

EVOLUTION OF THE IBERIAN POPULATION OF THE COMMON CRANE (*Grus grus*): YEARS 2013/2018

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Summary

Cranes wintering in the Iberian Peninsula have been monitored over 5 years with 2 censuses each season, in which more than 400 people have collaborated, visiting 350 localities and 12 sectors, as a result of which we estimate 270,000 wintering cranes, although this figure usually varies each season, depending on the weather conditions, the availability of food and suitable resting places.

Keywords: Common Crane, Iberian Peninsula, population 2013-2018

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Introduction

The Iberian Peninsula is the principal wintering area for European cranes, currently hosting 70% of the population.

From the first censuses in Spain the 1970s (Fernández Cruz *et al.*, 1981) and subsequent counts (Alonso *et al.*, 1981, 1985, 1996; Muñoz Pulido *et al.*, 1987; Sánchez *et al.*, 1998; De la Cruz & Montoya 2004; Lundin, 2005; Prieta & Del Moral 2008, Román *et al* 2012/18), also in Portugal (Cruz 1986, 1991) the figures have shown the significance of the Iberian Peninsula as the principal wintering area for common cranes in Europe.

The growth of the species in its breeding areas has translated into a significant and continued increase of birds wintering in Spain, France (Deschartres *et al*, 2010/2017, Salvi 2014, Dulau 2015) and to a lesser extent in Portugal (Cruz *et al*).

Knowledge of the population of cranes in Spain before 2012 was from irregular censuses, however in Portugal they have been censused every year since the mid-80s. Given the importance of this population, we proposed to undertake periodic and continuous monitoring, for which we have done two annual censuses in the last five years. This continuity has improved our knowledge of cranes wintering in the Iberian Peninsula.

Method

To perform these two annual censuses, 350 different locations have been visited, as well as 12 sectors, with more than 400 collaborators participating. The majority of these are experienced ornithologists with a good knowledge of the species, censussing regularly in each of these years. In general, each participant has counted in an area they know well.

The first census has generally been done around the second week of December and the second one in the third week of January.

With regards the census methodology, three forms of census have been done.

- 1) At roots
- 2) In feeding areas.
- 3) At roots and in feeding areas.

Results

In this study period, and after 10 censuses, we can be sure that the Iberian population of cranes, although with fluctuations, is made up of some 270,000 wintering cranes, with a minimum of 200,000 birds, depending on the phenology of each winter, feeding resources and resting places, as well as the weather conditions in Central Europe. Probably in some winters we could have reached 300,000 birds in the Peninsula, as this figure was obtained in pre-nuptial migration in the year 2015 (Wourtsen & Mooser, G.O.O.).

The censuses, generally, have been quite complete, and they have covered all the regions, provinces, Autonomous Communities and Portuguese regions that have cranes. The highest figures are obtained in December, never below 200,000, although cranes may still be arriving in the Peninsula, and only during January 2017 was a higher figure obtained, with the highest number registered during the period of this study.

Lower figures are usually given in January since birds are more dispersed, and it is possible that groups that are moving are not counted. As agricultural operations progress in many of the feeding areas, then fewer resources are available and disturbances increase. It can't be ruled out that cranes begin to cross the Pyrenees early if climatic conditions are favourable.

