

WINTERING OF COMMON CRANE IN FRANCE

Christian Riols

France

Historical account

Despite the work of *Dietrich Ristow* in the 1960s, the survey of Common Crane migration remained rather efficient in France until 1975, except for a few localities.

However, perceptible increase in winter observations has been recorded since 1973—1974 in the better surveyed areas. This trend coincides with two major phenomena: establishment of the Spanish site of Gallocanta and noticeable increase of autumn gathering in the Rügen area. Until then there had been very scarce wintering of single birds. In 1974—1975, a distinct migration of 900 cranes in 25 flocks of 2—150 occurred throughout December in Champagne and ended on January 4. Wintering took place likely as early as this year.

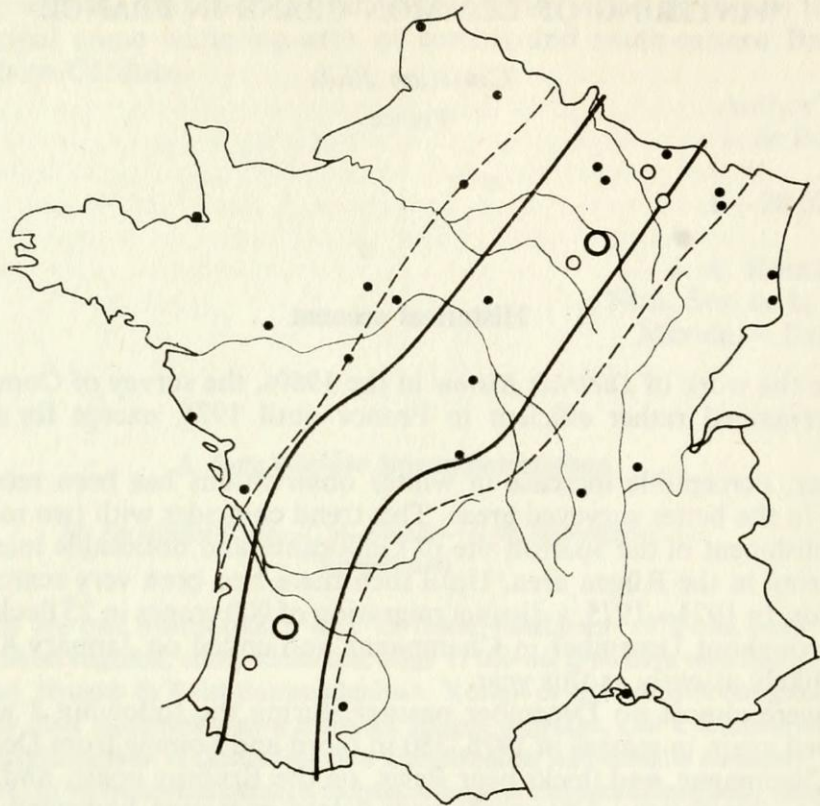
There were almost no December passage during the following 3 winters. The cranes arrived again in masses in 1978, 380 in Nord and Somme from December 2 to 31, 720 in Champagne, and flocks near Paris, on the Brittany coast, and many elsewhere in the main flyway. Afterwards such a late migration happened every year.

Its recent increase is related to several factors, among others rapid and considerable maize development in northern Germany and north-eastern France, and the creation of 2 large artificial lakes in Champagne: Forêt d'Orient (Aube: 2500 hectares) in 1966 and Der-Chantecoq (Marne and Haute-Marne: 4800 hectares) in 1974, both of them opened in wildfowl reserves. Perhaps connected with climatic and ecological conditions (degradation of some Spanish wintering areas as clear oak-woods, "dehesa"), these 2 factors allowed the recent development of true wintering in north eastern France. The phenomenon existed probably formerly in the south-west of the country (Landes of Gascony) where large-scale maize farming is much older.

Since autumn 1973, both lakes of Forêt d'Orient and Der-Chantecoq became of increasing importance for the cranes which selected them as staging sites during autumn and spring migration, then as wintering places. This has fundamentally disrupted the migratory pattern of cranes in the area and consequently in other parts of France: wintering cannot be discussed without talking a few about dramatic changes in migratory gathering.

First "true" wintering was recorded in 1976—1977, there was no late migration, during the previous autumn in Wet Champagne and on the 2 lakes 10+30 birds). Since then overwintering has become quite regular on Lake Der-Chantecoq, but irregular on Lake Forêt d'Orient, and 2 other wintering places appeared in 1977—1978: Landes of Gascony (25 cranes) and Lorraine (31 birds in Meuse). Occasional wintering in some parts of France occurred almost yearly since this season.

Moreover, the big storm of 6—8 November, 1982 induced several wintering cases; since then, another site is regularly occupied in coastal Vendée: the Bay of Aiguillon, a "Classical" wintering place was occupied by large number of cranes in 1982—1983, and this figure is to be discussed separately.



- occasional wintering
- irregular wintering
- regular wintering
- main flyway
- - - normal extent



Figure 1. Wintering of Common Crane in France

Occasional wintering

Wintering cases since 1960 are considered only. Beside the year 1982—1983, 23 cases are known for 11 winters and 21 sites: 11 of these latter are out of the usual migratory corridor, 5 are on its border, 1 on the border of the main flyway and only 4 inside it. Twelve of these winterings concern single birds; there were pairs on 4 occasions, families (3—4) on 4 occasions and twice larger groups in a new site, which is perhaps becoming a regular staging place in southern Landes (Arjuzanx reserve, 2000 hectares). The large surface of this reserve is sufficient in itself for the establishment of cranes.

