

# Black-tailed Godwit Demographic Project

## Spring migration of Black-tailed Godwits in Iberia between 31 January and 24 February 2019

Portugal (Sado & Tejo), Spain (Doñana & Extremadura)



*Funded by University of Groningen, Birdlife Netherlands and Global Flyway Network*

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# Introduction

In 2004 the University of Groningen has started a long-term demographic project on a partly colour-ringed breeding population of Black-tailed Godwits *Limosa limosa* (hereafter: godwits) in SW Friesland and has since then coordinated all colour marking of godwits in The Netherlands. Mainly from December onwards, Black-tailed Godwits leave their wintering areas in West-Africa to stopover areas in southern Iberia. Here they are largely confined to three areas: Doñana NP and Extremadura in Spain and the rice fields surrounding the Tejo and Sado estuaries near Lisbon in Portugal (Figure 1). Since 2007 these areas are visited by experienced volunteers and researchers from the University of Groningen in search for colour-ringed godwits. In this report you will find a summary and detailed day-to-day trip report of our work in Portugal and Extremadura in winter 2019.



Figure 1. Three main areas where many godwits can be observed during January-February; Extremadura (1), Doñana NP (2), Tejo-Sado (3)

Resighting colour marked birds during the stopover period is important for several reasons:

1. If a godwit disperses outside our study area, the chance that it will be resighted elsewhere in The Netherlands is small. Without the resightings in the stopover area, we would assume that this individual is dead and therefore underestimate annual survival.
2. Secondly, with enough resightings in the Iberian Peninsula we can calculate seasonal survival. In other words, we can calculate in which period of the life cycle mortalities occur more often. Or we can find out if birds cross the Sahara have a different survival rate than birds that stay the entire winter in southern Europe.
3. By measuring the density of individuals with colour marks, we can monitor the population size of the western European part of the Black-tailed Godwit population. In 2016 we

published a scientific paper about this, a true milestone summarizing 9 years of fieldwork in Iberia. Please find below the abstract.

## Estimating the size of the Dutch breeding population of Continental Black-tailed Godwits from 2007–2015 using resighting data from spring staging sites (*Ardea* 114: 213–225.)

Rosemarie Kentie, Nathan R. Senner, Jos C.E.W. Hooijmeijer, Rocío Márquez-Ferrando, Jordi Figuerola, José A. Masero, Mo A. Verhoeven, & Theunis Piersma

Over the past 50 years, the population of Continental Black-tailed Godwits *Limosa limosa limosa* breeding of the East Atlantic Flyway has been in steep decline. This decline has previously been documented in trend analyses and six Netherlands-wide count-based population estimates, the last of which was completed in 1999. We provide an updated population size estimate and describe inter-annual fluctuations in the population between 2007 and 2015. To generate these estimates, we integrated a mark-recapture survival analysis with estimates of the densities of colour-marked individuals at migratory staging sites with known proportions of Continental and Icelandic *L. l. islandica* Black-tailed Godwits within a Bayesian framework. The use of these analytical techniques means that, in contrast with earlier efforts, our estimates are accompanied with confidence intervals, allowing us to estimate the population size with known precision. Using additional information on the breeding destination of 43 godwits equipped with satellite transmitters at Iberian staging areas, we found that 87% (75–95% 95% CI) of the nominate subspecies in the East Atlantic Flyway breed in The Netherlands. We estimated that the number of breeding pairs in The Netherlands has declined from 47,000 (38,000–56,000) pairs in 2007 to 33,000 (26,000–41,000) in 2015. Despite a temporary increase in 2010 and 2011, the population declined by an average of 3.7% per year over the entire period from 2007–2015, and by 6.3% from 2011–2015. We conclude that investing in an intensive demographic program at a regional scale, when combined with targeted resightings of marked individuals elsewhere, can yield population estimates at the flyway scale.

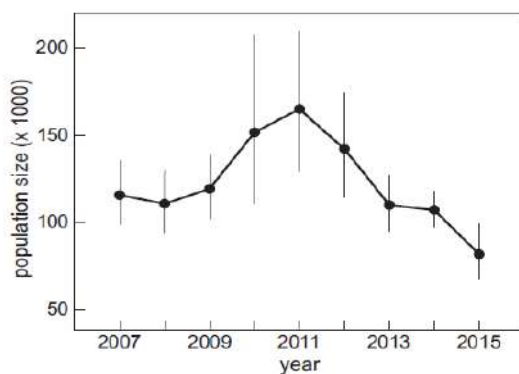


Figure 2. Population size of Black-tailed Godwits *Limosa limosa limosa* of the East-Atlantic Flyway based on colour ring densities on the staging sites. These estimates include godwits from the Icelandic subspecies *Limosa limosa islandica* using Iberian rice fields, which we assume to be 6.5% of the population size.



# Summary and overview sightings 2019

## Overview Sado and Tejo estuaries

The winter of 2018-2019 was wet in the greater Lisbon area. Especially in November it rained a lot:



Data provided by WorldWeatherOnline.com

So when the godwits and we arrived in Portugal in late January, we encountered suitable conditions in the rice fields. In the core area between Porto Alto and Vila Franca de Xira (Giganta/ Ponta da Erva-rice fields) many fields were already ploughed and during February freshly ploughed fields became available regularly, also outside in the surrounding rice fields of Belmonte, Benavente, Alcochete and Samora Correia. Unlike the Tejo-area, the situation in the Sado was not ideal: less fields were used for rice cultivation, the fields were drier and ploughing started only in the second half of February.

Foraging conditions for godwits were therefore perfect in the Tejo-area because they prefer wet, freshly ploughed rice fields to forage on. After the first days, weather conditions for ring reading were excellent with hardly any days lost due to bad weather or fog but the birds sometimes used inaccessible sites (see below).

The hotspot was again the Cardal/ Giganta/ Ponta da Erva-ricefields near Porto Alto. When we arrived there were hardly any recently ploughed fields and water levels in the fields were high. The godwits did not use the area a lot to forage but arrived mainly in the late afternoon to roost; in the first days 20-30.000 were present but by the end of the first week numbers went up to 40.000. The birds that were present were often standing on one leg or in belly deep water which made ring reading difficult in the beginning. In the second week of February godwits still did not use this area a lot to forage. They arrived at dusk and mainly stayed there to roost. In the early morning, as soon as

the Marsh Harriers started flying around, the majority of them left to fly south to an island in the Tejo river, Mouchão da Póvoa, where they stayed the whole day as was indicated by several godwits with satellite transmitters and confirmed during field visits. We could see them forage from the river shore but the distance was too big to see rings or to establish what made this island so attractive. It was too complicated to get access and the remaining several thousands of birds at Giganta gave us enough opportunity to read rings and take ring density samples. After 15 February the birds started using the island less and less and numbers that stayed at Giganta increased, coinciding with more ploughing in that area creating new foraging opportunities. No foraging birds were found just north of Giganta at Cara Larga or at Ze do Pinho, nor at the revelation of last year: Carregado. No individuals were found at Santo Estavao-Belmonte ricefields. The ricefields at Benavente, Samora Correia, Porto Alto and near Alcochete were also scanned regularly but we hardly found any godwits there despite the favorable conditions: apparently the birds found all they needed in the core area of Giganta/ Ponta da Erva, close to the Tejo River. The situation in the south at the Sado estuary remained poor: we hardly found any birds there.

Over the whole month of February the number of godwits in the Tejo (and Sado) estuaries remained more or less constant at 40-50.000 individuals but we never encountered the massive flocks with more than 70.000 like in the years before 2018. After the small increase in numbers in the Sado in 2018, they were absent again this year, in line with the long term decrease in this area. The home range was rather limited in the second half of February: birds stayed in the core area the whole day. In the beginning we could not find big foraging flocks but in the second week we found out that big numbers were leaving the Giganta area to visit Mouchão da Póvoa, an island in the Tejo river, probably to forage. Interesting was the arrival of birds from Extremadura by 23 February.

In total 2639 resightings were made of 732 individuals with a full colour ring combination of the RUG-program in the Tejo estuary and 0 in the Sado estuary. That is quite comparable to previous years.

### **Overview Doñana and Extremadura**

Like last year, we started the first 5 days of February in Doñana. That was 2 days more than anticipated but we had heard that the situation in Extremadura was again poor this year (only 500 godwits in the whole area on 4 February) and decided to stay longer in the south. We did not check El Rocio or Dehesa de Abajo, and found no godwits during a superficial check in the Isla Mayor and Minor ricefields. We focused completely on Veta la Palma because there was still a very big group in the Lucio Cuquero Grande. Every day we encountered 20-25.000 birds here that were mainly sleeping in the morning but woke up to forage for a few hours around noon. Sometimes they continued to do so during the afternoon, providing perfect conditions to read rings, also because the water level was low due to the strong winds. In other parts of Veta la Palma we hardly found any godwits this year. But the total numbers present were twice the number we encountered last year.

The situation in Extremadura was good this year. Like in Portugal it had been raining a lot in the months before we arrived and there were suitable fields (ploughed, wet) throughout the study area. Very different from the situation in 2018 when >95% of the fields were dry. Despite the good conditions, the number of godwits stayed low throughout our stay. Not as bad as last year (<1500 birds present) but the highest estimate was 3-4000. It was hard to get a good overview because they

were roosting in places they did not roost before (like Vegas Altas) and during daytime they spread out over a large area in smaller groups of a few hundred individuals. Only the combination of good local information of our colleagues of the University of Badajoz and the presence of several birds with satellite transmitters made it possible to get a fair amount of resightings. Cherry on the cake was again the presence of famous transmitter-bird Amalia, tagged in the area in 2013 and still going strong! It confirms a trend that Extremadura is gradually becoming less important as a stop-over site in favor of the Tejo estuary where rice cultivation is increasing and conditions are generally more optimal and predictable. In 2018 we published an article on this (more information below). We also think that birds stay longer in Doñana nowadays. It is hard to establish what is driving this decline. Our Spanish colleagues hypothesize that there might be competition for roosts with the ever increasing number of Cranes. That could be true in dry years (although both species do mix at roost sites) but in wet years like 2019, you would expect higher numbers again as godwits can be quite explorative in finding suitable habitat. We observed quite some Peregrine activity in the traditional Hernan Cortes – Santa Amalia area but there are also regularly raptors at the Tejo hotspot. Again we saw hunters shooting waders in Extremadura but not godwits this time. Hunting also occurs in some of the Portuguese sites but not in the most favored Giganta fields.

