

PHENOLOGY AND DISTRIBUTION  
OF THE COMMON CRANE (*Grus,  
grus*) IN SPAIN. 2021/2022.



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(Coordinator).



*This report is dedicated to the memory of José Luis Pérez Chiscano (1930 - 2022), Doctor of Pharmacy, excellent botanist, great ornithologist, pedagogue, humanist, committed, respectful and a great friend.*

*He was the first to describe the wintering of common cranes in the dehesas of Extremadura, particularly those of La Serena and the Central Zone of Extremadura. He was a founding member of Associations such as ADENEX and ANSER, president of SEO, and actively collaborated with them, especially with regard to the conservation of bird and plant species, as well as the unique ecosystem of the dehesa.*

*He accompanied Francisco Bernis in the first ringing programmes for white storks that were undertaken in Extremadura and Spain, and he also ringed the first Spanish black storks and described the nesting and feeding habitat of this species. For years he followed the progress of the colony of Alpine swifts in the bridge at Villanueva and described most of the colonies of this species in the Guadiana basin.*

*As a botanist, he centred his activity in the study and classification of the flora of La Serena, particularly the Extremenian narcissi and orchids, contributing to the clarification of the complicated world of these species. His work to classify what is now called *Narcissus confusus* was particularly important, and he described a new species of orchid, which bears his name: *Serapias perez-chiscanoi*.*

*He studied tirelessly until his final days; he was fascinated by hummingbirds and their role as pollinators, and whenever he could he would spend afternoons looking for Northern wheatears on their post-breeding migration through La Serena and enjoying cranes.*

*We have lost a teacher and friend; his legacy is great, with numerous scientific articles about birds and plants, and the hours and days we shared and enjoyed together will never be forgotten.*

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## THANKS

Once again I have to express my most sincere thanks to everyone who participates by sharing information of their sightings and censuses during both migration periods; thanks to these we can produce weekly maps and compile the information that we publish weekly on our web site.

Also, thanks to those who have shared their photos: Agustín Rivas, Ángel Franca, Ángel López, Carmen Comendador, Carmen Tornos, Cristóbal del Haro, David C. Huertas, Esther Yera, Fernando Jubete, Fernando Rico, Francisco Lopo, Irene Marina, Javier de La Paz, Javier Fregenal, J. Manchado, Javier Ternero, Jesús Mari Lekuona, Jose Leal, José L. Suárez; Jose M<sup>a</sup> Lubián, Juan Villora, Juan A. López, Juanma Sánchez, Manuel Díaz, Michel Viskens, Miguel Todón, Neil Renwick, Raquel Mansilla, Richard Fleming, Rúben Coelho, Sergio Arroyo and Xabier Saralegi among others.

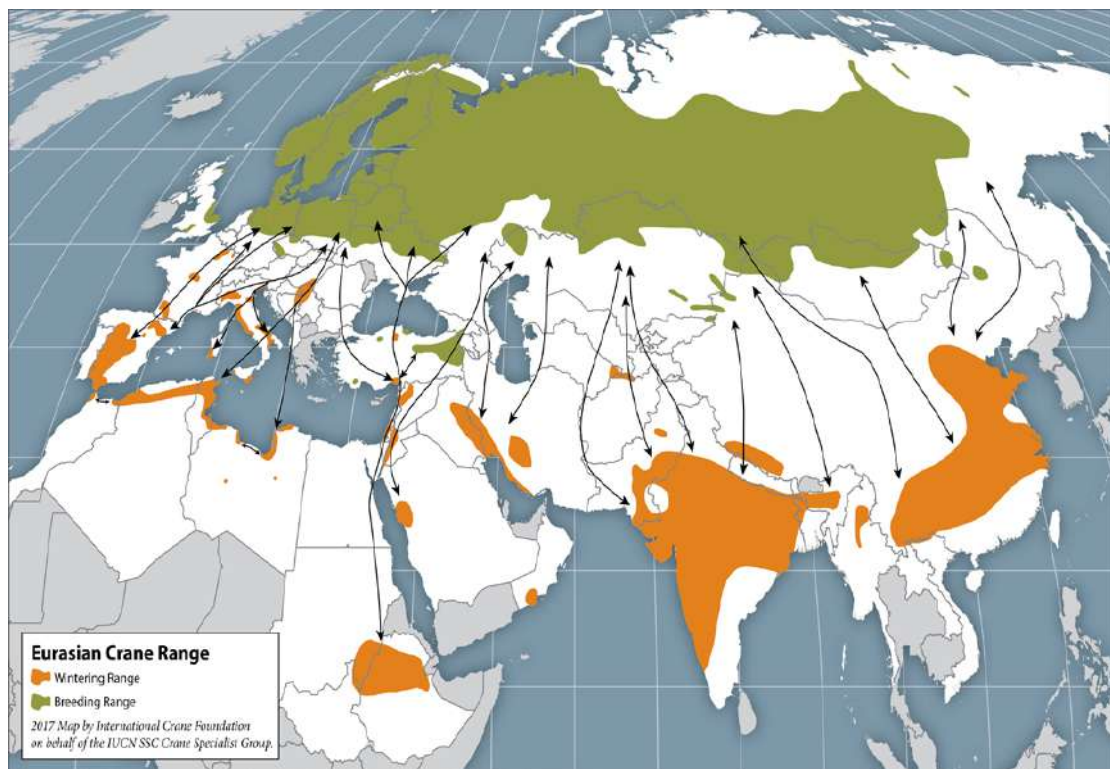
To Antonio Torrijo and José Miguel Pueyo for their daily work during the spring migration at Gallocanta.

To Jose Leal and Valentín Arévalo for producing the maps, to Neil Renwick for the translation into English, to Jose Leal for the cover photo and to Ivar Ojaste for the information about the Estonian cranes.

Finally, to all the participants for their excellent work in the censuses, as without them this report would not be possible.

## INTRODUCTION

The common crane is a bird belonging to the *Gruidae* family within the order *Gruiformes*. It breeds across the northern Palearctic (Jonhsgard, 1983), from the Scandinavian Peninsula to Siberia and to the south from central Europe (Germany, Czech Republic and Ukraine) to Mongolia and northern Manchuria in the east.



Map nº 1: Distribution, migration routes and wintering areas of common cranes. Source: I.C.F.

The crane is a polytypical species, with four subspecies recognised: *Grus grus grus* Linnaeus, 1758, *Grus grus lilfordi* Sharpe, 1894, *Grus grus archibaldi* Ilyashenko, 2008 and *Grus grus korolevi* Ilyashenko y Belyalov, 2013. Of these, the dominant subspecies are *Grus g. grus* and *Grus g. lilfordi*.

The subspecies *Grus g. lilfordi* is distributed throughout Asia and it should be noted that the majority of the population migrates within that continent, from the Middle East to Korea. The subspecies *Grus g. grus* is distributed throughout Europe. Those from the west migrate to Spain, those from the centre and east of Europe migrate to Africa and Arabian Peninsula.

The distribution limit of both subspecies is not clearly defined, but the eastern race is generally found east of the Obi River, while the western subspecies is found to the west of the Pechora and Volga Rivers.

Currently the Asian population is smaller than the European, with an estimated 120,000 individuals of the former (Prange, 2015), with populations that are in decline. These are primarily as a consequence of the end of the Soviet Union especially as a result of agricultural changes, which led to a significant decline in the Russian populations (Ilyashenko & Markin, 2010).

Conversely, the western population is constantly increasing, being estimated at over 580,000 cranes, probably due to protecting the species along with improving and restoring the breeding habitats.

The majority of the western population of cranes is distributed across the north, centre and east of the European continent, with small numbers in southern countries of the continent, such as Turkey, and Transcaucasia in Asia (Prange 1997, 2006, 2007, 2015).

Currently the bulk of the west European breeding population is found in Finland, Scandinavian countries, the Baltic Republics, Poland and Germany. Other countries, such as the Czech Republic, Ukraine and Belarus, have smaller populations. There are recent cases of recolonisation, such as in the United Kingdom, where they began breeding in Norfolk in 1979 (Buxton, 1987), after 400 years, and where there is a reintroduction programme in Somerset. They have also naturally recolonized France since 1985 (where they became extinct in the 19<sup>th</sup> century) (Salvi & Dulau 2018) and The Netherlands Belgium and Ireland in recent times.

## **HABITAT**

The common crane generally inhabits open areas in or near wetlands, where they feed and shelter. In countries where they breed, they nest in wetlands with dense vegetation and groves of trees, such as birches, placing nests on the ground. During this period they are not gregarious, with territorial pairs jealously defending their territories from other cranes. Gatherings are only seen of small groups of immature birds, or young of the previous year, which are roaming in search of feeding resources. Outside the breeding season, they visit recently-harvested cereal fields in search of grains, and also recently-sown fields that have already sprouted, forming groups whose size depends on the availability of food.

During the pre-migration and migration period, cranes are seen feeding in open fields, and they gather at particular wetlands (reservoirs, lagoons and other water-bodies) to sleep with cranes from neighbouring areas. The size of these concentrations depends on the availability of wetlands and feeding areas.

In the wintering areas, cranes historically occupied the dehesas of south-western Iberia, but following population growth and the planting of extensive areas with crops such as maize, this pattern has changed, and now it is common to see large flocks in stubble fields of this cereal, rice and other cereals. However, they still occupy the dehesas at the start of winter, when there is a readily-available supply of acorns, but maintain the same routines: sleeping in wetlands and feeding in the surrounding fields by day.

## **MIGRATION**

At the end of summer, cranes begin to collect in favoured areas (where thousands may gather) and begin to leave on migration in groups, heading for the wintering areas. This migration may begin early or late depending on the weather conditions, which also influence the duration of migration, as does the availability of food in resting areas along the migration route. They may leave early if there is no food, or they may extend their stay when resources are abundant.

The majority of the western population of cranes winter in south-western Europe, in dehesas, cultivated fields and wetlands in the Iberian Peninsula, France and Germany, while a fraction do so in northern Africa (Morocco, Algeria, Tunisia and Libya). Some of the European Russian, Finnish, Baltic and Belarusian cranes spend the winter in Sudan, Ethiopia and Eritrea, with a lesser number in Turkey, Israel, Iraq and parts of Iran.

The migration routes of European cranes pass through four regions:

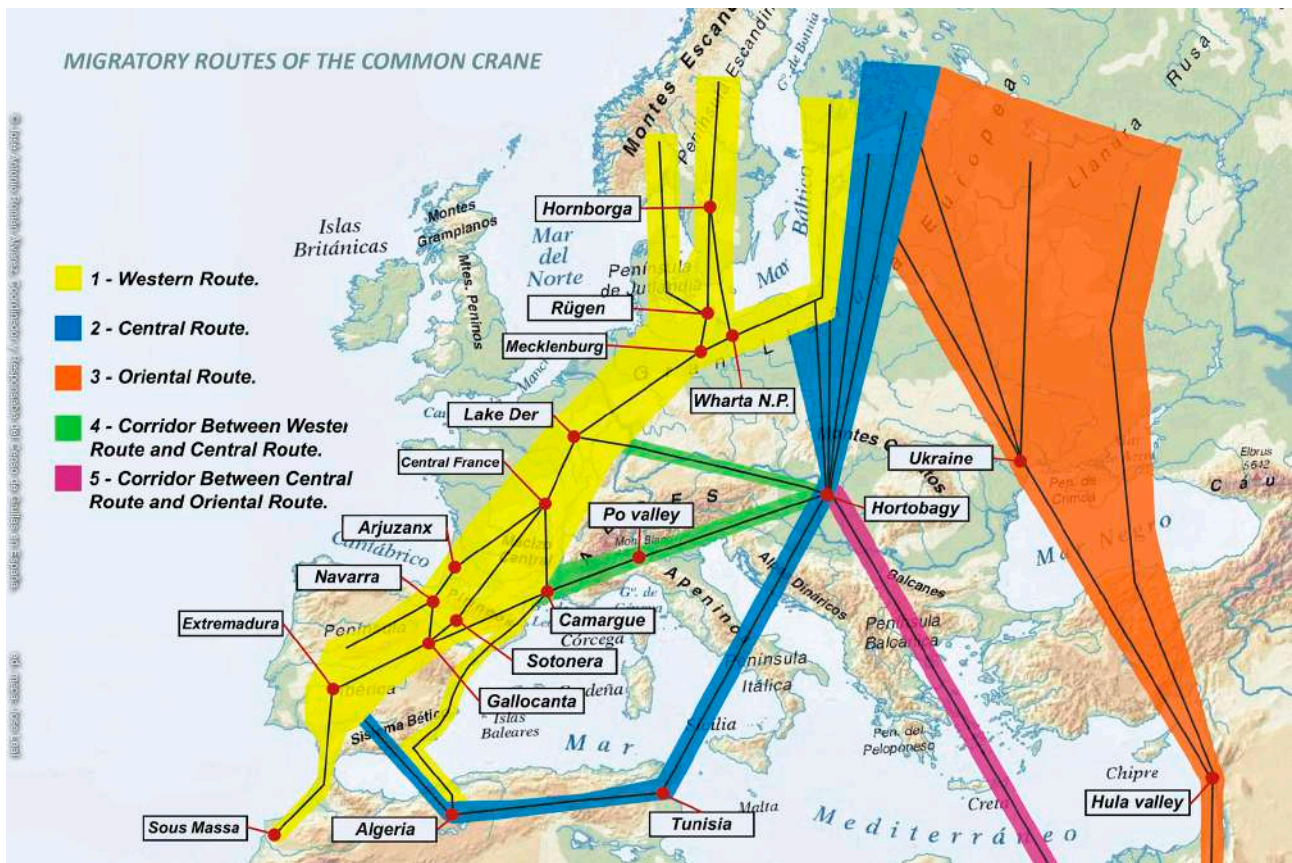
<b>Geographical Region</b>	<b>N.º Birds</b>
Western Europe	400.000
Baltic/Hungary (N & E África)	150.000
<b>Total</b>	<b>550.000</b>

- The East European Route, the migration route of the cranes that winter in Africa, originating in the most easterly populations of the Baltic region, Finland, Ukraine and western Russia, crossing the Black Sea and flying to the Jordan Valley, to rest at Hula Lake in Israel and then continue to Eilat, in the Sinai, crossing the Red Sea and going on to the Nile Valley and following the river to their wintering quarters around Lake Tana (Ethiopia).
- The Baltic-Hungarian Route (Central route), which birds from the Baltic region, Finland and Belarus follow to Hortobagy National Park in Hungary (where they stay for weeks), then they continue to the Balkans, crossing Croatia, the Italian Peninsula and the Mediterranean to spend the winter in Tunisia and Algeria. Some of these birds head for the Bosphorus Straits in Turkey, looking for the route to Asia Minor, or even going through Greece and Cyprus to cross directly to northern Africa.

- The West European Route, flown by Scandinavian birds to Rügen Island in Germany and then to northern Germany, where they rest and feed and are joined by birds from Poland, Baltic countries and Finland. These flocks then head for Lac du Der, a reservoir in Chantecoq in the north-east of France. From the middle of September, they may migrate in a staggered and continuous fashion or in big waves, depending on the weather conditions, being able to stay in this area for weeks. They continue their journey across France, south-westwards to Les Landes, Aquitaine, where they stop again before crossing the Pyrenees (although they may cross them directly if the weather conditions are favourable). They usually cross the mountain range through the valleys of Navarra and the most westerly ones of Aragón to head for Gallocanta Lagoon, an obligatory rest stop for the majority of them. They usually stay at the lagoon for a few days, but if this is dry, as happens occasionally, the cranes only stay overnight at this spot and continue the journey the next day. They also use reservoirs and lagoons a few kilometres from Gallocanta. A minority continue the journey across La Rioja without going to Gallocanta, heading across Tierra de Campos to La Nava Lagoon, following the old traditional route. Valverde (1952) described this migration route which they took across Castile, which was the usual route that they used to get to the wintering areas in south-western Iberia until the first half of the 20<sup>th</sup> Century, to arrive in Salamanca, Extremadura, Andalucía and Portugal. The desiccation of the majority of wetlands on this route (La Nava and others) produced a change of strategy and in the 1970s (Fernández Cruz 1982) they began to migrate through the centre of the Peninsula from Gallocanta, following the route with staging posts at some reservoirs in Castille-La Mancha, such as Buendía. In those days their stay was usually very short, as the farmers didn't welcome their presence and harassed them continuously. After crossing the centre of the country, they spread across La Mancha lands (reaching Fuente de Piedra in Málaga), while some occupied neighbouring parts of Toledo, or continued to Ávila, Salamanca, Valladolid and Zamora. The bulk will continue to Extremadura, some via the Valdecañas reservoir to spread across Cáceres province, others via the Cíjara Valley to Orellana, entering the Central Zone of Extremadura (Upper Guadiana Valley) where they rest and feed, using this area as a corridor that leads them to spread throughout the region: Portugal, northern Córdoba, the Sevilla area, Doñana and La Janda, from where a few hundred may cross the Straits of Gibraltar to spend the winter in Morocco. There is also a corridor in eastern Spain which takes them to northern Africa without needing to cross at the Straits.

Although cranes have generally been faithful to these routes, sometimes they use new ones, and at the beginning of the 21<sup>st</sup> Century they opened a new corridor, leaving Hortobagy (Hungary) towards Serbia, continuing across Croatia and Slovenia, migrating over northern Italy to the south of the Alps. As a result of this, a new wintering nucleus emerged in France, at the Rhone estuary, in the Camargue, and more recently another in the Po Valley in Italy (Ojaste *pers.com.*). Other cranes go through Austria, to the Jura Massif in France, then subsequently divert to the Camargue (Salvi, 2016). From this location they head for the Pyrenees, crossing into Catalonia or Andorra then heading for Gallocanta.

A small proportion continue down the east of Spain to the north of Africa. The Balearic Isles may be a reference point for birds that cross the Mediterranean from north to south.



Map nº 2: Principal routes followed by European cranes on migration.

Migration begins with the northern-most birds, where bad weather events occur earliest and days shorten rapidly. This photoperiod marks the first movements and these most northerly birds are those that will fly furthest and travel the most kilometres. On the other hand, Central European cranes usually fly shorter distances and winter in nearer latitudes. In general, autumn migration is more leisurely and can last more than two months (from October to December), until the breeding territories have been abandoned. It can even last into January, as mild winters are becoming more frequent in central Europe and allow many cranes to stay in or near their breeding area, and when a bad weather front arrives they move to the west-southwest, even crossing the Pyrenees, depending on the strength of it.

Cranes will be concentrated in certain favourable areas, where there is abundant food and there are tranquil roost sites, and as the days get shorter and inclement weather increases they begin to leave these areas and head for the wintering areas. Autumn migration generally occurs in waves, so that during certain days or a particular week a major percentage of the population moves on, while during the rest of the season they migrate in smaller flocks. Weather is the key factor and each year migration happens differently, with one or two main waves.

On the other hand, spring migration is much faster, as adults are in a hurry to arrive at their breeding areas, so it usually lasts just a month, between the middle of February and the start of April; the bulk of migration taking place in the last week of February. They leave the wintering areas mid-morning, when thermal air currents form, and migrate determinedly with short breaks. Extremenian cranes usually have a break at Valdecañas



reservoir (Cáceres) if they are coming from the most westerly areas, while those from the Central Zone usually stop at Buendía Reservoir (Guadalajara/Cuenca). For the next break, they will arrive at Gallocanta Lagoon (Teruel/Zaragoza), where the majority of adults will set off again the next morning, and, depending on the wind, they will cross the Pyrenees from Navarra or will make another stop at Sotonera Reservoir (Huesca). If they cross they will continue to the centre of France, taking another break in the centre of the country before arriving at Lac du Der (Chantecoq). Once here, and after another stop (which may be for a few days) they head through Belgium, Luxembourg and the Netherlands, making for northern Germany, where they may stay a few days or weeks before returning to their breeding areas during March, while the Baltic and Scandinavian birds don't arrive until the end of March or early April.

At Sotonera (Huesca), if wind conditions allow it, cranes cross the mountain range through Huesca's valleys or even from Navarra's; sometimes the wind pushes them further east and they go through Catalanian valleys, especially those in Lleida, although many also go through Gerona's valleys. Many of them also come from Gallocanta, pushed by El Cierzo (strong north-west wind). They then go on to the Camargue, from where they may go north (Lac du Der) or via the Jura to Austria, or even take the route to the south of the Alps and make for Hortobagy from northern Italy.

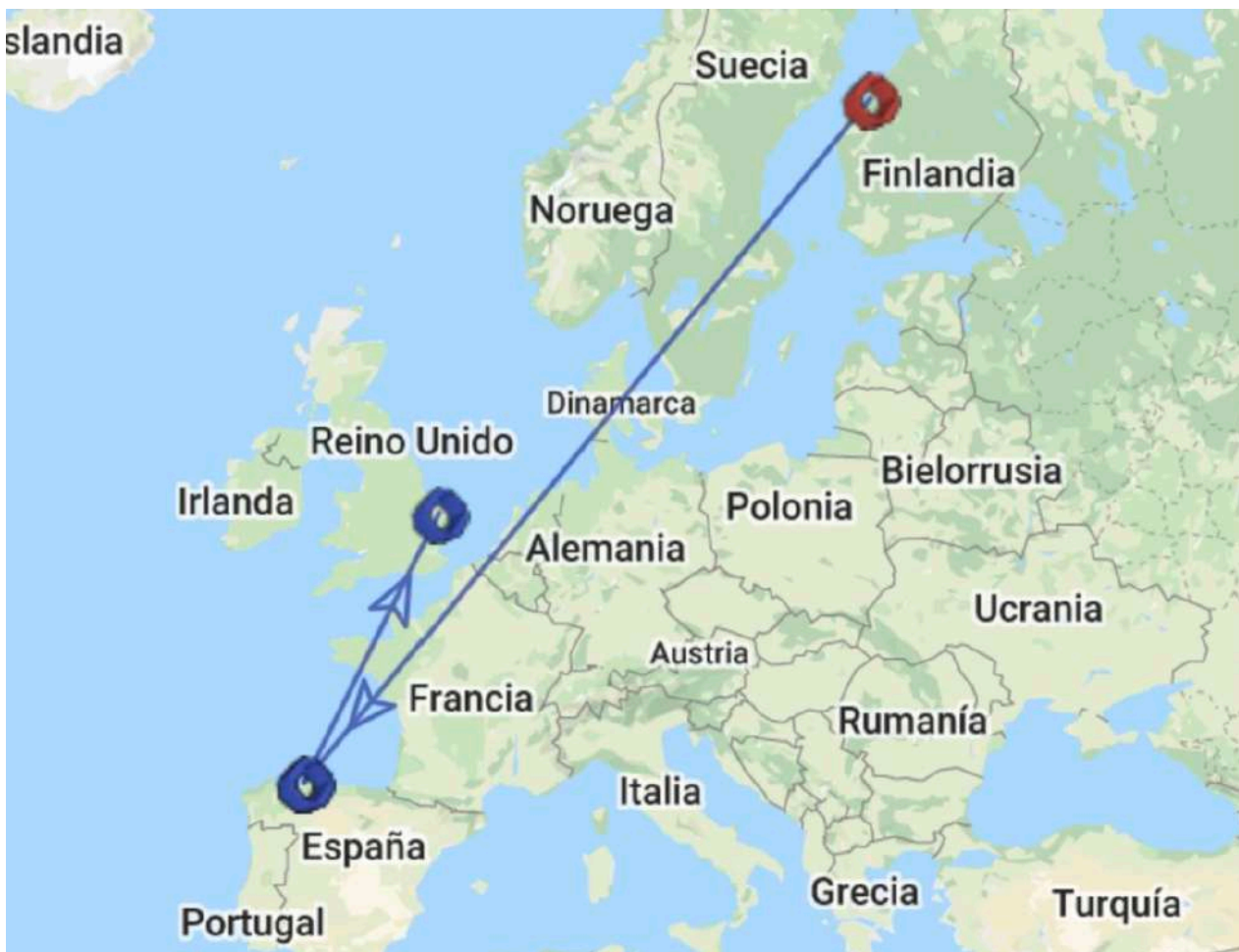
The return routes are usually the same as the southbound ones, although routes to the north of the Alps from France to Hortobagy have been documented. Thanks to birds carrying GPS/GSM transmitters, some Lithuanian families are being tracked (Perzhu, 2018, *pers.com.*) as well as Estonians (Ojaste *pers.com.*), which take the route to the south of the Alps in autumn then return by the French route, although some of them, particularly young birds, take the autumn route without hesitating to fly over the sea. Some birds even make a loop on migration, when in autumn they go south on the Hungarian route to northern Africa then return through central Europe, as Vilja did in 2018 (Ojaste *pers.com.*).

During spring migration (and autumn) it is not uncommon that a juvenile may be left behind, being lost or independent of its parents, and it wanders to different wetlands, perhaps dying because of lack of experience, though in some cases they manage to leave the Peninsula and look for areas they recognise and thus return to their original sites. However, this isn't always the case: last spring a juvenile turned up in the Avilés estuary (AS) on 22 March, separated from a migrating flock that must have gone further north, as this is neither a wintering or passage area. This individual originated in Finland, as it wore rings (YYBk/BkRY) and had been ringed at Norrby on 4/07/21; it had not been seen at any wintering locations in the Peninsula.

After this date there were no more contacts in the Peninsula, nor on the continent, until it was found on 21 June at Yaxham in the United Kingdom, where it had joined the British population that is resident in the east of the country. This shows the extraordinary capacity these birds have for finding and joining with other congeners, even when they have never been in particular geographic regions. Their instinct tells them to go north and it may have followed the coast of Les Landes, Aquitaine, on its return journey, which then brought it to cross the English Channel and then find the British population. On 17 November it was located to the east of Norwich (UK). The British population is sedentary, so it is possible that this bird will stay in the area, although its instinct will be to migrate sooner or later and perhaps leave the British Isles, where she continued on January 28.

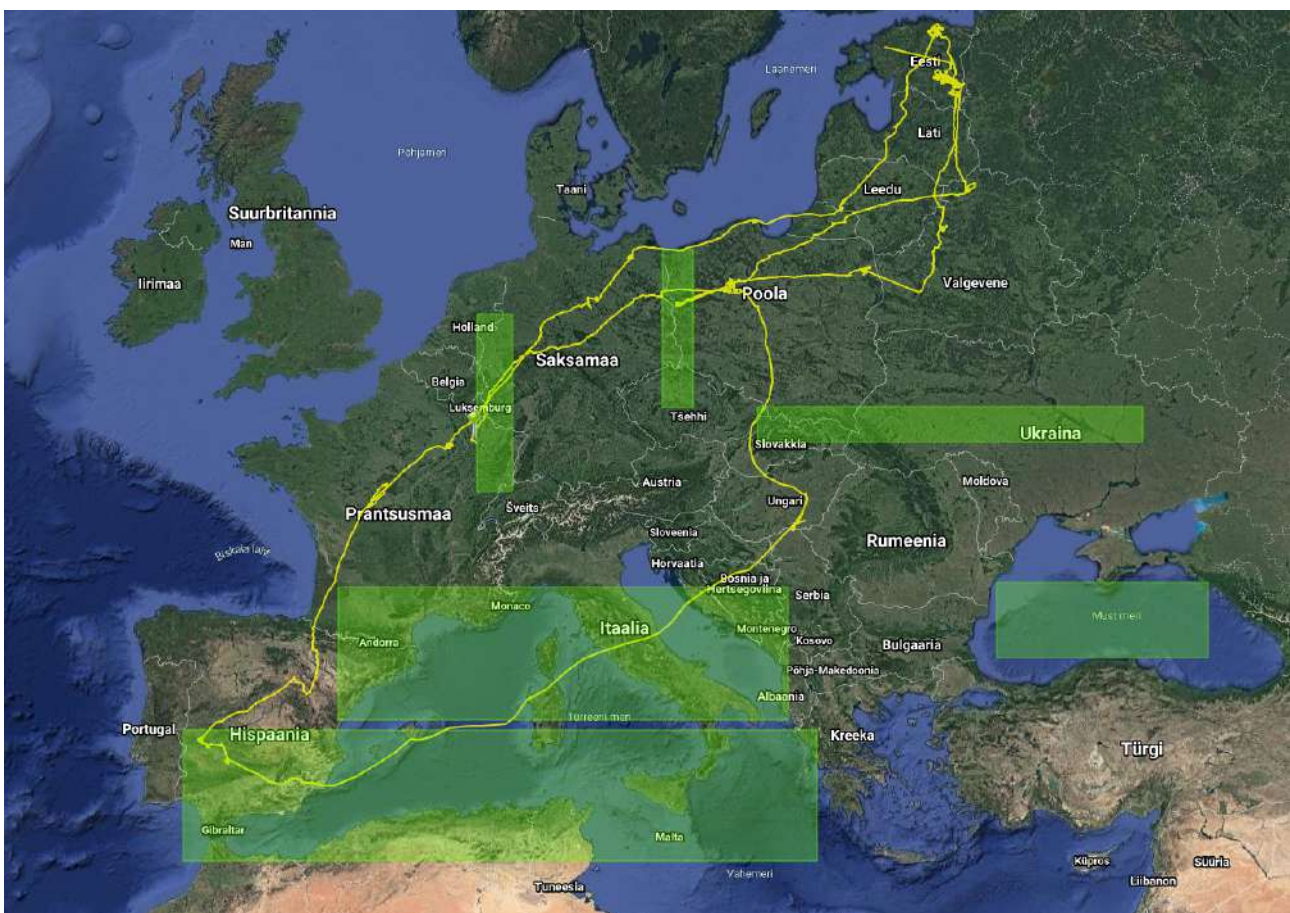


Image nº 2: Juvenile crane at the Avilés estuary (AS), 22 March 2021: Photo: Alicia Polledo



Map nº 3: The route followed by crane YYBk/BkRY. Source; iCORA.

Another bird that demonstrated the character of these birds was Lootvina. It arrived with its parents in autumn 2019 along the traditional route through Poland, Germany and France, coming through the Pyrenees into Navarra then to Gallocanta, from where they headed to Extremadura. They spent the winter in the dehesa at Aldea del Cano (CC), although they also moved to maize stubble areas around Miajadas and Amoharín. Probably after becoming independent from its parents, it went to the dehesas of northern Córdoba (Los Pedroches) and heading east-southeast continued to Palos Cape in Murcia (SE Spain), going out over the Mediterranean to the island of Mallorca (Balearic Isles). It took a break at Salobrar de Campos Natural Park, continued the journey over the Tyrrhenian Sea, going over the Strait of Bonifacio between Corsica and Sardinia, crossing the Italian Peninsula and then the Adriatic Sea to reach Croatia, continuing through Bosnia, Herzegovina and Serbia to reach Hortobagy, in Hungary. In autumn 2021 it settled for the winter in the Central Zone of Extremadura, near Hernán Cortés (BA).



Map n° 4: Routes followed by Lootvina in autumn 2020 and spring 2021. Info: Ivar Ojaste, Estonian University of Sciences.

The traditional migration routes through central Europe continue to deliver the bulk of cranes from that zone and also from Scandinavia to the wintering areas in France and the Iberian Peninsula, although in recent years we are witnessing a very interesting phenomenon involving Baltic and Finnish cranes. Although they continue migrating along this central European route, principally in autumn, it appears that they are gradually modifying it, both those that migrate by the western route and those that go by the eastern route to winter in Ethiopia.

Hortobagy National Park in Hungary has become, in recent times, a summering resort for immature Estonian cranes (*Ojaste pers.com.*) and also the key location on migration in both periods.

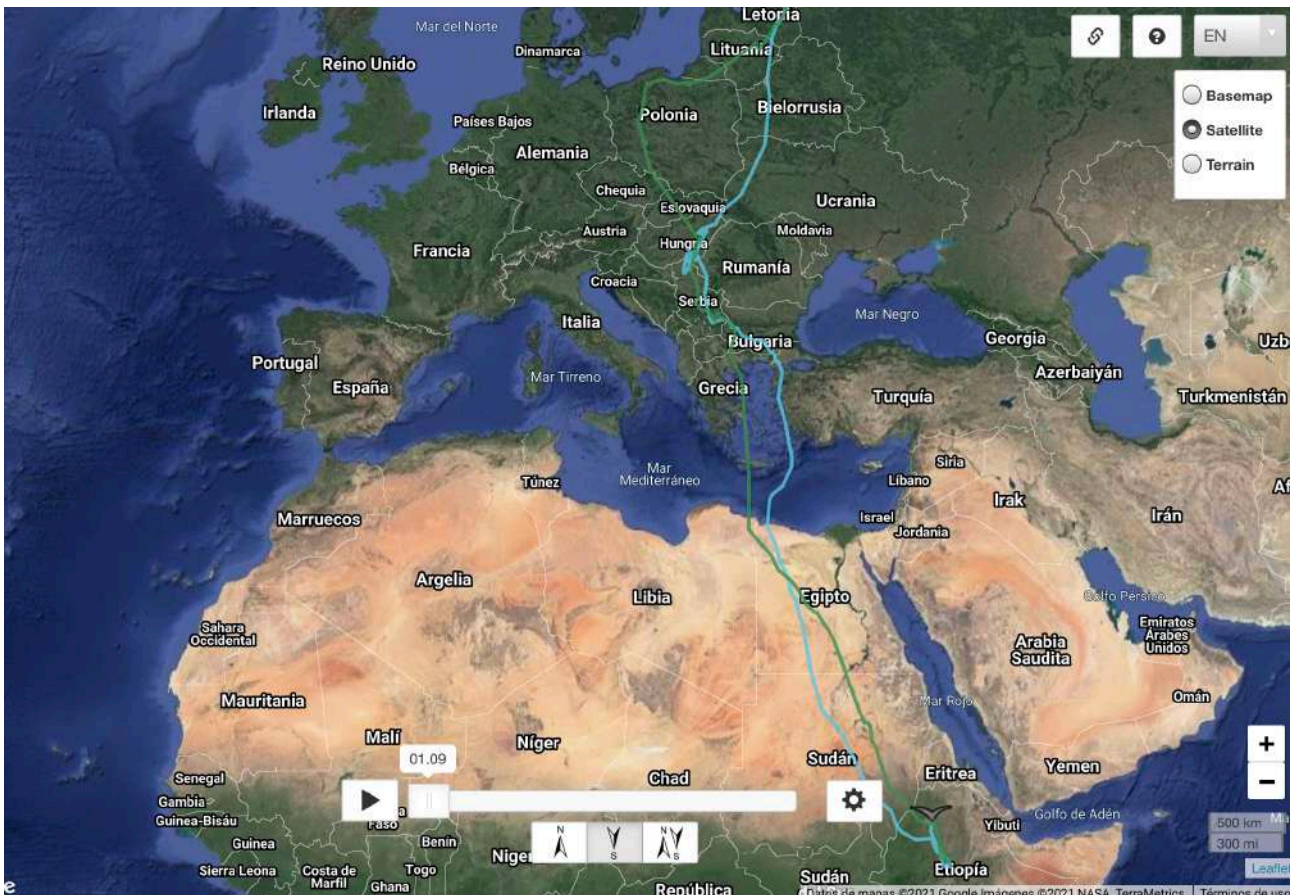
In autumn, these cranes head through central Europe (Poland and Germany) and from there move on to Hortobagy, to take a break that may last days or weeks. Afterwards, they take the route to the south of the Alps, across Serbia, Croatia, northern Italy and southern France to the Iberian Peninsula, without ruling out that they may cross the Adriatic or Mediterranean seas.

On the other hand, those on the Eastern route through Hortobagy migrate south-east, even through Greece to Egypt, to go down over the Sahara Desert to Ethiopia, which is a long, hard route given that crossing this enormous desert allows few stops due to the lack of suitable oases for them until they get close to the Nile.

They may also head for the Bosphorus Straits and across Turkey, Israel and the Sinai, and cross the Red Sea to reach the Nile, including crossing the Aegean Sea from these straits, following the Turkish coast to northern Egypt.

For all this, the Black Sea seems to be losing importance, at least for Baltic cranes, although it is still active for the most easterly Finnish cranes and Russian cranes which are using this route.

In the future, it is possible we could see a strategic change for these cranes and Hortobagy becomes the main axis in the migration of these two populations, which could mean there will be interchanges here and cranes from the eastern route may end up in the Iberian Peninsula. This has been the case for the family of Mustakurmu, which has wintered in Spain after spending the previous winter in Ethiopia (*Ojaste pers.com.*). This allshows that the migratory dynamics of this species are flexible and very active, subjected to constant evolution.



Map nº 5: Routes followed by Ahja M in 2019/20 and 2022. Source: Birdmap.

## **SUMMER VISITORS AND FIRST ARRIVALS**

To designate the different provinces and countries we use the following codes: LU: Lugo; C: Coruña, PO: Pontevedra; Ourense: OU; AS: Asturias, CT: Cantabria NA: Navarra, LR: La Rioja, G: Gipuzkoa, AR: Araba, BI: Bizkaia; GI: Girona, B: Barcelona, LL: Lleida, T: Tarragona, Z: Zaragoza, HU: Huesca, TE: Teruel, V: Valencia, CS: Castellón, A: Alacant, MU: Murcia; IB: Illes Balears, BU: Burgos, VA: Valladolid; LE: León; ZA: Zamora, SA: Salamanca, AV: Ávila, SO: Soria; SG: Segovia, M: Madrid; CU: Cuenca, AB: Albacete; GU: Guadalajara, TO: Toledo, CR: Ciudad Real; CC: Cáceres, BA: Badajoz, CO: Córdoba, SE: Sevilla, H: Huelva, CA: Cádiz, MA: Málaga, AL: Almería; GR: Granada:J: Jaén: Canary Islands: IC

Countries: Portugal (PT) France (FR) Italy (IT) Germany (GE) Hungary (HU) Israel (IS) Sweden (SE) Poland (PL), United Kingdom (UK).

In Spain, this year, summering birds have been very scarce:

02/05/21: at Torralba de Oropesa (TO) Elisa Vazquez.

07/05/21: 1 at Riobobos weir (SA) Ángel López.

14/05/21: 1 at Caminreal (TE) Antonio Torrijo.

16/05/21: 3 at Gallocanta (Z) Antonio Torrijo.

23/05/21: 1 at Tornos (TE) Juan C. Bellido.

07/06/21: 2 at Santoña lagoon (NA), also observed on 8<sup>th</sup>, 10<sup>th</sup> & 12<sup>th</sup>: María Díaz, Rosario Mendoza, Juan M. Pérez, David Cantalejo, Jon Irztzagorria, Jesús Méndez.

10/06/21: 1 at Cazalegas (TO) Francisco Rodríguez (ARDEIDAS).

18/07/21: 1 at Ejea de los Caballeros (Z) Ángel Franca.

24/07/21: 2 at Gallocanta lagoon (Z) Antonio Torrijo.

18/07/21: 1 at Ejea de los Caballeros (Z) Ángel Franca.

21/08/21: 1 at Mendixur (AR) Julen Santacristina.

12/09/21: 1 at Ejea de los Caballeros (Z) Ángel Franca.



Ángel Franca

Image nº 3: Crane at Ejea de los Caballeros (Z). Photo: Ángel Franca

## **AUTUMN MIGRATION**

The first migrating flocks are seen in September:

**18/09/21:** 55 migrating over La Bujeda (GU) Javi de la Paz; heard at Mazuecos (GU) DALMA; 1 at Chica lagoon, Villafranca de los Caballeros (TO) Ignacio Velázquez.

**19/09/21:** 100 over Moscardón (TE) José A. Bendito; 1 at Pitillas lagoon (NA) Alberto Pastoriza.

**21/09/21:** 2 Valereña rice fields, Ejea de los Caballeros (Z) Sandra Martínez.

**25/09/21:** 32 circling over Torija (GU) Juanma Pérez-García; 5 at Pitillas lagoon (NA) Gonzaga Santesteban.

**29/09/21:** 30 over Logroño (LR) Maribel Gutiérrez.

**01/10/21:** 1 at Chica lagoon, Villafranca de los Caballeros (TO) MCarmen Comendador.

**02/10/21:** 14 at La Janda (C) Maite Santos ; 3 flying over Bárcena de Cicero (CT) José A. Tielve.



Image nº 4: Flock migrating over la Bujeda (CU). Photo: Javi de la Paz



Map nº 6: First cranes in Spain up to 3 October 2021.

At the start of the second week of October some cranes were seen coming through the Basque corridor, and migration began during the week

**05/10/21:** 12 at Salburua (AR) Julen Santacristina; 7 over Pamplona (NA) Rajen Ayerra; 40 over San Sebastián (G) Álvaro Campuzano; 25 at La Janda (CA) Francisco Solano; heard at Torre de Miguel Sesmero (BA) Felipe Ontiveros.

**06/10/21:** 6 at Palomas (BA) José Guerra, Marc Gálvez.

**07/10/21:** 2 at Biota (Z) Antonio Esteban.

**08/10/21:** 35 over Alberiza (LR); 7 over Villalba reservoir (BA) José Leal; 50 over Busto de Bureba (BU) José A. Campos; 2 in Arguedas rice fields (NA) Rajen Ayerra.

*68 cross over Lindus (FR) Ander & Jon; 2 cross Lizarreta Pass (FR) Félix Thévenet et al.*

**09/10/21:** 20 over Daroca (Z) Agustín Gracia and land at Gallocanta reservoir (Z), where small groups continue to arrive throughout the day, Carmina Franco; 25 over Alba de Tormes (SA) Lucía Alonso (Sylvestris) 4 at La Nava lagoon (P) which then set off on migration, Andrés Alfaro, Fernando Jubete Guzón; 8 over San Pedro Manrique (SO) Juan L. Hernández; 5 over Irún (G) David Santamaría; 11 over Cabanillas del Campo and 19 over Quer (GU) (DALMA); 9, 1 juvenile, at Los Canchales reservoir (BA) Jose L Bautista, Juan A. López; 10 over the chozos de Llera (BA) Rafael Vicente; 21 over Villoria (SA) Paqui del Castillo; 5 at El Oso lagoon (AV) Juan R. Cuervo; 25 over Tudela (NA) Francisco Ahedo; 62 at Pitillas lagoon (NA); 2 at Riobobos weir (SA) Tino Fernández; 3 at El Raso lagoon (VA) Rocío Gómez; 96+56 over Roncesvalles (NA) Sancho Pineda; heard over Ochagavía (NA) José Sola; 90 at La Zolina pool (NA) Gorka Gorospe; 66 over Sangüesa (NA) Gonzaga Santesteban; 4 at Llongar lagoon, Lillo (TO) María Bueno; 12 over Tembleque (TO) José López; 3 at Navalcán reservoir (TO) Luis J Martínez, Miguel Martínez; 30 over Cabanillas del Campo (GU) J Luis Ramos; 100 over the Fluvià river, Besalú (GI) Michael Lockwood; 3 over Barcelona, Xavi Larnuy; 78+65 over Navarrete (LR)

Álvaro Saramián; 89 over Sotos de Alfaro (LR) Ignacio Gámez, Javier Robres; 1 at Las Tablas de Daimiel National Park (CR) Cuevas Ruíz; 6 at Villafáfila (ZA) Miguel A.G.M., Juan J. González, Alfonso Rodrigo; 32 over Pamplona (NA) Rajen Ayerra; 203 over Monteagudo de las Vicarías reservoir (SO) Fernando Chaguaceda, Marian Ramos; 9 at Valdecañas reservoir, Bohonal de Ibor (CC) César Clemente; passage over Calatayud (Z) Ángel Suazo; 2 flocks over Yunquera de Heneres (GU) DALMA; 3 over Castellò d'Empuries (GI) Jean Bisetti; 23 over Olot (GI) Oriol Clarabuch; 16 over Valdelcubo (GU) Sergio Pérez; 20 over Olóriz (NA) Santiago Serrano.  
 646 cross the Organbideska Pass (FR) Johan Meurailon et al.



Image nº 5: Cranes at Los Canchales reservoir (BA). Photo: Juan A. López.

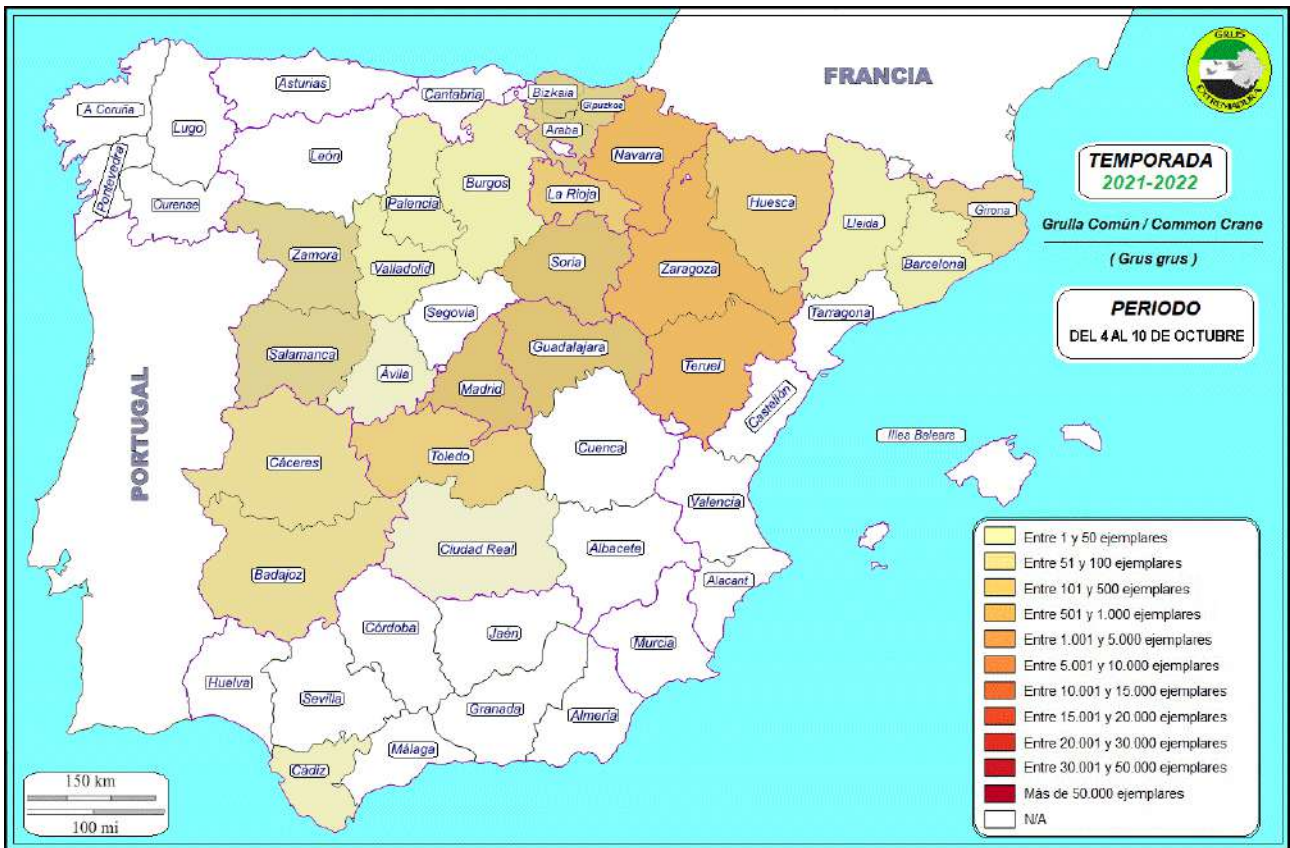
10/10/21: At 2:10h a flock over Lasarte-Oria (G) José R. Labrador; 3 at La Aldea del Obispo (CC) Neil Renwick; 63 at dawn at Peña Hueca lagoon, Villacañas (TO) Ángel Velasco; 570 at dawn at Gallocanta lagoon (Z/TE) and 11 at La Zaida lagoon (Z) Antonio Torrijo; 15 over Solsona (LL) Laia Ximenis, Lluís Brotons; 58 at Villafáfila nature reserve (ZA) and 15 migrating, Cristian Osorio; 8 over Villanueva de la Serena (BA) Manuel Gómez; 3 over Zorita de la Frontera (SA) Néstor Conde; 86 over Elorrio (BI), Aitor Zabala, which are then seen over Vitoria-Gasteiz (AR) Beñat Guevara; 9 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 3 (family group) over Valdecaballeros (BA) José M<sup>a</sup> Traverso; 10 at Sotonera reservoir (HU), 1 juvenile, Juan C. Albero; 380 leave on migration from Gallocanta (TE) and fly over Honda lagoon (GU) Antonio Torrijo; 52 over Bernedo (AR); 50 over Barluenga (HU) Juan C. Albero; 23 over Getafe (M) Isabel Paulos, Fernando Paulos, Carlos Paulos (DALMA); 100 over Bergue (HU) Raúl Navarro; 105 over Bujarradal (GU) Jorge (DALMA); 10 circling over Sariñena lagoon (HU) Eduardo Gracia; 46 over Sástago



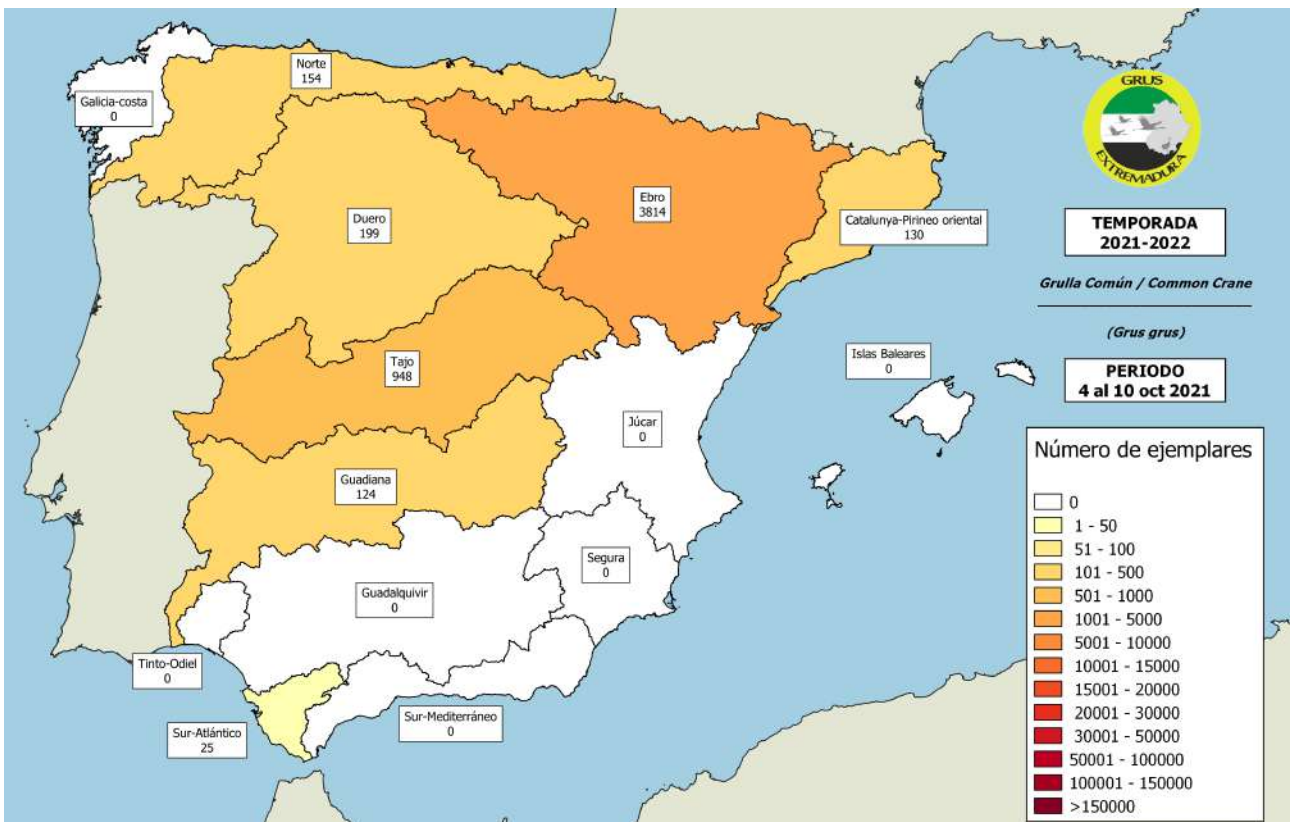
(Z) Daniel Enfedaque; 60 over Utebo (Z) Ignacio J. Romero; 60 over Pueyo de Santa Cruz (HU) Conchi Esteban; 3 at Txingudi (G) Juan F. Esparcia; 10 at Los Canchales reservoir (BA) Gonzalo Valencia; 1 at La Vequilla lagoon (CR) Pepe Buendía; 1 at Chica lagoon, Villafranca de los Caballeros (TO); 1 at Santillana reservoir (M) Jorge García; 40 over Somosaguas (M) Sofía Borop; 110 over San Martín de la Vega (M) José Liarte, María Liarte; 80 over Algora (GU) Ángel Vela; 100 over Buñuel (NA) Patricia Andrés; 5 over Izurzun (NA) Samuel Aunión; 120 over Auritz-Burguete (NA) and 70 over Burguete (NA) Gorka Gorospe; 100 over the Sierra de Alono (HU) María Durán; passage over Abay (HU) Daniel Barceló; 50 over Barluenga (HU) Juan C. Albero; at least 1,000 arrive at Gallocanta (Z/TE) throughout the day, Antonio Torrijo; 25 at Navalcán reservoir (TO) Gustavo Hernández (ARDEIDAS); 166 roost at Sotonera reservoir (HU) Esther Yera, Silvia Duque, Juan Muñoz; 108 in three flocks over Guadalajara and 57 over Cabanillas del Campo (GU) Juan Luís (DALMA); 3 over Valladolid, Rocío Gómez; 15 over Santa Cruz de la Sierra (CC) Carmen Pérez-Aloe; 18 over Huélagua (CC) Miguel Todón; 20 at Cabañeros National Park (CR) Juan Segura; 2 over Las Navillas (TO) Javier Nicolau; 9 at Cazalegas reservoir (TO) Christophe Pontegnie; 25 over San Sebastián de los Reyes (M) Inés Garrido; 57 over Llumes (Z) Ángel Jaime; 28 over Zaragoza, Thomas Rickfeider; 35 at Estany d'Ivars (LL) M<sup>a</sup> José Ochoa, María Mira, Sergi Sales, Carles Serrano, Jaume Albeigès; 1 at Castellò d'Empuries (GI) Aleix Comas; 1 over Torralba de Oropesa (TO) César Clemente; 18 at Tablas de Daimiel National Park (CR) Diane Appels, 120 over Colmenar Viejo (M) ANAPRI, which roosted at El Pardo reservoir; 31 at Los Canchales reservoir (BA) Raúl Pérez; 17 at Alange reservoir (BA) Raúl Granados.



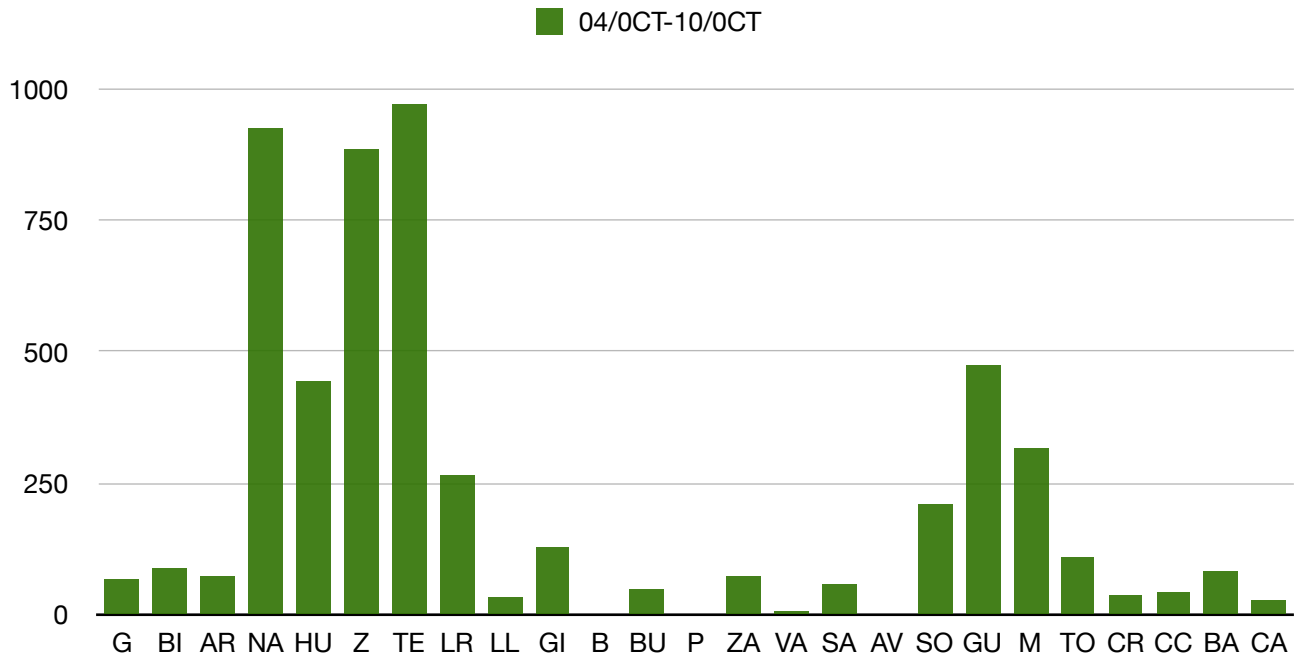
Map nº 7: Crane observations during the week 3 to 1



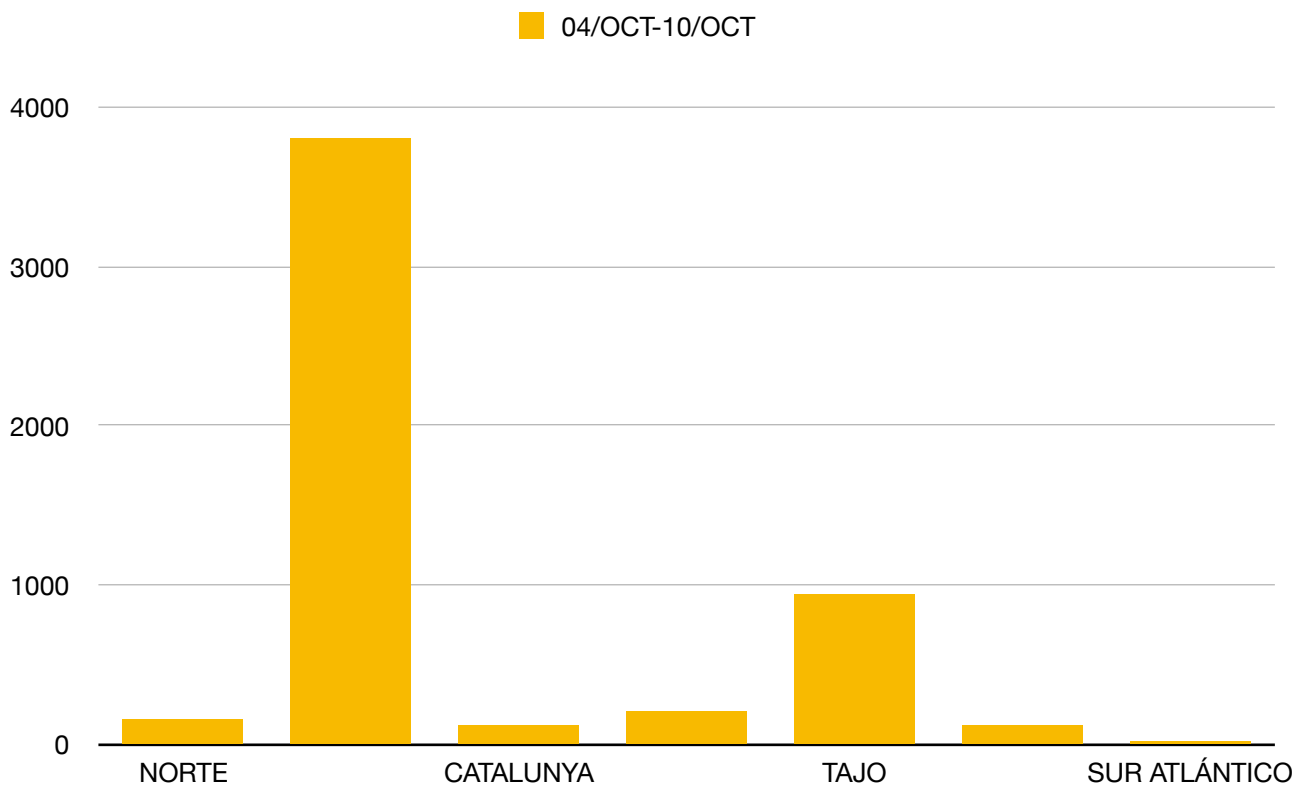
Map nº 8: Crane migration by provinces. October 4 to 10



Map nº 9: Migration by water catchment areas. October 4 to 10



Graphic nº 1: Migration by provinces, October 4 to 10



Graphic nº 2: Migration by water catchment areas. October 4 to 10

Migration continued resolutely at the start of the week, although the intensity diminished at the end of it.

11/10/21: Nocturnal passage: 60 at 04:00h over Alfaro (LR) Andrés Armendáriz and also at 06:00h, Borja Solans. 150 at Navalvillar de Pela (BA) Fermín Sierra; 15 over Casarrubios del Monte (TO) and 6+28+172 over Villamanta (M) José A. Fimia, Alfredo Mirat; 60 over Villaviciosa de Odón; 30 over Barajas airport (M) Martin Kelsey; 25 over El Gordo (CC) Elvira Cano; 9 over Toledo, Javier Nicolau; 58 over Madrid, Maiki; 14 at Lagartera (TO) César Clemente; 6 over Belvís de Monroy (CC) Javier Briz; 37 over La Casa de Campo, Madrid; 50 over Ugena (TO) Carmen Conde; 160 over Valdelcubo (GU) Sergio Pérez; 50 over Madrid, Javier Gayo; 90 over Toledo, Ángel Velasco; passage over Huerva (Z) María; 8 over Monfragüe National Park (CC) Sergio Mayordomo; 29 over Guadalajara, Raúl del Amo; 145 over Boadilla del Monte (M) David R. Martínez; 25 over La Casa de Campo (M) Peter Swinder; 80 over El Retiro park (M) Joan A. Ximenis; 60 over Madrid, David Izquierdo; 135 over San Fernando de Henares (M) Ismael Bayo; 100 over Candelejas de Padrastro (GU) Miguel Díaz; 140 over Carenas (Z) Roberto Muñoz; 5 at Borbollón reservoir (CC) Goyo Naharro; 95 over Pamplona (NA) Rajen Ayerra; 17 at Grande lagoon, Villafranca de los Caballeros (TO) M. Carmen Comendador; 101 over Castejón (NA) Daniel Velasco; 21 at Valdabrá reservoir (HU) Jorge Hernández; 400 over Tudela (NA) Rajen Ayerra; 40+109 over Marchamalo (GU) Isabel, Fernando, Carlos Paulos (DALMA); heard over Robredarcas, Joaquín (DALMA); 50+90 over Bujarrabal (GU) Jorge (DALMA); 3 over Valdelacasa de Tajo (CC) Fco. Javier Caballero; 5 at Proserpina reservoir (BA) Elvira del Viejo; 55+27+152 over Chioeches (GU) Javi Calvo (DALMA); 2 over Riobobos (CC) Álvaro; 83 over Valdecaballeros (BA), José M<sup>a</sup> Traverso; 26 over Trujillo (CC) Juanma Jiménez; 1 over La Portilla del Tiétar, Monfragüe National Park (CC) Sergio Mayordomo; 2 at Galisteo lagoon (CC) Jorge Martínez; 3 at Toril (CC) Sergio Mayordomo; 5 at Granadilla (CC) Laura Marín, Sergio Ávila; 26 over Funtidueña de Tajo (M) García de los Ríos; 45 over El Pardo (M) Francisco Guil; 115+44 over Rivas Vaciamadrid (M) Blas Molina; 16 at El Campazo lagoon (CC) Neil Renwick; 146 roost at Santa Teresa reservoir (SA) Vicente G. Garrudo; 60 at La Fresnedilla de la Oliva (M) M.A.; 2 over Los Pedroches (CO) Juanma Sánchez; 12 over Cabanillas del Campo (GU) José Luis (DALMA); heard at Semillas and Sacedón (GU) Joaquín, Javi Rejos (DALMA); 314 at Moheda Alta (BA) Ángel López; 2 at Chica lagoon, Villafranca de los Caballeros (TO) M.Carmen Comendador; 2 over Esparragalejo (BA) Fergus Crystal; nocturnal passage over Calamonte (BA) Samuel del Hoyo; several flocks flying over Monfragüe National Park (CC) Fran Espinosa; 80 circling over Alfaro (LR) Borja Solans; 26 over Segovia, Fran Delgado; 60 over Villaviciosa de Odón (M) José L. Maduro; 6 over La Portilla del Tiétar (CC) Antolín Hernández; 42 migrating over Navatrasierra (CC) Joaquín Araujo; 134 at Gabriel y Galán reservoir (CC) Laura Marín; 181 at Villafáfila nature reserve (ZA) Andrés Cotoara; 27 in Tablas de Daimiel National Park (CR) Joost Dewyspeleare, Diane Appels; 25 over Tauste (Z) Ricardo Pérez; 13 over La Roca del Vallès (B) Javi Mendoza; 29 over Guadalajara, Raúl del Amo; 1 at Cuerda del Pozo reservoir (SO) José L. Hernández, Jesús Ruíz; 30 over Soto de las Juntas (M) Ana Salas; 23 at La Zolina pool (NA) Raúl Pascual; 50 over El Garraf natural park (B) Juan C. Bellido, Diego Ruíz; 70+30+5 over Sigüenza (GU) Diego Moreno; 50 over Darnius (GI) Ramón Prat; 39 at Las Picadas reservoir (M) Ricardo Rodríguez; 12 over Valdemorillo (M) Víctor L.; 150 over Velilla de San Antonio (M) Mónica Alcolado; 120 over Torremocha de Jadraque (GU) Alf Ortega; 2 at Las Cañas reservoir (NA) Nan Martic; 41 at Riobobos weir (SA) Vic González, Antonio Ceballos; 125 over San Román de los Montes (TO), 158 over Esquivias (TO) and 20+11 over Talavera de la Reina (TO) Francisco

González (ARDEIDAS); 1 over Hondarribia (G) David Santamaría; 9+50 over Ugena (TO) and other flocks were heard, M<sup>a</sup> Victoria Cabañas, Concepción Conde.  
 1,835 over Lindus (FR) Jon & Txufis; 1,563 go over Organbidexka (FR) Yohan Meurailon et al; 646 go over Pelous (FR) Sébastien Arribergé and 121 over Lizarreta Pass (FR) Félix Thévenet et al.



Image nº 6: A crane from Poland at El Oso lagoon (AV). Info: DirectoNatura.org

12/10/21: Family group (3) in dehesa at Cornalvo natural park (BA) Jesús Valiente (ADENEX); 30 at La Nava lagoon (P) Fernando Jubete Guzón; 1,208 at La Zaida lagoon (Z) and 4,000+ at Gallocanta lagoon (Z/TE) from where 3,181 leave at 12:08h, Antonio Torrijo; 650 at Los Canchales reservoir (BA) José A. Román; 5 one mile off Palos Cape (MU) Antonio Fuentes; 160 at Alange reservoir (BA) Pepe Elías; 131 in Villafáfila nature reserve (ZA) Pepe Barrueso; 3 over the low peak at Mota del Cuervo (CU) Jesús Pérez; 12 over Monfragüe National Park (CC) Mauro; 59+60 over Pago de San Clemente (CC) Martin Kelsey; 60 over San Pablo de los Montes (TO) Ángel Velasco; 47 over Villafranca de los Caballeros (TO) Ana R. Casero; 40 over Herencia (CR) Beatriz Oliver; 10+6+16 migrating over Cazalegas (TO) Hugo Sánchez; 22 at La Roca de la Sierra (BA) Raúl Granados; 32 over Montijo (BA) Arturo Pérez; 61 at La Fresnedilla pond, Oliva de Plasencia (CC) and passage over La Navilla (CC) Álvaro García; 20 over Tremedal Pass (AV) Javier Prieta; 145 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 1 at Villoria (SA) and 9 at Riolobos weir (SA) Miguel Rouco; 100 over Pamplona (NA) Javi Eslava; 15 over Los Galachos de la Alfranca (Z) José M. Sánchez; 7 at Monteagudo de las Vicarías reservoir (SO) Jesús Ruíz; 125 over El Pardo hill (M) Brian Villegas; 9 over El Pardo (M) Mónica Carrasco; 45 over Valdebebas (M) Juan Gómez; 16 over Boadilla del Monte (M) Luis Benito; 190 over Villaviciosa de Odón (M) José L. Machuca, M<sup>a</sup> José Cenamor; 40 over Pinto (M) Luis Carretero, Pepe Castaño; 48 over Higuera de Dueñas (AV) Octavio Infante; 16 over Toledo, Ángel Velasco; 50 over Bujarral (GU) Jorge (DALMA); 150 over Cabanillas del Campo (GU), Isabel, Fernando, José Luis (DALMA); passage over Robredarcas (GU)

Joaquín (DALMA); 335 in rice fields at Navalvillar de Pela (BA) Ángel López; 4 over El Brazo del Este (SE) Fernando del Valle; 196 over Olmeda del Extremo (GU) Mario (DALMA); 500 over El Pardo (M) Ángel Victoria; 40 over Agudo (CR) Raquel Ramiro; 99 over Sigüenza (GU) Diego Moreno; 12 over Monfragüe (CC) Mauro; 23 at Toril (CC) Marco A. Sánchez; 15 at La Anguila reservoir (CC) and 13 at Cerro Alto reservoir (CC) César Clemente, Sergio Mayordomo; 30 over Torrijos (TO) Miryam Palomo; 8 over Zaragoza, Alberto Montero; 70 over Tudela (NA), 40 over San Martín de Unx (NA) and 100 over Beortegui (NA) Juan C. Lorenzo; passage over Pamplona (NA) Javi Eslava; 44 at La Nava lagoon (P) Francisco J. Calvo, Miguel Martín; 146 at El Oso lagoon (AV) César L. Pindado, César San Clemente; 2 at Aldehuela de Yeltes (SA) Carlos A. Ramiro, Vega Bermejo; 21 over Amposta (T) David Guixè; 44 at Borbollón reservoir (CC) Óscar Cruz; 2 at Fuente de Piedra lagoon (MA) Manuel Rendón, 309 in Villafáfila nature reserve (ZA) Pepe; 250 over Aranjuez (M) Joan A. Ximenis, Daniel Izquierdo; 4 at El Rocío (H) Daniele Dessi; 2 over Corral de Calatrava (CR) Francisco Hidalgo; 3 at El Vicario reservoir (CR) Jorge Sereno; 6 over Los Santos de Humosa (M) Ana Salas; 60 over Soto de las Juntas (M) Peter Swinden; 16 over Boadilla del Monte (M) Luis Bello; 150 over Velilla de San Antonio (M) Saul Arranz, Mónica Alcolado; 7 at Los Serones reservoir (AV) César San Segundo; 1 over Amposta (T) David Guixè; 1,710 go to roost at Cubilar reservoir (CC) José A. Sánchez; 42 roost at Sotonera reservoir (HU) José M. Canudo, Clara, Francisco Quesada, Silvia Duque; 60 flying at night (22:40h) over Chapinería (M) Rubén Bautista; 1 at Salburua (AR) Gonzalo Deán; 20+40+71 over Berzocana (BA) Paul Burgman; 1 over Prat de Lluçanès (B) Albert Subirá; 31 over Cervera de los Montes (TO) David Gómez; 32 over Yunlos (M) David Mina; 30 over Darnius (GI) David Schlemonast; 15 at Ejea de los Caballeros (Z) Ángel Franca; 7 over Ugena (TO) Hortensia Camino.



Image nº 7: First cranes at Fuente de Piedra (MA). Photo: Manuel Díaz Zurita.

**13/10/21:** 14 at Rucas (BA) Manuel Maximiano; 47 at Cabeza del Buey (BA) Carlos Pacheco; 25 over Navas del Rey (M) José A. Fimia; 20 at La Janda (CA); 300 at Palazuelo (BA) Martin Kelsey; 10 over Hecho (HU) Pedro Bescos; 20 over Neila de San Miguel (AV) Rubén Bautista; 1 at Las Cogotas reservoir (AV) César San Segundo; 9 over Galinduste

(SA) Vega Bermejo; 4 over Bujaraloz (Z) Conchi Esteban; 6 over Noblejas (TO) Francisco J. Martín; 85 over Fuenlabrada (M) Carlos Herranz; 7 over Rincón de Ballesteros (CC) Francisco A. Prieto; 136 in Doñana (SE) Juanma Pérez-García 55 over Palomares del Río (SE) Carlos Moreno; 1 at Centelles (B) David Vilasis; 14 in Cornalvo natural park (BA) José M<sup>a</sup> Benítez; 224 at El Oso lagoon (AV), of which 17 are juveniles, Jorge Leonor, Enero Leonor, Juan R. Cuervo, 7 at Talayuela (CC) Pilar Goñi; 16 at Lagartera (TO) and 27 at Navalcán reservoir (TO) César Clemente; 13 over Coria (CC) José L- Vázquez; 9 at Lillo (TO) and 300 at Quero (TO) Andrei Cotoara; 35 over Cañamero (CC) Paul Burgman; 214 at Villafranca de los Caballeros lagoons (TO) Andrei Cotoara; 19 over Auzberri (NA) Carlos M. Coro; 23 +70+50 over Santa Maria del Berrocal (AV) Javier Prieta; 65 in rice fields at Arguedas (NA) Francisco Anedo; 5 at La Loteta reservoir (Z) Diego Uche; heard at Peralejo de las Truchas (GU) Belén Saura,

14/10/21: Family group of 3 at El Campazo lagoon (CC) Neil Renwick; 33 over Chiprana (Z) Conchi Esteban; 4 over Velilla de San Antonio (M) Manuel Rodríguez; 20 over Madrid, Juan C. Paniagua; 6 over Getafe (M) Andrei Cotoara; 2,000+ set off on migration from Gallocanta (TE/Z) Carmina Franco; 32 over Villaviciosa de Odón (M) José L. Machuca; 15 over El Carrascalejo (BA) Agapito J. Verde; 11 at El Cañizar lagoon (TE) Lovanka de Leonardo; 47 over Guadalajara, Aureliano (DALMA); 741 at Rosarito reservoir (TO/CC) Dave Langlois; 25 at Medina Sidonia (CA); 134 over Cazalegas (TO) Juan Fdez.-Elipse; Paula Machín, Hugo Sánchez; 17 at Aldea del Cano (CC) Francisco Martín; 500 in the Moheda Alta area (BA/CC) Raúl Granados; 1,000 over Campillo de Dueñas (GU); 80 over Calahorra (LR) Jesús Ucha, Jorge Ezquerro; 50 over Villaviciosa de Odón (M) Mark Davis; 145 roost at Sotonera reservoir (HU) Juan L. Muñoz; 10 over Malpartida de Plasencia (CC) Álvaro García; 13 roost at Fuente de Piedra lagoon (MA) Alberto Cebrián; 4 at Galisteo lagoon (CC) Sergio Mayordomo; 115 over Pamplona (NA) Diego Zalbidea; 30 over Pampliega (BU) Diego Santamaría; 13 over Sarracín (BU) Fidel Martín; 101 over Talavera de la Reina (TO) Antonio Alía (ARDEIDAS); 3 at Campo Lugar (CC) Neil Renwick; 260 over Aranguren (NA) Juan I. Deán; 120 at Puebla de Alcollarín (BA) José L. Bautista; 20 at Txingudi (G) Juan F. Esparcia; 105 over Mutilva (NA) Gaspar Zaldua.