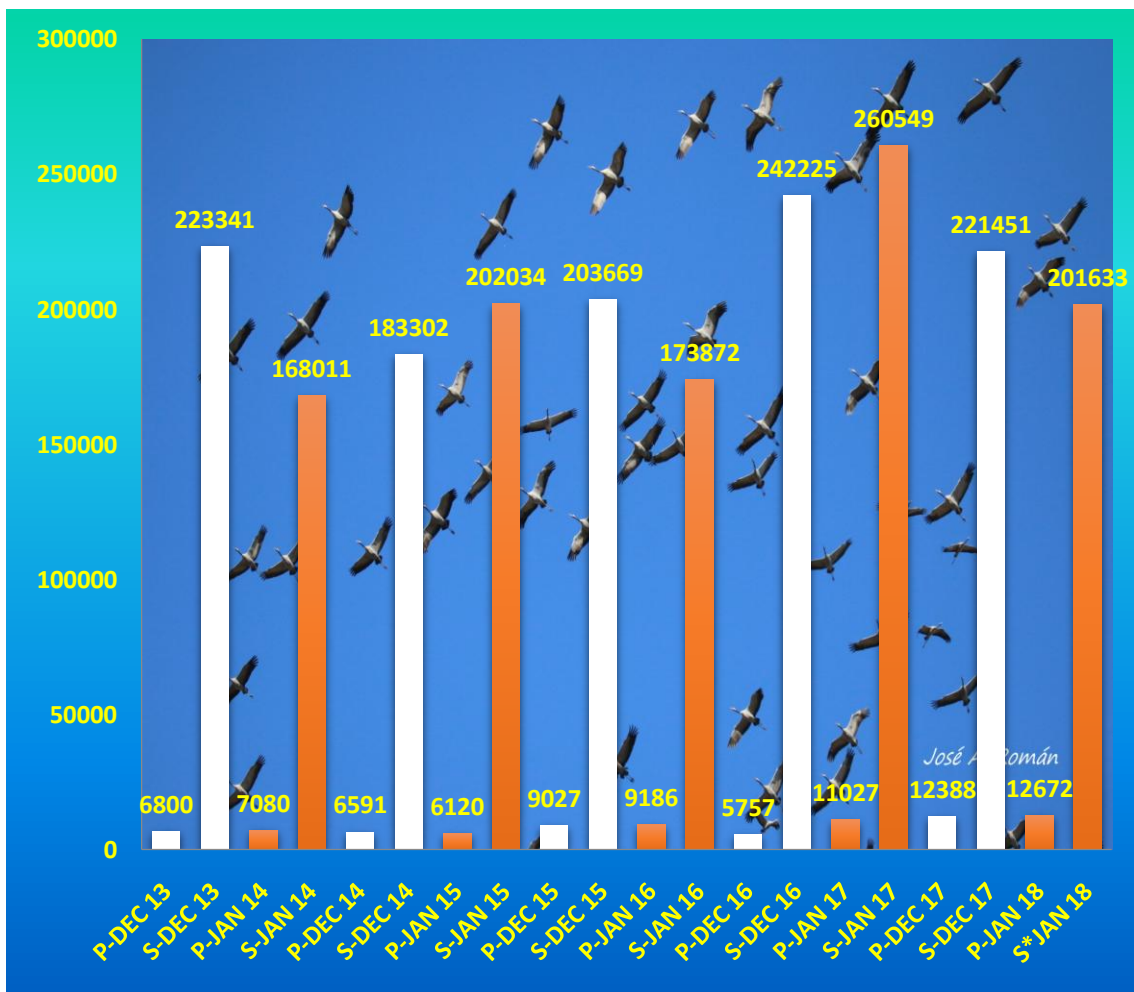


Table 1: Evolution of the Iberian (Portugal & Spain) crane population, 2013/18

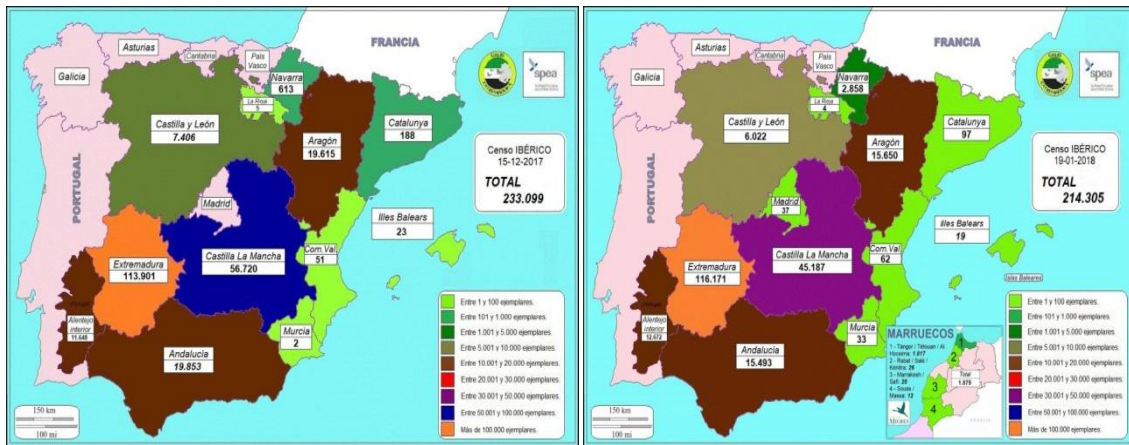


Fig. 1: Crane distribution by Autonomous Community and Regions in the Iberian Peninsula (Spain and Portugal) in December 2017 and January 2018