In total 363 resightings were made of 107 individually marked birds with a full colour ring combination from the RUG-program in Extremadura and 311 resightings of 189 individuals in Doñana.



Data provided by WorldWeatherOnline.com

## **Generational shift in spring staging site use by a long-distance migratory bird (Biol. Lett. 14: 20170663)**

**Mo A. Verhoeven, A. H. Jelle Loonstra, Jos C. E. W. Hooijmeijer, Jose A. Masero, Theunis and Nathan R. Senner.**

In response to environmental change, species have been observed altering their migratory behaviours. Few studies, however, have been able to determine whether these alterations resulted from inherited, plastic or flexible changes. Here, we present a unique observation of a rapid population-level shift in migratory routes—over 300 km from Spain to Portugal—by continental black-tailed godwits *Limosa limosa limosa*. This shift did not result from adult godwits changing staging sites, as adult site use was highly consistent. Rather, the shift resulted from young godwits predominantly using Portugal over Spain. We found no differences in reproductive success or survival among individuals using either staging site, indicating that the shift resulted from developmental plasticity rather than natural selection. Our results therefore suggest that new migratory routes can develop within a generation and that young individuals may be the agents of such rapid changes.

### **Numbers, individuals and percentage of the population seen**

Since 2012 a significant increase of the number of sightings was achieved until 2014; since then it has levelled off between 3-4000 sightings and 1100 individuals per year. This year we performed comparable to 2014-2018 (see figure 2). We had slightly more resightings but 20% less individuals in Portugal. In Extremadura it was the other way around: less resightings despite the higher numbers and the same number of individuals. In Doñana we doubled the number of resightings and individuals as a result of excellent ring reading conditions and higher numbers present.

The decrease in individuals seen in Portugal resulted in a small decrease of the resighting-rate of the colour-ringed population. As you can see in figure 3 below, we have still resighted 65% of the ringed population which is an excellent score and close to the average of the past 5 years.

The estimated number of alive ringed individuals has levelled off at around 1600 birds due to normal annual mortality, a row of years with bad recruitment in combination with a relaxed catching effort in the study area in SW Friesland. This estimate is based on an annual survival of 85% for adults and 45% for 1<sup>st</sup> cy birds (>10 d old). More recent estimates suggest that these figures might be too high for recent years which implies that we have probably seen a higher percentage of the ringed population than as suggested above.

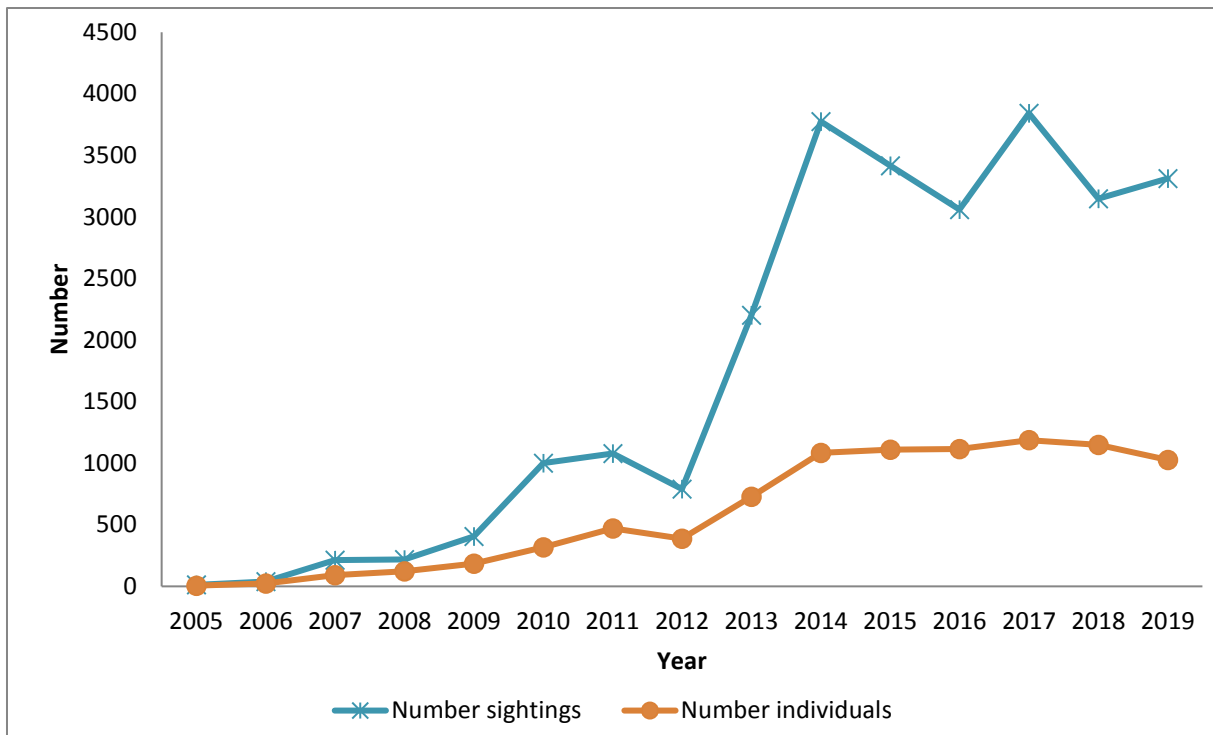


Figure 2: Total numbers of sightings and observed ringed individuals in Extremadura, Doñana NP, Tejo-Sado in January-February of each year (no code flags).

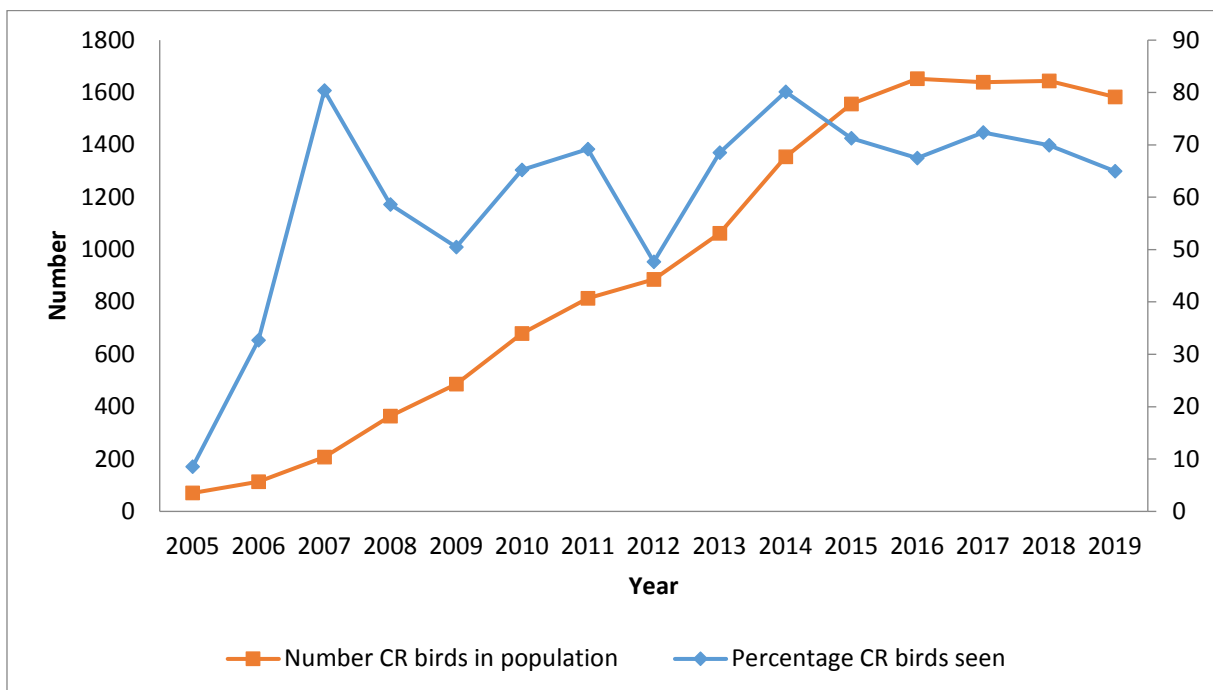


Figure 3: Estimated number of colour ringed birds that are still alive and the observed percentage in Extremadura, Doñana NP, Sado and Tejo Estuary all together in January-February of each year (no code flags).



# Acknowledgements

These colour ring reading trips would not be possible without the help of all co-authors, colleagues and volunteers that spent their (free) time or even their holidays scanning godwit legs: many thanks for that! Especially Astrid Kant and Ronald Messemaker made a major contribution again next to our permanent teams.

Thanks to Jose Masero and Pipe Abad (University of Extremadura) for organizing the apartment in Santa Amalia again! They and Julian Cabello Vergel were also indispensable to find the birds in Extremadura. Miguel Medialdea helped us to organize the field work in Veta la Palma.

Thanks to Rui Alves and Livia Ala of the Companhia das Lezírias, Rui Paixão of Associação de Beneficiários da Lezíria Grande de Vila Franca de Xira for help with logistics and information.

Last but not least, all the people and organisations that gave us their hospitality to be as a guest in their areas. We are very pleased that we could make use of this.

**Team 1 Portugal: Bob Loos & Jacob Jan de Vries, 31 January - 9 February 2019**

## Thursday 31 January 2019

**Weather:** rain with bright intervals. 15 C, W 5 Bft.

We arrived at the airport of Lisbon according to schedule in the afternoon and after picking up our mobile bird hide at the car rental desk, we quickly drove towards Vila Franca de Xira to visit the Hostel DP and to meet Rui Paixão of the Associação De Beneficiários Lezíria Grande de Vila Franca de Xira.

He told us that it was an average winter up to now, with a lot of rain in October and November, but rather dry in December. As a result, there was more water on the rice fields (and on the adjacent roads, as we experienced later). The rice field area has been expanded last year to 4459 ha of total 8910 ha. We received, as usual, the indispensable access card to open the fences.

The 'Goudse stroopwafels' in return were highly appreciated.

## Friday 1 February 2019

**Weather:** rain with bright intervals. 13 C, W 5 Bft

The morning started at 5:40 when a Blackbird began to sing in the garden (still dark, morning twilight at 7:25), spring is coming!