1,973 are counted at Arjuzanx natural reserve (FR) Sophie Laugareil; 750 over Lizarreta Pass (FR) Félix Thévenet et al; 541 over Lindus (FR) Mikel J., Ander Goñi; 132 cross over Organbidexka (FR) Yohan Meurailon et al; 60 cross over Tarnos (FR) Frédéric Cazaban.

15/10/21: 500 feeding on fallow land at Campo Lugar (CC) Antonio Calvo; 95 over Talavera de la Reina (TO) Fernando Nicolás (ARDEIDAS); 500 at Gallocanta lagoon (Z/TE) and 600 at La Zaida lagoon (Z) Antonio Torrijo; 6 over Don Álvaro (BA) Fergus Crystal; 13 over La Roca del Vallés (B) Javi Mendoza, Jordi Brau; 15 at Lagartera (TO) César Clemente; 6 over the river Adaja (AV) Víctor González; 274 over Pamplona (NA) Rajen Ayerra; 6 over Madrid, Christophe Pontegnie; flock over Robredarcas (GU) Joaquín (DALMA); 3 at Santillana reservoir (M) Juan Ruíz; 120 at Pueblonuevo de Miramontes (CC) Eva Gascón; 160 over Agreda (SO) María Beracoechea; 69 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 52 over Madrid, Ricardo Rodríguez; 175 over Tudela (NA); 280 at La Janda (CA) David Wood; 16 over Cubelles (B) Xavier Parra; 18 at Loza reservoir (NA) Alberto Rodríguez; 7 over Talavera de la Reina (TO) David García (ARDEIDAS); 15 at Villarreal (BA) Julián Cabello; 154 roost at Sotonera reservoir (HU) Esther Yera, Juan Muñoz, Francisco Quesada, Silvia Duque; 27 at Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); 34+12 over Darius (GI) Clément Berthelet; 4,000 go to roost at Obando (BA) Manuel Gómez.

15 over Lizarreta Pass (FR) Félix Thévenet et al; 745 cross over Organbidexka (FR) Yohan Meurailon et al; 230 over Lindus (FR) Mikel J. Ander Goñi.

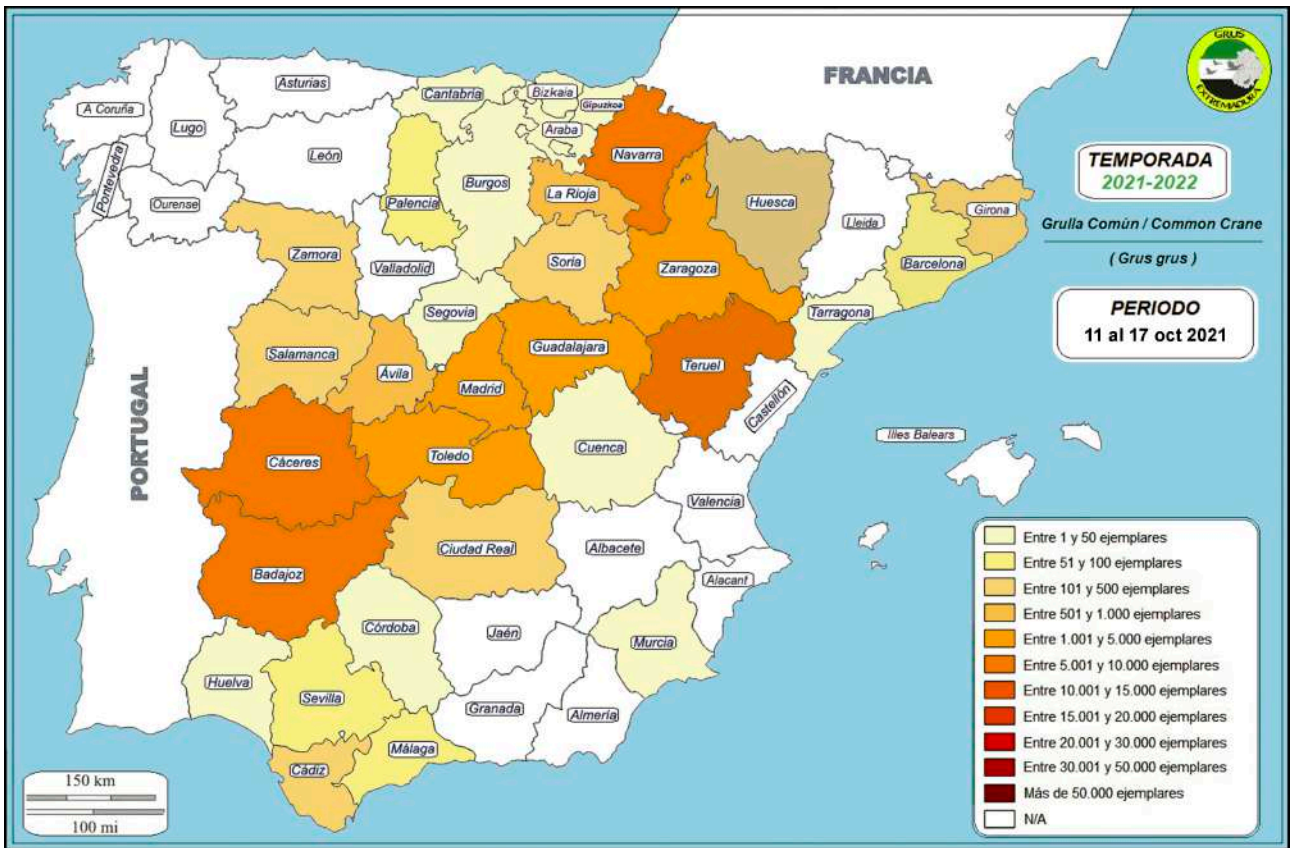
16/10/21: 62 over Villamanta (M) Alfredo Mirat Pablo Escribano, José A. Fimia; 17 roosted at Monteagudo de las Vicarías reservoir (SO) Juan L. Hernández; 440 roost at Peña Hueca lagoon and 550 at Taras lagoon, Villacañas (TO) Ángel Velasco; 45 over D Tello, Mérida (BA) Yolanda Díez; 211 at Puebla de Alcollarín (BA), 125 at Campo Lugar (CC) 1,500 at Palazuelo (CC) Agapito J. Verde, Francisco S. Prieto; 152 set off on migration from Gallocanta lagoon (TE/Z) Antonio Torrijo; 9 over Ávila, César San Segundo; 3 at Santillana reservoir (M) Luis Carretero; 2 in rice fields at Arguedas (NA) María Beracoechea; 5 at Sotos de Alfaro (LR) Marc Gálvez; 9 over Alange (BA) Lorenzo Alcántara; 1,081 go to roost at Borbollón reservoir (CC) Miguel Todón; 197 at La Janda lagoon (CA) Carmen Benítez, Nicolás Ruíz, José Cazorla, Arkadiusz Broniarek; 57 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 80 over Las Rozas (M) Daniel Ordóñez; 3 at Santillana reservoir (M) Alfonso Hervás, Luis Carretero; 740 at Vegas Altas (BA) José L. Machuca; 2 at Sierra Brava reservoir (CC) and 135 at Casa de Hitos reservoir (CC) Sergio Mayordomo, César Clemente.

17/10/21: At least 1,938 roosted at Cubilar reservoir (CC) José A. Román; 12 at El Campazo lagoon (CC) Neil Renwick; 400 in rice fields at Madrigalejo (CC) and 250 in rice fields at Vegas Altas (BA) José C. López; 27 over Aldea Moret (CC) Sandra Criado; 172 at Navalcán reservoir (TO), where another 42 arrived, José L. De la Cruz (ARDEIDAS); 8 at Fuente de Piedra lagoon and 48 at Campillos lagoon (MA) Juan M. Trujillo; 224 at Navaseca lagoon (CR) Jesús Ruíz; 25 at Camino de Villafranca lagoon (CR) Jesús Ruíz, Ignacio Velázquez; 42 at La Veguilla lagoon (CR) Jesús Ruíz; 6 at Alcázar de San Juan lagoon (CR) and 126 at Pastrana lagoon (TO) Pedro Bustamante; 92 over Villamesías (CC) Yolanda Díez; 1,000 between Obando and Vegas Altas (BA) José A. Sánchez; 346 at Palazuelo (CC), 664 at Torviscal (BA); 515 at Puebla de Alcollarín, 174 at Hernán Cortés (BA) and 42 at Yelbes (BA) José A. Román; 69 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 299 go to roost at El Oso lagoon (AV) Alfonso Guío, Miguel Martín, M<sup>a</sup> Cruz González, José M<sup>a</sup> García; 32 over Montijo (BA) José L. Bautista; 750 in Gallocanta lagoon (Z/TE) Nick DÁgoirne

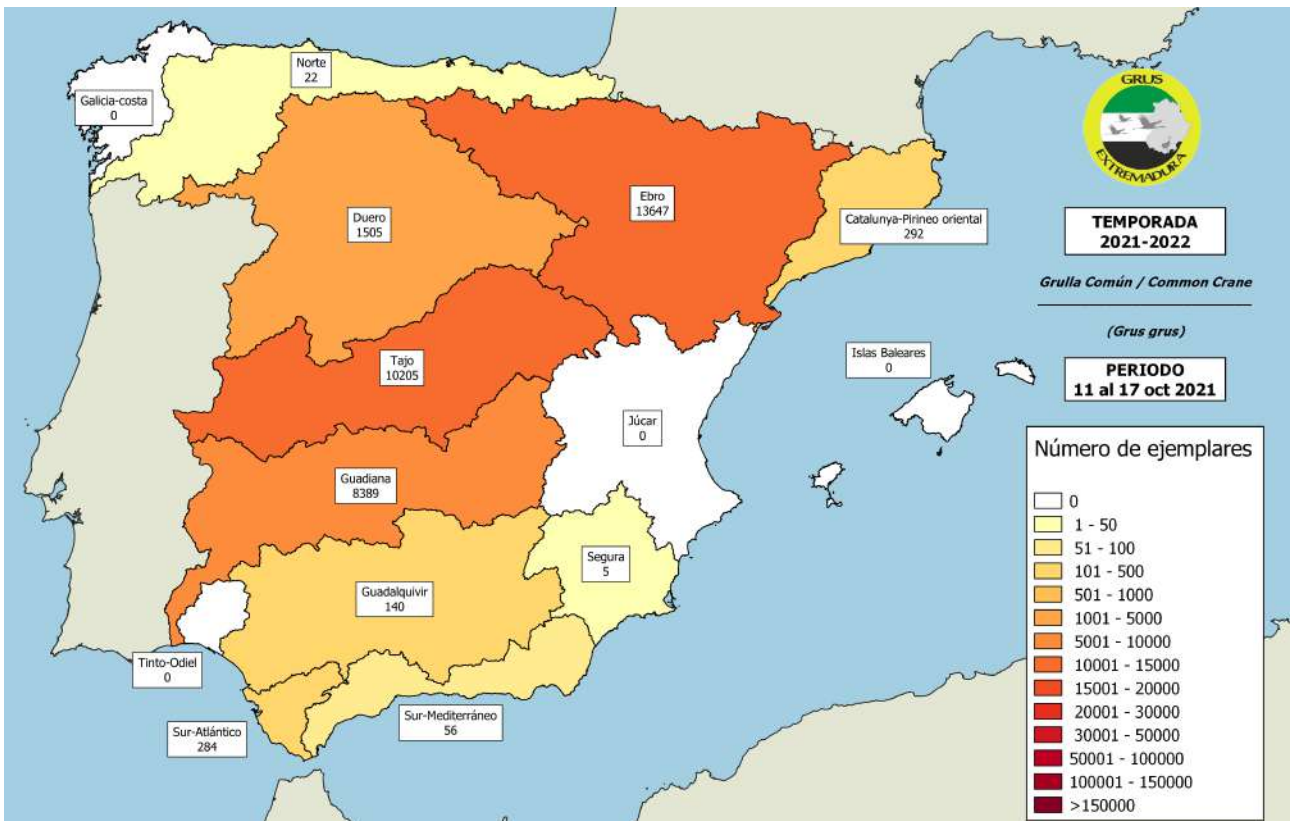


Image nº 8: Cranes in Valdepalacios dehesa (BA). Photo: José A. Román

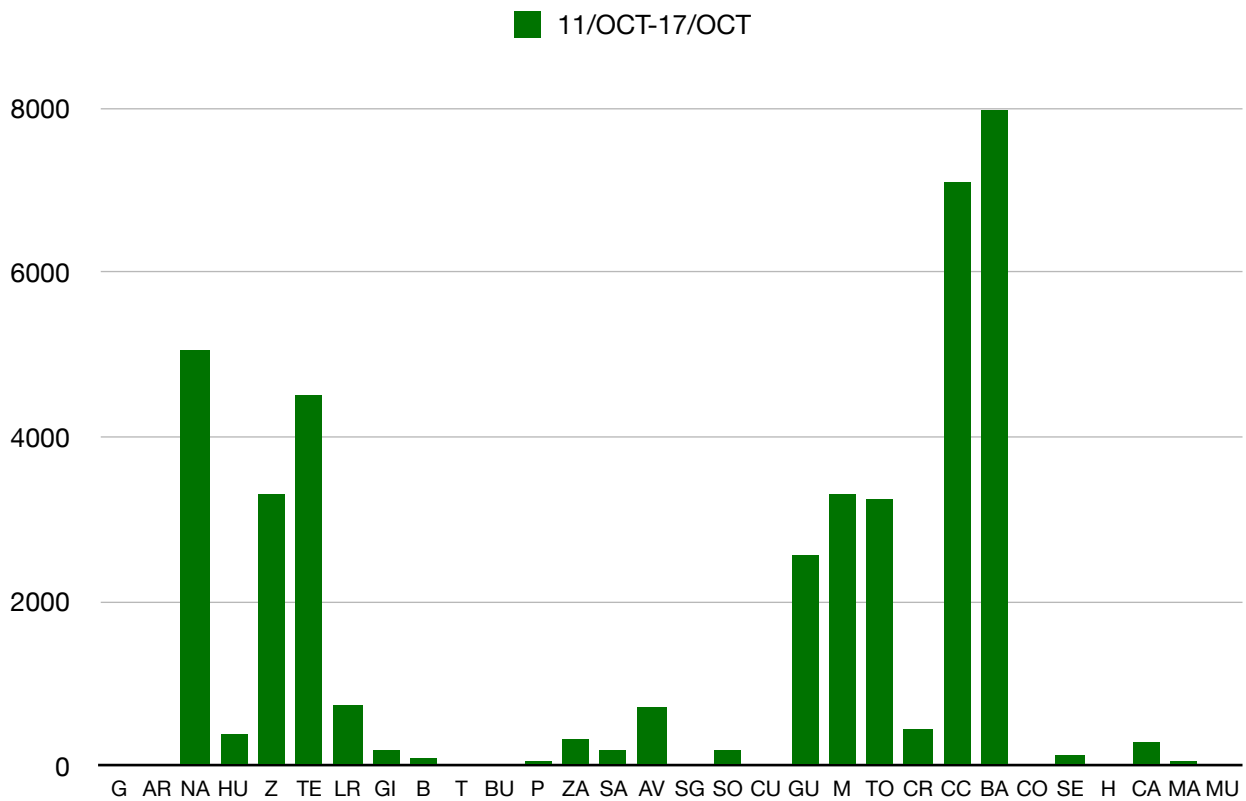




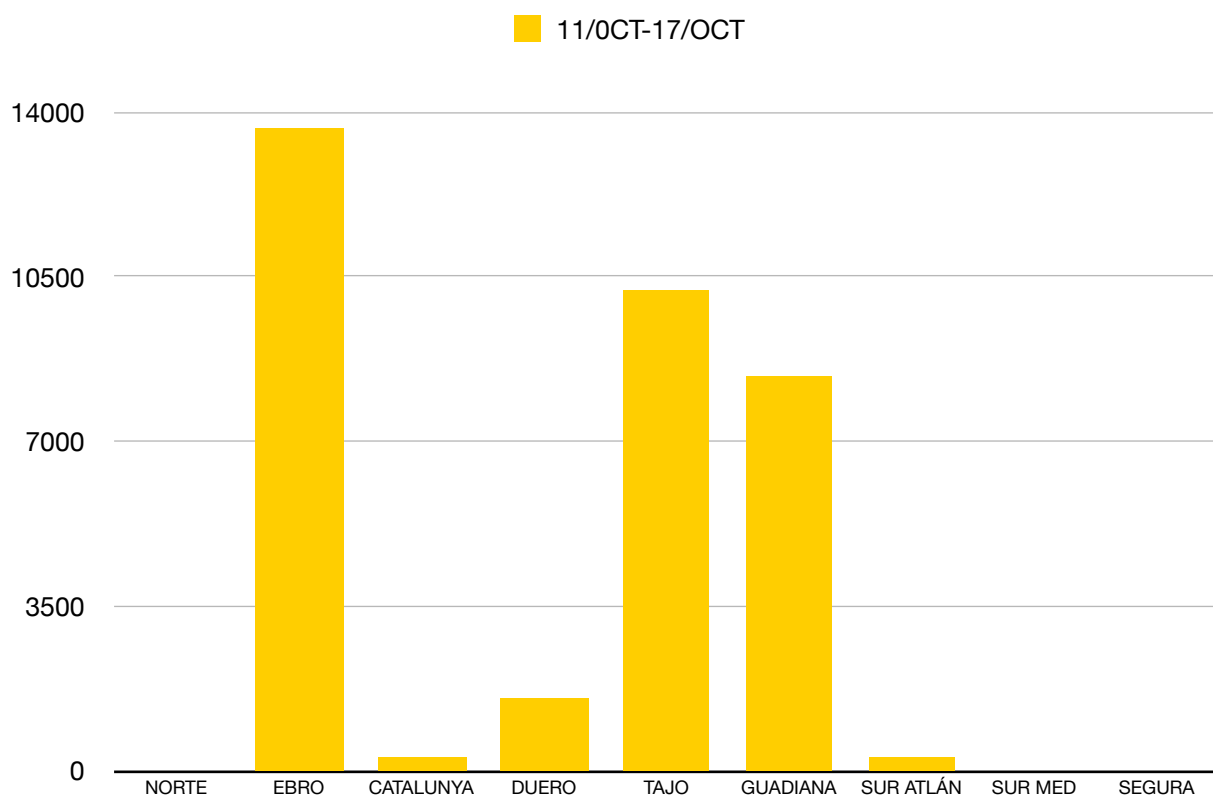
Map nº 10: Migration and distribution by provinces. October 11 to 17



Map nº 11: Migration and distribution by water catchment areas. October 11 to 17



Graphic nº 3: Provincial migration during the week of October 11 to 17



Graphic nº 4: Provincial migration by water catchment areas during the week of October 11 to 17

During the first days of the week, migration slowed and practically stopped, while cranes spread through the wintering areas.

**18/10/12:** 40 over the River Tajo in Talavera de la Reina (TO) Antonio Alía (ARDEIDAS); 21 over Olvera (SO) Carlos Pérez; 68+80+180 over Sotos de Alfaro (LR) Sito de la Torre, Borja Sanz; 41 at La Nava lagoon (P) Fernando Jubete Guzón; 55 over El Carrascalejo (BA) Agapito J. Verde; 430 in Villafáfila nature reserve (ZA); 57 over Sotos de Alfaro (LR) Andrés Arméndariz; 12 over Alcalá de Henares (M) David Araque; 2 at Guadiloba reservoir (CC) Raúl Granados; 20 over Pamplona (NA) Sandra Pineda; 200 at Navalcán reservoir (TO) César Clemente; 100 in Tablas de Daimiel National Park (CR) Rafael Berlanga.



Image nº 9: Family group near Borbollón reservoir (CC). Photo: Miguel Todón.

**19/10/21:** 259 at Riobobos weir (SA) Miguel M.G.; 30 over Pércheles, Mazarrón (MU) Paco Muñoz; 26 at Sotos de Alfaro (LR) Borja Sanz; 245 go to roost at El Oso lagoon (AV) Juan R. Cuervo; 13 over Murcia, Vicente Hernández; 2 over El Conde marsh, Santander (CT) Felipe Cañas; 4 at La Cuerda reservoir, Molinos de Duero (SO) Eric vd Brugge; 320 at La Janda (CA) Bryan Murray; 14 at Trebujena (CA) Juan M. Bermúdez; 25 on Isla Mínima (SE) Vicent Steller; 12 at Navalcán reservoir (TO) Joan A. Ximenis, José L. Arroyo; 179 over Cambrillos de Guadarrama (TO) Javier Nicolás; 40 over Los Santos de Humosa (M) Ángel Vela; 13 over Mejorada del Campo (M) José M<sup>a</sup> Sendarrubia; 360 at La Zolina reservoir (NA) Xabi Urmeneta; 5 at Dos Reinos lagoon (NA) Gorka Gorospe.

**20/10/21:** 65 over Pamplona (NA) Rajen Ayerra; 45 over Alfaro (LR) Jesús Ucha; 57 over Sotos de Alfaro (LR) Borja Sanz; 2 at Santa Marta de Magasca (CC) Francis Martín; 75 over Talarrubias (BA) José L. Herrero; 22 over Majadas de Tiétar (CC) Pablo Escribano; heard over Sant Martí d'Albars (B) Jordi Clavell; 18 over Tajonar (NA) Ana Martín; 52 over

Solsona (LL) Lluís Brotons; 15 over Villarta de San Juan (CR) M<sup>a</sup> José Valencia; 150 roost at Sotonera reservoir (HU) Kees Woutersen; 400 go to roost at Los Valverde lagoon, Villanueva de la Serena (BA) Manuel Gómez.

143 over Lizarreta Pass (FR) Félix Thévenet et al; 33 over Organbidexka (FR) Yohan Meurailon et al.

21/10/21: 14 at Trebujena (CA) José Manuel; 3,141 are censused at Gallocanta lagoon (Z/TE) and 485 at La Zaida lagoon (Z) S.A.R.G.A.; 7 at Valdesalor reservoir (CC) Samuel Hernández, Raúl Granados; 90 at Huerta Tejada, Doñana National Park (SE) Clément Berthelot; 35 at Valdelacalzada (BA) Francis Martín; 7 at Alcollarín reservoir (CC) Martin Kelsey; 25 at Orellana reservoir (BA) José L Herrero.

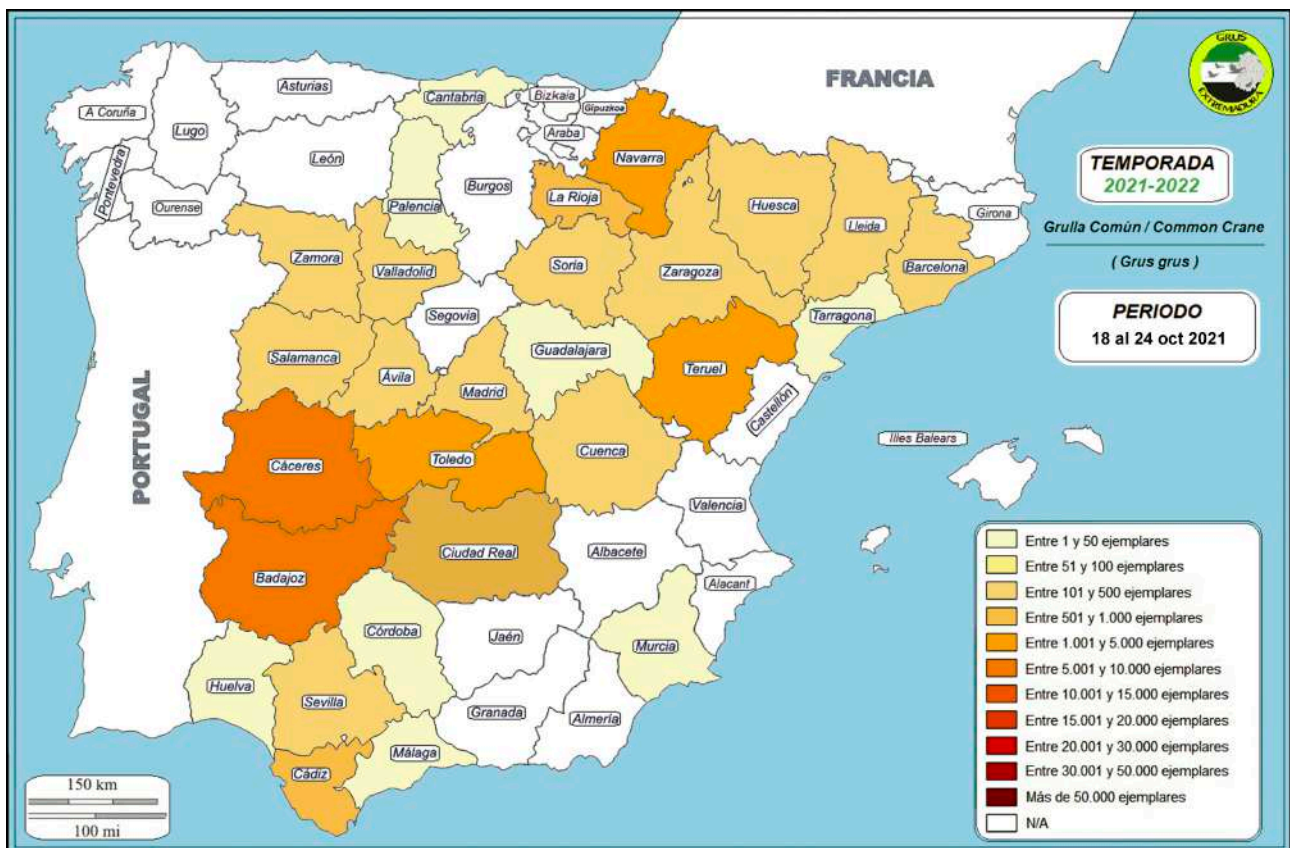
22/10/21: 400 in rice fields at Obando (BA) Ángel López; 2 over Malpartida de Plasencia (CC) Eva Garzón; 150 at Navalcán reservoir (TO) Felipe Rosado; 500 at La Janda (CA) José A. Sepúlveda; 45 at La Nava lagoon (P) Fernando Jubete Guzón; 3 at El Campazo lagoon (CC) Jesús Pomet; 450 in Villafáfila nature reserve (ZA) Cees de Vries; 20 at Santa Amalia (BA) Agustín; 996 at Los Canchales reservoir (BA) José A. Román; 150 over Proserpina reservoir (BA) Elvira del Viejo; 12 at Corta de Olivillos (SE), 13 in El Brazo del Este (SE) Saúl Román, Ana Risco; 25 over Albarracín (TE) Miguel A. Martín; 12 at Casas de Don Antonio reservoir (CC) Francis Martín.

23/10/21: 48+35 over Sotonera reservoir (HU) heading south, Francisco Quesada; 17 at El Rincón reservoir (AV) Luis J. Martín; Miguel Martín; 11 over Cáceres, JuanMa Jiménez; 37 over La Aldea del Obispo (CC) Neil Renwick; 100 at Madrigalejo (CC) David Lindo; 200 at Grande lagoon, Villafranca de los Caballeros (TO) Beatriz Bermejo; 56 at Manjavacas lagoon and 12 at Alcahozo lagoon, Mota del Cuervo (CU) Pedro Bustamante; 80 at Ejea de los Caballeros (Z) Javier Train; 100+16 over Sant Pere de Torelló (B) Francesc Farriols; 30 at Aznalcázar (SE) Francisco J. Salcedo; 23 over Cigales (VA) Pablo Tascón; 2 at Trigueros (H) José C. Rodríguez; 52 over Puerto Peña (BA) José L. Herrero; 250 in rice fields at Palazuelo (CC) Raúl Granados; 6 at Brozas (CC) Arturo Domínguez; 26 over Zaragoza, Guillermo Aparicio; 30 over Garralda (NA) Miguel Minondo; 140 over Auzberri/Espinal (NA) Carlos M. Cruz; 200 at Riobos weir (SA) Víctor Coello; 170 over Navàs (B) Joan Gimestells; 300 over Plá de Sió (LL) Bernat Iglesias.  
15 at Roxo dam (PT) Oliver Revilla.

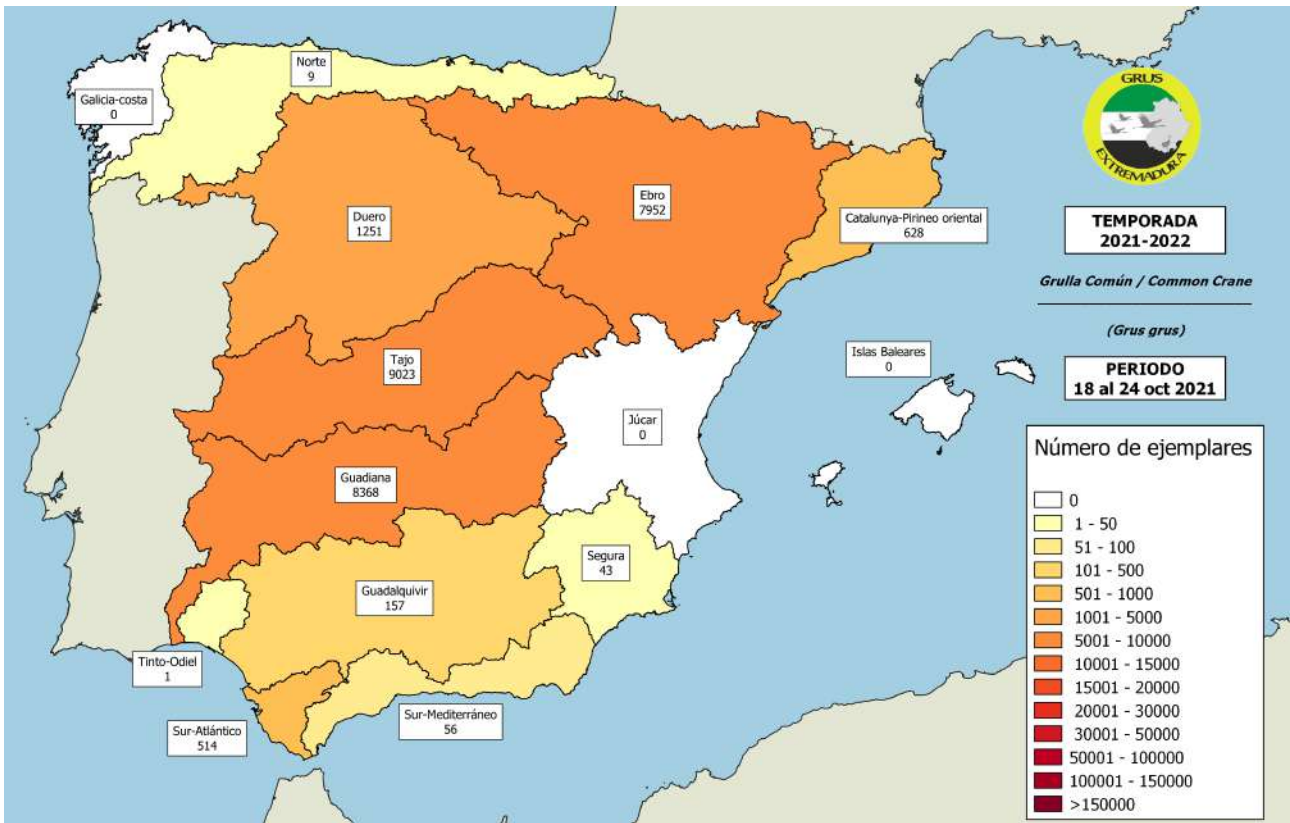


Image nº 10: Cranes bathing at Los Canchales reservoir (BA). Photo: José A. Román

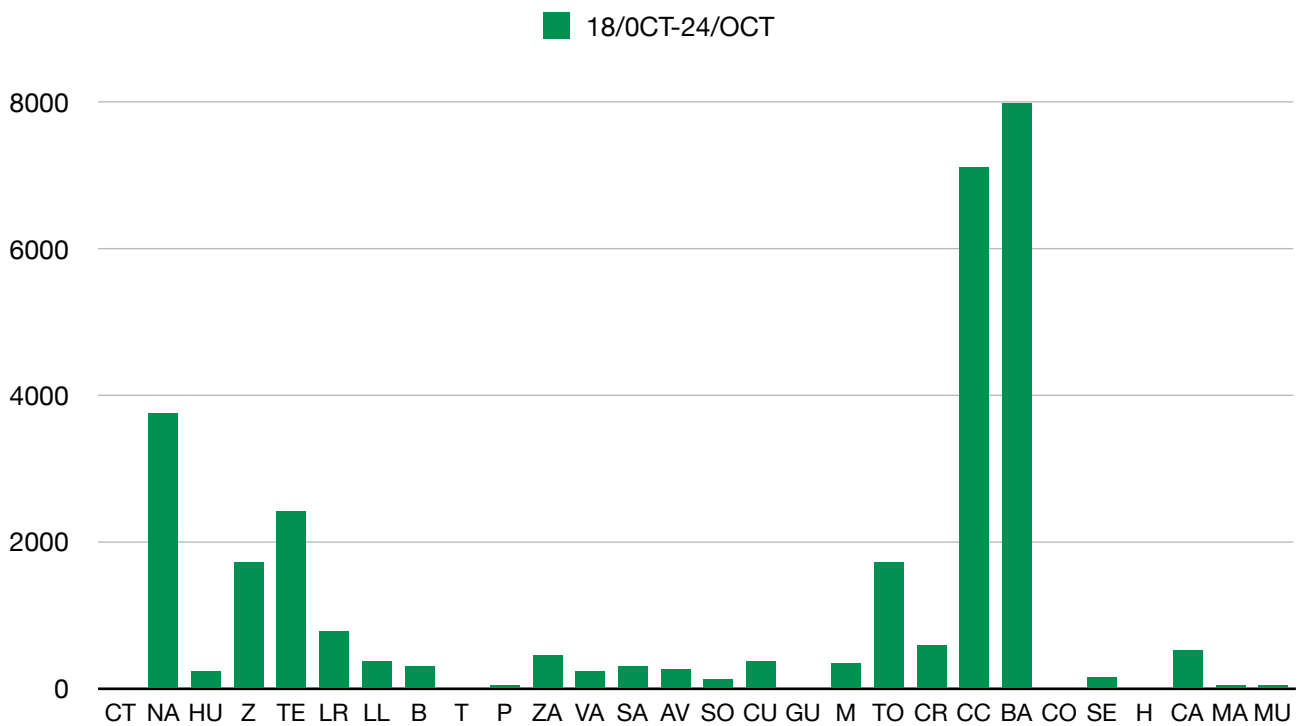
24/10/21: 650 roosted at Peña Hueca lagoon, Villacañas (TO) Ángel Velasco; 300 set off on migration from Gallocanta (TE/Z) and another 75 fly over, towards the south-west, Antonio Torrijo; 50 over Galilea (LR) Pedro Sáenz; 72 over Arenas de San Juan (CR) Carlos Paulos; 28 over Hornos de Moncalvillo (LR) Maite; 31 over Ortigas (LR) Jorge Alonso; 49 over Calahorra (LR) Emilio Pascual; 300 at Sánchez Gómez lagoon, Mota del Cuervo (CU) Jesús Porrero; 70 circling over Monteagudo de las Vicarías reservoir (SO) Felipe Rosado; 61 circling over La Molineta reservoir, Alfaro and 33 over Alfaro (LR) Andrés De la Torre; heard over Sacedón (GU) Javi Rejos (DALMA); 39 (6 juveniles) at Sotonera reservoir (HU) Silvia Duque; 201 at El Tozo reservoir (CC) Jesús Porreras (Iberian Nature); 72 at Tablillas del Zancara (CR) Pedro Bustamante; 59 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 27 over La Zarza (BA) Raúl Granados; 400 at Castrejón reservoir (TO) Javier Nicolau; 22 over Daganzo de Arriba (M) David Rodríguez; 15 at La Fresnedilla lagoon, Oliva de Plasencia (CC) Álvaro García; 15 at Santa Amalia (BA) Alicia Casillas (Sylvestris); 30 over Tafalla (NA) Juan I. Deán, 93 over Alfaro (LR) Amadeo Ortega; 148 over Pitillas lagoon (NA) Julio Roldán; 1 at Deltebre (1) Óscar Reche; 75+55 over Aranjuez (M) Carlos Paulos (DALMA).



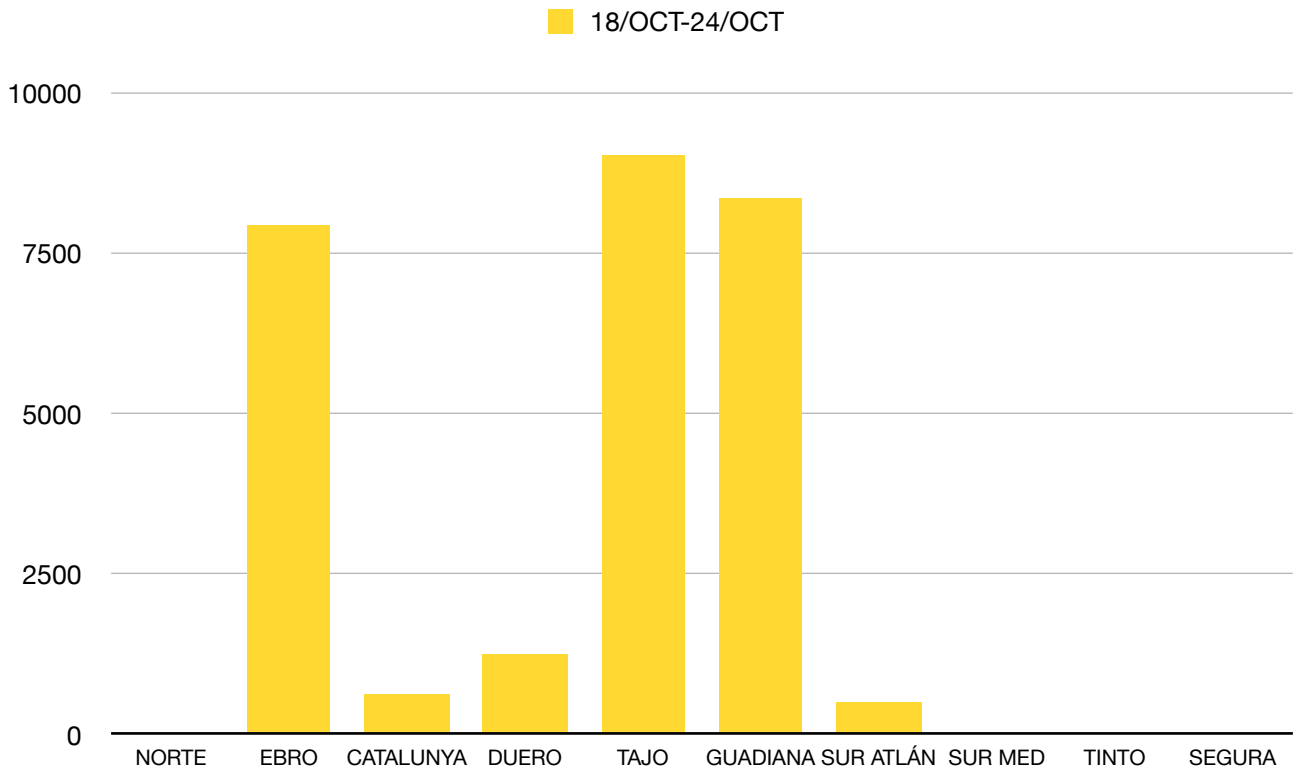
Map nº 12: Provincial distribution and migration on the week October 18 to 24



Map nº 13: Distribution and migration by water catchment areas on the week October 18 to 24



Graphic nº 5: Provincial distribution and migration on the week October 18 to 24



Graphic nº 6: Distribution and migration by water catchment areas on the week October 18 to 24



Image nº 11: Cranes at the Canchales reservoir (BA): Photo: José A. Román

The week begins with little migratory activity, however, from Thursday, a new arrival of cranes begins, through both the Atlantic Pyrenean and Mediterranean Pyrenean routes, ahead of a rainy weather front.

25/10/21: 1 over Teruel, Luis M. Muñoz; 25 over Rivas Vaciamadrid (M) Eugenia Castillejos; 6 over Madrid, Lucía de la Madrid; plus 40, Juan C. Paniagua; 4 over Santa Olalla (TO) Juan Fernández, Hugo Sánchez; 40 over Madrid, José M<sup>a</sup> Rojo; 308 at El Oso lagoon (AV) 27 of them are juveniles, José M. Hernández, Mari Cruz González; 83+40 over Alfaro (LR) Andrés Armendáriz; 140 over Erro (NA) Eric vd Brugge; 50 at Aznalcázar (SE) José Márquez; 3 over Saucedilla (CC) Katy Peeters; 13 in El Brazo del Este (SE) José Márquez; 40 over Vilanova i la Geltrú (B) Diego Callau; 7 at Alcázar de San Juan (CR) Ángel Arredondo; 10 at Castellanos de Zapardiel (AV) Víctor Coello; 30 over Sitges (B) Rodrigo del Amo; heard at Bujarral (GU) Juan M. Nuevo (DALMA); 25 over Las Rozas (M) Daniel Ordóñez

40,900 migrating over Marburg (DE) Martin Kraft; 2,200 in Arjuzanx Nature Reserve (FR) Sophie Laugareil.

26/10/21: Passage at 05:38h over Guadalajara, Juan M. Nuevo (DALMA); 28 at Sotonera reservoir (HU) Kees Woutersen; 400 near Acedera (BA) Manuel Gómez; 445 over Vall d'en Bas (GI) David Batlle; 41 over El Masnou (B) Toni Alonso; 125 over Torellò (B) Susagna Crosas; 30 over Sant Julià de Villatorra (B) Anne Gallès; 210 over Santa Maria de Corcó (B) Carles Martorell; 85 over Ogassa (GI) Jordi Fans; 200 over L'Ametlla del Vallès (B) Emiliano Ramos; 170 over Olot (GI) Oriol Clarabuch; 6 over Trasierra (CO) Antonio Esteban; 2 at Cazalegas reservoir (TO) Juan Fernández, Hugo Sánchez; 60 over Massanet de Cabrenys (GI) Andreu Cufí; 41 at Lagartera (TO) César Clemente; 23 over Malgrat de Mar (B) Georgina A.G.; 1 over Zaragoza, Elena Cantalapiedra; 25 over Las Rozas (M) Daniel Ordóñez; 70 over Madrid, Luis Carretero; 350 over Castellnou de Bages (B) Joan Manubens; 71 over Juneda (LL) Jaume Bonfil; 100 over Canet d'Adri (GI) Carles Colodro; 122 over Vacarisses (B) Albert Martínez; 40 over Les Franqueses del Vallès (B) José L. Fernández; 6 at Trajano (SE) Neil Renwick.

233 over Lizarreta Pass (FR) Félix Thévenet et al; 103 over Lindus (FR) Ander Gonzalo and 95 over Organbidexka (FR) Yohan Mouraillon et al.; 4 at Lagos (PT) Sérgio Correia.

27/10/21: 70 over Herrera de los Navarros (Z) Javier Domínguez; 40+8+5 over Madrid, Juan C. Rubio; 46 over Pamplona (NA) Rajen Ayerra; 100 over Sariñena lagoon (HU) Eduardo Gracia; 36 over Simancas (VA) Teresa Tasis; 4+5+12 over Torremocha del Jarama (M) Rubén Ramos; 30 over Retuerta del Bullaque (CR) Gerardo García; 92 at dawn at La Salada Pequeña, Alcañiz (TE) Esther Yera; 30 over Plenas (Z) Javier Domínguez; 109 at Ejea de los Caballeros (Z) Jorge Hernández; 25 over Robredarcas (GU) Joaquín (DALMA); 445 over Villar de los Navarros (Z) Javier Domínguez; 2 flocks over Guadalajara, Juan J. Calvo (DALMA); 33 over Pamplona (NA) Rajen Ayerra; 75 over Toledo, Ángel Velasco; 64 over Torrejón del Rey (GU) Laura Calvo (DALMA) 16 over Pamplona (NA) Rajen Ayerra; 40+30 over Simancas (VA) Rafael Pérez, Dámaso Vergara; 150 over Don Benito (BA) Fergus Crystal; 46 over Otero (TO) Juan Lorente; 150 over Las Rozas (M) Daniel Ordóñez; 37 over Majadahonda (M) Cristina Gómez; 30 over Villaviciosa de Odón (M) Mark Davis; 45 over Leganés (M) José Zamorano, Chemi Ibáñez; 5+11+160 over San Martín de la Vega (M) José López, Blas Molina; 150 over Sariñena (HU) Eduardo Gracia; 60 over Autol (LR) Alberto Castillo; 600 in 3 flocks over Isona i Conca Dellà (LL) Ivan Almirall; 1 at Aiguamolls de l'Empordà (GI) Karin Karnk; 55 at La Zolina reservoir (NA) Miguel Ciriza; 10 at Loza reservoir (NA) Ignacio Alonso; 35 at Meco lagoon (M) Rafa Al; 2 over Valdebebas (M) Félix Arribas, Juan A. Ximenis, José L. Arroyo; 2 at José Torán reservoir, La Puebla de los Infantes (SE) Vicent Esteller; 70 over Herrera de las Navas (Z) Javier Domínguez; 40+8+5 over Madrid, Juan C. Rubio; 16 over Pamplona (NA) Rajen Ayerra; 100 over Sariñena (HU) Eduardo Gracia; 16 at El Brazo del Este (SE) Andrés



Rodríguez; 4+5+12 over Torremocha del Jarama (M) Rubén Ramos; 64 over Torrejón del Rey (GU) Laura Calvo; 54 at La Puebla del Río (SE) Ángel Bas-Pérez; 200 at Riolobos weir (SA) Laura Alonso, Jaime Tejedor ( Asoc.Sylvestris); 425 over the Sierra del Perdón (NA) Ana Martín, César Díez; 150 over Etxalar (NA) José Ardaiz; 37 roost in the River Tinto (H) José M. Méndez ; 800+ over Talarrubias (BA) heading to roost, Yasmina Annicchiarico. 65,730 are censused at Lac du Der (FR) Aurelien Deschartres, LPO; 257 over Organbidexka (FR) Yohan Mouraillon et al.; 365 over Lizarreta Pass (FR) Félix Thévenet et al.

28/10/21: Nocturnal passage over Irún (G) Juan F. Esparcia; 20+50 over Tolosa (G) at 08:15h Fernando Unzué; 10,000, which were arriving during the night, at dawn at Gallocanta lagoon (TE/Z) Antonio Torrijo; 950 set off on migration and small groups arrived throughout the day, an evening census gave 8,596 and 42 at La Zaida lagoon (Z) Francisco J. Sampietro; 50 over the Autonomous University, Madrid, JuanMa Santana; passage over Orio and Aia, Andoain and Billabona (G) 10 over Nanclares de Gamboa (G) and 60+28 over Irún (G) Birding Euskadi; several hundred over Arguedas (NA) Daniel Velasco; 25 over Bañares (LR) Óscar Zuazo; 50 over Robredarcas (GU) Joaquín (DALMA) 15 over Marazabel (SO) Marisa Gil; 30 over Azuqueca de Henares (GU) Javi Calvo (DALMA); several flocks over Humanes de Mohernando (GU) Fernando Gómez (DALMA); 33 over Portilla (LR) Asier Ximenitz; 1 over Lakao (G); heard over Legazpi (G); 100 over Legorreta (G); 80+30+16 over Txingudi (G) Paul Ortuzar; 150 over Zertain (G) Julen Vega; 50 over Madrid, Álvaro Casaux; 113 over Santa Cruz de Yangüas (SO) Eduardo Alfaro; 40 over Logroño, Jesús Serradilla; 28 over Vitoria Pass (AR) José A<sup>a</sup> Gainzarain; 22+140 over Olaberria (G) Beñat Bilbao; 200 over Zarautz (G) Héctor X. González, Héctor González; 190 over San Sebastián (G) Carlos M. Coro, Roberto Alberdi; 25+30 over Irún (G) Daniel Morcillo, Carmen González; 1,300 over Baztan (NA) Xabier Etxarri; 40 over Berriozar (NA) and 300 over Pamplona (NA) José Ardaiz; 80 over Zizur Mayor (NA), 456 over the Sierra del Perdón (NA), 258 over Zabalegui (NA) and 900 around Loza reservoir (NA) Ana Martín, César Díez; 50 over Pamplona (NA) Patricia Andrés; 1,000 roosted at Rosarito reservoir (TO/CC) and 500 in *dehesas* of El Rincón reservoir (AV) Dave Langlois, Sam Langlois; nocturnal passage at 21:00h over Galilea (LR) Lidia Roncero; 1,342 at Los Canchales reservoir (BA) José A. Román; 11 over the Sierra de las Yeguas, Navahermosa (MA) arriving on migration where a family of three were feeding, Javier Fregenal; 50 over Olvega (SO) Carlos Pérez; 60+120+50 over Murillo (LR) Ignacio Gámez; 300+500 over Enciso (LR) Sonia Martínez; heard over Tudelilla (LR) Roberto Vega; also over Autol (LR) Alfonso Cillero; 3 at El Hondo reservoir (A) Jacobo Ramos; 3 at Hondo de Amorós (A) Sergio Arroyo; 33 over Pamplona (NA) Juan I. Dean; at least 2,973 over Pamplona (NA) Rajen Ayerra; 179+81 over Cervera de Luezas (LR) Roberto Vega; passage over Alfaro (LR) Miguel Martínez; cranes arrive at Gallocanta lagoon (Z/TE) at 13:50h, Antonio Torrijo; 35 over Alfaro (LR) Eugenio Montelio; 70+ over Aldeanueva de Atienza (GU) Mario (DALMA); 200+250 over Horquín (GU) Irene Pinto; 84 over El Carrascalejo (BA) Agapito J. Verde; 100+60 over Cabanillas del Campo (GU) José Luis (DALMA); 42 over Jirueque (GU) Vicente Peinado (DALMA); 60 in two flocks over Madrid, Carlos Rubio; 40 over Logroño (LR) Jesus Serradilla; 111+63+157+132+124 over Ágrede (SO) Carlos Pérez; 60 over San Román (LR) Irene Pinto; 50 land at Los Sotos de Alfaro (LR) Andrés Armendáriz; 35 over Alfaro (LR) and 38 over Tarazona (Z) Eugenio Montelio; 73+52 over Soto de Alfaro (LR) Andrés Armendáriz; 1 at Camarles (T) Harold Wijts; 9 go to roost at Cabo de Gata salt pans (AL) Raimundo Martín, Blanca Pérez; 50 over Asparrena (LR) and 20 over Agurain (LR) Azaitz Unanue; 30 over Vitoria-Gasteiz (AR) Ricardo Gutiérrez; 100 over Andoain (G) and 30 over Vitoria-Gasteiz (AR) Azaitz Unanue; 130 over San Sebastián (G) Carlos Monzón; 150 in three flocks over Prejano (LR) Asier Ochoa; 150 over Quel (LR) Ulpiano Roncero; 50 circling over Santurde (LR) Enrique Aguilar; 2 over Vilanova i la Geltrú (B) Sergi Cmeros; 1 Riudecols (T) Xavier Riera; 36 over Leganés (M) Carlos Herranz; 30

over Villaviciosa de Odón (M) Mark Davis; 40 over Madrid, Daniel García; 113 over Santa Cruz de Yangüas (SO) Eduardo Alfaro; 21 over Uría (BI) Kepa Aldama; 6+12 in Delta de l'Ebre (T) Sergi Sales; 10 Villar De la Torre (LR) Arturo Fuente; 12 in Salobrar natural park, Mallorca (IB) Stephan Kienle; 40 over the River Manzanares (M) Daniel Gaona; 49 over Villamediano de Iregua (LR) Rubén Zabala; 60 at La Nava lagoon (P) Sheila García; 8 at Los Francos gravel works (SA) Miguel Rouco.

6,646 cross over *Lindus* (FR) Ander Gonzalo; 6,089 cross Lizarreta Pass (FR) 30 Félix Thévénét et al and 769 over *Organbidexka* (FR) Yohan Meuraillon et al.



Image nº 12: Family group, Sierra de Yeguas (MA). Photo: Javier Fregenal.

29/10/21: 46 at Salburua (AR) Aitor Zabala, Agustín Rivas; 8 at Urdaibai (BI) Urdaibai Bird Center; 4 over La Maresme (B) Borja Solans; 80 over La Plana (LR) Borja Solans; 200 over Abejar (SO) Cristian San Juan; 140 over Toledo, Ángel Velasco; 216 between Bienvenida and Brazatortas (CR) Pedro Wildlife; 4 over Viladecans (B) Martí Méndez; 2 over the River Gor (GR) Rick Meulendijks; 15 over Vitoria-Gasteiz (AR) Eraztun Berdeko Basozainak (Guardas Anillo Verde); 65 over Soto de las Juntas (M) Peter Swinden; 27 over Velayos (AV) Miguel Martín, Alfonso Guío; 113 over Ávila, Alfonso Guío; 19 at San Fulgencio (A) Sergio Arroyo; 25 over Algete (M) Vicente Torres; 90 over the River Guadarrama (M) José Zamorano, José Pérez, Chemi Ibáñez; 80 over Santillana reservoir (M) Héctor Roldán; 23 at Torreveja lagoon (A) Rolf Karlsson.

32,620 go over Marburg (DE) Martin Kraft. 1 at Lagoa (PT) Carl Hawker.

30/10/21: 500 roosted at Riolobos weir (SA) Gonzalo Criado (Asoc. Sylvestris); 40 over Vitoria-Gasteiz (AR) Guardas Anillo Verde (Eraztun Berdeko Basozainak); 62 over Sotos de Alfaro (LR) Daniel García; 70 circling over Alfaro (LR) Borja Sanz; 7 at Urdaibai (AR) Carmelo de Dios; 88+130+223 over Bárdenas Reales (NA) José Luis (DALMA); 350 in Villafáfila Nature Reserve (ZA) Wil Luiijt; 23 over Salinilla de Buradán (AR) Lidia Roncero;

family of 3 at Cordovilla (SA) Gonzalo Criado (Asoc. Sylvestris); 30 over Soria, Fernando (DALMA); 22 at Manjavacas lagoon complex, Mota del Cuervo (CU) Fran Baena; 23 at Prat de Cabañas, Torreblanca natural park (CS) Isabel Martín; 411 over Txingudi (G) Aimar Hernández; 23 over Barajas (M) César San Segundo; 12 over Eresma (SG) Eduardo García; 25 over Ocaña (TO) Daniel Gonzalo; 354 at El Oso lagoon (AV) Víctor Coello; 87 over Bardenas Reales (NA) Daniel Piñas; 30 over Movera (Z) José M. Sánchez; 3 over Simancas (VA); 50 in Tablas de Daimiel National Park (CR) Jesús M. Quesada; 30 over El Espinar (SG) Jorge Mañes; 19 (1 juvenile) at San Fulgencio (A) Sergio Arroyo; 28 at Cofín (LR) Borja Sanz; 9 over the River Guadalhorce (MA) Juan M. Trujillo; 9 over Villamòs (LL) Nacho Morales.



Image nº 13: Cranes at Hondo de Amorós (A). Photo: Sergio Arroyo.

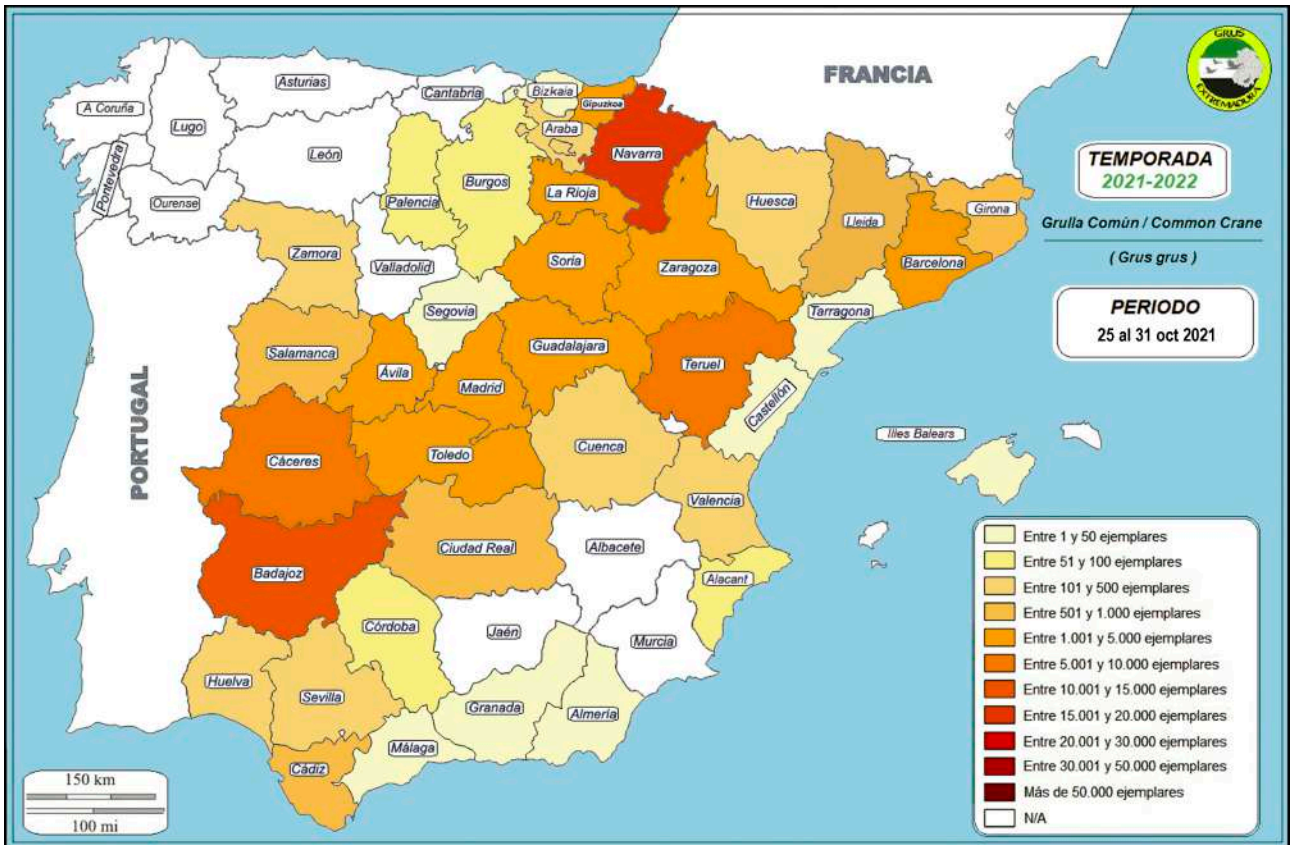
**31/10/21:** 821 roosted at Peña Hueca lagoon, Villacañas (TO) Ángel Velasco; 47 over Torrecilla de la Jara (TO) Leoncio González (ARDEIDAS); 2 over Bujaraloz (Z) Arnau Guardia; 50 at Hinojosa del Duque (CO) Carmen M<sup>a</sup> Ayuso; 199 at La Zaida lagoon (Z) Rafa Pinilla; 13 over Barcelona, Pedro Bescós; 20 over Las Rozas (M) Adolfo Rodríguez; 20 over Movera (Z) José L. Rivas; 49 at Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); heard at Talamanca (GU) Joaquín (DALMA); 2 over Lónguida (NA) Juan I. Deán; 175 at Manjavacas lagoon complex, Mota del Cuervo (CU) Fran Baena ; 4 in El Brazo del Este (SE) Francisco J. Salcedo; 12 at Castellò d'Empuries (GI) Antoni Abad; 3 at Camarles (T) Claudi Baiges; 375 at Navalvillar de Pela (BA) José L. Machuca, M<sup>a</sup> José M. Cenemor; 2 over El Pardo woodland (M) Susan Downey; 50 over las Rozas (M) Mónica Carrasco; 8 at Los Francos gravel works (SA) Miguel Rouco; 59 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 8 in rice fields at Figarol (NA) Rajen Ayerra.



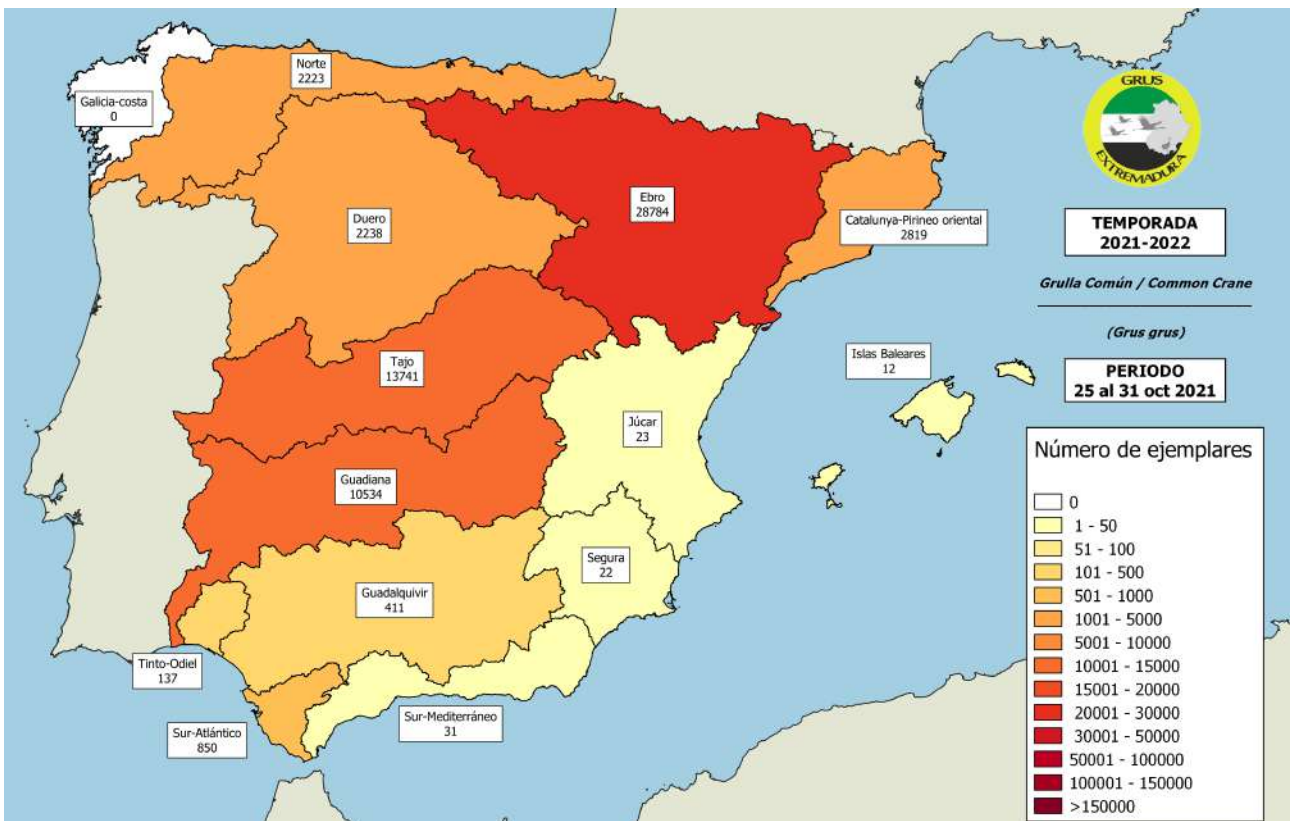
Image nº 14: Cranes at Salburua (AR). Photo: Agustín Rivas



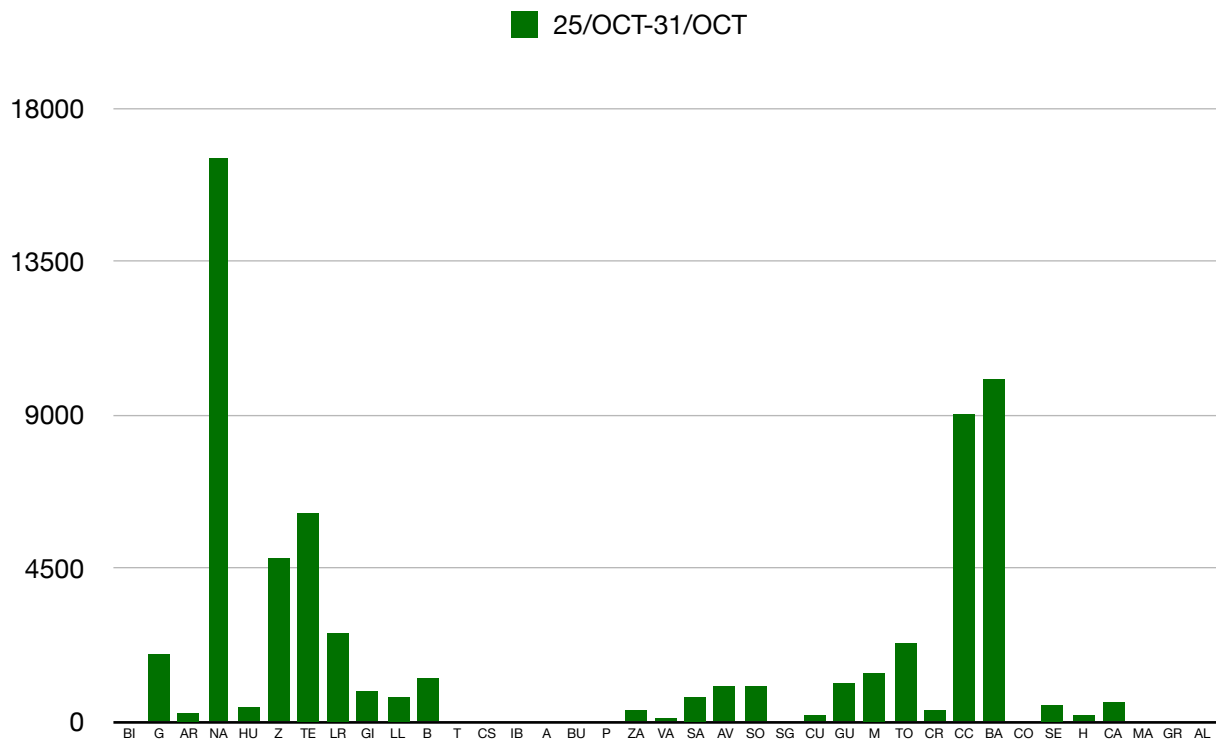
Image nº 15: Pyrenean migration over Lindus (FR). Photo: Migration Lindus



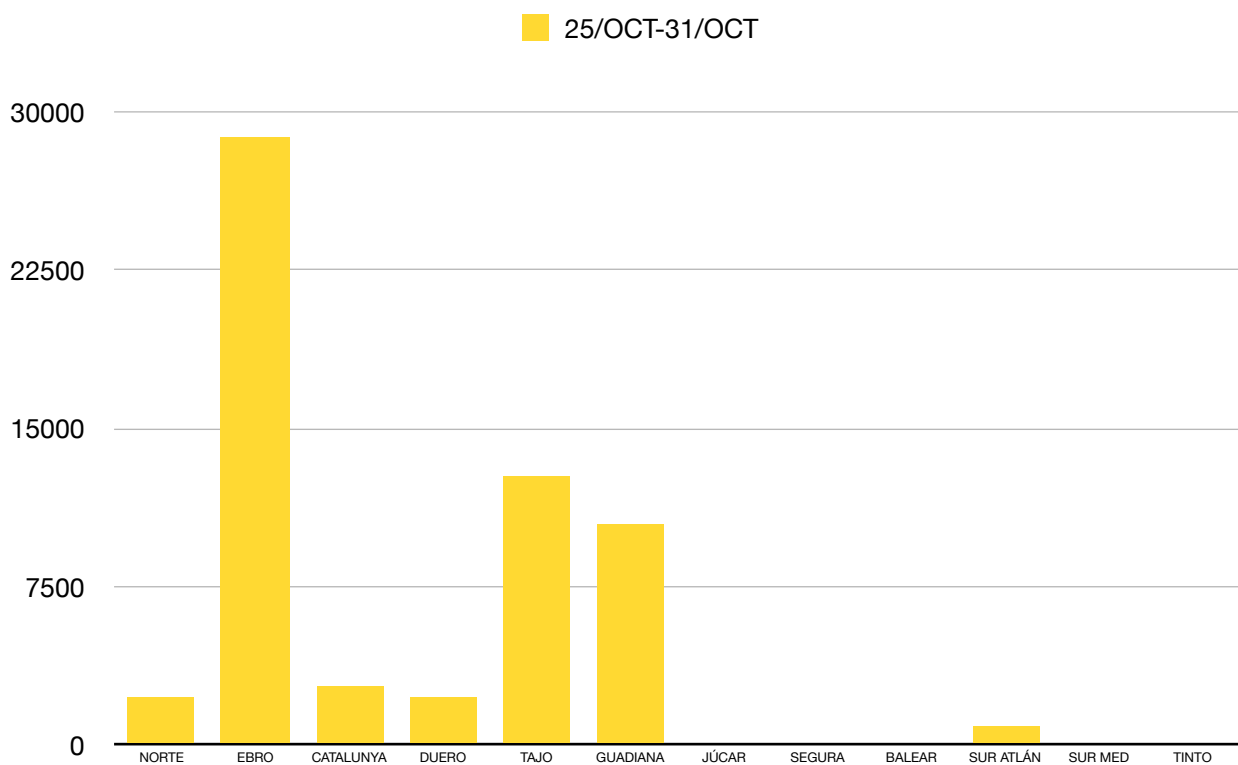
Map nº 14: Provincial migration and distribution on the week October 25 to 31



Map nº 15: Distribution and migration by water catchment areas on the week October 25 to 31



Graphic nº 7: Provincial migration and distribution on the week October 25 to 31



Graphic nº 8: Distribution and migration by water catchment areas on the week October 25 to 31

A transition week with unobtrusive migration, meanwhile cranes are progressively occupying the majority of wintering areas.

01/11/21: 133 at El Junco lagoon, La Albuera (BA) José Leal; 9 at Bujaraloz (Z) Arnau Guardia; 471 at Sotonera reservoir (HU) Francisco Quesada; 12 over Solana de los Barros (BA) Antonio M<sup>a</sup> Sánchez; 27 over El Carrascalejo (BA) Agapito J. Verde; 60 over Las Cañas reservoir, Viana (NA) Rajen Ayerra; 50 at La Colada reservoir, El Viso (CO) and 110 around Hinojosa del Duque (CO) Daniel Merino; 9 at Movera (Z) José L. Rivas; 6 in Yecla ZEPA (MU) Fernando Rico; 95 roost at Santa Teresa reservoir (SA) Vicente G. Garrudo; 1 at La Zolina reservoir (NA) Vic González; 5 at Almudévar (Z) Jorge Lardiés; 24 in Selgua rice fields (HU) Jesús Lavedán; 34 at Movera (Z) José M. Sánchez; 13 over Zaragoza, Juan C. Troya; 371 in Villafáfila Nature Reserve (ZA) Juan J. González; 294 at El Oso lagoon (AV) Katya Rinevica, Santiago Delgado, César San Segundo; 10 at Las Cogotas reservoir (AV) Adolfo Argüello, Federico Iglesias; 4+25 over Boquerón Pass (AV) Luis J. Martín, Miguel Martín; 300 at Navalcán reservoir (TO) Christophe Pontegnie; 65 at Oliva de Plasencia (CC) Vicente Torres; 11 at Guadiloba reservoir (CC) JuanMa Jiménez; 70 over Pago de San Clemente (CC) Martin Kelsey; 172 at Aldea del Cano (CC) and 25 over Rincón de Ballesteros (CC) Francis Martín; 225+398 at Vegas Altas (BA) José L. Machucsa, M<sup>a</sup>. José M. Cenamor; 2 at Rociana del Condado (H) Ángela Ruiz; 2 at Brazo del Este (SE) Paco Chiclana; 413 at La Janda (CA) Simon Tomkin; 20 at El Hondo reservoir (A) David Climent; 76 at El Llongar lagoon (TO) Javier Nicolau; 16 at La Nava lagoon (P) Alberto Laiz, María Bueno; 100 at Navaseca lagoon (CR) Miguel A. García, Francisco Vizcaíno, Vicente Malagón; 110+270 over Prados Redondos (GU) Inma Malo.



Image nº 16: Cranes in Yecla ZEPA (MU). Photo: Fernando Rico.

02/11/21: 43 over Toledo, Ángel Velasco; at 10:45h migration started at Gallocanta (TE/Z) where 6,000 cranes set off, among them a Lithuanian pair, Antonio Torrijo; 54 over Pedro Muñoz (CR) Jesús Porrero; 500 at Arguedas (NA) Daniel Velasco; 45 over Retuerta del Bullaque (CR) Gerardo García; 435 at El Oso lagoon (AV) Juan R. Cuervo; 56 around Dulce de Campillos lagoon (MA) Manuel del Barco; 59 at the small saline flats, Alcañiz (TE) Esther Yera; 188 at La Albuera lagoons (BA) José Leal; 499 at Puebla de Alcollarín (BA), 264 at Casar de Majadas (CC) and 1,117 at Torviscal (BA) José A. Román; 64 over Ávila, María Mateos; 8 in the Écija countryside (SE) Javier Rengel; 150 over Tendilla (GU) Guillermo González; 1 at Ollerías reservoir Legutio (AR) Serafín Alarcón; 30 at Aznalcázar (SE) J. Daniel Gómez; 60 over El Pardo woods (M) Chemi Ibáñez; 12 at Pétrola (AB) Raquel Montilla; 11 at Monroy (CC) José M<sup>a</sup> Jiménez.



Esther Yera

Image n° 17: Young Estonian “*Mustakurmu*” carrying a GPS at the small saline flats, Alcañiz (TE). Photo: Esther Yera.

03/11/21: 37 at Pétrola (AB) Raquel Montilla; 6 over Otero (TO) Juan Fernández-Elipse, Hugo Sánchez; 23 at Boada lagoon (P) Fundacion Global Nature; 2 over Lónguida (NA) Miguel Minondo; 33 at Deltebre (T) Óscar Reche; 2,000 set off on migration from Gallocanta lagoon (TE/Z) Antonio Torrijo; 23 over Las Rozas (M) Óscar Llana; 20 over Toledo, Ángel Velasco; 1,000 feeding at Logrosán (CC) Paul Brugman; 14+35 over Madrideojos (TO) Ronan Félix; 1 over Mendigorria (NA) Jan Wierd; 600 at La Janda lagoon (CA) A.J. Sepúlveda; 7 over Alía (CC) Jorge Ángel; 24 at Valdecañas reservoir (CC) Martin Kelsey; 107 over Madrid, ANAPRI; 3 in Mondragón Nature Reserve, Santanyi, Mallorca (IB) Jordi.



