

THE WINTERING OF COMMON CRANES IN SPAIN

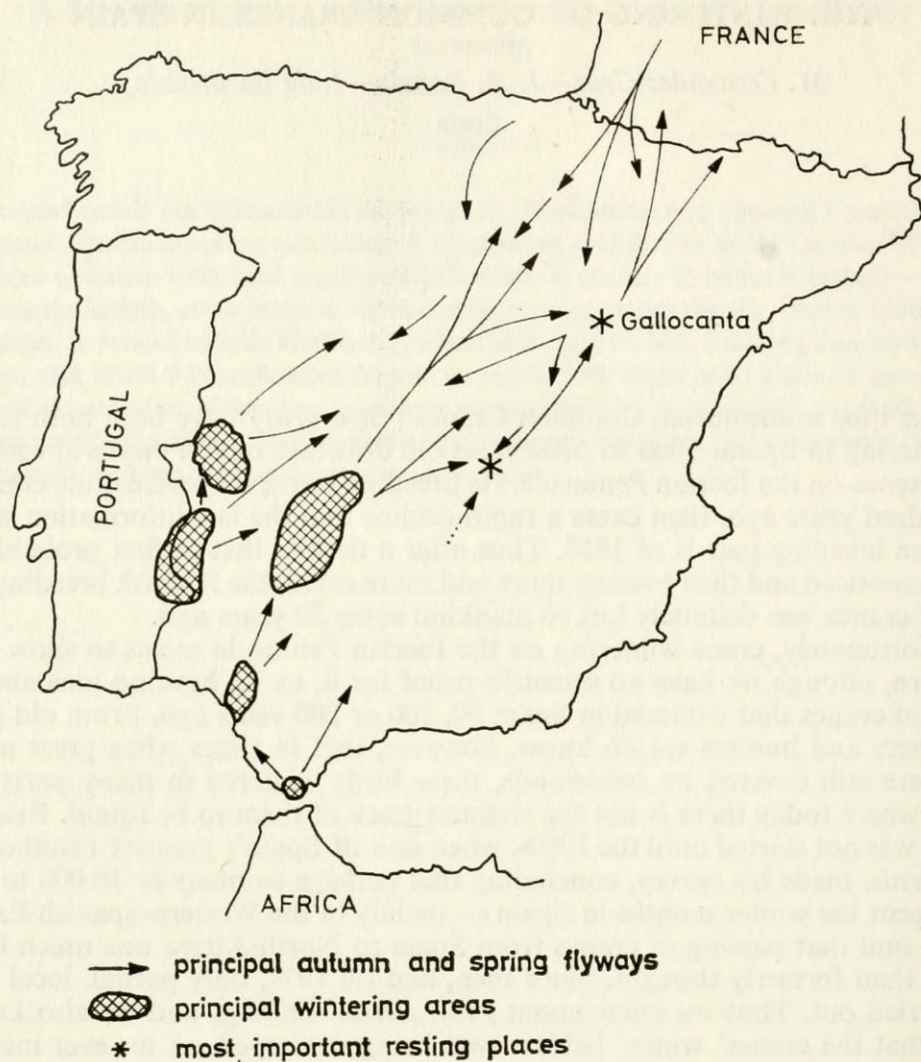
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Spain

Since time immemorial, Common Cranes (*Grus grus*) have been both breeding and wintering in Spain. 5000 to 6000 years old drawings on cave walls already show their presence on the Iberian Peninsula. As breeding birds, they were quite common a few hundred years ago, then came a rapid decline and the last information we have about one breeding pair is of 1954. Thus after a decline that at first probably went almost unnoticed and then became more and more rapid, the Spanish breeding population of cranes was definitely lost to mankind some 30 years ago.

Unfortunately, crane wintering on the Iberian Peninsula seems to show a similar pattern, although we have no scientific proof for it, as we have no idea about the number of cranes that wintered in Spain 50, 100 or 200 years ago. From old records of falconers and hunters we do know, however, that in times when great areas of Spain were still covered by oak-woods, these birds wintered in many parts of the country where today there is not the slightest trace of them to be found. Real crane research was not started until the 1960s, when one of Spain's greatest ornithologists, Prof. *Bernis*, made his survey, concluding that perhaps as many as 10 000 to 15 000 cranes spent the winter months in Spain — mainly in the Western-Spanish Extremadura —, and that passing of cranes from Spain to North-Africa was much less important, than formerly thought. Since then, and till 1979, only partial, local studies were carried out. Thus we knew about Prof. *Bernis*' findings and we also knew, of course, that the cranes' winter habitat was being destroyed on an ever increasing scale, by the felling of oak-woods, changes in agricultural practices and the poisoning of their food. But we had no real confirmation of Prof. *Bernis*' figures; we knew little about the cranes habits, movements, space-requirements and migratory flyways, and we had no scientifically founded knowledge about which were their principal wintering sites which should be protected.

