

WINTERING POPULATION IN EUROPE AND NORTHERN AFRICA

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The population of European cranes that uses the western migration route winters from central Germany to northern Africa, including Germany, France, Spain, Portugal, Morocco, Algeria and Tunisia, but the situation in Libya is not known.

In recent winters at least 385,000/400,000 cranes are estimated to be in these countries.

In northern Africa there could be around 18,000/20,000 wintering birds, of which 3,770 are wintering in Algeria (Hamdi y Charfi-Cheikhrouha, 2011). There is no recent data from Tunisia, but the wintering population there could be between 3,500 (Hamdi y Charfi-Cheikhrouha, 2011) and 9,000 individuals (Amari y Azafzaf, 2013).

Germany

Cranes wintering in Germany were described for the first time in 2005 (Lundin, 2005), citing 3,500 wintering birds. Prieta and del Moral (2008) cited 7,000 cranes wintered in that country in 2007. The wintering population has continued increasing ever since and in 2015 Prange estimated 20,000. The mildness of the recent winters and changes in crops have enabled many of the German cranes to stay in areas close to their breeding areas, and currently there could be some 35,000 birds in the country; these figures could change if weather conditions become harder and force them to move to neighbouring France and as far as Spain, even in January (Román, 2017). Therefore, up to 5% of the total could spend the winter in Germany.

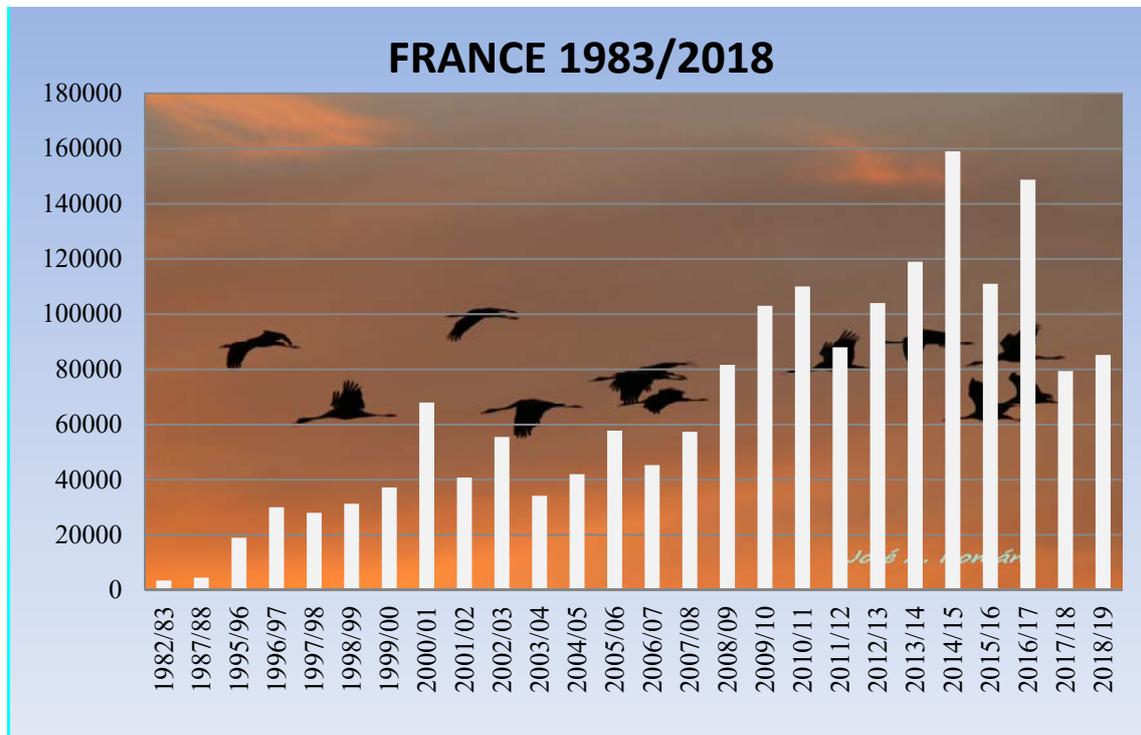
France

Cranes disappeared as a breeding species from this country at the beginning of the 19th Century, and one pair bred in Normandy from 1985 until 1991. Subsequently, in Lorraine, there was a new breeding case with two breeding pairs in 2010, although there was an estimated 12-15 pairs (Salvi, 2015), a figure that has continued increasing to a current 35/50 pairs (Salviet *al.*, 2018).