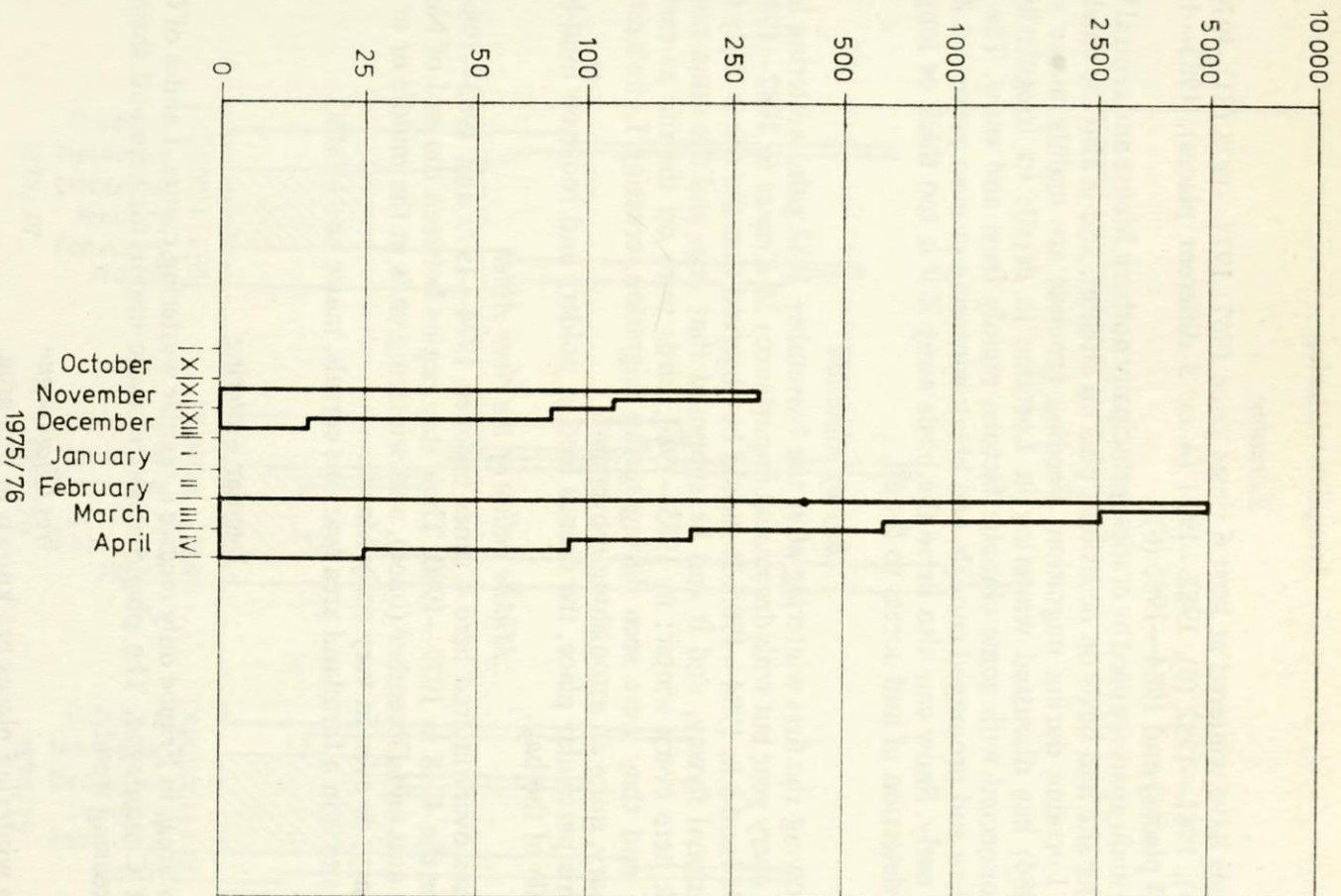


Figure 2. First important staging, without wintering on Lake Der-Chanteaug, 1975/76

Irregular wintering

Lorraine

Cranes have wintered at least 6 times since 1967: 1977—1978 (31), 1979—1980 (4 family), 1981—1982 (8), 1982—1983 (4 or 5 different places), 1983—1984 (14 birds in 3 places) and 1984—1985 (6).

Two main areas are used by cranes: principally northern Meuse and central Woëvre. The former site had birds on occasions, plus an attempt, and is also the chief resting place in Lorraine during migration. Feeding grounds are mainly maize stubbles. *Salvi* (1984) has discussed wintering in Lorraine in detail: its irregularity seems closely connected with some climatic factors, mainly frost and snow. The former, when severe and prolonged enough, can break wintering or even prevent it if happening too early. Snow can also drive the birds away if it is too thick or long-lasting to allow detection of and access to food.

Bay of Aiguillon

Following the first wintering after the November 1982 gale, wintering has since occurred every year but with decreasing importance: 58 Cranes in 1982—1983, 16 in 1983—1984 and 8 in 1984—1985. It should be observed that the site is fairly far from the traditional flyway, and it can be supposed that one, and the same small flock flies back here every winter: in 1983—1984, birds were on the site as early as 31 October, and they were seen during spring migration, crossing Loire's estuary on 29 February, quite an astonishing movement.