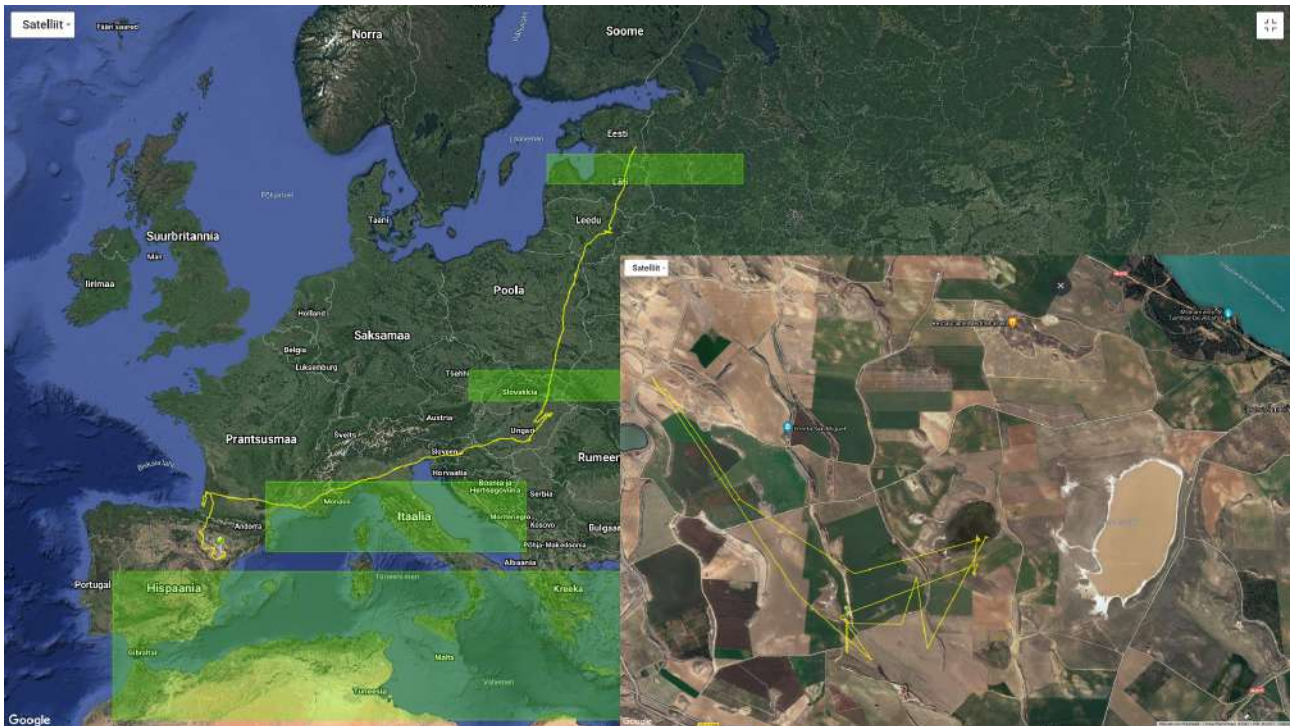
04/11/21: 27 at El Camino de Villafranca lagoon (CR) María J. Valencia, Pedro Bustamante; 25 at Lagartera (TO) César Clemente; 32 at Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); 40 over Agudo (CR) Raquel Ramiro; 16 at Granja de Torrehermosa (BA) Miguel Corvillo; 10 over Azuel, Cardeña (CO) Manuel Moral; a flock over Fuentidueña de Tajo (GU) Óscar (DALMA); 10 over Hinojosa del Duque (CO) Conchi Valle; 3 over El Fresno (AV) Juan Parra; 54 (5 juveniles) at Pétrola (AB) Marcelo Quesada; 10,679 are censused at Gallocanta lagoon (TE/Z) and 1,026 at La Zaida lagoon (Z) S.A.R.G.A.; 607 go to roost at Villafáfila Nature Reserve (ZA) Cristian Osorio; 544 at El Oso lagoon (AV) José M<sup>a</sup> García; 80 at roost, El Tinto (H) José M. Méndez; nocturnal arrival at Gallocanta (Z/TE), Javier Mañas; 16 at Pedroche (CO) Fernando Díaz; 9 at Cornalvo Nature Reserve (BA) José M. Benitez; 800 over Alange dam (BA) José Freitas, Vasco Valadares; 125 at Las Yeguas lagoon (CR) Pedro Bustamante; 22 over Leganés (M) Carlos Herranz; 1,000 at Used (Z) Antonio Torrijo; 26 over Novallas (Z) Moisés Zozaya, Jesús M<sup>a</sup> Lekuona; 400 at Ríolobos weir (SA) Tino Fernández; 577 roost at Sotonera reservoir (HU), of which 2 flocks arrived from crossing the Pyrenees, Kees Woutersen. 2,718 over Organbidexka (FR) Yohan Meurailon et al.



Image nº 18: Cranes at Pétrola (AB). Photo: Raquel Mansilla.

05/11/21: 20 over Proserpina reservoir (BA) Elvira del Viejo; 19 at Bujaraloz (Z) Conchi Esteban; 96 over Pastrana (GU) Ángel Arellano; heard at Yebes (GU) Alfredo (DALMA); 600 at Navalvillar de Pela (BA) Ángel López; 87 over Riels i Viabrea (GI) Arnau Tolrà; 95 over Sant Pere de Villamajor (B) Miquel Bonet; 5 over Madrid, Jorge Crespo; 2 over Las Picadas stream, Almendralejo (BA) Francisco Macias; 26 over Madrid, Christophe Pontegnie; 150 at Palancoso lagoon (CC) Vicenta Risco; 38 over Alcázar de San Juan (CR) Pedro Bustamante; 8 over the Sierra de Alaitz (NA) Moises Zozaya, Jesús M. Lekuona; 130+250 over Burguete (NA) Sandra Pineda; nocturnal passage at 23:00h over Alfaro (LR) Borja Solans; 4 over Valls (T) Xavi Escobar; 99 over Caldes de Montbui (B)

Albert Sanz; 19 over Puerto Hurraco (BA) Rafa AI; 22 at Campo Lugar (CC) David Valentín; 5 over San Pedro de Mérida (BA) Teresa Cohen; 300 over Hondarribia (G) Aimar Hernández.



Map n° 16: Route taken by *Mustakurmu* to Alcañiz (TE). Info: kindly provided by Ivar Ojaste, Estonian University of Sciences.

06/11/21: 15 over Cañas (LR) Lidia Roncero; 54 over Pastrana (GU) Cristina Pintor; 20 over Calblanque (MU) Miguel Escudero; 4 over Collado Mediano (M) Adolfo Rodríguez; 38 over Bujaraloz (Z) Conchi Esteban; 25 over Bujarrabal (GU) Jorge Atance (DALMA); 40 over Guadalajara (GU) Juan M. Nuevo (DALMA); flock over Aldeanueva de Guadalajara (GU) Mario (DALMA); 17 over Punta Entinas (AL) David C. Huertas; 22 at Sierra Boyera reservoir (CO) Miguel A. Leiva; 180 at Cabeza del Buey (BA) Carlos Pacheco, Rafa AI; 31 at Brazatortas (CR) José Márquez; 7 (2 juveniles) over Capdesaso (HU) Eduardo Gracia; 80 over Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); 260 at Navalcán reservoir (TO) Enrique Villaespesa; 600 at Castrejón reservoir (TO) and 20 in gravel pits at Cambrillo del Molino (TO) Javier Nicolau; 54 over Fontanarejo (CR) Diego Llorente; 41 at La Veguilla lagoon (CR) Gabriel Martín; 11 over Seseña (M) José A. Sánchez; 60 at San Juan lagoon, Titulcia (M) Eugenio Castillejos; 50+27 over San Martín de la Vega (M) Elver G.; 20 over Villamanta (M) Lola Martín; 29 over Quijorna (M) Eugenio Collado; 50 circling over San Juan de Guadalix (M) Jonás Muñoz; 30 at Hoya de la Yerba, Alcañiz (TE) Susana Lois; 2 at San Salvador reservoir (HU) Eduardo Gracia; 10 over Zaragoza, José A<sup>a</sup> Domínguez; 2 over Taus (Z) Luis Gracia; 55 at La Zolina reservoir (NA) Moisés Zozaya; 80 over Zizur Mayor (NA) P.G.B.; 200 over Mendioroz (NA) Miguel Minondo; 200 over Burguete (NA) Sandra Pineda; 70 at La Nava lagoon (P) Francisco J. Calvo; 23 over the River Besós, Montmeló (B) Ernest E.; 1,500 at La Janda lagoon (CA) Manuel Lobben; 2 over Olías del Rey (TO) Carlos Paulos (DALMA); 60 circling over Huetos (GU) José Luis (DALMA); 16 over Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); 20 over Berlitz (NA) Rajen Ayerra; 10 at Campanario (BA) Manuel Maximiano; 110 at Alboré pool (HU) Pablo Vallés; 145 at La Nava lagoon (P) José A. Campos; 25 over Rivas Vaciamadrid (M)

Nuria Fernández; 1,600 in Tablas de Daimiel National Park (CR) Carmen M<sup>a</sup> Ayuso; 97 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 10 in Cetina marshes (CA) Bruno Asensio; 15 at El Rocío (H) Carlos Carmona, Daniel Dessi; 5 over Fuente del Arco (BA); 68 at Gargáligas reservoir (BA) Juan L. Herrero; 20 over Betiz Natural Park (NA) Rajen Ayerra; 340 over Egulbati (NA) Ángel Larumbe; 120 over Las Bardenas Reales (NA) Chrisly Esmahan; 100 at Arguedas (NA) Teresa Cohen; 6 over Fuentebella (SO) Juan L. Hernández; 54 over Calatayud (Z) Ángel Gonzalo; 39 over Corral de Calatrava (CR) Francisco Hidalgo; 16 over Los Galayos de la Sierra de Gredos (AV) Alfonso Luengo; 2 flocks over Jirueque, Vicente Peinado (DALMA).



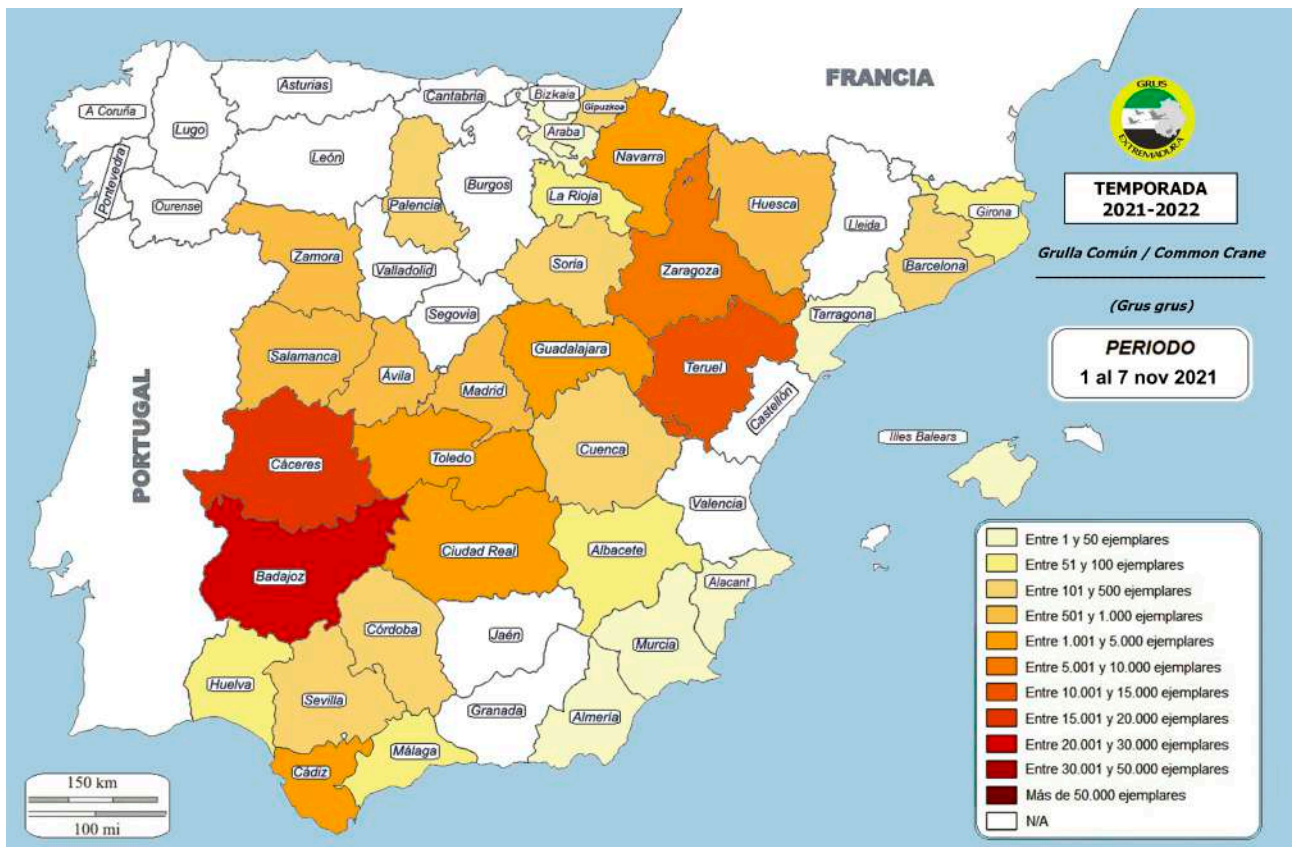
Image n<sup>o</sup> 19: Group of cranes over Punta Entinas (AL). Photo: David C. Huertas

**07/11/21:** 1,600 arrive at Gallocanta (TE/Z) during the day, and another 1,000 set off on migration, Carmen M<sup>a</sup> Ayuso, Juanma Sánchez, Antonio Torrijo; 1 at Cabo de Gata salt pans (AL) Raimundo Martín; 97 at Pétrola (AB) Fernando Rico; 32 going to El Campazo lagoon, La Aldea del Obispo (CC) Neil Renwick; 7+8+14+14 over Mirandilla (BA) Mariano Cabrero; 50 over Camapanario (BA) Manuel Maximiano; 75 over Retuerta del Bullaque (CR) Gerardo García; 16 over Cazalegas reservoir (TO) José L. De la Cruz (ARDEIDAS); 80 over Cervera de los Montes (TO) David Gómez (ARDEIDAS); 12 over Montánchez (CC) Francisco Lopo; 12 at Fuente la Zarza, Hinojosa del Duque (CO) Santos Ortega; 27 at Alboré pool (HU) Pablo Vallés; 21 over Villalba reservoir (BA) Juan G. Miranda; 23 (4 juveniles) at Campillo de las Miras, Valverde de Leganés (BA) and 51 (3 juveniles) at El Junco lagoon, La Albuera (BA) Jose Leal, Jose A. Román; 6,004 between Yelbes (BA) and

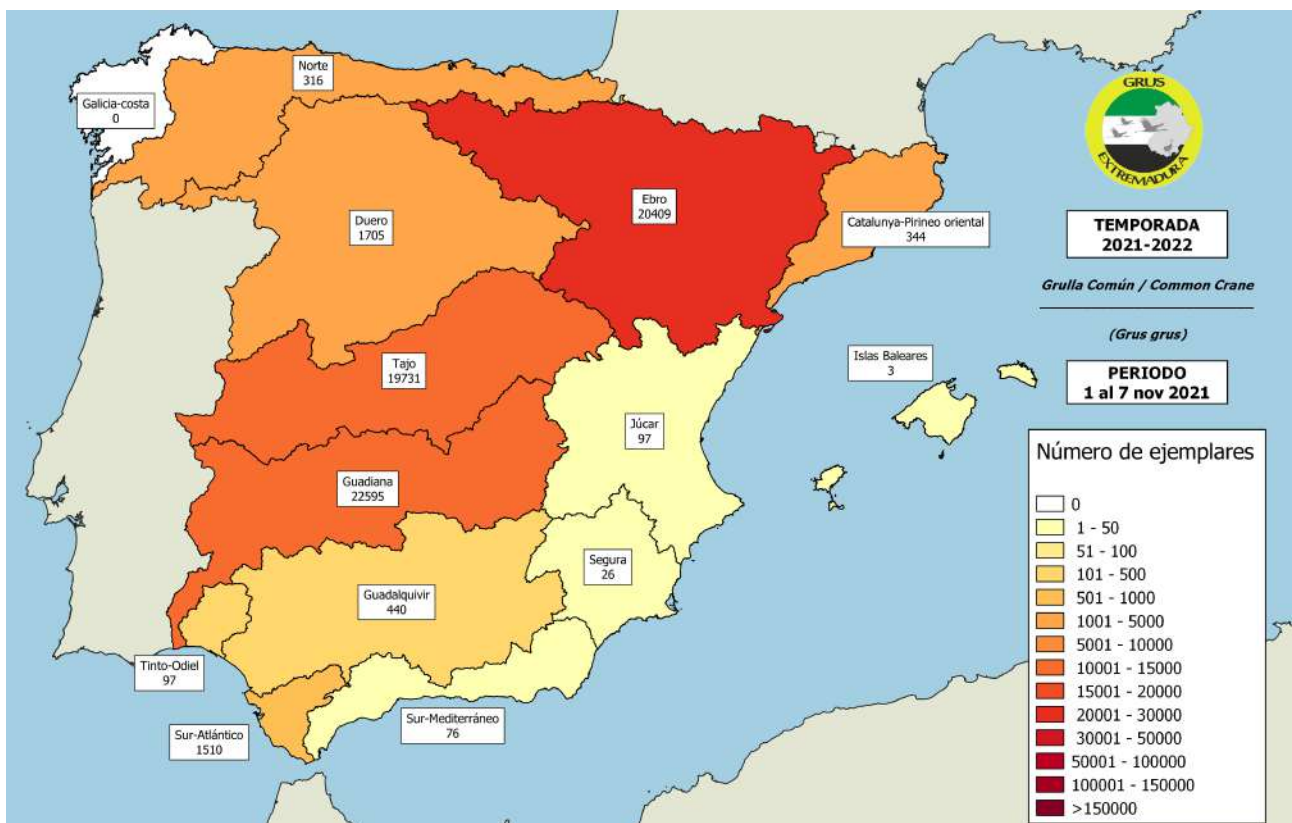
Palazuelo (CC), Jose A. Román: 2 over Barcelona, 1 over Arenys de Mar (B) Albert Soteras; 9 over Vitoria-Gasteiz (AR) Guardas Anillo Verde; 6 over Txingudi, Irún (G) José F. Esparcia; 10 over Vilar de Torre (LR) Arturo Fuentes; 20 at Arroyoconejos reservoir (BA) Antonio Núñez; 19 in Cornalvo Nature Reserve (BA) José Gómez; 3 over Trujillo (CC) Carmen Pérez-Aloe; 3 over Plasencia (CC) Marco A. Sánchez; 200 at Zarza de Granadilla (CC) Fernando Aranguren; 15 at La Fresnedilla lagoon, Oliva de Plasencia (CC) Javier Prieta; 350 at Riobos weir (SA) Alejandro Rebollo; 145 at La Nava lagoon (P) Fernando Jubete Guzón; 5,000 roosted at Gallocanta lagoon (TE/Z) José M<sup>a</sup> Canudo; 650 in 6 flocks over Prados Redondos (GU) Inma Malo; heard at Torres de la Alameda (M) Sergio Mayordomo; 5 over El Pardo (M) Juan C. Higes; 36 over Majadahonda (M) Rafael Hidalgo; 21+4 over Leganés (M) Ricardo Rodríguez, F. Romero; 38 at Tablillas del Zán cara (CR) Pedro Bustamante; 16 over Corral de Calatrava (CR) Francisco Hidalgo; 21 over Cobisa (TO) Ángel Rodríguez; 80 at Navalcán reservoir (TO) Antonio Luengo; 1,500 at La Janda lagoon (CA) José M<sup>a</sup> Lubián.



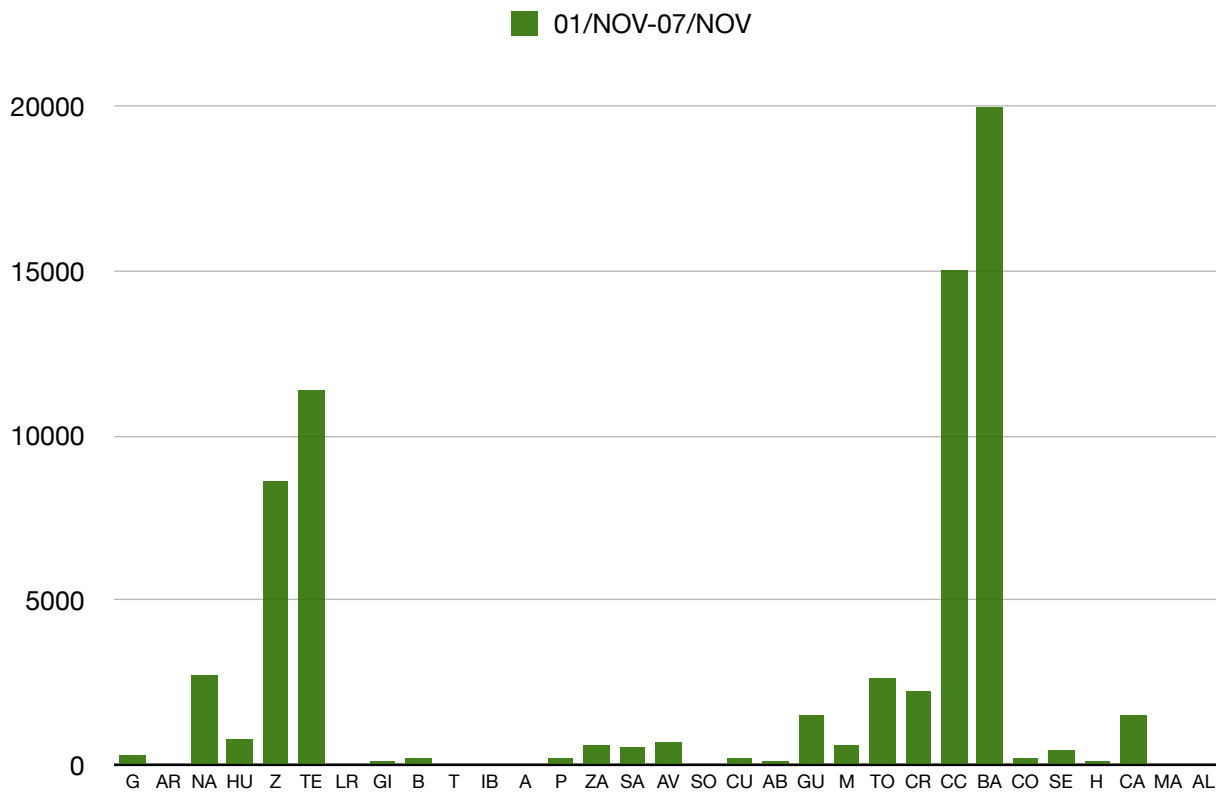
Image nº 20: Group of cranes at Gallocanta lagoon. Photo: Juan Villoria



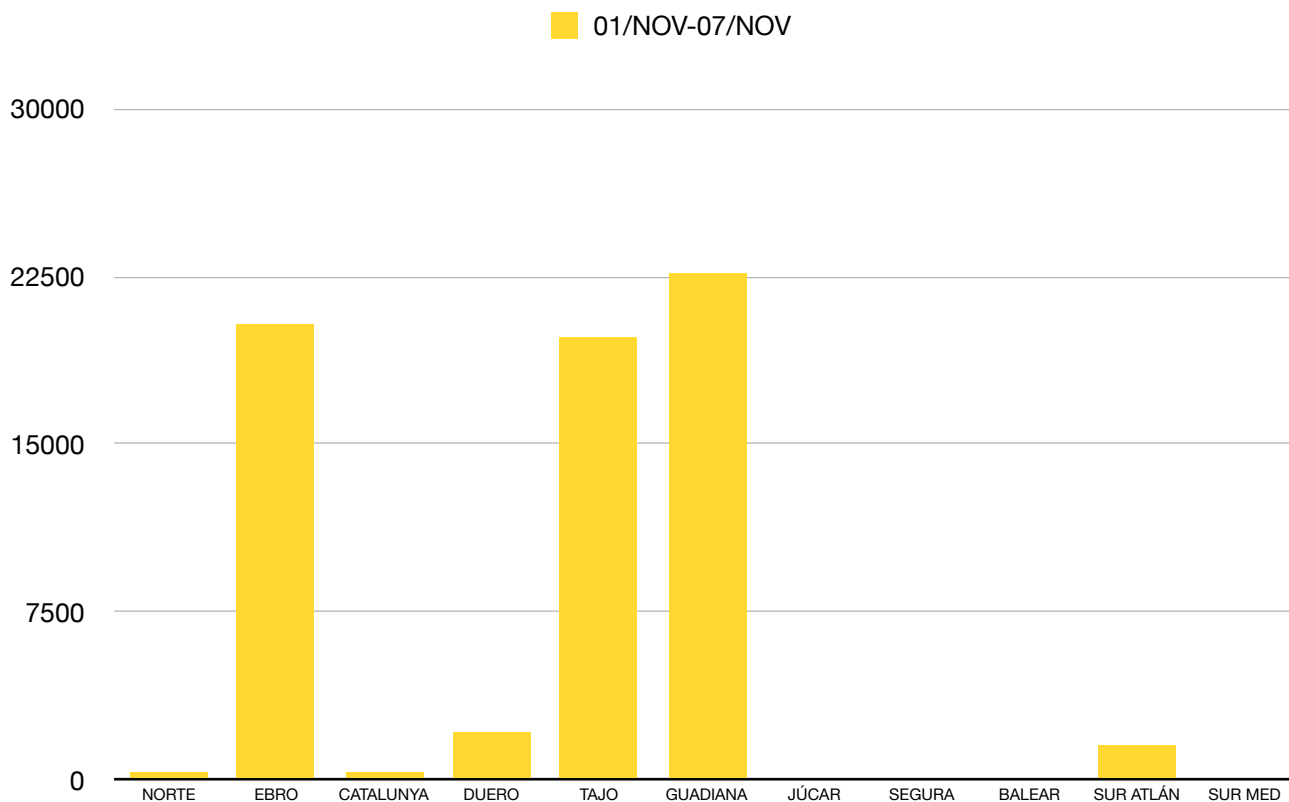
Map nº 17: Provincial migration and distribution between November 1 to 7



Map nº 18: Migration and distribution by water catchment areas between November 1 to 7



Graphic nº 9: Provincial migration and distribution between November 1 to 7



Graphic nº 10: Migration and distribution by water catchment areas between November 1 to 7

A week with significant arrivals from the second day, continuing for several days.

08/11/21: 97+37 at Bujaraloz (Z) Conchi Esteban; 17 at Selgua (HU) Kees Woutersen; 37 feeding and 26 in flight at Manjavacas lagoon, Mota del Cuervo (CU) Antonio Paredes; 37 at Selgua (HU) Jorge Sierra; 3 over Tordera (B); 4 over Ballobar (HU) Paul van Pelt; 26 over Quijorna (M) Eugenio Lozano; 2 at Solana reservoir, Herrera de Alcántara (CC) Antonio Galán.



Image nº 21 : Crane at La Janda (CA). Photo: José M<sup>a</sup> Lubián.

09/11/21: 180+4 over Sotos de Alfaro (LR) Jesús Ucha; 120 over Roncesvalles (NA) Chus; 50 over Aldehuela de las Flores (AV) Néstor Conde; 13 over Caminreal (TE) Antonio Torrijo; 80+43+60 over Toledo, Ángel Velasco; 65 over Hinojosa del Duque (CO) Juanma Sánchez; several thousand going over Navarra, Jesús M<sup>a</sup> Lekuona; 30 over Guadalajara, Mario (DALMA); 38 at El Hoyo, Bujaraloz (Z); 130 around La Molineta reservoir (LR) Cristina Martínez; 350 over Enciso (LR) Sonia Martínez; 50 by the lower Alberche canal, Talavera de la Reina (TO) José L. De la Cruz (ARDEIDAS); 96 on Alcañiz salt flats (TE), where the young Estonian “Mustakarmu” remains, Esther Yera; 7+5 over Valdetorres de Jarama (M) Julio C. González, Natalia Flores; 290 over Guadalajara, Sergio López; 7 over Fresno de Torote (M) Javier Moreno; 12 over the River Dulce ravine (GU) Javier Gómez; 30+80 over Baztan (NA) Xabier Etxarri; 53 at Hinojosa del Duque (CO) and 1 at Cerro Muriano (CO) Juan F. Flores; 98 over Leganés (M) Alfonso Heras; 25 over Villaviciosa de Odón (M) Mark Davis; 45 over Sevilleja de la Jara (TO) César Clemente; 22 over Los Montes de Toledo, Ángel Rodríguez; 26 over Ciempozuelos (M) Roberto Mayo; 62 over Rivas Vaciamadrid (M) Blas Molina; 8 over Madrid, Clara Álvarez; 120 over Villanueva de la Cañada (M) Edmundo Bell; 243 over Madrid, Miguel Sanz, plus 14, Daniel Izquierdo; 7 over Fresno de Torote (M) Javier Moreno; heard at night at Navalafuente (M) Natalia Rojas;

400 over Pamplona (NA) Rajen Ayerra; 29 over Valtierra (NA) and several thousand over southern Navarra, of which 3,570 go over Tarazona (Z) Jesús M<sup>a</sup> Lekuona; 40 over Valdelageve (SA) Christophe Pontagnie; 42 at Clavería lagoon, Membrío (CC) José L. Bautista; 60 over Azuqueca de Henares (GU) Juan M. Nuevo (DALMA); heard at Alcorlo (GU) Joaquín (DALMA); 46 over Bujarrabal (GU) José Atance (DALMA); big flock over Guadalajara, Nuria (DALMA); 65 over Aljucén (BA) Agapito J. Verde; 7 over Viñuelas (GU) and 5 over Valdenuño (GU) Rubén Ramos; 10 over Santa Coloma de Gramenet (B); 1 over Montagut i Oix (GI) Fran Trabalón; 14 over Cerdanyola del Vallès (B) Jonatan Lucas; 14 (5 juveniles) over Sant Fost de Campentelles (B); Miquel Bonet; 14,000+ go over Navarra today, Jesús M<sup>a</sup> Lekuona et al; 200 over Alfaro (LR) Sergio Calvo; 10 over Miajadas (CC) Maribel Gutiérrez; 620 at El Hoyo lagoon (AV) Juan R. Cuervo, Eneko Leonor, Jorge Leonor; 297 at Sotonera reservoir (HU) Kees Woutersen; 35+100+125 over Ugena (TO) M<sup>a</sup> Victoria Cabañas, Cristina Cabañas, Antonio Rubio; 18 over Monfragüe National Park (CC) Ayla Monllor.

*7,455 go over Roudeau (FR); 68 over Organbidexka (FR) Yohan Meurailon et al.; 1,753 go over Lizarreta (FR) Félix Thevenet.*

**10/11/21:** Passage over Toledo at 07:00h, Ángel Velasco; 11,000 at dawn at Gallocanta lagoon (TE/Z) and 6,000 at La Zaida reservoir (Z) Antonio Torrijo; 19+75 over Marchamalo (GU) Carlos Paulos, El Moyo (DALMA); 83+35+60+60+35+74+30+3+25+50 over Ugena (TO) M<sup>a</sup> Victoria Cabañas; Cristina Cabañas, Concepción Conde, Chon Conde, Sonia Núñez, Carmen Conde; 9 at Boada lagoon (P) Fundación Global Nature; 140 at La Nava lagoon (P) Francisco J. Calvo; 10+75 over Navas del Rey (M) Alfredo Mirat, José A. Fimia; 68 over Madrid, Óscar Llana; 40 over Santo Domingo (LR) Óscar Zuazo; 25 over Grañón (LR) Jorge Alonso; 38 over Madrid, Juan C. Rubio; 77+26 over Ávila, José M<sup>a</sup> García; 56 over San Román de los Montes (TO) Francisco Rodríguez (ARDEIDAS); migration began at 10:45h at Gallocanta, Antonio Torrijo; 90+70+140 flying over, between Cabanillas del Campo (GU) and Guadalajara, Juan M. Nuevo (DALMA); 70+15 over Sigüenza (GU) Jorge Atance (DALMA); 40 over Robredarcas (GU) Joaquín (DALMA); 200+ over Fontanar (GU) and 90 over Marchamalo (GU) Carlos Paulos (DALMA); 55 over Fontanar (GU) Carlos Paulos (DALMA); 120+30 over Toledo, Álvaro Gandía; 80 over Robredarcas (GU) Joaquín (DALMA); 3 over Cofín (LR) Jesús Ucha; 100 over Arnedo (LR) Chema Rico; 100 over Alfaro (LR) Sergio Calvo; heard over Alfaro (LR) Sito de la Torre, Sofía Martínez; 30 over Alfaro (LR) Juan P. Malumbres; heard migrating at 00:30h over Alfaro (LR) Amadeo Ortega; 283 in 7 flocks over San Román de los Montes (TO) Francisco Rodríguez (ARDEIDAS); 20 over Talavera de la Reina (TO) David Gómez (ARDEIDAS); 44 (5 pollos) at Bujaraloz (Z) Carlos Esteban; 60+ over Robredarcas (GU) Joaquín (DALMA); 120+52 over Guadalajara, Javi Calvo (DALMA); 137 over Yunquera de Henares (GU) Isabel, Fernando (DALMA); 40 over Guadalajara, José M<sup>a</sup> Gómez; 18 over Uceda (GU), 50 over Talavanca (GU), 75 over Villaseca de Uceda (GU) and 100 over El Casar (GU) Rubén Ramos; 150+50 over Berzocana (CC) Paul Brugman; 35 over El Vellón (GU) Rubén Ramos; 21+4 over Robledillo de Trujillo (CC) Vincent Smith; nocturnal passage over Irún (G) José F. Esparcia; 38 over Marchamalo (GU) José Luis (DALMA); 35 over Calahorra (LR) Emilio Pascual; 50 over Alfaro (LR) Eloy Bermejo; 400 at Valdecaballeros (BA) Jorge Ángel; 32 at Lagartera (TO) César Clemente; 74 at Cazalegas reservoir (TO) and 86 at Otero (TO) Hugo Sánchez; 174+52 over Santa Olalla (TO) Juan Fernández-Elipse, Juan Lorente; 2 at Alcázar de San Juan (CR) Pedro Bustamante; 100 over Pantoja (TO), 25 over Yuncos (TO) and 10 over Seseña (TO) Xavier Martín; 36 over Leganés (M) Alfonso Heras; 350 over Rivas Vaciamadrid (M) Blas Molina; 53+40+40+60+24+58 over Madrid, Eduardo Blanco, Ángela Tamayo, Chemi Ibáñez, Peter Swinden, Ester Contreras, Toni Alonso; 20 over El Pardo (M) Jesús Ruíz, José Fernández; 104 over Villanueva del Pardillo (M) Mariajo Caballero; 12 over Fuente de la Fresno (M) Paul Hubbers; heard at Garganta de los Montes (M) Gabriel Martín; 38 over Tórtola de Henares (GU) J. Luis Ramos; 44 at Rágama (SA) Víctor Coello;



49 over Monfragüe National Park (CC) Ayla Monllor; nocturnal passage over Las Posadas (CC) Manuel Moral; 400 in several flocks over La Alcarria (GU) José M<sup>a</sup> de La Paz; 24 over Madrid, Vicente; 2 flocks over Leganés (M) Marta; 250 over Madrid, Juan Sánchez; 18 over Fuenlabrada (M) Jesús Reyes; 30 over Madrid, JuanCar; 48 at 06:00h over Madrid; 80 over El Retiro (M) Joan Ximenas; 58 over Cabanillas del Campo (GU) José L. Arias (DALMA); 38 over Marchamalo (GU) José L. Ramos (DALMA); flock over Alcorco (GU) Joaquín (DALMA); 81 over Bujarrabal (GU) Jorge Atance (DALMA); 150 over Alfaro (LR) Sergio Calvo; 150 over Lumbier gorge (NA) Martín Pérez, John Muddeman; 300 over Garralda (NA) Miguel Minondo; 163 over Velilla de San Antonio (M) José M<sup>a</sup> de la Peña, Antonio Verdejo, Felisa Verdejo; 16 over Tembleque (TO) Alejandro Gallego.  
 6,002 over Lindus (FR) Gonzalo, Txufis; 362 over Organbideska (FR) Yohan Meurailon et al; 2,066 over Lizarreta (FR) Félix Thevenet.



Image nº 22: Wintering cranes, Vegas del Guadiana (BA/CC). Photo: Neil Renwick

11/11/21: 10 roosted at Santillana reservoir (M) Juan A. Díaz; 10 at Bujaraloz (Z) Conchi Esteban; 46 over Ugena (TO) Carmen Conde; 21 over Guadajira (BA) Jesús Valiente (ADENEX); 7 over Proserpina (BA) Elvira del Viejo; 6 over Pedro Muñoz (CR) Jesús Porrero; heard over Alcalá de Henares (M) Juan Prieto (DALMA); 30+32 over Marchamalo (GU) David Marchante; 3 over Yunquera de Henares (GU) Ana, Raúl, Fabio, Javier; 91 over Bujarrabal (GU) Jorge Atance (DALMA); 8 over Mohernando (GU) Alfredo (DALMA); 100 over Cincovillas (GU) José Molina (DALMA); 8 over San Martín del Pimpollar (AV) José M<sup>a</sup> García; 220 (12 juveniles) at Navalvillar de Pela (BA) Ángel López; 3 flocks over

Aldeanueva de Atienza (GU) Mario (DALMA); 100 over Guadalajara, Mario (DALMA); several hundred over Pamplona (NA) Rajen Ayerra; 11 over Ansenjo, Ocón (LR) Dani Mogica; 85 over Logroño (LR) Laura del Campo; 270 over Mendavia (LR) Lidia Roncero; 20 over Torrefresneda (BA) Antonio M<sup>a</sup> Sánchez; 15 over Ventosa (LR) Lidia Roncero; 15 at La Matilla (SG) Rubén Bautista; 60+150 over Toledo, Ángel Velasco; 98 and 77 arrive at Bujaraloz (Z) Conchi Esteban; 131 over Madrid, Óscar Llama; 60 over Enciso (LR) Chema Rico; 800 go to roost at El Hoyo lagoon, El Oso (AV) José M<sup>a</sup> García, César San Segundo; 20 over El Molar (M) Rubén Ramos; 40+44 over Berzocana (CC) Paul Brugman; 100 over Gallur (Z) Fernando Unzué; 28 at Castellò d'Empuries (GI) Ralf Enderlein, Philippe Lavaux; 37 over Los Cerralbos (TO) Hugo Sánchez, Juan Fernández-Elipse; 78+50 over Getafe (M) Gumer González, José Briceño; 61 over Aravaca (M) Ana Sáez; 151 over Velilla de San Antonio (M) Ángel Nein; 60+22 over Soto de las Juntas (M) Sergio GS, Peter Swinden; 70 over Aibar (NA) Jesús M<sup>a</sup> Lekuona; 450 over Antsoain and 350 over Pamplona (NA) Gorka Gorospe; 15 over Gamesa ravine (NA) Haritz Sarasa; 1,000 over Pamplona (NA) and 200 over Zolina (NA) Patricia Andrés; 8 over Pamplona (NA) Gorka Gorospe; flock over Elorriaga (BI) Aitor Zabala; 59 over Nájera (LR) Martín Larrañaga, Itziar González; 1,659 over Novallas (NA) Moisés Zozaya, Jesús M<sup>a</sup> Lekuona; 99 over Tudela (NA) Use Soto; 180 over Ciempozuelos (M) Adrián Fernández; 40 over Corral de Calatrava (CR) Francisco Hidalgo; 66 over Almería, David C. Huertas; 450+ over Autol (LR) Alberto Castillo; 60 over Alfaro (LR) Borja Solans; 19 over Sotos de Alfaro (LR) Andrés Armendariz; passage over Robredarcas (GU) Joaquín (DALMA); 16,863 are censused at Gallocanta (TE/Z) S.A.R.G.A.; 60 over Guadalajara, Elena, José M<sup>a</sup> Gómez (DALMA); 40 over Alcalá de Henares (M) Juan Prieto; 90 over Cabanillas del Campo (GU) José M. Gómez (DALMA); passage at 22:30h over Guadalajara, Juan M. Nuevo (DALMA); also over Toledo, Ángel Velasco; 200 over Calahorra (LR) Emilio Pascual; 200 over Madrid, ANAPRI; 27 over Villafranca de los Caballeros (TO) Alejandro Gallego; 16 at Grande lagoon (TO) Ana R. Ruíz; 100 over Nambroca (TO) Juanjo Gómez; 20 at Grande lagoon (TO) Ana R. Ruíz; 47 in several groups at Grande lagoon (TO) Carmen Comendador.  
7,005 over Lindus (FR) Sandra Pineda; 642 over Organbidexka (FR) Yohan Meurailon et al.



Image nº 23: Cranes feeding in the Fuente de Piedra área (MA). Foto: Javier Fregenal.

12/11/21: 36 over Ugena (TO) Sonia Núñez; 12 over Santa Amalia (BA) Antonio M<sup>a</sup> Sánchez; 102 over the Loverne reservoir, Ejea de los Caballeros (Z) Jorge Hernández; 42 over Sotos de Alfaro (LR) Borja Sanz; 4 over Campillo (CO) Javier Álvarez; 200 over Ocón (LR) Lidia Roncero; 35+38 over San Román de los Montes (TO) Álvaro de la Cruz, Francisco Rodríguez (ARDEIDAS); 35 over Chapinería (M) Rubén Bautista; 80 over Proserpina reservoir (BA) Elvira del Viejo; 40 over Bujarrabal (GU) Jorge Atance (DALMA); 35 over Cabanillas del Campo (GU) Luis Miguel (DALMA); 50 over Semillas (GU) Mario (DALMA); 1,000 at Fuente de Piedra lagoon (MA) Javier Fregenal; 16 over Fraga (HU); heard at Semillas (GU) Mario (DALMA); 92 over Fuentelaencina (GU) Javi Calvo (DALMA); 26 over Talavera de la Reina (TO) and 56 over Las Herencias (TO) Concepción de las Vecillas (ARDEIDAS); 1,000+ over Ibañeta (NA) Chus; 1,700+ over Saldías (NA) David Miqueleiz; 1,860 at La Janda (NA) Arkadiusz Broniarek; 10 over Castejón (LR) David Ordoyo; 16+29 over Oropesa (TO) Marc Gottenbos; 18 over Urkullu (G) and 3 at Salburua (AR) Aitor Zabala; 80 over Leitza (NA) José Ardaiz; 300 over Baztán (NA) Xabier Etxaur; 210 at La Zolina reservoir (NA) Rajen Ayerra; 50 over La Loza reservoir (NA) Alberto Rodríguez; 25 over Lillo (TO) Óscar Frías; 94 at Pastrana lagoon (CR) Pedro Bustamante; 8 over Posteruelo (CR) Francisco Hidalgo; 91 over Casarrubios del Monte (TO) Unai Fuerte; 25 over Leganés (M) Carlos Herranz; 45 over Madrid, Francisco Guil; 10 over Casarrubuelos (M) M<sup>a</sup> José M. Cenamor; 59 at El Campillo lagoon (M) Antonio Espino; 200 over Aranjuez (M) Jorge García; 6 over La Casa de Campo (M) Clara Álvarez; 15 over Madrid, Christophe Pontegnie; 56 over Las Rozas (M) Javi Rubio; 80 over Majadahonda (M) Rafael Hidalgo; 50 over Esteras de Medinaceli (SO) Marián Ramos; heard at Paredes de Nava (P) Fernando Jubete Guzón; 27 over Aceuchal (BA) Guillermo Casillas; 1 at Sueca (V) Adolfo Torres; 19 over Huesca, Aitor Mora; 112 over Huelva, Juanjo Cipriano; 55 over Villafranca de los Caballeros (TO) Alejandro Gallego..

13/11/21: 200 at Vegas de Caminreal (TE) Antonio Torrijo; 7 over Zarautz (G) Alexander Carriel; 5 over Autol (LR) Andrés de la Torre; 22 between Leiva and Tormantos (LR) José I. Sáenz; flock over Aldeanueva de Atienza (GU) at 00:20h, Mario (DALMA); 62 over Logroño (LR) Javier Nalda; 22+42+10 over Ugena (TO) M<sup>a</sup> Victoria Cabañas, Eric Palos, José C. Biencinto; 3,000 go to roost at Alange reservoir (BA) Juan J. Negro; 17+39 over Navas del Rey (M) Pablo Escribano; 123 at Navalespino reservoir (CO) Miguel Corvillo; 500 at Alcolea de Cinca (HU) Eduardo Gracia; 452 in several flocks over El Carrascalejo (BA) Agapito J. Verde; 60 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 34 over Yunquera de Henares (GU) Fernando (DALMA); heard at Sacedón (GU) Javi Reyes; 26 circling at Sotos de Alfaro (LR) Borja Sanz; 40 over Alfaro (LR) Cristina Muñoz; 104 over Griñán (HU) Eduardo Gracia; 14 at Alto Guadiato (CO), 9 at Los Blázquez (CO) and 15 at Sierra Boyera reservoir (CO) Miguel A. Leiva; heard at Semillas (GU) Mario (DALMA); 35 at Castelló d'Empuries (GI) Quico Serra; 7 over Voltoyo reservoir (AV) Esther Murciano; 150 over Sant Bartomeu del Grau (B) Irene Figueroa; 150 at La Colada reservoir (CO) Carmen M<sup>a</sup> Ayuso; 128 over Mantlleu (B) Albert López; 104 over Crespìà (GI) Carles Quer; 240 at El Brazo del Este (SE) Francisco J. Salcedón; 141 at Membrío (CC) Antonio Galán; 111 at Pétrola (AB) Marcelo Quesada; 193 over Pamplona (NA) Juan I. Deán; 110 at El Campazo lagoon (CC) Neil Renwick; 1,200 at Aznalcázar (SE) Walter Van Kerkhoven; 3 at Ses Salines d'Eivissa natural park (EI) Ibán Yarza; 1 over Olot (GI) Mireia Lúa, Josep Bujons; 300 over Garralda (NA) Miguel Minondo; 25 over Alzuza (NA) Javier Sanz; 20 over Andoain (NA) Mikel Mendía; 22 over Leiva reservoir (LR) José I. Sanz; 100 at Monteagudo de las Vicarías reservoir (SO) Marián Ramos; 3 at Los Francos gravel pits (SA) Dani Hernández, Alba Andrés; 11 over Ávila, Luis J, Martín, Miguel Martín; 38 over Collado Villalba (M) Andrés Martínez; 3 over Maderuelo (SG) and 3 over Milagros (SG) Xavier Parra; 40 over Madrid, Daniel Izquierdo, Chemi Ibáñez; 40 over El Pardo (M) Christophe Pontegnie; 1 at Paredes salt pan (GI) Carlos Antón; 38 over Valdelcubo (GU) Sergio Pérez; 2 over Jadraque (GU)

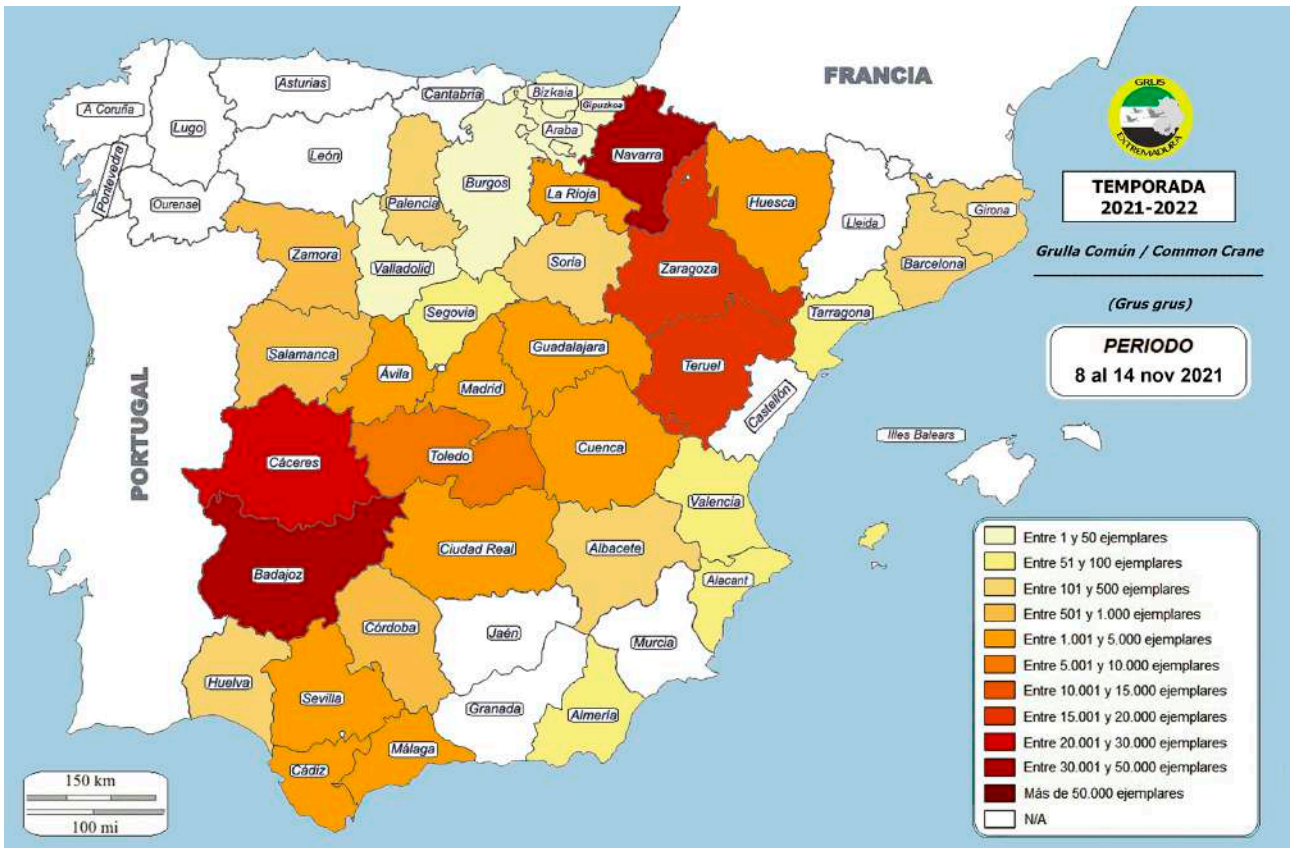
Carlos Antón; 125 over Majadahonda (M) Rafael Hidalgo; 150 over Villaviciosa de Odón (M) Mark Davis; 13 over Leganés (M) Clara Álvarez; 11 over Rivas Vaciamadrid (M) Joan A. Ximenis; 80 over Pozuelo del Rey (M) Elver G.; 50 over Alique (GU) Ricardo Rodríguez; 14 in dehesa at La Haba (BA) Francisco J. Macias; nocturnal passage at 01:30h over Brunete (M) Jesús Calle; 15 over Corral de Calatrava (CR) Fernando Hidalgo; 11 over Villafranca de los Caballeros (TO) Laura Albo.

14/11/21: 2,053 at Peña Hueca lagoon, Villacañas (TO) Ángel Velasco; 12+10 over IL Estaca del Gancho, Ejea de los Caballeros (Z) and 50 towards Las Bardenas Reales (NA) Javier López; migration began at 10:20h at Gallocanta (TE/Z) Antonio Torrijo; 47 at Sánchez Gómez lagoon, Mota del Cuervo (CU) Jesús Porrero; 18 over Torralba de Oropesa (TO) and 24 over Lugar Nuevo, Peraleda de la Mata (CC) Luis Asuar, José A. Román; 6 over Fuentenovilla (GU) Isabel, Fernando (DALMA); 4,500 in the Gargáligas reservoir area, Navalvillar de Pela (BA) Ángel López; 25 over L'Albió (T) Xavier Riera; 17 over Sant Jaume d'Enveja (T) Vottorio Pedrocchi; 14 over Les Madrigueres (T) Yuhand Mañé; 68 over Sariñena (HU) Eduardo Gracia; 16 over El Tiemblo (AV) Nacho Sevilla; 68 over Puebla de Almenara (CU) Fernando Alonso; 3 at El Llongar lagoon, Lillo (TO) Luis Alberto; 35 at La Veguilla lagoon (CR) Fernando Alonso; 7 at Tablillas del Záncara (CR) Pedro Bustamante; 8 over Corral de Calatrava (CR) Fernando Hidalgo; 126 at Pétrola (AB) Lucas de las Heras, Raquel Mansilla; 135 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 14 over Yebes (GU) Laura Calvo (DALMA); 22 arrive at 17:53h at Gallocanta (TE/Z) Antonio Torrijo; heard at Renera (GU) Jorge Atance (DALMA); 170 at Alboré pool (HU) Pablo Vallés; 22 at Bujaraloz (Z) Conchi Esteban; 38 at Pedrera reservoir (HU) Arnau Guardia; 7 at La Gineta (AB) Pablo Santonja; 2 over Vic (B) Jordi Fans; 600+500 over Guijarrales, Villafranca de los Caballeros (TO) Alejandro Gallego; 3 over Villafranca de los Caballeros (TO) Julio García.

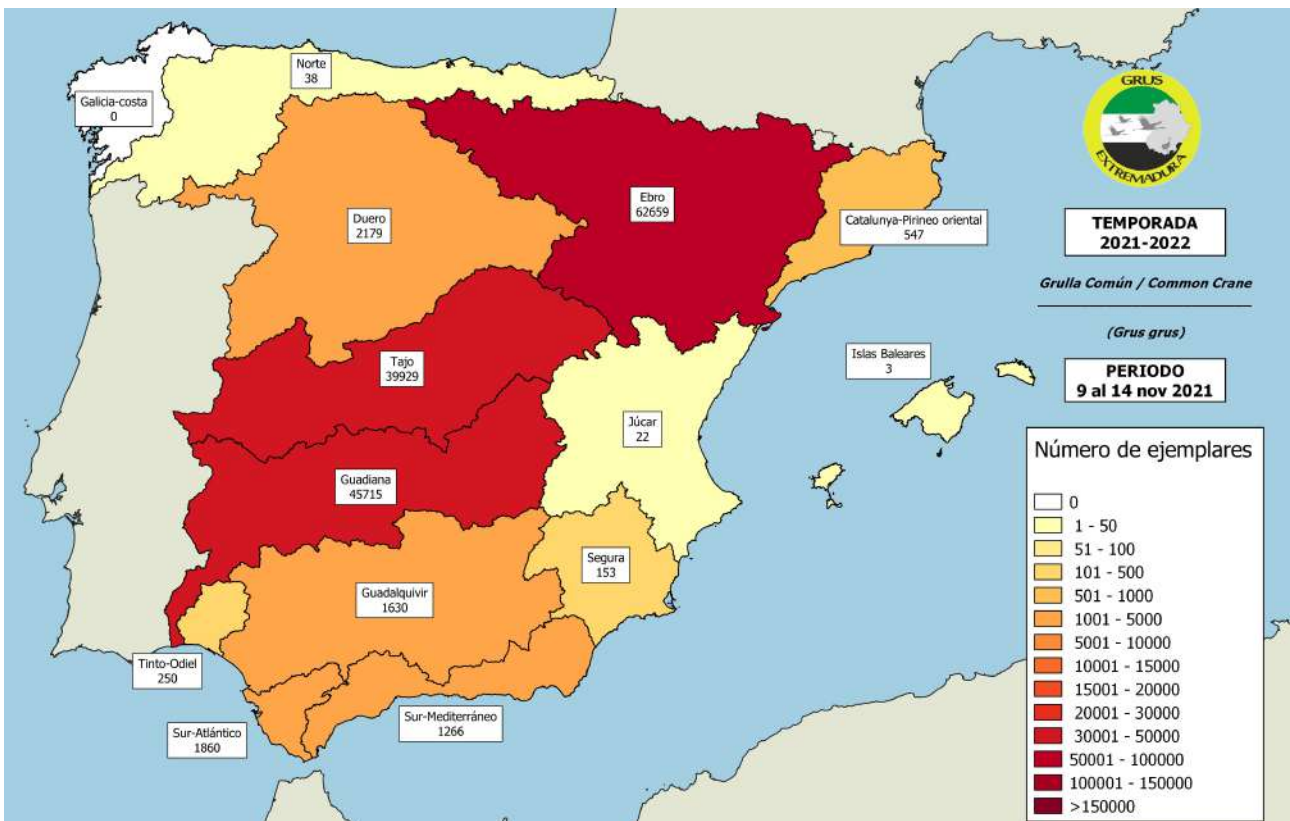
*15,420 are censused at Lac du Der (FR) LPO Champagne-Ardenne.*



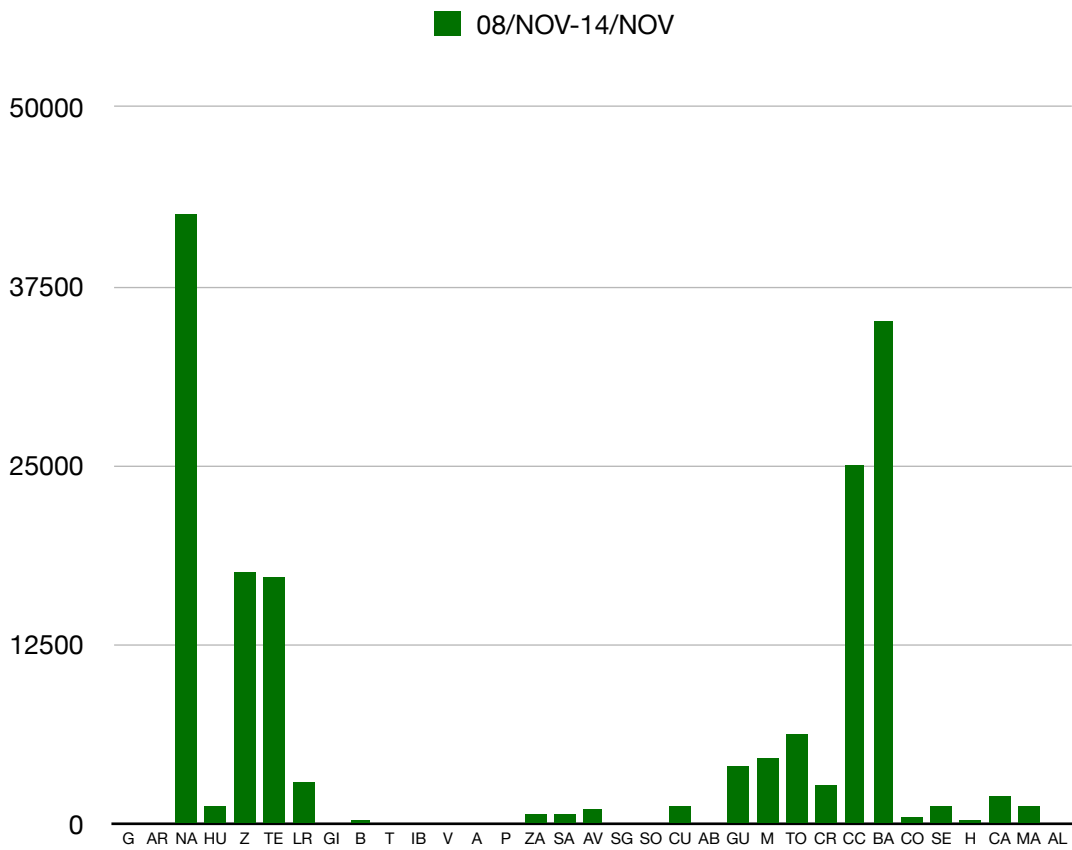
Image nº 24: Cranes at Pétrola (AB). Photo: Raquel Mansilla



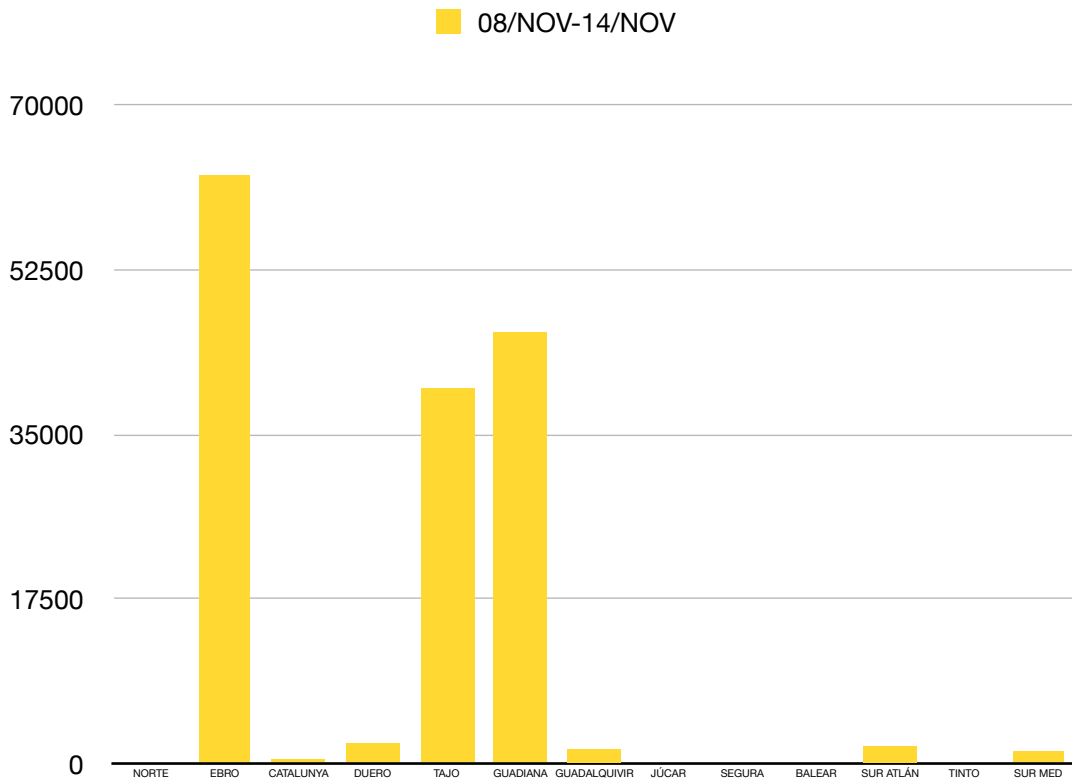
Map nº 19: Provincial migration and distribution between November 8 to 14



Map nº 20: Migration and distribution by water catchment areas between November 8 to 14



Graphic nº 11: Provincial migration and distribution between November 8 to 14



Graphic nº 12: Migration and distribution by water catchment areas between November 8 to 14

A week with few migratory movements and few birds entering the Peninsula. The wintering areas continue filling gradually, and cranes begin to occupy the areas where they usually arrive later, such as the north of Córdoba, linked to the Central Zone of Extremadura.

15/11/21: 11 over Villalba de los Barros (BA) José Leal; 12 over Sant Jaume d'Enveja (T) Ramón Ruíz; 41 over Vic (B) Xesco Puigdomenech; 56 over Gimènells i Pla de la Font (LL) Toni Leiva; 74 over Segura (G) Beñat Lardizabal; 100 over Robledo del Mazo (TO) Miguel A. De la Cruz (ARDEIDAS); 50 over Sástago (Z) Daniel Enfedaque; 25 over Sotos de Alfaro (LR) Jesús Ucha; 11 over Guadalajara, Javi Calvo (DALMA); 120 in rice fields at Capdesaso (HU) Eduardo Gracia; 35 over Mingorrubio (M) Adolfo Rodríguez; heard at night (19:22h) at Robredarcas (GU) and at Alcorlo (GU) Joaquin (DALMA); 190 at Hinojosa del Duque (CO) Juanma Sánchez; 14 over the River Lácara (BA) José M<sup>a</sup> Benítez; 120 over Nájera (LR) Martín Larrañaga, Itziar Gutiérrez; 48 at La Veguilla lagoon (CR) Guillermo Gómez; 19 at Las Seguras (CC) Francis Martín; 12 over Pazuengos (LR) Lidia Roncero; 15 over La Lastrilla (SG) Miguel A. García; 83 over Sariñena lagoon (HU) José M<sup>a</sup> Canudo.



Image nº 25: Cranes (“Josefina”, aged 22 years, among them) in dehesa at Hinojosa del Duque (CO): Photo; Juanma Sánchez

16/12/21: 26 over the River Salor (CC) Francis Martín; 400 at Urdimalas, Malpartida de Plasencia (CC) José M<sup>a</sup> Jiménez; 1 over Lezo (G) Aitor Labandibar; 11 over Getafe (M) José L. Béjar; 258 (54 juveniles) roost in the River Tinto (H) José M. Méndez; 45 at Castellò d'Empuries (GI) Oriol Clarabuch; 860 in Villafáfila Nature Reserve (ZA) Jesús Domínguez, Mariano Rodríguez; 992 roost at El Hoyo lagoon, El Oso (AV) Jorge Leonor; 11 over Getafe (M) José L. Béjar; 28 at La Nava lagoon (P) Rafael Hermosilla.

17/11/21: 10 at San Pedro del Pinatar salt pans (MU) Adrián López, Patricia López; 210 at Sotonera reservoir (HU) José M<sup>a</sup> Canudo; 1,073 roost at El Hoyo lagoon, El Oso (AV) José M<sup>a</sup> García; 14 at Baza (GR) Juan A, Dengra; 46 over Torroella de Fluvià (GI) Ramón Aguilar; 107 over Bellprat (B) Vittorio Pedrocchi; 60 over Copons (B) Eudald Pujol; 60 over Rafadell (B) Jordi Riera; heard at Vilassar de Dalt (B) Jordi Ponce; 90 over Terrasa (B) Albert Moreno; 25 over La Garriga (B) Javi Mendoza; 17 over Pla de Santa María (T) Albert Martínez; 60 over Moià (B) Montserrat Clapers; 100 over Anglès (GI) Raúl Bastida; 200 at La Bazagona (CC) Ayla Monitor; 58 over Alio (T) Mercè Postiguillo; 27 over Palafrugell (GI) Joan Estrada; 5 at Ivars lagoon (LL) Sergi Sales; 526 go to roost at Alange (BA) José A. Román; 373 at Tablillas del Zán cara (CR) Pedro Bustamante.



Image n<sup>o</sup> 26: Cranes going to roost at Alange reservoir (BA). Photo: José A. Román.

18/11/21: 44 over Sástago (Z) Daniel Enfedaque; 65 at El Campazo lagoon (CC) Neil Renwick; 540 at Las Tiendas, Mérida (BA) Neil Renwick; 2 over Plasencia (CC) Carine Van Goethem; 19,030 are censused at Gallocanta lagoon (TE/Z) and 102 at La Zaida lagoon (Z) Francisco J. Sampietro (S.A.R.G.A.); 50 over Castellterçol (B) Isabel Casas; 50 over Alcarràs (LL) and 51 over Lleida, Koldo Alonso; 350 at Larga lagoon, Villafranca (TO) M<sup>a</sup> José Valencia; 1,000+ go to roost at Peñahueca lagoon, Villacañas (TO) Carmen Comendador; 12 over Pago de San Clemente (CC) Martin Kelsey; heard at night (20:53h) at Robredarcas (GU) Joaquín (DALMA) 526 at dawn at the roost at Santa Amalia (BA) José A. Román; 3 at the saline lagoon at Zuera (Z) Jose; 2 at La Peña reservoir (Z) Esther Charles; 200+80+45 around Baztán (NA) Xabier Etxarri.



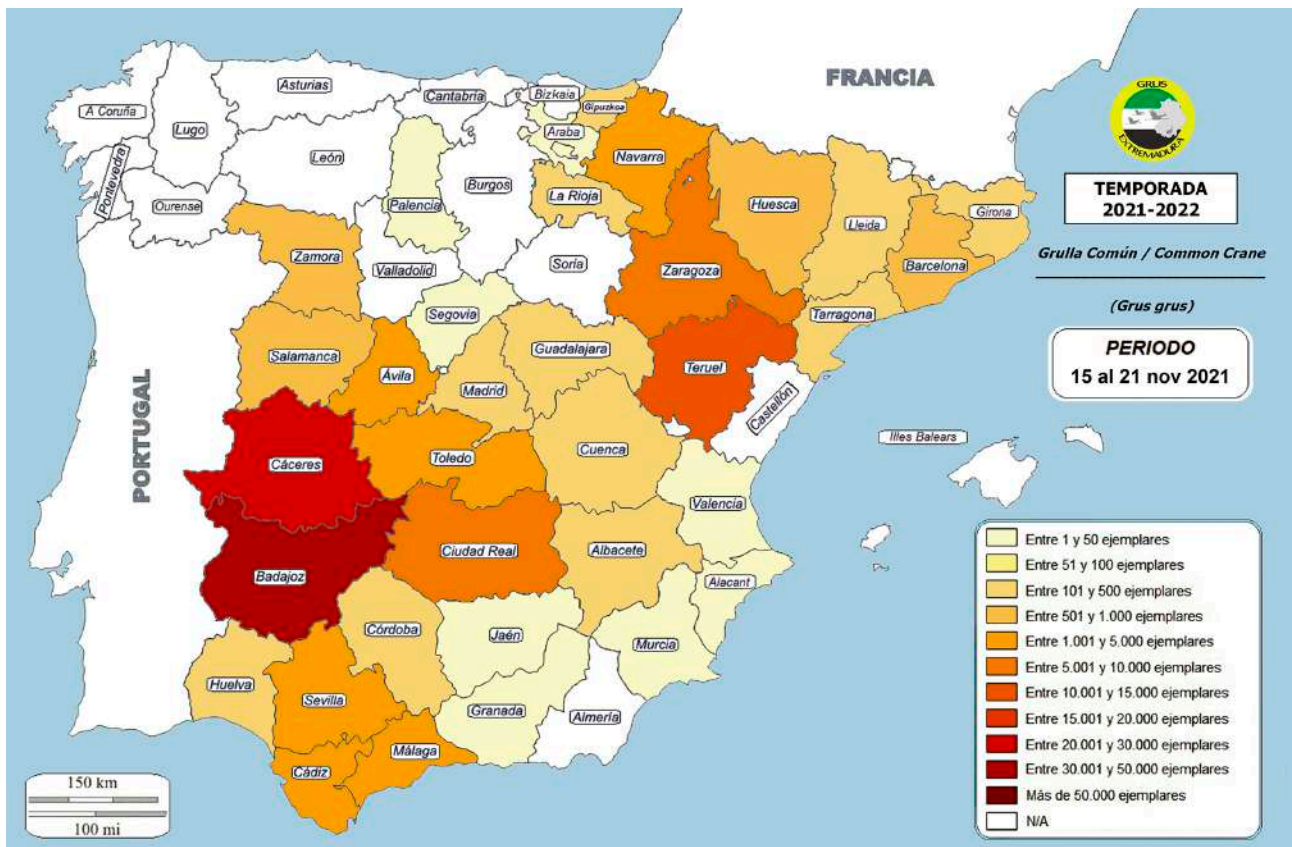


Image nº 27: Cranes going to roost at Peñahueca lagoon (TO). Photo: Carmen Comendador.

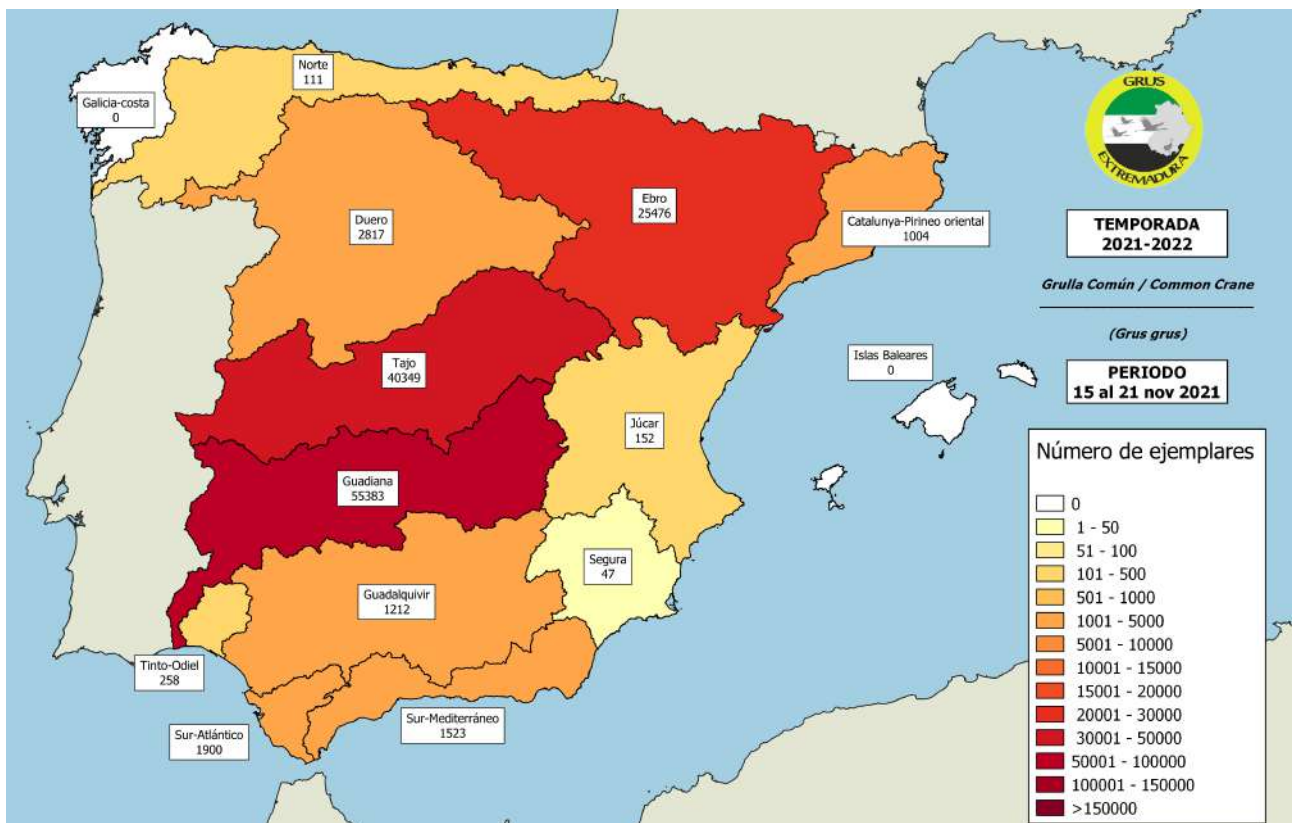
**19/11/21:** 863 roosted at Peñahueca lagoon, Villacañas (TO) Ángel Velasco; 647 roosted at Alange reservoir (BA) José A. Román; 3 over Palau-Saverdera (GI) Oriol Clarabuch; 10 over Sotos De Alfaro (LR) Borja Sanz; 17 over Sierra del Asno, Cieza (MU) Antonio Fuentes; 131 at Pétrola (AB) Marcelo Quesada; 13 at Castellò d'Empuries (GI) Ramón Fortià; 23+61 over Valereña (Z) Javier López; 1,900 at La Janda (CA) Arkadiusz Broniarek; 49 at Sotonera (HU) Kees Woutersen; 17 over Colera (GI) Miquel Pradas; 4 over Les Planes d'Hostoles (GI) Ignasi Llover; 3 over La Roca del Vallès (B) Ignacio López; 1.,09 (78 juveniles, one family with 3 juveniles, 6 with 2 and 63 with 1) between Fuente de Piedra and Campillo lagoon (MA) Javier Fregenal; 235 in dehesas at Hinojosa del Duque (CO) Juanma Sánchez; 11 in La Albufera Natural Park (V) Carlos Mompó.

**20/11/21:** 900 at El Taray lagoon, Villacañas (TO) Ángel Velasco; 747 at Ríolobos weir (SA) Rafael Vicente; 56 over Bujaraloz (Z) Conchi Esteban; 450 go to roost at Alboré Pool (HU) Pablo Vallés; 27 over Amposta (T) Francesc Rivero; 600 in rice fields at Monesme (HU) Jesús Lavedán; 35 over Moncayuelo lagoon (Z) Cuervas Aragón; 38 over Sotos De Alfaro (LR) Andrés Armendáriz; 1 over Villarreal (AR) Marta Mesa; 32 over Txingudi, Irún (G) José F. Esparcia, Aimar Hernández, David Santamaría; 10 over San Sebastián de los Reyes (M); 2 over Zamora, Alfonso Rodrigo; 180 over Madrid, Juan C. Rubio; 58 in dehesas at La Colada (CO) Juanma Sánchez; 91 at Santa Teresa reservoir (SA) Vicente G. Garrudo.