Then, in 1979, the newly founded Spanish Co-ordinating Federation for the Protection of Birds (CODA), together with the Spanish Ornithological Society, launched a big crane-survey, funded by ICBP's Migratory Birds Committee, covering all known or suspected Spanish Crane areas, and also obtaining data from Portugal and southern France. This survey's co-ordinator was Dr. *Fernandez-Cruz*, who also wrote a very extensive and detailed final report; and as many of the data I am giving here are taken from that report, I feel it is more than justified to cite him as one of the authors here. During the winter of 80/81 the survey was repeated, on a lesser scale, to verify the previous results. Since then there has been no repetition, so that the data I am going to give here mainly refer to 1979/81. Partial checks were made, however, in the western Spanish Extremadura, by the regional conservationist society ADENEX, without finding significant changes — excepting the still increasing habitat destruction. During the present, 85/86 winter, ADENEX is planning to carry



Figure|1. Crane wintering in Spain

out a complete survey of Extremadura, so that then we shall know, if the last 6 years have brought any significant changes or not.

The 79/81 surveys' final results showed that 17 000 or even more cranes spend the winter in Spain. We even have one almost absolute figure: on 5 March, 1981, 12 135 cranes were counted on lake Gallocanta, their large resting and gathering place; just a few days earlier, between 3000 and 5000 cranes had been counted in southern France which obviously had come from Spain. The mean value for France — 4000 —, plus the Gallocanta figure already give over 16 000, and surely this was not absolutely all the Iberian wintering cranes.

Taking, on the other hand, the population figures for Sweden, Norway and Finland, given by Cramp's Handbook of the Birds of the Western Palearctic, it appears that between 42 and 50% of the total Scandinavian Crane population winters in Spain. Or rather, on the Iberina Peninsula, though the number of cranes wintering in Portugal does not seem to be higher than 500 to 1000. Also, we came to the

same conclusion as Prof. *Bernis*, namely that scarcely any cranes fly over to north Africa.

All this means that Spain is of crucial importance for the northern European Crane population, and that there exists a mutual, great responsibility for their future between Spain and quite specially Sweden and also probably Norway, and perhaps to a lesser extent, Finland (from where, as far as I know, a good portion of the cranes take the eastern migratory route).

As the findings of the 79/81 surveys have partly been published (the 79/80 one) and we had reported on them during the 1982 Crane Symposium in India, I shall here only briefly outline them, for the benefit of those who could not come to India or study the extensive Spanish report in "ARDEOLA".

So far, the 79/80 survey was the largest collective ornithological project ever carried out in Spain and forms the basis of all crane research done in our country since then. Apart from general, simultaneous national censuses done in November, mid-December, end of December, January, February and March, some 150 local census surveys were carried out by well over 100 ornithologists, and some 3000 questionnaires were completed by hundreds of wardens of the Spanish Nature Conservation Authority. Then, during the 80/81 survey, the possibly most important wintering area was under constant, close observation during a total of 3 weeks, in order to study the behaviour, habits, movements and space requirements of cranes in a zone where about 25% these birds winter. Thus our results and findings are fairly accurate.

As it is known, post-nuptial migration in Scandinavia starts with young birds leaving in late August, to be followed by adults with the year's chicks a few weeks later. It takes the birds about a month to reach Spain, and the first ones fly in over the western Pyrenees during the last days of September. The immigration usually reaches its peak in the second half of October and is finished by the end of November.

As can be seen on the map, most of the cranes take more or less the same route, which first leads them southwards to lake Gallocanta. Then most turn towards the Extremadura, while a smaller number flies in a more SSW direction to central and southern Spain. It seems that in former times many of the cranes turned westwards much sooner after crossing the Pyrenees, taking quite a different route to Extremadura. Since then, however, some important wetlands have been drained and with the disappearance of these resting places the route is not used any more.