In this particular place, the cranes feed in polders and roost on mud-banks in the middle of the bay.

Middle valley of the river Allier

Cranes overwintered here 4 times between 1974—1975 and 1983—1984, singly except for the 4—8 in 1979—1980. Their stay begins between the end of November (2 times) and mid-December (once), and wintering ends in the middle or at the end of February, or even in very early March.

The site is in a farmland area (various cereals, maize and alfalfa).

Regular wintering

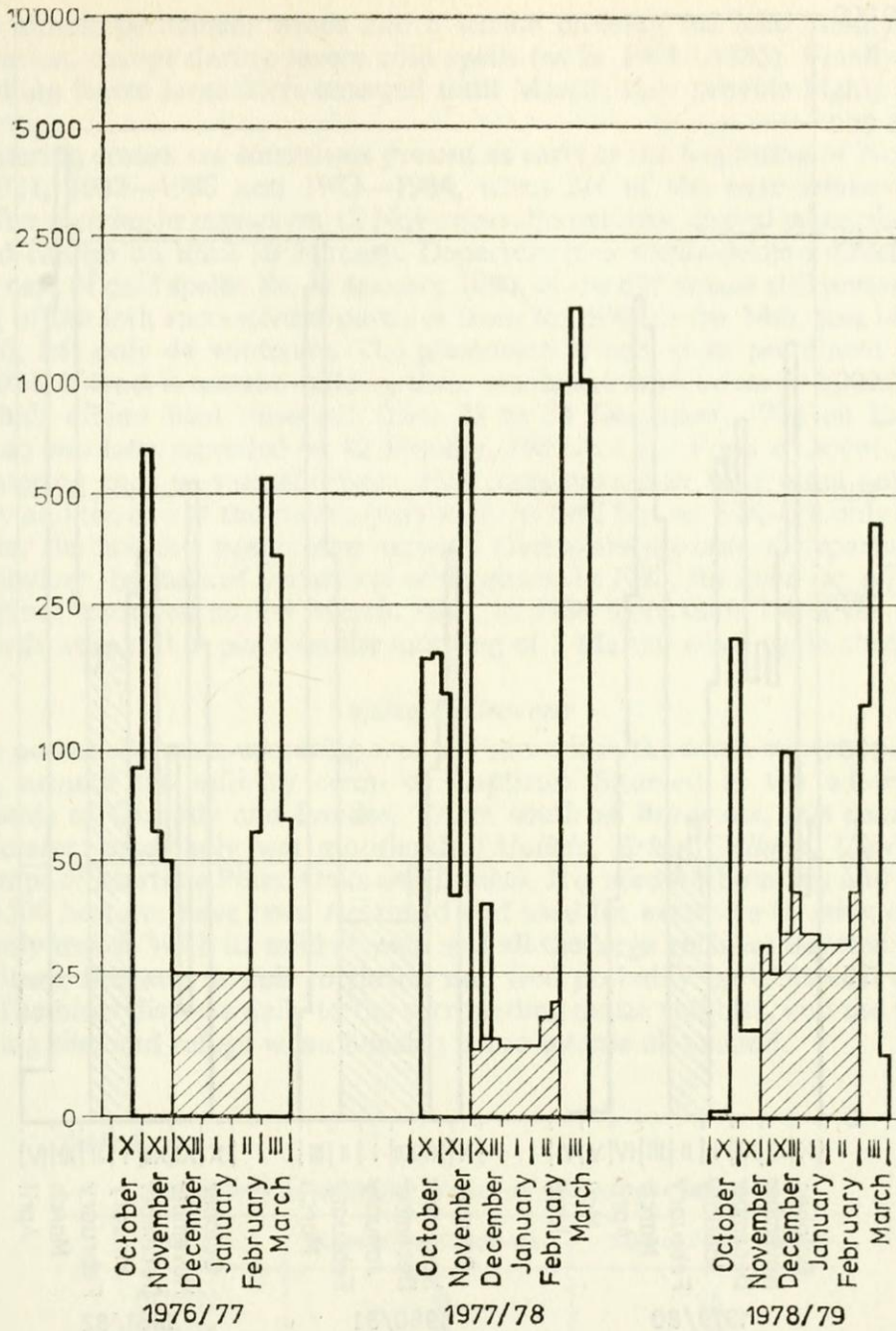
Two areas in France only receive a regular wintering cranes. Landes of Gascony and Wet Champagne. The phenomenon is more important here and shows a distinct increasing trend.

Wet Champagne

Two wintering places are known in this area.

Lake Forêt d'Orient (Aube: 2500 hectares), filled in 1966, it is a very regularly used staging site, discovered by cranes in autumn 1969, some years before the first important stop-over in October 1973 (400). If an increasing trend may be observed as regards migratory staging, it is not so with wintering, which is only irregular (every other year since 1974—1975), which involves less than 10 birds, except in 1982—1983 and 1983—1984.

Lake Der-Chantecoq (partly Marne and Haute-Marne, 4800 hectares), 40 km north-east of the above site, has been fairly massively visited since its complete filling in 1975. Far much more suitable than Lake Forêt d'Orient on account of its surface,



Figure/3. Wintering of Common Crane on Lake Der-Chantecoq, 1976/77, 1977/78, 1978/79

topography and less wooded surroundings, there were rapidly increasing number of staging cranes during the spring and autumn transit, and increasing number of over wintering birds.