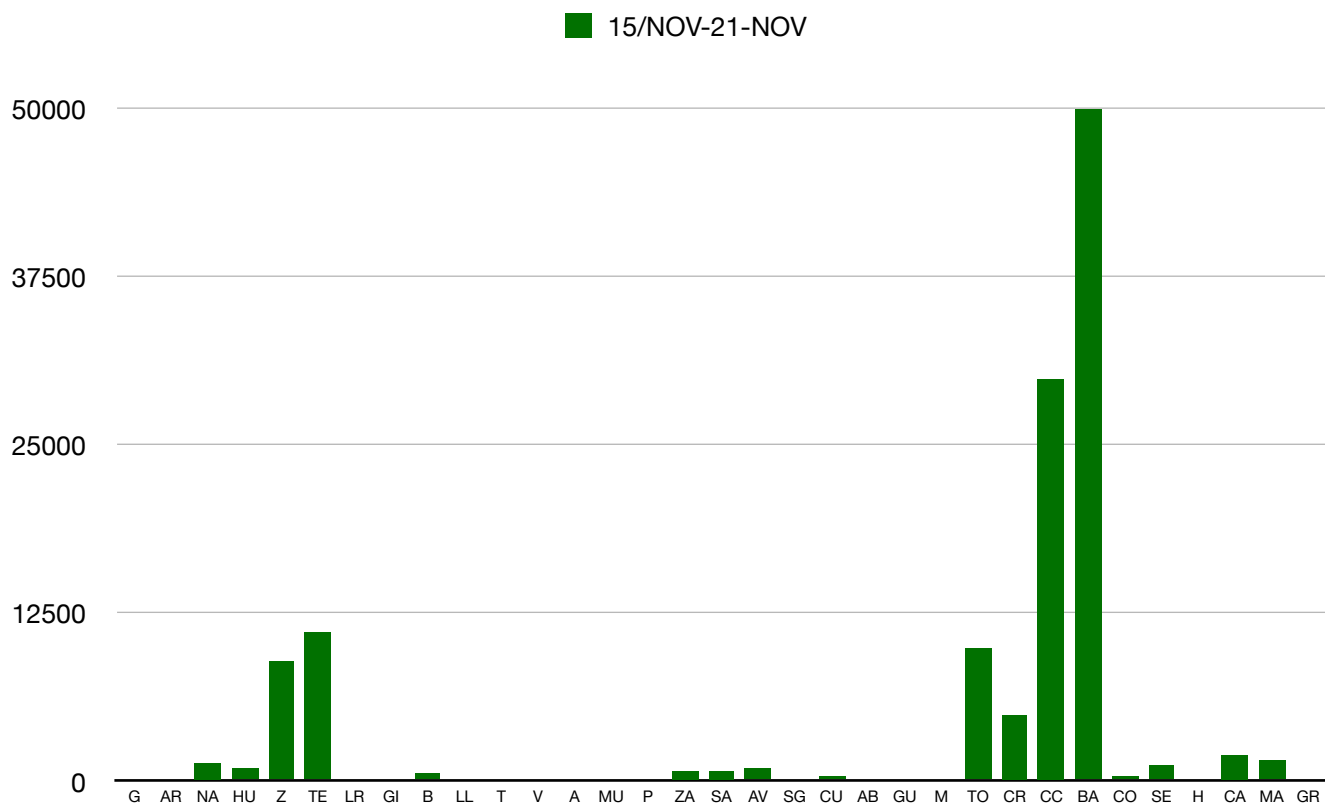
**21/11/21:** 199 roosted at Larga lagoon, Villacañas (TO) Ángel Velasco; some 20,000 at Gallocanta lagoon (TE/Z) where some 200 set off and 58 arrived, Antonio Torrijo; 62 over Pastrana (GU) Cristina Pintor; 48 over Cornalvo Natural Park (BA) Mariano Cabrero; 107 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 6 at Marjal dels Moros (V) Marga Colore, Carlos Mompó; 3 over Mendixur (AR) Carine Zimmerman, Pablo Varona; 11 over Trujillo (CC) Carmen Pérez-Aloe; 12 over the Sierra Morena (J) Francisco J. Pulpillo; 135 (10 juveniles) at Corral Rubio (AB) Susana Noguera, Francisco Rico, Chus Fernández; 9 over Fresnedillas de la Oliva (M) John L. Muddeman.



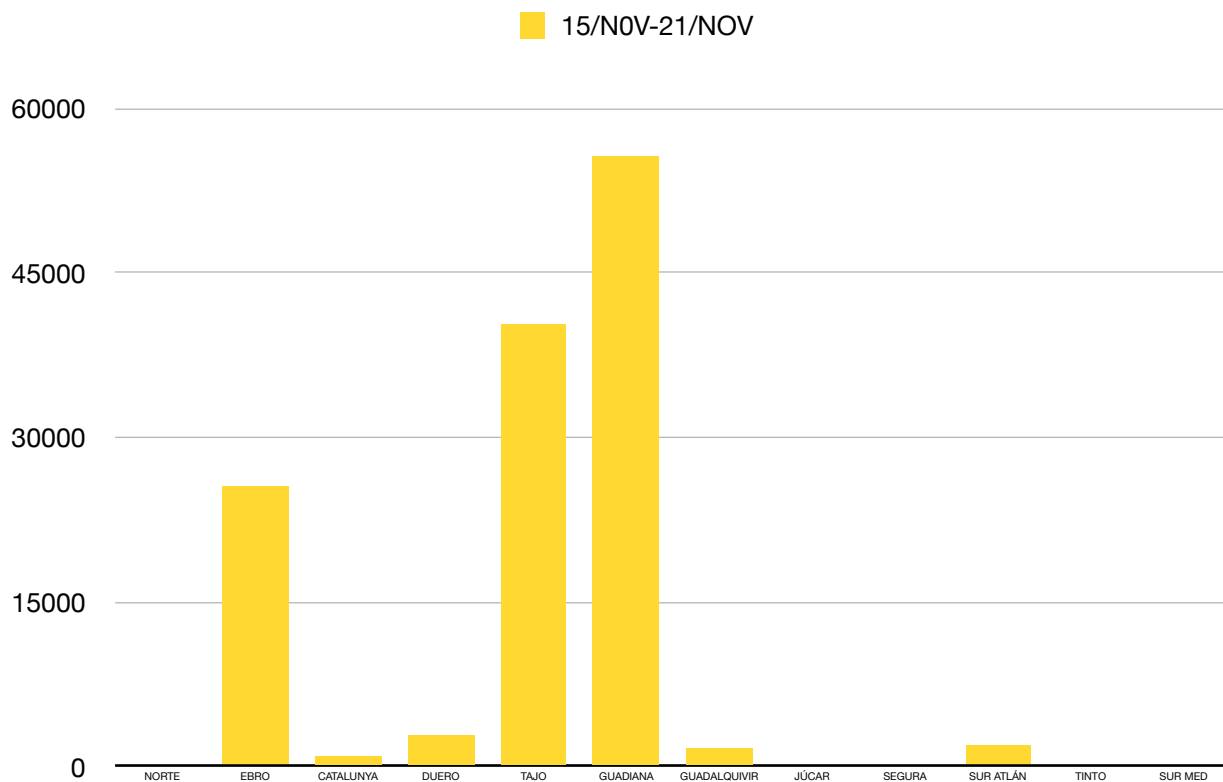
Map nº 21: Provincial migration and distribution on the week November 15 to 21



Map nº 22: Distribution and migration by water catchment areas. November 15 to 21



Graphic nº 13: Provincial migration and distribution on the week November 15 to 21



Graphic nº 14: Distribution and migration by water catchment areas. November 15 to 21

The week began with a good arrival of migrants, coinciding with a significant change in the weather which produced heavy snowfalls in the north of the Peninsula, which made detecting migratory flocks difficult.

**22/11/21:** heard at night (20:00h) over Llaneza (HU) Eduardo Gracia; passage over Avinyò (B) Josep Bujons; also over Abrera (B) Albert Martínez; 29 over Escalante (CT) Jesús Menéndez; 39 over Molins de Rei (B) Antoni Ferro; 31 over Fogars de la Selva (B) Xesco Puigdomenech; 22 over Terrasa (B) Albert Marrero; 75 over Granollers (B) Jordi Brau; 75 over Gualba (B) Andreu Dudau; 85 over Hinojosa del Duque (CO) Juanma Sánchez; 150 over Sant Pere Pescador (GI) Albert Bugas; 36 at the San Martín estuary (CT) Chencho Fernández; 60 over Aldellán (BU) Xavier Martín; 7 over Estarrit (GI) Carles Oliver; 6 at Sa Cabaneta, Mallorca (IB) Daniel Hinckley; 21 over Txingudi, Irún (G) Itziar Gutiérrez; 7 over Les Basses d'en Coll (GI) Carles Oliver; heard at night over Segovia, Álvaro Cesaux; 150 over Peraltilla (HU) José D. Moreno; heard over Segovia, Álvaro Casaux.

**23/11/21:** 50 at Las Cañas reservoir (NA) Eduardo Ayala; 23 at Ullibarri Gamboa reservoir (AR) Julen Santa Cristina; 50 over Cicero (CT) Roberto Hernández; 36 at the San Martín estuary (CT) Juan M Pérez, Abel Ojugas; 53 over Landa (AR) Joxean Isasi; 45 over Hinojosa del Duque (CO) Fernando Díaz; 3,000 in Doñana National Park (SE/H) Jan Jansen; 100 over Santa Coloma de Queralt (T) Martí Sendra; 2 over Tordera (B) Arnau Tolrà; 180 over Txingudi, Irún (G) Juan F. Esparcia; 300 over Oñati (G) Iker Novoa; 80 over Segura (G) Beñat Lardizabal; 3 in L'Albufera Natural Park (V) Diana Ferrís; 173+6 over Donostia/S. Sebastián (G) Roberto Alberdi, Carlos Monzón; 15 over Aiara (AR) Mario Corral; 15 over Aia (G) Héctor Gutiérrez; 1 over Ollerías (AR) Jon Iratzagorria, Marta Mesa; 21 over Urdaibai (BI) Pablo Varona, Josu Ibarra, Carine Zimmerman; 20 over Maroño (AR) Mario Corral; 90 over Donostia/S. Sebastián (G) José F. Esparcia; 4 over Villar de Cañas (CU) Manu Mijarro; 900 go to roost at El Hoyo lagoon, El Oso (AV) José M<sup>a</sup> García; 106 over Txingudi (G) Martín Larrañaga, Itziar Gutiérrez; 202 over Urumea woods, San Sebastián (G) Aritz Luzuriaga; 15 over Orío (G) Héctor González; 54 over Santoña marshes (CT) Felipe González.



Image nº 28: Cranes in Las Tiendas dehesa, Mérida (BA). Photo: Neil Renwick.

24/11/21: 28+25 over Alfaro (LR) David Manuelas; 47 at Las Cañas reservoir (NA) Eduardo Ayala; 245 over Salburua (AR) Julen Santa Cristina; 254 over Sotos de Alfaro (LR) Andrés de la Torre; 750 in two flocks over Cofín (LR) David Mazuelas; 34 between Cervera and Valdegutur (LR) and 178+208 between Cervera and El Mediano (LR) Roberto Vega; 700 in nine flocks between Aldeanueva de Ebro and Calahorra (LR) Pilar Azpiroz; 5 arrive at El Pardo reservoir (M) Adolfo Rodríguez; 98 between Villarroya and Carrascal (LR) Roberto Vega; 68 at Erba river, Ejea de los Caballeros (Z) Javier López; at least 3,000 cross over Navarra today (LR) Jesús Mari Lekuona; 100+270+120+600+1.000 over Baztán (NA) Xabier Etxarri; 100 over Barbate (CA) and 8 at Trebujena (CA) Lonnie Bregman, Danny Bregman; 4,000 at Rosarito reservoir (TO/CC) John Mudemman; 10 at Santanyi, Mallorca (IB) Soler; 76 over Tudela (NA), 48 over Ablitas (NA) and 38 over Peñadil (NA) Eugenio Montelio; 29 over Soto de las Juntas (M) Gustavo Fernández; heard at Santorcaz (M) Sara Piquet; 90 over Urdaibai (BI) Urdaibai Bird Center; 300 over Unda Uzoa (BI) Jon Hidalgo; 76 over Ullibarri reservoir (AR) Carine Zimmerman, Pablo Varona; 21 over Llanas de Codés (NA) Jesús M<sup>a</sup> Lekuona; 1 over San Sebastián (G) Carlos Monzón; 2 over Andís (AS) Ana M<sup>a</sup> López; 188 over Salburua (AR) Aitor Zabala; 801 over Pitillas (NA) Óscar Guindano; 4 over Creixell (T) Ramón Ruíz-Jarillo; heard over the Sierra de la Demanda (BU) Diego Santana.

25/11/21: 23+76+46 over Ejea de los Caballeros (Z) Javier López; 7 at Belchite (Z) Javier Dominguez; 3 in S'Albufera Natural Park, Mallorca (IB) Pere Vicens; 2 at Cabana de Bergantiños, (C) Ramsés Pérez; 234 at La Bazagona (CC) Eva Garzón; 525 at Casar de Miajadas (CC) Neil Renwick; 4 at Creixell (T) Ramón Ruiz: 86 over Zaragoza, Daniel Barceló; 900 in northern Doñana (SE) Fernando del Valle; 108 roost at Alboré (HU) Kees Woutersen; 1,357 go to roost at El Hoyo lagoon (AV) José M<sup>a</sup> García; 300 at Peña Hueca lagoon (TO) Beatriz Oliver; 19 over Villafranca de los Caballeros (TO) Carmen Comendador.



Image nº 29: A family of cranes near Gallocanta. Photo: Carmen Tornos

26/11/21: 33 over Sigüenza (GU) Jorge Atance (DALMA) 350 in several flocks over Tudela (NA) Andrés de la Torre; 30+6 over Pulguer lagoon (NA) Daniel Mogica; 60 over Zaragoza,

Francisco J. Sampietro; 150 over La Nava lagoon (P) Fernando Jubete Guzón; 160+ go to roost at Las Merinillas (BA) Mariano Cabrero; 420 roost at Sotonera reservoir (HU) Esther Yera, Pablo Vallés; 180 over Pastrana (GU) Cristina Pintor; 31 over Ávila at night (01:49h) José M<sup>a</sup> García; 10 over Pinseque (Z) and 115+165+106 over Zaragoza Marco A. Escudero; 107+14+45 over Novallas (NA) Moises Zozaya; 25 at La Clot de Galvani (A) Pim Lemmers; 13 Aiguamolls de l'Ampordà (GI) Elena Farré; 5 over Deltebre (T) Álex Fonollosa; 20 over El Prat de Llobregat (B) Jordi Sánchez; 30 over Argentona (B) Joan Pujol; 44 over Premià de Dalt (B) Daniel Roca; 30 over Santa Susanna (B) Antoni Abad; 50 at night over Gualba (B) Andreu Duclau; 43 over La Roca del Vallès (B) Javi Mendoza; 3 in S'Albufera Natural Park, Muro, Mallorca (IB) Pere Vicens; 1 at Ortigueira estuary (C) David Martínez; 1 juvenile in Urumea River, San Sebastián (G) Xabier Saralegi; 1 at Txingudi (G) David Santamaría; 500 over Lumbier gorge (NA) Manuel Silos; 82 over Berosoain (NA) Moises Zozaya; 884 at Huélaga (CC) Luis Asuar, José A. Román; 176 at Pétrola (AB) Marcelo Quesada; heard at Moscardón (TE) José A. Beneito; 600 at El Hito lagoon (CU) Óscar Frías; 25 at Brozas reservoir,(CC) Joseba Azpiroz; 1,000 in the northern part of Doñana National Park (SE) Brian Cox; 2 over Concabella (LL) Tim Johnson; 13 over Timoneda d' Alfès (LL) José Guerra; 250 to the north of Daimiel (CR) Juanma Sánchez; 210+90 over Borau (HU) Nelisa Caporale; 5 over Zarza de Montánchez (CC) Francis Martín; 10 over Fuente el Sol (VA) Álvaro Casaux; 420 at Riolobos weir (SA) Miguel Rouco. 27/11/21: 15 over El Pobo (GU) Uge Fuertes; 15 over Quer (GU) José L. Ramos (DALMA); 64 over Vellisca, while it was snowing, Mario (DALMA); 350 over Ejea de los Caballeros (Z) in several flocks, Javier López; 359 towards Sotos de Alfaro (LR) Ignacio Gámez; 52 over Bujaraloz (Z) Conchi Esteban; 134 in rice fields at Capdesaso (HU) Eduardo Gracia; 9 in Almenara marsh (CS) Alejandro Sanz; 134 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 25+50+55 over Villatobas (TO) Juan Fernández-Elípe; 34 over Garrigàs (GI) Eloi Iglesias; 34 over Amer (GI) Alfons Delgado-García; 1 juvenile in the Urumea River, San Sebastián (G) Joseba Amenabar; 300 over Irati forest (NA) Ludovico Vega; 85+32 over El Puente del Arzobispo (TO) Miguel A. de la Cruz (ARDEIDAS); the 2 are still at Cabanas de Bergantiños (C) Adrián Barrolomé.



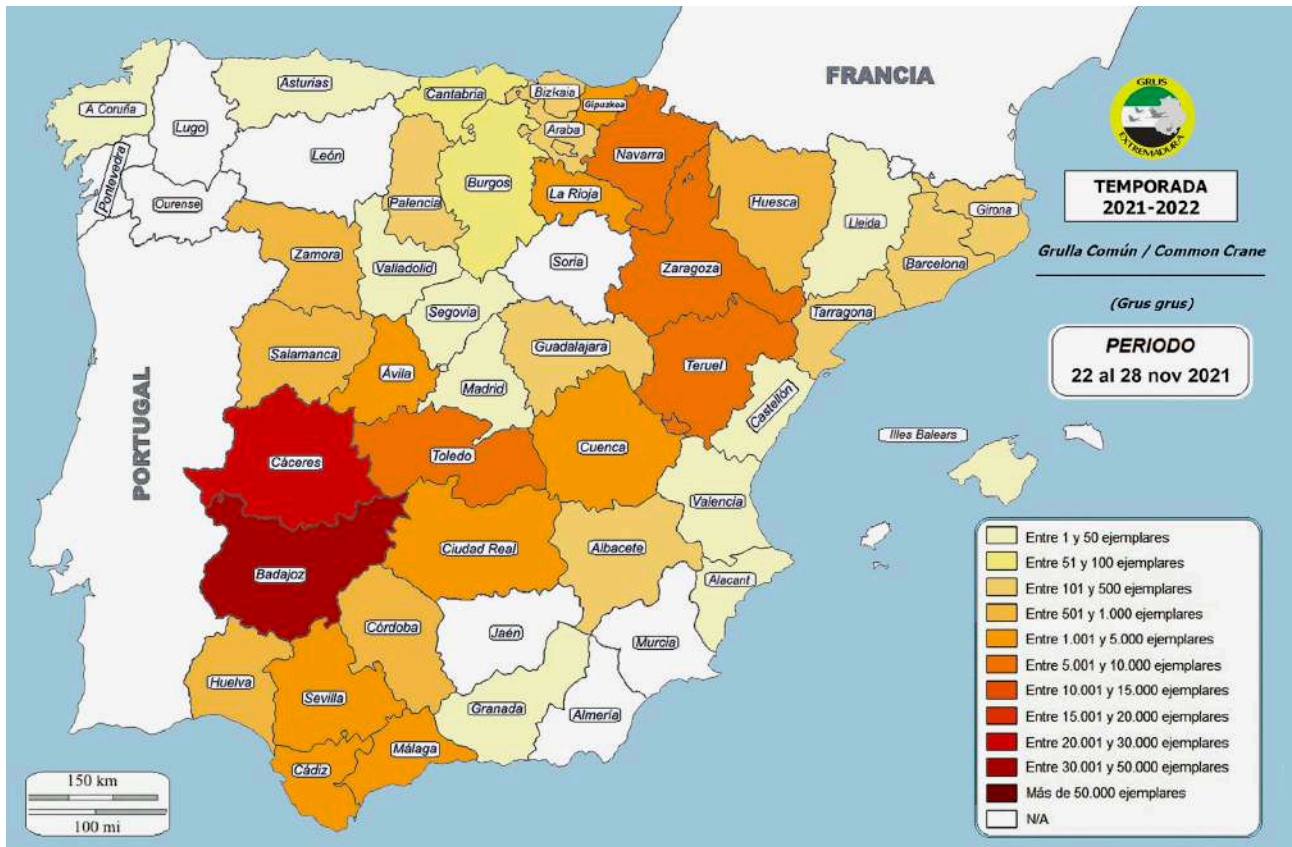
Image n° 30: Juvenile in the Urumea River, San Sebastián (G) Photo: Xabier Saralegi.

27/11/21: 15 over El Pobo (GU) Uge Fuertes; 15 over Quer (GU) José L. Ramos (DALMA); 64 over Vellisca, while it snows, Mario (DALMA); 350 over Ejea de los Caballeros (Z) in some groups, Javier López; 350 towards Sotos de Alfaro (LR) Ignacio Gámez; 52 by Bujaraloz (Z) Conchi Esteban; 134 in rice fields of Capdesaso (HU) Eduardo Gracia; 9 in the Almenarsa marsh (CS) Alejandro Sanz; 134 in the Santa Teresa reservoir (SA) Vicente G. Garrudo; 25+50+55 over Villatobas (TO) Juan Fernández-Elipe; 34 over Garrigàs (GI) Eloi Iglesias; 34 over Amer (GI) Alfons Delgado-García; 1 young in the Urumea River, San Sebastián (G) Joseba Amenabar; 300 over Irati jungle (NA) Ludovico Vega; 22 over Trasierra (CO) David Sánchez; group over Azuqueca de Henares (GU) Laura Calvo (DALMA); 459 over Sos del Rey Católico (Z) Manuel Silva; 11 in the Senia River, Vinarós (CS) Manuel Beltrán.

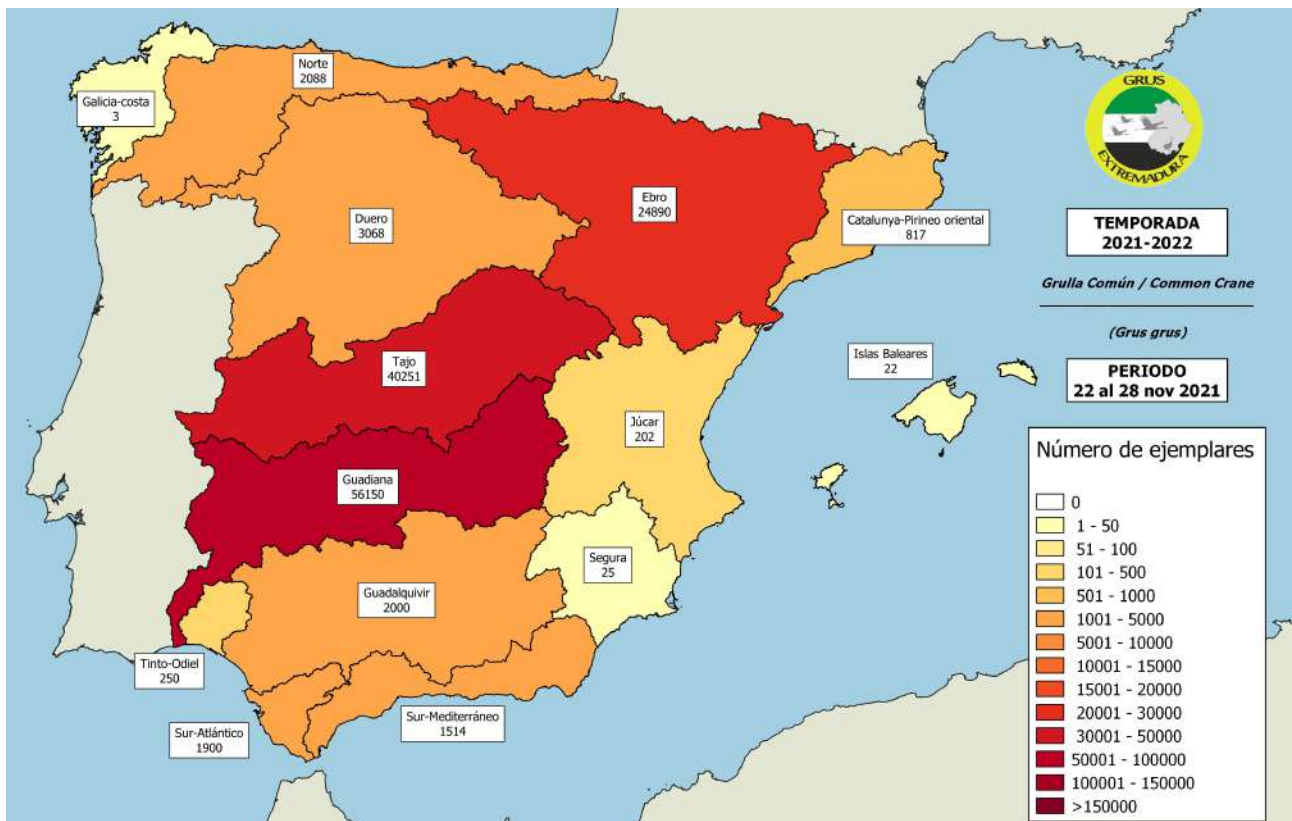
28/11/21: 85+32 over Puente del Arzobispo (TO) Miguel A. De la Cruz (ARDEIDAS); the two cranes continue in Cabanas de Bergantiños (C) Adrián Bartolomé; 30 over Trebujena marsh (CA) Juanpe Torres; 3 over the Puebla lagoon of Pedro Muñoz (CR) Jesús Porrero; 50 over Aldea del Cano (CC) Gus Gahete; 35 over Sástago (Z) Daniel Enfedaque; 117 sleep in the Santa Teresa reservoir (SA) Vicente G. Garrudo; 349 in the Merinillas pond, Valverde de Leganés (BA) Mariano Cabrero; 180 over Trujillo (CC) Jan Jansen; 6 in Blanquer de María, Mallorca (IB) J. Manchado.



Image nº 31: Cranes in the Blanquer de María, Mallorca (IB). Photo: J. Manchado

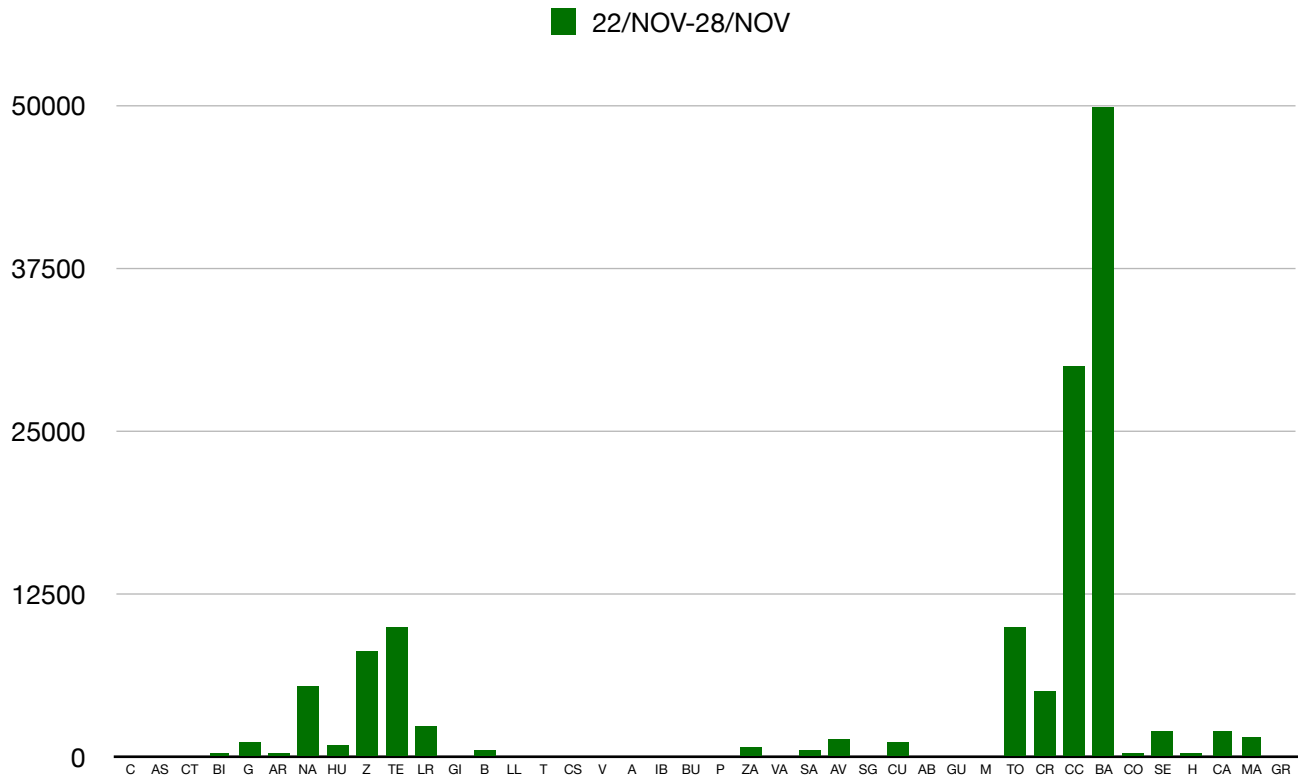


Map nº 23: Provincial distribution and migration on the week November 22 to 28

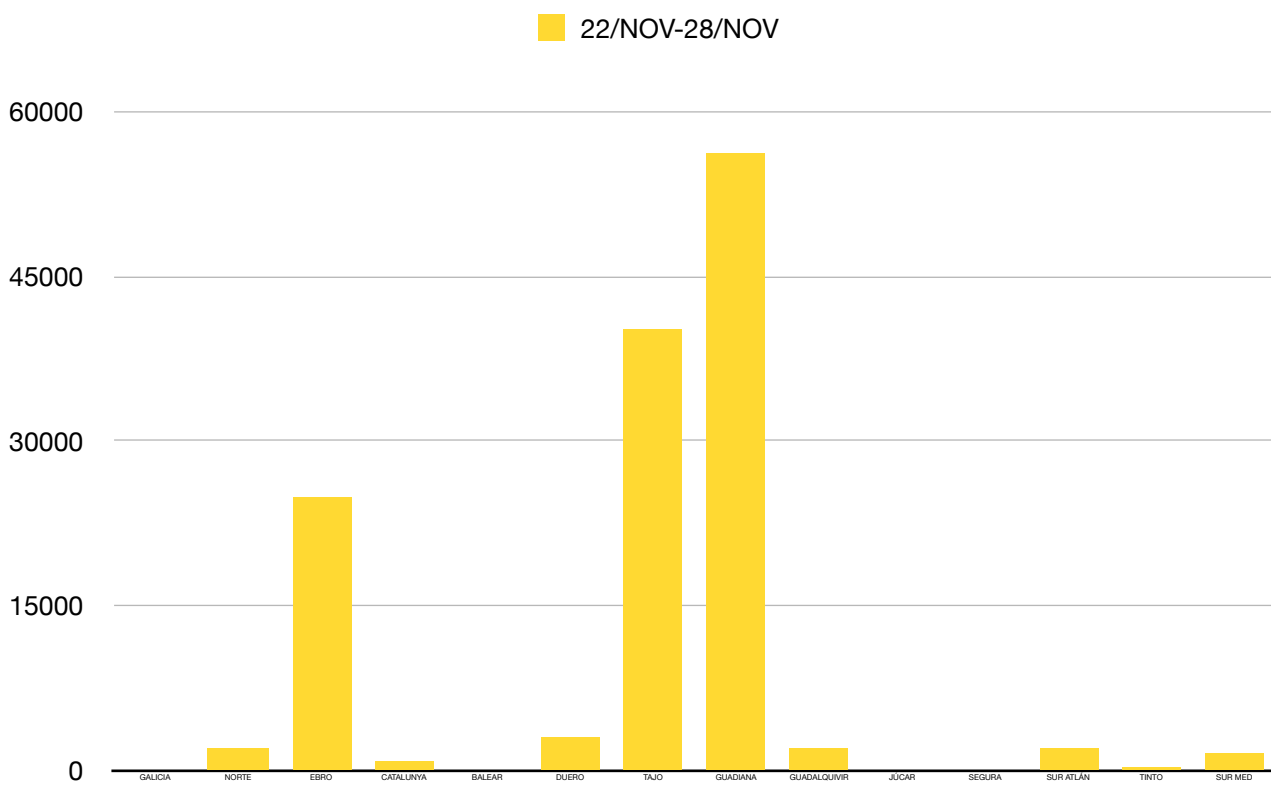


Map nº 24: Migration and distribution by water catchment areas on the week November 22 to 28





Graphic nº 15: Provincial distribution and migration on the week November 22 to 28



Graphic nº 16: Migration and distribution by water catchment areas on the week November 22 to 28

A week of stability, with few migratory movements; the wintering areas are occupied.

29/11/21: 17 at Sotos de Alfaro (LR) Jesús Ucha; 42 over Alfaro (LR) Andrés de La Torre; 39 at Laberné reservoir, Ejea de los Caballeros (Z) and 78+34 over Ejea, Javier López; 5 over Agudo (CR) Raquel Ramiro; 7 at Tabernas (AL) Manu Mojarro; 51 over Girona, Albert Cufí; 4 at S'Albufera Natural Park, Mallorca (IB) Pere Vicens; 4 in the Ebro delta (T) Sergi Sales.

30/11/21: 27 (7 juveniles) at San Lorenzo de Flúmen (HU) Eduardo Gracia; 120 at Alcañiz salt flats (TE) Juan L. Muñoz; several thousand set off on migration from Gallocanta (TE/Z) Carmina Franco; 6 over Los Blázquez (CO) Marga; 7 over San Mateo de Gállego (HU) Francisco J Sampietro; 2 at Solana reservoir, Herrera de Alcántara (CC) Antonio Galán; 11 at Torrecilla de Alcañiz (TE) Dianka (DALMA); flock over Aldeanueva de Guadalajara (GU) Mario (DALMA); flock over Azuqueca de Henares (GU) Laura Calvo (DALMA); 20+40 over Agudo (CR) Raquel Ramiro; 10 in the Alcudia Valley (CR) Daniel Pueyo; 40 over Madrid, David Almonacid (DALMA); 90 over Alcolea del Pinar (GU) Joaquín (DALMA); 60 over Almazán (SO) Jorge Atance (DALMA); 97 over Yunquera de Henares (GU) Isabel, Fernando (DALMA); 79 over Cabanillas del Campo (GU) José L. Ramos (DALMA); 31 roost in rice fields at Capdesaso (HU) Eduardo Gracia; 250 at Hinojosa del Duque (CO) Juanma Sánchez; 751 roost at Sotonera reservoir (HU) Kees Woutersen; 57 over Bujarrabal (GU) Jorge Atance (DALMA); 150 at Talaván reservoir (CC) Jan Jansen; 24 over Camarles (T) Quim Ferrando; 18 over Calviá, Mallorca (IB) Soler; 50 over Guadalajara, Juan M. Nuevo (DALMA); 10 in Salobrar Natural Park, Muro, Mallorca (IB) Josep Manchado; 164 over Ágreda (SO) Carlos Pérez; 2 in Pego Oliva marsh (A) María González; 6 in Almenara marsh (CS) Andrés Balfagón; 5 over Ribamontán al Mar (CT) Ludovico de Vega; 80+60 over Ugena (TO) Chon Conde; 79 over Cabanillas (GU) J. Luis Ramos; 74 over Alcalá de Henares (M) Sara Piquet.



Image nº 32 : Cranes in the Vegas Altas del Guadiana (BA). Photo: José A. Román.

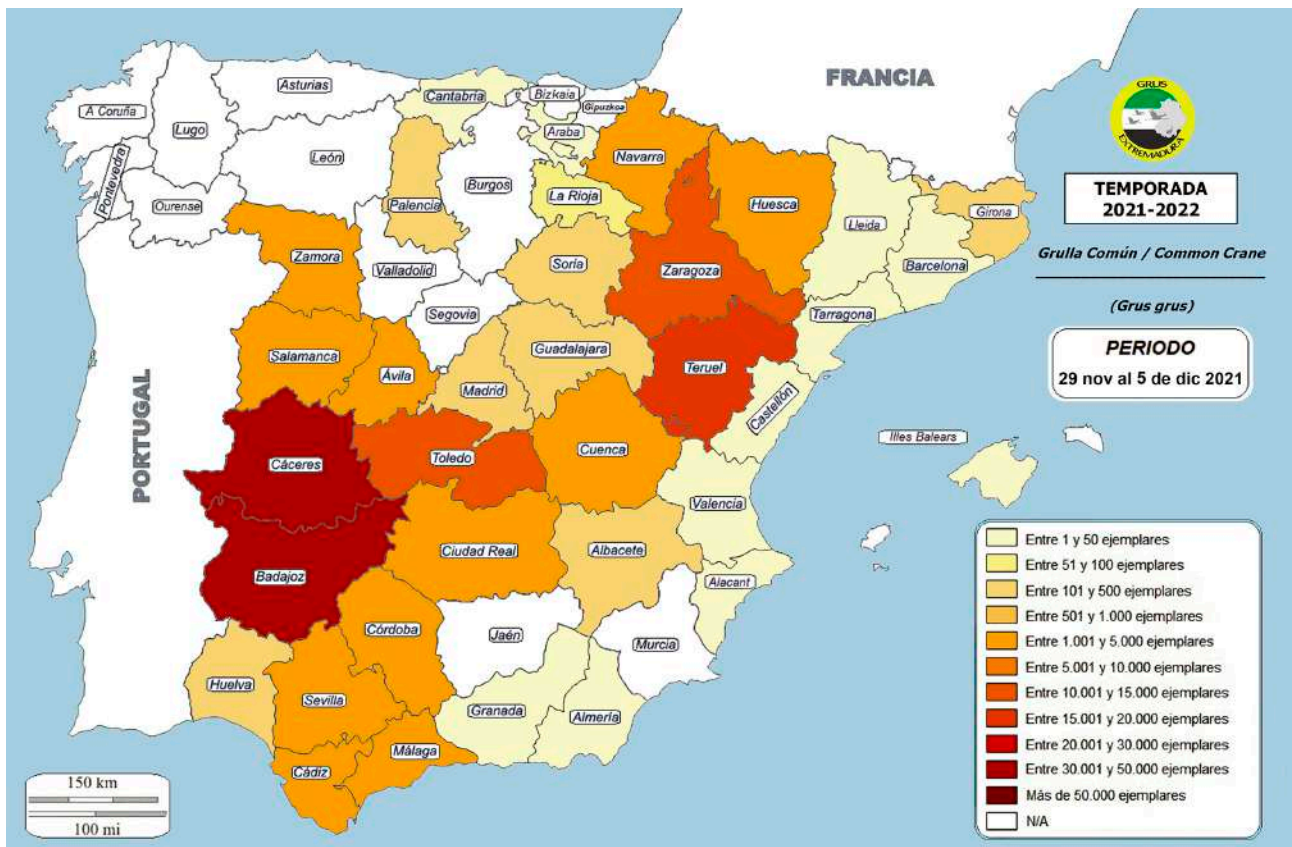
01/12/21: 60 over Ugena (TO) Sagrario Ballesteros; 168 at La Atalaya pond, Aldea del Cano (CC) Francis Martín; 15 over Vila-Sana (LL) Gerard Daniel; 24 over Pago de San Clemente (CC) Martin Kelsey; 3 at Arguedas (NA) and 5 at Pulger reservoir (NA) Ander Txokarro; 4 at Alcolea de Cinca (HU) Juan C. Albero; 17 at Galisteo (CC) Raúl Granados; 350 at Navalcán reservoir (TO) César Clemente; 45 over Aldea del Fresno (M) John L. Muddeman; 10 at Bujaraloz (Z) Daniel Lázaro; 3,260 at La Janda lagoon (CA) Alejandro Onrubia; 89 over San Román de los Montes (TO) Francisco Rodríguez (ARDEIDAS) 17 over Cariñena (TE) Antonio Torrijo; 7 over Los Cerralbos (TO) Antonio Alía (ARDEIDAS); 24 over Talavera de la Reina (TO) Ricardo Gómez (ARDEIDAS); 50 over the River Almonte (CC) Jan Jansen; 1 over Badalona (B) Ramiro Aibar; 202 at Pétrola (AB) Marcelo Quesada; 7,000 at Los Canchales reservoir (BA) Agapito J. Verde; 5,503 at Borbollón reservoir (CC) Miguel Todón; 22 at Alcántara (CC) José L. Bautista; 28 at Ambroz lagoon (M); 38 at Navaseca lagoon (CR) Mick Richardson; 16 over Santa Eulalia (TE) Luis M. Muñoz; 2 over Sant Pere Pescador (GI) Ricard Gutiérrez.

02/12/21: 135 at Sotonera reservoir (HU) and 14 at Almudevar del Campo (HU) Omar Catalá; 1,417 roost at El Hoyo lagoon (AV) José M<sup>a</sup> García, Arón Blázquez; 7,638 at Borbollón reservoir (CC) Miguel Todón, Luna Todón; 25,052 are censused at Gallocanta lagoon (TE/Z) Francisco J. Sampietro (S.A.R.G.A.); 239 at Riobobos weir (SA) Antonio Ceballos; 5 at El Hondo reservoir (A) Gabino Cortés; 7 at Boada de Campos lagoon (P) Rafael Hermosilla; 15 over Tárrega (LL) Francesc Ponz; 12 at Clavería pond (CC) and 359 at Membrío (CC) Jose L. Bautista; 300 at Lugar Nuevo, Peraleda de la Mata (CC) Hugo Sánchez.

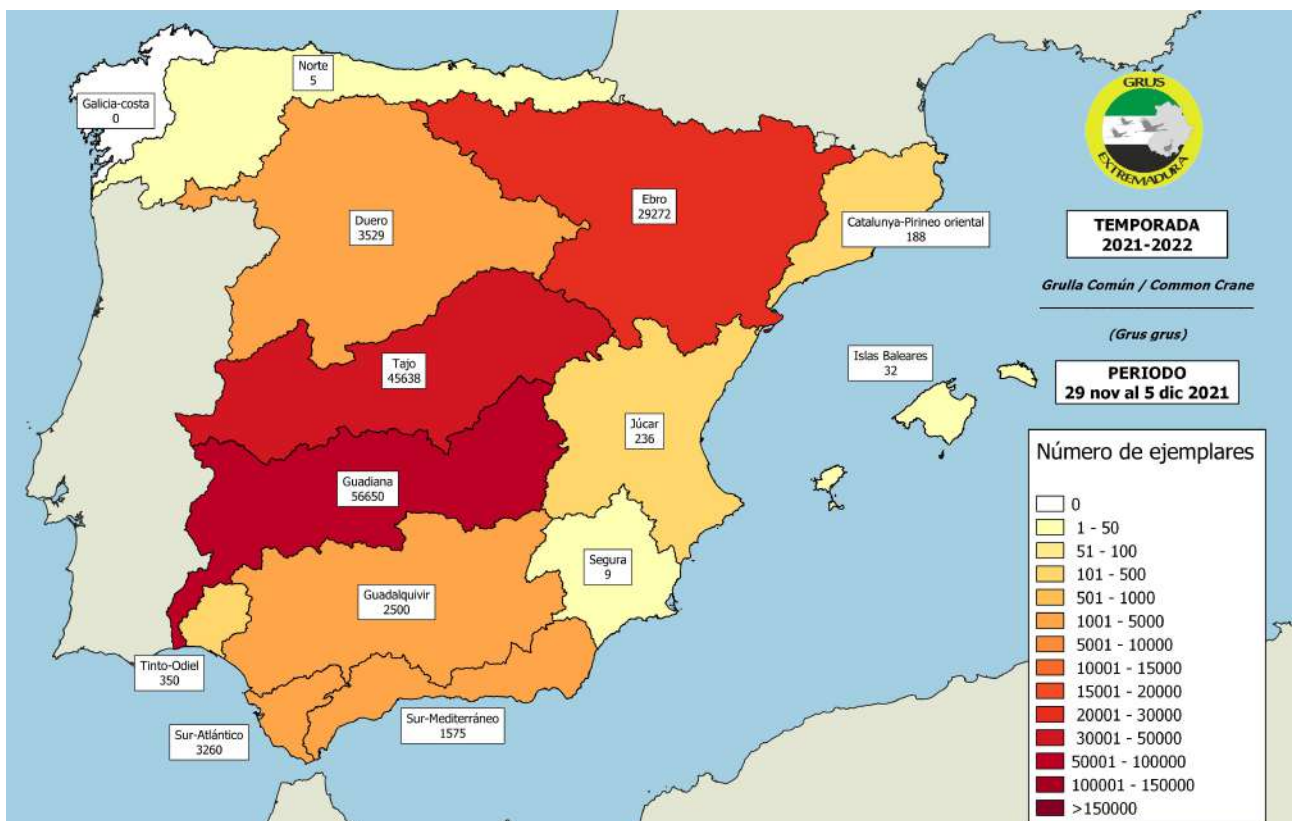
03/12/21: 4 over Cabo de Gata (AL) Jorge Leonor, Eneko Leonor; 320 at Damiel (CR) Raquel Ramiro; 900 at Casa Hitos, Madrigalejo (CC) Seppo Hjerppe; 19 at Mortero weir (CC) Francis Martín; 6 over San Martín de la Vega (M) Ricardo Rodríguez, Ángel Vela; 30 at La Nava lagoon (P) Fernando Jubete Guzón; 205 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 500 at José A. Valverde Visitor Centre, Doñana National Park (SE) José L Valls; 11 over Gallur (Z) Ricardo Zaldívar; 6 at Sariñena lagoon (HU) Alberto Bobed; 700 at Riobobos weir (SA) Enrique Junco.

04/12/21: 208 at Laberné reservoir (Z) Javier López; 45 over San Román de los Montes (TO) Francisco Rodríguez (ARDEIDAS); 87 feeding in the River Rigel, Valereña (Z); 100 at La Nava lagoon (P) Fernando Jubete Guzón; 50 (13 juveniles) at Llaneza (HU) Eduardo Gracia; 118+46 over Bujaraloz (Z) Conchi Esteban; 185 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 7 at El Hondo reservoir (A) Eugenio Castillejos; 45 at Aiguamolls de l'Empordà (GI); 14 at San Salvador reservoir (HU) Aitor Mira; 25 in rice fields at Taus (Z) Javier Train; 6 over Pals (GI); 2 at Plans de Sió (LL) Joaquim Bofill; 11 over Madrid, Jorge Crespo.

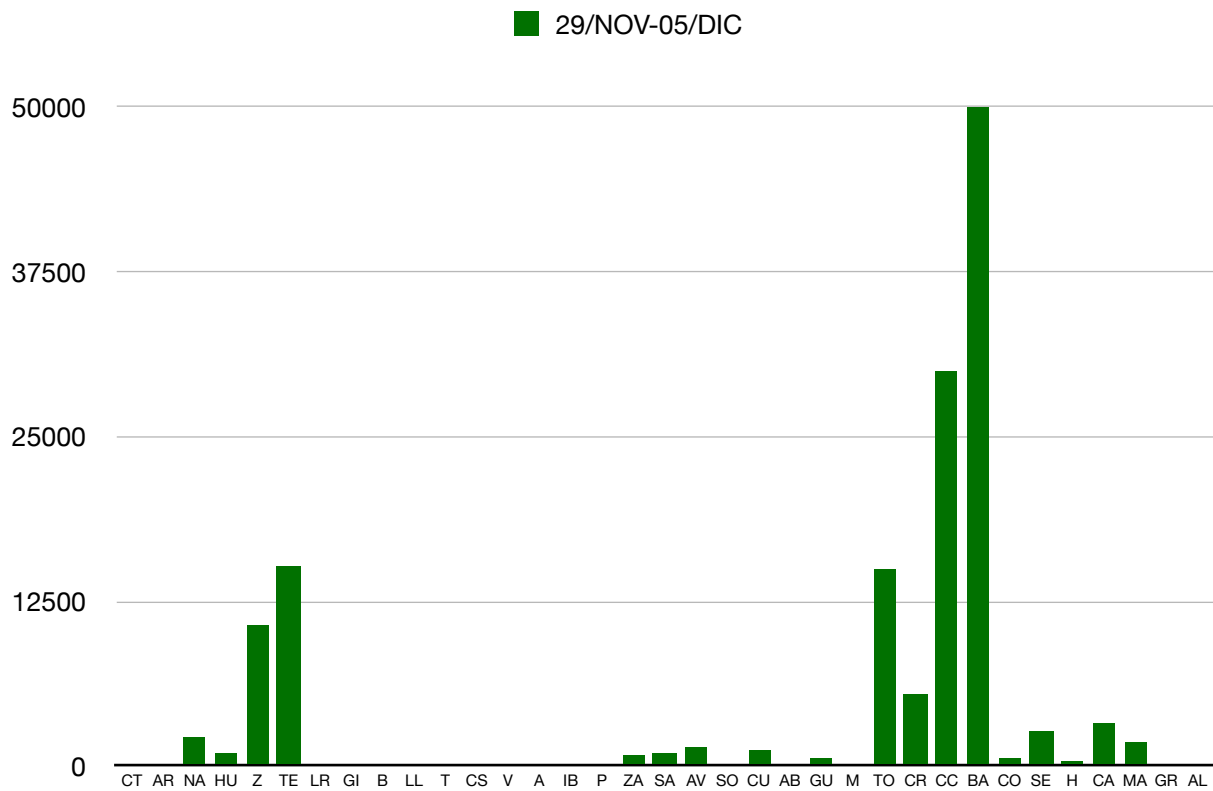
05/12/21: 7 at El Hondo reservoir (A) Susana Noguera; 172 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 68 at Castellò d'Empuries (GI) Xavier Elizondo; 230 at Pétrola (AB) Raquel Mansilla; 2.500 in the Rosarito reservoir (TO/CC) John L. Muddeman; 500 in the Arroyoconejos reservoir (BA) Ramón Ruiz; 125 in the Valdesalor reservoir (CC) Alejandro Puerto; 15 over Plasencia (CC) Javier Prieta; 2.000 in Riobobos Weir (SA) Gerardo Barsi; 4 in the Boada lagoon (P) Lois Santos; 95 over Baztán (NA); 500 in the rice fields of Selgua (Z) Jesús Lavedán, Marcos Lacasa; 403 in the dehesas of Peraleda de la Mata (CC) Violeta Arribas; 19 in the Osuna countryside (SE) Javier Rengel.



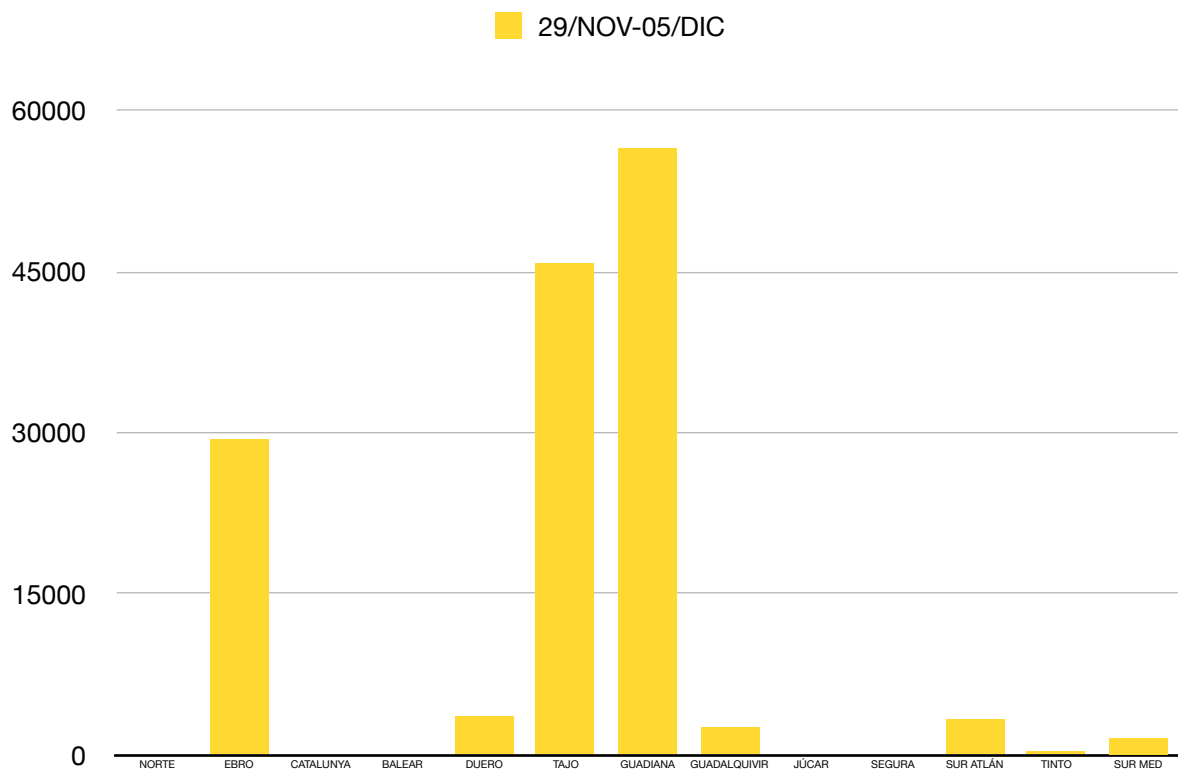
Map n° 25: Provincial distribution and migration between November 29 to December 5



Map n° 26: Distribution and migration by water catchment areas on the week November 29 to December 5



Graphic nº 17: Provincial distribution and migration between November 29 to December 5



Graphic nº 18: Distribution and migration by water catchment areas on the week November 29 to December 5

## **THE WINTERING POPULATION IN SPAIN**

### **GENERAL RESULTS**

#### **Census methodology**

The censuses were coordinated in Portugal and Spain, establishing the principal counting days as **17 December 2021 and 28 January 2022**, although in Portugal the December census was brought forward a week to avoid the full moon. In Spain, some locations were censused after the chosen date

because of persistent fog in the north and south of the country; as well as this, a rainy weather front produced heavy rain in the days before the census in the north of the country, so it was possible that some cranes might have changed their roost site with a greater availability of suitable locations for this, although the majority stayed at their traditional roosts.

Visits to the roost sites and feeding areas are recommended prior to the census with the aim of evaluating possible changes and locate new ones in advance, so that everything proceeds correctly on census day.

We generally recommend doing the census on the Friday so that we have the possibility of doing it on the Saturday if circumstances are unfavourable. Sundays are ruled out due to the disturbance caused by hunting, which is a significant source of disturbance that pushed birds away from their usual feeding areas or late arrival at roost sites, when it is already dark and the hunting activities have stopped.



Image nº 33: Poster designed for the December census: Photo: José Leal

Cranes are gregarious birds of habit which use communal roost sites, where the majority of birds that use the feeding area generally congregate. They set off at first light and disperse through the feeding area in groups or family units, where they feed until mid-day then they usually gather at places with water, such as ponds, streams, reservoirs or flooded rice fields, to drink, bathe and also to rest, after which they disperse again until the end of the afternoon, when they begin to form groups in open areas, known as pre-roosts, or they may fly directly to the roost sites. Depending on the feeding area and the number of cranes, there may be more than one roost.

We use two methods for counting them:

-Resting areas or roost sites:

Although many nuclei have been known for decades, as well as the roost sites they use (to which they are usually faithful), nevertheless, these may change each season depending on the conditions of the wetland, if it has water or not, or if other alternatives exist when all the ponds are full.

After locating rest areas on prior visits, a place is chosen which has sufficient visibility, generally high, to be able to count the flocks as they are arriving or leaving. If the census is done in the afternoon, it is recommended to be there at least two hours before sunset, and if it is done in the morning, people should be there at least 45 minutes before dawn, before the skies begin to clear.

We recommend counting in the morning as the best census method, as at this time all the birds that have roosted there will be found, unless fog prevents it. In the evening, cranes may arrive as it gets dark, or even at night if they are feeding far away, or have been disturbed at the usual roost sites, or if there are late phases of the moon, especially at full moon, so counting them accurately can be complicated by the lack of light.



Image nº 34: Cranes leaving the roost at dawn. Photo: José A. Román

-Feeding areas:

This is an exclusively daytime method used in open areas with low relief, with good visibility and where birds can be easily detected, generally in stubbles of rice, maize, rain-fed cereals, grasslands and recently-sown fields. It is used in the Central Zone of Extremadura, for the large number of birds present and the conditions of the terrain. Many roosts are used, and there can be interchanges between these some days, so counting at them would require a large team of people. We have therefore divided the area into 11 sectors which are covered by a single team of one or two people, but each can be subdivided if there is more than one team of people available.

Transects are necessary in days prior to the census in order to have a clear idea of the usual distribution of the habitual feeding areas, taking into account that these change during the winter, as resources are consumed or when these disappear during agricultural operations, or because of livestock, they have to look for other suitable areas to feed, especially between the two censuses. The census is done early in the morning, once the birds have spread out into the feeding areas, and should be finished before mid-day to avoid duplications, because, as already stated, the cranes usually move and gather at places to bath and rest, therefore producing changes in the flocks and areas where they are concentrated.

This method, after nine consecutive years of censuses has shown its effectiveness and is highly recommendable for other nuclei with similar characteristics in other parts of the country.

The choice of census method is left to the participants, as they know very well their areas and therefore know which is the most appropriate or is best suited to the local conditions.



Image nº 35: Cranes in a feeding área in the Central Zone. Photo: José A. Román



## FIRST CENSUS

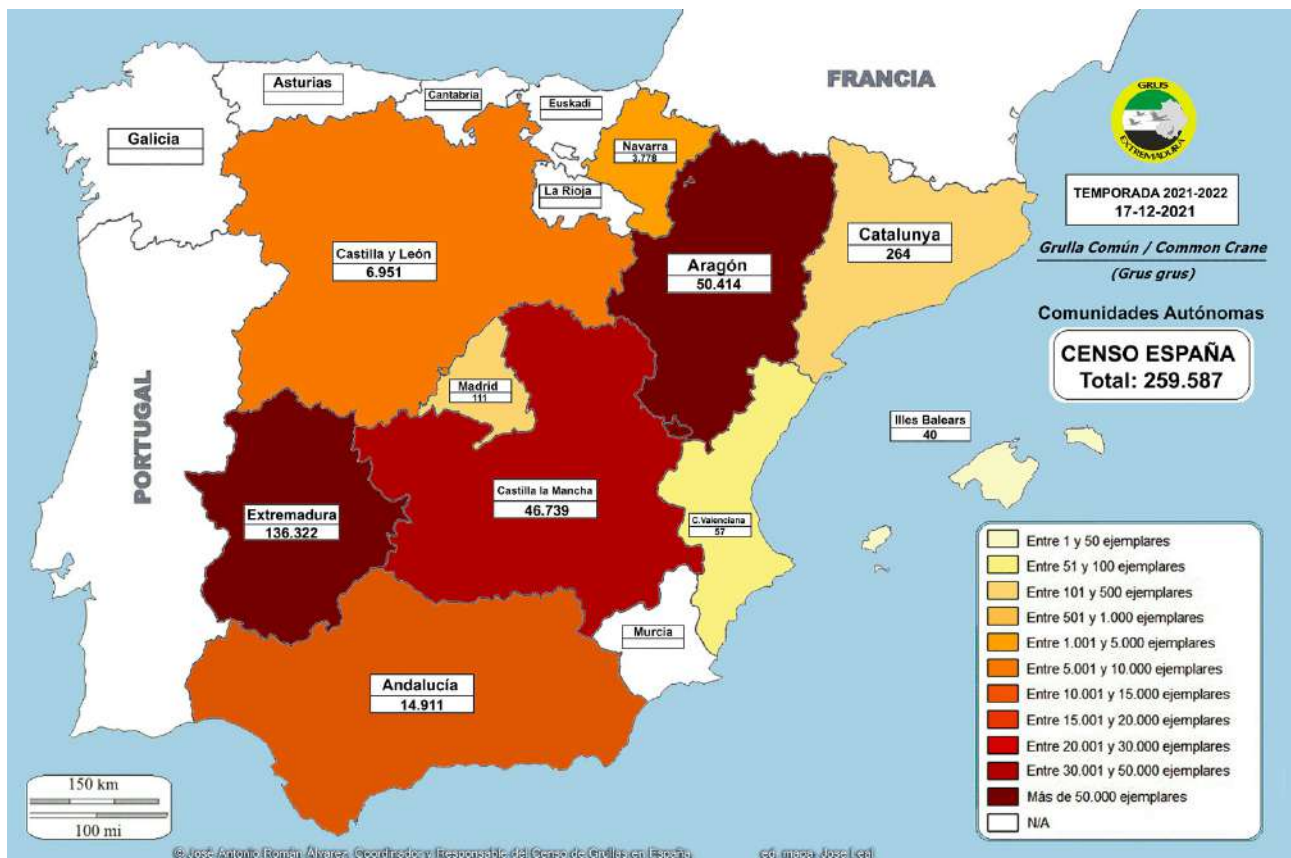
The result of the first census was **259,587** wintering cranes, although some migratory movements were observed on later dates.

Extremadura, with 132,322, hosted 53% of the birds, followed by Aragón, which recorded 50,414 (19%) and after that, Castile-La Mancha with 46,739 (18%). These three autonomous communities hosted 90% of the Spanish crane population.

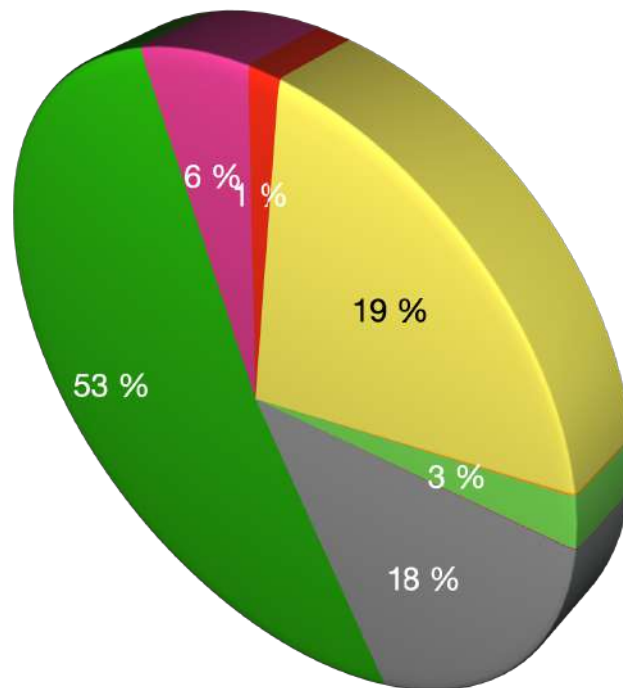
Andalucía was fourth with 14,911 (6%), followed by Castile y León with 6,951 (3%), Navarra with 3,778 (1%), Catalonia with 264, Community of Madrid with 111, Community of Valencia with 57 and the Balearic Isles with 40 individuals; there were no wintering birds in La Rioja.

Subsequently, the presence of a pair was recorded, and later, a bird in the province of A Coruña in Galicia, as well as a juvenile on the Canaries island of Tenerife, although none of these is included in this census.

Also, some localities on the border between Toledo and Cáceres couldn't be censused adequately because of logistical problems, such as the principal roost site at the Valdecañas reservoir (CC) and two roosts at Villanueva del Fresno (BA), so the actual census figure would be over 260,000 cranes and probably the actual figure is around 265,000 birds, making this the highest recorded number of wintering birds so far, and if we add the 14,327 cranes counted in Portugal we would be close to **280,000** individuals in the Iberian Peninsula.



Map nº 27: Crane distribution by autonomous community in Spain during December.



- |                 |                      |                 |                   |
|-----------------|----------------------|-----------------|-------------------|
| ● NAVARRA       | ● LA RIOJA           | ● ARAGÓN        | ● CATALUNYA       |
| ● C. VALENCIANA | ● C. MURCIA          | ● ILLES BALEARS | ● CASTILLA Y LEÓN |
| ● C. MADRID     | ● CASTILLA LA MANCHA | ● EXTREMADURA   | ● ANDALUCÍA       |

Graphic nº 19: Crane distribution by autonomous communities in Spain during December.

With regard to provincial distribution, Badajoz with 80,911 hosted 31% of the birds, followed by Cáceres with 55,411 (21%) and Zaragoza with 45,991 (18%). 70% of the cranes were found in these three provinces.

3,778 cranes (1.4%) were counted in Navarra. In Aragón, the majority were distributed through Zaragoza, followed by Huesca, with 3,861 (1.5%) and 562 in Teruel.

In Catalonia, 196 wintered in Gerona, followed by Tarragona with 63 birds and 25 migrating birds in Lleida. In the Community of Valencia, 30 were found in Alicante, 23 in Valencia and 4 in Castellón. In the Balearic Isles, 24 were in Majorca, 14 were seen in Menorca and 2 in Ibiza.

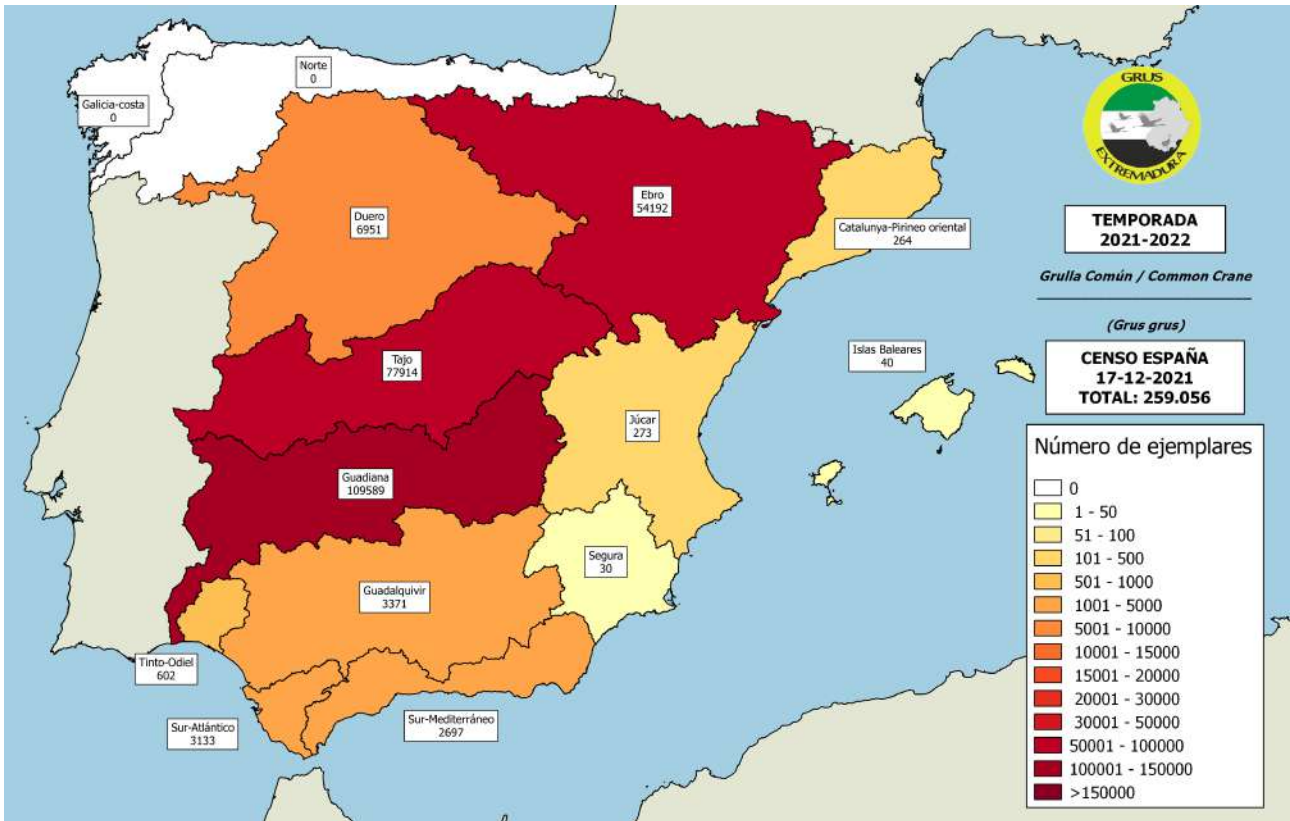
In Castile y León, 3,508 (1.4%) were found in Salamanca, 1,850 (0.7%) in Ávila, 353 in Palencia and 290 in Valladolid. In Madrid, 111 were counted, 15 of them roosted at the El Pardo reservoir and the rest were migrants.

In Castile-La Mancha, 22,392 (8.6%) were found in Toledo, 13,742 (5.2%) in Cuenca, 9,828 (3.8%) in Ciudad Real and 246 in Albacete. In Extremadura, 62%, with 85,518 cranes, were found in the Central Zone, which corresponds with the upper Guadiana Valley and is shared by both provinces, Badajoz and Cáceres.

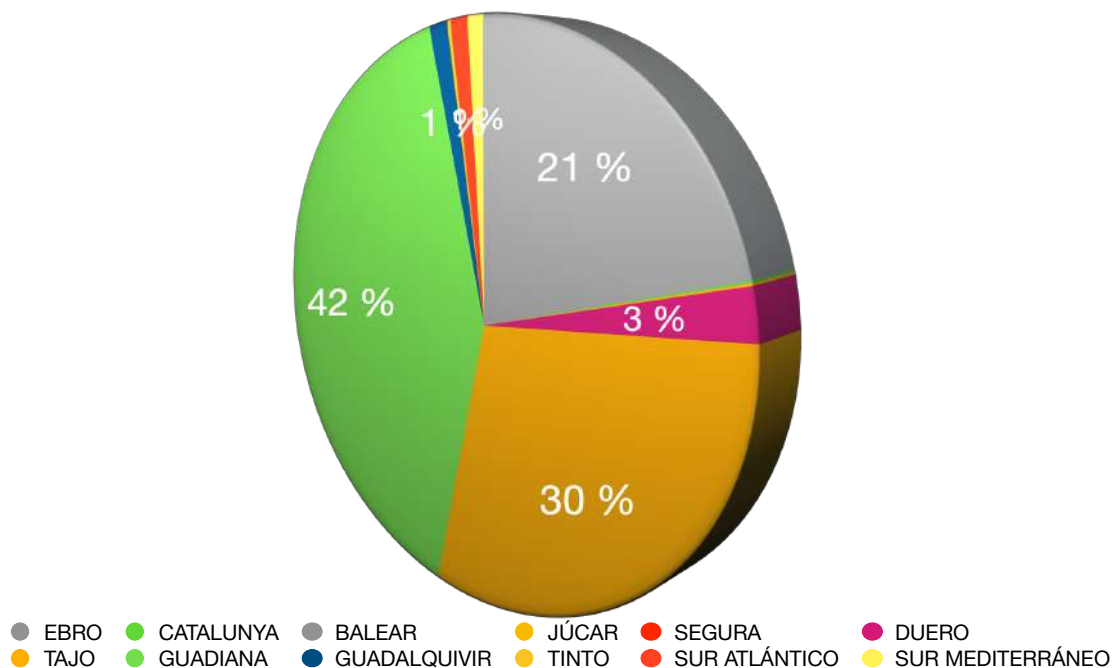
Finally, in Andalucía, 6,072 (2.3%) were in Córdoba, 3,133 (1.2%) in Cádiz, 2,677 (1%) in Málaga, 2,407 (0.9%) in Sevilla, 602 in Huelva and 20 in Granada.



42% of the cranes, 110,120, wintered in the Guadiana catchment area, followed by the 77,914 (30%) which were in the Tajo catchment area, 84,192 (21%) in that of the Ebro; these three catchment areas hosted 93% of the wintering cranes. 6,615 (3%) wintered in the Duero catchment area, 3,371 (1%) in the Guadalquivir's, 3,133 (1%) in the Atlantic South, 2,697 (1%) in the Mediterranean South, 602 in the Tinto, 264 in Catalonia, 273 in the Júcar, 40 in the Balearics and 30 in the Segura catchment areas.



Map nº 29: Distribution by water catchment areas during December.



Graphic nº 21: Distribution by water catchment areas during December

## SECOND CENSUS

The second part of the winter was characterised by atmospheric stability, with an almost total absence of precipitation in the peninsula, which led to farmers working much of the stubbles and a good proportion of the harvest waste was buried or disappeared, which obliged the cranes to look for search for stubbles or even look in the already worked fields for grain that had been buried, and, of course, to move to other favourable areas.

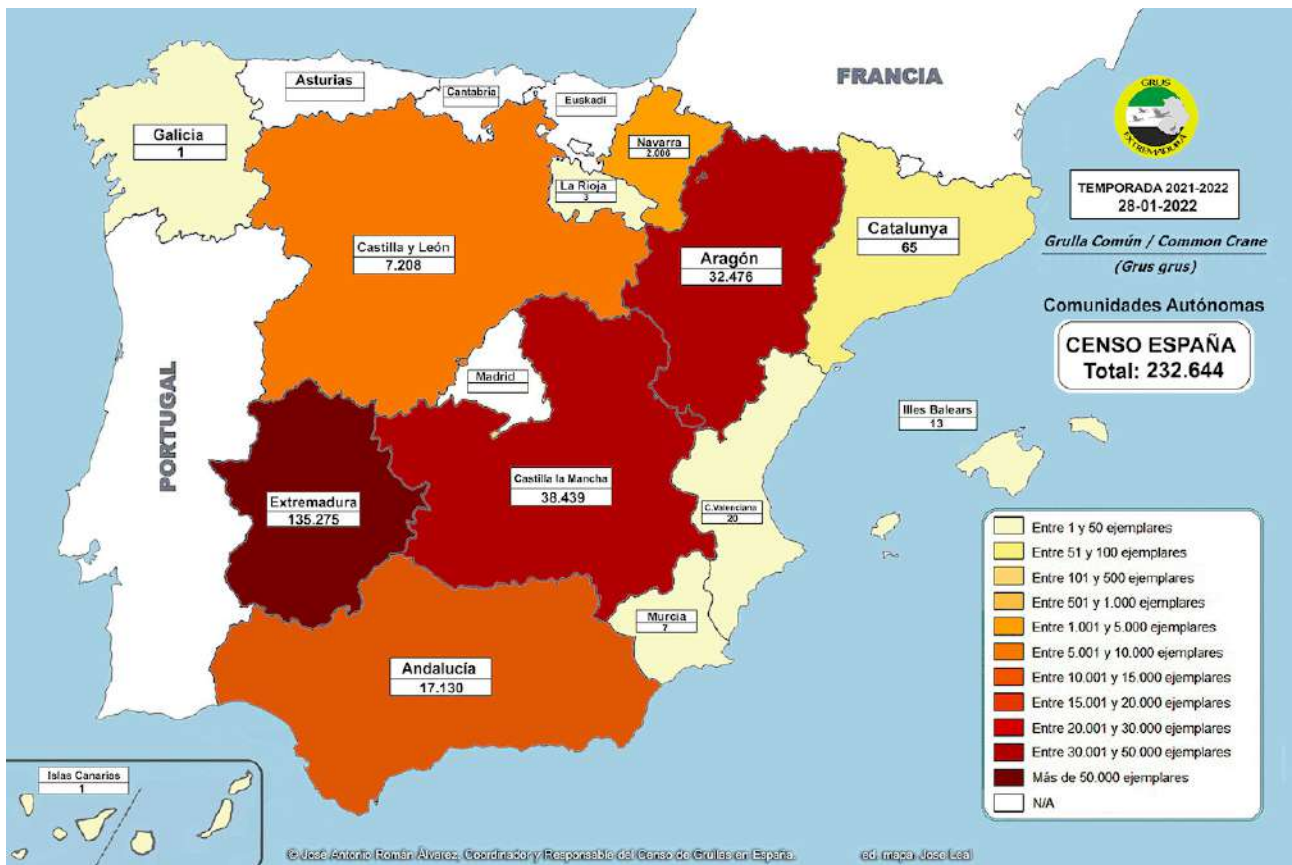
The absence of precipitation left some roosts without water, something of great importance to the cranes, and the increase of winter sowing led to some populations abandoning their wintering areas. This fact has been especially noticeable in the south of Toledo province and the Manchegan border lagoons around Alcázar de San Juan in Ciudad Real, where unusually low numbers were recorded.

Only a few locations between Cáceres and Toledo were not counted.