At 9:00 we drove to Cardal, but where to start? It was very windy with some serious showers, so it was not a surprise (although we were warned by Rui) that we got stuck...



*Looking at this picture, it doesn't seem a serious problem, but in the extreme slippery clay it was quite impossible to get the car in motion. After an hour of by turns giving up and perseverance, we came loose.*

In most of the rice fields the water level was very high, so no godwits at all during the morning. At last we found at the chain path around 13:00 a dense group of 3,180 sleeping birds, and as a result we obtained our first ring readings.

During the afternoon we scanned Cardal again; in the most northwestern corner we observed in the late afternoon a group of 350-400 resting Eurasian Spoonbills surrounded by roughly 20,000 godwits in (too) deep water, so godwit ring reading was really impossible.

We met Petra de Goeij and Arne van Eerden on their search for colour ringed/satellite tagged spoonbills. Nevertheless, we returned to the chain path as quick as possible, where we estimated the number of resting godwits at 10,000; as a result, a total number of godwits in Cardal at about 30,000. We could only manage to read approximately ten ring combinations, and no ring densities counts at all; pointless to say that this result was disappointing and frustrating! A 2cy Common Gull was the only unexpected bird today, a Norwegian colour ringed adult Lesser Black-backed Gull (LBG) was forbidden fruit.

## Saturday 2 February 2019

**Weather:** mass of clouds, sunny but also a few showers. 11 C, NW 4 Bft

Theme of the Day (or during our stay in Portugal): let it be better than yesterday.....

At 8:30 we arrived at Cardal again, and we were happy to see the first recently satellite tagged godwit L3BRYB in good shape at the chain path. In the morning there was disturbance by flying raptors quite frequently: Marsh Harriers and a Peregrine Falcon hitting a godwit, which escaped. Reason for two female/2cy Marsh Harriers to harry the spot immediately, but without result. Unfortunately, the ultimate fate of this godwit remained also unclear for us.



*In the northwestern part of Cardal we counted at 13:00 194 Spoonbills and 15,570 godwits. Water level was still too high to read godwit rings, but the Spoonbill colour rings (most Dutch birds, but also two German and one Spanish bird) were a cold comfort.*

Around 18:15 we counted again 30,000 godwits in the rice fields near the chain path. As said before, the water level here was still too high, so the number of ring readings was well below our expectations again.

## Sunday 3 February 2019

**Weather:** mass of clouds but dry. 13 C, NW 2-4 Bft.

8:30 Cardal. Sunday morning hunting activities in the hills (never seen in the rice fields), but no response from the birds in Cardal. In the northwest corner of Cardal we counted 430 spoonbills, but unfortunately the majority took off in southern direction, and only 40 returned. Some of the colour ringed birds (including two from Germany) were new to us. We did not count the godwits, and quite soon a few hundred flew away in southern direction, the remaining birds stood in belly deep water, so no reason to stay here any longer.

We stayed from 10:25 till 17:10 at the chain path (38 48'54" N 9 12'25" W). In the first instance more than 95% of the 4,500-5,500 godwits were asleep, later the majority went foraging. The birds were several times disturbed by a Marsh Harrier flying over, but the group returned quite soon at the same spot (or a little closer or of a little further on). Quite different was their response to a juvenile Peregrine; all the godwits fast went up high in the air, except one, gripped by the Peregrine! But with the same result as yesterday; the godwit came loose. This time it squeezed him/ herself in the water shortly and flew away. The other godwits remained high in the air for several minutes in impressive flight formations and selected another rice field to forage again. Not once have we seen an attack of Marsh Harriers upon godwits.



*After a Peregrine attack*



At 14:55 we counted 5,200 – 5,700 godwits in the rice fields a both sides of the chain path. At the end of the day the foraging godwits approached us, so we were able to read 40-50 ring combinations, including our first lime inscription flag. Unfortunately, the majority foraged in belly deep water, so reliable ring density counts were impossible.

## Monday 4 February 2019

**Weather:** virtually cloudless. 13 C, E 2-3 Bft, later windless

At 9:10 we estimated the number of resting godwits in the known northwestern corner of Cardal at 3,000 – 5,000 and we counted 245 sleeping Spoonbills. Between this corner of Cardal and the chain patch we saw a few ploughing tractors, chased by hundreds of Black-headed Gulls (84 adults and nine 2cy in a sample), Glossy Ibises and tens of Lesser Black-backed Gulls.



*Cleaning the windows is useless....*

At the chain path we counted 5,000 godwits at noon, but at 16:55 small clouds of hundreds of godwits whirled down from a great height and with an impressive wing noise. As a result, we counted 11,100 birds just a quarter of an hour later. How relatively the counted numbers are, was revealed when a Marsh Harrier flew over. Not only in the rice fields we were looking in, but also in the adjacent fields the godwits formed into three imposing flight squadron of at least 20,000 birds. If someone would have called 30,000 it would sound as credible also!

If you walk very, very slowly and cautious, you could walk on the transverse dams for more than one-third, to approach the godwits quite close. That increased the number of readings quite spectacularly!



In a broad reed-land we saw two Bluethroats (wintering birds or on migration already?), one with a nice blue throat and white spot already. In a complex of three lakes adjacent to Rio Sorraia we saw about 750 Shovelers, 900 Pintails and 45 Greylag Geese. We stopped early at 17:35; a Marsh Harrier had chased all the godwits.

## Tuesday 5 February 2019

**Weather:** virtually cloudless. 15 C, almost windless

At the sleeping site in the northwestern corner of Cardal we saw at 8:30 some 175 Spoonbills with, to our surprise, four Danish colour ringed birds. On our way to the chain path we photographed an adult Black-headed Gull with a yellow Polish colour ring.

At the chain path we counted at 11:40 two groups of godwits, 2,300 and 18,500 respectively, almost all asleep. At 14:15 still more than 95% were sleeping/preening. It was already 16:00 when about half of the group was foraging, again in belly deep water, not really optimal for ringreading!

Again today swarms of godwits from all sides fell from the sky between 16:00 and 17:30, at least 1,000 – 2,000 birds in total. Marsh Harriers were again the bullies, this time in good company of a Merlin male. Anyway, we could read three satellite tagged birds, although one bird was sleeping at one leg, a rudeness not only restricted to godwits! We left the chain path at 17:30; all the birds had just left the rice fields here and landed far more western. Today we saw our first Serin.



*Waiting to start their work*

## Wednesday 6 February 2019

**Weather:** virtually cloudless. Max 18 C, almost windless

We changed our tactics a bit; just a very short visit to the northwestern corner of Cardal where we saw around 8:00 thousands of sleeping godwits and approx. 270 Spoonbills. The latter were handled by Petra and Arne. At the chain path the godwits were busy foraging and we read the rings. In exactly 15 minutes three times the entire group flew off briefly because of a male and female/ 2cy (twice) Marsh Harrier flying over. At 9:55 we had our first coffee stop this week in the famous Casa das Queijadas in Porto Alto, merciless punished after our return an hour later; not the slightest trace of a godwit at all!

In the next few hours we had the feeling that we drove meaningless through the Cardal area, and it was 16:35 already when we heard godwits high in the sky, landing in a ricefield which was ploughed today, totally brownish black tinted by thousand(s) of Glossy Ibises escorted by Black-headed and Lesser Black-backed Gulls. Also our first adult Common Gull (we had seen two 2cy before) and several Mediterranean Gulls. Around 17:50 the majority of the Black-headed Gulls left the area, probably they went to their sleeping site at the river Tejo. The Lesser Black-backed Gulls remained foraging.

We know sunbathing behaviour from, among others, Blackbird and Grey Heron, but today we have witnessed sunbathing Glossy Ibises. Remarkable, Glossy Ibises stretched only one wing! The other wing hung down as a kind of counterweight. We have not examined whether there was a preference for the left or right wing. In the previous days we have not noticed this behaviour, not surprising, today it was the first time this week the cold wind was not a wet blanket.



## Thursday 7 February 2019

**Weather:** mostly cloudy in the morning with bright intervals, in the afternoon plenty of sunshine. 16C, NW 2-3 Bft.

At sunrise (7:45) we estimated the number of godwits at the Cardal chain path at 20,000 – 30,000, the majority foraging. Between 7:45 and 8:35 the birds flew up no less than seven times; six times a Marsh Harrier was the cause, one time we could not trace the reason why. We found the fifth satellite tagged godwit this week.

We left Cardal and visited Zé do Pinho. Some rice fields had a thin layer of water, but the majority was rather dry, so it was not a surprise to see only Glossy Ibises, a few White Storks, Black-headed and Lesser Black-Backed Gulls, and no godwits at all. We saw just one tractor ploughing. A pair of Kestrels was the only bird of prey. After Zé do Pinho we visited the Sado Delta near Zambujal at two sites during outgoing/low tide. Only 15 godwits (no rings!), 100+ Avocets, 37 foraging Spoonbills, Redshanks and a single Grey Plover. Not only the sun, but also a briefly singing Chiffchaff created a genuine feeling of spring. At the bird observatory Moinho de Mare da Mourisca we observed a few tens of Dunlins with Little Stints, Curlew Sandpipers, Turnstones and Ringed Plovers on the mud. No godwits.

Back to the chain path in Cardal where the godwits foraged now in not ploughed rice fields. Ring reading from 14:15 till 18:30. As the well-informed reader will know, counting c.q. estimating the number of birds is almost always a challenge, and sometimes really a frustration. The last also applies to this afternoon when we were almost ready with counting the godwits when all went into the air. So, we had to start again: 1, 2, 3, ..... At 17:05 we counted 24,200 godwits, at 17:35 we came up with 23,900 birds, while around 17:50 at least three flocks of 1,100 birds joined the group, making the total in this area to 25,000. Then, as quick as possible, to the well-known roosting spot at the northwestern part of Cardal, where we counted at 18:30 14,700 noisy godwits, thus the minimum number of godwits in Cardal at that moment was not less than rounded off 40,000 godwits. A number that was also achieved in previous years.

## Friday 8 February 2019

**Weather:** mostly cloudy in the morning, during the day bright intervals. 15C, almost windless

At 8:00 on the well-known spot: chain path Cardal. A carpet of godwits, three times scared by Marsh Harriers within five minutes. Unfortunately, the birds landed in the back of the field, so ring reading was (again) a little bit disappointing.