Like Lake Forêt d'Orient, this place receives the status of migratory bird reserve: hunting is allowed only in neighbouring farmland, and the cranes are generally held in respect.

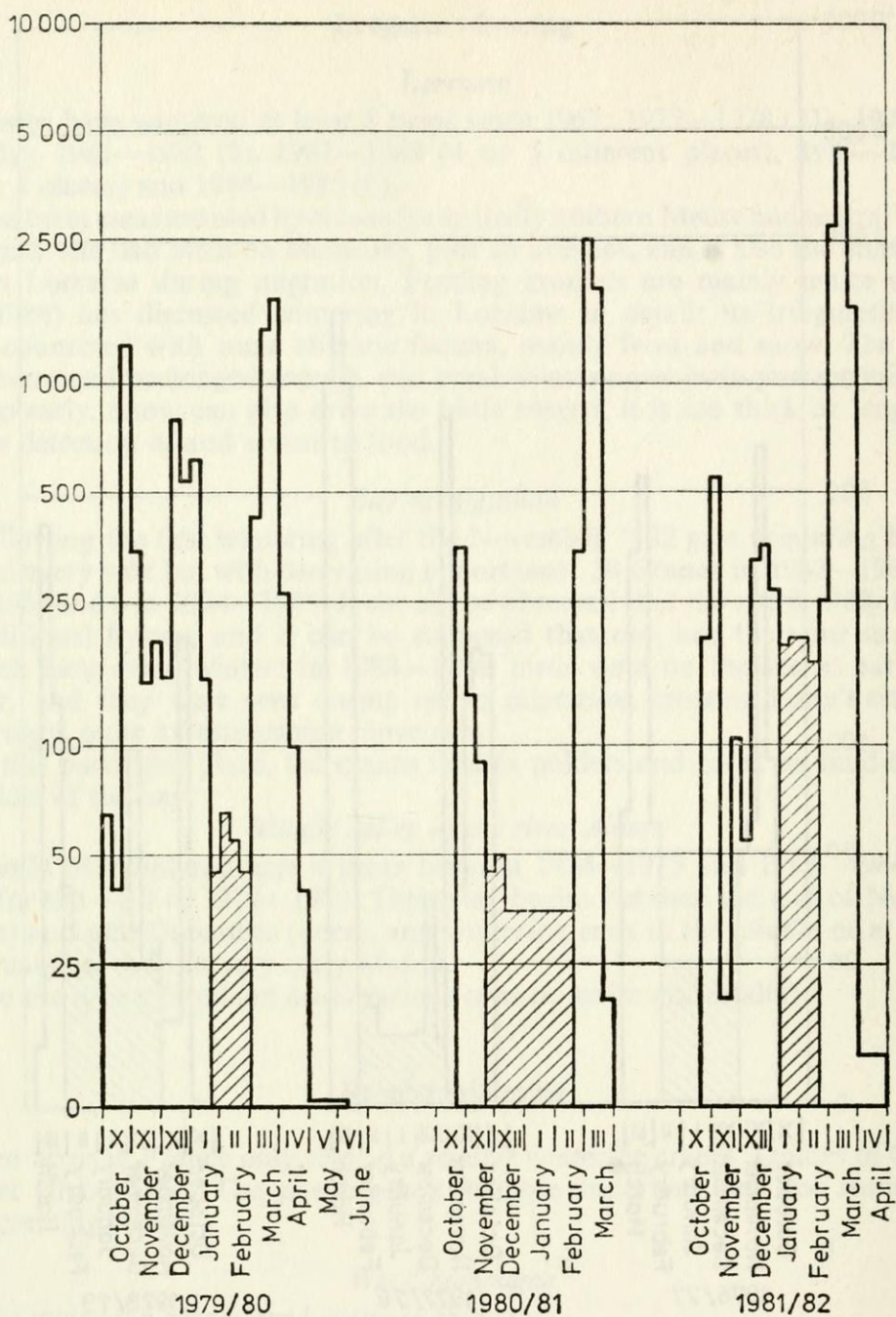


Figure 4. Wintering of Common Crane on Lake Der-Chantecoq, 1979/80, 1980/81, 1981/82

The hydraulic regime of the lake, with summer drawing, when very large mud flats uncovered from the end of September, is very attractive for the cranes which feel completely secure here. The whole of the lake is used as a roosting site: the first feeding grounds are very close by, where cranes feed mainly in maize stubbles and grasslands in autumn and winter, in the spring also possibly causing damage to freshly sown barley, peas and beans.

The almost permanent winds and a stream crossing the lake usually prevent ice formation, except during severe cold spells (as in 1984—1985). Finally gradual winter filling leaves large islets emerged until March: they provide highly valuable roost sites.

Wintering cranes are sometimes present as early as the beginning of November: 1980—1981, 1982—1983 and 1983—1984, when 3/4 of the over wintering birds stayed after arriving in masses on 12 November. Sometimes, arrival takes place much later and can go on until 10 January. Departure in a south-western direction may occur in case of cold spells. So, in January 1980, of the 625 cranes still present on the morning of the loth successive departures from the 10th to the 14th, just before the very cold, left only 44 winterers. The phenomenon was more prominent again in 1984—1985. If frost is not too sudden, these movements can be made by easy stages: thus a half albino bird observed from 21 to 24 December, 1979 on Lake Der-Chantecoq was later recorded on 12 January, 1980 at Lake Forêt d'Orient.