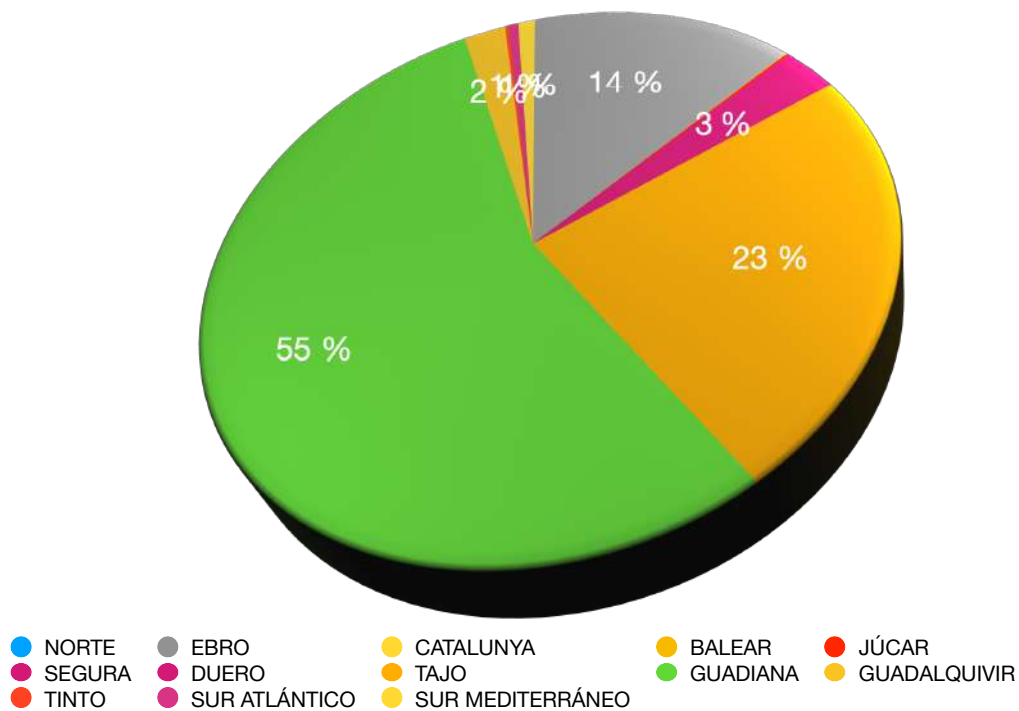


Image nº 36: Poster for the second census. Photo: Michel Viskens

The result of the second census was **232,644** cranes. The only autonomous communities with increases were Castile y León with 7,208 cranes (3%) and Andalucía with 17,130 (7%), while Extremadura remained stable with 135,125 (59%). Next came Castile-La Mancha with 38,539 (17%), Aragón with 32,476 (14%), Navarra with 2006 (1%), Catalonia with 65, Community of Valencia with 20, the Balearic Isles with 13, the Community of Murcia with 7, La Rioja with 3 and 1 in Galicia and another in the Canary Islands.



Map nº 30: Crane distribution by autonomous communities during January 2022.



Graphic nº 22: Crane distribution by autonomous communities during January 2022.

CENSUSES 2021/2022

	17/12/21	%	28/1/22	%
<b>NAVARRA</b>	<b>3778</b>	<b>1,45</b>	<b>2006</b>	<b>0,86</b>
<b>LA RIOJA</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b>ARAGÓN</b>	<b>50414</b>	<b>19,4</b>	<b>32476</b>	<b>13,95</b>
<b>CATALUNYA</b>	<b>264</b>	<b>0,1</b>	<b>65</b>	<b>0,02</b>
<b>C.VALENCIANA</b>	<b>57</b>	<b>0,02</b>	<b>20</b>	<b>0</b>
<b>C. MURCIA</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>
<b>ILLES BALEARS</b>	<b>40</b>	<b>0,01</b>	<b>13</b>	<b>0</b>
<b>CASTILLA Y LEÓN</b>	<b>6615</b>	<b>2,62</b>	<b>7208</b>	<b>3,09</b>
<b>C. MADRID</b>	<b>111</b>	<b>0,04</b>	<b>0</b>	<b>0</b>
<b>CASTILLA LA MANCHA</b>	<b>46739</b>	<b>18</b>	<b>38539</b>	<b>16,56</b>
<b>EXTREMADURA</b>	<b>136322</b>	<b>52,5</b>	<b>135125</b>	<b>58,51</b>
<b>ANDALUCÍA</b>	<b>14911</b>	<b>5,74</b>	<b>17130</b>	<b>7,36</b>
<b>SPAIN</b>	<b>259587</b>		<b>232644</b>	

Table n: 1: Comparison of the censuses in December by autonomous communities 2021 and January 2022.

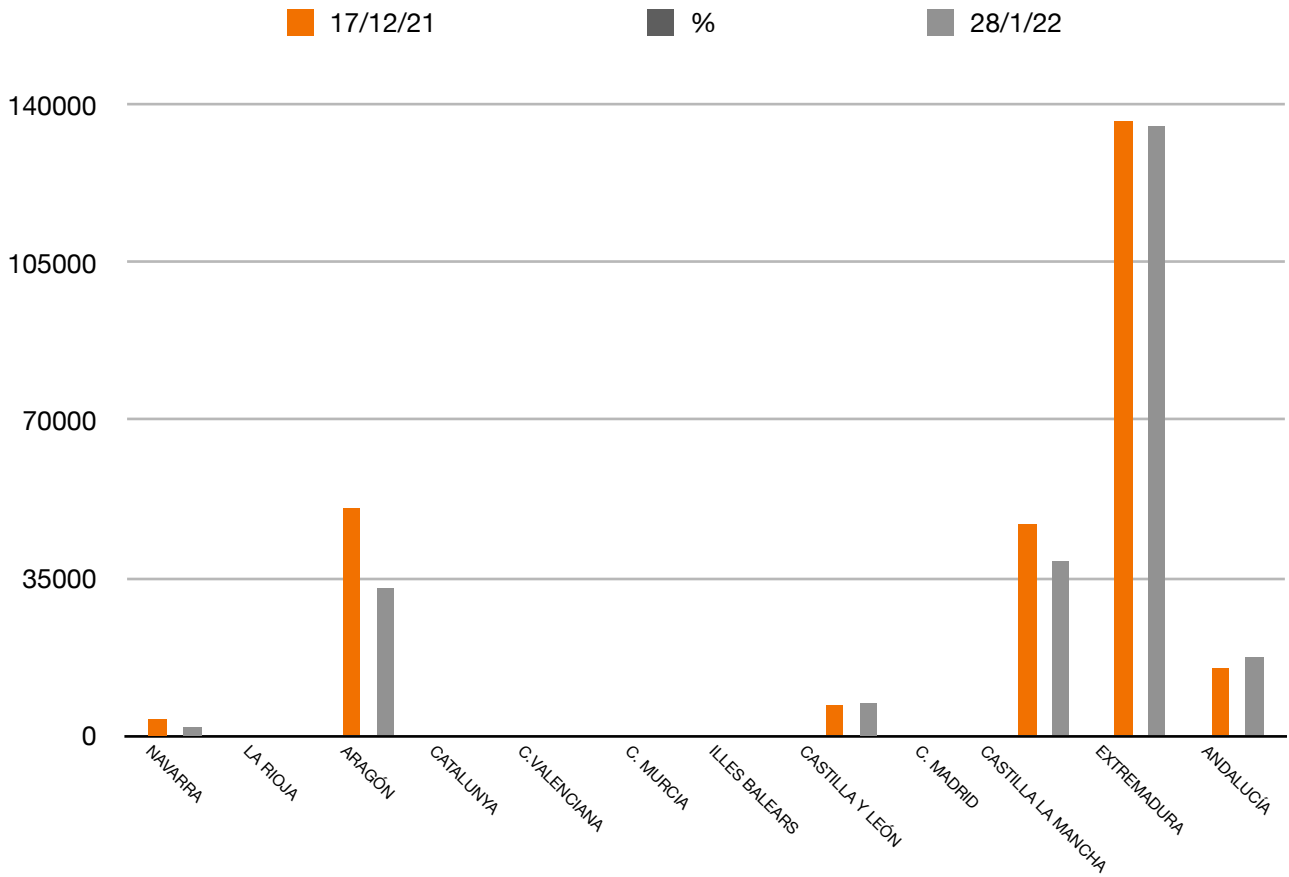
Navarra's number of cranes reduced to almost half from December. In Aragón, the population reduced by 5% in January, losing 18,000 individuals between the two censuses.

The wintering populations also reduced in Catalonia by up to 80% from the first census, as well as the Community of Valencia, which reduced by over 50%, and the Balearics, which lost 60% of its population, while the Community of Murcia, which hadn't recorded any wintering cranes, had 7 in January.

Castile y León recorded a slight increase in its wintering population, by 600 birds, equating to a half percent growth. On the other hand, they disappeared from the Community of Madrid.

Castile-La Mancha also recorded a loss of some 8,000 cranes compared to the previous month (1.5%). Extremadura held the same number in both censuses, although it increased by 6% the percentage of cranes in the January census.

Andalucía grew by 1.62% compared to the first census, with the addition of 2,600 cranes to its wintering population.



Graphic nº 23: Comparison of the censuses in both periods



Image nº 37: Crane in flight. Photo: Juan M. Flores



With respect to provincial distribution, Badajoz with 71,827 hosted 31% of the wintering population, followed by Cáceres with 63,298 (28%), Zaragoza with 24,139 (10%), Toledo with 22,069 (10%), Córdoba with 10,999 (5%), Ciudad Real with 10,677 (5%), Cuenca 5,336 (2%), Salamanca 5,299 (2%), Huesca 4,601 (2%), Teruel 3,736 (2%), Huelva 2,502 (1%), Málaga 2,170 (1%), Navarra 2,006 (1%), Cádiz 1,244 (0.5%), Ávila 1,097 (0.5%), Zamora 479, Albacete 354, Sevilla 213, Palencia 78, Gerona 65, Valladolid 27, Alicante 20, Mallorca 11, Murcia 1, Logroño 3, Ibiza 2, Granada 2, A Coruña 1, Tenerife 1.

Huesca province increased slightly by 800 cranes compared to December, while Zaragoza dropped by 21,000 birds during January and Teruel increased its population to 3.700 cranes. In Catalonia, only Gerona province retained a wintering population, although it reduced to only a third of the December count.

Only Alicante province in the Community of Valencia retained cranes in January, and this reduced moderately.

In the Balearic Islands, Ibiza retained two wintering birds and Mallorca's population reduced by a half.

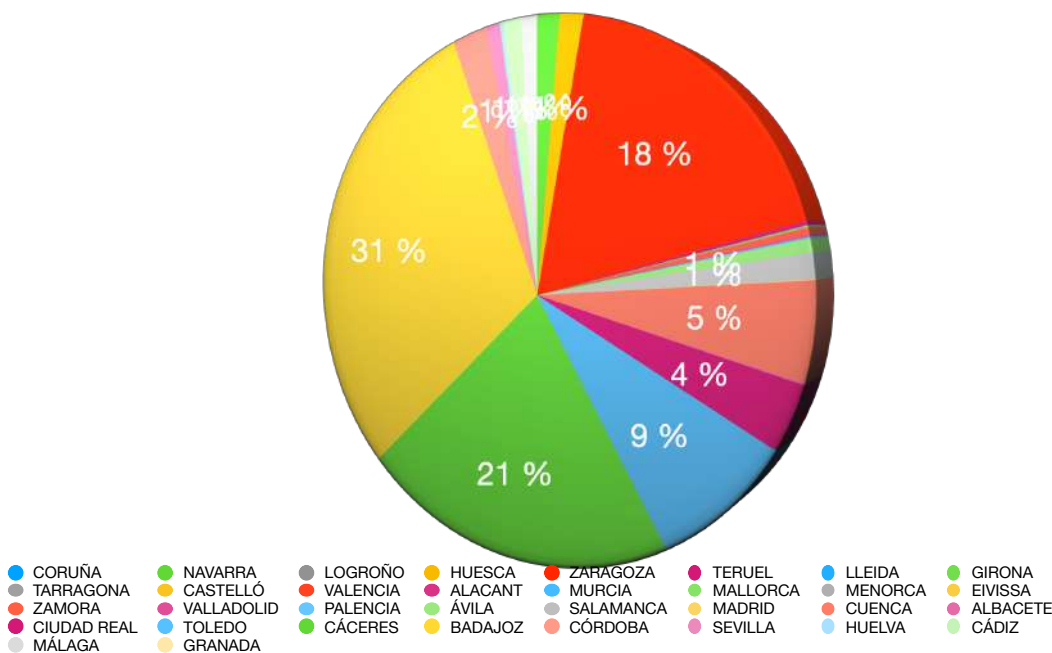
Zamora's number reduced to a half and in Valladolid only 27 birds remained in January, and Palencia also retained only a third of the wintering birds, while Salamanca increased its number by 1.700 in January, while Ávila lost some 800 birds.

No birds were recorded in Madrid in January.

Toledo retained its number of wintering birds in both censuses, Ciudad Real increased its number and Albacete grew by 100 individuals, and Cuenca's population reduced by 8.000 cranes.

In Cáceres province, the number of cranes increased by 8.000 cranes, while in Badajoz's number reduced by 7.000 individuals.

Córdoba province had an increase of almost 6.000 cranes in January, while Sevilla's number reduced to just 213 birds; however, Huelva increased by 2.000 birds in the second census, Cádiz's population reduced by a half, while Málaga showed a slight decrease and Granada also decreased its wintering birds to 2 individuals.

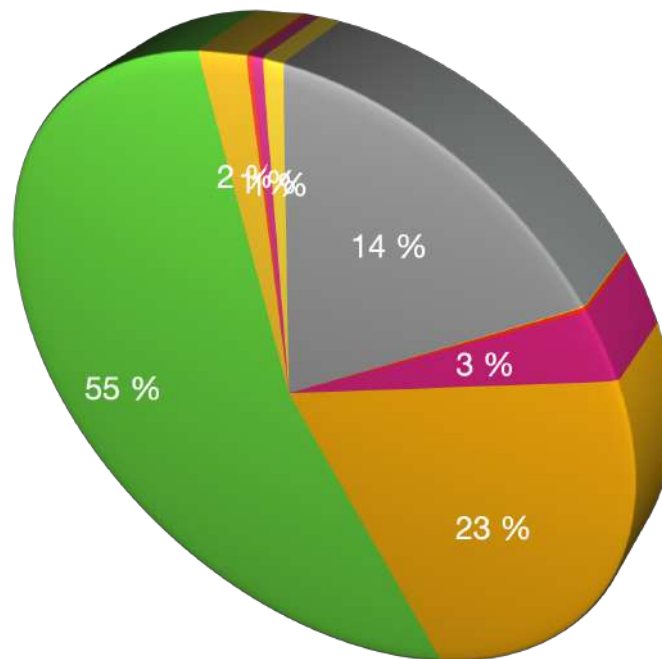


Graphic nº 24: Provincial distribution of cranes during January

PROVINCIAL CENSUS 2021/2022

	17/12/21	%	28/1/22	%
CORUÑA	0	0	1	0
NAVARRA	3778	1,45	2006	0,86
LOGROÑO	0	0	3	0
HUESCA	3861	1,48	4601	1,97
ZARAGOZA	45991	17,7	24139	10,37
TERUEL	562	0,21	3736	1,60
LLEIDA	25	0	0	0
GIRONA	196	0,07	65	0,02
TARRAGONA	63	0,02	0	0
CASTELLÓ	4	0	0	0
VALENCIA	23	0	0	0
ALACANT	30	0	20	0
MURCIA	0	0	7	0
MALLORCA	24	0	11	0
MENORCA	14	0	0	0
EIVISSA	2	0	2	0
ZAMORA	860	0,33	476	0,20
VALLADOLID	290	0,11	27	0
PALENCIA	253	0,09	78	0,03
ÁVILA	1850	0,71	1097	0,47
SALAMANCA	3508	1,35	5299	2,27
MADRID	111	0,04	0	0
CUENCA	13742	5,29	5336	2,29
ALBACETE	246	0,09	354	0,15
CIUDAD REAL	9828	3,78	10677	4,58
TOLEDO	22392	8,62	22069	9,48
CÁCERES	55411	21,34	63298	27,2
BADAJOS	80911	31,16	71977	30,9
CÓRDOBA	6072	2,33	10999	4,72
SEVILLA	2407	0,92	213	0,09
HUELVA	602	0,23	2502	1,07
CÁDIZ	3133	1,20	1244	0,53
MÁLAGA	2677	1,03	2170	0,93
GRANADA	20	0	2	0
TENERIFE	0	0	1	0

Regarding the water catchment areas, 131,700 (55%) occupied the Guadiana catchment area, followed by the Tajo with 55,795 (23%), Ebro with 34,485 (14%), Duero with 6,980 (2%), Guadalquivir 5,399 (2%), Mediterranean South 2,170 (0.5%), Tinto 507, Júcar 354, Catalonia 54, Segura 27, Balearics 13, Galicia 1 and Canarias 1.



- NORTE
- EBRO
- CATALUNYA
- BALEAR
- JÚCAR
- SEGURA
- DUERO
- TAJO
- GUADIANA
- GUADALQUIVIR
- TINTO
- SUR ATLÁNTICO
- SUR MEDITERRÁNEO

Graphic n° 25: Distribution by water catchment area in January.

Crane distribution by water catchment area showed a drop of 20,000 individuals (6%) in the Ebro catchment area from December.

The Catalonia catchment area's number reduced notably compared to December, while that of the Júcar increased slightly and it remained stable in the Segura, and the population also reduced in the Balearic catchment area.

The Duero catchment area had a slight increase of 600 birds compared to December although there were decreases matching increases in the different provinces.

The Tajo's numbers also reduced, by some 22,000 individuals (7%) compared to December, while the Guadiana's increased by the same proportion, with 20,000 cranes more than in December: 56.6% of the total recorded in January.

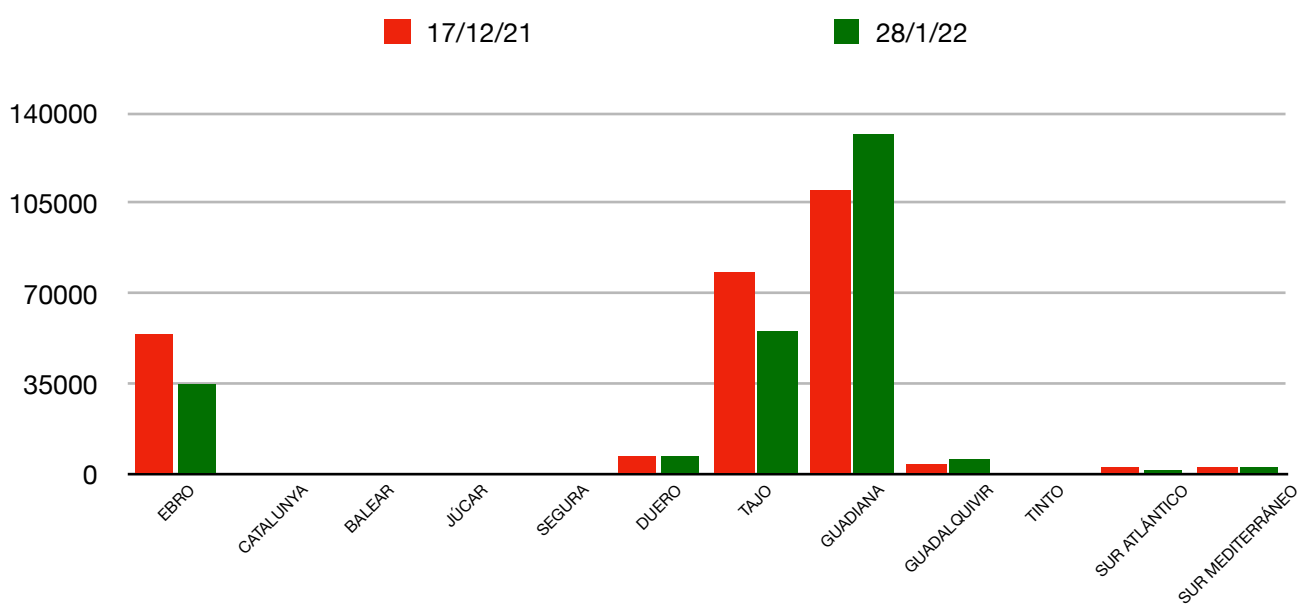
The Guadalquivir increased by 2,000 birds, the Tinto remained stable and the numbers decreased in the Atlantic South and Mediterranean.

One bird was found in the Canary Isles, which wasn't there in December.

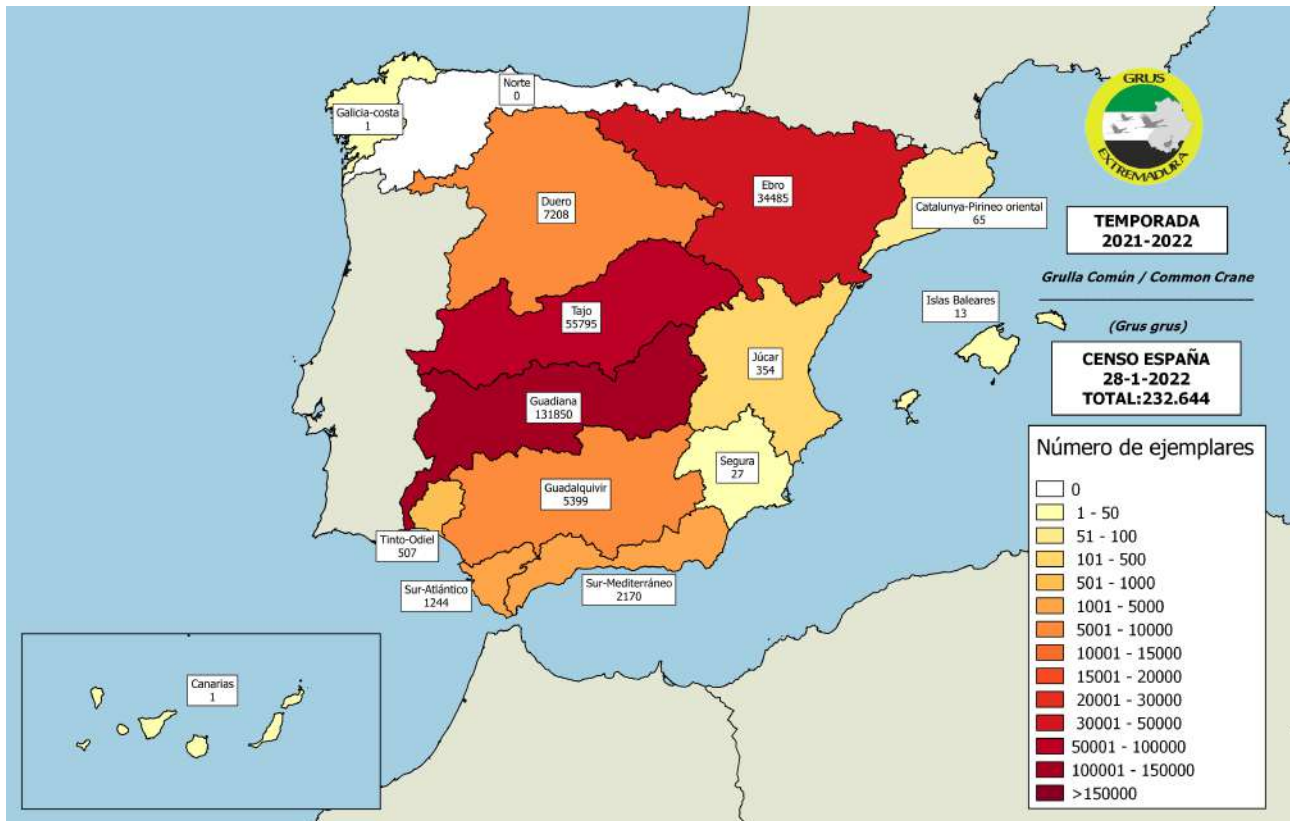
### CENSUSES IN WATER CATHMENT AREAS

	17/12/21	%	28/1/22	%
<b>GALICIA</b>	0	0	1	0
<b>EBRO</b>	54192	20,87	34485	14,82
<b>CATALONIA</b>	264	0,10	65	0,02
<b>BALEARIC</b>	40	0,01	13	0
<b>JÚCAR</b>	273	0,10	354	1,15
<b>SEGURA</b>	30	0,01	27	0,01
<b>DUERO</b>	6615	2,54	7208	3,09
<b>TAJO</b>	77914	30,01	55795	23,98
<b>GUADIANA</b>	110120	42,4	131850	56,67
<b>GUADALQUIVIR</b>	3371	1,29	5399	2,32
<b>TINTO</b>	602	0,23	507	0,21
<b>ATLANTIC SOUTH</b>	3133	1,20	1244	0,53
<b>MEDIOTERRANEAN SOUTH</b>	2697	1,04	2170	0,93
<b>CANARY</b>	0	0	1	0

Table nº 3: Comparison of the censuses in water catchment areas in December and January.



Graphic nº 26: Comparison of the censuses in water catchment areas in December and January.



Map nº 31: Crane distribution by water catchment areas in January 2022

## Evolution of the winter season by Autonomous Community

### Galicia

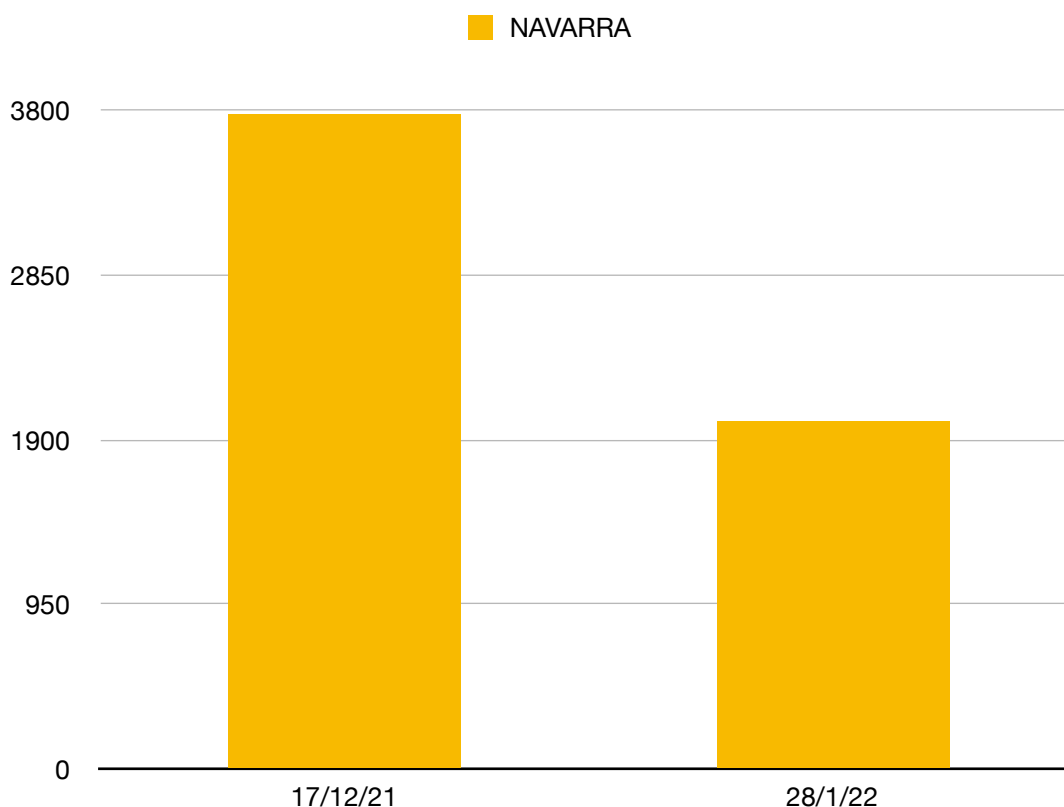
A single bird was present in the Baldaio district, A Coruña, from the end of December and throughout January and February. This was an immature bird, in its third year, which had probably got separated from a migrating flock.

### Navarra

In December, 3,778 were counted in 3 localities, while in January only 2,006 were present, all in one locality (Dos Reinos Lagoon). This accumulated the bulk of the wintering birds, which use it for roosting, even though many of them feed in Zaragoza province, and it is part of the Cinco Villas sector.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Arrozales Arguedas	NA	Arguedas	800	0
La Mueda	NA	La Mueda	3	0
Dos Reinos lagoon	NA/Z	Figarol y Carcastillo	2975	2006
NAVARRA			3778	2006

Table nº 4: Census results in Navarra by localities.



Graphic nº 27: Comparison of the censuses in Navarra

## Aragón

Aragón is the second most important community for wintering cranes with Castile-La Mancha. In December there are usually more individuals present than in January, when many of them have moved on to more southerly areas. 50,414 (19%) were counted in December, and 32,476 (14%) in January.

Generally, the bulk of the population is concentrated around Gallocanta Lagoon, between the provinces of Zaragoza and Teruel, near the border with Guadalajara.

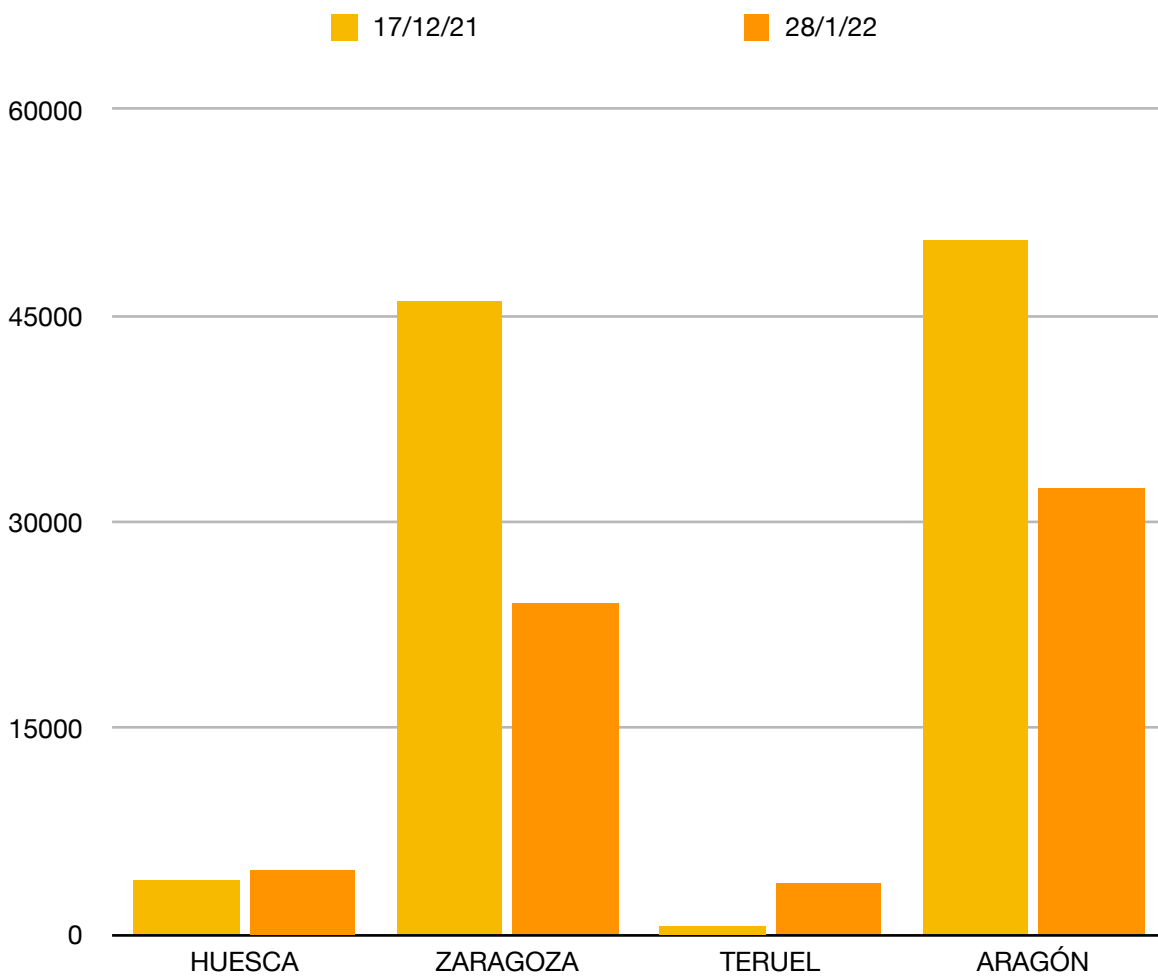
A total of 31 localities were visited, 18 in Zaragoza, 8 in Teruel and 5 in Huesca. In Huesca, 3,861 were censused in December (7.6%) and 4,601 in January (14.1%). In Zaragoza, 45,991 cranes (91.2%) were censused in December and 24,139 (74.3%) in January. In Teruel, 562 (1.11%) in December and 3,736 (11.5%) in January.

Huesca increased slightly in January, hosting 14% of the population then. Most of its cranes were distributed between La Sotonera and Clamor Vieja.

91% of Aragón's population was concentrated in Zaragoza in December, where the total reduced in January, the number of birds descended almost by half, although it still hosted 74% of the total. The principal locality is Gallocanta Lagoon, which concentrates the majority of the birds, although the Loteta, Valereña and Sopena reservoirs hosted a good number of birds, particularly in December. Teruel, which had low numbers in December (1.11%), increased significantly in January (11.5%), thanks to the increase seen at Cañizar Lagoon.

	17/12/21	%	28/1/22	%
<b>HUESCA</b>	<b>3861</b>	<b>7,65</b>	<b>4601</b>	<b>14,16</b>
<b>ZARAGOZA</b>	<b>45991</b>	<b>91,22</b>	<b>24139</b>	<b>74,32</b>
<b>TERUEL</b>	<b>562</b>	<b>1,11</b>	<b>3736</b>	<b>11,50</b>
<b>ARAGÓN</b>	<b>50414</b>		<b>32476</b>	

Table nº 5: Results of the provincial censuses in Aragón.



Graphic nº 28: Comparison of the censuses in Aragón by provinces.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Arrozales de Selgua	HU	Selgua y Monzón		44
Embalse de la Sotonera	HU	Montmesa	2681	4107
Clamor Vieja	HU	Castelflorite	790	
Alcolea de Cinca (Ventorrillo)	HU	Alcolea de Cinca		450
Arrozales de Santa Lecina	HU	Santa Lecina	390	
Laguna de Cañizar	TE	Villarquemado y Cella	500	3686
Saladas de Alcañiz	TE	Alcañiz	0	50
Saladas de Calanda	TE	Calanda	7	
Laguna del Mojón	TE	Odón	55	
Embalse de Lechago	TE	Lechago	0	0
Laguna del Becerril	TE	El Pobo de la Sierra	0	0
El Balsón (Ojos Altos)	TE	Caminreal	0	0
Laguna de Carabejas	TE	Torralba de los Sisones	0	
Laguna de Gallocanta	Z/TE	Gallocanta, Bello, Las Cuerlas	22299	10908
Laguna de la Zaida	Z	Used	3505	0
Balsa de la Parada	Z	Used	5.880	
Embalse de la Loteta	Z	Pedrola	1070	3451
Plano de Buena Vista	Z	Ejea de los Caballeros	6700	2130
Valareña	Z	Valareña	2675	4052
Turruquiel	Z	Ejea de los Caballeros	850	1330
Valdecenicera	Z	Quinto de Ebro	370	0
Balsa Venta el Esquilao	Z	Quinto de Ebro	0	0
Elan	Z	Quinto de Ebro		1210
Sopeña	Z	Ejea de los Caballeros	2630	570
Salada de Chiprana	Z	Chiprana	0	
Embalse de Mequinenza	Z	Chiprana	37	5
Quinto y Belchite	Z	Quinto y Belchite	370	
El Planerón	Z	Belchite	0	0
Salada de Santed	Z	Santed	73	0
Hoyo de la Cruz	Z	Bujaraloz	292	
Saladas de Pito	Z	Sástago	0	483
<b>ARAGÓN</b>			<b>50414</b>	<b>32476</b>

Table nº 6: Census results in Aragón by localities



The combined Navarra-Aragón sectors gave a total of 54,059 cranes (20.8%) in December and 33,501 (14.4%) in January, distributed as follows:

-Sector Cinca Medio: situated in the north-east of Huesca, in the localities of Ventorrillo, Selgua and Clamor Vieja, with 790 cranes in December (1.45%) and 494 in January (1.43%); although the number of individuals went down, nevertheless it was stable with respect to the census.

Sector Cinco Villas & La Sotonera: situated in the north-north-west of Aragón and the south-east of Navarra, combining birds from Navarra, the north-west of Zaragoza and west of Huesca, which are distributed principally through the localities of Figarol and Alera (NA), Valereña, Sopeña, Turruquiel, La Mueda, Plano de Buena Vista and La Loteta reservoir (Z) and La Sotonera (HU) reservoir (HU), hosting 12,884 cranes in December (23.7%) and 16,667 in January (48.3%), being the only sector to increase in January, particularly at Valereña, La Loteta, Turruquiel and La Sotonera, which practically doubled the population in January, probably at the expense of other areas, as Navarra's numbers reduced considerably, as did Sopeña's.

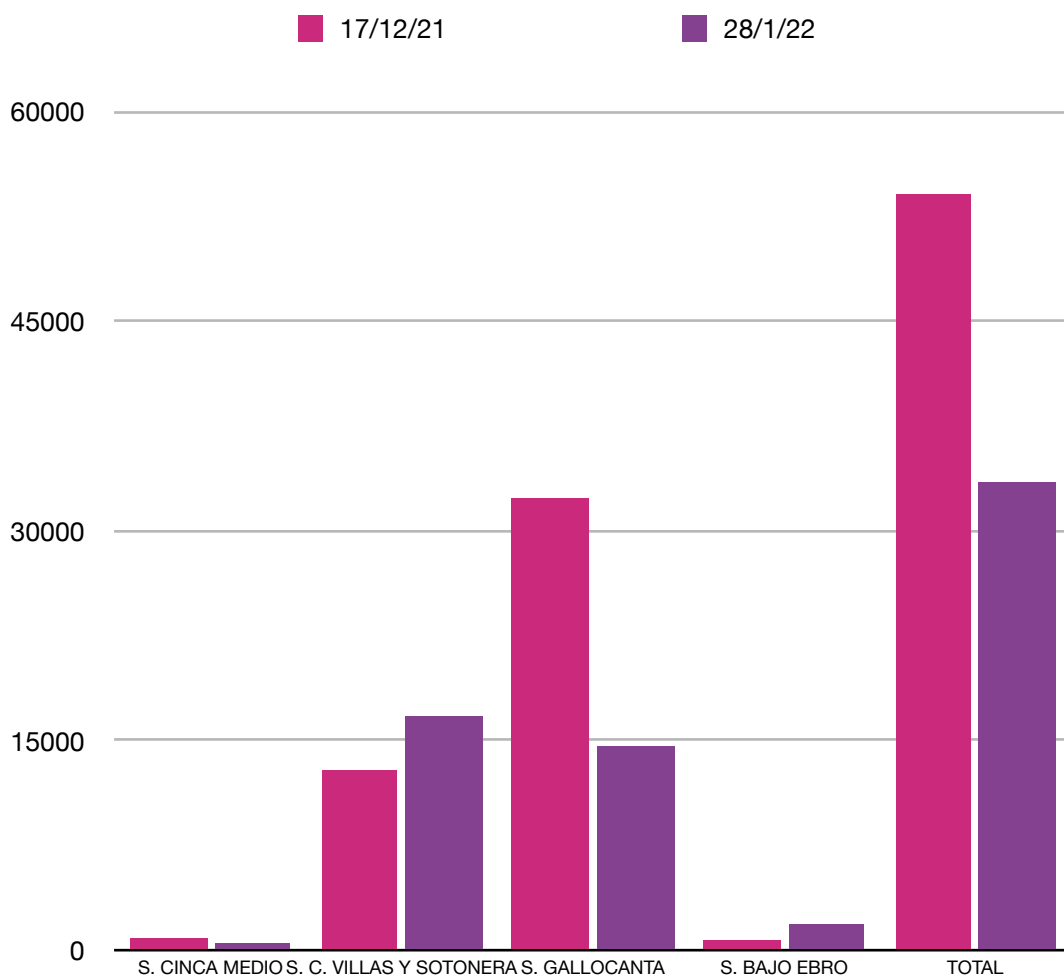
-Sector Gallocanta: located in the south-west of Zaragoza, west-north-west of Teruel and north-east of Guadalajara, and includes the birds of Gallocanta Lagoon (Z/TE), La Zaida, La Parada, the saline lagoons of Santed (Z), the lagoons at Honda, Cuartizo, Rubio, Méndez, Llana, Pasadilla, Pedruche and Mojones Blancos (GU), El Balsón, Lechago reservoir, Cañizar and El Mojón lagoons (TE), with 32,312 birds in December (59.6%) and 14,597 in January (42.3%). The Manchegan lagoons only had one positive data in December, and those at Gallocanta, which are spread across several roosts centred at the lagoon, reduced their numbers by more than half; many of them probably moved to Cañizar lagoon, where numbers increased considerably in January, although many others must have moved further, to the south-west of the peninsula.

-Sector Bajo Ebro: in the centre of Aragón, with birds at Valdecenicera, Hoyo de la Cruz, Elan, Mequinenza reservoir, Valdecenicera, Hoyo de la Cruz, the saline lagoons at Santed, Chiprana, Calanda, Playa, Pito, Chiprana and Venta El Esquilao, with 706 in December (1.30%) and 1,743 in January (5.2%). The bulk of the population was found at Valdecenicera and Hoyo de la Cruz in December, moving in January to Elan (Quinto de Ebro) and the saline lagoons at Pito, where birds from the Gallocanta sector must have joined them, as the sector increase by almost two thirds during January.

#### NAVARRA-ARAGÓN SECTORS

	17/12/21	%	28/1/22	%
<b>S. CINCA MEDIO</b>	<b>790</b>	<b>0,14</b>	<b>494</b>	<b>1,47</b>
<b>S. CINCO VILLAS &amp; SOTONERA</b>	<b>12884</b>	<b>23,77</b>	<b>16667</b>	<b>51,28</b>
<b>S. GALLOCANTA</b>	<b>32312</b>	<b>59,62</b>	<b>14597</b>	<b>43,57</b>
<b>S. BAJO EBRO</b>	<b>706</b>	<b>1,30</b>	<b>1743</b>	<b>5,20</b>
<b>TOTAL</b>	<b>54192</b>		<b>33501</b>	

Table nº 7: Census results of the Navarra-Aragón sectors



Graphic n° 29: Comparison of the censuses in the Navarra-Aragón sectors

### La Rioja

La Rioja had no wintering birds in December, and in January three were detected at

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Cofín	LO	Cofín	0	
Hervías Lagoon	LO	Hervías	0	
Sotos de Alfaro	LO	Alfaro	0	3
LA RIOJA			0	3

Sotos de Alfaro.

Table n° 8: Census results in La Rioja by localities.

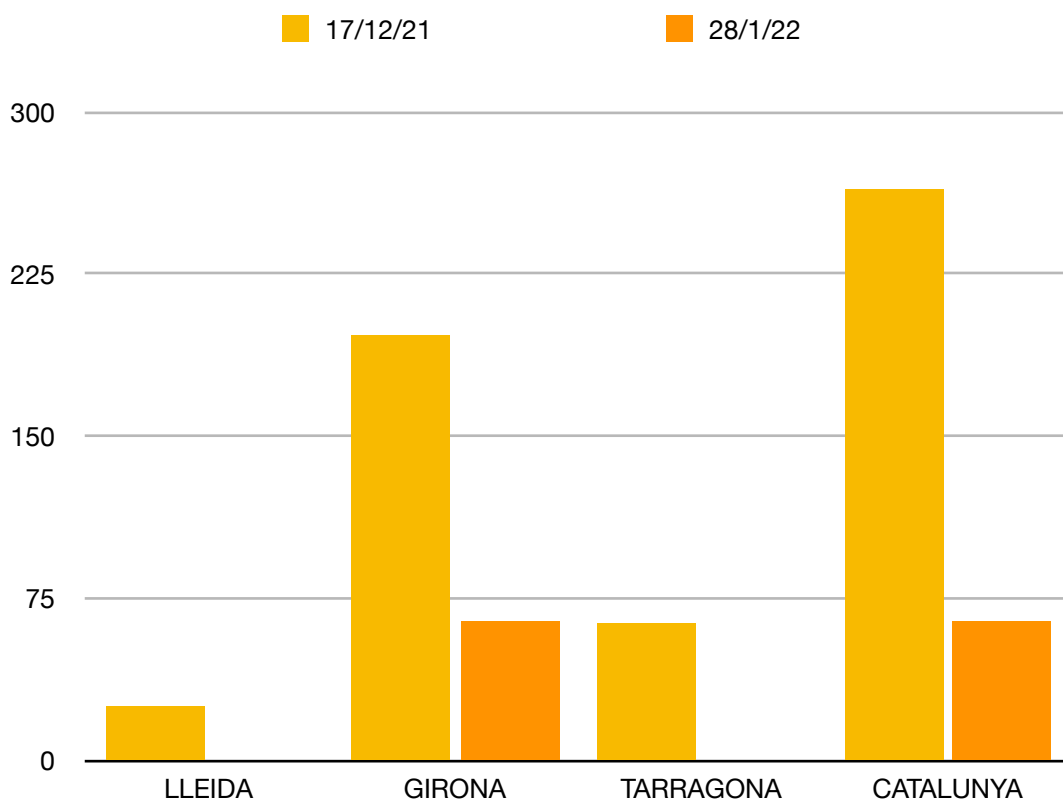
## Catalonia

264 cranes were recorded in Catalonia during December in the three provinces, although it has to be pointed out that the majority of cases were migrating birds detected on the census day, particularly those in Lleida, as well as those in Tarragona and some in Gerona. Only Gerona has regularly wintering, at Aiguamolls de L'Empordà. 264 birds were censused in December and 65 in January.

### CATALUNYA

	17/12/21	28/1/22
<b>LLEIDA</b>	<b>25</b>	<b>0</b>
<b>GIRONA</b>	<b>196</b>	<b>65</b>
<b>TARRAGONA</b>	<b>63</b>	<b>0</b>
<b>CATALUNYA</b>	<b>264</b>	<b>65</b>

Table nº 9: Census results of cranes in Catalonia.



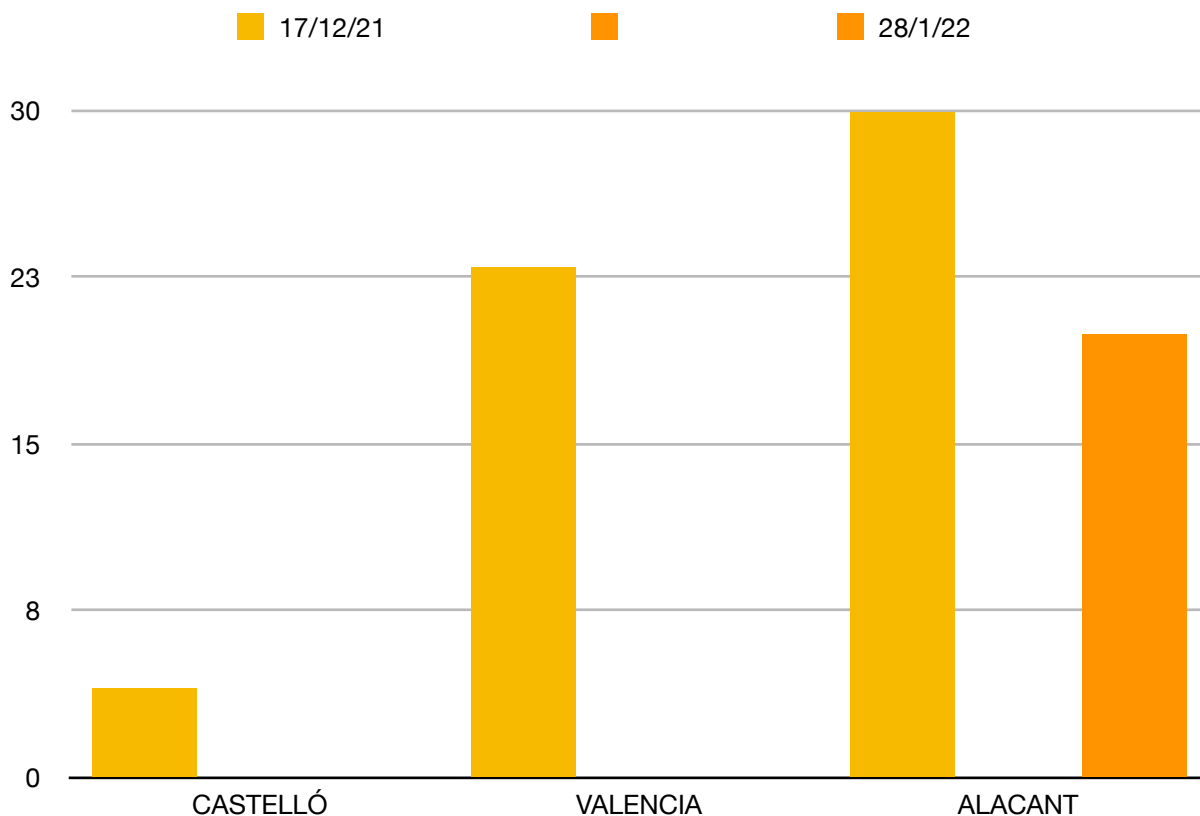
Graphic nº 30: Comparison of censuses in Catalonia.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Aigüamolls de l'Ampordá	GI	Castelló d'Ampuries	81	65
Olot	GI	Olot	49	
Palafrugell	GI	Palafrugell	6	
Ventalló	GI	Ventalló	40	
La Seu d'Urgell	LL	La Seu d'Urgell	25	
Delta del'Ébre	T	L'Ampolla/ Sant Jaume d' Enveja	63	
CATALONIA			264	65

Table nº 10: Census results in Catalonia by localities.

### Community of Valencia

The Community only had two positive results in the two censuses for a single locality, El Hondo reservoir in Alicante, which hosted wintering cranes throughout the season. The other birds observed in December were migrants making stopovers at some of the censused localities. The results were 57 birds in December and 20 in January.



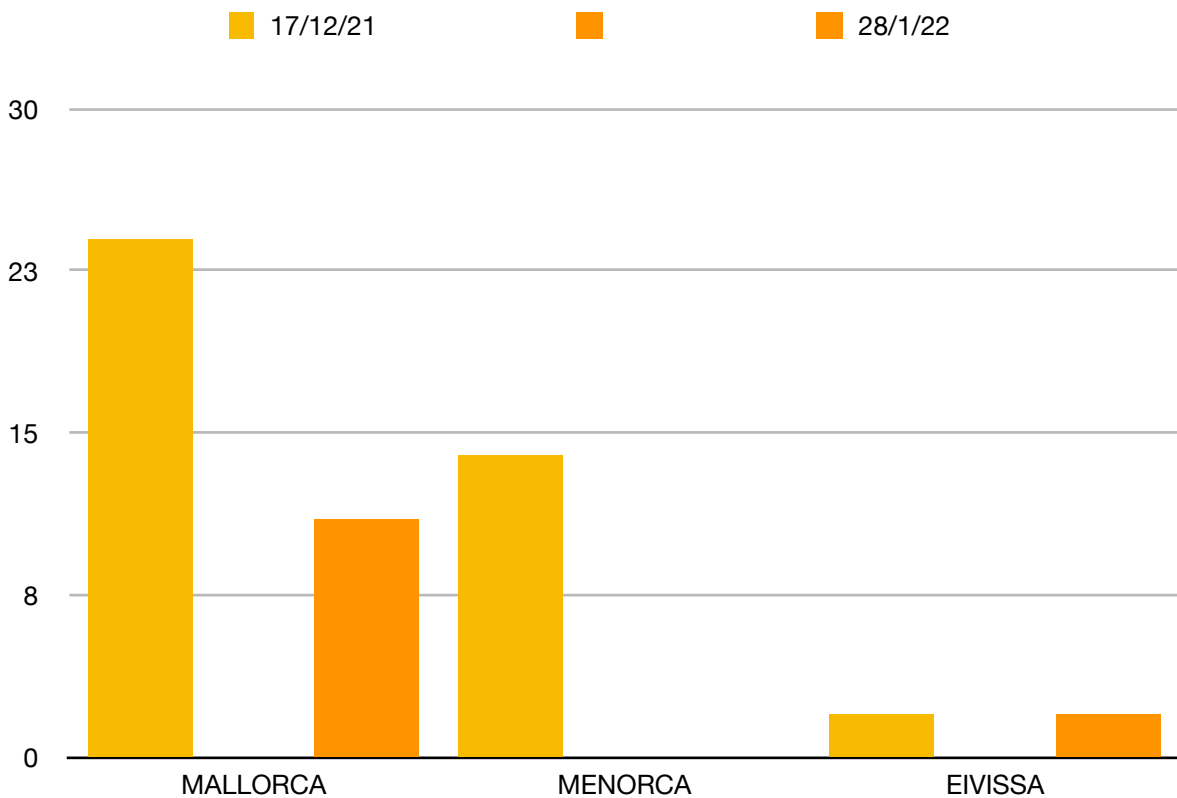
Graphic nº 31: Comparison of the censuses in the Community of Valencia.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Marjal de Almenara	CS	Xilxes	4	0
Sant Mateu Lagoon	CS	Sant Mateu	0	0
La Jana Lagoon	CS	La Jana	0	0
Sant Jordi Reservoir	CS	Sant Jordi	0	0
Lora Reservoir	CS	Traiguera	0	0
L'Albufera Nature Reserve	V	Mislata	23	0
El Hondo	AL	Elx	30	20
COMMUNITY of VALENCIA			57	20

Table nº 11: Census results in the Community of Valencia by localities.

### Balearic Islands

The islands had wintering birds on two islands: Ibiza and Mallorca. The birds seen on Menorca during December were migrants. Cranes stayed on Ibiza throughout the period and in Mallorca they were principally divided between two localities. The total figure was 40 birds in December and 13 in January.



Graphic nº 32: Comparison of the censuses on the Balearic Islands.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Salobrar de Campos	MALL	Campos	13	
S'Albufera Nature Reserve	MALL	Muro	11	11
Es Mercadal	MEN	Es Mercadal	14	
Ses Salines Natural Park	IB	Sant Jordi de ses Salines	2	2
BALEARIC ISLANDS			40	13

Table nº 12: Census results on the Balearic Islands by localities.

### Community of Murcia

The Community of Murcia is a transit region for birds going to northern Africa and doesn't usually have a wintering population; on this occasion seven individuals have been included, which were observed resting at Santomera reservoir, in all probability migrants or birds from the nearby Hondo reservoir.

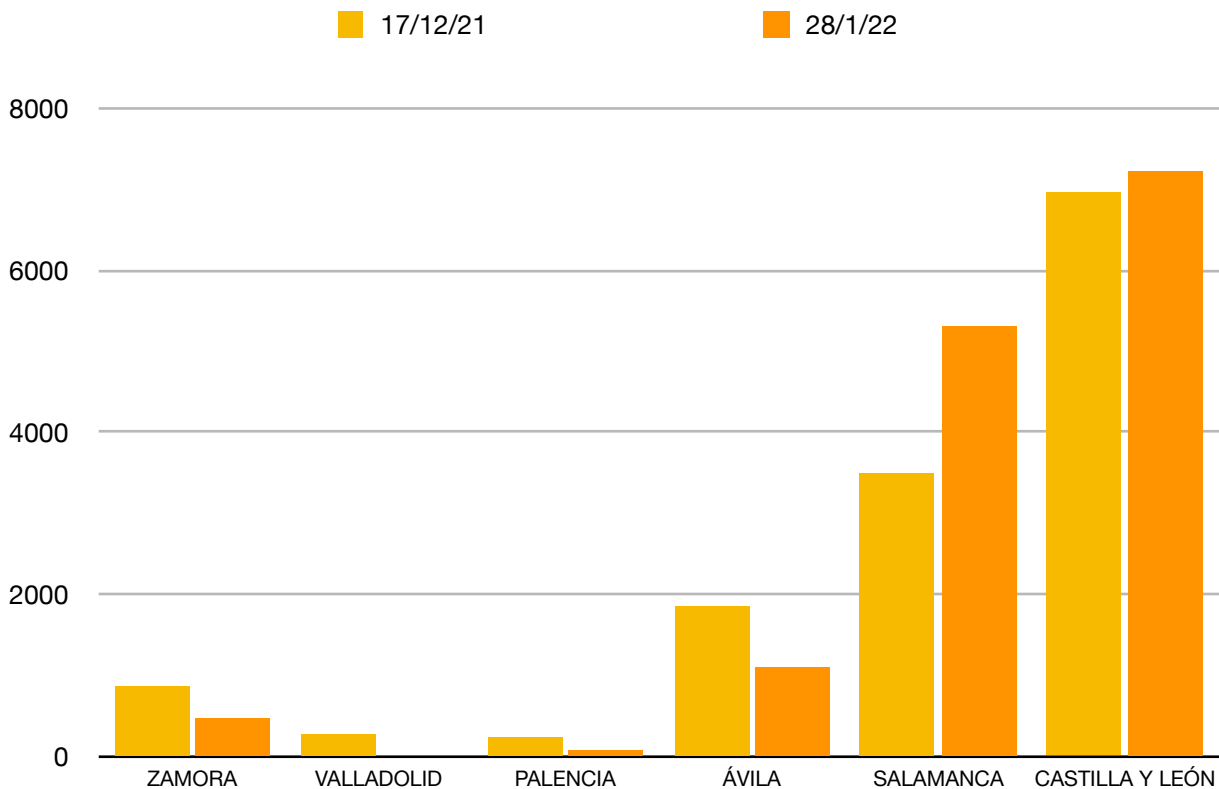
### Castile y León

14 localities were visited in Castile y León, 2 in Palencia, 1 in Zamora, 4 in Valladolid, 3 in Ávila and 4 in Salamanca, and 6,951 cranes were counted in December and 7,208 in January. Salamanca is the most important province, which in December hosted 3,508 cranes (50%) and 5,299 (74%) in January, followed by Ávila with 1,850 (27%) in December and 1,097 (15%) in January; Zamora with 860 (12%) in December and 476 (7%) in January, then Valladolid with 290 (4%) in December and 27 (0.3%) in January and Palencia with 253 (4%) in January and 78 in January (1%). This is one of the Communities with greatest population stability. The Riobobos weir almost tripled its numbers in January and the Santa Teresa reservoir remained stable throughout the season. Villafáfila (ZA) and El Hoyo (AV) were occupied early and although El Hoyo retained a good number of its birds throughout the period, birds left the Zamora site to go south. In any case, there is a significant inter-connection between all the sites in Castile y León, and many cranes end the winter in the dehesas of Salamanca.

#### CASTILE Y LEÓN

	17/12/21	%	28/1/22	%
<b>ZAMORA</b>	<b>860</b>	<b>12,37</b>	<b>476</b>	<b>6,60</b>
<b>VALLADOLID</b>	<b>290</b>	<b>4,17</b>	<b>27</b>	<b>0,37</b>
<b>PALENCIA</b>	<b>253</b>	<b>3,63</b>	<b>78</b>	<b>1,08</b>
<b>ÁVILA</b>	<b>1850</b>	<b>26,61</b>	<b>1097</b>	<b>15,21</b>
<b>SALAMANCA</b>	<b>3508</b>	<b>50,46</b>	<b>5299</b>	<b>73,71</b>
<b>CASTILE Y LEÓN</b>	<b>6951</b>		<b>7208</b>	

Table nº 13: Census results in Castile y León.



Graphic n° 33: Comparison of the censuses in Castile y León.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Laguna de la Nava	P	Fuentes de Nava, Maza	350	78
Laguna de Boada de Campos	P	Boada de Campos	3	SD
Laguna de Villafáfila	ZA	Otero de Sariegos, Villafáfila	860	479
Laguna de la Zarza	VA	La Zarza	16	0
Laguna de los Mullidares	VA	Lomoviejo	238	0
Laguna La Colada	VA	San Vicente del Palacio	0	0
Los Lavajones	VA	Cervillejo De la Cruz	36	27
Laguna del Hoyo	AV	El Oso	828	909
Garganta Sta María	AV	Candeleda	829	184
Río Tiétar, Prado Loboso	AV	Candeleda	193	4
Embalse de Santa Teresa	SA	Montejo, Salvatierra, Pelayos, La Tala	2166	2406
Azud de Riobobos	SA	Campo de Peñaranda, Villar Gallimazo	1096	2893
Charca del Campo	SA	Sando	336	216
Embalse de Castroverde	SA	Las Veguillas		12
CASTILE Y LEÓN			6951	7208

Table n° 14: Census results of the censuses in Castile y León by localities.

## Community of Madrid

The Community of Madrid doesn't usually have wintering birds, and the cranes recorded in December were on their migration, and only those at El Pardo reservoir made a roost stopover. 111 individuals were counted.

LOCALITY	PV	MUNICIPALITY	17/12/21	28/1/22
Embalse del Pardo	M	Madrid	15	0
Madrid norte	M	Madrid	31	
Río Manzanares	M	Madrid	65	
MADRID			111	0

Table nº 15: Census results in the Community of Madrid

## Castile-La Mancha

Castile-La Mancha is joint-second with Aragón in importance for cranes. They were censused in 44 localities, 10 in Guadalajara, 1 in Albacete, 4 in Cuenca, 16 in Toledo and 13 in Ciudad Real. 46,739 (18%) cranes were counted in December and 38,439 (17%) in January.

The localities in Guadalajara are a complex of small lagoons which are found on the route from Gallocanta and are included in that sector; only one of them had a positive result in January, with 3 birds. In Albacete, there was only one locality in the lagoon complex of Pétrola-Corral Rubio, with 246 (0.5%) in December and 354 (0.9%) in January. Cuenca had 13,742 (29%) in December and its population reduced to less than half in January, with 5,336 (14%). All of the population is based around El Hito and Manjavacas lagoons and Alarcón reservoir.

Toledo is the most important province for cranes, as it hosts more than half of the birds. Some localities on the border with Extremadura could not be censused in December and January, so the figure is higher than we report here. This province has a population in the west which uses feeding areas and roost sites in Cáceres and also with Ávila, and another in the south-east associated with lagoon complexes in Ciudad Real and Cuenca, and there an interchange of birds between the different localities. In January, because of the drought, there was a significant decline in numbers in these parts of the three provinces. The most significant locality is Rosarito reservoir, whose population increased in January, as occurred at Navalcán and Castrejón reservoirs and Grullo lagoon. There was a major decline at the Taray lagoon, due to the drought conditions and consequent lack of food. 22,392 cranes (48%) were counted in December and 22,069 (57%) in January, with a very stable population trend due to the interchange between the different areas.

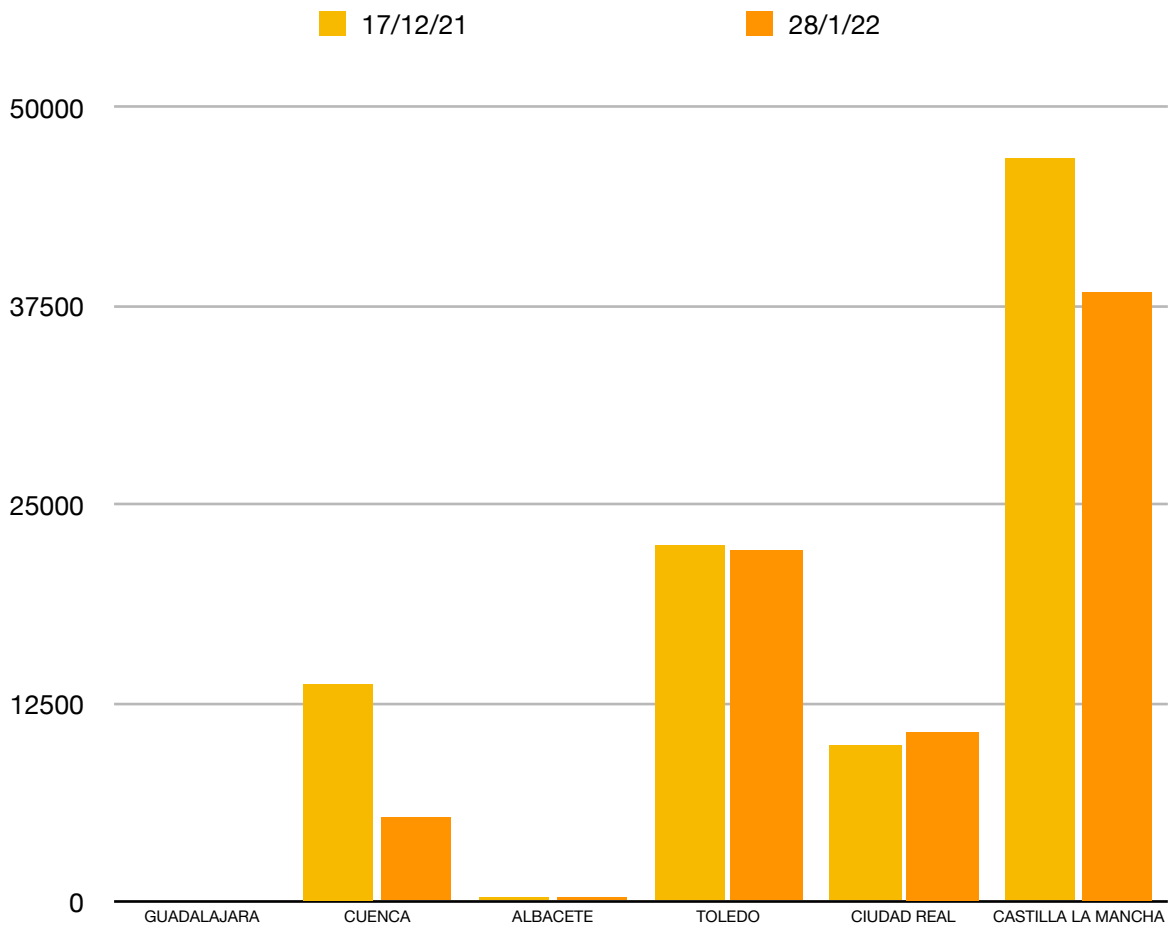
Ciudad Real is the second province in importance in the region with 9,828 birds (21%) in December and 10,677 (28%) in January. The majority of the birds are divided between the national parks of Cabañeros and Las Tablas de Daimiel and the lagoon complex at Alcázar de San Juan. The population increased in January at the Torre de Abraham and Povedas (Cabañeros) reservoirs, with a slight decrease in Las Tablas de Daimiel, and showed a significant increase in the Alcudia valley, which recorded one its highest January counts.



### CASTILE-LA MANCHA

	17/12/21	%	28/1/22	%
<b>GUADALAJARA</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b>CUENCA</b>	<b>13742</b>	<b>29,40</b>	<b>5336</b>	<b>13,88</b>
<b>ALBACETE</b>	<b>246</b>	<b>0,52</b>	<b>354</b>	<b>0,92</b>
<b>TOLEDO</b>	<b>22392</b>	<b>47,90</b>	<b>22069</b>	<b>57,41</b>
<b>CIUDAD REAL</b>	<b>9828</b>	<b>21,02</b>	<b>10677</b>	<b>27,77</b>
<b>CASTILE-LA MANCHA</b>	<b>46739</b>		<b>38439</b>	

Table nº 16: Census results in Castile-La Mancha



Graphic nº 34: Comparison of the censuses in Castile-La Mancha

LOCALITY	PV	MUNICIPALITY	17/12/2	28/1/22
Laguna Honda	GU	Campillo d Dueñas	0	0
Laguna Cuartizo	GU	Campillo d Dueñas	0	0
Laguna El Mojón	GU	Campillo d Dueñas		0
Laguna El Rubio	GU	La Yunta	0	0
Laguna Méndez	GU	La Yunta	0	0
Laguna la Pasadilla	GU	La Yunta	0	0
Laguna Llana	GU	La Yunta	0	3
Laguna El Pedruche	GU	La Yunta		0
Laguna Mojones Blancos	GU	La Yunta	0	0
Embalse de Buendía	GU/CU	Auñón	1350	0
Casa Higinio (lagª de la Torrecilla)	AB	Pétrola/Corral Rubio	246	354
Embalse de Alarcón	CU	Honrubia, Hontecillas, Valderde Júcar	3537	1132
Laguna de Manjavacas	CU	Mota del Cuervo	3186	1500
Laguna del Hito	CU	Montalbo	6200	2700
Embalse de Campo del Paraíso	CU	Carrascosa del Campo		4
Embalse Castrejón	TO	La Puebla de Montalbán	3733	5431
Embalse de Rosarito	TO	Oropesa	8500	10251
Rio Tiétar Buenaventura	TO	Buenaventura	256	983
Embalse de Navalcán	TO	Navalcán	2910	3108
Laguna del Taray	TO	Quero	4121	130
Vadoancho	TO	Quero	862	136
Dehesa de Villafranca	TO	Villafranca de los Caballeros/Quero	351	0
Laguna del Longar	TO	Lillo	550	110
Área encharcada Tirez	TO	Tirez	215	0
Laguna Larga	TO	Villacañas	161	0
Laguna de Peña Hueca	TO	Villacañas	450	0
El Verdugal	TO	Oropesa	53	558
Laguna del Grullo	TO	La Calzada de Oropesa	230	1252
Corral de Almaguer	TO	Corral de Almaguer		12
Embalse de Finisterre	TO	Turleque		98
Laguna del camino Villafranca	CR	Alcázar de San Juan	197	70
Laguna de Pajares	CR	Alcázar de San Juan	0	0
Lagunas de Salicor	CR	Alcázar de San Juan	884	82
Junta de los Ríos Záncara y Cigüela	CR	Alcázar de San Juan	504	148
Laguna de la Veguilla	CR	Alcázar de San Juan	30	5
Embalse de Gasset	CR	Fernán Caballero	24	
La Atalaya	CR	La Atalaya	22	
Campo de Calatrava	CR	Pozuelo de Calatrava	25	
Corral de Calatrava	CR	Corral de Calatrava	23	
Embalse de la Torre de Abraham	CR	Retuerta del Bullaque	2453	3440
Embalse de las Povedas	CR	Alcoba	2150	2819
P.N. Tablas de Daimiel	CR	Daimiel, Villarrubia de los Ojos	2775	2125
Valle de Alcudia	CR	Almodóvar del Campo	741	1988
CASTILLA LA MANCHA			46739	38439

## Extremadura

Extremadura is the most important Community for wintering cranes in the peninsula, which hosted 136,322 cranes (52.5%) in December and 135,375 (59.6%) in January, the population remaining stable throughout the season although there were movements within the winter, especially in the Central Zone.

We generally divide the two provinces of Extremadura into three different sectors, one being the Tajo sector, which includes all the birds in Cáceres province associated mainly with the dehesas; the Central Zone sector corresponds with the upper Guadiana valley and includes birds in both provinces, particularly Badajoz, but there is continuous movement between roosts and feeding areas on both sides of the border, with a high percentage of cranes in stubbles from irrigated crops; the Guadiana sector has cranes in Badajoz province, the majority of these are also in areas of Dehesa.

28 localities were visited in Cáceres province and 38 in Badajoz province, and 11 sectors were covered.

The Tajo sector was stable during the period, with 26,900 cranes (20%) in December and 27,190 (20%) in January, although the actual figure exceeds 30,000 cranes in this sector, as some localities in the Campo Arañuelo area could not be covered due to logistical problems, including the principal roost at Valdecañas reservoir, which was only visited in January. The recovery in the Brozas sector should be noted, which, although having apparently declined in recent censuses, maintained typical numbers. As ever, the availability of roost sites influenced their movements, which can give low figures at regular roost sites in years with a greater availability of ponds.

The Guadiana sector increased notably in January, with 19,376 cranes (14%) in December and 30,584 (23%) in January, certainly at the expense of the Central Zone, which is typical in the second part of the winter, although not always so significantly. Some localities, such as Los Canchales reservoir and the Zangallón farm increased to almost double the December number, and also in Valdecaballeros. The roost at Guadalemar could only be estimated, due to access difficulties, but the number had to be higher than recorded. Numbers in La Serena also increased notably in January.

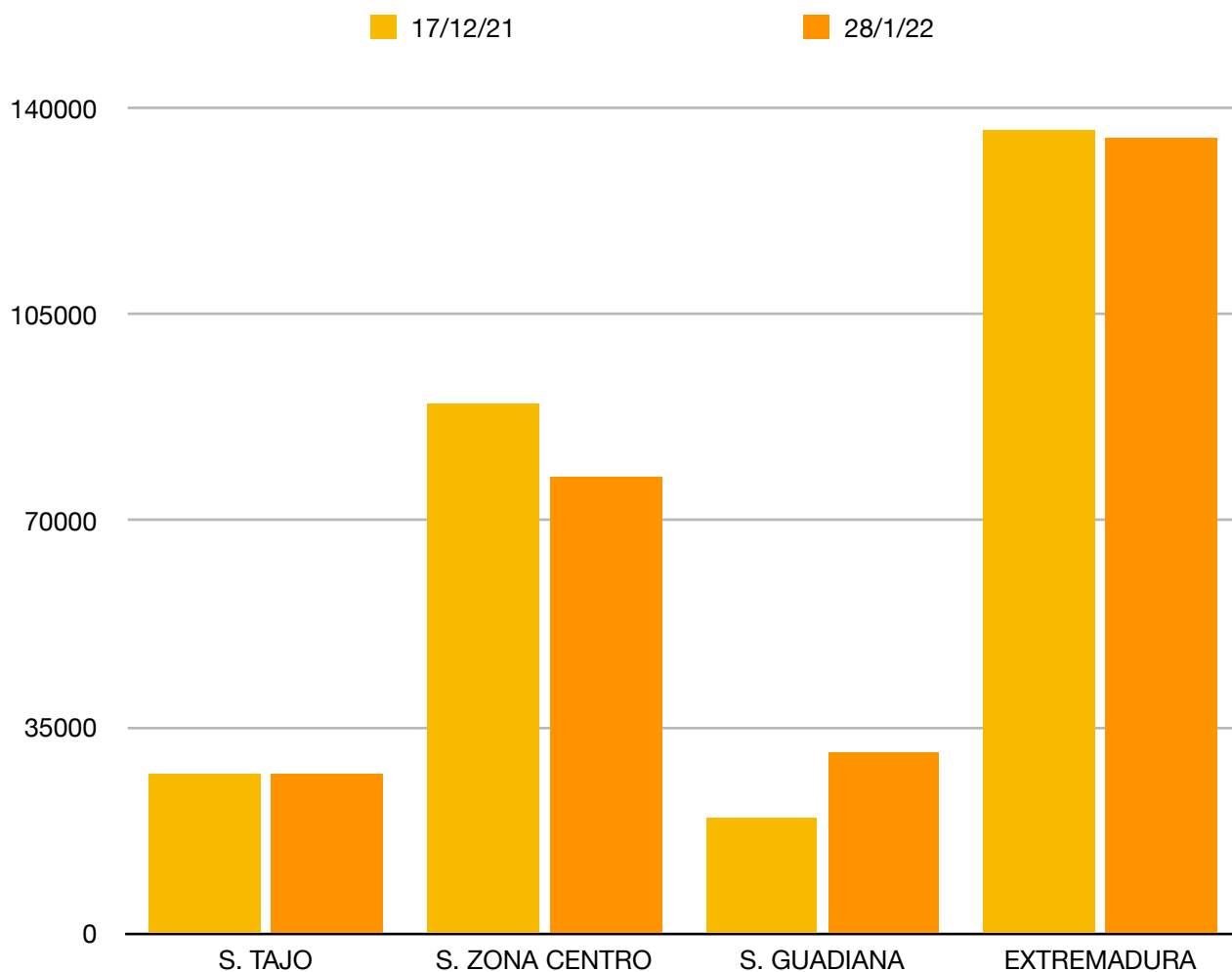
The Central Zone sector is by far the most significant for cranes in Extremadura and Iberia, which in December hosted 90,046 cranes (66%) and 77,361 (51%). It is an area in which the majority feed in maize and rice stubbles, and as the season progresses they usually move from east to west in search of food. However, during the past season this dynamic was reversed due to the persistent drought, which enabled the farmers to cultivate fields early and therefore bury a large part of the grain that was left on the ground, so the birds were obliged to use the standby resources in the dehesas in the second part of the winter. Evidently this also brought them to nearby areas such as La Serena in Badajoz and Los Pedroches in Córdoba, where a considerable increase in numbers was seen in January, and also to the lower Guadiana valley (Los Canchales reservoir), which is a zone with less stubble and more dehesas.