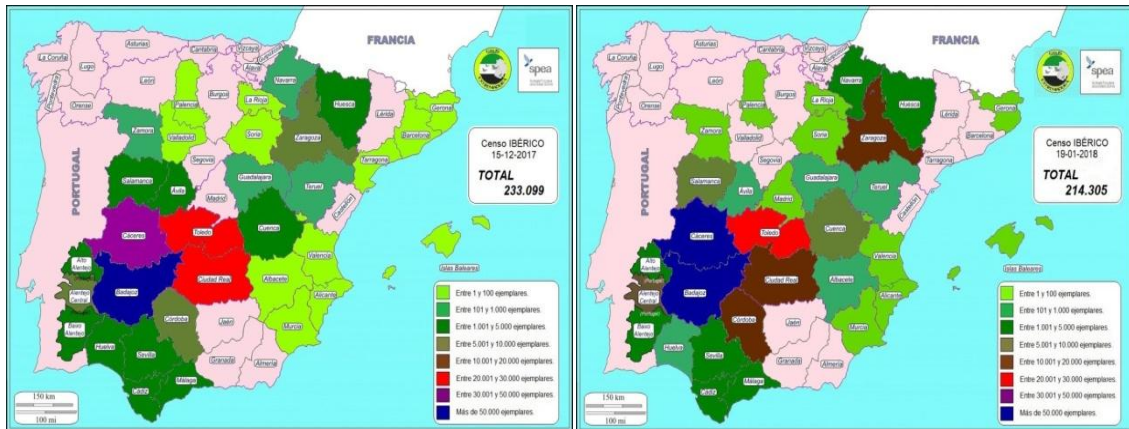


Fig. 2: Crane distribution by province in the Iberian Peninsula (Spain and Portugal) in December 2017 and January 2018

Distribution by Autonomous Communities (Spain) and Regions (Portugal):

Navarra:

Navarra is key during migration in autumn, and is highly important during spring. The wintering population is usually below 1,000 birds, although this figure is exceeded occasionally. The number increases notably in some Januarys with birds fleeing bad weather, as happened in 2016, or making an early start to migration, as occurred in 2018.

