are part of the Natura 2000 network. Thus complete breeding failure is pretty rare and in 2012 occurred only in four small and recently established colonies. In two reservoirs nests were abandoned due to large changes in water levels, while in another colo-

ny cormorants abandoned the nests after being harassed by a helicopter involved in fire fighting. Finally, 3-4 pairs trying to breed in a fish pond area were discouraged by the land owner.

Discussion

In the six-year period since the last national census in 2006 the number of cormorant colonies have tripled (from 16 to 48) and the number of nests counted almost doubled (from 1,770 to 3,914 nests). However, 26 years after cormorants established a colony in Val Campotto starting the colonization of continental Italy (Spina et al. 1986, Carpegna et al. 1997), the overall number of birds nesting in Italy is only about 1% of the overall estimated European population. So the breeding population is small compared with the number of cormorants wintering in Italy, estimated at 50,000-60,000 birds (i.e. 10-15% of the European population). The cormorants overwintering in Italy are found in a variety of habitats, from the Alps to the Mediterranean environment of Sicily and Sardinia, using several hundred night roosts and foraging in alpine lakes and rivers, inland freshwater wetlands, coastal brackish lagoons and shallow sea waters.



Great Cormorants nesting in trees on a cliff at Lake Bolsena, Italy 2011. Photo: Massimo Brunelli.

The size of the breeding population seems to be regulated mainly by two factors: food availability around the colony, which acts at a local level (e.g. the oldest colonies of Val Campotto, Punte Alberete, and those in West Sardinia and the upper Po River in Piedmont) and limited availability of protected breeding sites where cormorants can breed without being disturbed directly (e.g. colony harassment) or indirectly (e.g. hunting activities). Undisturbed areas are required for almost a six-month period lasting from the early stages of colony occupation and egg laying, starting in mid-January, to chick fledging occurring up to the end of July and later in new colonies. In the past direct actions to destroy nests or to prevent breeders from starting to nest were carried out in several colonies in the Lagoon of Venice and the Po Delta. These actions resulted in cormorants abandoning the breeding site or ceasing breeding activity (Serra & Brichetti 2002).

The effects of human activities on both the distribution and size of cormorant colonies seems rather clear. Several areas regularly occupied in winter by very large numbers of cormorants do not have any breeding colonies (i.e. natural lakes and reservoirs in central Italy, coastal wetlands in southern Sardinia and the core area of the Po Delta). Additionally almost all cormorant colonies are located in protected sites where long-established colonies of Grey Heron (*Ardea cinerea*) and other colonial species of Ciconiiformes (herons, egrets, spoonbill and ibis) exist. Probably the cormorants use the presence of colonies of these other species as an indication of safety against human disturbance.

Measures taken to scare away cormorants from aquaculture and other fishing areas, as well as from rivers and basins managed by anglers, are likely to continue in coming years. The number of cormorants breeding in Italy will therefore, probably, remain rather small compared to the number overwintering cormorants. Furthermore, most colonies are likely to remain within the range of 1-100 nests and new colonies will probably only be established in protected areas and/or inside colonies of Grey Herons and other colonial Ardeidae. Overall, the breeding population of cormorants in Italy will remain well below the potential natural carrying capacity of our wetlands.

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Panoramic view of a portion of the cormorant colony at Punta Alberete, Italy in 2012. Photo: Stefano Volponi.