Without doubt, this fact must have led to the early departure of cranes from this sector, while those associated with dehesas left later.

## EXTREMADURA

	17/12/21	%	28/1/22	%
S. TAJO	26990	19,73	27190	20,12
S. ZONA CENTRO	90046	66,05	77361	57,25
S. GUADIANA	19376	14,21	30754	22,62
<b>EXTREMADURA</b>	<b>136322</b>		<b>135275</b>	

Table nº 18: Census results in Extremadura



Graphic nº 35: Comparison of censuses in Extremadura

LOCALITY	PV	MUNICIPALITY	17/12/2	28/1/22
Embalse de El Borbollón	CC	Santibáñez el Alto	7632	8103
Charca de Espinel	CC	Moraleja	614	
Embalse de Gabriel y Galán	CC	Zarza de Granadilla	2948	3014
Rio Tiétar-Monfragüe	CC	Malpartida de Plasencia	2192	1557
Laguna del Palancoso	CC	Navalmoral de la Mata	5370	3162
Torviscoso	CC	Navalmoral de la Mata	SD	SD
Cañada del Venero	CC	Talayuela	SD	SD
El Gordo	CC	El Gordo	60	
Embalse de Valdecañas	CC	Peraleda de la Mata, El Gordo, Berr	234	3569
Embalse de la Solana	CC	Herrera de Alcántara		2
Embalse de Mata de Alcántara	CC	Mata de Alcántara		2
Charca de la Clavería	CC	Membrío	74	771
Sector Brozas/Alcántara	CC	Brozas	2727	2245
Ponce	CC	Brozas		59
Noque y Barroso	CC	Villa del Rey		69
Embalse de Petit I	CC	Arroyo de la Luz		80
Embalse de Molano	CC	Arroyo de la Luz		3
Embalse de Talaván	CC	Talaván	16	0
Charca El Excedente	CC	Monroy	27	
Embalse de Cuartón/Tejarejos	CC	Monroy	591	1014
Las Seguras	CC	Cáceres	379	626
Valdesalor/La Generala	CC	Cáceres	476	704
Embalse de S. Martín	CC	Aldea del Cano	1821	1818
Charca del Campazo	CC	Trujillo	166	48
Charca Espinel	CC	Trujillo	79	
Rio Tozo/Labradillo	CC	Torrecillas de la Tiesa	1178	970
Embalse Arroyo Casillas	CC	Trujillo	163	124
Valle Judío	CC	Zorita/Logrosán	70	450
Azud de la Canchaleja	CC	Escurial	83	
Almansa, rio Guadalupejo	BA	Valdecaballeros	664	1055
El Alandre	BA	Puebla de Alcocer	4528	6900
Recula emb Orellana	BA	Talarrubias	128	246
Recula Guadalemar	BA	Garbayuela	1000	1200
Las Bodeguillas	BA	Espárragos de Lares	43	450
Sector Madrigalejo/Casa Hitos	CC	Madrigalejo/Navalvillar Pela	9608	3916
Sector Logrosán	CC	Logrosán	3686	5161
Sector Moheda/Vegas Altas	BA	Acedera/Navalvillar Pela	16009	13950
Sector Rañas-Casas d. Pedro	BA	Casas de d. Pedro	5321	9945
Sector Acedera-Puercas	BA	Acedera/Don Benito	3746	1796
Sector Los Guadalperales	BA	Don Benito	5300	3265
Sector Palazuelo/La Mata	BA/CC	Vva. Serena/Valdivia/Madrigalejo	4772	2654
Sector Villar de Rena/Miajadas	BA/CC	Villar Rena/Campo Lugar	13863	7224
Sector Valdehornillos	BA/CC	Sta. Amalia/D.Benito/Miajadas	14800	10154
Sector Guadámez/Búrdalo	BA	Guareña/Sta.Amalia	2553	5441
Sector Yelbes/Medellín	BA	Medellín/Sta. Amalia/Guareña	5860	6709

Cortijo del Zangallón	BA	Villar del Rey, Alburquerque	742	1318
Dh el Cubillo	BA	Puebla de Obando	626	506
Embalse de Peña del Águila	BA	Villar del Rey		390
Morantes	BA	La Roca de la Sierra	1544	1613
Embalse de los Canchales	BA	Mérida	3973	6813
Embalse de Cornalvo (El Gamo)	BA	Mérida		5
Pozo de Agua Buena (Valdelagran)	BA	La Albuera	480	0
Lagunas de la Albuera	BA	Torre de Miguel Sesmero	44	480
Embalse de Villalba	BA	Villalba de los Barros	128	84
Embalse de Alange	BA	Alange	1637	4
Las Merinillas	BA	Badajoz, Valverde de Leganés	621	636
El Gamonal/El Romo	BA	Valverde de Leganés		200
Rio Guadiana (Alqueva)	BA	Villarreal	983	1120
Embalse de Cuncos	BA	Villanueva del Fresno	750	656
Emb Alqueva (Friegamuñoz)	BA	Cheles, Vva. Fresno, Olivenza		1000
Mirador de Cuncos	BA	Villanueva del Fresno		359
La Guarda	BA	La Guarda	78	323
Las Torralbas	BA	Magacela	145	349
Cancho Roano	BA	Quintana de la Serena	0	130
Badija Norte	BA	Campanario	0	70
Badija Este	BA	Quintana de la Serena	480	864
Dehesa de la Reyerta	BA	Quintana de la Serena	170	
Puerto Mejoral	BA	Castuera	247	977
Almorchón	BA	Cabeza del Buey	107	995
El Aguijón	BA	Cabeza del Buey		450
Zarza Capilla	BA	Zarza Capilla	341	898
Capilla	BA	Capilla	485	80
Monterrubio (río Zújar)	BA	Monterrubio de la Serena	75	670
Embalse del Rosal	BA	Peraleda del Zaucejo	2384	2773
Embalse de Arroyo Conejo	BA	Berlanga, Higuera de Llerena	1062	1459
Dh de San Pedro	BA	Casas de Reina	0	370
La Osa	BA	Retamal de Llerena	15	
Las Navas	BA	Puebla de la Reina		195
Embalse de los Molinos	BA	Llera	424	136
Embalse del Moral	BA	Los Santos de Maimona		742
Monesterio	BA	Monesterio		4
EXTREMADURA			136322	135125

Table nº 19: Census results in Extremadura by localities.

## Andalucía

In Andalucía, 24 localities were visited: 10 in Córdoba, 4 in Sevilla, 3 in Huelva, 4 in Cádiz, 1 in Málaga and 2 in Granada, counting 14,911 cranes (6%) in December and 17,130 (7%) in January, being the fourth Community in importance for cranes. Córdoba is the most important province in the region and shares birds from roost sites in Extremadura and Castile-La Mancha that feed in its dehesas. It is quite dependent on the Central Zone of Extremadura, and according to the availability of food, cranes arrive earlier or later in its feeding areas, so in December fewer birds are detected in this province. 6,072 (41%) were counted in December and 10,999 (64%) in January.

The majority of Sevilla's birds were concentrated in Doñana National Park as the lagoons of Lantejuela and the surrounding areas were without water all winter. In December, 2,407 birds (16%) were counted, all in Doñana, and only 213 (1%) in January.

Huelva has a population in the Tinto and Odiel catchment area, and others belonging to the Doñana area. 602 birds (4%) were counted in the Tinto in December and 2,502 (15%) in January, when birds from Doñana joined Huelva's to roost in the Huelva side of the National Park.

Cádiz host the majority of its birds at La Janda lagoon, although there are small flocks in marsh areas. They counted 3,133 (21%), in December, a record number, and 1,244 (7%) in January. This significant drop was because the count was made difficult by a strong easterly wind which was blowing at the time, so the number was probably much higher.

Málaga's entire population is at the Fuente de Piedra lagoon, which was very stable with 2,677 cranes (18%) in December and 2,170 (13%) in January.

No cranes were seen in the Baza district of Granada, where agricultural intensification is reducing the possibilities of finding food; they settled in nearby localities.

### ANDALUCÍA

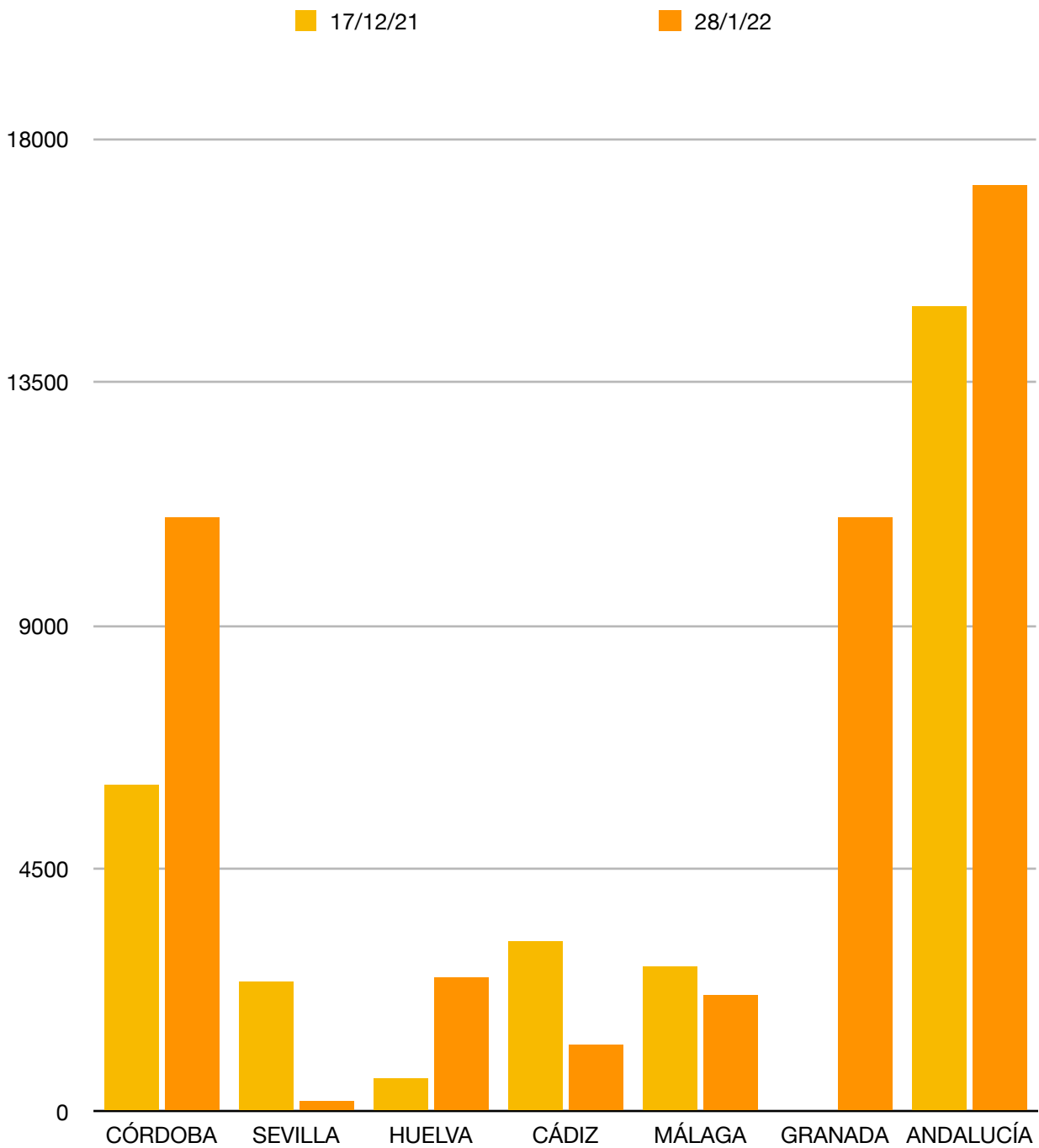
	17/12/21		28/1/22	
<b>CÓRDOBA</b>	<b>6072</b>	<b>40,72</b>	<b>10999</b>	<b>64,20</b>
<b>SEVILLA</b>	<b>2407</b>	<b>16,14</b>	<b>213</b>	<b>1,24</b>
<b>HUELVA</b>	<b>602</b>	<b>4,03</b>	<b>2502</b>	<b>14,60</b>
<b>CÁDIZ</b>	<b>3133</b>	<b>21,01</b>	<b>1244</b>	<b>7,26</b>
<b>MÁLAGA</b>	<b>2677</b>	<b>17,95</b>	<b>2170</b>	<b>12,66</b>
<b>GRANADA</b>	<b>20</b>	<b>0,13</b>	<b>2</b>	<b>0,01</b>
<b>ANDALUCÍA</b>	<b>14911</b>		<b>17130</b>	

Table nº 20: Census results in Andalucía.

LOCALIDAD	PV	MUNICIPIO	17/12/2	28/1/22
Embalse de la Colada	CO	El Viso	1018	600
Fuente la Zarza	CO	Hinojosa del Duque	0	542
La Pizarra	CO	Belalcázar	722	2044
Embalse de Cogollarta	CO	Belalcázar	558	733
Solana de Guadamatilla	CO	Hinojosa del Duque	642	2735
Embalse de Jardoso	CO	Hinojosa del Duque	23	164
Embalse de Valhondo-Campocere	CO	Hinojosa del Duque	103	370
Embalse de Sierra Boyera	CO	Peñarroya/Pueblonuevo	964	1489
Embalse de Navalepino	CO	Los Blázquez	2042	2322
Peñalazorra/Matallana	CO	La Granjuela	0	
Dehesa de Bucaré	SE	Alcalá de Guadaira	227	180
Laguna de la Lantejuela	SE	La Lantejuela/Osuna	0	0
Laguna de las Turquillas	SE	La Lantejuela/Osuna	25	
P.N. de Doñana	SE/H	Aznalcázar	2155	2028
Rio Odiel	H	Gibraleón	0	343
Rio Tinto	H	San Juan del Puerto	602	164
La Madre P.N. Doñana	H	Hinojos		
La Janda	CA	Tarifa y Vejér de la Frontera	2480	1200
Marismas de Algaida y Trebujena	CA	Trebujena y Sanlúcar de Barrameda	279	
Salinas de Bonanza	CA	Sanlúcar de Barrameda	374	30
Laguna de Medina	CA	Medina Sidonia		4
Laguna de los Tercios	CA	El Puerto de Sta. María		10
Laguna de Fuente de Piedra	MA	Fuente de Piedra	2677	2170
Baza	GR	Baza	14	
Huétor-Tajar	GR	Huétor-Tajar	6	2
ANDALUCIA			14911	17130

Table nº 21: Census results in Andalucía by localities.





Graphic nº 36: Comparison of the censuses in Andalucía.

### Canary Islands

For the first time we had information of a crane in this Community, which was a juvenile that appeared prior to the census and stayed during February, at the Tahodio reservoir, in the north-east of Tenerife Island. Without doubt, this would be a lost bird that may have come from Oued Massa, which is the most closest wintering area for the species in north-western Africa.

## **CENSUS TEAMS**

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-Arguedas rice fields: Jesús Mari Lekuona Sánchez

-Dos Reinos lagoons: Jesús Mari Lekuona Sánchez, David Miqueleiz Cortés, Rajen Ayerra Vildarraz, Moisés Zozaya

-La Mueda: Javier Sola

**Aragón:** Antonio Torrijo Pardos (coordinator)

*Huesca*

-Santa Lecina rice fields: Jose Damián Moreno Rodríguez, Katia Moreno Aspiroz

-Sotonera reservoir: Silvia Duque Mavilla, José M<sup>a</sup> Canudo Gavín, Francisco Javier Quesada Gaibar, Kees Woutersen

-Clamor Vieja: José Damián Moreno Rodríguez

-Ventorrillo: Jesús Lavedán Rodríguez

*Teruel*

-El Balsón: Antonio Torrijo Pardos

-Lechago reservoir: Rodrigo Pérez Grijalvo, Eva Nadal Subías, Carlos Pérez Naval

-Carabejas lagoon: Sabi Martínez Ordás

-El Mojón lagoon: Uge Fuertes Sanz, Marta López Villaba

-El Cañizar lagoon: David Mansilla Lanzuela, Nicolás Ferrer Bergua-Leease, Nuria Gómez Masía, Toñi Anadón Marco, Mateo Lázaro Anadón, Ginés Lázaro Anadón

-Alcañiz saline lagoons: Juan Luis Muñoz Pérez, Esther Yera Posa

-Calanda saline lagoons: Juan Luis Muñoz Pérez, Esther Yera Posa

-El Becerril lagoon: César Izquierdo Tena, Isaac Parra, Chabier de Jaime Lorent

*Zaragoza*

-La Parada reservoir: Francisco Javier Sampietro Latorre, Pablo Monroy Martínez (S.A.R.G.A.)

-Gallocanta Lagoon: Enrique Pelayo, Francisco Javier Sampietro Latorre, Pablo Monroy Martínez, Elvira Ballestín Cantín, Luis Javier Vicente Ballestín, M<sup>a</sup> Pilar Vicente Ballestín (S.A.R.G.A.)

-La Zaida lagoon: Francisco Javier Sampietro Latorre, Pablo Monroy Martínez (S.A.R.G.A.)

-La Loteta reservoir: José Antonio Pinzolas

-Quinto & Belchite: Miguel Serrano Pérez, Juan Gómez de Valenzuela

-Venta El Esquilao reservoir: Juan Gómez de Valenzuela, Miguel Serrano

-Santed saline lagoons: Beatriz Sebastián Minguijón, Sabi Martínez Ordás

-Plano Buena Vista: Lander Goñi

-Sopeña: Diego Villanua Inglada, Marco Villanua Biescas

-Turruquiel-Arana: Javier Domínguez Insa, Rubén Utiel Alonso, Eva Rubio López, Germán García Montolar

-Valereña: Sergio González Martínez, Héctor Bintanel Cenís

-Valdecenicera: Juan Gómez de Valenzuela, Miguel Serrano

-Mequinenza reservoir: Laila Aranda Romero

-Chiprana saline lagoon: Arnau Guardia Povedano

-Hoyo De la Cruz: Conchi Escanilla Usón, Daniel Enfedaque Sariñena

-Pito saline lagoon: Conchi Escanilla Usón, Daniel Enfedaque Sariñena

-Elan: Antonio Torrijo Pardos

-Selgua rice fields: Carlos Perallón Romero

## **La Rioja**

- Cofín & Sotos de Alfaro: Borja Sanz, Borja Solans
- Hervías lagoon: Lidia Roncero, Ignacio Gámez

## **Catalunya**

### *Girona*

- Aiguamolls de l'Empordà: Jordi Sargatal Vicens, Jordi Martí Aledo, Agnes Batlle, Roger Coromina
- Olot: Roger Coromina
- Palafrugell: Miguel Ángel Fuentes, Gerald Dalmau, Roberto Mercial
- Ventalló: Xavier Adell

### *Lleida*

- La Seu d'Urgell: Montse Brugulat

### *Tarragona*

- Delta de L'Ebre: Cristian Jensen, Sergi Sales, Josep Tantull

## **Community of Valencia**

### *Castelló*

- Reservoirs of San Jorge, Traiguera, & River Cerval, lagoons at La Jana & San Mateo: Deborah Fandos Fernández, Manolo Beltrán Ayza, Quique Luque López

### *Valencia*

- L'Albufera Nature Reserve (Mislata): Felipe del Barrio, David Saldaña
- Almenara Marsh: Josep Bort

### *Alicante*

- El Hondo reservoir: Sergio Arroyo Morcillo

## **Community of Murcia**

- Santomera reservoir: Francisco Montoya

## **Balearic Islands** (coordinator : GOB)

### *Menorca, Mallorca & Ibiza:*

- Marc Anglada, Juanjo Bazán, Sergi Saules, Carlos Daza, Mateu Garau, Pere Garcías, Josep Manchado, Oliver Martínez, Mike Montier, Pere Vicens, Lalo Ventoso

## **Castille y León**

### *Zamora*

- Villafáfila lagoons: Mariano Rodríguez Alonso, Jesús Domínguez Fernández, Eduardo Vega Rabano, Manuel Hernández Jaspe, Luis Fernando San José Luengo, José Miguel San Román Fernández, Manuel Miñambre Fidalgo, Javier Pintado Corcero

### *Palencia*

- La Nava lagoon: Fernando Jubete Tazo, Fernando Jubete Guzón
- Boada de Campos lagoon: Alejandro Rebollo

### *Valladolid*

- Mullidares, Los Lavajones y La Zarza: David García López, Javier García Sáez, Juan Matute de Toro, Marcos Gómez Sanz, Epifanio Ramos, José Gil Alonso, Rafael Herrero Viturtia, Juan Antonio Medina Cuaresma
- La Colada: Juan Antonio Medina Cuaresma

### *Ávila*

- El Hoyo lagoon: José María García Jiménez, M<sup>a</sup> Cruz González; Arón Blázquez
- Garganta de Santa María: Blanca Martín, Lea Sanchez, J.A. Corcobado, Israel Alvarez (ARDEIDAS)

-Rosarito North: Juan Fernández-Elipe (ARDEIDAS)

#### *Salamanca*

-Riolobos weir: Gonzalo Criado Alonso, Lucía Alonso, Jaime Tejedor, Marina Paniagua, José María Azpeitia, Susana Lopez, Gloria Olivares

-El Campo pool: Jaime Sánchez Martín

-Santa Teresa reservoir: Pedro L. Ramos Bueno (coordinator), Alejandro del Amo García, José Vicente Sánchez, Ángel González Mendoza, Roberto Carbonell Alanís, Vega Bermejo Castelnuo, Alfonso Asenjo Fernández, María Jesús Justo Nieto, Javier González Estévez, David Valle Vallejo, Majo Benítez, Vicente G. Garrudo, E. Hernández-Lambrano, Ángel García Sánchez

-Castroverde reservoir: José María Martín Herrero

### **Community of Madrid**

-El Pardo reservoir: Francisco José Cantos Mengs, Manuel Martínez Duchel, Adolfo Rodríguez Pérez

-Madrid norhe: Juan Carlos Rubio

-River Manzanares: Jorge Crespo

### **Castile-La Mancha**

#### *Albacete*

-La Torrecilla lagoon (Casa Higinio): Raquel Mansilla Cerdán, Noé Cuesta Ortiz, Elsa García, Juan Carlos Pastrana, Ainhoa Esteve, Marcelo Lucas de las Heras, José Antonio Cañizares, Marcelo Quesada, Sergio Palacios, Julia Giménez (SAO), Siro González (SAO)

#### *Guadalajara*

-lagoons at Honda, Méndez, Pasadilla, Llana, Cuartizo & Mojones Blancos: Uge Fuertes Sanz, Marta López Villaba

#### *Toledo*

-Rosarito reservoir: Eugenio Garrido, Juan José Alarcía, José Manuel Fernández, Manuel Salcedo, Julio Menéndez (ARDEIDAS), Dave Langlois

-Navalcán reservoir: José L. De la Cruz Alemán, Antonio Alía, Miguel Ángel de la Cruz, Francisco Rodríguez, Antonio Rodríguez (ARDEIDAS)

-River Tiétar, Buenaventura: Rubén Segovia, Alberto González (ARDEIDAS)

-El Grullo reservoir: César Clemente

-El Verdugal: César Clemente, Sergio Mayordomo

-Castrejón reservoir; José Carlos Oliveros, Pilar Villalobos, Óscar Frías, Ángel Velasco García

-Vadoancho: Pablo Joaquín Álvaro García, Julio García, M<sup>a</sup> Carmen Comendador, Rocío Castañeda

-Dehesa de Villafranca de los Caballeros: Rocío Castañeda, M<sup>a</sup> Carmen Comendador

-Larga lagoon, Villafranca: Gerardo Barsi Moreau, Ángel Velasco García

-El Llongar lagoon: Gerardo Barsi Moreau

-Tirez lagoon: Gerardo Barsi Moreau, Ángel Velasco García

-Peña Hueca lagoon: Ángel Velasco García

-El Taray lagoon: Ángel Velasco García

#### *Cuenca*

-Manjavacas lagoon: Antonio Paredes, Yolanda Peñalver, Jesús Porrero, Noelia Alfaro, Alicia Salido

-Alarcón reservoir: Agustín Villodre Corrillero, Fernando Alonso Gutiérrez, Cecilia Díaz Martínez, Antonio Torrijo Pardos, Luis Miguel Bautista

-Buendía reservoir: Nuria Cardo Maeso, Fernando Alonso Gutiérrez

- El Hito lagoon: Alfredo Mirat, Antonio Mirat, Linda Lawrance, Joaquín Rodríguez Moreno, Yolanda Rozaléz, Jesús Romero, Juan Carlos del Moral
- Campos del Paraíso reservoir: Gumer González
- Ciudad Real
- Las Tablas de Daimiel National Park: Manuel Carrasco, Claudio Ruíz, Crescencio Benegas, Juan C. Felipe
- La Veguilla lagoon: Pablo Álvaro García, Pedro Jesús Suárez Gomaiz, Isabel Castellanos Botico
- Confluence of the rivers Záncara & Ciéguela: Pedro Bustamante Bustamante, Arturo Núñez Calvo, Joaquín Álvaro, Ana Palomo Ruano, Luis Felipe Alhambra Molina
- Pajares lagoon: Benito Montiel Moreno, Francisco Javier Sánchez González
- Salicor lagoon: María José Valencia Sánchez-Arévalo, Benito Montiel Moreno, Pedro Bustamante Bustamante
- El Camino de Villafranca lagoon: Luis Felipe Alhambra Molina, Sonia López-Romero Moraleda, Julio Moyano López
- Gasset reservoir: José Gómez Aparicio
- La Atalaya: Manu Santa-Cruz
- Campo de Calatrava: David Pérez
- Corral de Calatrava: Francisco Hidalgo Carrión
- La Torre de Abrahám reservoir; Lucas Gómez Resa, José Gómez Aparicio, Jesús Monroy Manzanares, Yolanda de Gregorio Morena, Ángel Arredondo Acero; Juan López Jamar, Miguel Ángel Díaz Portero, Begoña
- Las Povedas reservoir: Benito Garrido, Ángel Gómez Manzaneque
- Alcudia valley: José Gómez Aparicio, Miguel Ángel Díaz Portero, Miguel Ángel Sonlleva García, Yolanda de Gregorio Morena, Ángel Arredondo Acero, Julia Burgos
- Tirteafuera: Yolanda de Gregorio Moreno, Ángel Arredondo Acero

## **Extremadura**

### *Cáceres*

- Gabriel y Galán reservoir: Hugo Sánchez Mateos, Raquel Lozano, Alba Vicioso, Martín de la Cruz, Miguel Gutiérrez: Sara Velázquez, Gabriel Franco
- Borbollón reservoir: Miguel Todón Castaño
- El Gordo: Maribel Gutiérrez
- El Palancoso lagoon: Vicente Risco
- Valdecañas reservoir (Bohonal): Eva Garzón (SEZ)
- El Verdugal: César Clemente, Sergio Mayordomo Ruíz
- Talaván reservoir: José Carlos López Fuentes
- El Excedente pond: José Carlos López Fuentes
- Sector Brozas: Manuela Rodríguez, Fernando Sánchez,, Helios Dalmau
- Membrío, La Clavería pond: Antonio Galán Fariñas, José Luis Bautista Morán, Diego Felipe Navarro Sarró
- Molano reservoir: Marco Antonio Sánchez
- Mata de Alcántara reservoir: Fernando Sánchez, José Luis Bautista Morán
- La Solana reservoir: Fernando Sánchez
- El Cuartón/Tejarejos reservoir: Sergio Mayordomo Ruiz, César Clemente, Macarena Cuadrado Lirio
- Tiétar Valley-Monfragüe: Javier Prieta Díaz, Álvaro García Martín
- Espinel pond: Manuel Moro
- Arroyo Casillas reservoir: Jesús Porras
- El Tozo reservoir: Jesús Porras
- La Generala pond: Javier Caballero Álvarez
- Las Seguras: Cecilia Sanchez Villares

- San Martín reservoir: Agustín Mogena, Juan Carlos Núñez Arjona
- El Campazo pond: Neil Renwick
- La Canchaleja weir: Antonio Calvo Búrdalo
- Badajoz*
- Almansa: José M<sup>a</sup> Traverso Martínez, Mauro Rodríguez
- Recula Orellana: José M<sup>a</sup> Traverso Martínez
- Río Guadalemar: José M<sup>a</sup> Traverso Martínez, Mauro Rodríguez
- El Alandre: José M<sup>a</sup> Traverso Martínez, Mauro Rodríguez
- Judío valley: Manuel Gómez Calzado
- Las Bodeguillas: Manuel Gómez Calzado
- Zangallón: Luis M. Venancio
- Morantes: Jose Luis Bautista Morán, Francisco Lopo
- Dehesa de Cubillo: Justo Tarrío, Ana Cordero, Carmen Campos, Mariano Cabrero
- Los Canchales reservoir: ADENEX (Elvira del Viejo Pinilla, Antonia Cangas, Ismael Sánchez, Francisco Lopo, Susana Burgos, Julián Cendrero, Juan Cendrero, Francisco Castro, Jesús Solana), Beda, Isabella, Alfonsa Moreno, Elvira Cano, Fátima, Serafín, Paula, Ana Fernández, Carmen Fernández
- Cornalvo reservoir: Raúl Alcantud Caballero
- Alange reservoir: José A. Román Álvarez
- Las Navas: Manuel Calderón Carrasco, José Antonio Román Álvarez
- La Albuera lagoons: José M<sup>a</sup> Álvarez Leal
- Villalba de los Barros reservoir: José M<sup>a</sup> Álvarez Leal
- Gamonal/El Romo: José M<sup>a</sup> Álvarez Leal
- Valdelagrana: Juan Gregorio Miranda Alor
- Las Merinillas: Nicolás Piriz Muñoz
- Villarreal: Jacobo Hernández Pulido
- Los Valverde ponds: Consuelo Pérez Moreno, Alicia Casillas, Yasmina Annicchiarico Sánchez.
- Dehesa de las Yuntas: Andrea García Teruel, Daniel Velarde Pizarro, Gerardo Pizarro García
- La Serena: Manuel Calderón Carrasco (coordinator) Yasmina Annicchiarico Sánchez. Participants: Yasmina Annichiarico Sánchez, Águeda Juliana Mateos Rodríguez, Consuelo Pérez Moreno, Daniel Merino Velasco, Guillermo Crespo, Manuel Pozo Centeno, Antonio Balseira, Juan José Benítez, Agustín Sanabria Hidalgo (ANSER)
- El Moral reservoir: José Ángel Sánchez González
- El Bercial reservoir: José Ángel Sánchez González
- Cuncos reservoir: Jesús Gil Morión
- Mirador de Cuncos: Mariano Cabrero Rubio
- Friegamuñoz: Mariano Cabrero Rubio
- Arroyoconejos reservoir: Andrés González Muñoz, Inés M<sup>a</sup> Sánchez (ADENEX Azuaga), Gustavo Gahete
- Casas de Reina: Luis Salguero Báez
- Rosal reservoir: Gustavo Gahete, Alejandro Montero
- Central Zone*
- Sector Logrosán: Neil Renwick
- Sector Acedera/Puercas: Manuel Gómez Calzado, Juan Parralejo
- Sector Las Rañas/Casas de Don Pedro: Manuel Gómez Calzado, Juan Parralejo
- Sector Moheda/Vegas Altas: Manuel Gómez Calzado, Manuel Gómez Guarín, Miguel Gómez Guarín, Anabel Moreno Fernández
- Sector Madrigalejo/Casa Hitos: Martin Kelsey
- Sector Palazuelo: Ángel López
- Sector Los Guadalperales: José Ángel Sánchez González

- Sector Villar de Rena/Miajadas: Sandra Criado Martin, Chris Hodge, José A. Román Álvarez.
- Sector Valdehornillos/Almoharín: Jesús Valiente López (ADENEX), Juan Alfonso López Cerrato, Antonio Calvo Búrdalo, José A. Román Álvarez.
- Sector Guadamez/Búrdalo: Elvira del Viejo Pinilla, Antonia Cangas, Antonio M<sup>a</sup> Sánchez Conde, José A. Román Álvarez
- Sector Yelbes/Medellín: Fernando Yuste

## **Andalucía**

*Córdoba*: Juan Manuel Sánchez Esquinas (coordinator)

- La Colada reservoir: José Cañas
- Valhondo reservoir: Juan Manuel Sánchez Esquinas
- Solana de Guadamatilla: Antonio Leiva
- River Zújar/La Pizarra: Rafael Pinilla Muñoz, Miguel Carrasco Casault, Juan de la Cruz Merino
- Embalse de Cogollarta: Carmen María Ayuso
- Sierra Boyera reservoir: Miguel Ángel Mesa López
- Fuente la Zarza: Juan Felipe Flores Moyano
- Jardoso reservoir: José María Molina
- Navalespino reservoir: Miguel Corvillo Seco, Alejandro Montero
- Peñalazorra/Matallana: Marga Martín Pachón.

*Sevilla*

- Las Turquillas: Javier Rengel
  - Dehesa de Bucaré: Paco Chiclana
- Doñana National Park: Rubén Rodríguez Olivares, Antonio Martínez.

*Málaga*

- Fuente de Piedra lagoon: Javier Fregenal (coordinator), José A. Cortés, Miguel Domínguez, Lázaro Torres, Gonzalo Rodríguez, Juan Manuel Trujillo, Laura Barroso, Benito Sánchez, Gregorio Perán, Pablo Ramírez, Diego Ramírez, Juan Cristobal De Haro, Javier Rico, Michel Rennes, Francisco Palomeque

*Granada*

- Baza: Juan Antonio Dengra
  - Huétor-Tajar: Mick Richardson
- Huelva: José Manuel Méndez (coordinator)
- River Tinto: José Manuel Méndez
  - River Odiel: Víctor Fiscal

*Cádiz*

- Trebujena marshes: JuanPe Torres, JuanPe Torres jr.
- Bonanza salt pans: Manuel Barcell Arizón, Concepción González de los Ríos, Inmaculada González Fernández, Francisco Solera González, Francisco Solera del Río, Juan Pedro Torres, Juan Pedro Torres (junior) AVESNATURA
- La Janda lagoon: Arkadiusz Broniarek
- El Barroso Bajo: Manuel Barcell de Arizón, Javier Hidalgo de Argüeso, Francisco Solera del Río

## **Canary Islands**

*Tenerife*

- Tahodio reservoir: José Luis Suarez Díaz, Eduardo García del Rey



Image nº 38: Census team at Borbollón reservoir (CC). Photo: Miguel Todón





Imagen nº 39: Census team at Dos Reinos lagoon (NA). Photo: Jesús Mari Lekuona



Image nº 40: ADENEX census team at Los Canchales reservoir (BA). Photo: Francisco Lopo



Image nº 41: Census team at Fuente de Piedra (MA). Photo: Juan Cristóbal de Haro



Image nº 42: ANSER census team at Almorchón Castle (BA). Photo: Esther Díaz



Image nº 43: Census team at Gabriel y Galán reservoir (CC). Photo: Hugo Sánchez



Image nº 44: Census team at Santa Teresa reservoir (SA). Photo: Vicente G. Garrudo



Image nº 45: Census team at El Hoyo lagoon (AV). Photo: José M<sup>a</sup> García



Image nº 46: Census team at La Sotonera (HU). Photo: Francisco Quesada



Image nº 47: SEZ census team at Valdecañas reservoir (CC). Photo: Eva Garzón



Image nº 48: Census team at Alarcón reservoir (CU). Photo: Antonio Torrijo



Image n° 49: Census team at El Rosal reservoir (BA). Photo: Gustavo Gahete.



Image n° 50: Census team at Rosarito reservoir (TO/CC) . Photo: José L. De la Cruz

## **PRODUCTIVITY**

This is the third season in which productivity of the wintering birds has been studied. Reproduction in 2021 was successful, and this translated into a good productivity of chicks.

Once again, the majority of the information was collected in the first months, which is when the chicks are more easily distinguishable from a distance, with their mainly brown plumage. As the season progresses the base of the bill and the back of the neck blacken, and the cheeks and stripe along the length of the neck turn white. The most precocious are already difficult to pick out in December, while the later ones retain their appearance until the end of the season.

Information was collected about 675 juveniles which accompanied 5,801 adults/sub-adults (n=6.476), which means that 10.42% of the total of flocks studied were juveniles. This is an increase of 1.11% compared to 2020, although the survey was much smaller than then.

A total of 64 flocks was studied: 5 in Huesca, 1 in Zaragoza, 1 in Barcelona, 7 in Zamora, 2 in Valladolid, 2 in Ávila, 2 in Albacete, 4 in Cáceres, 32 in Badajoz, 1 in Huelva, 2 in Málaga and 1 in Granada. The biggest flock had 1,509 individuals (Fuente de Piedra, MA), and the smallest had 4 individuals (Mullidares, VA).

Of the 206 families observed, 174 were with 1 chick (84.46%), 31 had 2 (15.04%) and 2 with 3 (0.97%). Regarding the previous season, families with one chick decreased by 3.5% and those with two increased by 3.3%, as did those with three, by 0.65%. This indicates that the average productivity per pair was 1.17 chicks.

This information was collected by: José L. Bautista, Juan C. Albero, Jorge Leonor, Eneko Leonor, Juan R. Cuervo, Sergio Arroyo, Marcelo Quesada, Eduardo Gracia, José Leal, José A. Román, Javier Fregenal, Carlos Esteban, Miquel Bonet, Ángel López, Susana Noguera, Fernando Rico, Chus Fernández, José M. Méndez, Richard Fleming, Felipe Rosado, Toño Fernández, Gerardo Pizarro, Andrea García, Daniel Velarde and Martin Kelsey. To all of them, my most sincere thanks.



Image nº 51: Juvenile in early winter in Extremadura. Photo: José A. Román

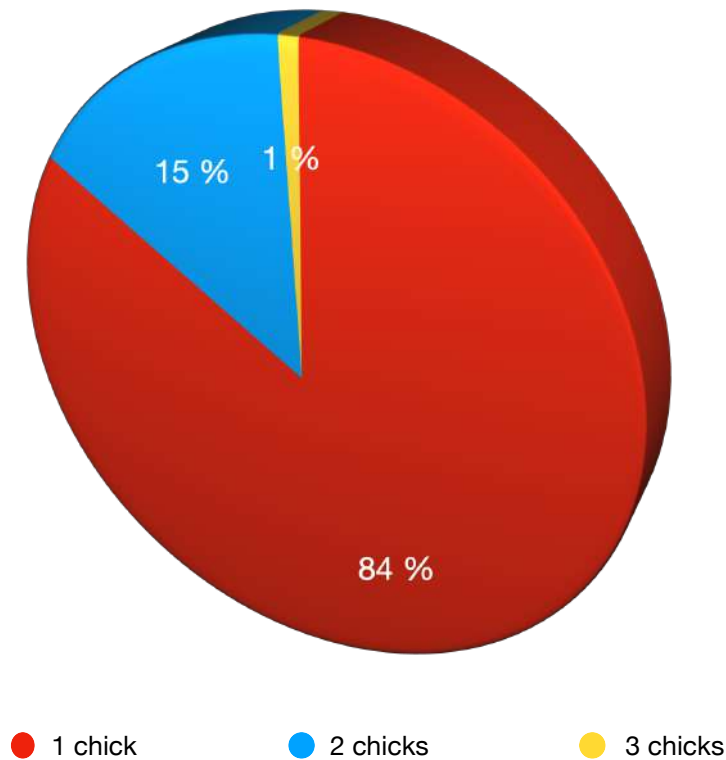


Image nº 52: Family with 3 chicks in Extremadura. Photo: José A. Román



Image nº 53: Juvenile already significantly changed by 31 December at Palazuelo (BA). Photo: José A. Román





Graphic nº 37: Family size in 2022.

### **FIDELITY TO THE WINTERING AREA**

Cranes are birds which stay faithful to the territories in which they were born and also to their wintering areas (philopatry). The young birds are “imprinted” with the territory they knew in their early days and as adults they tend to occupy adjacent areas to their natal area, as this is usually held by their parents, and if not then some of their descendants will occupy it.

This same behaviour is observed in wintering areas. Pairs or families usually occupy the same plots each year, regardless of the habitat, whether dehesa or stubble. These will be the same as they got to know in their first winter when they came with their parents. Just as happens in the breeding areas, the birds occupy adjacent plots if the parents have occupied their plots, so the birds in an area may be related and consist of birds of several generations.

This is evidenced in the area of Los Pedroches (CO), thanks to colour-ringed birds and where the known crane “Josefina” occupies a plot in the dehesa, which is the same, year after year (Juanma Sánchez *pers.com.*). In addition, the offspring of this crane, and their own offspring, use adjacent plots in the same dehesa to spend the winter and raise their broods, so that a good part of the area is occupied by all of a dynasty. Josefina came to this dehesa with her parents and since then has returned continuously for 23 years with her offspring, some of them ringed also, and they have done the same afterwards.

Dehesas are usually subject to few changes, other than those with rotations of cereal crops and plots left fallow or for grazing, so the search for food is usually predictable.



Image nº 54: The crane “Josefina” in Los Pedroches during the current winter. Photo: Juanma Sánchez.

However, in the stubble fields the changes are usually more radical, as some plots may be subjected to significant changes between one year and the next, such as going from maize to tomatoes or vice-versa, so the predictability of finding food is subject to more variables. Nevertheless, some pairs show the same fidelity as those seen in the dehesas and occupy the same plot during the entire winter, year after year. Such is the case with “Isla”, a German crane, who stays with her partner in the same place throughout the winter, so she was given the name of the farm where she stays, near to the River Búrdalo (BA). This bird was seen for the first time in the plot in 2011 and since then it has been reported 30 times in the following 10 years in the same place and only three times in the neighbouring area and once at Los Canchales reservoir (BA), some 40km to the west (also in 2011). It is known that during the first years, cranes move between locations, but generally over time, and once paired up, they usually settle in one place and regularly spend each winter there. This individual is a female, but we do not know which of the two sexes chooses the wintering area.

Another example of fidelity is shown by a crane, this time a male, which can be identified because of partial melanism on the neck and cheeks. We have been following this bird for three seasons and it also is equally settled in a particular plot, near to the town of Miajadas (CC), where we have been observing it. It is a maize plot and this year the bird was accompanied by two chicks. They stayed all winter in the same place.



Image nº 55: “Isla” in her wintering location. Photo: José A. Román



Image nº 56: Crane with partial melanism at its wintering location, accompanied by one of its chicks. Photo: José A. Román

Another striking case is that of two siblings from Finland which, as juveniles in 2018, we detected near Rucas (BA). In the next season they were seen together again, which is unusual, as generally siblings separate although these ones stayed together.

In the following winters they were seen separately in the Rucas area, though were not seen together. However, in the current season they were seen together again in the same flock and area on several occasions.

It is possible that they continue to have emotional links and this leads them to share the same feeding and resting habitat that they were shown by their parents, which, in all probability, are also part of the same flock with new offspring.



Image nº 57: One of the Finnish siblings near Rucas (BA). Photo: José A. Román



Image nº 58: The second sibling, part of the same flock. Photo: José A. Román.

## **USE OF FEEDING HABITAT**

Cranes are primarily vegetarian, but they also consume animal material, particularly invertebrates (spiders, worms, beetles, larva, ants, etc.) and some small vertebrates, especially during the breeding season.

The vegetarian diet includes tender plant shoots (cereals, legumes, etc.), grains, fruit, bulbs, rhizomes and tubers.

Grains are usually consumed in cereal stubbles (rice, maize, wheat, barley, etc.) and occasionally directly from the plants themselves, such as rice, when they are mature and have not been harvested (in the autumn); however, they don't do this when the maize cobs are still on the plant.

The job they do when they are foraging in stubble is important, since by removing grain they prevent it from germinating, especially in warm and damp autumns, which can be a problem for farmers when they are working to prepare for the next sowing; working with stubble is different to new plants, which offer more resistance.



Image n° 59: Crane with germinating maize. Photo: Jose Leal

Fruit consumption is generally from the holm oaks (*Quercus ilex*) although they may also feed on seeds in sunflower stubble, which they probably ingest without removing the husk, which is something they do with the acorns. After picking them up, the cranes usually place the acorns in a small depression, and with accurate pecks, they break the covering and extract the fruit cleanly. The technique for eating acorns is shown to the juveniles by the adults, as they have to learn to know how to obtain food from this fruit. They also obtain proteins and fat from them in the most efficient way and with less effort than small grains. They generally consume acorns when they fall from the holm oaks on reaching maturity, but if for any reason they fall before maturing, the cranes will eat them anyway.



Image nº 60: Consumed acorns, although not mature, at the start of November. Photo: Jose A. Román.



Image nº 61: Crane family eating acorns in dehesa. Photo: José Leal



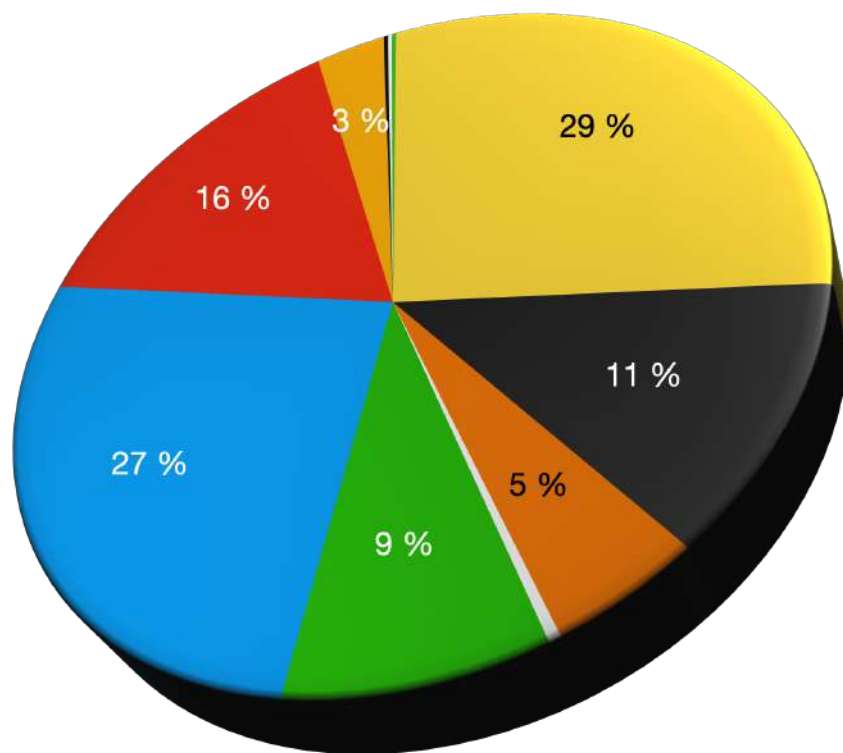
During this season 510 rings were read on cranes in Spain, of which 146 (29%) were Finnish, 56 (11%) Estonian, 24 (5%) Latvian, 2 (0.2%) Lithuanian, 81 (16%) Swedish, 17 (3%) Norwegian, 1 (0.2%) Danish, 45 (9%) Polish, 135 (27%) German, 1 (0.2%) Czech, 1 (0.2%) French and 1 (0.2%) Spanish.

A Danish-ringed bird was read for the first time, which was carrying a GPS; it was in Extremadura.

Of the Finnish total, 14 wore flags. Of those seen carrying GPS, 3 were German, 6 Estonian, 3 Finnish, 1 Lithuanian, 1 Latvian, 1 Polish, 4 Swedish and the Danish bird.

One Finnish crane was controlled 23 times at Gallocanta (Z/TE) and once at Sotonera (HU), and a German crane was controlled at El Hoyo Lagoon (AV) on 20 occasions.

The oldest crane was a Swedish bird ringed in 1994, seen in Extremadura (therefore 28 years old); of 2 Finnish birds ringed in 1999 (23 years old), one was in Córdoba, the other in Extremadura, and another Swedish bird, ringed in 2000, was also in Extremadura.



● FINLAND    ● ESTONIA    ● LATVIA    LITHUANIA    ● POLAND    ● GERMANY  
● SWEDEN    ● NORWAY    ● DENMARK    LITHUANIA    ● SPAIN  
FRANCE

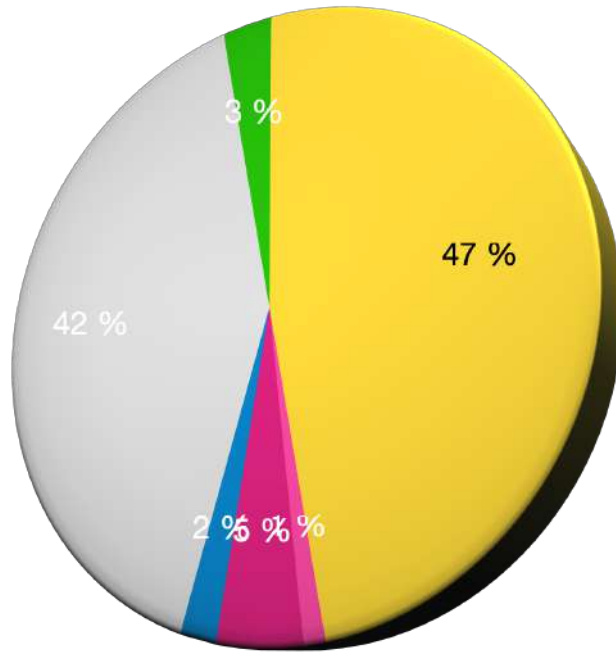
Graphic nº 38: Percentage of cranes with coloured rings read in Spain during 2021/2022, by country. Source: “Grullas al Sur de los Pirineos”.





Image nº 62: Estonian crane, “Lootvina”, carrying a GPS in Extremadura. Photo: José A. Román.

The distribution of readings by Autonomous Community was as following: 261 in Aragón (47%), of which 252 were seen in Zaragoza province, 10 in Teruel and 24 in Huesca. The majority of those in Zaragoza were seen at Gallocanta Lagoon and those in Huesca were at Sotonera (A.A.G. and G.O.O.). 6 was seen in Navarra. 25 were read in Castile and León (4%): 9 in Salamanca province, 11 in Ávila and 5 in Zamora. In Salamanca, the birds were seen at Riobos weir, in Ávila at El Hoyo lagoon and El Rincon reservoir, and in Zamora they were at Villafáfila lagoons. 11 (2.3%) were recorded in Castile-La Mancha: 3 in Cuenca, 4 in Toledo and 4 in Ciudad Real. The birds in Cuenca were at El Hito lagoon and Alarcón reservoir, those in Toledo were at the Villacañas lagoons, and those in Ciudad Real were at Las Tablas de Daimiel. 235 were read in Extremadura (42%), 54 in Cáceres province and 181 in Badajoz. The great majority were seen in the upper Guadiana Valley (Central Zone), which is shared by the two provinces. In Cáceres they were also seen at Borbollón, Gabriel y Galán and Cuartón reservoirs, at Zorita and La Bazagona. In Badajoz they were also observed at Los Canchales and Alange reservoirs, as well as at Hinojosa del Valle and Arroyo Conejos. In Andalucía 16 were read (2,8%), 13 in Córdoba, 1 in Málaga, 1 in Sevilla and 1 in Huelva. Those in Córdoba were seen in the Los Pedroches area, the Málaga bird was at Campillos lagoon, Sevilla’s was at Doñana and Huelva’s was at Moguer.



- ARAGÓN
- CASTILLA LA MANCHA
- EXTREMADURA
- NAVARRA
- CASTILLA Y LEÓN
- ANDALUCÍA

Graphic nº 39: Rings read, by Autonomous Community. Source: “Anillas al Sur de los Pirineos”



Image nº 63: Young German crane, observed at Huélagá (CC). Photo: Manuel Flores

Although the general trend is to use the octagonal style of ring (ELSA type), there are some countries, such as Poland, that use a single ring with an alphanumeric code, and Finland which, as well as a flag, has used tubular rings with three colours stuck onto a uniform base and generally with alphanumeric characters on each one.

The latter present reading problems, because over time some of the colours, particularly the upper one, come off and reveal the base colour, which is usually red, so the loss of this ring produces reading errors, erroneously identifying the bird. A peculiar case has been observed in Los Pedroches (Juanma Sánchez *pers.com.*): the bird in question was wearing WYY(6F1)/BuYBk last year, but the white came off, showing the red base, and it slipped to the bottom, so it appears to be wearing four rings instead of three, and the number 6 can now be read at the bottom, so the alphanumeric code is now "F16", meaning that anyone who reads it will be given an error if they don't know this bird.

Another case has been seen on another Finnish bird in Extremadura, which has lost part of the upper ring, so it retains the blue colour on one side and shows red on the other, which produces both confusion and reading errors, depending on which side is seen.

Although this type of ring is no longer used, they are giving quite a few errors and will continue to do so as the rings and the birds that wear them get older.



Image nº 64: Finnish crane at Los Pedroches (CO) in 2020 with the combination: WYY(6F1)/BuYBk. Photo Juanma Sánchez,



Image nº 65: The same crane this year, now showing: RYYW(F16)/BuYBk. Photo: Juanma Sánchez.



Image nº 66: Finnish crane with the partial loss of one colour; the correct reading is WYY (5F5)/BuWY. Photo: Pedro Holgado.



Image n° 67: Young German crane at Granadilla (CC). Photo: Michel Viscpens.



Image n° 68: Estonian crane at Huélagá (CC). Photo: Manuel Flores.



Image nº 69: Swedish crane wearing GPS/GSM at Miajadas (CC). Photo: José A. Román.



Image nº 70: Young Finnish crane wearing a flag at Gallocanta (Z). Photo: Felipe Rosado.



Image nº 71: Finnish crane at Navalvillar de Pela (BA). Photo: Ángel López.



Image nº 72: Estonian crane at Santa Amalia (BA). Photo: Juan J. Negro.



Image nº 73: Swedish crane at El Torviscal (BA) with combinations on the wrong legs (the country colours should be on the left leg). Photo: José A. Román.



Image nº 74: Norwegian crane at Huélaga (CC). Photo: Miguel Todón.





Image nº 75: Swedish crane ringed in 2000 with discoloured spiral rings at Miajadas (CC). Photo: José A. Román.



Image nº 76: Polish crane with an alphanumeric code at Yelbes (BA). Photo: José A. Román.



Image nº 77: German crane at Arguedas (NA). Photo: Jesús Mari Lekuona.



Image nº 78: Young Estonian crane at Gallocanta (Z). Photo: Juan Villora.



Image nº 79: German crane “Isla” at Yelbes (BA). Photo: José A. Román.



Image nº 80: Ringed crane in flight at Alange (BA). Photo: Juan J. Negro.

## **PRENUPTIAL MIGRATION**

Some migratory movements occurred at early dates, certainly favoured by the persistence of the anticyclonic weather, with high temperatures (for the dates) in the middle of the day and the absence of winds.

30/01/22: 64 over Begonte (LU) Eulogio García.

01/02/22: 60 over Los Molinos (M) Alejandro Escarpa.

02/02/22: group over Villoldo (P) Gonzalo Criado; 200 arrive at Gallocanta lagoon (TE/Z) Antonio Torrijo.

03/02/22: 300 over Biota (Z) Esther Yera.

04/02/22: 3 over Toledo, Manuel Nieto; 30+31 over San Juan de la Peña (HU) Eduardo Gracia: group over Madrid

05/02/22: The first cranes leave the Borbollón reservoir area (CC) Goyo Naharro; 350 fly over Campo Maior (PT) Raúl Granados

1,000 arrive at Arjuzanx (FR) coming from Spain, Sophia Laugareil.

06/02/22: Groups migrating over San Lorenzo de Flúmen (HU) Eduardo Gracia; 350 over Santacara (NA) Gonzaga Santesteban; 35+14 over Valdetorres de Jarama (M) Johnathan Dadds, García de los Ríos, Félix Arribas; Juan C. Arroyo, José A. Ximenis.

07/02/22: 3,000+ migrating over the Central Zone of Extremadura (BA/CC) Manuel Gómez; 40 over Alcalá de Henares (M) David Araque; 909 roost at El Oso lagoon (AV) José M<sup>a</sup> García, Arón Blázquez: 1 at Tahodio reservoir (TF) Mariano Martínez.

08/02/22: 400 migrating over Madrigalejo (CC) Manuel Gómez; 633 in 16 groups set off from Gallocanta lagoon (Z/TE) and 500 arrive in the afternoon, Antonio Torrijo; 10, 53, 23, 55, 10, 25, 30, 25 over Madrid, José M<sup>a</sup> Rojo; 18 over Alcorco reservoir (GU) Jesús M<sup>a</sup> Serrano; 2,000 migrating over Ugena (TO) Carmen Conde; 100 over Leganés (M) Jorge García; 5 over Alto la Varga (BU) Rafael Díez, César Díez; 80 over Madrid, Carlos Herranz; 20+30 set off from Alboré pool (HU) Pablo Vallés: 100 over Leganés (M) Ricardo Rodríguez, Jorge García; 60 over Rida (Z) Javier Train; 149 over Figueruelas (Z) Esther Charles.

09/02/22: 400 over Aoiz (NA) Jesús Mari Lekuona, David Miqueleiz; 60 over Las Rozas (M) Juan P. Fresno; 100+ over Quintos de Mora (TO) and several hundred over Toledo, Ángel Velasco; 52 over Buendía reservoir (GU/CU) Jorge Atance (DALMA); 40 over Valdemorillo (M) José M. González; 44 over Villanueva del Pardillo (M) Mariajo Caballero; 3 over Pastriz (Z) José M<sup>a</sup> Sánchez.

10/12/22: 10 over Grávalos (LR) Javier Robres; 520 over Calahorra (LR) Jesús Ucha; 2 over Madrid, Peter Swinden; 60 over San Agustín de Guadalix (M) Rubén Ramos.

11/02/22: 1,050 set off from Gallocanta lagoon (Z/TE) Antonio Torrijo, José M. Pueyo.

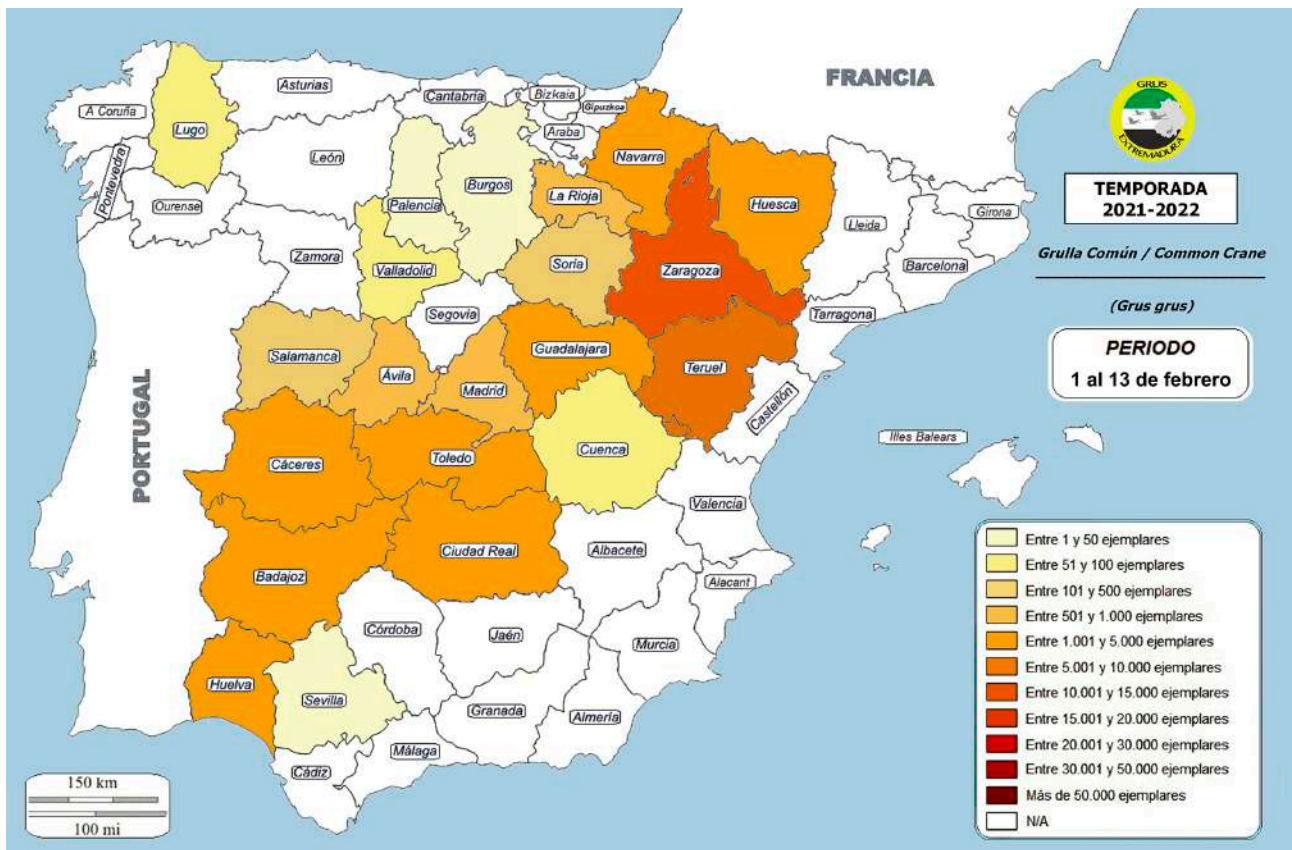
12/02/22: 559+108+6+26+50+20 set off from Alboré pool (HU) Francisco Quesada; 2,185 in 12 flocks over Retuerta del Bullaque (CR) Gerardo García; 500 arrive at Gallocanta lagoon (TE/Z) Antonio Torrijo, José M. Pueyo; 120 over Yunquera de Henares (GU) Fernando (DALMA); 200+100 over El Recuenco (GU) Javi Rejos (DALMA); heard at Renera (GU) David Almonacid; 117 over Heras del Ayuso (GU) José L. Arias (DALMA); 1,300 at Campillos lagoon (MA) Javier Fregenal; 357 at Pétrola (AB) Raquel Mansilla; 40+ over the Sierra de Quilomas (SA) Cristina Giner; 8,000 roost at Alboré pool (HU) Francisco Quesada, Jorge Hernández, José M<sup>a</sup> Canudo, Clara, Sara; 738 roost at La Janda lagoon (CA) Arkadiusz Broniarek; 633 roost at El Hoyo lagoon (AV) Arón Blázquez; 200+180+850 over Rueda de Jalón (Z) Eduardo Gil; passage over Palencia, Fernando Jubete Guzón; 18 over Velilla de San Antonio (M) Sandra Gassol; 20 over Utebo (Z) Pablo Monroy; 350 over San Juan De la Peña (HU) Arturo Bobed; 200, 180,850 over Rueda de Jalón (Z) Eduardo Gil; 47 over Sotillo de Achada (AV) Octavio Infante; 100 over Salado

River (GU) Fernando Ávila; 180, 90 over Muriel de la Fuente (SO) Virginia Marco; 250 over Valdefuente de Sangusín (SA) Julián Velasco; 80 over Iglesias de Tiétar (TO) Amparo Moreno; 150 over Cadalso de los Vidrios (M) Krystol Morák; 100 over Arrabal del Portillo (VA) Samuel de la Calle; 83 over Pedrajas de S. Esteban (VA) Rocío Gómez; 177 over Las Rozas (M) Eduardo Carbajo.

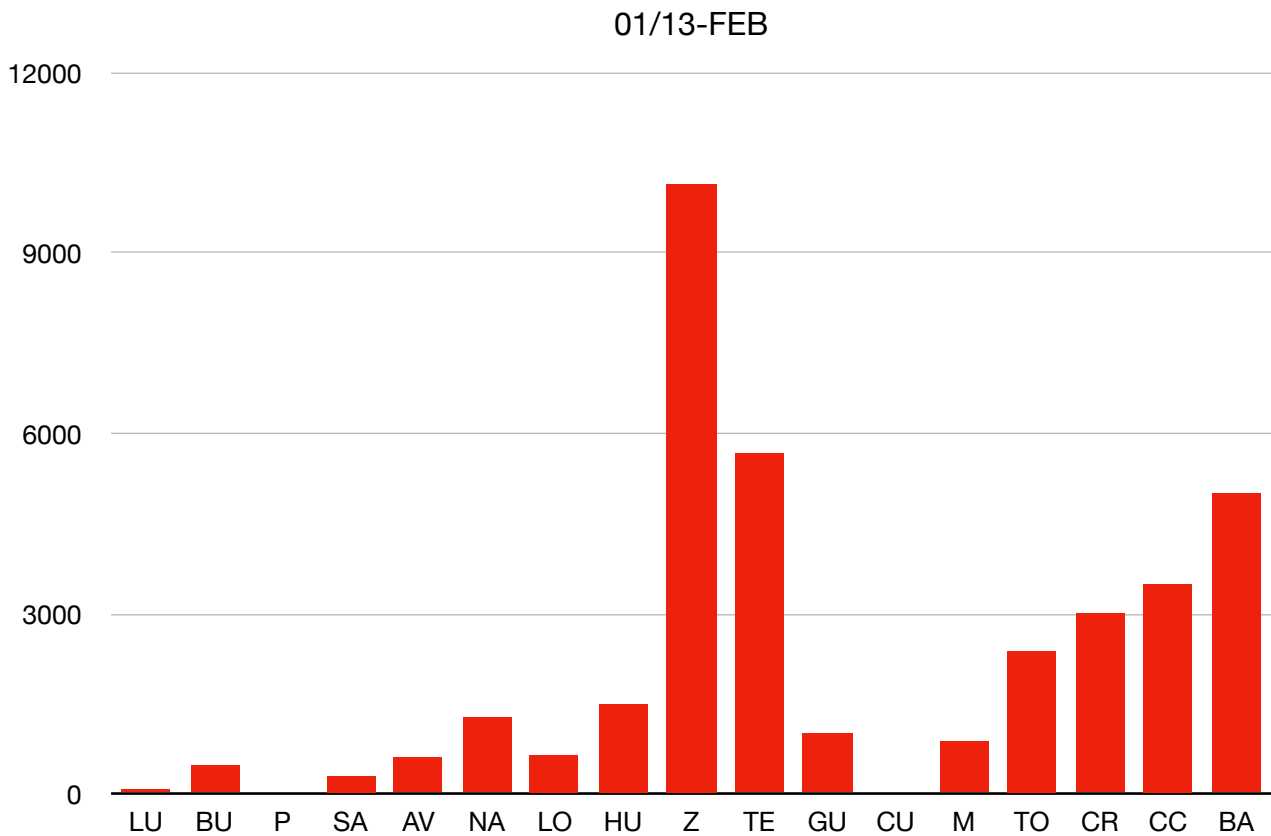


Image nº 81: Cranes arriving to Gallocanta lagoon. Photo: José Miguel Pueyo

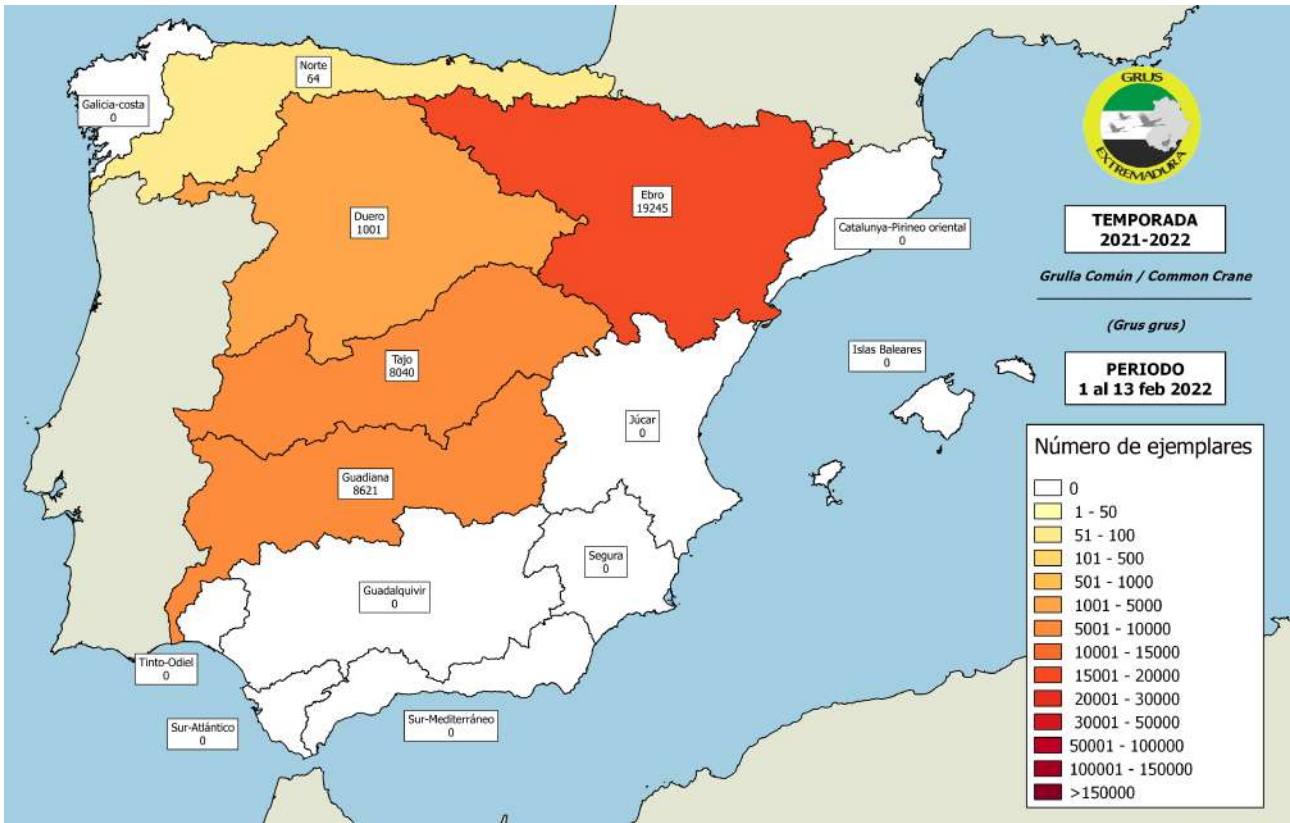
[13/02/22](#): 137 set off on migration from Alboré pool (HU) Kees Woutersen; 1,125 set off from Gallocanta lagoon (TE/Z); 248 over Pamplona (NA) Jesús Mari Lekuona; heard at Sacedón (GU) Javi Rejos (DALMA); a flock over Torrejón del Rey (GU) Laura (DALMA); 300 over Cabanillas del Campo (GU) José M<sup>a</sup> Gómez (DALMA); 70 over Villamediana (LR) Pilar Azpiroz; 370, 98, 48, 146, 172 over Retuerta del Bullaque (CR) Gerardo García; 232 over Zorita de la Frontera (SA) Javi de La Paz; 2 over Coslada (M) Jorge Ángel; 200 over Gallipienzo (NA) Asier Sarasa; 85 over Pamplona (NA) Rajen Ayerra 10,000 arrive in the afternoon at Gallocanta lagoon (TE/Z) Antonio Torrijo, José M. Pueyo; several thousand migrate from the Central Zone of Extremadura, Manuel Gómez; 327 roost at El Hoyo lagoon (AV) Arón Blázquez.



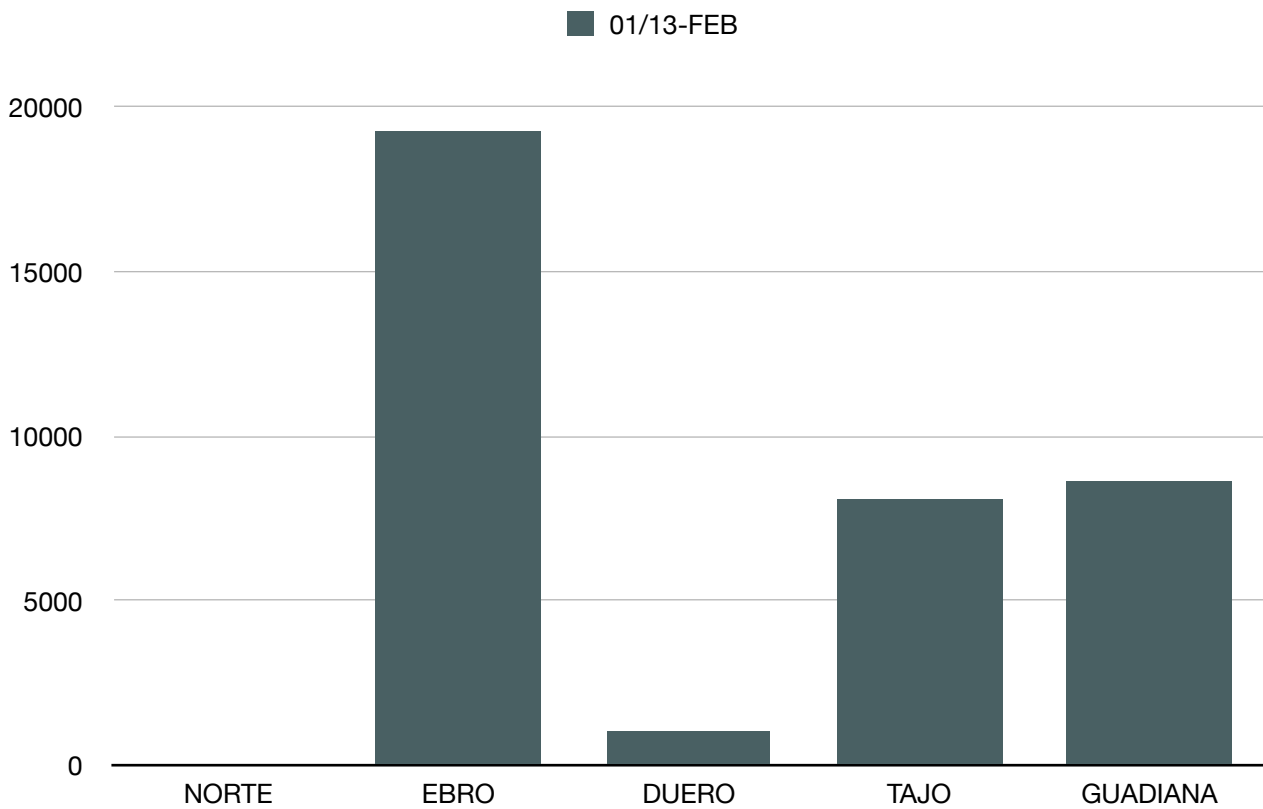
Map nº 32: Provincial migration February 1 to 13



Graphic nº 40: Prenuptial migration by provinces, February 1 to 13



Map nº 33: Prenuptial migration by water catchment areas. February 1 to 13



Graphic nº 41: Prenuptial migration by water catchment areas. February 1 to 13

A week of intense migration, when there were significant departures from the wintering areas with a major presence of cranes, and leaving them empty. The Cierzo (northwest wind) pushed cranes from Gallocanta, the majority crossing the Pyrenees from Huesca after a rest at Sotonera.