Wintering ends at variable dates. First departure may take place between 12 February and the end of the month (very early in 1982 but on 5 March only in 1984), often after the first few post-winter arrivals. Overwintering cranes' departure is not always obvious, because of the arrival of migrants. In 1983, for instance, all the wintering cranes remained until 4 March. Also, in 1984 more than 3/4 of the overwintering birds were still in place on the morning of 7 March, when again there was no arrival.

Landes of Gascony

The potentially main wintering area in France is in the south-western part of the country, around the military camp of Captieux. Situated in the administrative departments of Gironde and Landes, 70 km south of Bordeaux, this camp covers 9000 hectares: essentially wet moorlands (*Molinia*, *Erica*, *Calluna*, *Ulex*) dotted with clumps of Maritime Pines, Oaks and Birches. It is used for bombing and gunnery. About 1500 hectares have been reclaimed and used for extensive farming of cereals and mainly maize. With its mild climate and all the large enclaves devoted to maize monoculture, this area is able to shelter and feed probably up to several thousand cranes. The birds disperse daily to the surrounding maize stubbles, and use the camp as roosting site, and refuge when hunting is too intense all around.

Table 1.

Numbers of wintering cranes on Champagne lakes

Year	Lake of Der-Chantecoq	Lake of Forêt d'Orient
1974/75	0	5
1975/76	0	0
1976/77	20—30	9—10
1977/78	12	0
1978/79	28—32	1
1979/80	54—65	8
1980/81	34	0
1981/82	175—200	0
1982/83	1215—1395	155—200
1983/84	408	30—53
1984/85	126—200	0

Although the noise of low-flying jets, machine-gunning and explosions practically do not disturb the birds, the hazard of crash with a crane flock is quite high, just as that of destruction of a landed group during bombing.

However, the main problem in the area is hunting pressure: Roe-Deers and Wild Boars are hunted all over the camp with considerable force. It is in the crop fields where hunting is the heaviest, on account of the big flocks of Wood Pigeons wintering here and attracting several hundred hunters: it is to be considered that the 4 departments of Charente-Maritime, Gironde, Landes and Pyrenees-Atlantiques experience a really incredible hunting pressure with about 250 000 hunters (1/7 of the total number in France!). Cranes are still often shot, despite their legal protection. In addition to shooting, disturbance is very important, especially in autumn, and often prevents or shortens staging, and disperses the potential winterers elsewhere. The reduced number of cranes during the winter of 1979—1980, for instance, was caused by frequent battues for Wild Boar, every week-end in November and December. Staging was far more numerous in spring (March) because of more sporadic hunting.

Disturbance on the feeding grounds is sometimes so intense that the cranes, hopelessly holding on to the site, are sometimes reduced to reversing their circadian rhythm, feeding at dusk and “roosting” in daylight after unceasing flights from one place to another. In 1980—1981, flight distance from a car reached 800 m.

With a view of promoting wintering and of long-term improvement, several measures were proposed in 1982:

- prohibition of hunting in crops and adjacent woods;
- if total prohibition is impossible, to restrict hunting to areas the cranes do not frequent;
- if Wild Boar battues are absolutely necessary, they should be carried out in September and October, before the cranes' arrival;
- cultivation of cereals and potatoes, with crops left in the field, in parts of the peripheral fire-belt (food supply for the cranes);
- traffic prohibition of this fire-belt, except for agricultural machines and surveillance vehicles;
- permanent wardening from September to April;
- to avoid any improvement of the track approaching the fields in the southern part of the camp (which is presently the main wintering sites) which would make it suitable for motor vehicles: this proposition, unfortunately, has not been headed because recently important road works were made.

Winter 1982/83

The autumn of 1982 was characterized by a very unusual migration. A strong south-east gale on 6—8 November literally blew ashore some 10 000—20 000 cranes from coastal Flanders and England to the Charente-Maritime islands. Brief staging in masses was recorded in all large bays and estuaries (Somme, Seine, Mont St-Michel, Loire, Bourgneuf and Aiguillon). On this occasion, the Bay of Aiguillon became a wintering place with 58 cranes, remnants of an enormous party of 2400.

Crane passages along the coastal areas were simultaneous with a Geese rush, so that the number of cranes killed in western and south-western France was probably as high as several hundred birds.

Table 2.

Numbers of cranes wintering in Captieux

Year	Numbers of cranes
1977/78	25
78/79	250
79/80	60
80/81	130
81/82	400
82/83	1710
83/84	575
84/85	935

The extended staging in December and early January in southern Gironde and northern Landes, and important wintering were probably the result of the strong perturbations suffered by cranes. Considerable disturbances owing to hunting induced desertion of some feeding grounds before the end of December, frightening away many potentially over wintering cranes. In Captieux, on the morning of 21 December, intense rifle-volleys were waiting for each large flock leaving the roost and skimming along the pines; on the evening return, the same thing was observed (gravely wounded birds, many carcasses found later). New feeding grounds were found, however, as large number of cranes were staging (1710 in January). The cranes departed from February 25 to March 2: over 600 left on the latter date.