Between the autumn immigration and settling down in the final winter-quarters, there is still quite a lot of movement and temporary occupation of pseudo-wintering areas. One of these lies in the NNE of Spain, touching the Pyrenees and SW-France, the second occupies central Spain and the third one is down south and SW, very roughly from Málaga to Portugal and Extremadura. The reason for the existence of these sites probably weather conditions and movements between real wintering areas. The pseudo-wintering movements are very unstable, but their direction generally points south and south-westwards.

As also can be seen on the map, the main wintering areas are relatively close to each other, occupying eastern and western Extremadura, the latter touching NW-Andalusia and the former going into Portugal. Here we find very large, stable concentrations of cranes, numbering up to 2700 birds in a single place, the eastern nucleus being the more important of the two. Then there are some peripheral zones, to almost west and to the south of Madrid in central Spain, and also in southern Spain.

The principal areas together contained, during the 79/80 survey, up to 89% of all the cranes wintering in Spain; up to 67% were concentrated in the eastern nucleus, the Badajoz-Córdoba area, shared between Extremadura and Andalusia.

It was in this area that during the 80/81 survey a special study of the movements and behaviour of between 4000 and 4500 cranes was carried out, reaching the following main conclusions:

- the feeding area of a population of around 2000 cranes can exceed 600 to 700 square kilometres;
- roosting sites not close to wet areas are subject to sudden changes; flyways seem to be fairly stable routes and thus their protection is important;
- crop damages caused by the cranes can constitute a major problem;
- weather has a direct influence on group behaviour;
- the numbers of individuals in a group is not necessarily stable and transfers between groups are frequent.

Naturally, the 79/80 survey, apart from identifying flyways and wintering areas, also led to some important general conclusions:

- As compared to the situation some 20 years before, there is a marked increase of large groups (of up to 2700 individuals) and decrease of small groups. This indicates that areas and sites suitable for cranes have been disappearing at an alarming rate.
- Lake Gallocanta has, almost overnight, become of really crucial importance for the cranes. As a wintering site, its stable winter population went up from just a dozen or two to some 2000 in 79/80, and according to latest information it has since then increased to almost 4000. In addition, as a stop-over site during the autumn and spring migrations it is used by 80% or more of all the cranes that come to Spain.
- The main wintering areas invariably consist of a mixture of sparse oakwoods and cereal fields.
- And finally, the survey made it possible to study the age composition of the cranes wintering in Spain: of a total of 17 240 birds the age of which could be determined, 11.4% were young birds of the same year; of 1,847 identified pairs, 47.6% had young with them, and out of these pairs, 82.4% had one and 17.6% two juveniles with them. From this it can be calculated that in 1979 average breeding success was 1.17 chicks per pair.

And now we come to the final phase, the pre-nuptial migration from Spain back to the northern breeding grounds. As you know, the cranes begin to arrive in Scandinavia in April. Thus logically they start off from Spain in March.

In fact, the overwhelming majority of cranes leave Spain between the end of February and mid-March, although of course the timing and the quantities of both post- and pre-nuptial migrations are influenced by weather conditions in Europe. The flyways out of Spain lie to the east of the autumn, incoming routes and the average group-size is more than double of that in autumn with a mean of 50.3 individuals per group in autumn and 106.8 in spring.

As mentioned before, Gallocanta again is an extremely important gathering place. You remember that in 1981 on a single March day over 12 000 cranes were counted here. Just about 10 days ago I was told by a Zaragoza based ornithologist who, by the way, is the Spanish Ornithological Society's actual President, that on the one hand this year immigration seems to be late, probably because of the uncommonly long and warm early autumn, and on the other hand, that the general situation at Gallocanta has not changed during the last 4—5 years. Farmers now do get compensations for crop damage caused by cranes, but nevertheless they are getting more and

more hostile towards these big birds trampling on their fields. So far no serious incidents have happened, but they could explode any day. The payment of damage compensations is clearly not the ideal, final solution. It is not only that money is short but, as probably all of you know, once compensations are being paid, people tend to regard them as a nice additional income and tend to exaggerate damages; moreover, the number of people who claim damage compensation for non-existent damages, or for damages by quite a different cause, will invariably increase anywhere, and is increasing at Gallocanta. Some other, permanent solution is urgently needed.

Apart from a resolution about Gallocanta, which I hope you will agree to, I have been asked to ask you: Is there anybody here, who would have the expertise and experience in such matters and would be willing to give advice to the authorities responsible for Gallocanta? If that is so, I should be very grateful if that person or persons could kindly contact me while we are together here. One of the officials responsible for Gallocanta would have come here, but unfortunately he got to know about this conference too late.