14/02/22: 10,000 migrating over Alcollarín (CC) Seppo Hjerppe; 30,000 migrating over Vegas Altas (BA) Lex Peeters; 1,400 over Alquézar (HU) Godfried Schreur; 350 over Toledo, Aris Vouros: 720+600 over Alquézar (HU) Bart Moons; 1,800 over Almoguera (GU) David Cañizares; 936 in 8 flocks over Lagartera (TO) César Clemente; 2,500 over Valdecaballeros (BA) José M<sup>a</sup> Traverso; 4,627 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 150 over Toledo, Ángel Velasco; 4,000 over Retuerta del Bullaque (CR) Gerardo García; 700 from Villafáfila (ZA) Wil Luijst; 430 over the Sierra de Monflorite (HU) Francisco Quesada; 543 go to roost at El Hoyo lagoon (AV) José M<sup>a</sup> García; several thousand arrive at Gallocanta (Z/TE) Antonio Torrijo, José M. Pueyo; 1,000 go to roost at El Taray lagoon, Villacañas (TO) Ángel Velasco; 322 over Torres de los Montes (HU) Francisco Quesada; 20 over Casas de Miravete (CC) Martin Kelsey; 20 over Navarcles (B) Marc Illa; 795 over Trujillo (CC) Seppo Hjerppe; 57 over Arnara (Z) Héctor Bintanel; 400 over Rivert (LL) Marc Freestone.

15/02/22: 230 over Huesca, Juan C. Alberó; 600 over Zaragoza, Fernando Sancho; 23,311 set off from Gallocanta lagoon (TE/Z) Antonio Torrijo, José M. Pueyo; several thousand arrive at Sotonera (HU) Francisco Quesada; 100 over Zaragoza, Francisco J. Sampietro; 10,000 set off from the Central Zone of Extremadura (BA/CC) Manuel Gómez; 1,000 over Majadahonda (M) and 150 over Villanueva de la Cañada (M) José A. Fimia; passage over Jaca (HU) and at least 3,500 over Huesca, Francisco Quesada; 250 over Leganés (M) Alfredo Mirat; 23 over Haro (LR) Maribel Gutiérrez; 300 over Huesca, José M<sup>a</sup> Canudo; 26, 63, 200, 54 over Aljucén (BA) Gerardo Pizarro; 1,000 over Algaixen (Z) and 400+ over Zaragoza, info: Francisco Quesada; 700 over Boadilla del Monte (M) Antonio Calvo; 30 over Los Santos (SA) Cristina Giner; 240, 110, 140, 100, 150+, 140+ over Guadalajara, José L. Ramos, José M. Gómez, Ana, Raúl, Fabio, Javier; 100 over Las Rozas (M) Juan P. Fresno; 1,800 over Cobejas (TO) Elena Baonza; 100 over Vallecas (M); 200 over Casa de Campo (M) Christophe Pontegnie; 60 over Madrid, David Valentín; 15,494 go to roost at Sotonera reservoir (HU) Silvia Duque; 200 over Valdemorillo (M); 650+ over Albalate de Zorita (SA) Javi de la Paz; 80 over Agudo (CR) Raquel Mansilla; large flocks try to cross from Hecho (HU), but the weather conditions force them to abort the passage, info: Francisco Quesada; 430 over Abay (HU) Daniel Barceló; 150 over Charo (HU) Ferrán Guardia; 200 over Valdetorres de Jarama (M) Eduardo de Juana, José L. Díez, Elena P.R., José Zamorano, José Pérez, Chemi Ibáñez; 450+360 over Soria, Jesus Ruiz, Sergio Pérez; 60+32 over Lagartera (TO) César Clemente; 400+250 over San Martín de Valdeiglesias (M) María Bueno; 300 over Montearagón reservoir (HU) Juan C. Alberó; 50 over Madrid, David Valcarcel; 40 over Monte del Pardo (M) José Fernández; 150 over Trescientos (M) Christy Esmahan; 3,000 over Mérida (BA) Toon Pop; 3,500+280 over Toledo, Aris Vouros: 400 over Zaragoza, Thomas Rickfeler; 500 over Cadrete (Z) Héctor Bintanel; 150 over Zaragoza, Enrique Pelayo, plus 3,500, Javier Ferrero; 80 over Santo Domingo de Pirón (SG) Gabriel Arner; 35 over Madrigal de las Altas Torres (AV) Víctor Coello; 250 over Pastriz (Z) Javier Rubín; 2,500 over Zaragoza, Nacho Jarquín; 1,442 at Riobobos weir (SA) Miguel Rouco; 700 over La Alfranca (Z) José M<sup>a</sup> Sánchez; 250 over Huesca, Bart Moons

16/02/22: 87 at dawn at Torres de Montes (HU) Nacho Arrimón, Santiago Sando; at Sotonera (HU) the majority set off but most return due to the bad weather conditions, Pablo Valles; 370+90 over Huesca, Francisco Quesada; 1,500 pass the Sierra de Guara at Bierge (HU) but turn around and head towards Barbastro, Omar Catalá; 3,400 go over Navarra, Jesús Mari Lekuona *et al*; 418 over Peñaflo (Z) David Herrero; 3,796+5,545 set



off from Gallocanta (Z/TE) in two waves, Antonio Torrijo, José M. Pueyo; 3,394 flying over Huesca, 500 go over Actur (HU) and 750 go over Mediano (HU), info: Francisco Quesada; 85 over Leganés (M) Alfredo Mirat; 190 over Jirueque (GU) Vicente A. Peinado; 30 over Maçanet de Cabrenys (GI) Andreu Cufi; 200 over Montcada i Reixac (B) Iván Almirall; 450 over Albalate de Zorita (SA) Javi de la Paz; 200 over Cobejas (TO) Elena Baonza; 322 over Torrejoncillo del Rey (CU) Juan Erans; 1,200 over Vegas Altas (BA) Manuel Gómez; 60 over Alzuza (NA) Javier Sanz; 250 over Los Galachos de La Alfranca (Z) José M<sup>a</sup> Sánchez; 500, 200, 81 over Huesca, Jorge Lardiés; 200 at Loreto reservoir (HU) Pablo Tebas; 4,321 roost at Borbollón reservoir (CC) Miguel Todón; 500 over Esteras de Medinaceli (SO) Marián Ramos; 190 over Boumort nature reserve (LL) Núria Vallverdú; at least 16,000 roost at Sotonera reservoir (HU) and some 13,000 at Alboré reservoir (HU) Silvia Duque; 60,000 roost at Gallocanta lagoon (TE/Z) Antonio Torrijo, José M. Pueyo.



Image nº 82: Cranes migrating over Navarra. Photo: Jesús Mari Lekuona

**17/02/22:** Some 25,000 set off from Sotonera and Alboré (HU) Irene Marina; 27,000 go from Gallocanta (Z/TE) Francisco J. Sampietro (S.A.R.G.A); 300 over Monzón (HU) Carlos Perallón, Nacho Arizón; 250+45 go over Huesca, José Lardiés; 500 over Movera (Z) José M<sup>a</sup> Sánchez; 400 over Zaragoza, Enrique Pelayo; 300 over Zaragoza, Javi Lasheras; 600+350 over Huesca, José M<sup>a</sup> Canudo; 80, 300, 100, 22, 50, 100, 200, 50, 80, 100 over Los Santos (SA) José M<sup>a</sup> Álvarez; 80 over Lubia (SO) Sergio Pérez; 280+150 over Zaragoza, Fede Sancho; 10,000 cross the Pyrenees over Abay (HU) Daniel Barceló; 700 over Panticosa (HU); 500+ cross over Monte Perdido (HU) Cristina Ibort; 6,000 try to cross from Navarra, but the weather conditions prevent them and they return, Jesús Mari Lekuona; 1,000 over the Sierra de Guara (HU) Juan C. Alberó; 100 over Alcocer (GU) Maribel (DALMA); 1,000 feeding at Almudévar (HU) Esther Yera; 427 at Hoyo de la Cruz, Bujaraloz (Z) Conchi Esteban; 876 in the western part of the Central Zone of Extremadura,

between Torrefresneda and Vegas Altas (BA/CC) José A. Román; several thousand go over Huesca at 11:00h, Álvaro Sánchez; 350, 275, 3, 75 over Las Rozas (M) Juan P. Fresno; 200 over Guadalajara, José L. Arias (DALMA); 50 over Alcocer (GU) Maribel (DALMA); 120+ over Guadalajara, José M<sup>a</sup> Gómez, Javi Reyes (DALMA); 130+60 over Cabanillas del Campo (GU) José L. Arias (DALMA); 3,000 feeding in the Hinojos marshes (H) Juan J. Negro; 100 at Salàs de Pallars (LL) Jordi Castellò; 2,500 over Siétamo (HU) José L. Cortés; 8 over Robledo de Montalbán (TO) Álvaro Nicolau; 250 over Boadilla del Monte (M) Luis Bello; 700 over Escarrilla (HU); 170 over La Población de Segur (LL) Marc Freestone; 140 over Navalcarnero (M) Auxi Suárez; 1,000 over Daganzo de Arriba (M) Jonathan Dadds; 111,110 roost at Gallocanta, of which 5,800 did so at La Zaida lagoon (Z), 6,800 at La Parada reservoir and 1,820 at the Santed reservoirs (Z), and the rest in Gallocanta lagoon (TE/Z) Francisco J. Sampietro (S.A.R.G.A.)



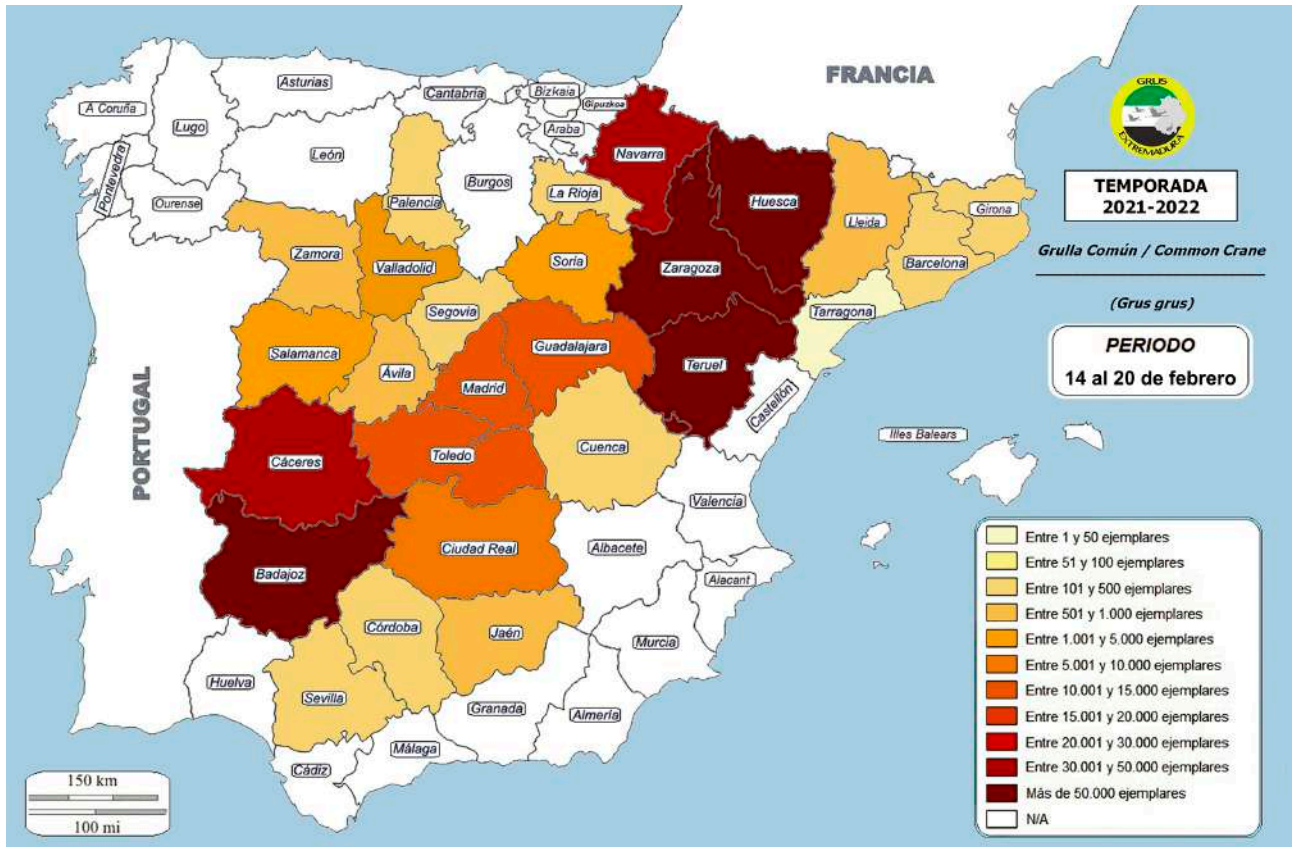
Image n° 83: Cranes over Monte Perdido, Ordesa National Park (HU). Photo: Cristina Ibort

**18/02/22:** 25,000 set off from Sotonera (HU) leaving just 2,000, Pablo Vallés, Irene Marina; 1,000 over Figueruelas (HU), info: Francisco Quesada; 100,000 leave Gallocanta (TE/Z) between 10:00 and 13:00h, leaving 6,000 at the lagoon and 4,000 more feeding on the Jiloca plains, Antonio Torrijo, José M. Pueyo; 300 over Las Rozas (M) Juan P. Fresno; 220, 100, 150, 150, 50 arrive at Sotonera (HU) Irene Marina; 8,000 go over Navarra, Jesús Mari Lekuona *et al*; 350 over Valdepeñas de la Sierra (GU) Carmina Franco; 130 over Guadalajara, José L. Arias (DALMA); 500+ migrating over La Alcarria (GU) Fernando Canalejas (DALMA); 75 over Huesca, Pablo Tebas; 150 over Santorcaz (M) Sara Piquet; 300 over Cortés reservoir (HU) Víctor Pintado, Arturo Sanz; 600 over Huesca, Juan C. Albero; 25 over Santa Ana reservoir (HU) Juanma Novales; 1 at Santillana reservoir (M) Jesús Ruíz; 200, 100, 50, 70 over Madrid, Cristophe Pontegnie, Jesús Ruíz, David Valcárcel, Jesús Calderón, Enrique López; 1,000 over Abay (HU) Daniel Barceló; 1,600 over Casarrubios del Monte (M) Jesús Pérez, Unai Freire; 70 over Madrid, Lucía de la

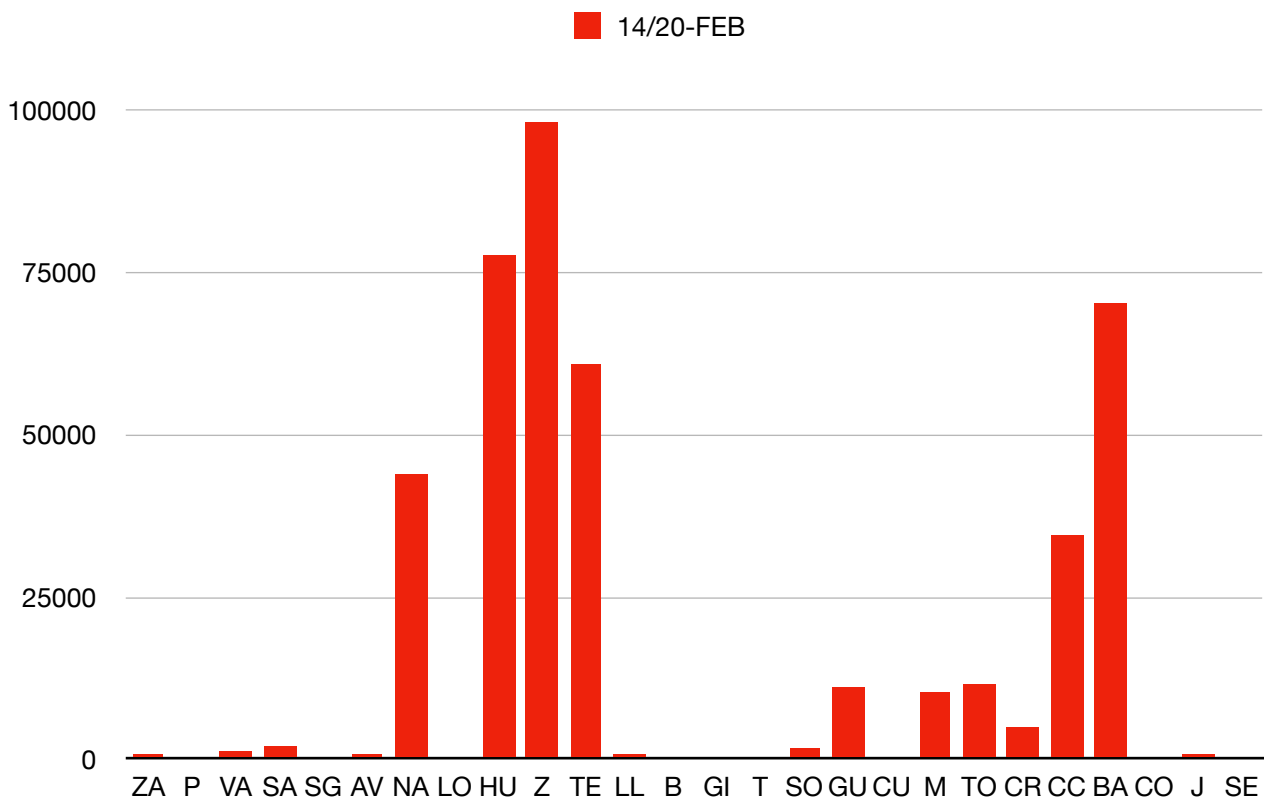
Madrid, Enrique López; 100, 100 over Villaviciosa de Odón (M) José L. Machuca, María J. M. Cenamor; Mark Davis; 420 roost at Las Merinillas, Valverde de Leganés (M) Mariano Cabrero; 300 over Guadalajara, José M<sup>a</sup> Gómez (DALMA); 70 over Llançà (GI) Ponç Feliu, Salvador Oliu; 80 at Castelló d'Empuries (GI) Ramón Ruíz; 50 over Sant Pere Pescador (GI) Ponç Feliu.

**19/02/22:** There are no migratory movements at Gallocanta due to the inclement weather Antonio Torrijo; 200 in the La Nava lagoon area (P) Fernando Jubete Guzón; some 15,000 leave Sotonera (HU) but the majority return, Esther Yera, Silvia Duque, José M<sup>a</sup> Canudo, Juan C. Albero, Jorge Lardiés; 276 over Madrid; 4,000 in the Obando area (BA) Manuel Gómez; 800 roost at La Albuera lagoon (BA) Juan G. Miranda.

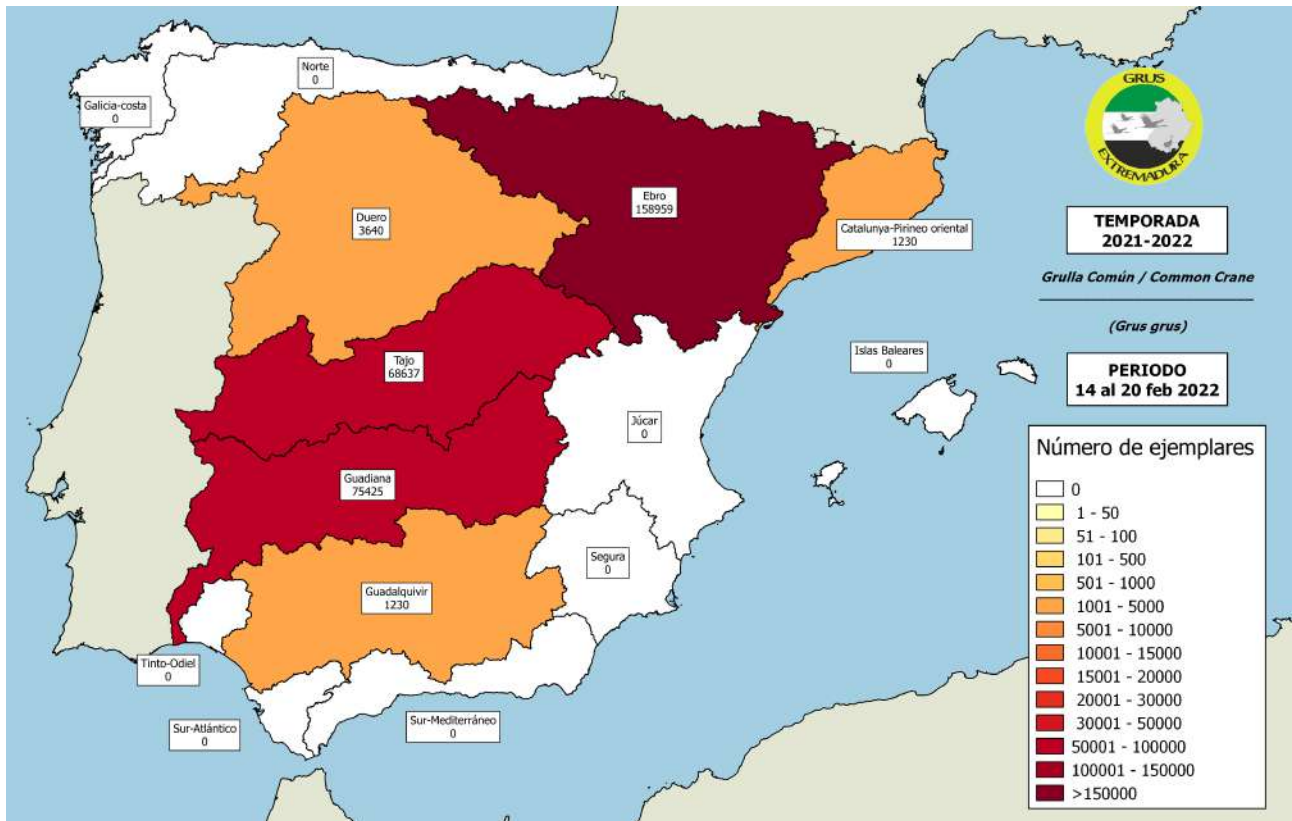
**20/02/22:** 195 at dawn at El Taray lagoon (TO) Ángel Velasco; 200 over Garciaz (CC) Gus Gahete; 9,568 set off from Gallocanta lagoon (TE/Z) Antonio Torrijo, José M. Pueyo, Luis Salguero, José A. Sánchez, Luis M. Bautista, G.O.O.; 510 over La Aldea del Obispo (CC) Neil Renwick; 300 over Ejea de los Caballeros (Z) Javier López; 5,000+ migrate through Roncal Valley (NA), having roosted at Yesa reservoir (Z), Jesús M. Lekuona; 378 over Movera (Z) José L. Rivas; 150, 50 over Torrero (Z); 130 over Agudo (CR) Raquel Ramiro; 600+ over Colmenar Viejo (M) Sol Senise; 400 at Bujaraloz (Z) Conchi Esteban; 2,000 migrating over Hecho (HU) Javier Domínguez; 150, 200, 150, 200, 500, 500, 10, 100, 700, 20 over Arbeteta (GU) Luis Miguel (DALMA); 200 over Alcorco (GU) Joaquín (DALMA); 10,000+ set off from Sotonera (HU) Esther Yera; 400, 140 over Íscar (VA) Jorge Leonor; 400 over Gavilanes (AV) Laura Calvo (DALMA); 300, 500 over Guadalajara, Isabel, Fernando, Fernando Canalejas (DALMA); 140 over the same area, José L. Arias; plus 300, 110, 300, David Valls; 500 over Taracena (GU) Jesús; 150+95 over Los Galachos de La Alfranca (Z) Fede Sancho; 250 over Valdemoro (M) José M<sup>a</sup> Herranz, 100 over Rivas Vaciamadrid (M) Ángela Tamayo; 73 over Alcalá de Henares (M) Rocío del Castillo; 200, 50, 40 over Carrascosa del Campo (TO) Christy Esmahan; 22+28 over Monfragüe National Park (CC) Tiago Carvalho, Paulo Alves, Alexandre Espanhol, Eduardo Alfaro, Maricruz Gutiérrez; 191 over Villaviciosa de Tajuña (GU) Fernando Gómez (DALMA); 600+510+300+150 over Cabanillas del Campo (GU) Elena, José M<sup>a</sup> Gómez; 200 over Sacedón (GU) Javi Rejos (DALMA); 3,000 over Navalcán (TO) José Luis de la Cruz (ARDEIDAS); 60 over Grande lagoon at Villafranca de los Caballeros (TO) Carmen Comendador; 1,000 over Ugena (TO) Carmen Comendador; 109, 113 over Logroño (LR) Eugenio Montelio; 6,000 go to roost at Los Canchales reservoir (BA) José L. Bautista; 110 roost at El Hoyo lagoon (AV) Arón Blázquez; 292 at Pétrola (AB) Raquel Mansilla; 4,700 roost at Sotonera reservoir (HU) Esther Yera; 3,000 arrive at Gallocanta (TE/Z) where there are about 10,000, Felipe Rosado; 1,500 roost at Alange reservoir (BA) Ángel Sánchez; 55 over Huesca at 22:45h, Pablo Valles; 42 at 22:50h over Huesca and another group at 23:43h, Silvia Duque



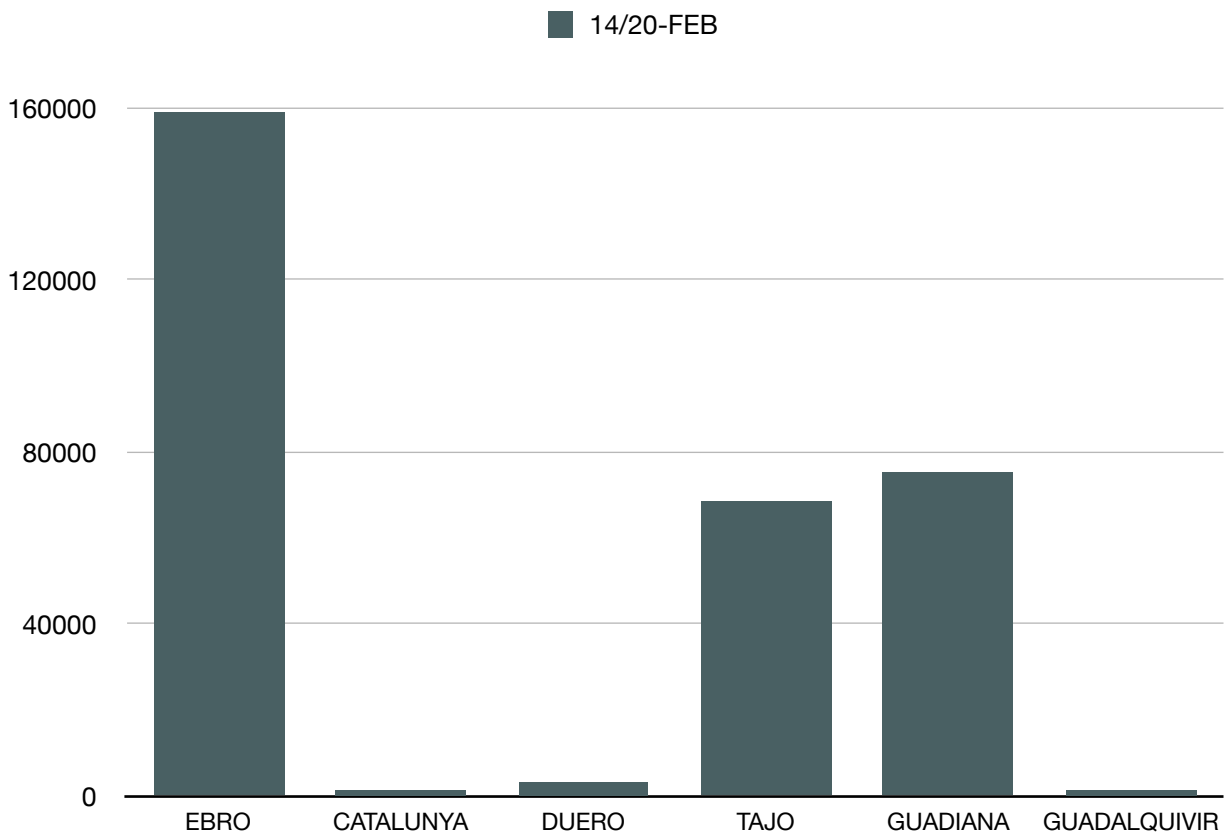
Map nº 34: Provincial migration, week February 14 to 20



Graphic nº 42: Provincial migration, week February 14 to 20



Map nº 35: Migration by water catchment areas. Week February 14 to 20



Graphic nº 43: Migration by water catchment areas. Week February 14 to 20

Migration continues relentlessly while the last wintering areas are emptying, especially those in dehesas or more southerly areas.

21/02/22: 300 over El Casar (GU), 600 over El Cubillo de Uceda (GU) and 450 over Pedrezuela (GU) Rubén Ramos; 130, 260 over Botorrita (Z) Eduardo Gil; 200 over Berzocana (CC) Paul Brugman; 100 over Mojà (B) Verónica Marín; 217 over Taradell (B) Xesxo Puigdomenech; 55 over Banyoles (GI) Carles Quer; 19 over Alguaire (LL) César Pisón; 50 over Fuente El Saz de Jarama (M) Paul Huibers; 40 over Plasencia (CC) Miguel Todón; 300, 200, 500 over Ugena (TO) Carmen Conde; 500, 600, 180 over Leganés (M) Alfredo Mirat; 300 over Caspe (HU); 80 over La Aldea del Obispo (CC) Neil Renwick; 350, 600 over Agudo (CR) Raquel Ramiro; 190 over Lupiñén (HU) Irene Marina; 1,100 over Mingorrubio (M) Adolfo Rodríguez; 14,488 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo, Luis Salguero, José Á. Sánchez; 3,000 migrating over Vegas Altas (BA) Manuel Gómez; 900 set off from Guarrera lagoon, Tardajos de Duero (SO) Virginia Marco; 260 over Zaorejas (GU) Rafa Rejos, Javi Rejos (DALMA); 66 at 23:25h over Huesca, José M<sup>a</sup> Canudo; 310 over Santorcaz (M) Sara Piquet; 350 over Alcalá de Henares (M) David Araque; 300 over Leganés (M) José Liarte, Mario Liarte; 120 over Villaviciosa de Odón (M) Mark Davis; 310 over the River Manzanares (M) Miguel Martín; 250, 30, 65, 60 over Madrid, Christophe Pontegnie, Toni Alonso, Ángela Tamayo; 300 over Cazalegas (TO) José L. de la Cruz (ARDEIDAS); 26 at Monteagudo de las Vicarías reservoir (SO) Marián Ramos; 169 over El Romeral (TO) Óscar Frías; 500 over Toledo, Aris Vouros; 500 over Velilla de San Antonio (M) Carlos Antón; 40 at Herrera lagoon (SO) Virginia Marco; 200 over Ivars lake (LL) Suzanne Kho, Carles Oliver; 19 over Oña (BU) Íñigo Alonso; 1,000 over Villanueva de Huerva (Z) Enrique Pelayo; 5,000 roost at Los Canchales reservoir (BA) José L. Bautista.



Image nº 84: Cranes in Las Tiendas dehesas (BA). Photo: José A. Román

22/02/22: 4,000 set off from Sotonera (HU) Irene Marina; 200 over Liesa (HU) at 07:46h; 240 over Valdabra (HU) Kees Woutersen; 700 at Guarrera lagoon (SO) Juan P. del Álamo, Juan L. Hernández; 300 over Ballobar (HU), 300 over Luesia (HU), 300 over Barbastro (HU), 80 over Sabiñánigo (HU); 250+82 over Torres de Montes (HU), info from Francisco Quesada; 22, 45 over Cáceres, Miguel Todón; 17,447 set off from Gallocanta (TE/Z)

Antonio Torrijo, José Miguel Pueyo, Luis Salguero, José A. Sánchez; 100+450 over Huesca; 3,000 have left the Los Pedroches valley (CO) Juanma Sánchez; 200 over Agudo (CR) Raquel Ramiro; 114 over Toledo, Ángel Velasco; 100, 250 over Villarejo (M) Elena Baonza; 800 roost at La Albuera lagoon (BA) Mariano Cabrero; 1000+150+100+250 over Villarejo de Salvanes (M) Elena Baonza; 1,500 over Villafranca de los Caballeros (TO) Alejandro Gallego; 900+300 over Leganés (M) José Liarte, Mario Liarte; 199 over Arrocampo reservoir (CC) Jacqueline Cartigny; 125 over Berzocana (CC) Paul Brugman; 400 over El Molar (M) and 350 over El Vellón (M) Rubén Ramos; 300 over Garriguella (GI) Máxime Pastore; 100 at Castellò d'Empuries (GI) Àlex Fonollosa; 200 over Roses (GI) Ponç Feliu; 150 over La Seu d'Urgell (LL) Montse Brugulat; 100 over Isona i Conca Dellà (LL) Ivan Almirall; 90 over El Baix Pallars (LL) Lina Ratia; 13 over Penelles (LL) Sergi Sales; 36 over Font de Queralt (LL) Sergi Sales; 11 over Casas de Miravete (CC) Martín Kelsey; 200 over Revillaruz (BU) Alberto Laiz; 170+250 over Zaragoza, Ángela De Castro, Orlando Jarquín; 150 over Barluenga (HU) Juan C. Alberó; 200 over Huesca, Jorge Lardiés; 1,100 over Loreto reservoir (HU) Arturo Sanz; 170 over Valencia D'Aneu (LL) Susana Alcolea; 1,500 over Santa Coloma de Jaca (HU) Juan C. Alberó; 400 over Fuenlabrada (M) Paula González; 2,675+800 over Velilla de San Antonio (M) José L. Manzanaro, Johnathan Dadds; 120 over Valdabrá reservoir (HU) Aitor Mora; 106 over Las Rozas (M) Eduardo Carbajo; 600 over Barbastro (HU) Elena Cantalapiedra; 1000+300+150+140 over Ugena (TO) M<sup>a</sup> Victoria Cabañas, Concepción Cond, Chon Conde, Julián Fernández; 2,079 roost at Los Canchales reservoir (BA) Agapito J. Verde, Francis Prieto, Pepe Guisado, José A. Román; 7,000 roost at Sotonera reservoir (HU) Francisco Quesada.

*4,000 over Andorra la Vella (AND) Jan Lock.*

**23/02/22:** 4,950 set off from the Yesa-Artieda reservoir (NA) Kees Woutersen; 300 over Huesca, Francisco Quesada; 15,869 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo, Luis Salguero, José A. Sánchez; 500+ over the Sierra de Aibar (NA) David Miqueleiz; 37 over Zaragoza, Pedro Bescós; 55 over Ciudad Real, Raquel Ramiro; 6,000 set off from Sotonera (HU) Irene Marina; 2 over El Toboso (CR) Ángel Alcolado; 391+600+ over Ejea de los Caballeros (Z) Javier López; 5,000 arrive at Gallocanta (TE/Z) Carmina Franco; 700 over Valdabrá reservoir (HU) Arturo Sanz; 16,000+ cross Navarra, Jesús Mari Lekuona *et al*; 32 over the River Guadalmez (CR) Rafa Al; 70 over Cervera del Río Alhama (LR) Michel Marín; 150+50+200 over Pitillas lagoon (NA) Gus Gahete; 1 at Sotos de Alfaro (LR) Borja Sanz; 47 over Ciudad Real; 600 over Salàs de Pallars (LL) Jordi Castelló; 90 over Agudo (CR) Raquel Ramiro; 2,420 roost at Sotonera reservoir (HU) Kees Woutersen; 3,000 over Ribera de Saelices (GU) during 30 minutes, Jesús M<sup>a</sup> Serrano (DALMA); 100 over Velilla de San Antonio (M) Miguel Martín; 120 over Gallur (Z) Enrique Pelayo; 2,000 over Aranguren (NA) María Durán; 241 over Negrilla de Palencia (SA) Miguel Rodríguez.

**24/02/22:** 480 over Zaragoza, Francisco J. Sampietro, Fede Sancho; 200 over Zaragoza, Orlando Jarquín; 14,000 set off from Gallocanta lagoon (TE/Z) and 13,845 roost at Gallocanta (TE/Z) Francisco J. Sampietro (S.A.R.G.A.); 2 over Les Presses (GI) Àlex Fonollosa; 250 over Agramunt (LL) Jordi Castellet; 4 at Sa Albufera nature reserve, Mallorca (IB) Nacho Barcia; 305 roost at Alqueva reservoir, Villanueva del Fresno (BA) Mariano Cabrero.

**25/02/22:** 11,600 migrating over Riglos (HU) Kees Woutersen; 1,630 set off from Gallocanta (Z/TE) Antonio Torrijo, José M. Pueyo; 120 at Bujaraloz (Z) Conchi Esteban; 150 over Los Galachos de La Alfranca (Z) Fede Sancho; 34 over Talarn (LL) Jordi Castelló; 96 over Font de Queralt (LL) Greg McIvor; 600 over Puente la Reina (HU) Eduardo Gil; 1 at Sotos de Alfaro (LO) Borja Sanz; 2 over Calas de Herreros (SO) Juan L. Hernández; 25 over Argui forest (NA) Rajen Ayerra; 20 over Zunzarren (NA).

**26/02/22:** 4,000 set off from Sotonera (HU) Francisco Quesada; 280 coasting over the Straits of Gibraltar (CA) Alejandro Onrubia; 78 roost at Guarrera lagoon, Tardajos (SO) migrating at 10:30h, Juan L. Hernández; 489 set off from Gallocanta lagoon (TE/Z) where

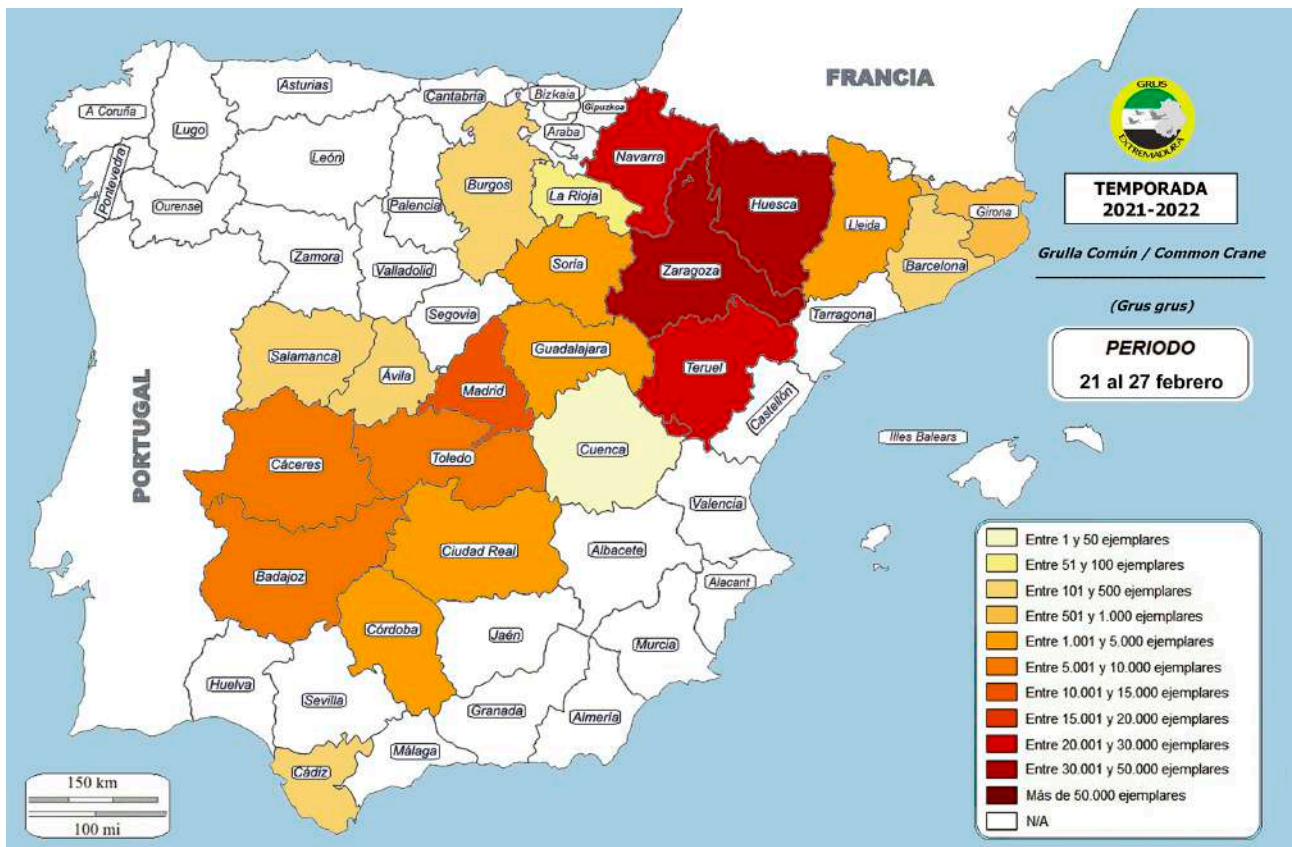
12,000 cranes remain, Antonio Torrijo, José M. Pueyo; 7 at Alcañiz salt flats (TE) Esther Yera; 324 at Santa Teresa reservoir (SA) Vicente G. Garrudo; 170 over El Carrascalejo (BA) Francis Prieto; 100 at Castellò d'Empuries (GI) Raúl Calderón; 8 roost at El Hoyo lagoon (AV) Arón Blázquez.



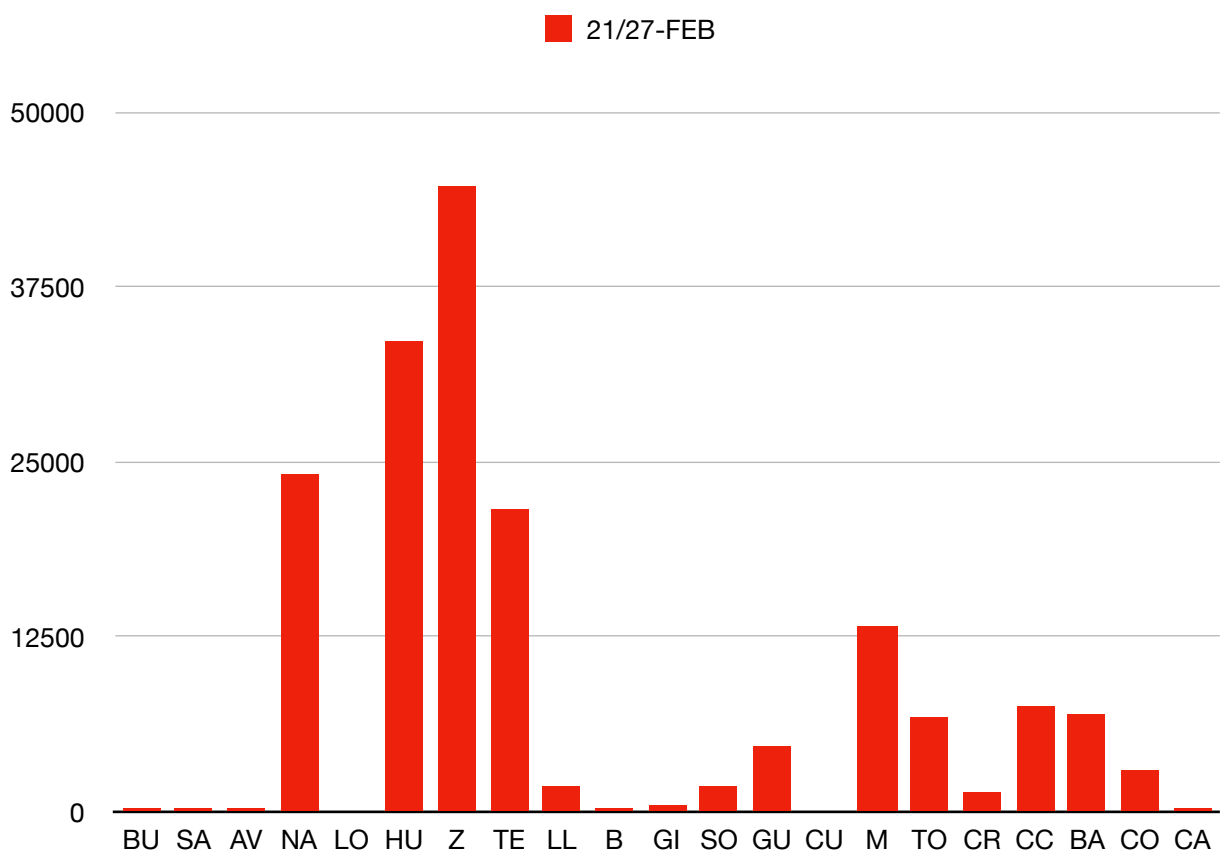
Image nº 85: Cranes migrating over Navarra. Photo: Jesús Mari Lekuona.

[27/02/22](#): 3,500+110+300+70+130 migrating over Villamesías (CC) Yolanda Díez, Antonio Calvo; 970+550 migrating over Trujillo (CC) Neil Renwick; 149 over Monfragüe National Park (CC) José C. López, Kerig Gouvernarec; 1,171 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 64 over Leganés (M) Alfredo Mirat; 14 over Naval Moral de la Mata (CC) Antonio M<sup>a</sup> Sánchez; 400 over El Carrascalejo (BA) Francis Prieto; 56+74+40+83+26+30 over El Casar de Cáceres (CC) José M<sup>a</sup> Rojo; 150 over Solana de los Barros (BA) Juan G. Miranda; 1,000 at Arroyoconejos reservoir (BA) Miguel Corvillo; 3,000 at Sotonera (HU) where there is no migration during the day, Francisco Quesada; 500 roost at Alqueva reservoir, Villarreal (BA) Mariano Cabrero; 60 over Trujillo (CC) Carmen Pérez-Aloe; 50+75+146+77 over Monfragüe National Park (CC) Patricia Arnaiz, Kerig Gouvenarec, Alonso Garcia; 200 over Higuera de Dueñas (AV) Octavio Infantes; 60 over Valmojado (M) Unai Fuente; 30 over Velilla de San Antonio (M) José M<sup>a</sup> Sendarrubia; 10 over Campo del Brito reservoir (CU) Fernando Alonso; 53 over Zaragoza, Isabel Jaime; 60 over Los Barruecos, Malpartida de Cáceres (CC) Gaspar Calvo; 93 over Agudo (CR) Raquel Ramiro; 54+46 over Pepino (TO) Alberto Herrero (ARDEIDAS); 450 over Erustes (TO) Juanjo Alarcia (ARDEIDAS); 345 over Talavera de la Reina (TO) and 265 over La Portiña (TO) Antonio Rodríguez (ARDEIDAS); 150 migrating over Vegas Altas (BA) Manuel Gómez; nocturnal passage during the weekend over Villafranca de los Caballeros (TO) Alejandro Gallego; 5 at Pétrola (AB) José M. López; 130 over the Sierra de Santa Eufemia (CO) José Méndez; 200 over Torrijos (TO) Cristina Lemus; 19 at the Hondo reservoir (A) Sergio Arroyo.

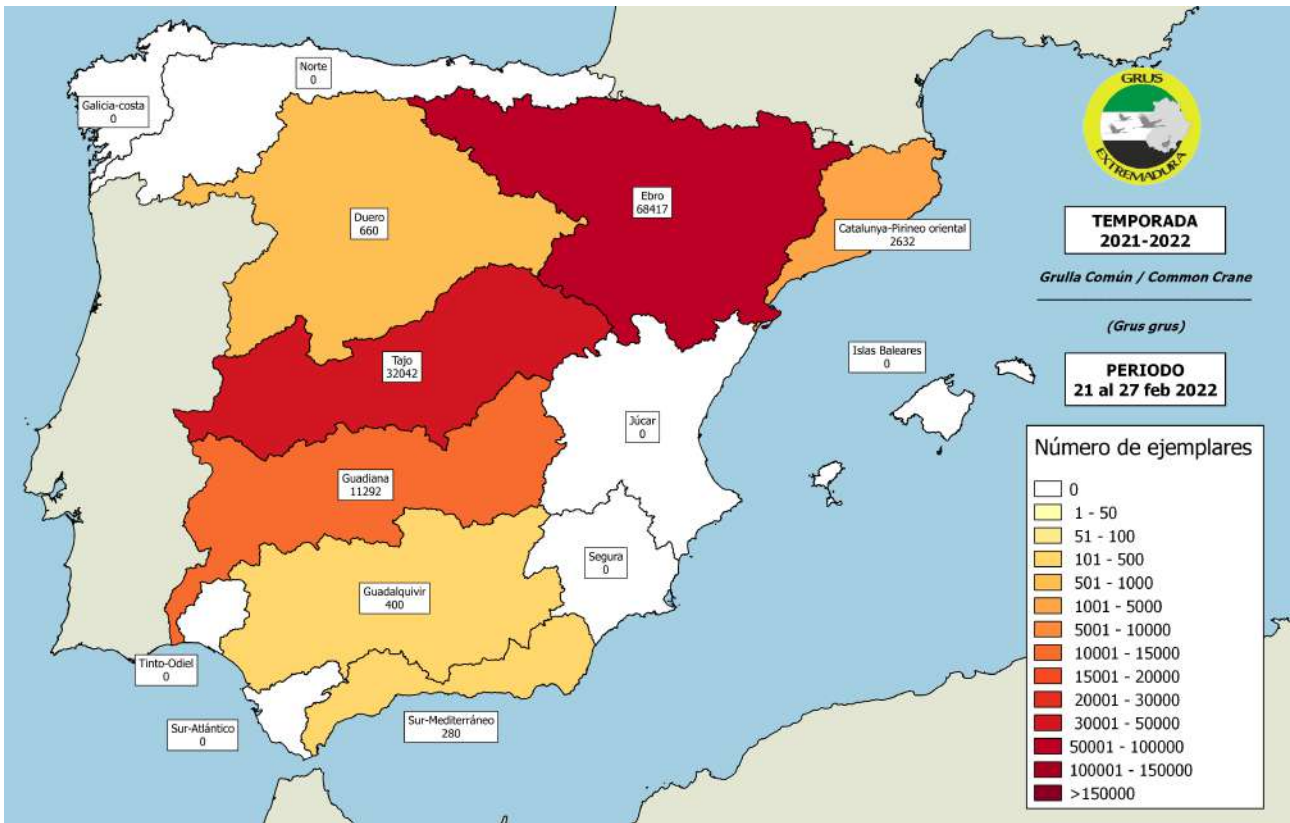




Map nº 36: Provincial migration during the week February 21 to 27

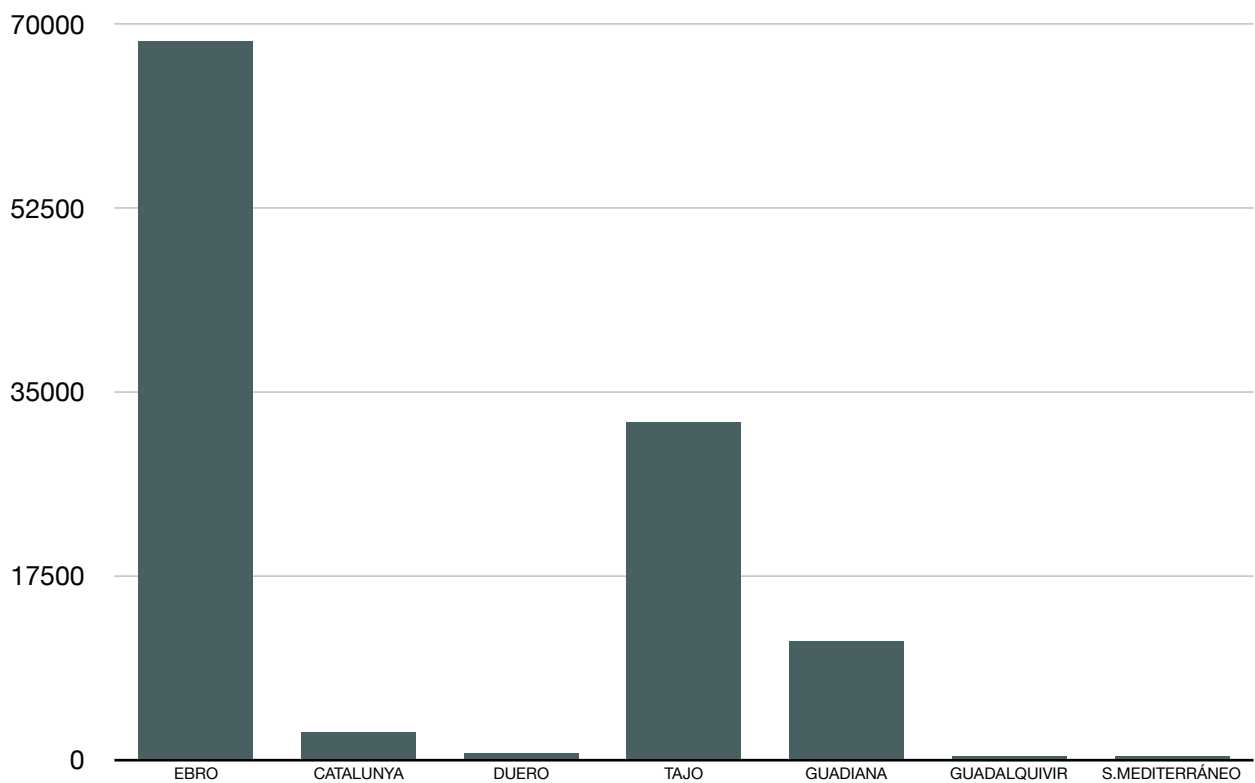


Graphic nº 44: Provincial migration during the week February 21 to 27



Map nº 37: Migration by water catchment areas, week February 21 to 27

■ 21/27-FEB

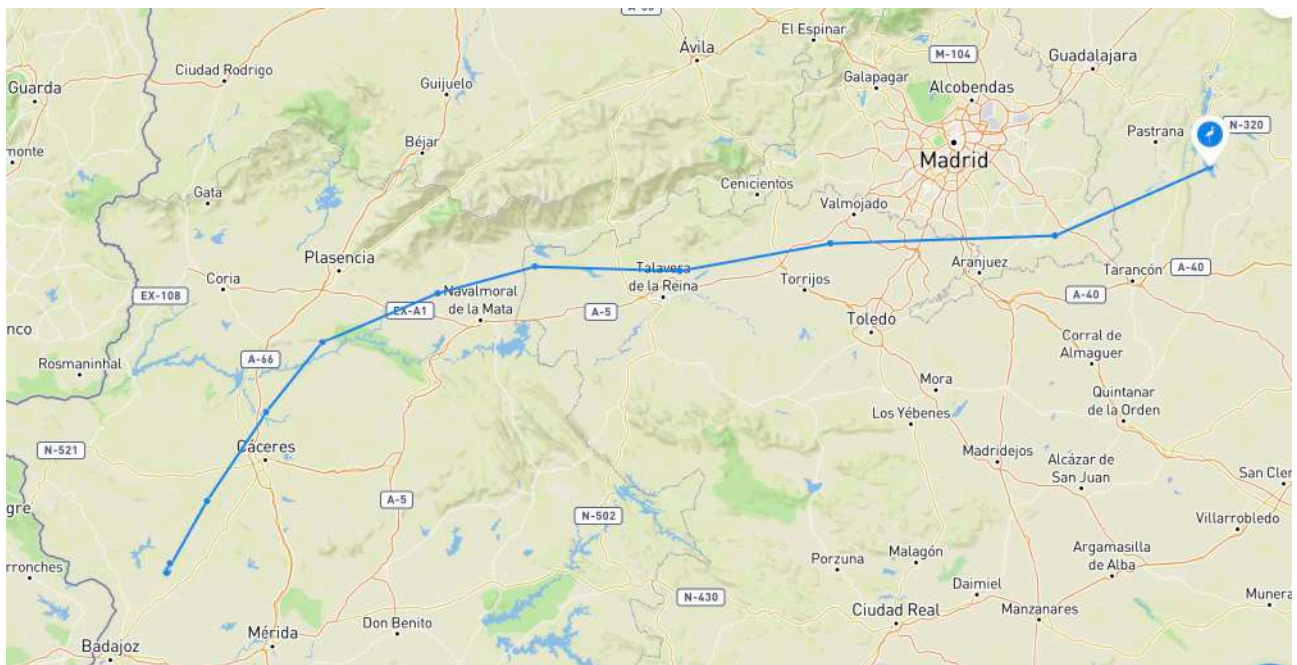


Graphic nº 45: Migration by water catchment areas, week February 21 to 27

The last big migratory wave took place during the first days of the week, when more than 30,000 cranes crossed the Pyrenees.

**28/02/22:** 200 over Badajoz, Nicolás Pirez; 220 over Vegas Altas (BA) Manuel Gómez; 4,000 set off on migration from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 122 over Talavera de la Reina (TO) José M. Melo (ARDEIDAS); 150 over Entrerríos (BA) Yasmina Annicchiarico; 104 over Talavera de la Reina (TO) Eugenio Garrido (ARDEIDAS); 250 over Navalvillar de Pela (BA) Ángel López; flock over Béjar (SA) Vicente G. Garrudo; 87+90+93+120+204 over Agudo (CR) Raquel Ramiro; 120+200 over Jaraicejo (CC) Martín Kelsey; 68 over Monfragüe National Park (CC) Chris Hodge; 120 at Riobobos weir (SA) Víctor Coello; flock over Arrabal de la Portilla (VA) Samuel de la Calle; 60 over Peña Oroel, Jaca (HU) Steve Saxton; 70 at Almudevar (HU) Aitor Mora; 106 over Cabanillas del Campo (GU) Elena Gómez, José M<sup>a</sup> Gómez; 265 over Cornalvo Natural Park (BA) Ángel Sánchez; 1,100 in six flocks over Cabanillas del Campo (GU) Fernando Gómez; 750 over Leganés (M) Alfredo Mirat; 526 over Montánchez (CC) Eva Garzón; 60 over Jirueque (GU) Vicente A. Peinado; 120 over Pastrana (GU) Cristina Pintor; several thousands arrive at Gallocanta lagoon (TE/Z) in the afternoon, where 25,000 cranes will roost, Antonio Torrijo, José M. Pueyo; 266 over Illescas (M); 150 over Torrejuncillo del Rey (CU) Juan Erans; 9 at La Nava lagoon (P) Fernando Jubete; several thousands at Buendía reservoir (CU/GU) Antonio Rodríguez; 150 over Agudo (CR) Raquel Ramiro; 12 over El Capello (A) Ted C.J. Sluijter; 190 over Rueda de Jalón (Z) Eduardo Gil; 200 over Logroño, Ismael Sáenz; 40 over Quintanilla del Agua (BU) Israel Yáñez.

*A pair of Lithuanian cranes that have spent the winter in the dehesas at Villar del Rey (BA) set off at 09:50h to the northeast, flying over Malpartida de Cáceres, Monroy, Monfragüe, Talayuela and Navalmoral in Cáceres, north of Toledo city and Aranjuez (MA), arriving at Buendía reservoir at 20:15h, covering 388 km.*



Map nº 38: Lithuanian cranes' journey on 28/02/22. Source: Animal Tracker.

**01/03/22:** 200+200 over Villafranca de los Caballeros (TO) Sonia Oliver; 83 over Montánchez (CC) Eva Garzón; 300 over Utebo (Z) Ignacio Romero; 24,061 set off on migration during two hours from Gallocanta lagoon (TE/Z) José M. Pueyo, Antonio Torrijo;

60 over Jirueque (GU) Vicente A. Peinado (DALMA); 1,200 over Ejea de los Caballeros (Z) Javier López; 182 over Serradilla (CC) Achilles Cools; 150+180+500 over Rivas Vaciamadrid (M) Esther Murciano; 400 over Villafranca de los Caballeros (TO) Alejandro Gallego, Carmen Naranjo; 100 over San Román de Cameros (LR) Irene Pinto; 50 over Montánchez (CC) Francisco Lopo (ADENEX); 148 over Benacazón (SE) Andrés González; 150 over Mingorrubio (M) Andrés Rodríguez; 320+55+30+30+160 over Alcalá de Henares (M) Juan Prieto; 80 over Guadalajara, Xulio García (DALMA); 124 over Guadalajara, Antonio Nieto (DALMA); 125+114+102 over Pescueza (CC) Andrés Rodríguez; 60 over Sanlúcar la Mayor (SE) A. Jurado; 800 over Tremp (LL) Paco Martínez; 70 over Pitillas lagoon (NA) Isabel Jaime; 18 over Gotzaga (NA) Sandra Pinedo, Gorka Gorospe; 600 at Yesa reservoir (NA) Oier Torrecilla; 2 over Tarifa (CA) Niki Williamson, Simon Tonkin; 100 at La Janda (CA) Javier Elorriaga, Yeray Seminario; 3 at Medina Sidonia lagoon (CA) Fernando E. Navarrete; 12 at Fuente de Piedra lagoon (MA) Antonio Tamayo; 3 over Pozuelo de Calatrava (CR) Francisco Hidalgo; 70 at Las Tablas de Daimiel National Park (CR) Adrián Jordi; 75 at Camino de Villafranca lagoon (CR) M<sup>a</sup> José Valencia, Pedro Bustamante; 20+26 over Badajoz, Scott Schette, Jesús Guerrero; 19 over Almodévar (HU) Javier Viera, Víctor Pintado; 164 over Las Pedrosas hills (HU) Aitor Mora; 90 over Trujillo (CC) Carmen Pérez-Aloe; 71 at Riobobos weir (SA) Jorge Leonor; 40 over Monfragüe National Park (CC) José M<sup>a</sup> Jiménez; 300 over Tres Cantos (M) Christy Esmahan; 200 over Las Rozas (M) Daniel Ordoñez; 500 over Madrid, Daniel Izquierdo; 200+15 over Rivas-Vaciamadrid (M) José L. Sobrino, José Pérez, Chemi Ibáñez; 120 over Guadalajara, Diego Moreno; 60 over Almazán (SO) Fernando Chaguaceda; 15 over the beach at Saler (V) José Monterde; 25 at L'Albufera natural park (V) Alejandro Sanz; 23 over Torreblanca (CS) Isabel Martín; 200 over Daroca (Z) Gonzalo Peña; 850 over La Aldehuela (Z) José A. Domínguez; 135 over La Alfranca (Z) José M. Sánchez; 161 at Sariñena lagoon (HU) Alberto Gasquet; 60 at Villalba reservoir (BA) and 2 at Palomas (BA) Pepe Elias; 600 over Toledo, Aris Vouros; 300 over Vallecas (M) Blas Molina; 80 over Piedra Monastery (Z) Alfredo Sánchez.

*The Lithuanian cranes set off from Buendía (CU/GU) and travel 124 km to Gallocanta, where they arrive in the afternoon, Antonio Torrijo*

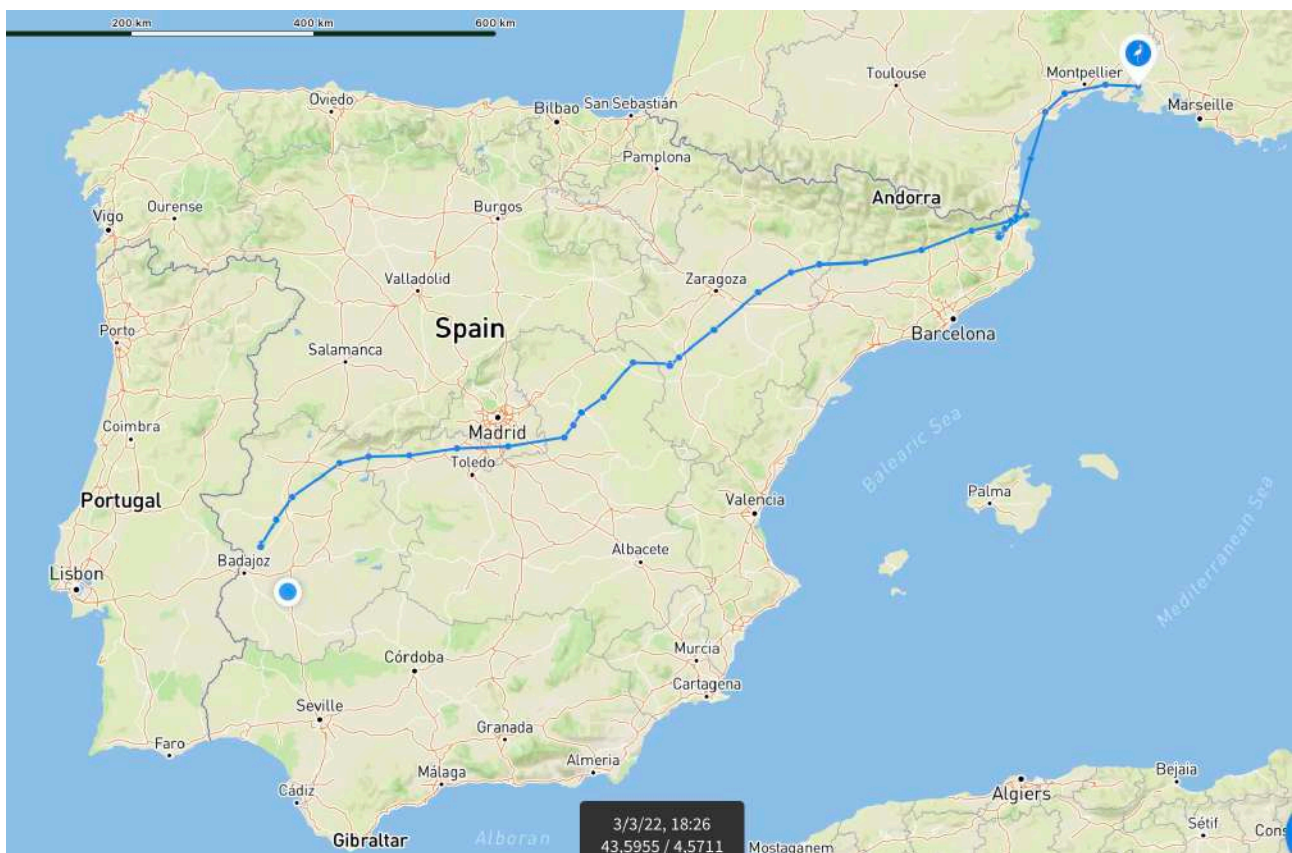
02/03/22: 1,400 at Sotonera (HU) Kees Woutersen; 25 at Sierra Brava reservoir (CC) Martin Kelsey; 400 over Zaragoza, José M. Sánchez; 560 over Valfarta (HU) Sandra Pineda, Gorka Gorospe; 900+350 over Huesca, Kees Woutersen; 200 over Zaragoza, Maite Miguel; 10+47 over Azuara (Z) Javier Domínguez; 14,104 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 90 over the Sierra de Guara (HU) Kees Woutersen; 300+70 over Azuel (CO) Manuel Moral; 4 over Bollullos de la Mitación (SE) Javier Rengel; 56+30 over the River Bembézar (CO) José Márquez; 1,000 over Ayerbe (HU) Menno van Duijn; 21 over La Jonquera (GI); 70 over Lluçà (B) Tori Cunill; 25 over Sant Vicenç de Torellò (B) Lluís Copete; 1,845 over Sangüesa (NA) Moisés Zozaya, Jesús Mari Lekuona; 76 over La Mueda reservoir (NA) Jesús Mari Lekuona; 45 over Orellana reservoir (BA) Rafa Al; 60 over Los Villares (CO) José Márquez: 60 over Trasierra (CO) Antonio Esteban; 160 over La Calzada de Oropesa (TO) Macarena Cuadrado, César Clemente; 235 over the Sierra de Andújar (J) Lilian Hacquin; 2,500 over Zaragoza, Javier Ferreres; 140 over Palomas del Río (SE) Carlos Moreno; 2 over Irún (G) Martín Larrañaga, Itziar Gutiérrez; 100 over Boscasa (GI) Jol Jols; 87 over Lécera (Z) Steve Saxton; 5,000 over Zaragoza, Silvia Roy.

*The Lithuanian cranes set off from Gallocanta at 10:25h to the northeast, flying over Sariñena (HU) continue eastwards to Solsona (LL) and continuing to La Jonquera (GI) where they circle and land at 20:11h near the aerodrome at Llado (GI), where they will spend the night. They have travelled 922km across the peninsula.*

03/03/22: 30 migrating over Panizo (Z) at 07:28h and 7 over Romanos (Z) at 07:37h, Francisco J. Sampietro; 40 over Sallent del Gállego (HU) Francisco Quesada; 50 over

Olesa de Montserrat (B) Albert Martínez; 60 over Sant Antoni de Vilamajor (B) Pau García, Andreu Dudau; 5,900 set off on migration from Gallocanta (TE/Z) and 7,097 roost at the lagoon, Francisco J. Sampietro (S.A.R.G.A.); 17 at Bobadilla (MA) Andrés Rojas; 22 at El Hondo reservoir (A) Ángel Sallent; 1 at La Llosa (CS) Ángel Bereje; 80+50 at the Ebro Delta (T) Arnau Costa; 900 in Capdesaso rice fields (HU) Eduardo Gracia; 2 at El Rubio lagoon and 2 others at El Cuartizo lagoon, Campillo de Dueñas (GU) Antonio Torrijo; 227 over Sevilla, Fernando del Valle; 50 over Zaragoza, Orlando Jarquín; 80 over Puebla del Río (SE) José A. Lama; 720 over Belchite (Z) Sandra Peinado, Gorka Gorospe; 80 over Pitillas lagoon (NA) Rajen Ayerra; 100 at Bujaraloz (Z) Conchi Esteban; 450+490 over Roses (GI) Damien Cohez.

*The Lithuanian cranes leave at 10:50h and go over Espolla (GI) towards Angels de Mer (FR) and fly over the Gulf of León towards Biezers (FR) at 14:10h, and continue, arriving at The Camargue (FR) at 18:20h.*



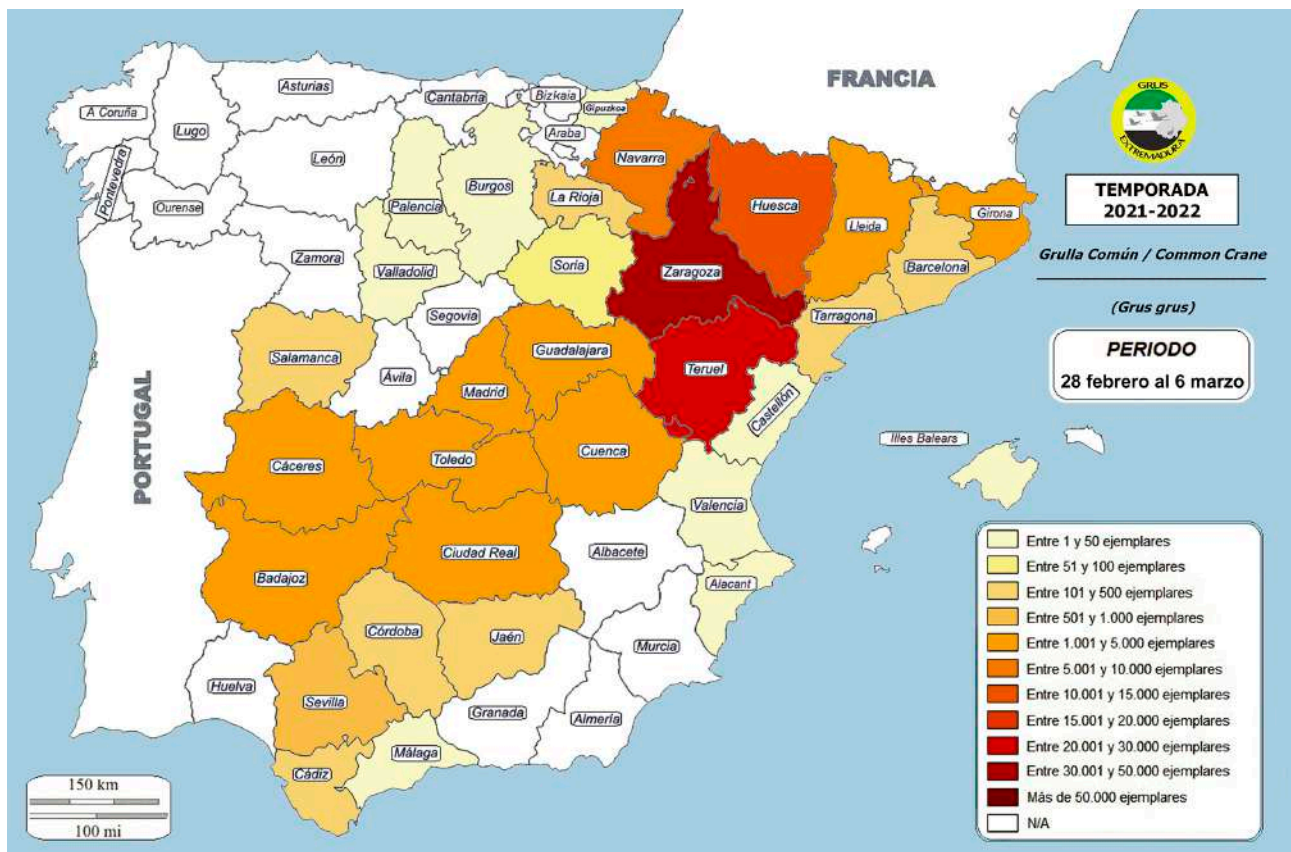
Map n° 39: Route followed by the Lithuanian cranes between 28 February and 3 March. Source: Animal Tracker.

**04/03/22:** 4 at Fuente de Piedra (MA) Adrián Jordi, Alfonso García; 50 over Marchamalo (GU) Isabel, Fernando (DALMA); 150 over Ciudad Real, Raquel Ramiro; no migration at Gallocanta (TE/Z) Antonio Torrijo; 121 at Castellò d'Empuries (GI) Ricard R. Longarte; 7 at S'Albufera Natural Park, Mallorca (IB) David Hinckley, Josep Maldonado.

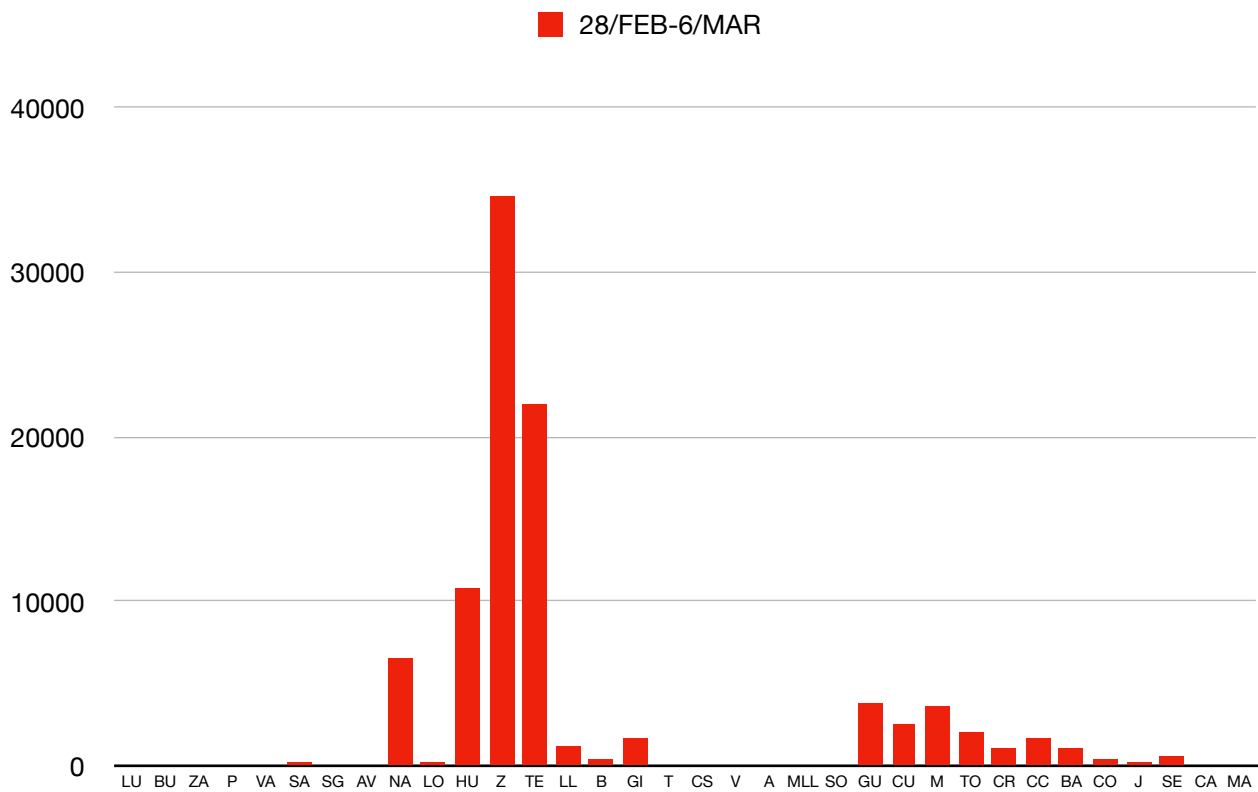
**05/03/22:** 2,000 set off from Artieda-Yesa (NA) but abandon the crossing because of bad weather, Kees Woutersen; 3,840 set off from Alboré (HU), although 436 return, Francisco Quesada; 143 at Larga lagoon, Villacañas (TO) Ángel Velasco; 150 over Los Yébenes (TO) Alejandro Gallego; 10 at Cañizar lagoon (TE) Eva Gascón; 7,000 set off from Gallocanta (TE/Z) Antonio Torrijo; 810 over Peñaflor (HU) Francisco Quesada; 101 over Movera (Z) José L. Rivas; 500 arrive at Sotenera reservoir (HU) Francisco Quesada; 800 in

Capdesaso rice fields (HU) Eduardo Gracia; 160 over Mérida (BA) Gerardo García; 5 at Villagonzalo (BA) Gerardo García; 215 over Olot (GI) Fran Trabalón; 150 over Solsona (LL) Gerard Bota; ; 200 over Girona, Cristina Casanova; 15 over Mocejón (TO) Javier Nicolau; 1 over Seseña (TO) Miguel Pulido; 4 over Rivas Vaciamadrid (M) Carlos Alonso; 300 over Los Galachos de Justibol (Z) Elena Cantalapiedra; 29 over Los Mallos de Riglos (HU) Alex Rafart; 140 over Pitillas lagoon (NA) Raúl Pascual; 7 over Loza lagoon (NA) Gaspar Zaldua, Alberto Rodríguez; 4,000 roost at Alboré reservoir (HU) Francisco Quesada.