France was always a transit country for the cranes that wintered in the Iberian Peninsula and northern Africa, and the first wintering bird wasn't detected in this country until 1971. Since then a spectacular increase in the number of wintering birds has taken place, especially in Landes, Nouvelle Aquitaine, in the southwest of the country, where breeding birds were once found. Following the intensive habitat restoration of an open-cast lignite mine at Arjuzanx, it has become the principal crane roost in all France since 1977. They also started to winter at Lac du Der in 1976 (Riols, 1987), which is also a migration channel, and has become the second-most important area. Cranes began wintering in central France in 1976 too. More recently, another wintering area has been added to these: The Camargue, since 1999.

In the 2018/2019 season 70,759 cranes were counted in December and 85,197 at the end of January, giving between 19 and 23% of the total of wintering birds. In other

winters they have exceeded 159,000 birds (2013/2014), coinciding with one of the lowest figures obtained in Spain, with 202,017 in January of that winter. This means that 44% of all the cranes on the western route wintered in France that season. Since 2010 the winters have had over 100,000 individuals. Weather conditions and the availability of food supplies undoubtedly affect the situation, as is the case in Spain.



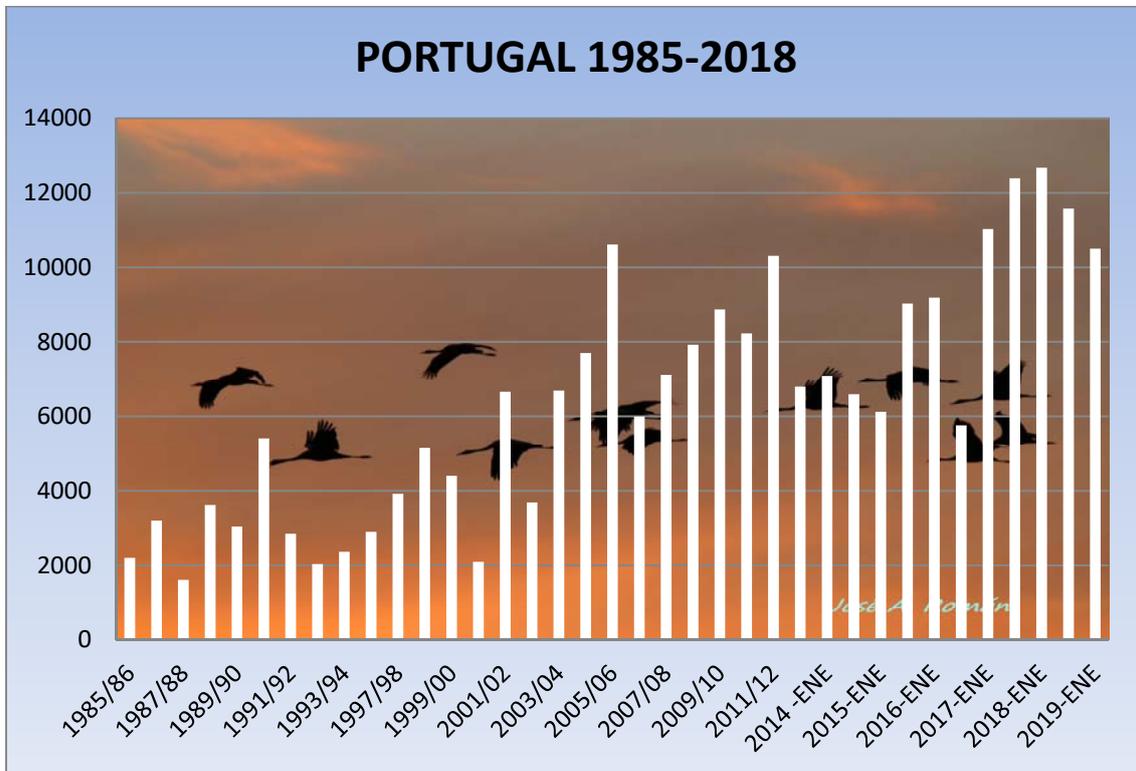
Evolution of the common crane population in France.

Portugal

The population of Portuguese cranes has a growing trend in recent years. Probably Portugal is one of the western countries which has experienced the least agricultural change so far, although large reservoirs have been built, such as Alqueva, on the Guadiana River, and the area of super-intensive production olive orchards is increasing significantly, as with other fruit trees. Currently, this situation doesn't seem to be affecting cranes much, but continual monitoring will have to be done to check if these changes affect the population of this species.