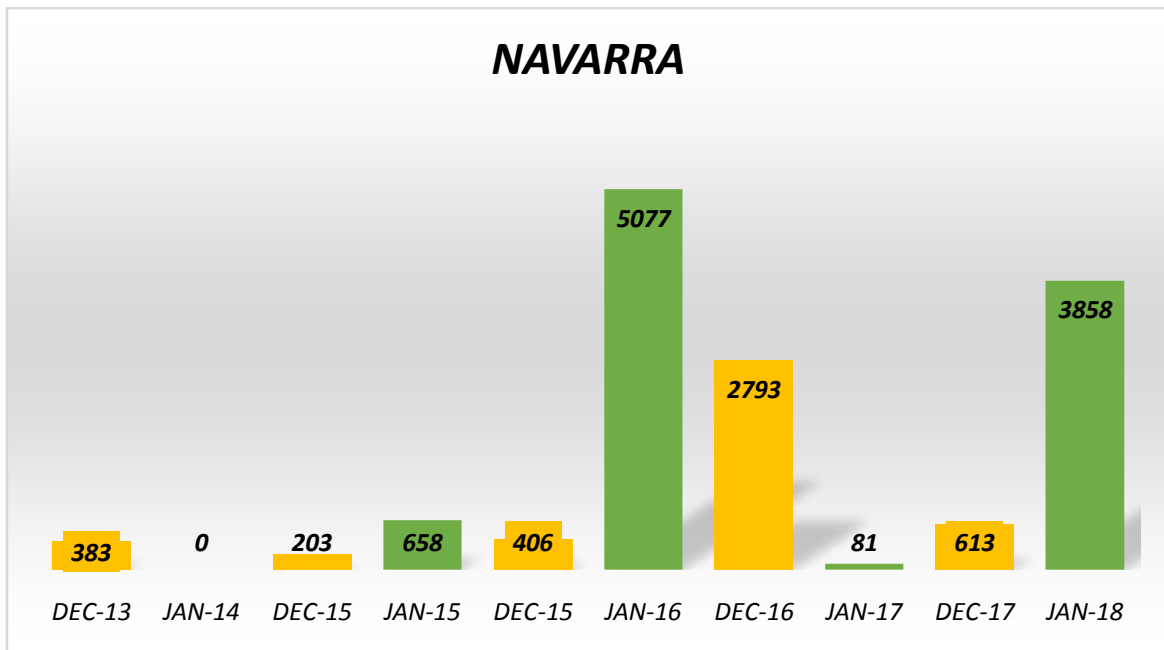


Table 3: Navarra 2013/18

Aragon:

Aragon is the third most important Community for wintering cranes in Spain. Gallocanta lagoon is the obligatory reference point in both migration periods, as cranes migrate to the rest of the Peninsula after crossing the Pyrenees, or use it as a collecting place before they return to breeding areas. It is also the most important place in Aragon, although in the past winter the numbers decreased massively because the lagoon was dry.

The Aragonese population is usually around 35,000 cranes.

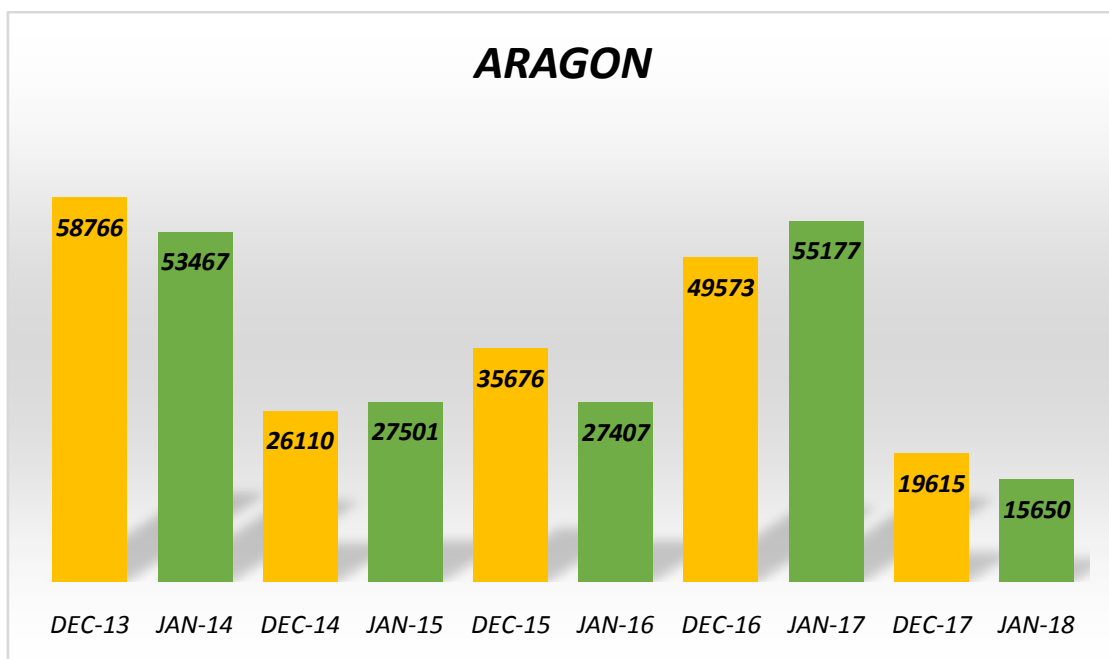


Table 4: Aragón 2013/18

Catalunya:

Catalunya has a small population of wintering birds, generally associated with Aiguamolls de l'Empordà. In recent years it has become a “transit lounge” during migration periods. In autumn, many of the cranes that use the route to the south of the Alps cross the Pyrenees in this Community and Andorra. These cranes generally head for The Camargue, from where they usually migrate towards the north-east of France. The Catalan population doesn't usually exceed 100 individuals.