At 10:30 we visited Benavente. Rice fields bordered by pines, cork-oak and flowering broom, a totally different landscape from the rice fields at Cardal. The rice fields were deserted, puddle of bog, still had to be ploughed, so no godwit. We heard singing Woodlark and Nuthatch and observed Long-tailed Tits (subspec. *irbii*) and Iberian Grey Shrike.

So, we returned to the chain path at Cardal. Between 12:00 and 18:10 the Marsh Harrier disturbances were an exception, unlike in the mornings, so we could easily read colour rings till dark. From 16:30 flocks of godwits came high out of the blue. A few tens White Wagtails, two Pied Wagtails and two Yellow Wagtails scratching between the godwits. Some Mediterranean Gulls were invisible, although you could hear their characteristic somewhat complaining meowing call.

Saturday 9 February 2019

**Weather:** full-cloudy

After checking out we had just less than one hour left to look at the (colour ringed) godwits at the Cardal chain path. We could only add ten ring readings to our not so exceptionally long list this trip before we had to go to the Lisbon airport to meet Maarten and Kees.



*Collaboration.....*



## Team 2 Portugal: Kees de Jager & Maarten Hotting, 9-17 February 2019

### Saturday 9 February 2019

**Weather:** partly clouded, 15 C, SW 3 Bft.

We arrived at the airport of Lisbon according to schedule and met there with Bob and Jacob Jan. During the waiting time at the car rental desk (we had to transfer the car to Maarten) they updated us on the locations of the godwits and some more practical stuff. After the transfer of the car succeeded, we quickly went to the car and drove towards Vila Franca de Xira. By mistake (?) Maarten missed the junction and we decided to take a look at Carregado; the location we discovered last year.

We found some of the fields just ploughed but only 7 godwits were present (no rings).

After some shopping for lunch we went to the Giganta rice fields where Bob and Jacob Jan saw the majority of their godwits. Thanks to the directions of Bob and Jacob Jan we quickly found the first group and we were able to read our first rings.

We spend the rest of the afternoon in the area and managed to read +/- 50 birds each (with some overlap). Just before dark one of the fields behind us all in a sudden was crowded with godwits. Where did they come from? We didn't see them coming, so work for tomorrow. It was hard to estimate the group while they were standing close together and the light was already fading. We did a try and estimated the group around 45.000 – 50.000 birds.

### Sunday 10 February 2019

**Weather:** morning partly clouded, afternoon full cloud cover and drizzle, 17C, SW 4 Bft.

We started where we ended yesterday, but to our surprise no birds were present. We drove the road a bit further and saw some birds foraging, but not the numbers of yesterday. Before we could go to the place Jacob Jan and Bob told us, we saw the flock taking off in the distance. A large group seems to fly south in the direction of Lisbon, a smaller part landed on the fields nearby. We drove to the group and start reading rings. The longer we stayed the more birds came in, most likely some of the birds we saw flying south before. Did they make a reconnaissance flight and couldn't find a better spot?



*Godwit L3BRRR with transmitter*



*Godwit B1LRLR*

At the end of the morning the sun had turned to far and we suffered severe backlight making reading impossible. We decided to check some other spots in the area because we were still missing a lot of birds from yesterday evening.



In the Giganta area a lot of fields seems good for godwits, but no birds to see. Also at the borders of the Tejo no birds to be seen. We headed for Porto Alto for lunch after which we did a search in the norther part of the Tejo rice fields (Cara Larga area), but again no birds.

Back at the spot of this morning the number of birds had dropped even further, but still some rings to read. The weather turned the wrong way and it started to drizzle. With the birds on the side of the wind, the optics became wet and reading became tough.

With the fading of the light small groups of godwits set in from somewhere. Due to the drizzle and low clouds, we couldn't see from which direction. At dusk the same numbers as yesterday (45.000 – 50.000 birds) seems to be present again.

## Monday 11 February 2019

**Weather:** sun, 17C, NE 2 Bft.

Just before sunrise we arrived at the sleeping area of the godwits. This appears to be just in time; the first of many Marsh Harriers chased the birds to the sky. A large group flew straight south in the direction of Lisbon, some smaller groups went a few fields further.

We both took a field and scanned the bird for rings and made some samples. This took almost the whole morning. The birds took off when a Marsh Harrier flew over, but almost always landed nearby.

At lunchtime we went to Porto Alto to do some shopping and decided to take a look around Alcochete to see if we could find some of the birds that took of in that direction. We tried different roads to get to the Tagus shores, but we didn't succeed; dead-ends or private roads ...

At Alcochete it appears to be low tide and no godwits to be seen. We checked some field nearby where we had some godwits last year, but no luck this time. Also some more north, where a GPS signal was been reported, we didn't find any suitable habitat for godwits (only some field that weren't ploughed).

Via Benavente – also no ploughed fields yet – we went back to the Giganta rice fields, where we spent the remainder of the afternoon and read some birds. Almost at dusk large groups came flying in, most likely the birds that took of in the direction of Lisbon this morning.



*Some of the godwits that came in just before dusk*

Tuesday 12 February 2019

**Wheater:** sun, 20C, NE 3 Bft.

We arrived just in time to see the first large group took off in the direction of Lisbon. This time some more birds seems to stay in the area, and we found a nice group to read some rings. A Peregrine falcon also liked the group and did a – unsuccessful – attempt to get his breakfast. This was the sign for the majority of the group to take off. Some landed some field east, but a large portion went in the direction of Lisbon again.

With some fresh satellite data, we assumed the birds where on or nearby one of the islands in the Tagus river. We tried to find a good spot at the banks of the river to check our assumption but didn't find any godwits. The islands have a dike surrounding them and blocking our view on the interior.

We went back to the field near the Ponta da Erva entrance where we met Astrid Kant and Ronald Messemaker who just arrived from The Netherlands. Together we scanned the remaining godwits and did some ring readings. The birds were mostly resting between the left overs of the rice and were hard to read. With some patience we succeeded to get some rings.

An immature Bonelli's Eagle and light morph Booted Eagle chased the godwits to the sky and our hands to the camera. Luckily the godwits came back to the same fields and gave us the opportunity to do some more readings.



*Bonelli's Eagle - Aquila fasciata*

Almost at dusk a Marsh Harrier chased the birds of again, this time flying some further. We left the spot and thought we could find them at the same spot as the previous days, but that appeared to be a false assumption.

At dusk we saw the group from the Tagus island flying in again. But it was to dark to even try to read some rings.

Wednesday 13 February 2019

**Weather:** sun, 20C, NW2 Bft.

The tactic for today was to get before the godwits to the south of the reserve and see if we could see them fly over and possibly land in the direction of Lisbon.

Along the way we came across a group of Spoonbills and a quick stop revealed a group of +/- 18.000 godwits sleeping in the same field. At the same moment Kees saw the godwits taking off from the main sleeping area and we rushed back in the car and "raced" down south. We arrived just in time to see the first birds flying over and when the big group came over, we were ready to follow them. As we already expected the birds landed at one of the islands in the Tagus river. Way to far to check from our standpoint.



*The godwits against the skyline of Lisbon*

We received a call from Astrid with the message there still were quite a bit of birds at the beginning of the rice fields. We went towards them and joined them reading a nice group. The birds let us pretty close with the sun in our back: ideal reading circumstances!

After a short coffee break (thanks Astrid & Ronald) we continued reading until we had the whole group (+/- 2500) done. Time to get to the next group on one of the adjacent fields. This group was some harder – quit a distance and most of them asleep. As lunchtime was approaching, we decided to buy some lunch and see if we could get any closer to the island in the Tagus.



*Part of the group asleep*



Based on Google maps there should be some kind of park at the bank of the Tagus just opposite to the island we assumed the birds were on. After a little drive we found the park and with our field lunch we sat down at the Tagus bank.

From our location we could just look over the dike surrounding the island. The interior of the island seems to be some kind of wetland (most likely old rice fields) and was packed with birds. With the help of a Marsh Harrier which flushed the birds, we could determine it were indeed godwits (and some ducks). We found our missing birds!

The island however seems to be inaccessible. There was no ferry and the dock we saw wasn't looking very robust and seems to be only accessible with high tide. In addition to the inaccessibility the map showed the island seems to be part of the Tagus estuary nature reserve. All this did us decide not to try to get there. We eat lunch and stretched our legs along a nice boardwalk along the Tagus river with some nice photo opportunities.



*Zitting Cisticola (Cisticola juncidis) one of the photo opportunities*

After this we went back to “work” and drove back to the rice fields. We checked the small sleeping area, still containing some 6500 birds standing in deep water (almost no rings). After a while we gave up and drove in the direction of the good reading spot.



Maarten spotted a Short-eared Owl sitting on a fence. To our surprise the bird stayed as we stopped and stepped out of the car. The bird let us come pretty close and we could take a series of nice photographs. We called Astrid and Ronald who came racing towards us and could see the owl before it took off.

Together we drove back to the reading spot where the birds moved to some fields with terrible light. Maarten and Kees both took a field and walked over the small dike surrounding them. The birds let us come close again and we were able to read some more rings.

At dusk we only saw some small groups coming in. The large group of the island seems to be very late or did find another sleeping area.

*Short-eared Owl - Asio flammeus*

## Thursday 14 February 2019

**Weather:** sun, 22C, S3 Bft.

Today we started at the small sleeping area. Some 12.000 godwits were present, mostly resting, some foraging, but all in belly deep water. We managed to get a few rings. The Spoonbills standing in the same field were a better target for reading rings, although some of them were standing on one leg. While standing at this spot, we saw again a large (+/- 30.000) group of godwits flying over in the direction of the island in the Tagus river.

With a quick stop and a few ring readings at the spot nearby the main sleeping area, we went in the direction of the Sado river, our main goal of today.

We started on the north bank and overlooked different spots. Some seem to be suitable for godwits, but we saw none. Maarten had his lucky day and was able to photograph an Iberian Magpie, a species on his (photo)wish list for some time.





*Iberian Magpie - Cyanopica cooki*

Reaching the south of the Sado early afternoon, we continued our search for godwits. Some of the fields look promising, but again no godwits. Some Spoonbills satisfied our “hunger” for rings however. At last we saw 4 godwits foraging in the rice fields north of Comporta, but that was all for today.