Wintering cranes have also been recorded in the border of Beauce (2 cases involving 6 birds) and in Cher (21 in a military camp where Bean Geese winter regularly).

In the other main areas, no less than 5 different places were occupied in Lorraine: northern Meuse gathered 140—230 birds and central Woëvre 50—60, the 3 other sites 23 in total.

In Champagne, 2 occasional wintering occurred in southern Ardennes (15) and northern Marne (40). The most important staging ever known until then in autumn was recorded on 6 November and following days on the 2 lakes: up to 3205 on Der-Chantecoq and 1470 at Forêt d'Orient. Since then, the staging sites have been intensively utilized: the number of cranes at Lake Der-Chantecoq was always over 1500 until the end of November, when departures took place, reducing the number to 270 birds on 1 December. A new influx was observed on 2—3 December and more than 1000 birds roosted there after the evening of 5 December. Some departures occurred in mid-December, followed by a few arrivals in the first half of January: a definitely wintering flock (1380—1395) was recorded since 16 January to 15 February. The arrival of spring migrants made it difficult to detect the departures from the wintering grounds, but all wintering cranes were still present on 4 March (fog), and perhaps until the 9th: the duration of the winter stay of most of the birds was 3 months long, and 4 months for some others. Wintering at Lake Forêt d'Orient was much reduced, but no less than 150—200 cranes stayed here since the end of December until first spring arrival in the last days of February.

Such a mass wintering was possible owing to persistent rainy weather in autumn, which considerably impeded maize harvesting and ploughing, so that most of the maize stubbles remained in the field, and provided much food for the cranes.