Valencian Community:

In this Community, cranes winter in small numbers, but regularly at the El Hondo reservoir in Alicante. Although little information exists, this region is important in the migration corridor for birds that spend the winter in Morocco. The number of regular wintering birds is about 60 individuals.

Balearic Islands:

The islands have a small but regular number of wintering cranes on the island of Mallorca, not usually over 30 individuals. Although few records exist, it is likely that the islands play an important strategic role as a reference for cranes migrating to northern Africa.

Castilla y León

Wintering in this Community has traditionally been associated with the dehesas of Salamanca, although in recent years and thanks to the recovery of some wetlands in Avila, cranes are wintering regularly in this province too. The crane population is around 7,500 individuals.

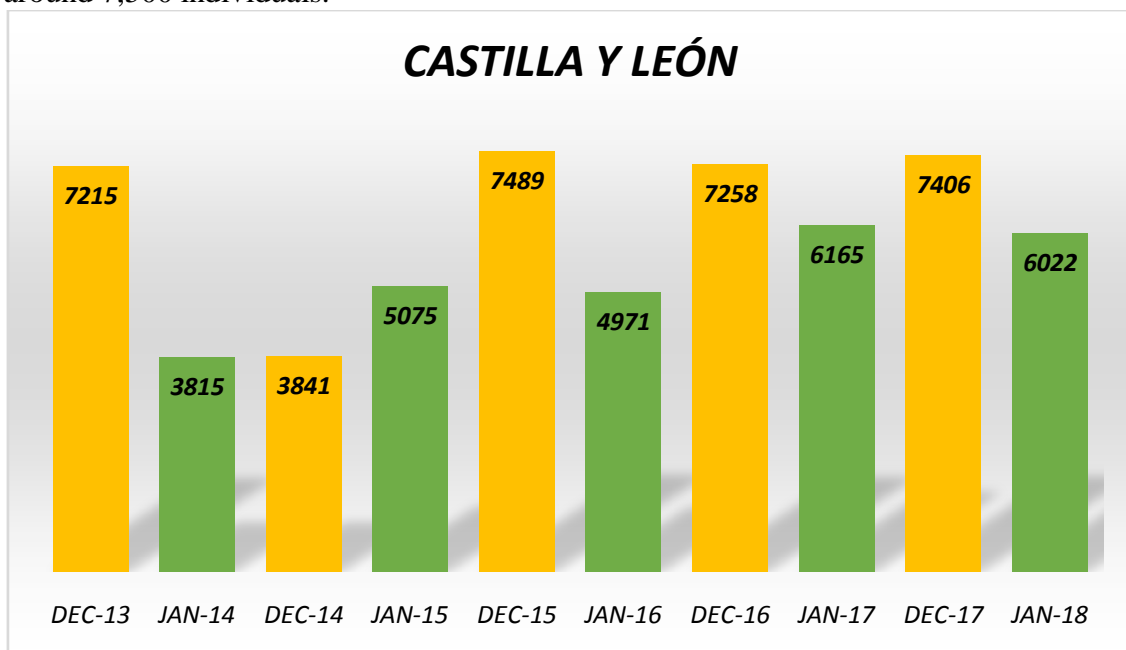


Table 5: Castilla y León 2013/18

Castilla La Mancha:

This is the second most important Community for cranes in Spain. Its population is distributed mainly through the dehesas of Ciudad Real and Toledo, provinces bordering Extremadura, with which they share feeding and/or dormitory areas.

Its population has fluctuated in the years under review according to difficulties with the censuses, which have not always been completed in certain areas. In the past winter, an unusually high number of birds was found in December.

We estimate a population of 40,000 cranes.