We had to wait a while for the ferry back to Setubal and decided to do some birding around Setubal instead of racing back to Giganta (and possibly miss the last sunlight). Based on observation.org an Iberian Green Woodpecker was sighted a bit north of the city and we drove there. The spot was nice, but the woodpecker didn’t show up.

At dusk we drove back to Porto Alto and decided to take a quick diner at the Mac. While driving back to Vila Franca de Xira, we decided to take the junction to the ricefields and do a night drive through the area. We first checked the small sleeping area, where – to our surprise - we didn’t find any Godwit. On the rest of the drive we managed to spot 7 Western Barn Owls and some even gave us the chance to shoot some pictures. A nice end of a day without a lot of godwits; or as Maarten said: “more Barn owls in Giganta than godwits in the Sado” .....

## Friday 15 February 2019

**Weather:** partly clouded, 20 C, NE 2 Bft.

We started again at the small sleeping area. This time no Spoonbills, only some 15.000 godwits in belly deep water. Fortunately, a lot were foraging and showed their legs time by time. We got some more readings than yesterday. After a while we headed for the main area and found a large group. Some of them still resting, others feeding. They let us close and we could do some nice readings.



*One of the ring readings in the morning: godwits G3PGCG, ringed by the ringgroup of Kees*

Around noon we were reading the same birds over and over and decided it was time for lunch. We did a quick shopping in Porto Alto and headed for Belmonte. The key appears to be from a different gate than last year, but we managed to find the right gate.

In Belmonte some fields appear to be suitable for godwits, but none of them were present. We ate our field lunch in Belmonte and afterwards headed back to Ponta da Erva. Here we found the group again, this time at some fields ploughed yesterday. Most of them were feeding and we could do a lot of readings. Around 17:00 new birds came flying in, most likely from the groups that left for the island in the Tagus river this morning.

These birds gave us the opportunity to read some new ring combinations and the total amount was getting higher and higher. Birds kept falling in and we stayed at the place until dusk hindered us to read any more rings. Satisfied with both more than 100 unique birds each we went home.

## Saturday 16 February 2019

**Weather:** sun, 20C, NW 3 Bft.

Due to the weekend we couldn't have an early breakfast and were some later in the field than usual. The godwits were already foraging at the same location as yesterday. First near the road, later some further away. We kept reading rings until lunchtime.

We took the field lunch at the Godwit spot and after lunch continued reading. The birds were now mostly foraging on the yesterday ploughed fields and came pretty close.

Around 15:30 Maarten left to pick up Egbert and Marycha from the airport while Kees – accompanied by Astrid Kant - continued reading. The birds stayed mostly close to the road and with the absence of predators (no Marsh Harrier to be seen) didn't get flushed much. At the end you kept seeing the same rings most of the time. Around 17:30 Maarten came back and Egbert and Marycha had their first rings of their period.



*Godwit 1LNPJB*

Unlike the other days there were few godwits falling in at dusk. Up to Egbert and Marycha to find out if they changed their pattern (again).



**Team 3 Portugal: Egbert van der Velde & Marycha Franken, 16-24 February 2019**

## Saturday 16 February 2019

**Weather:** 18°C, Wind SE3, Sunny, 25k godwits.

We arrived at Lisbon Airport in the late afternoon and went straight to the Ponta D'Erva section of the Giganta Rice fields to observe the godwits until the sun went down. Circumstances were perfect with around 20k birds foraging in freshly plowed rice fields. The godwits are remarkably easy to approach this year. Hopefully they continue to use these fields during the days to come.



## Sunday 17 February 2019

**Weather:** 16°C, Wind NE2, misty morning followed by sun and a clouded afternoon, 30k godwits.

We started late because of dense sea fog, but found the godwits on the same spot as where we left them yesterday under great circumstances. There were more as yesterday so the group on the island in the Tagus probably started joining the Ponta D'Erva group. Nothing remarkable happened because we spent most of the day looking through the telescope and recording color ring combinations. There was quite some disturbance from marsh harriers providing a welcome mixing of the groups of godwits.



## Monday 18 February 2019

**Weather:** 15°C, Wind N4, clouded with a few drips, 40k godwits.

It rained during the night so the water levels in the rice fields increased a bit, but not too much to read rings. Circumstances were great again and most of the godwits were actively foraging behind the plows throughout the day.





## Tuesday 19 February 2019

**Weather:** 17°C, Wind E2, sunny, 40k godwits.

The godwits were still present in the same section of Ponta D'Erva. There was less foraging and a lot more resting during the majority of the day. In the afternoon some idiot caused a massive bang with fireworks resulting in extreme panic amongst all the present birds including 40k godwits and a few thousand black ibis. We expect it was one of the guys from the plows which got stuck and wanted to tease us out of boredom. The flocks kept flying around for around 15 minutes and even after they landed they remained vigilant for quite a while. Before the birds continued their normal behavior a booted eagle scared them and within a few minutes the same happened with a peregrine falcon. After that, peace returned and we had a good ring reading session. At dusk the peregrine falcon returned, but strangely enough most of the godwits remained on the ground and from the few that flew up one got chased by the falcon but managed to land just before it got grabbed and the falcon gave up. We didn't know if the godwits remained on the ground because it was almost dark or if it was a strategy to avoid the peregrine falcon.



## Wednesday 20 February 2019

**Weather:** 17°C, Wind ZW2, sunny, 40k godwits.

Same spot, same godwits, same weather. We read rings until godwit siesta at 11 and decided to check some other areas although we knew we wouldn't find many other godwits there because we didn't see godwits come to or leave the roost at Ponta D'Erva in the past few days. Almost everywhere looks suitable for godwits this year. Most of the fields at Gigantas are still very wet, some are plowed and some are not. Around Benavente en in Belmonte we came to the same conclusion, but we didn't see any godwits. The Salinas the Sambuco is always a great place to visit and we ran into Afonso Rocha and Pete Pots there who were trying to catch sandpipers without luck. We had a nice conversation with them and made a tour through the Salinas to find ca. 70 easily

scared godwits in belly-deep water. Without any additional data we returned at Ponta D'Erva to finish the day with a great 2 hour ring reading session.



## 21 February 2019

**Weather:** 18°C, Wind S4, sunny, 40k godwits.

The wind turned south so we expected some migration today, but we had more or less the same numbers as yesterday until dusk. There was not so much activity among the godwits today and hard sunlight from the wrong direction made it difficult to read rings. Afonso, Pete and some others joined us at the Ponta D'Erva for a while. We shared some information and joked around for a bit. After they left we toured around the Gigantas for a bit to enjoy the nice weather and surroundings before we continued our main purpose. Only at the end of the afternoon ring reading became worthwhile again.



## 22 February 2019

**Weather:** 20°C, Wind Z4, sunny, 40k godwits.

We drove around the Sado estuary today and didn't see any godwits at all. Overall the number of birds using the rice fields around the Sado was pretty low compared to the past 5 years. We mainly saw gulls, black ibis, storks and herons. Zambujal is slowly turning into extensive pastures with clover, lolium and several herbs. Over the past few years birdlife is gradually replaced by cattle, we only saw a few lapwings and golden plovers in the few remaining and unplowed rice fields. The fields on the route to Alcácer do Sal were unplowed as well. At Alcácer do Sal plowing started recently attracting large numbers of black ibis. The southern side of the Sado was relatively dry and only at Comporta a few fields had been plowed. Last year the Tagus area was very dry, but this year the Sado area appeared drier than previous years. We couldn't find any fields with high water levels which was probably the reason why we didn't see any spoonbills, flamingos or godwits on our Sado trip, not

even on the river benches. The weather was nice though and it was fun to be in a different kind of landscape than the Giganta rice fields for a change, but apart from that the Sado trip was rather dull. We returned just in time to finish the day with a good ring reading session. At sunset several thousands of godwits joined the roost from unknown direction but significant height.



*The few remaining rice fields at Zambujal. No godwits and hardly any birds at all.*

## 23 February 2019

**Weather:** 21°C, N2, sunny, 40k godwits.

We had amazing circumstances for ring reading today. There was a lot of foraging going on with several spread out groups until two booted eagles caused huge panic all over the rice complex at the beginning of the afternoon. It was very impressive to see all the flocks of many different bird species in the air at the same time as far as we could see and it continued for quite a while. We decided to get some well-deserved coffee while everything calmed down and when we returned the godwits had left the section they used the past 3 days. After a short search they appeared to have moved to the next section right next to the small airport where they started plowing yesterday. This was perfect because we could approach them with the sun behind us now so we continued our duty until the sun went down. After the disturbance we had the impression we missed a significant part of the group, but at sunset the missing birds joined again and we think they stayed on the island in the Tagus (Mouchão da Póvoa) which they used the previous week as they arrived from that direction. Another thing worth mentioning is that we observed several “new” individuals that had been seen or ringed in Extremadura Spain in the beginning of February. Apparently some influx happened recently, probably the group we saw falling in yesterday at the end of the afternoon.





24 February 2019

**Weather:** 22°C, NE3, sunny, 35k godwits

We arrived early to provide a live report about the godwits using the Giganta rice fields on the “Vara’s Vroege Vogels” radio program. At sunrise most of the godwits started foraging immediately until a peregrine falcon disturbed the fields. After that about half of the godwits left the Gigantas and it looked like they went to the southern island in the Tagus again. Nevertheless enough godwits remained, but moved to the last rice section of the Ponta D’Erva, just before where the pastures start. Circumstances for reading rings were great again and we enjoyed our last day on the rice fields. At dusk, we expected to see the missing birds returning from the island, but only several smaller groups returned to the roost on the Gigantas and from different directions. We didn’t wait until dark, but had the impression a significant number of godwits were missing. We didn’t care because we had a great time with amazing circumstances and next week we’ll continue our search for color banded godwits in Friesland.





## Team 4 Doñana & Extremadura: Wim Tijssen & Siebe Bonthuis, 1-10 February 2019

### Friday 1 February 2019

#### Travel day

For Siebe the second time and for Wim the 5<sup>th</sup> time to be a part of the RUG-Iberia BT-godwit-team. But, for us both, the first time to Doñana NP and Extremadura. Our first day turns out to be an almost complete travel day, despite our early flight at 09.15 from Schiphol. Our plane had a delay and had to be de-iced before we go to Sevilla. Jos organised already a taxi for us to bring us to the car pick-up on the other side of the big city. Our 4-WD car was not ready for us, so we had to wait for almost an hour. When we finally get our car, the google-maps brings us to a closed road, so we have to take the road through the busy city. Which brings us into a half hour traffic jam so we arrived in the late afternoon at our field station for the next days. Hostess Maribel from Cañada de los Pájaros shows us our room for the next days.