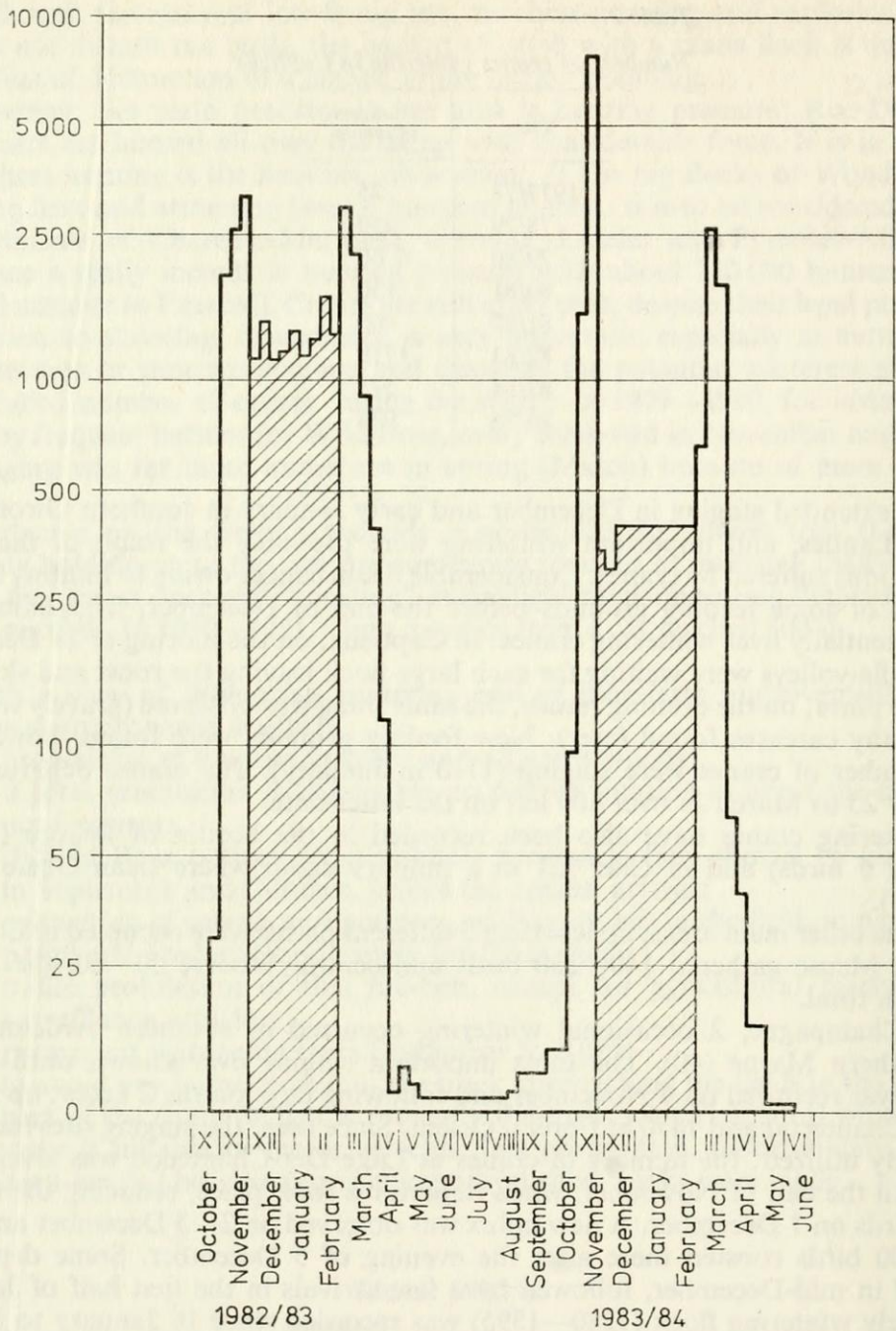


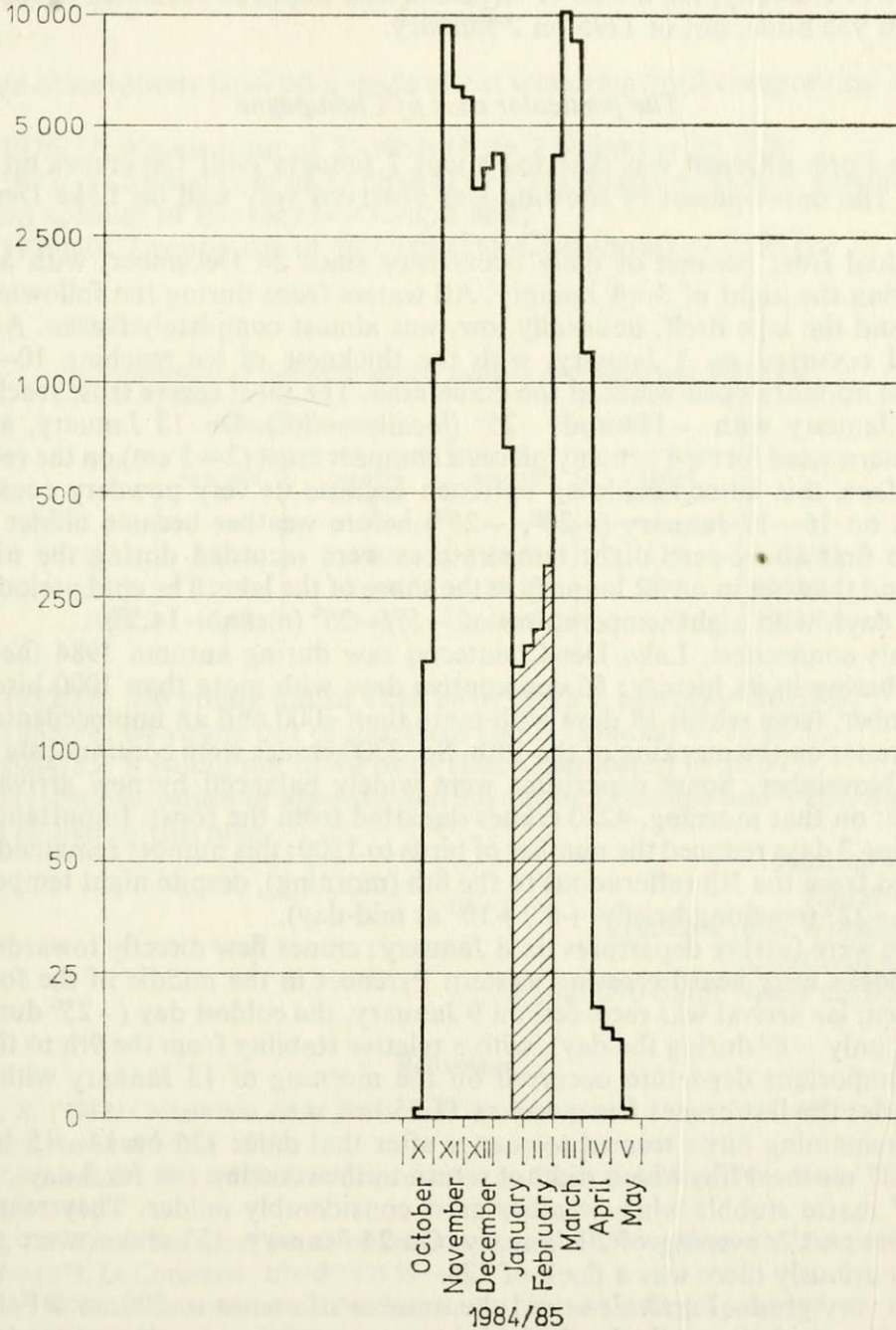
Figure 5. Wintering of Common Crane on Lake Der-Chantecoq, 1982/83, 1983/84

Moreover, weather was particularly mild. Due to the high number of birds, diurnal dispersal from roost increased noticeably during winter, up to 15 km when it is usually only 2—8 km.

A quite amazing event was the passage in central France (Sologne) of several hundreds of cranes flying north-eastwards on 31 December, and of about 1000 birds

flying in the same direction by strong moon-light on 2 January, some 250 km ENE (Aube): it is uncertain whether they were the same birds.

In total, wintering in France in 1982/83 reached 3500—3550 cranes. This phenomenon is more especially noteworthy as the same occurred in East-Germany (400—500) and in Hungary (2250—3350), simultaneously on the western flyway and on the eastern one.



Figure/6. Wintering of Common Crane on Lake Der-Chantecoq, 1984/85

Cold snap 1984/85

The frost which set in January 1985 provided good opportunity for recording the fidelity of crane to their wintering places, even under very hard weather condition.

Some birds (6 at least) remained in their main haunts of Meuse in Lorraine, out of 400–450 on 2 January. The Vendean coastal site (Bay of Aiguillon) kept its 8 cranes all over January despite very low temperatures and snow, rather unusual here. In Landes of Gascony, the 2 sites of Arjuzanx and Captieux remained occupied, the latter with 935 birds, out of 1295 on 2 January.