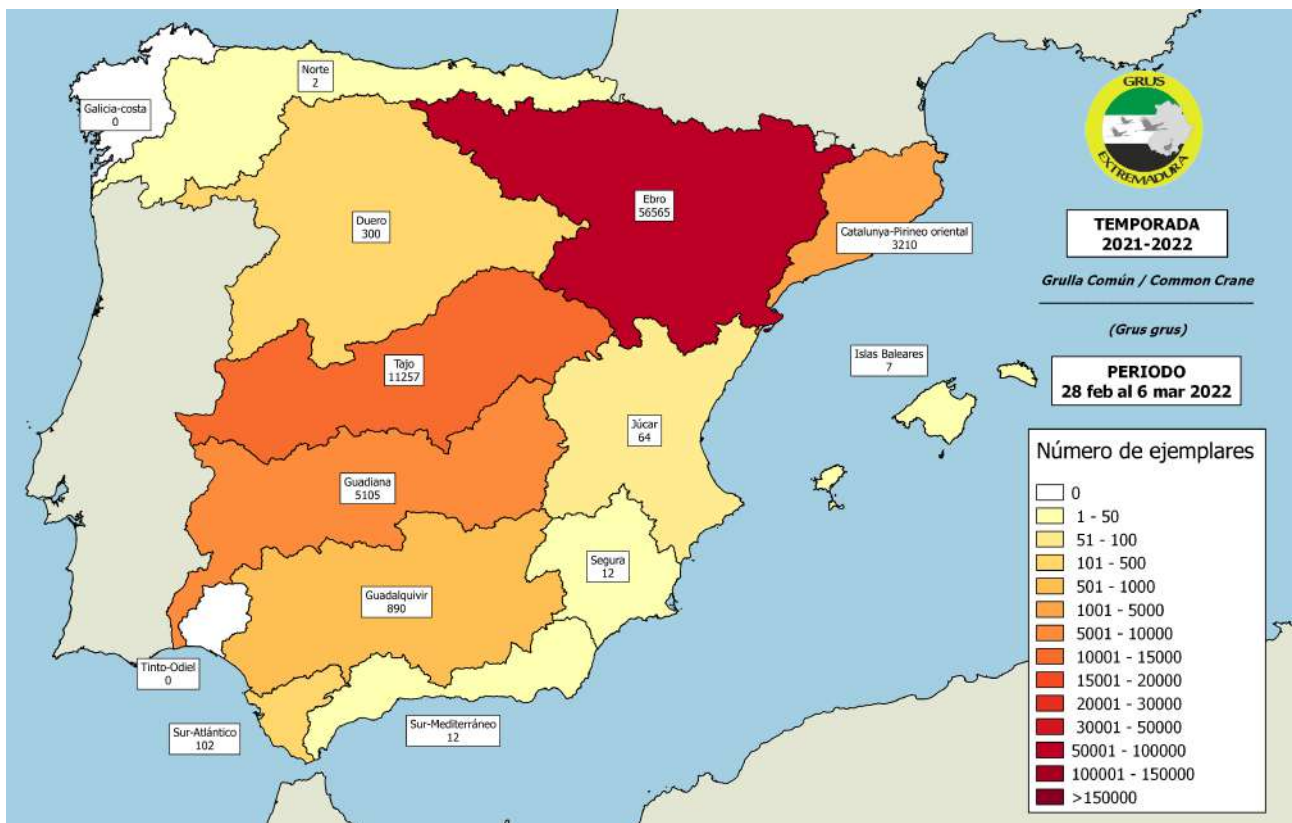
06/03/22: 1 at La Loteta reservoir (Z) Alfredo Sánchez; 450 set off on migration from Capdesaso (HU) Eduardo Gracia; 1 at El Longar lagoon, Lillo (TO) Ángel Velasco; 360 over Jaca (HU) Daniel Enfedaque; 2 over Alcollarín reservoir (CC) Ángel López; 1,000 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo, Felipe Rosado; 3,373 leave Sotonera (HU) although 1,126 return, Silvia Duque, Francisco Quesada; 125 over Solsona (LL) Gerard Bota; 150 over Orís (B) Ferrán González; 25 over Sant Quirze de Besora (B) Ferrán González-Prat; 35 over Palol de Revardit (GI) Miquel Pradas; 114 over Naut Arán (LL) Nacho Morales; 270+320 over Caldearenas (HU) Jorge Lardiés; 80 over Sariñena (HU) Eduardo Gracia; 30 over Alcubierre (Z) Omar Catalá; 3,000+ roost at Sotonera (HU) Silvia Duque, Francisco Quesada.



Map nº 40: Provincial migration during the week February 28 to March 6

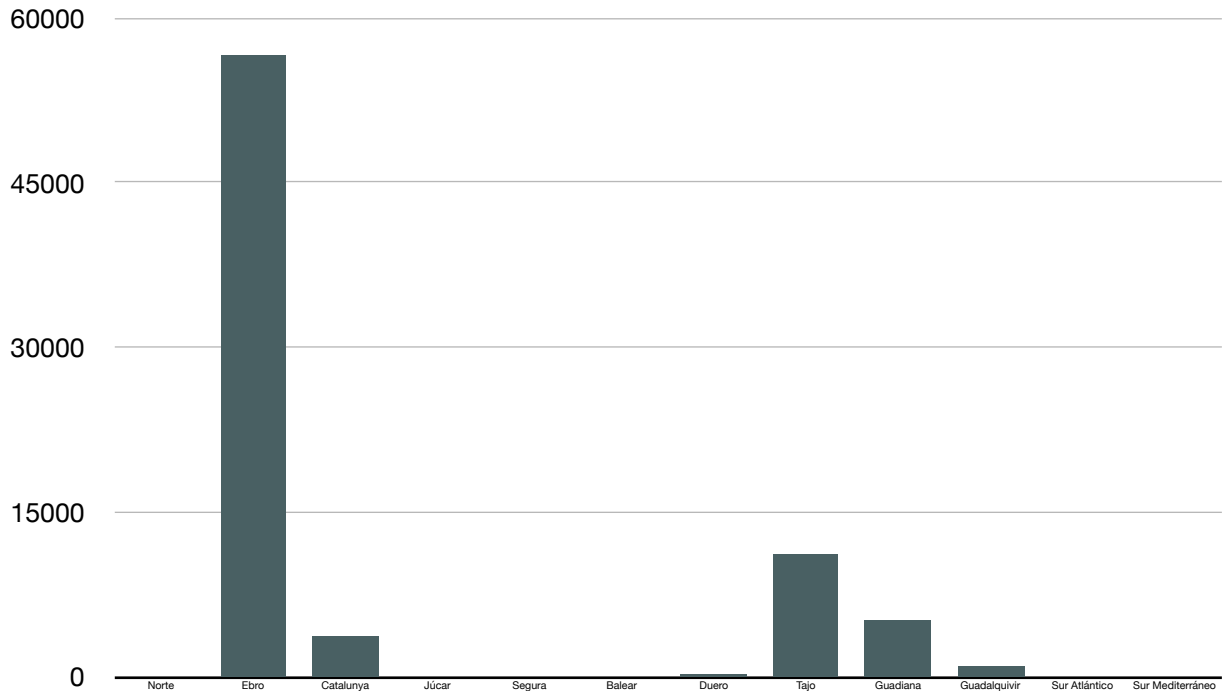


Graphic nº 46: Provincial migration during the week February 28 to March 6



Map nº 41: Migration by water catchment areas during the week February 28 to March 6

■ 28-FEB/06-MAR



Graphic n° 47: Migration by water catchment areas during the week February 28 to March 6

Migration is in the final phase, and is ending as wintering areas are practically empty of cranes.

**07/03/22:** 420 over Mallos de Riglos (HU) Shaun Robson; 722 over Pamplona (NA) Moisés Zozaya; 2 at Loza reservoir (NA) Alberto Rodríguez; 650 over Arizkun (NA) José L. Liarte; 440 over Huarte (NA) David Miqueleiz; 1,000 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 40 over Charo (HU) Ferrán Guardia; 300 over Pitillas lagoon (NA) Pablo Pérez

**08/03/22:** 2,400 set off from Gallocanta (TE/Z) Antonio Torrijo, José M. Pueyo; 48 over Herrera de los Navarros (Z) Javier Domínguez; 35 at Vega de Caminreal (TE) Antonio Torrijo; 40 over Siétamo (HU) Info: Francisco Quesada; 25 over Marchamalo (GU) Ángel Vela 180 over Alfajarín (Z) José L. Rivas; 150 at San Salvador reservoir (HU) Alberto Gasquet, Juanan Novales, Aitor Mora; 80 over Tárrega (LL) Francesc Pont; 200 over Sant Antoni de Vilamajor (B) Andreu Dulau; 1,792 roost at Sotonera (HU) Kees Woutersen.

**09/03/22:** 2,000 set off on migration from Sotonera (HU) Peter van Waveren; 100 over Alcalá de Júcar (AB) Lucas de las Heras; 55 over Albesa (LL) Jaume Bonfill; some cranes arrive at Gallocanta during the afternoon, Carmina Franco; 25 over Malla (B) Jordi Baucells; 14 over Santa Coloma de Farners (GI) Alfons Delgado; 40 over Villafranca de Córdoba (CO) José Márquez; 3 over Mérida (BA) Leen van Dam; 1 in the River Guadalhorce (MA) Ignacio Barrionuevo; 1 at Tablillas del Záncara (CR) M<sup>a</sup> José Valencia, Pedro Bustamante; 11 over the Columbretes Islands (CS) Vicente Tamarit; 300 at El Pas reservoir (HU) Ayla Monllor; 79 over Peñalba (HU) Héctor Pinilla; 1 at Cabeza del Buey (BA) Carlos Pacheco.

**10/03/22:** 7 in dehesas at Hinojosa del Duque (CO) Carmen M<sup>a</sup> Ayuso; 91 over Sangüesa (NA) Jesús Mari Lekuona, Moisés Zozaya; 130 over Girona, Albert Cufi; 547 set off on migration from Gallocanta (TE/Z) and 307 roost in the evening (S.A.R.G.A.); 1 at El Oso



lagoon (AV) Chema García; 40 over Pamplona (NA) Rajen Ayerra; 3 over Lagartera (TO) César Clemente; 30 over Punta Blanca, Ceuta, José Navarrete.

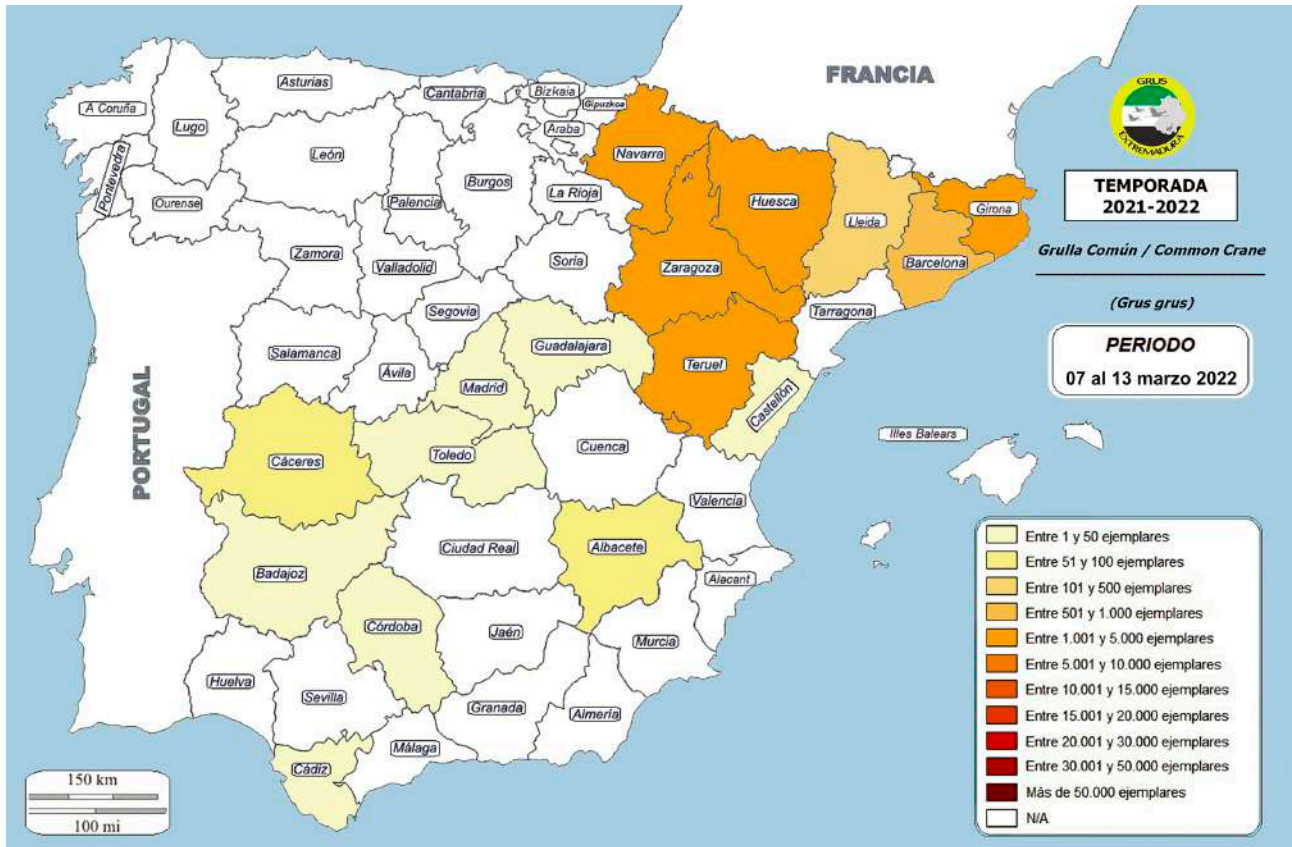


Image nº 86: The last cranes at El Hondo reservoir (A). Photo: Jacobo Ramos

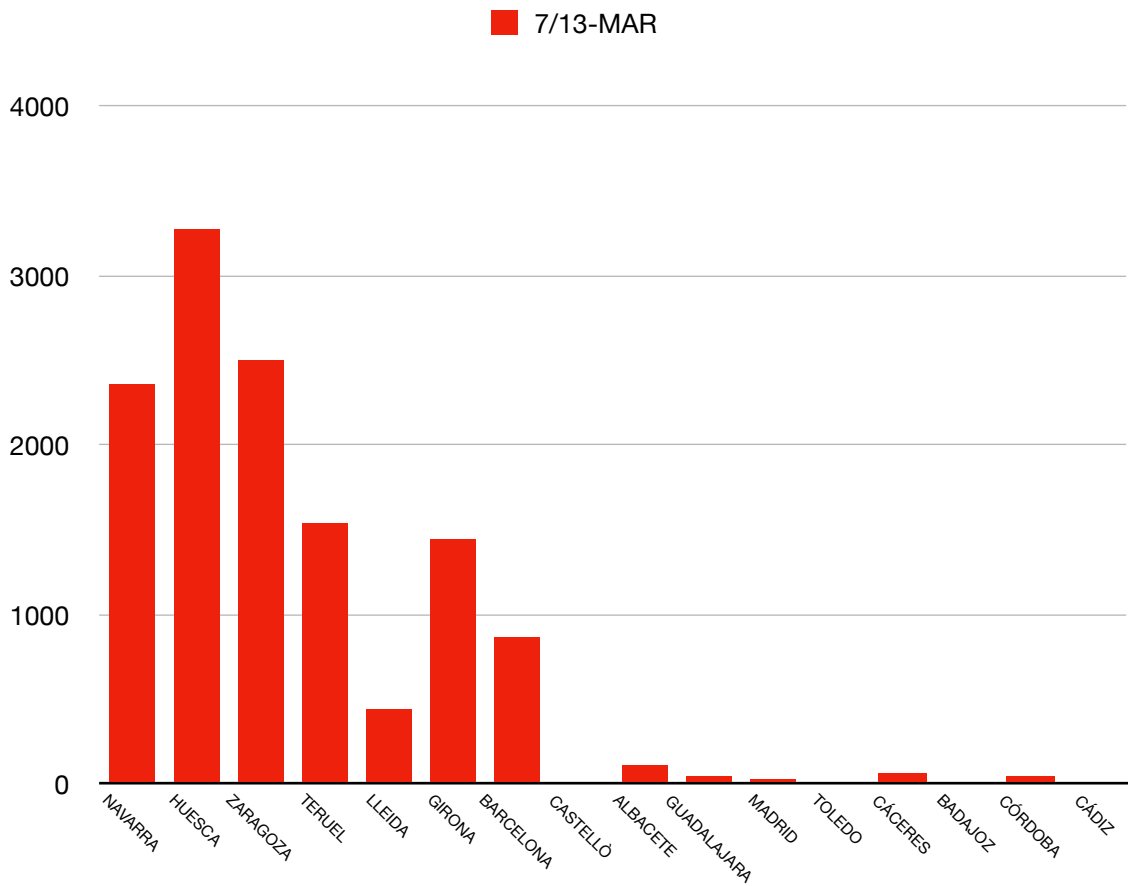
**11/03/22:** 2 at Sotonera (HU) Kees Woutersen; 9 in Vegas Altas rice fields (BA) Martín Kelsey; 4 in dehesa at Moheda Alta, Navalvillar de Pela (BA) Anabel Moreno; 160 in Capdesaso rice fields (HU) Eduardo Gracia; 50 at El Palancoso lagoon (CC) Antonio Méndez; 1 at Castelló d'Empuries (GI) Anthony Goubin.

**12/03/22:** 3 over Punta Carnero, Algeciras (CA) Javier Rengel; 3 at Cabeza del Buey (BA) Juan J. Benítez; 70 over Canet d'Adri (GI) Carles Colodro; 2 over Torellò (B) Jordi Erra; 60 over Clariana de Cardener (LL) Joan Gimestells; 150 over Navès (LL) Oscar Bargalló; 381 at El Pas reservoir (HU) Aitor Mora; 32 at Lalueza (HU) Eduardo Gracia; flock over Loarre castle (HU) Diego Uche; 110 over La Mueda reservoir (NA) Rajen Ayerra; 20 over el River Dulce gorge, Pelegrina (GU) Alexandre Nazarenko, Jannick Forquignon, Javier García, García de los Ríos, José Liarte, Mario Liarte; 23 over El Pardo (M) Manuel Horcajuelo; 4 over Arrocampo reservoir (CC) Almudena Molinero, José I. Gómez, 4 over Valdeobispo (CC) Marco A. Sánchez.

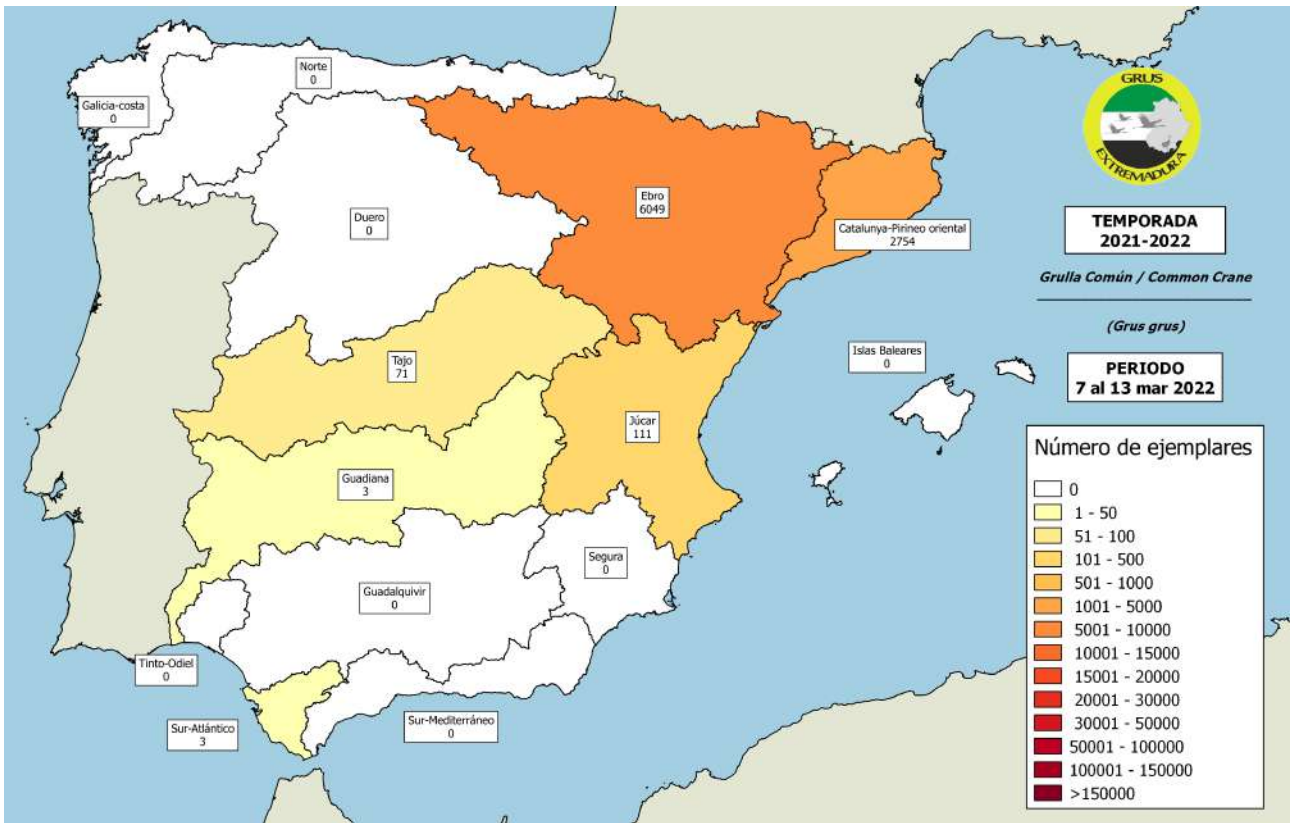
**13/03/22:** 80 over Montmesa (HU) Irene Marina; 350+150 over Beuda (GI) Michael Lockwood; 50 over Tona (B) Genis Cunill; 33 over Huerto (HU) Eduardo Gracia; 230 over Garriguella (GI) Máxime Pastore; 60 over Barcelona; 350 over Olvan (B) Daniel Pascual; 400 over Olot (GI) Roger Coromina; 3 over Tordera (B) Javier Romera; 174 over Taradell (B) Xesco Puiegdomenech; 100 over Ripoll (GI) Lourdes Solano, Castellserà (LL) Gerard Daniel and then over Agramunt (LL) Francesc Pont; 8 at Oropesa (TO) Fernando Cámara, Victoria Fraile (ARDEIDAS); 400 roost at Alboré reservoir (HU) Silvia Duque.



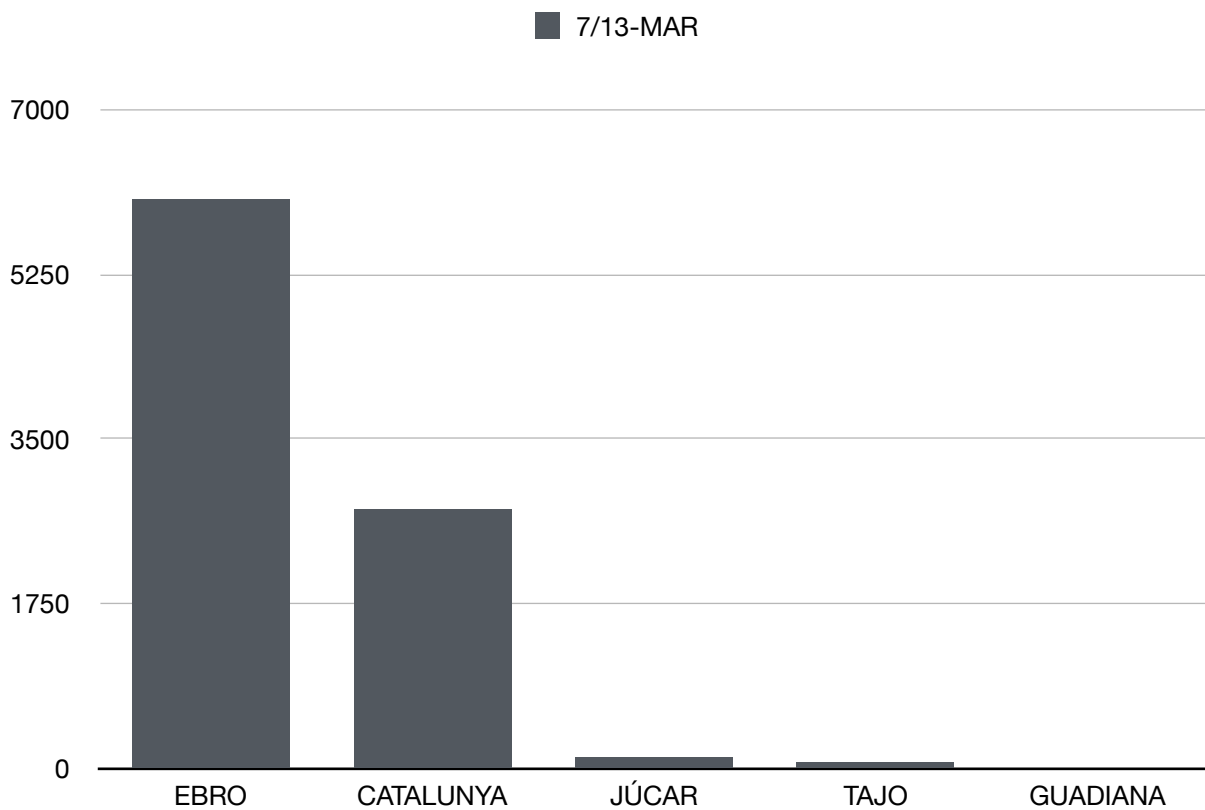
Map n° 42: Provincial migration during March 7 to 13



Graphic n° 48: Provincial migration during March 7 to 13



Map nº 43: Migration by water catchment areas between March 7 to 13



Graphic nº 49: Migration by water catchment areas between March 7 to 13

Migration is over and only small groups remain, mostly of immature birds which are gradually moving north-east, and a few birds left behind in their wintering areas.

14/03/22: 58 at Lalueza (HU) Eduardo Gracia; 14 at San Salvador reservoir (HU) Alberto Gasquet; passage over Avià (B) Miquel Casas.

15/03/22: 1,730 go to roost at Sotenera reservoir (HU) where there been 220 birds in the afternoon, Kees Woutersen; 3 at La Zaida lagoon (Z) and 111 at Gallocanta lagoon (Z) Francisco J. Sampietro; 5 in Doñana National Park (SE) Manuel Bárcena; 5 at La Nava lagoon (P).

16/03/22: Pair at La Mueda (NA) Jesús Mari Lekuona; 6 at Pitillas lagoon (NA) Gus Gahete; 45 over Villalba de los Montes (TE) Paul Chapman; 2 at La Mueda reservoir (NA) Jesús M. Lekuona, Moisés Zozaya.

17/03/22: 20 over Fortià (GI) Joan Ventura; 9 at El Mojón lagoon (TE) and 3 at La Parada reservoir, Used (Z) Antonio Torrijo; 100 at Gallocanta lagoon, Las Cuerlas (Z) Emilio Bobed.

18/03/22: 114 roost in ricefields at Capdesaso (HU) Eduardo Gracia; 1,000 at Alboré reservoir (HU) Francisco Quesada; 30 at Aiguamolls de l'Empordà (GI) Miguel A. Pérez; 5 over El Temple (Z) Paul Chapman.

19/03/22: 11 over Alía (BA) Manuel Gómez; 1 adult and 1 juvenile at Longar lagoon (TO) Ángel Velasco; 152 migrating over Riglos (HU); 17 over Loreto reservoir (HU) Francisco Quesada; 650 set off from Sotenera reservoir (HU), where 260 birds remain, Kees Woutersen; 142 in ricefields at Capdesaso (HU) Eduardo Gracia; 46 over Villaminaya (TO) Alejandro Gallego; 17+100+50 over Huerríos (HU) Silvia Duque; 45 over Sariñena (HU) Esther Yera; 11 over Fortià (GI) Kim Cama; 30 at El Cañizar lagoon (TE) Gregorio Chaguaceda; 25 at Castrejón reservoir (TO) Juan F. Fernández; 40 over San Agustín de Guadalix (M) Lucía O. Carretero; 100 over Huesca, Ángel Castro; 300 over Los Mallos de Riglos (HU) Sergi Sales; 1 at Villafáfila lagoon (ZA) Alfonso Rodrigo; 250 at El Pas reservoir (HU) Jesús Lavedán.

20/03/22: 29 set off from Gallocanta lagoon (Z) Antonio Torrijo; 80 at Alboré (HU) and 80 migrating over the mountains, Francisco Quesada; 32 over Cabanillas del Campo (GU) Fernando Gómez (DALMA); 56 roost at Alboré (HU) Silvia Duque, Francisco Quesada, Irene Marina; 3 at Alcocer (GU) Ángel Arellano; 33 at Gallocanta lagoon (TE) Sabi Martínez, Antonio Torrijo; 13 over Velilla de San Antonio (M) Carlos Antón; 74 at El Pas reservoir (HU) and 1 in ricefields at Selgua (HU) Jesús Lavedán; 15 over Abizarda (HU) Jan Vertroeye; 250 over Meco (M) Lorenzo Rodríguez.

21/03/22: 1 at Vegas Altas (BA) Martin Kelsey; 220 at Castellò d'Empuries (GI) Maxime Pastore; 7 over Fortià (GI) Joan Ventura; 23 over Pals (GI) Joachim Camps; 50 at Gallocanta lagoon (Z) Marc Mckeen; 12 over Tarifa (CA) Vicent Esteller; 24 over Les Basses d'en Coll (GI) Joan Estrada; 5 at San Salvador reservoir (HU) Jesús Lavedán.

22/03/22: 10 over Lo Poyo wetland, Mar Menor (MU) Antonio Fernández, they are subsequently seen over Los Martínez del Puerto (MU) Isidro Bartolomé; 4 at Salobrejo (AB) Manolo Salas; 80 over Calahorra (LR) Cristina Asunción; 10 at Torrefresneda (BA) Godfried Schreur; 100 over Vilajuiga (GI) Ponç Feliu; 5 over Fortià (GI) Joan Ventura; 9 over Sant Vicenç de Torellò (B) Jordi Erra; 32 at Gallocanta (Z) Mark Mckeen.

23/03/22: 6 at Luna (HU) Aitor Mora; 120 at Sotenera reservoir (HU) Esther Yera; 1 juvenile at Málaga airport, Javier Fregenal; 165 roost at Sotenera reservoir (HU) Kees Woutersen; 5 at Fuente de Nava (P) Fernando Jubete; 120 over La Torre de Capdella (LL) Iván Almirall; 200 at Estada (HU) and 1 at Graus (HU) Javier Domínguez.

24/03/22: 16 in dehesas at Tiétar (CC) Pedro Gómez.

25/03/22: 45 roosted at Guarrera lagoon, Tardajos (SO) Juan P. del Álamo, Juan L. Hernández; 17 at Lalueza (HU) Eduardo Gracia; 130 at Ejea de los Caballeros (Z) Jorge

Hernández; 7 at Castellò d'Empuries (GI) Joan Ventura; 25 at Loreto reservoir (HU) José M<sup>a</sup> Canudo; 21 over Tarifa (CA) Laura Rollán; 8 at La Janda (CA) Francisco Solano.



Image n° 87: Crane group over Motmesa (HU) on 03/13/22. Photo: Irene Marina



Image n° 88: Flock of cranes migrating over Sangüesa (NA) on 10/03/22. Photo: Jesús Mari Lekuona

26/03/22: 44 over Valdabra reservoir (HU) Francisco Quesada; 1 at La Mueda reservoir (NA) Rajen Ayerra; 1 at Pesquerito pool (BA) José L. Vinagre

27/03/22: 25 over Cubilar reservoir (CC) Anabel Moreno; 16 at Palazuelo (BA) Ángel López; 207 over Sotonera (HU) Irene Marina; 22 circling at Pitillas lagoon (NA) Jorge Hernández; 56 over Pamplona (NA) Rajen Ayerra; 25 over Loreto reservoir (HU) José M. Canudo; 20 over Miramontes (TO) Victoria Fraile (ARDEIDAS); 3 at Alcocer (GU) Ángel Arellano; 1 at Zarzacapilla (BA) Juan J. Benítez; 3 over Lezo (G) Aitor Labandibar; 80 over Chapinería (M) José I. Gómez.

28/03/22: 2 at El Campazo lagoon, La Aldea del Obispo (CC) Neil Renwick; 3 at Valverde de Mérida (BA) Fergus Crystal; 100+53 over the Sierra de Pardos, Cubel (Z) Gonzalo; 18 over Cofín (LR) Sito de la Torre, Borja Sanz; 107 at Sotonera reservoir (HU) Esther Yera; 4 at El Cañizar lagoon (TE) Miguel A. Martín.

29/03/22: 16 over the Sierra de Ibargoiti (NA) Jesús Mari Lekuona; 2 at Bello (TE) Josep Medrado.



Image nº 89: Pair of cranes at La Mueda (NA). Photo: Jesús Mari Lekuona

30/03/22: 10 over Sant Vicenç de Torellò (B) Lluís Copete; 115 over Madrid E. van Tugil.

31/03/22: 12 over Navarrete (LR) Jorge Alonso; 85 roost at Sotonera (HU) Kees Woutersen.

01/04/22: 4 at Ríolobos weir (SA) Carlos Villaverde, Miguel Rouco, Eduardo Alba, Javier Salcedo; 1 juvenile at the Guadalhorce estuary (MA) Lonnie Bregman, Huberto García; 5 over Toledo, Kiki Bairaktaridou; Aris Vouros; 1 at Santa María del Berrocal (AV) Eduardo Amengual; 1 at Alba de Tormes (SA) Miguel Rouco.

02/04/22: 1 at Basauri reservoir (HU) Francisco Quesada; 1 at La Mueda reservoir (NA) Javi Sola; 5 at Castellò d'Empuries (GI) Andreu Duclau; 15 over Garriguella (GI) Pau Federico; 25 over Inzares pass, Moratalla (MU) Salvador Sánchez; 1 over Marbella (MA) Antonio Román.

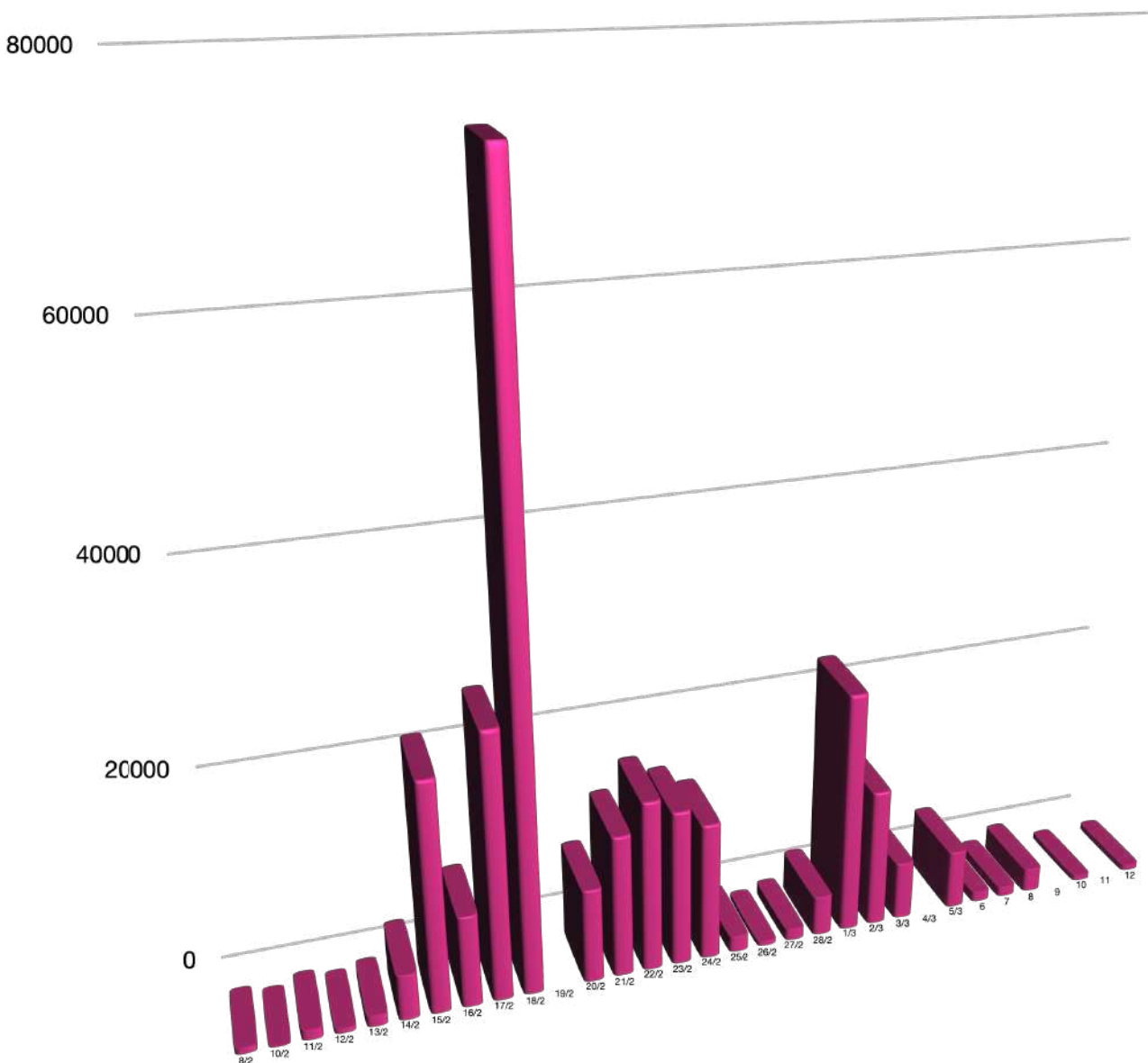
03/04/22: 70 over Sangüesa (NA) Rajen Ayerra; 3 at Alboré reservoir (HU) Silvia Duque; 2 at Vegas Altas (BA) Ángel López; 5 over Torroella de Montgrí (GI) Ton de Groot; 20 at Castelló d'Empuries (GI) Andreu Duclau; 200 over Garriguella (GI) Maxime Pastore; 14 over La Junquera (GI) Joan Budó; 22 over El Port de la Selva (GI) Xesco Puigdomenech.  
04/04/22: 18 over Garriguella (GI) Maxime Pastore.  
05/04/22: 3 at Conquezuela lagoon (SO) Jorge Atance (DALMA); 1 juvenile in the Liendo valley (CT) Virginia Iturriaga



Image nº 90: Flock migrating over Los Mallos de Riglos (HU). Photo: Joaquina Bort.

Migration has been rapid and determined, thanks to the good weather conditions that dominated in February and March, although there were some adverse episodes that delayed them or diverted their routes.

The starting date in Extremadura was 14 February, when a good number of the wintering cranes left and reduced their population to just a few thousands in one week. They headed for Gallocanta lagoon, from which they began to leave in significant numbers from 15 February, reaching the peak on the 18<sup>th</sup>, when 74,000 birds left the lagoon. In the following days there were more departures from wintering areas, birds arriving at Gallocanta lagoon in the afternoon and leaving the next day. In the days after the 18<sup>th</sup> several tens of thousands set off, with the exception of the 19<sup>th</sup>, when there was no migration. The last significant wave occurred on 1 March, with over 24,000 birds, then it decreased gradually, with ups and downs.

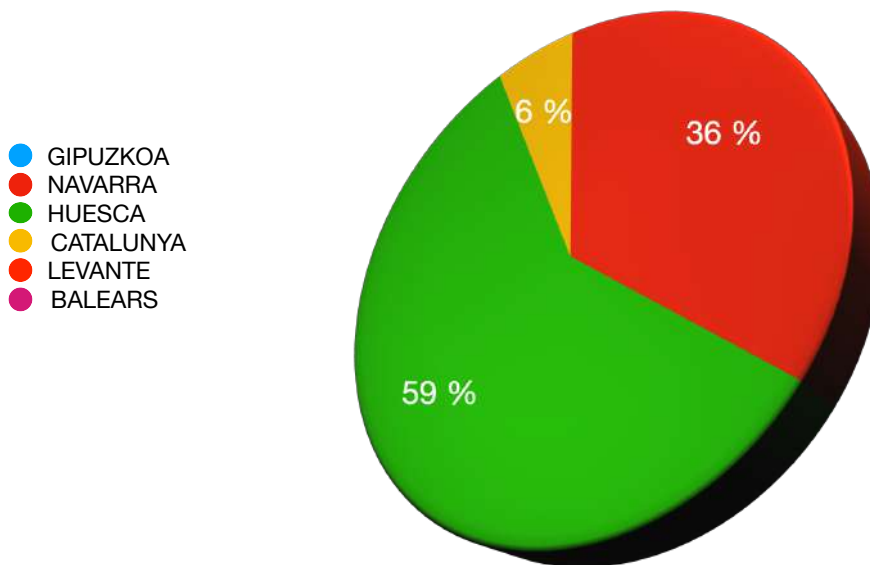


Graphic nº 50: Daily migration at Gallocanta lagoon between 8 February and 13 March.



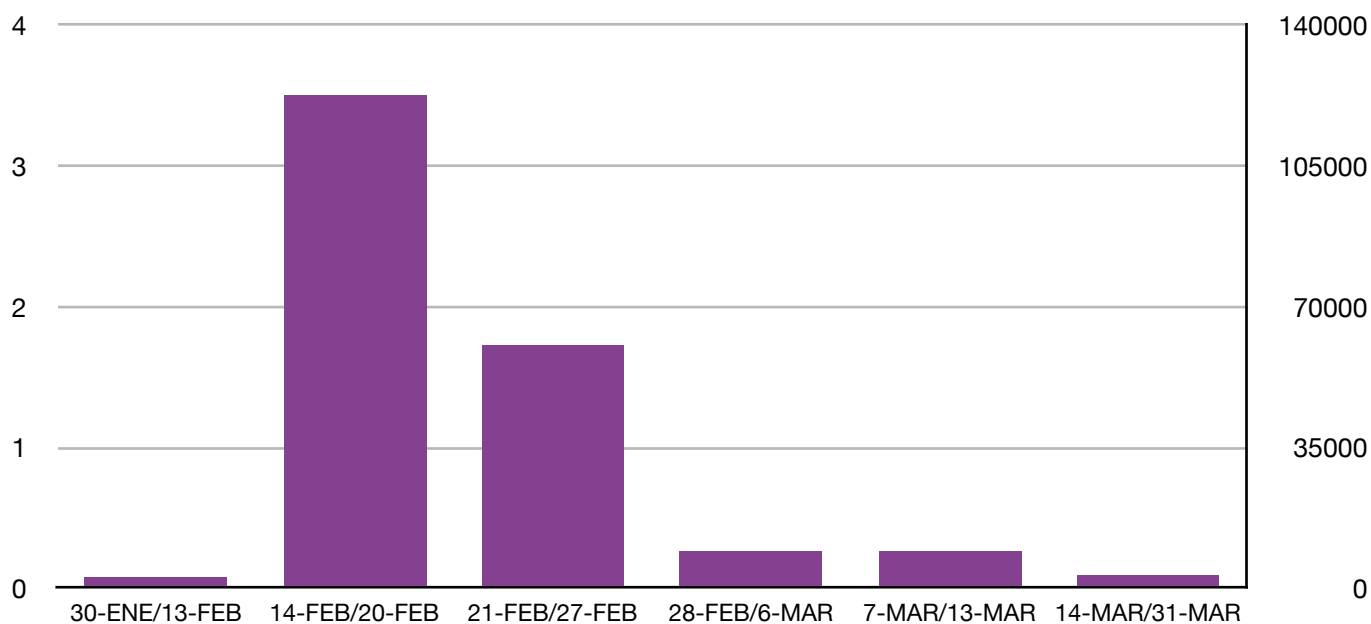
Crossing the Pyrenees was mostly from Huesca (59%), especially on those days when the north-west wind was blowing. A good number also went over from Navarra (36%). However, only 2 birds went from the Basque Country, while they didn't begin to go over Catalonia (6%) until the week beginning 14 February, increasing in the following weeks, and exceeding the numbers in Aragón and Navarra in the weeks beginning 28 February and 6 March.

There was very little passage on the east coast or over the Balearic Islands, also being seen in the final days of February and the beginning of March. Notably, a group of 11 birds were migrating over the Columbretes Islands, Castellón, on the 8<sup>th</sup>, several miles from the coast.



Graphic nº 51: Percentages migrating through the Pyrenees.

The bulk of the birds, 60%, crossed in the second week of February and 30% went the next week, so that 90% of the migration took place between the 14<sup>th</sup> and 27<sup>th</sup> of February. Numbers of migrants decreased progressively in the following weeks.



Graphic nº 52: Weekly evolution of pre-nuptial migration in 2022

**210,493** cranes were counted crossing the Pyrenees, in addition to those that went along the east coast/Balearic corridor, although 94,328 were not detected, due to weather conditions or nocturnal migration.

The actual number of cranes that passed through the Iberian Peninsula was **304,850** individuals. This figure is the sum of the 276,306 (91.4%) cranes counted at Gallocanta lagoon and those that were counted on the Castilian route, further to the west, and which are all those that migrated to the north of the central mountain range, which were 5,736 (1.9%), as well as those that were found to the north of the lagoon, which were 19,970 (6.6%), the 82 (0.02%) that went along the Mediterranean corridor and those that were seen in the second half of March.

We estimated that in December there were at least 280,000 birds in the Peninsula, although the result of the January census was lower, when we are confident that not all the birds present were counted. Counting is complicated, especially in areas of dehesa; in some instances, it is difficult to access farms, and in others because birds are more widely dispersed and groups have spread out to many ponds that cannot be seen. It is possible that our estimate from the first census is low and the number of wintering birds was higher. Additionally, north African birds should be included, not only those in Morocco, which we estimate at around one thousand, but also birds in Algeria should be included, and we shouldn't rule out Tunisian birds, as circular migration is not unusual - those birds which go south through the Italian Peninsula or the Balkans and then return via the Iberian Peninsula. However, we don't have recent figures for how many spend the winter in these countries nor how many cranes use this corridor.

## PRENUPTIAL MIGRATION

	30-JAN/13-FEB	14-FEB/20-FEB	21-FEB/27-FEB	28-FEB/6-MAR	7-MAR/13-MAR	14-MAR/31-MAR
<b>GIPUZKOA</b>	0	0	0	2	0	3
<b>NAVARRA</b>	1283	43921	24100	1230	2255	86
<b>HUESCA</b>	1517	77716	33728	2632	3684	2186
<b>CATALONIA</b>	0	1230	2632	4989	2754	620
<b>EAST</b>	0	0	0	64	11	35
<b>BALEARIC</b>	0	0	0	7		0
<b>TOTAL</b>	2800	122867	60460	8924	9004	2930

Table nº 23: Weekly migration, between 30 January and 31 March.



Map nº 44: Principal prenuptial migration corridors during 2022.

Image nº 91: Flock rising on a thermal before leaving. Photo: José A. Román.

## **PROBLEMS AND CONSERVATION**

### **AGRICULTURE**

The change in agricultural use continues relentlessly in the majority of wintering areas, replacing herbaceous crops with woody ones. There is a widespread trend in abandoning crops of maize, rice and rain-fed cereals because of their low economic profitability, increasing at the same rate the number of hectares dedicated to crops such as olives, almonds and pistachios for their greater profitability; these changes are sponsored by the different regional administrations which support them under the over-used argument of “avoiding rural depopulation”.

The majority of these changes depend on irrigation systems, the majority legal but some illegal, with indiscriminate wells dug to reach water for irrigation, with drip systems used in the rain-fed areas. However, this phenomenon is also taking place in irrigated areas, making use of the existing hydraulic infrastructures.

All of this entails a loss of favourable feeding habitats for cranes, which each year find more and more areas have been transformed and therefore have lost interest for them as feeding or resting places, including some flooded plots which were used as roost sites by them; these have been lost due to the changes and some traditional wintering areas have seen numbers dwindle, even disappearing or will do soon.

Unfortunately, these practices are going to increase, unless the different administrations put in place or develop adequate agricultural policies in each region. In the future the species' distribution and wintering in this country could change significantly.





Image nº 92: Cranes in Extremadura with pistachio and olive plantations in the background, which were rice and maize fields until recently. Photo: Jose A. Román.



Image nº 93: Roosting lagoon (VA) surrounded by intensive crops and a farm building, which affects their routines. Photo: Juan A. Medina

Image nº 94: One of the few feeding areas for cranes in Valladolid has been invaded by super-intensive crops. Photo: Juan A. Medina.

## HEALTH

An outbreak of avian flu H5N1 was found at Hula Lake in Israel at the end of December. This is a location on the migration route for the eastern population of cranes (from Russia, the Baltic states and central Europe), and it is also a wintering site. It can host up to 50,000 individuals. The disease infected domestic and wild birds, causing the death of at least 7,000 cranes and the slaughter of at least 600,000 domestic poultry on farms. Although the outbreak subsided, it nevertheless affected a significant number of individuals, which will impact on the growth of the breeding populations.

In Spain, no outbreak was detected until the middle of January, when one was recorded at El Hoyo lagoon, El Oso (Ávila) which primarily affected wild greylag geese (*Anser anser*) and caused the death of at least 4 cranes (Arón Blázquez *pers.com.*); no other cases were registered in wintering areas until the end of the season, in mid-February, when the death of a crane due to this disease was reported in a roost site at Santa Amalia (Badajoz) and another at Belalcázar (Córdoba), without any other cranes being infected apparently, as no other birds were found affected by this disease.

No cases were found at migration sites either, such as Gallocanta or Sotonera. However, we have to be aware that at the latter site an event on 12 November 2021 caused the sudden death of 57 cranes, and although everything pointed to poisoning, there were no clear conclusions about the cause of the deaths (Pablo Vallés *pers.com.*), so an outbreak of avian flu cannot be ruled out.



Image nº 95: Crane affected by avian flu at Santa Amalia (BA). Photo: Guillermo Crespo.

## INFRASTRUCTURES (ELECTRICITY CABLES, WIND TURBINES AND SOLAR PANEL PARKS)

### Electricity cables

Every year cables cause the death of several individuals, particularly juveniles, but adults too on days with poor visibility, and they are the main cause of death. Generally, this happens through colliding with the earth cable, which is usually thinner and the highest, which makes it harder to be seen by the birds. However, there has been a case of electrocution, which involved the red-crowned crane (*Grus japonensis*) which had been in the area around La Nava lagoon (Palencia) since the previous season and was spending the summer there. Probably the bird was trying to avoid a distribution cable but the greater wingspan of this bird meant it touched two conductors at the same time, causing instant death.

New cables must continue to be marked and avoid, as much as possible, crossing sensitive area for birds.



Image 96: Red-crowned crane (*Grus japonensis*) killed by an electricity cable. Photo: Fernando Jubete

## Wind turbines

The installation of wind turbines as an alternative source for producing electric power continues to increase in all of the Spanish autonomous regions. The “clean energy” argument is continuously put forward by our politicians and electricity companies. However, this is having a serious impact on landscapes, natural or otherwise. In addition, they are a serious problem for birds in general, not just soaring or large birds, but affecting all species, especially on migration routes such as hill tops, where they can become slaughterhouses for many species. Additionally, and especially for cranes in some wintering areas in Aragón, the widespread installation of these enormous structures, which are in some cases between resting places (reservoirs) and feeding areas, is forcing cranes to cross them daily. Although the cranes learn to avoid them, they are still at risk on days of strong winds or poor visibility, which causes the death of several individuals each season. Putting ever-bigger complexes of wind turbines in sensitive areas for cranes should be restricted.

In some places in Spain the blades are stopped on days with significant migration, such as Gibraltar and some places in Navarra. This is done in France and Belgium too, when informed by ornithologists who are monitoring migration, so this practice should become widespread.



Image nº 97: Cranes going through a wind turbine park at La Loteta reservoir (Z). Photo: José A. Pinzolas.



## Disturbances

The major source of disturbance for cranes continues to be hunting on the days it occurs, as there are so many moving vehicles, hunters and dogs, which complicates the birds' movements and feeding on those days, concentrating them to excess in small, apparently quiet, plots where they could be scared off at any moment, leading to accidents with cables or other aerial structures.

At the same time, the number of people taking exercise in the open-air is increasing: running, walking, on bicycles or motorbikes and also travelling on all-terrain vehicles on tracks at high speed, which cause flocks to continually take off when they may be feeding or resting.

It is not infrequent to find “scarecranes”, who are those on certain farms, having recently sown fields or because they are not sympathetic to the birds, going out to frighten them by sounding a car horn, or even getting out of the vehicles and clapping hands with the aim of keeping cranes away from the plots where they are found.



Image nº 98: “Scarecrane” in action in a plot near Villanueva de la Serena (BA). Photo: José A. Román.

## Festivals and conferences about cranes

Different Associations, as well as some Autonomous Region Administrations, have been celebrating crane festivals and welcome and goodbye to crane events. The oldest welcome and goodbye events are those organised by ADENEX and the Friends of Gallocanta Association (AAG), which, despite the pandemic, have celebrated these popular events which aim to improve knowledge of and support for our cranes.



Image 99: Poster for the Goodbye Cranes event at Gallocanta. Illustration by Pilar León.

The Crane Festival at Moheda Alta, Navalvillar de Pela, organised by the Tourism Department of the Extremadura Government and Grus Extremadura, was held with people attending. Amongst the activities, such as workshops especially for children, a round table was held on crane migration, changing patterns and the earlier dates, which sparked a lively debate between the participants. It was chaired by José A. Román (Grus Extremadura) and taking part were Antonio Torrijo and José Miguel Pueyo (AAG), Luis M. Bautista (CSIC, MNC) and Joao Sanguinho (Portugal).



Image nº 100: Members of the round table on crane migration. Photo: Samuel Sánchez.

Image nº 101: Manolo Rincón “storyteller” telling children the story of an injured crane. Photo: José A. Roman.



Image nº 102: Children's workshop by Grus Extremadura at the Festival. Photo: José



Leal

Image nº 103: Carmen Conde presenting her book "Vuelos con grullas" (Flights with cranes). Photo: Jose Leal



Image nº 104: Children's activity at the Goodbye to Cranes event at Gallocanta. Photo: AAG.

### **Environmental education**

Without any doubt, the best tool for cranes to be respected and protected in the future is environmental education, especially for the youngest. The talks and conferences dedicated to cranes in schools and colleges sow the seeds of the future crane people, therefore this activity is very important.

Our colleagues in Los Pedroches have held several days for children, consisting of talks in the schools and with visit to the dehesas, where they were able to enjoy the presence of "Josefina" and other cranes. The day will be forever etched in their memories and in the future these will be the people helping to protect this unique ecosystem.

Other crane colleagues organise workshops for their pupils in Casar de Cáceres school, in which they learn and perform tasks related to cranes.

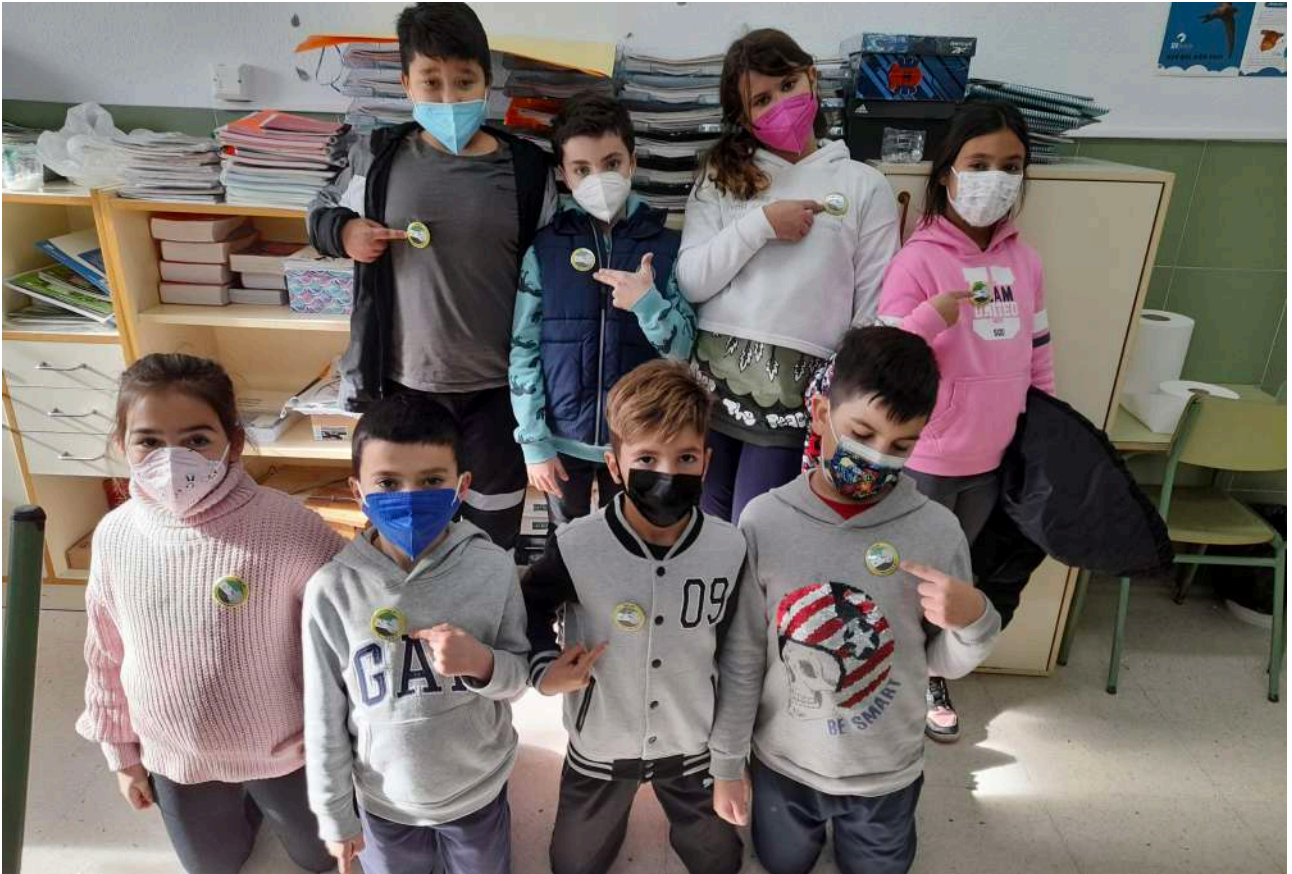


Image nº 105: Group of students at Casar de Cáceres after educational activities about cranes. Photo: José Carlos López



Image nº 106: Juan Sánchez telling the story of “Josefina” to his classmates in Añora school (CO) under the watchful eye of his father. Photo: Juanma Sánchez



Image nº 107: A presentation about “Josefina” in Añora school (CO). Photo: Juanma Sánchez



Image nº 108: School trip into the dehesas at Los Pedroches to learn about cranes. Photo: Juanma Sánchez.

## Publications

The Friends of Gallocanta Association has recently published a story about the life of the crane “Josefina”, the most famous of our wintering cranes. In it, we are told of her origins and journeys, and how she was the trigger for systematic monitoring and reading coloured rings and the origins of the Association.

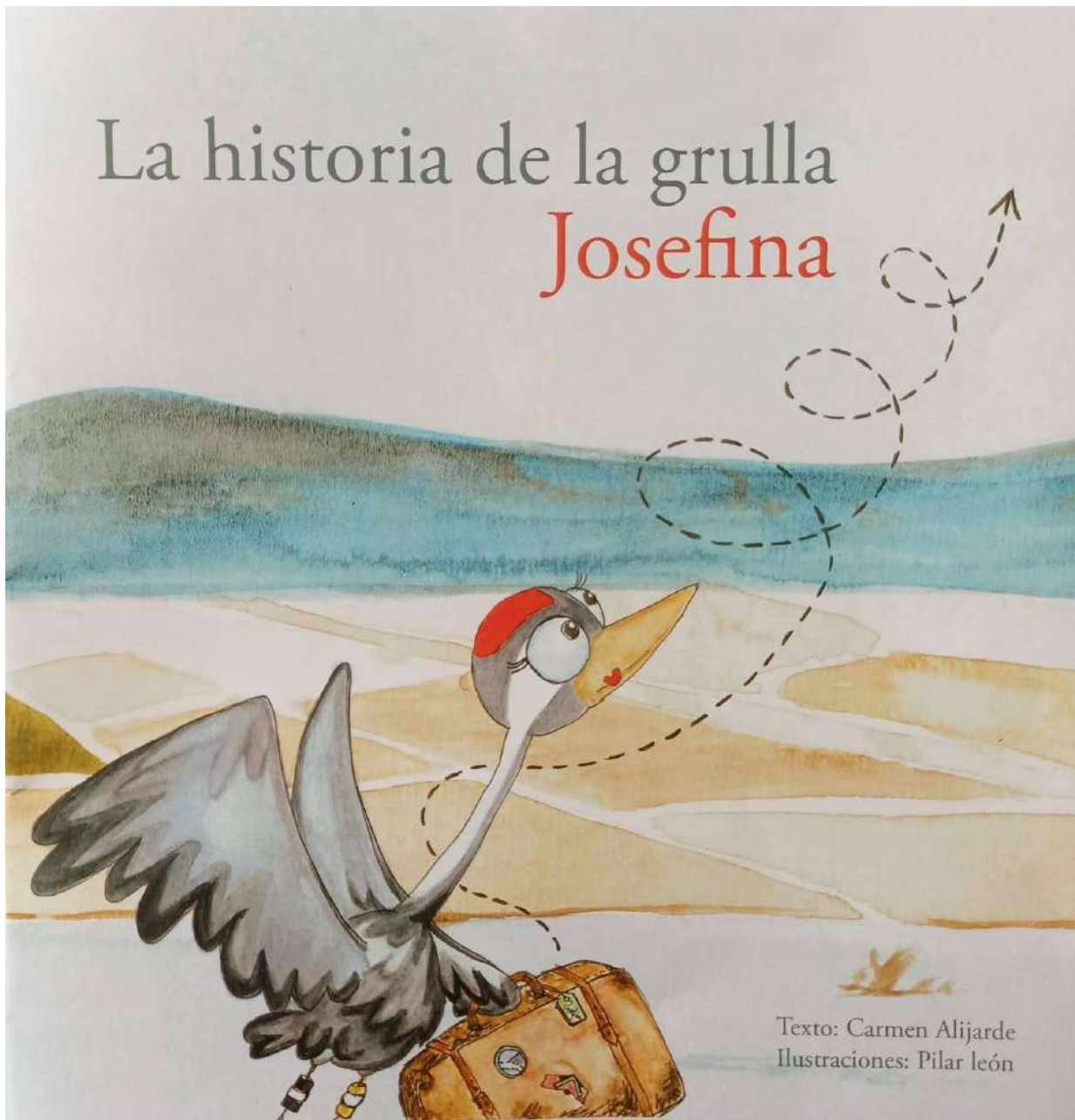


Image nº 109: Cover of the story of Josefina the crane. Illustrations by Pilar León and text by Carmen Alijarde.



Another publication to have come out recently is “Alba and the Old Crane”, published by the Friends of La Janda Association, in which the story is told of the journey of a young crane who got separated from her parents and joined an old crane, which got to know the wetland in the old days, to travel to La Janda lagoon in Cádiz province. Written and illustrated by Marta Curti and Gorka Gorospe, it has been published in Spanish and English.

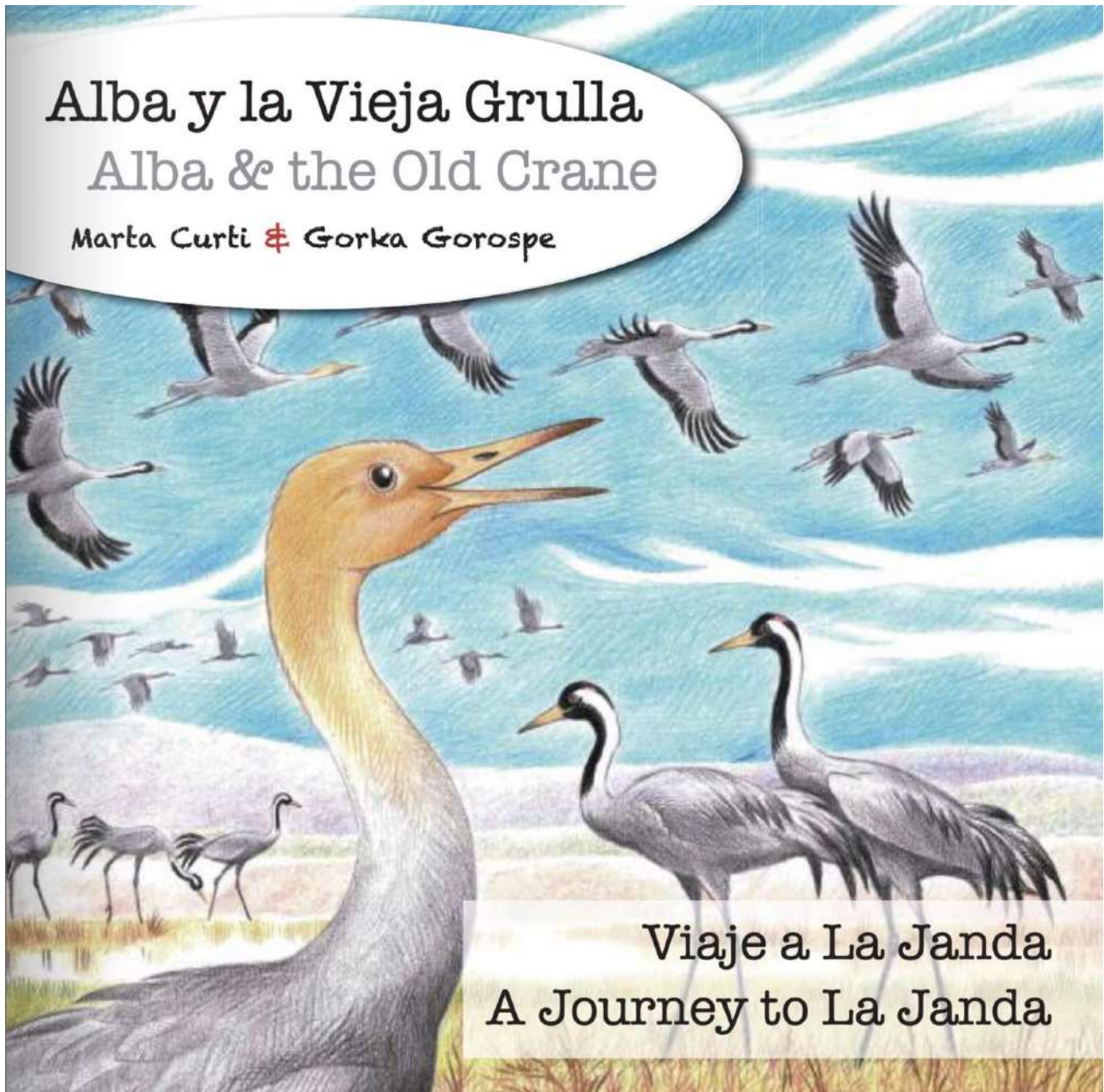


Image nº 110: Cover of the story of Alba the crane and the journey to La Janda. Illustration by Gorka Gorospe.

Also published in the past year was the story of “Gudrs”, a crane from Latvia who spends the winters in the Sotonera area, Huesca. It is illustrated by Miguel Bradineras, with text by Pablo Vallés. This tells us of this crane’s experiences in the Montmesa area, and its relationship with other animal and plant species.

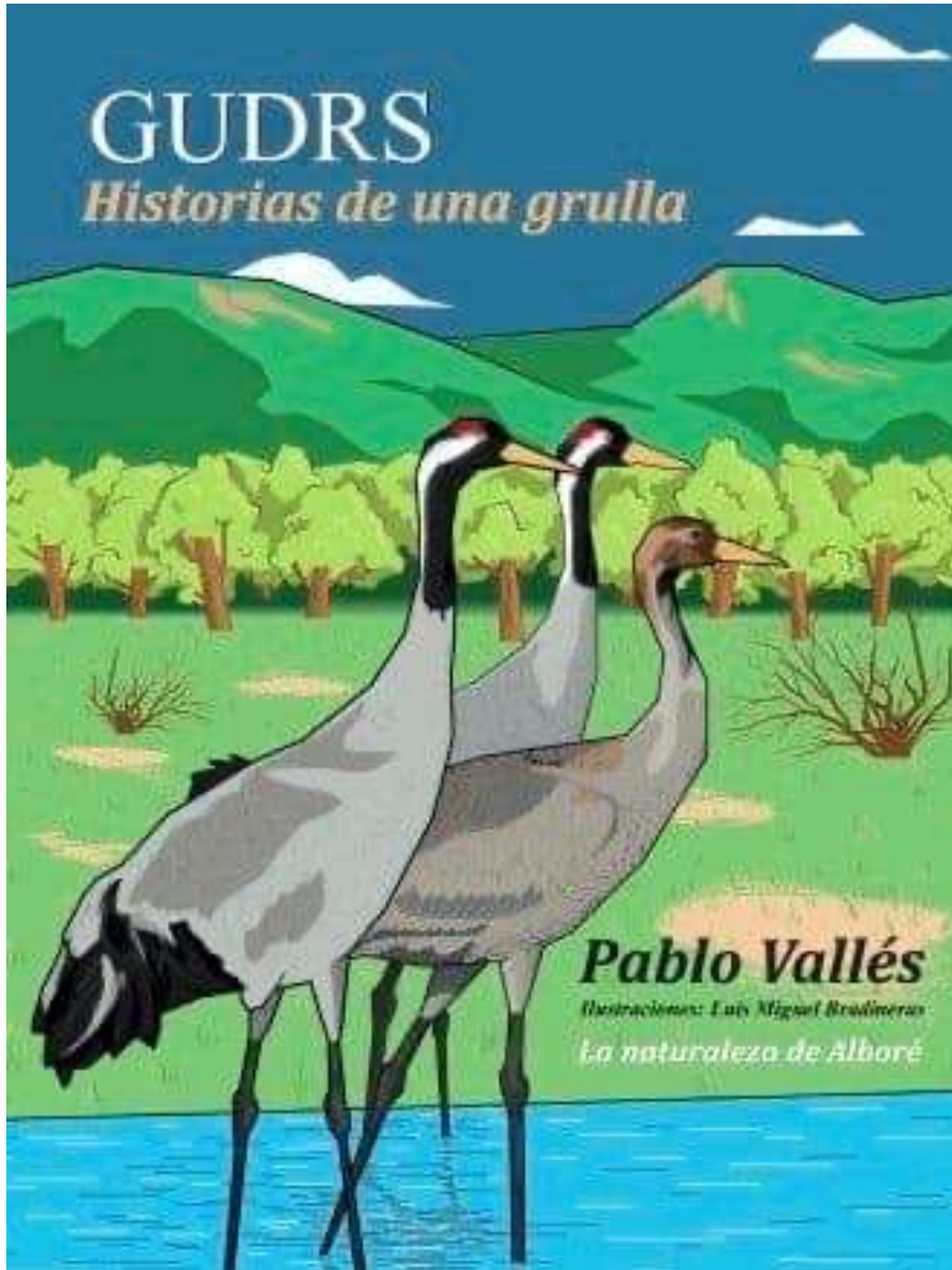


Image nº 111: Cover of “Gudrs”. Illustration by Miguel Bradineras.

Carmen Conde also published a book, called “Vuelos con las Grullas” (Flights with cranes), which earned the Tundra Prize for Nature Literature in 2020.

This work relates Carmen’s personal experiences with cranes. She is a professor at the University of Extremadura, dedicated to teacher training. After completing her studies, she worked with student groups for ADENEX in the Ambroz Valley, where they learnt about and enjoyed cranes, which took her to Sweden where she got to know their feeding areas and also how children in this country are educated and become aware. All these and subsequent experiences with the species are reflected in this book in a pleasing literary style that makes it an entertaining read.

The book’s prologue is by the naturalist Joaquín Araujo and the cover photo is by Pepe Elías.



Image nº 112: Cover of the book “Vuelos con grullas” (Flights with cranes) by Carmen Conde, with a photo by Pepe Elías.

A lovely children's story "Cuento de grullas" (A tale of cranes) was published in 2018, written and illustrated by Pilar Domené and published by Teruel Gráfica. It tells of the experiences of a girl called Luneta, who lives near Gallocanta, sees cranes and falls in love with them, not understanding why they go away in spring, but her good friend, Sabino, answers all her doubts throughout the narration. It is an emotional and tender story for younger children presented very sensitively by Pilar. In the introduction there is a small poem by Uge Fuertes.



Image nº 113: Cover of "Cuento de grullas" (A tale of cranes) with text and drawings by Pilar Domené.

Our final selection is the monograph “La Grulla Común” (The Common Crane), published in 2018 by José A. Román, in which he describes the species, its biology, feeding habits, migration and wintering activities. He has gathered all the information published about the species in Spain during 40 years, from the first “Grus” project up to the 2018 census, describing the wintering areas and also the challenges they currently face. It was published by Tundra Ediciones, which has become the most important natural history published in this country.

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# **La Grulla Común**



**José Antonio Román Álvarez**



Image nº 114: Cover of “La Grulla Común” (The Common Crane) by José A. Román and illustrated by Lluís Sogorb.

We are expecting the story of “La grulla herida” (The injured crane) to be published soon, written by Manuel Rincón.



Image nº 115: Illustration from the story of “La grulla herida” (The injured crane). Artist: Ángel M. Palomino



Image nº 116: Sunset over one of the roost sites at Santa Teresa reservoir (SA). Photo: Vicente G. Garrudo