*Our fieldstation for Doñana 1 to 5 February – Wim Tijssen*

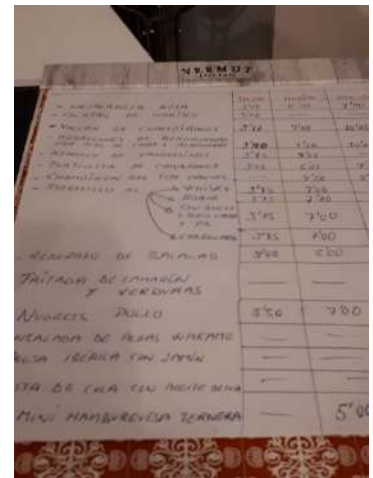
After installing ourselves we just have 2 hours of light to see some godwits in this totally new environment for us. So up to the ricefields, and the promised 12.000 godwits at lake Lucio del Cuquero Grande, but first some shopping for our breakfast at Isla Mayor. We end up at the barrier for permission to go to the small lake and the fishponds in this area. The sun is almost down, we have to show our passports and after the standard “no ingles” and a phone-call from the man in the waiting room to Miguel Medialdea from the company Veta la Palma, it is okay for tomorrow. We

decide not to go in, that would be useless looking at the quick sunset and hard cold wind. So we tried to get some food in little village Isla Mayor, which is not so easy...!



We arrive at 19.00 but all restaurants won't be open before 21.00, this is Spain! And after trying several restaurants with the same story, we go for a beer and some peanuts and wait for our most close by restaurant which should be open at 20.45, the owner promised us earlier that evening ... After a lovely meal with black-rice as speciality and local fish, early to bed after a long traveling day!

*Our best, Restaurant 1927, closed afterwards at Isla Mayor – Wim Tijssen*



## Saturday 2 February 2019

### First day in the field!

**Weather:** Wind 3-5B North, sunny, temperature various 3C to 14C end day

We start the day with traffic jam, in the village of Isla Mayor, because of a group of passing Greylag geese, which we did not expect in this part of Spain...



*Traffic jam in Isla Mayor in the morning for passing Greylag geese - Wim Tijssen*

But later on we understand them, because every day there is feeding near the grain storage! After passing the man at the barrier we find our way to the promising lake Lucio del Cuquero Grande and yes, there they are! The big flock is a bit too far away and almost all birds are standing on one leg... and sleeping, and the position of the sun is not in favour for us! When we just want to have a look somewhere else around 11.30 hour, the group starts to forage a bit, so we finally are able to read some rings.





*Sometimes a marsh harrier helps to move the flock a bit – Wim Tijsen*

During the rest of the day sometimes a marsh harrier helps to move the big flock and the sun is turning the right way for us! There is also an almost white bird amongst them, which looks a bit as “The witte van de Mijzen” but it has a bit black on the end of the tail and wings. In the end of the afternoon we got a control from the wardens from the National Park Doñana. We let them have a look through our telescopes and explain about our research, also they see the white godwit and we show them a transmitter-godwit. They are impressed and wish us luck in the ring reading of the birds.



*Officers from National Park Doñana Checking us – Wim Tijsen*

The wind was some times a bit too much today and we were glad we had good warm sweaters. Despite the sunny circumstances it is not so warm as it looks like... But we read 50 different colour rings so not bad at all, according to the circumstances. We had dinner on the north side a bit closer to our field station in La Puebla del Rio, in a very busy restaurant with 'no Ingles' and just in time because later on that evening there were queues for food, again a surprise meal!

## Sunday 3 February 2019

**Again a whole day at Lucio del Cuquero Grande!**

**Weather:** Sunny, wind NE 1-3 Beaufort, Temperature 5-15 Celsius

We started the day with an colour ringed Osprey on the special pole which is made for the bird. The godwits seem to trust the bird, because no movement when he starts to fly... they know their predators! Almost no wind, so a very beautiful morning, although the sun is causing some vibration and makes ring reading for some colours difficult.



*Colour-ringed Osprey M7 on his favourite spot made for pictures – Wim Tijssen*

The godwits feed here during the night and are resting during the day, so almost no movement in the big flock we estimate at 18.100 birds. During the morning some 5 to 6.000 godwits are landing from high altitude, amazing sound! It looks like they are just arriving from Africa... At twelve o'clock, when we just want to leave for birding somewhere else, they start to forage a bit, a little wind is coming up, so let's start ring reading! The rest of the day the birds are acting good for us.





*It seems that “De witte van polder Mijzen” is amongst them, but it is a different bird than the one who breeds in North Holland – Wim Tijssen*

We see 3 transmitter birds and make fine API-scores and make some good ring density counts. So now and then the birds are on the move for a marsh harrier and by the end of the day Wim’s score is 61 rings, 3 more than Siebe so he deserves the price of the day, a fine and nice snicker!



*Trying to find a good restaurant which opens early is hard in Spain, but wall paintings enough in Isla Mayor – Wim Tijssen*

We try another restaurant in Isla Mayor but the red wine is cold, like the whole restaurant, and the food is not the best and again a surprise meal... The starter and the main course are served together so food is also getting cold, not such a nice end of a very beautiful day.

## Monday 4 February 2019

### **An ill Siebe and a tricky ride along the fishponds**

**Weather:** Wind 3 to 5 B, NE, temp. 2-15C, sunny.

Day 4 started with a ill Siebe, who got problems with his stomach during the night. So a slow start of the day and what to do? Is Wim going on his own in the field, or shall we start and see how it goes? Siebe decides to come along. He starts with some tea and first, we buy some rice crackers for him and we will see how he copes during the day. If things are going not well for him, we still can decide to bring him back to our apartment. The day starts cold with just 2 to 4 degrees but when its warming up it is okay.



*Our usual flock in Lucio del Grande, one godwit with orange legs... Wim Tijssen*

Only the wind is blowing more than yesterday, so the 20.000 godwits are standing very close to each other and are almost not moving during the morning... In the meanwhile, Siebe is taking some naps and in the car behind the screen and in the sun he tries to recover. Like the last days around 12 o'clock birds start to move a bit and we are able to read some rings, also because the hard wind is blowing the water to the south part of the pond and water level is better for ring reading this way. But as soon their stomach is full, they immediately are in the 'one-leg-position' and at 13.30 the flock is in rest again. So we decide to have a look in the rest of the area in the fish ponds and the nature reserve part to find some godwits. No godwits at all and driving on the small dikes in the fishpond area was not such a good idea... On the day we arrived, a few days ago, some rain had fallen and when we approach a very small dike and there is no way back in our case... the sweat of fear breaks out! Siebe has some exciting moments on the right side of the car, while Wim is trying to keep the 4-WD on the small muddy dike-road with some wet deep tracks... We are both very glad we made it!



*Not the best profile tires made it very slippery at the fishpond dikes – Wim Tijssen*

Wim felt that there was no grip, despite the four-wheel drive and when we looked at our tires we immediately understood why... 3 of the 4 tires had almost no profile! After this adventure we have good moments with new bird species and take some time for pictures for big flocks of Flamingo's. At four o'clock we are back at our pond, close to the godwits. We check some 100 legs of a small flock of redshank's passing by, sadly enough none of Wim's research. But the moments the godwits are moving are very scarce, so we end the day early also for Siebe's state of health. A good sleep will hopefully help to recover.



*Very well drained 'industrial' agricultural fields in Isla Mayor area – Wim Tijssen*

In the evening we have contact with Pipe Abad from the university of Badajoz and with the crane-research team done by Julian Cabello Vergel also from the university. Julian and Pipe were in the



Extremadura area and did not find too many godwits in that area, around 500, but they saw transmitter bird Amalia! Because of the low numbers over there we decide to stay a day longer in Doñana after a consultation with Jos. The university of Badajoz arranged a house for us in the little village Gargaligas. Julian will stay with us in the same house in the Extremadura area also to help us a bit to show what the best places are for the godwits in our new to discover area. Very helpful!

## Tuesday 5 February 2019

### **A tree full of night herons, a fox and our best day!**

**Weather:** Wind 1 to 3B from NW, temperature from 6C, ended 17C, only sun...

Siebe recovered well after a good sleep. We first want to see a bit more from the surroundings then only the road through the rice fields to Isla Mayor and Lucio del Cuquero Grande. On our way we check some new rice fields but no godwits at all. The view on a tree with more than 100 night herons is fantastic and we see our first ferruginous duck in life, what a beautiful painted duck!



*Night herons and a ferruginous duck – Siebe Bonthuis*

The sound of the night herons is very nice on this quiet morning full of sun in the back. Also the black storks, along our way to the godwits in the pond, act very well for the photos. The start is as always a stand still situation with the godwits in the pond. But as usual a small flock starts to forage at twelve in the south corner close to the observation point. So quickly to that place and with us also the godwits start to follow us. A perfect situation finally, with foraging godwits in not too deep water and the sun in the right way and some shelter behind the observation hide for the wind! Siebe is doing the southern part of the flock, while Wim is in the hide itself to cover another part of the foraging flock. He heard a crack of a small straw of reed and only 3 meters away a red fox is showing up! Siebe does not notice it, while the fox must have passed him very close by, good concentration on ring reading of course! Later on that afternoon the birds moved back to the normally roosting place but



still foraging in small groups. We end the day with no wind and read the first Lime flag combo, so a excellent last day in Doñana!

We leave some Dutch treats, Wieringer Jodekoeken and stroopwafels, for the guard at the barrier, and also for our hostess Maribel. Siebe is the winner for today in reading the most rings, 75 combos is his highest record for the day. In the evening we hear, while we are packing for our next goal the Extremadura, from Pipe that numbers have climbed up over there, so a good timing.