The particular case of Champagne

Lake Forêt d'Orient was deserted about 7 January (still 150 cranes on 31 December). The development of roosting was observed very well on Lake Der-Chantecoq.

Gradual frost became of daily occurrence since 28 December, with a strong snow during the night of 3–4 January. All waters froze during the following night (-18°), and the lake itself, unusually low, was almost completely frozen. A second snow fall occurred on 7 January, with the thickness of ice reaching 10–15 cm. There was no more open water in the crane area. The most severe frost reached was on 8–9 January with -18° and -25° (locally -30°). On 13 January, a strong north-eastern wind formed in many places a compact crust (2–3 cm) on the recovered snow surface, this latter remaining unfrozen because its very powdery consistence. The frost on 16–17 January (-20° , -25°) before weather became milder on the 18th. The first above-zero night temperatures were recorded during the nights of 20–21, and thaw set in on 22 January in the shore of the lake. The cold period proper lasted 16 days, with night temperatures of $-5^{\circ}/-25^{\circ}$ (mean -14.5°).

In this connection, Lake Der-Chantecoq saw during autumn 1984 the largest crane gathering in its history: 56 consecutive days with more than 1000 birds since 14 November, from which 18 days with more than 4000 and an unprecedented peak of 9555 cranes on the morning of the 19th. So, 3300 cranes were continuously present since 17 November. Some departures were widely balanced by new arrivals until 3 January: on that morning, 4220 cranes departed from the roost. Important departures during 3 days reduced the number of birds to 1300: this number remained almost unchanged from the 5th (afternoon) to the 8th (morning), despite night temperatures of $-15^{\circ}/-22^{\circ}$ (reaching briefly $+6^{\circ}/+10^{\circ}$ at mid-day).

There were further departures on 8 January: cranes flew directly towards Spain, because flocks were heard crossing western Pyrenees in the middle of the following night. Then, last arrival was recorded on 9 January, the coldest day (-25° during the night and only -8° during the day), with a relative stability from the 9th to the 13th. The last important departure occurred on the morning of 13 January with strong NNE winds: the last cranes flew away at 11.55 hrs, u.t.

The remaining birds seemed to scatter after that date: 126 on 14–15 January, but only 37 on the 17th, which did not return to the roosting site for 3 days, staying in "their" maize stubble when weather grew considerably milder. They reappeared at the roost on the evening of 20 January. On 24 January, 132 cranes were present, of which curiously there was a flock of 126.

Some very gradual arrivals raised the number of cranes to 200 on 9 February: it should be noted that a flock of 80 birds was seen flying south-westwards in the afternoon of 23 January, 20 km NE of the lake.

A second period of pronounced frost (-5° – -13°) from 12 to 23 February induced no movement, except a little increase (233 on the evening of 20 February, 322 on the 22th). The first arrival of migrants at the site was recorded on 28 February (+450) and especially on 2 March (+2100).

Some similarities between cranes and wintering Sea Eagles have been recorded, such as the particular behaviour of cranes flying with feet folded up among the central feathers when there is a strong frost.

Age-ratio

Some observations have been made about wintering flock composition in Champagne:

- 1976/77: 9 young out of 35 birds (both 2 places) = 25.71%;
- 1977/78: 5 young out of 12 birds (Der-Chantecoq) = 41.67%, non-significant on account of the very low sample size;
- 1979/80: 7 young out of 44 birds (Der-Chantecoq) = 15.91%;

Table 3.

Comparison of age-ratio during autumn migration and wintering

Year	Autumn migration		Wintering		Year
	age-ratio %	number of birds	age-ratio %	number of birds	
1982	24,23	2 220	26,67	1125	1982/83
1983	15,53	2 164	13,81	391	1983/84
1984	16,67	15 663	16,67	48	1984/85

- 1982/83: 300 young out of 1125 birds (both 2 places) = 26.67%;
- 1983/84: 54 young out of 391 birds (both 2 places) = 13.81%;
- 1984/85: 8 young out of 44 birds (Der-Chantecoq) = 16.67%.

The respective values of age-ratio during autumn passage and wintering seem to be fairly similar in this area.

Author's address:
Christian Riols
French Crane Working Group
Chatillon sur Broué
F—51 290 Saint Remy en Bouzemont
France

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A daru teelése Franciaországban

Christian Riols

Franciaország

Az 1970-es évek elejétől kezdve számos változás történt a darvak franciaországi teelését illetően. Ezek részben a tengeri természet növekedésével, részben két nagy mesterséges tározó építésével magyarázhatóak. Korábban csak szórványos áttelelést tapasztaltak, ezek gyakorisága a hetvenes években és az 1980-as évek elején nőtt meg. Rendszeresen áttelelő darvak az ország két területén fordulnak elő, a Forêt d'Orient és a Der-Chantecoq tavakon Wet Champagne-ban és az ország délnyugati részén levő mocsarakban. Az utóbbi helyen nagyfokú a madarak zavarása, főként a vadászok által. Az 1981/82-es télen nagyszámú daru teelt át, amelyeket vonulásuk során orkánszerű vihar kényszerített útjuk megszakítására. Többévi megfigyelések szerint az áttelelő csapatokban a fiatalok aránya 13—26%.