As to the reason of Gallocanta's increasing importance for the cranes, one hypothesis is that as more and more wintering and also stop-over sites are destroyed, more and more cranes are forced to this one site. Remember: at minimum, 42% of all Scandinavian Cranes come to Spain and of these at least 80% touch Gallocanta. The importance of this site cannot be underestimated.

But let me include also a more optimistic note. As regards the cranes' principal wintering areas in Extremadura. Less than a month ago I had a meeting with the Extremaduran autonomous Government's Director General for the Environment, a noted naturalist and conservationist, whom at least some of you know personally or by name: *Jesús Garzón*. Well, he told me, that on his desk he had a Decree, which will give full legal protection to two crane areas, one in one of the principal wintering areas and the other being a site that is perhaps a bit more peripheral for cranes, but where a lot of other species will also benefit from the protection. As the Decree is not yet published, I was asked not to give their exact locations. Moreover, four additional areas are being studied as to the feasibility of their protection as crane wintering sites.

As I have already mentioned, we might be in the process of losing our wintering cranes, after having lost the breeding population. Threats to cranes exist at Gallocanta, but also in their main wintering areas of the Extremadura. The data on these, are recent — I received the report on this, written by our crane co-ordinator *José Antonio Román* and his colleague *Juan Ferrero*, just a week ago.

The principal problems are the continuing felling of oak-woods, new irrigation projects, an important new electrical power-line, plus some construction works, pesticides and hunting.

At practically every single regional, national and international conference that has to do with nature conservation in Spain, resolutions are passed, asking, begging, imploring Spain to stop the destruction of oak-woods. Between 1950 and 1980 more than eight million of these trees have been felled in Extremadura!, and this has not stopped since then either. In 30 years, Badajoz has lost 40% of its oak-woods, and Cáceres about 60 000 hectares. The reasons are, that, thanks to the African swine-fever, pig raising has lost its rentability since 1960, and thus acorns are no longer of interest; in many places former oak-woods are transformed into cereal cultivations or irrigated agricultural land; farmers use large machines, and these trees make driving them difficult; fire-wood for elegant chimneys and charcoal for barbecue are becoming more and more fashionable, and oak wood is excellent for these purposes.

At the same time, however, farmers are in fact hurting themselves, and that is the utterly sad and senseless aspect of it. To take out some of the trees would still be understandable and would not do too much harm. But in many places, *all* the trees are felled and that, in a foreseeable future, will result in the loss of soil fertility, then erosion and then desertification. Yet farmers only see their immediate gain, while authorities and political forces (which all too often are one and the same), just seek spectacular, so-called advances in order to secure more votes. Thus the felling of the oak-woods is not only a disaster for our cranes, but for the entire region's longer-range economic future as well.

Actually, over 135 000 hectares are to be newly irrigated and some of the canalisation works have already been started, notably the so-called "Canal de las Dehesas", and another 23 000 hectares in the Tagus valley. All in all, these irrigation projects would profoundly affect the wintering sites of over 3200 cranes, unless certain key-areas can be kept out of irrigated cultivation.

Electrical power-lines have in the past already caused the death of cranes, but so far this problem has not been really extremely serious. Now, however, a large, 380 kilovolt power-line is being planned between the new nuclear power station Valdecaballeros and a big water reservoir in the Province of Sevilla. This line, with cables in three layers, would traverse the most important wintering area, which we termed the eastern nucleus. Many thousands of wintering cranes would have to cross and recross the power-lines on their daily flights between roosting and feeding sites and many accidents are bound to happen, specially during December and January, when dense and persistent fog often occurs.

This nuclear power station already was responsible, this very year of 1985, for the elimination of 10 000 oak trees. Now add to this the illegal construction settlements here and there, of a great dam on one of Extremadura's rivers, the Zújar, the building, in 1982, of a small airport in a crane area, the above-mentioned power-line, that not only crosses daily flight-routes, but also the main spring migration route, and you have a very nice picture of what is happening and what could still happen to almost half of Scandinavia's Cranes when they come to sunny Spain for their winter holidays.