*A red fox wants to get a lift... and very close to our car and us! – Wim Tijssen*



*End of the daily rituals; Siebe talking to the guard to open the gate – Wim Tijssen*



*Route 66 to the Extremadura!*

## Wednesday 6 February 2019

### **Route 66 to the Extremadura!**

**Weather:** Wind N-2B, Afternoon 10-15C and sunny in Extremadura

We leave our hostess Maribel in the morning and have to travel over 200 km tot the Extremadura along highway 66. We made an appointment with Julian and his students to pick us up at the main road near Hernan Cortes. They have time to show us the area in the later afternoon and we visit the rice fields where the last days godwits were seen, including transmitter bird Amalia. But... no godwits on the fields in the main areas. Julian is apologizing for this, but he can't help of course. Finally we found a small flock of 18 birds close to Yelbes and read one RUG combination.



*More cranes than godwits in the Extremadura on 'round-up' fields - Wim Tijssen*

We end in the late afternoon for find out where the roosting place will be for the godwits. The team of the university of Badajoz wants to catch godwits for an experiment with rice and Omega3 in captivity. While we are waiting some big flocks of over 500 to 1000 birds appear from the NW and are landing somewhere in the NE direction of us. Where Manuel, another researcher on ducks from the university, is standing on a hill to find out where they are going to roost. While we are waiting

with the sounds of hundreds of cranes and a beautiful sunset, the Spanish guys are excited because they did find the roosting place.



*The sound of cranes during sunset and a nice skyline – Wim Tijsen*

Soon Manuel joins us, and all together we leave for our house and sleeping place at Gargaligas. The Spanish team tries to let us pronounce it well in quick Spanish which is not so easy with lots of gggg's! We had dinner in a nice and warm road-restaurant very close to our house, so we could reach it by foot! The house itself is very cold, so a warm meal is welcome. The lady in the restaurant tries to help us in English because "no ingles" is everywhere but with help from our colleagues we have a good diner and even warm red wine. After coming home the Spanish team have to watch a very important football game, the El Clásico (Fc Barcelona-Real Madrid), but suddenly no electricity so it will be a cold, cold night...

## Thursday 7 February 2019

**Where are the birds? But, better one in the hand then lots in the sky, and a "Double Dutch" godwit!**

**Weather:** A very cold and foggy start: Temperature 2C to 15C, almost no wind.

No electricity, and to get warm, we join the Spanish colleagues in having breakfast in the very cosy and warm restaurant Merialba. And as they promised, very nice and cheap breakfast and good coffee, and we can charge our mobile phones with electricity!





*Now we understand why they go here every morning, instead of making their own breakfast in a cold house... - Siebe Bonthuis*

Julian will show us the road and areas around Palazuelo, which is always good for the godwits, but not this morning. After the fog disappears very soon we drive the whole area, but sadly not birds. There are lots of farmers in the area working on equalizing the fields with dumpers and GPS in the middle, just like in the Netherlands, 'improving' the landscape and the agricultural circumstances. And I think godwits like fields with more muddy and bumpy circumstances and a bit micro relief. Where the leftovers from the harvested rice must be better to reach or with more rice grains left in the field. We drive the whole area around Santa Amalia, Hernan Cortes and finally we find 58 birds near Yelbes and two RUG-birds.

We checked a bit more of the 25.000 rice fields in the Extremadura and visited the area in the western part between Valdehornillos and Vivares. In the end 68 more godwits and one Spanish bird with ring loss near Yelbes. In the late afternoon the Spanish team had put up some mist nets trying to catch some godwits in the dark at the roost. Also professor José A. Masero shows up and more helpers. Some food is collected at Santa Amalia for the night and then we wait what will happen... Very soon the team brings 21 godwits to an old shed where the birds will be measured and ringed. So a quick catch early in the evening. And a new ringing scheme has to be attached on the birds; a yellow colour ring with a black A and a colour above on the right tibia and 3 colours (red/white and blue) on the left tibia. So no White Flag anymore and the metal is not a part of the scheme anymore. Another 7 birds are caught and while José and Pipe look for the best birds for the experiment, we help with the colour ringing as 'experienced' helpers. In the end it turned out that only 14 birds will have colour rings and the rest will go to the university of Badajoz. When Siebe looks at the colours for the new scheme there is a combination which is exactly in the order of the colours of the Dutch Flag..., so we ask Pipe if we can use this combination for the last bird.



*Insects and flowers only on roads in the very intensive used rice fields around Yelbes, sprayed by Monsanto/Bayer with glyphosate – Wim Tijssen*



*In the afternoon Julian and his young students join us – Wim Tijssen*





*From now on there is a “Double Dutch” Limosa limosa hollandica flying around in the population! - picture Julian Cabello Vergel*

It was a long day, but worth it and very exciting and we had almost more godwits in our hands than in the air!



Friday 8 February 2019

**Checking part of 25.000 rice fields but no godwits?**

**Weather:** Dry and sunny, up to 18C, almost no wind.

Our plan was today to read lots of rings, especially our 'own' ringed birds. But wherever we went in the whole area, we did not find any godwits. First we went to the usual good areas around Hernan Cortes, Santa Amalia and Yelbes. And when we just arrived near Yelbes approaching a nice flock, a marsh harrier and a peregrine falcon appeared and all birds went high in the sky to SW. We followed them in that direction but we could not find them back around Torrefresneda. But the only bird we see in this part are cranes, and cranes everywhere! We visited and checked many fields at several new places like Vivares, Miajadas and Alcollarin.



*We were held up by a sheep herd – Wim Tijsen*

And we get a phone call from Pipe that maybe they want to release six of the caught birds fitted with transmitter... Which is a big surprise for us, because we did not know about this! We also check the area around Madrigalejo, which we did not visit before. Here we make a vlog about the competition to predict when transmitter bird Madrigalejo will arrive at her breeding spot near little village Kolhorn in the province of North-Holland.



*Siebe is testing the new vlog - made by Wim Tijssen – Landschap Noord-Holland*

At the end we try to find the roosting place in the area where the catch was yesterday, but no birds at this place. We see a flock of 500 birds flying into NE-direction and too far away and too late to see any rings if we are able to check the place.



*Tomorrow everything will be better on our last day around Santa Amalia*

Saturday 9 February 2019

**Fog and release of the transmitter godwits**

**Weather:** Foggy morning, cloudy, ending in sunny afternoon, wind 1 Beaufort.

Our last day in the field. This must be an exiting last day if we can hopefully release the transmitter godwits and the *Hollandica* bird, which was a bit wet after the catch and had to recover together with the other birds at the university of Badajoz. But... the day starts with a real heavy fog and after driving around for two hours in the area it is hard to see any birds. We are able to check 30 birds close to the road in the fog near Yelbes, but no rings.



*Fog! So we made the best of it, entering samples! – Wim Tijssen*

So at the end we decide to go to a café/restaurant to enter our ring density samples from the whole period in the laptop, have some coffee and wait until it clears up. In the meanwhile Pipe Abad phones us that the team from the university of Badajoz will arrive around one o'clock because the transmitter birds are ready to release. When they arrive at Santa Amalia the weather cleared a bit so we are able to release them. The most exciting moment always, to release the birds for the ongoing research of the University of Groningen in cooperation with Badajoz university.





*Release of transmitter godwit Rena – Jose A. Masero*

Almost all birds are acting very well after the release except “Hollandica” who is not able to fly away well, so he will recover a few days more at the university with the other birds. Siebe’s released bird in the future will be Ojeda(L3BRBY) and Wim’s favourite is Rena(L5YLYB), cross fingers when they perhaps arrive in the Netherlands...?



*Release: Jose A. Masero, Pipe Abad, Siebe and Manuel Parejo Nieto – Wim Tijssen*

After the release we check the birds in the rice field and we discover also 12 other godwits, and amongst them two of our ringed A-birds from this week. Siebe discovered his own colour-ringed bird, how exciting! After more than an hour, checking that everything is okay with the new transmitter birds, we leave the area. We search the area around castle Medellin and some other places, but no more godwits sadly enough, except for 12 unringed birds around Hernan Cortes.

## Sunday 10 February 2019

**Last day, travel day and new team Martin & Age**

**Weather:** Sunny 15C, wind North 2Beaufort

Today Wim has to catch his plane at 20.00 hour in Sevilla while Siebe has a 'date' with his wife Trudy at a hotel in Sevilla, how funny! Our new colleagues Marten Sikkema and Age Hulder will arrive at 13.00 at Seville's airport. Our last nice breakfast in restaurant Merialba and when we pass the release field, on our way to Sevilla we stop to have a quick look at it. All birds are gone and left the rice field, so we are really satisfied with that. It is almost unbelievable that we were not able to find some nice flocks of foraging godwits in the area. But the area is 50 by 25 km, and with 25.000 rice fields they can be everywhere. Or we were just unlucky, specially not finding most famous godwit Amalia...!?

But nevertheless we had a very good time together and always fun and good talks. Wim drops Siebe in the centre of Sevilla and Age and Marten arrive in time at the airport. Sadly enough the boys luggage did not come with their plane and especially for Age it's a pity because he will be missing his telescope. Wim is handling over all documents and we have enough time to have a good talk above the maps where the birds can be, we did not see... Happily Age and Marten did find much more birds than we, including Amalia, so a happy ending!

## Team 5 Donaña & Extremadura: Age Hulder & Marten Sikkema, 10-18 February 2019

### Sunday 10 February 2019

Early in the morning (04.00) we left for Schiphol to fly to Sevilla, via Madrid. We arrived in Sevilla around 13 hours, unfortunately however, our luggage did not. The agency who handled it, also did not know where it was, most likely in Madrid still. They promised us they would send it to our address as soon as possible. We met with Wim and had a good talk to exchange information on their experiences during their stay in the Extremadura. We then drove to Gargáligas the same afternoon. On the road we already saw lots of nice 'Iberian' species, such as Southern Grey Shrikes. Around 18.30 we arrived in Gargáligas, inspected the house where we stay and then went for some food and drinks to the roadside restaurant across the street.