Systematic censuses in this country have been undertaken from 1985 (Almeida, 1996) to the present day (Alonso *et al.*, 1990a; De la Cruz y Montoya, 2004; Prieta y Del Moral, 2008; Román y Cruz, 2018). The traditional wintering centres are Campo Maior, Évora, Mourao and Castro Verde, with a new area recently appearing on the border, at Juromenha. Apart from Castro Verde and Évora, the others form part of populations shared with Spain, where birds cross from one side of the border to the other to feed or rest.

From the 2,200 cranes counted in this country in 1985, the numbers have continued growing, up to 12,672 in January 2018, which is the highest number recorded up to the present time. In December of that year 11,580 cranes were counted, and 10,500 on 1 February, representing 4% and 3.1% of the Iberian total.



Evolution of the common crane population in Portugal

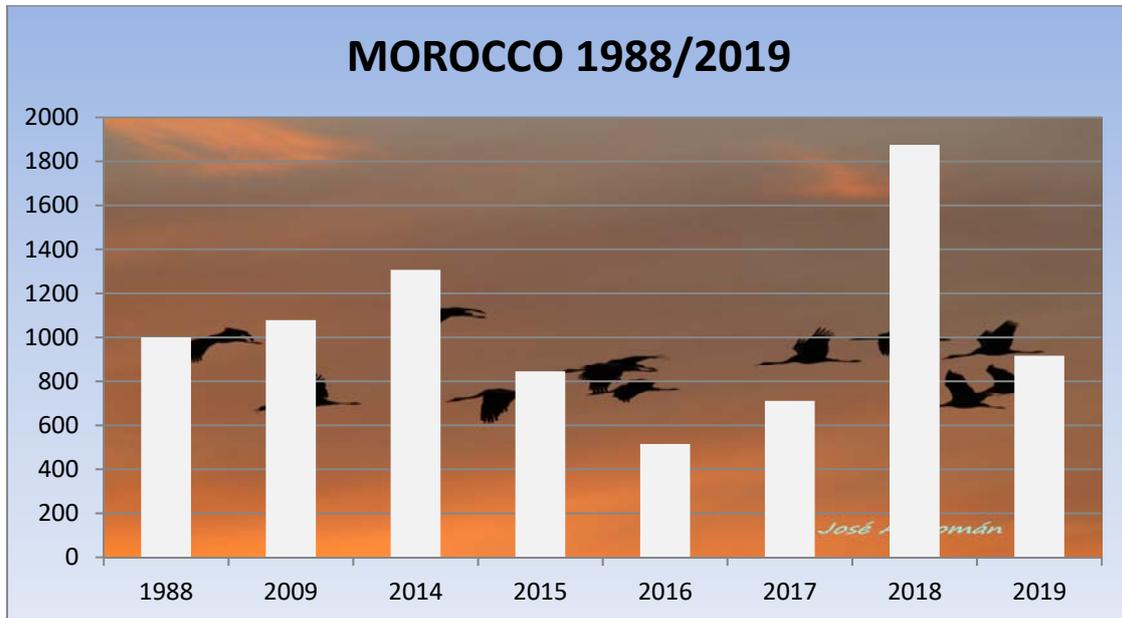
Morocco

Morocco has a modest wintering population of around 1,000 cranes, although authors such as Irby assumed that this country was the most important in winter for European cranes, as on the 11th of March 1874 he had counted some 4,000 migrating cranes at La Janda, which he understood were coming from this country (Irby 1898), but in reality they might have been winter and resident birds from this lagoon. Very little information exists for this country, only Thevenot (Thevenot y Salvi, 1987) has been collecting information based more on estimates than reliable censuses since the 1980s. FundaciónMigres did two censuses in 2008 for its programme of waterbird censuses in this country, counting a maximum of 1,078 cranes in January (Onrubia *et al.*, 2009). Since then they have continued doing counts in January, having obtained the highest record in 2018 with 1,875 birds counted.

The bulk of the population is distributed through the province of Tanger, in the north, and a lower number in Fès/Meknès, in the centre, although some cranes reach as far south in the country as Oued Massa.

The future of this population could be threatened as wintering moves further and further north (Salvi, 2016), due to global warming and the availability of resources in

more northerly parts of Europe, although at present the situation appears to be stable.



Evolution of the common crane population in Morocco.