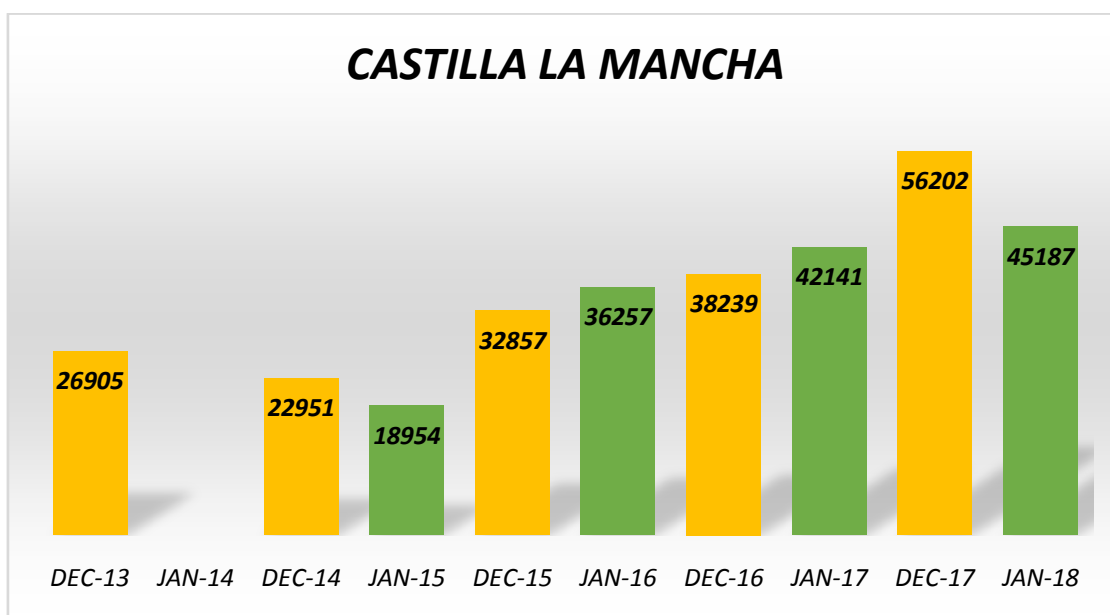


Table 6: Castilla la Mancha 2013/18

Extremadura:

Extremadura is the principal wintering area for cranes in the Peninsula and has been censused repeatedly, so the data are fairly complete. We have divided the Community into three sectors: Tajo Sector, Guadiana Sector and the Central Zone Sector. The latter hosts more than 60% of the Extremadura cranes, and up to 40% of the Spanish cranes. Not only is it important in winter, it acts as a migration corridor for birds that winter in more southerly latitudes.

The wintering population has traditionally been associated with dehesas, but following the loss of these as land has been converted to irrigated crops; the cranes knew how to adapt successfully to the new situation. The current figure is of some 130,000 individuals, which has been stable during the last few years, with fluctuations related to agricultural operations and the weather.