Poison is another problem, the effects of which cannot easily be measured or demonstrated. The fact is, the pesticides and seed-dressings are being used, and that at least in some parts even the almost completely prohibited DDT is still there. I have no information on direct crane mortality caused by pesticides, but we all know that such poisons can and do have effects on birds' fertility and on egg-shell thickness. I do not know whether or not crane birth-rate is changing, but the danger that pesticides used in Spain might affect Scandinavian Crane birth-rate is evidently present.

Finally, hunting. ADENEX estimates that around one hundred cranes per year reach taxidermists' workshops, and we know that in some villages crane meat is eaten. We feel, however, that the outright killing of cranes is not really a big problem and that the nuisance to feeding and roosting cranes is more important, even if the real harmful effects cannot be measured.

Our federation, CODA, and in the very first place of course our Extremaduran Member society, ADENEX, are doing everything that is possible to afford better protection to our wintering cranes. ADENEX has produced thousands of posters and leaflets, in order to heighten the public's understanding and awareness of cranes and ADENEX is also actively working on fact-gathering and collaborates with the

Directorate General for the Environment in trying to find and put into practice solutions for the many problems I have briefly outlined.

Within our limited means, we in Spain certainly do what we can for nature conservation in general and, as I have tried to show you, for the protection of wintering cranes. Often, however, we are hampered not only by the lack of understanding and lack of honest willingness of the public and the authorities, but also by our own shortage of man-power — very many conservationists and ornithologists can only give their free time, after work-hours, to this cause —, and by simple lack of money, which makes it impossible to organize extensive campaigns, or to pay people for gathering and putting together facts and data. Thus we need your help too. In some instances we need your expertise, like in what I said about Gallocanta. In others we need the resolutions and recommendations of international organisations and meetings, like the present one. These alone usually have no real, decisive effects, but they certainly do help and constitute an additional point of pressure. And finally, we often need your financial help, directly or more or less indirectly, for projects, campaigns, participation in meetings and our own functioning.

To end my report, I should like to take this opportunity once more to thank, in the name of nature conservation in Spain, for the many instances we did get the help we needed from many of our colleagues and from many foreign societies and organisations.

Resolutions requested by ICBP/Spain

1. Considering the enormous international importance of lake Gallocanta, in Spain's autonomous region of Aragón, where between 35 and 40% of the entire western European Common Crane population gather during their autumn and spring migrations, this conference:

URGES the Governments of Spain and of the autonomous region of Aragón to adopt urgent and permanent measures for the protection, and safeguarding of this unique European heritage and of the cranes during their permanence at lake Gallocanta.

2. This Conference, having been made aware of the continuing large-scale destruction of evergreen oak-woods, specially in Extremadura; of the new irrigation projects actually being studied or for which work has already started, of the electrical power-line that is to connect the Valdecaballeros nuclear power plant with the Pintado reservoir in Sevilla; and on the other hand, of the actual plans to put at least some crane wintering areas under legal protections,

Congratulates the Extremaduran autonomous Government for the intention of protecting crane areas, but:

URGES this same Government, and where its competence could call for it, the central Government of Spain:

- to give legal protection to all important crane wintering areas and migratory flyways;
- to take urgent measures for stopping the destruction of oak-woods;
- to take the necessary measures in order to protect and maintain the important crane areas which would be affected by the irrigation scheme of the "Canal de las Dehesas" and others;
- and to plan the electric power line that is to connect the Valdecaballeros power

plant with the Pintado reservoir, so that by no means it will run through the principal crane wintering area of eastern and south-eastern Badajoz and northern Córdoba.

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A daru telelése Spanyolországban

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Spanyolország

Mintegy 39 éve már nem fészkel a daru az Ibériai-félszigeten. 1979-ben, majd 1980/81-ben széles körű felmérést végeztek, amely kimutatta, hogy 17 000-nél több daru telél Spanyolországban. A fő telélőhelyek Nyugat- és Kelet-Extremadurában, Közép- és Dél-Spanyolországban találhatóak. Az utóbbi 20 év alatt megnövekedett a csapatok átlagos nagysága, ami a telélőhelyek számának csökkenésével magyarázható. A Gallocanta-tó a kiemelkedően legfontosabb telélőhely. A szélteében folyó erdőirtások, az öntözési rendszerek, a nagyfeszültségű áramvezetékek építése, valamint kisebb mértékben a vadászat veszélyezteti a madarakat. Mivel a Skandináviában fészkelő darvak mintegy 42%-a Spanyolországban telél, a konferencia a felsorolt veszélyek elhárítására ösztökélő felhívást intéz a spanyol kormányhoz.