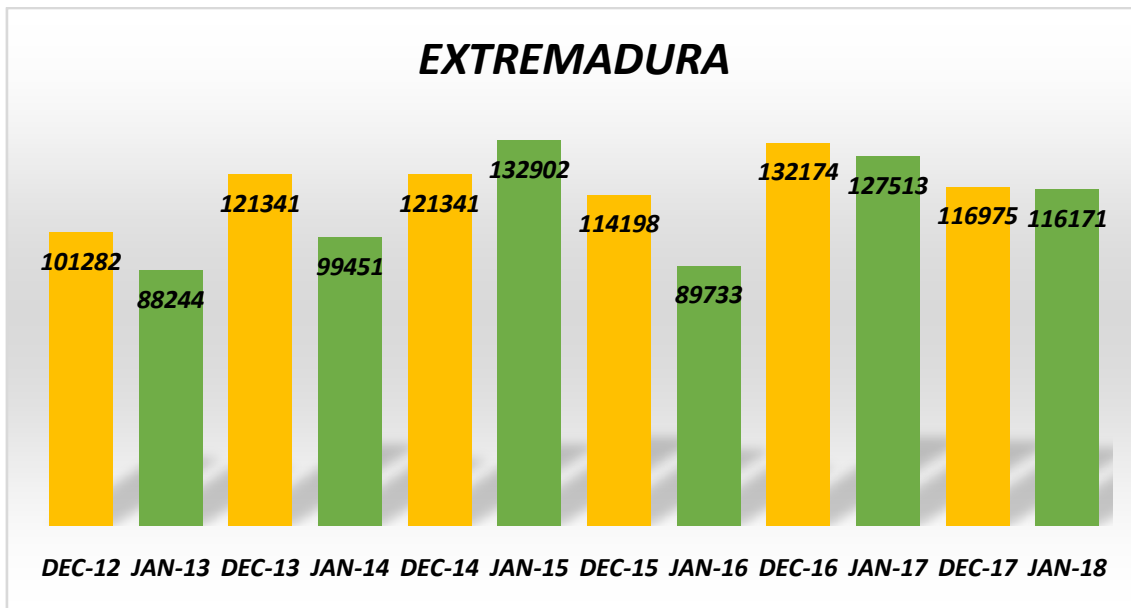


Table 7: Extremadura 2013/18

Andalucía:

The population of Andalusian cranes is associated with the dehesas of north-eastern Cordoba, mainly sharing the habitat with Badajoz and Ciudad Real, although they use other locations, such as Fuente de Piedra (Malaga), La Janda (Cadiz) and Doñana and its surroundings.

The Cordoba population apparently went into decline, as shown in the early censuses, but it has recovered thanks to better coverage and the work of the census teams.

The number of individuals in Andalucía is some 20,000, although it is also subject to fluctuations.

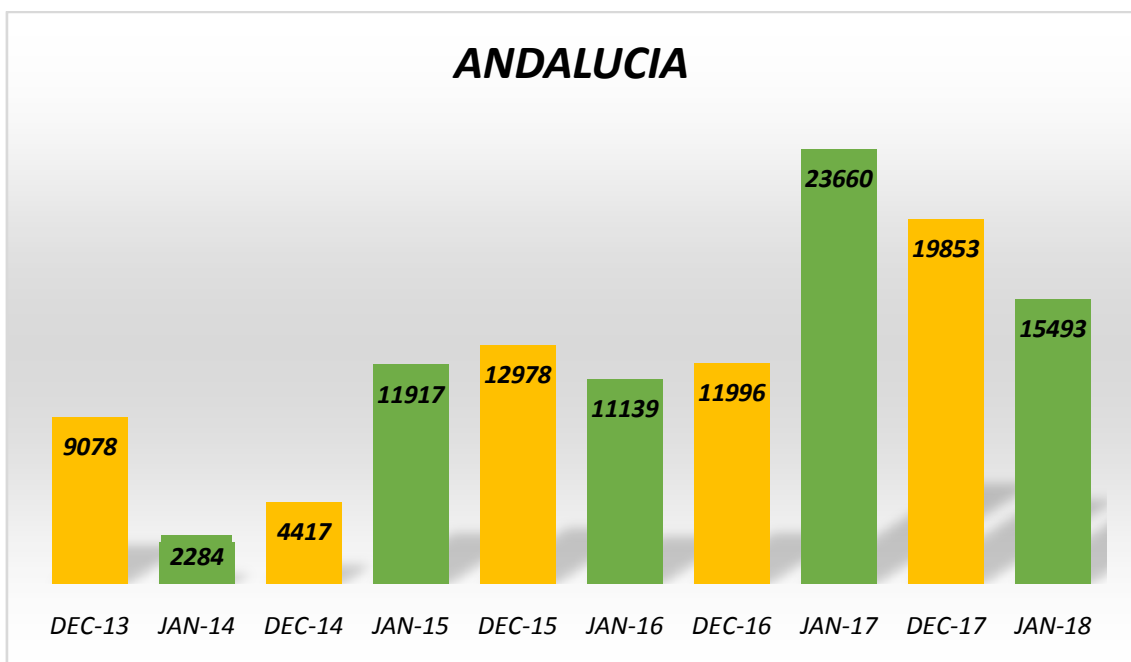


Table 8: Andalucía 2013/18

Portugal:

The Portuguese population of cranes is intimately linked to the dehesas (montados), especially of the Alentejo region, showing a strong relationship with the not very dense "montados" exploited extensively. The traditional wintering areas are characterized by the persistent relationship between roosts and feeding areas.

The population of wintering cranes varies between the 6,120 individuals of 2013/14 and the 12,672 counted in January of 2018, verifying a gradual increase of the specie in Portugal. The five wintering areas have been maintained and, exceptionally, two new areas have been detected in 2017/18 (Olivença in Alentejo Central and another in Alvito in the Baixo Alentejo)

The wintering population of Portuguese cranes is classified by the IUCN as Vulnerable, as it presents a very localized distribution, with a continuous loss of habitat quality due to important recent agricultural changes in the Alentejo.

The main threats to the species are the abrupt disappearance of the "montados" of holm oaks due to the increase in the intensification of agriculture, especially in the area of the Alqueva reservoir, the accidental poisoning by phytosanitary products, the collision with power lines, the persecution of hunters and disturbances in the roosts

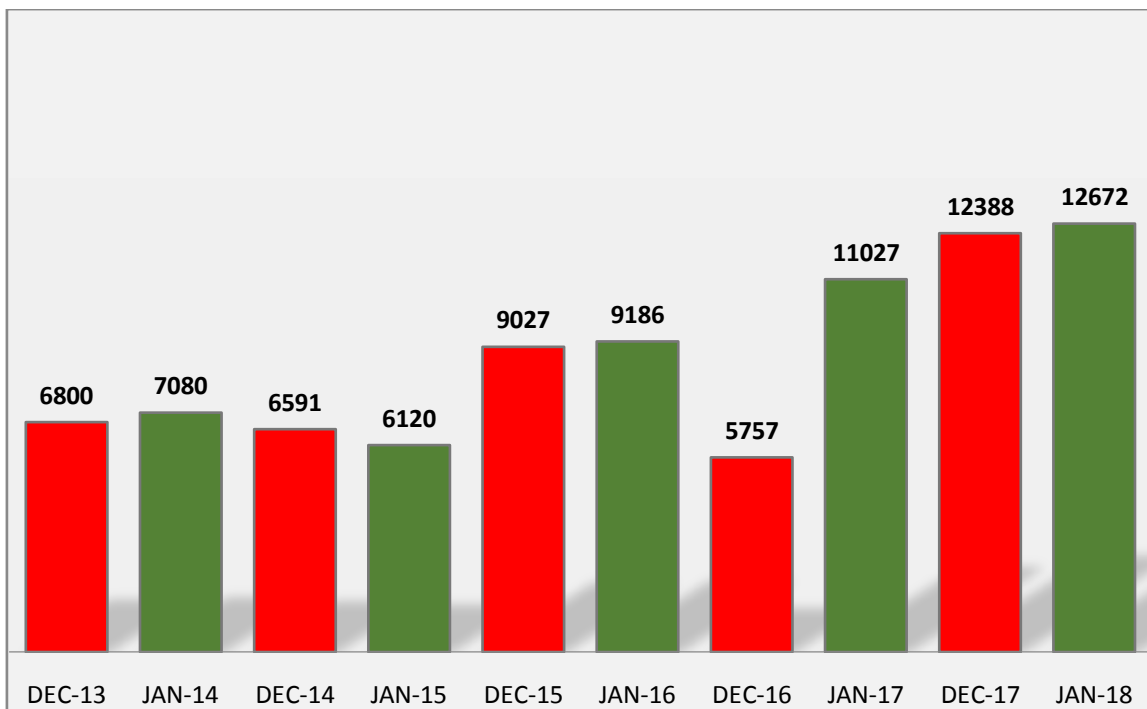


Table 9: Cranes in Portugal 2013/2018. CEAI, ICNF, LPN, SPEA

Conclusions

The wintering population of cranes of the Iberian Peninsula is currently the most important in Europe, being around 270,000 birds. Fluctuations occur according to the prevailing weather in the Peninsula and in Europe each season, and that influences the number of individuals present each winter because of the availability of food resources and suitable rest areas.

The agricultural changes that have been taking place in recent years may have a negative effect on wintering birds and on the number of individuals in the future, because of the introduction of intensive fruit trees (olives, almonds and others). These are being planted in huge areas usually used by cranes (holm oak dehesas, maize, rice, cereals, tomatoes etc.) which cranes can no longer use to find food.

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