### Monday 11 February 2019

Yesterday in the evening we got a phone call saying that our luggage would arrive today between 12 and 14 o'clock. So after a good night sleep and some breakfast, we had a few hours to check for godwits in the area, before returning to the house again to wait for the luggage. Luckily we did have one pair of binoculars and one telescope with us, that were in the hand luggage, so we could at least do something. We searched some ricefields in the area between Valdivia (just north of the N430) and then the area from the N430 to Palazuelo, Zurbarán and back to the N430, There were several fields that looked suitable for godwits, but no godwits regrettably. We then had to go back to the house to wait for the luggage. We waited from 11.45 to 15.30, but no one arrived and no one called.... We tried to call the agency, but no one answered. We did call Pipe Abad, he was busy but agreed to meet us around 16:00. Pipe then tried to call the agency that handles the luggage, but no answers. We waited again while Pipe went back in to the field. Around 17.30 we thought they would not come anymore. So we left a note on the door that the garage door was open and went out to see at least some movements to sleeping roosts. When we were north of Hernan Cortes we accidentally ran into Pipe again. In the meantime, finally our luggage had arrived while we were not at home. Via the house owner, Jose Masero and Pipe it was arranged that the courier left it in the garage. We then had time to look for godwits flying to roosts. We saw very large groups at a very large distance. Pipe drove towards it, but didn't find anything but Starlings. In hindsight the big groups we saw must have been Starlings, as we saw these large groups of Starlings more often later on. The next morning we only found Starlings again, we couldn't find godwits in the area. We did see some godwits going to another roost. It seemed to be just west of a factory. Later, with help of data of a satellite tagged bird, we searched the area and found the field that must have been used as a roost, the coordinates are: 39,0995209, -5, 94115513.





07:30 At the viaduct. Nice to start the day early

## Tuesday 12 February 2019

We started the day early, trying to find a roost. At 07.30 we were a high viaduct over a highway next to a factory which was our landmark for the roost we saw the evening before. We didn't see godwits. Later we saw satellite tracking data of Amalia, indicating the roost must have been closer to our lookout point. We checked the area and found several suitable ricefields. And lots of Lapwings, Common Snipe and Golden Plover, but no godwits. We then had something to eat in Valdehornillos (where we saw a beautiful draft horse). Via some more rice fields we ended in rice fields south of Hernan Cortes, where Pipe had seen about 1.000 godwits the day before. And there they were, finally some godwits. Our first estimate was that there were around 2120 godwits (a group of 370 and a group of 1750). When they went up into the air, it seemed to be a little less than that. So we estimated around 1500 godwits. However, given the ring density and the number of individual ring combinations we read, it must have been over around 2600 godwits. And conditions were absolutely perfect!! Perfect light with the sun our back, very shallow water so all legs were visible and the godwits kept on foraging. In total we read 55 different RUG rings and 24 rings of other foreign schemes. So 79 different combinations. We also did several ring density samples and took some foraging protocols. We saw a lot of newly ringed godwits (caught one week ago), also some with brand new satellite tags. And last but not least, we saw Amalia several times!

It was a long day, we were back home very late. We did some checks on all the different ring combinations.

### Foraging protocols:

Y6RLBL: 46,5 sec = 3 prey

Unringed male: 2min:7sec = 11 prey

Y6BRLY: 4:46 = 19 prey

Female unringed: 2:50 = 35 prey (did not move one step during this protocol)

Male unringed: 1:53 = 7 prey



*In terms of biomass, this single beautiful draft horse likely equals to about 14% of the total Dutch population of godwits. (33.000 BTG in 2015 \* 0.95 per year leads to 26.879 BTG in 2019; with an average weight of 290 grams this gives 7.795 Kg of Dutch BTG. The horse is estimated to be easily 1.100 Kg).*

## Wednesday 13 February 2019

**Weather:** 20 C, sun, almost no wind (2 Bf max). Perfect weather.

We started the day a little later because we had had a very long day yesterday. First we had to write the day report of yesterday during breakfast (after all the ring reading yesterday we ate and then looked at how many different combinations we saw, after that we were very tired and went to sleep). Today we first went to the Hernan Cortes site on our way to Yelbes. As the light is bad in the morning there, we decided to go to Yelbes first. On our way there, we passed HC and had a quick look, not many birds, approx. 300-400. Just northeast of Yelbes we quickly found a group of about 80 birds. We could easily see all legs, read all 4 present combinations and took a sample of the whole group. We continued to scan the whole area but found no more groups. We took a lunch break in a beautiful Dehesa just north of the village. It was wonderful to walk in between the many flowers and singing birds (many Common Chiffchaff singing). Seeing two Great Spotted Cuckoo's was a highlight, as well as a singing Southern Grey Shrike. We then went back to the Hernan Cortes site, as it was about 13.00 hrs and the sun is shining from the right side. However, the godwits were gone! We only saw a small group of about 40 godwits flying around and heading generally northeast of Santa Amalia. We quickly began searching the area. East of the area we had seen apparently suitable fields in the morning, we searched them but found no godwits. We did find singing Sardinian Warbler and Common Whitethroat. Also northeast of HC we had seen suitable fields, but forgot to check them as we had decided to go north following the small group. We then found a group of about 300 godwits. Again, it was easy to read all (but one) rings, make a sample of the complete group and we took two foraging samples too. There was also someone else passing by, also placing the car and looking at the godwits with a telescope. However, as we could not leave the car without chasing away the godwits, so we couldn't make small talk with him. As we were looking at the godwits, we saw another small group landing further away. We went over there, but couldn't find them. We continued in the direction of Valdehornillos and Vivares. In this area there are very few suitable fields, but we had already searched the area thoroughly earlier, which is at present the area with the

last known positions of satellite tagged Amalia. We found nothing. We then kept on searching in the direction Casar de Miajadas, Puebla de Alcollarin, Palazuelo, Zurbarán. Around Casar de Miajadas there were only few good fields with only Cranes, Lapwings and one with also Golden Plovers and Dunlin. Just north of Puebla de Alcollarin there were some good fields, but no godwits. And north of Palazuelo there was an extensive area of apparently very suitable fields. We checked a lot of them but it was already getting late. We found five godwits in one field, and just before we approached the field Age saw around 100 birds flying away in the direction of the low sun (heading for their roost, as did the present Cattle Egret, Greenshank and Glossy Ibis). Because of the blinding sun we were not sure if that were godwits, but it might very well have been them. The 5 godwits had no rings. We then decided to try to check Hernan Cortes in the last light, as we had had the idea that the birds stay there to sleep last night. It was a race against the lowering sun to get there in time, but we made it. There was an incredible amount of Cranes blocking a large part of the view and also making it impossible to get a good look because we didn't want to disturb them of course. But we did see over 500 godwits in between them. So we think the area still is the major roost at the moment. So tomorrow we are going to try to find a spot on the east side of the Hernan Cortes fields (sun in the back), and be there at 07:30-07:45. So we can see how many godwits roost there, see if we can find any rings from that side, and if they leave for other fields than try to see how far and in what direction they fly. That's the plan. Now it is 23.00 already, time to go to bed.

Foraging protocols:

Male unringed: 2:00 = 10 prey

Female unringed: 1:41 = 8 prey

Santa Amalia east (30S 241917 E, 4322806 N)



*Our beautiful lunch location.*

## Thursday 14 February 2019

**Weather:** Sun, 8C in the morning, 20C later in the day. Very little wind, approx. 3 Bf.

We drove to the roost at 07:10. There were many of Cranes again and two groups of godwits of 2500-3000 in total. At 08:10 there was a group of 25 godwits came flying to the roost, this was our first hint that there must be another roost somewhere. We started to read the first few rings of the



day. At 09:13 an adult female Peregrine falcon started to hunt godwits. It scared off all of the godwits in several directions. A large fraction flew off in several smaller groups of 50-150 to the north in the direction of Santa Amalia, a larger part of about 300-750 flew in the direction of Yelbes and a large part of about the same number left in the direction of Palazuelo (in hindsight; they might have left for Vegas Altas instead; but at that time we had only seen a small group near Palazuelo, so we assumed that this was the direction they were going). After all the godwits had left in different directions, we went for breakfast and coffee in Hernan Cortes. We met with Pipe there to share experiences of the past few days. Then the search began. We decided that Pipe would check out the area between Hernan Cortes and Yelbes and we would go north. We went for the field where we had found 300 the day before, and found 60 there. We read all colour rings, took a sample for ring density and then continued in the direction where a part of the group flew off to. But there we found only the same few. We then got a call from Pipe, he had seen a large flock of 300-400 returning to Hernan Cortes but it was a long way to get there from where he was. So we went there after we filled the car with gas. Once we returned to Hernan Cortes, we saw several groups returning, we couldn't see from which direction they came. Soon there were more than 1200 godwits. We first started to read as many rings as possible. After a while we started to compare the different ring combinations which we had seen, to assess how many we've seen, how many new ones compared to the day before, etc. But when we looked up again, we had lost all the godwits! We couldn't see them anywhere anymore and we didn't see or hear them leaving. Very stupid of us of course! While we were angry at ourselves for being stupid and deciding on what to do now, we slowly forwarded to the end of the road next to the Hernan Cortes fields. We then learned a valuable lesson! At two different fields, the height difference between the fields is so big, that it is impossible to see the complete field. You'll think you can see all fields from the entrance of the area, but there is no way can see all of it. It turned out that the whole group of godwits was still there, but in one of lower fields completely out of sight. Later in the week, we had this several times, that the group was present but invisible from only a little distance. We can easily imagine that the groups of godwits have been here all the time, but were missed by not driving all the way to the end of the road. This can happen easily if the site is checked only one or two times. Possibly we missed them this way yesterday. The rest of the day we kept reading rings in this very group. Almost unbelievable how long you can keep on finding new rings in a group of 1200 godwits. We were lucky that they came flying towards us. Sun in the back, all legs visible, foraging godwits close by, perfect conditions. At the end of the day Pipe came to the area and read some rings too. At 17:00 hrs Pipe went to the high vantage point to look for 'roost migration'. All groups he saw were going to Hernan Cortes. Some of the groups he saw we could also see falling into the big group, we didn't see all groups but we were also discussing and evaluating our findings and making plans for tomorrow, so we might have easily missed a few groups. After dark, we went to the village to eat and do some data entry, but there was no power socket, so we quickly ran out of battery. Marten called with Jos for a while about the database and to tell how everything was going. By the time we were back 'home' it was already late, but still we decided to enter all data. It was 00:45 when we went to bed, tired but satisfied.



*We had absolutely perfect ring reading conditions at Hernan Cortes many times.*

## Friday 15 February 2019

**Weather:** 8 C in the morning, 20 C during the day, sun, almost no wind (Bft 2 max).

The alarm woke us again at 06:45, it was a short night. Although we were both tired, we didn't hesitate or waste time and were in the car on our way within 20 minutes. Today we gambled and stopped for breakfast and coffee first before going to the roost, it was a good gamble, the birds were still at the roost when we arrived. We could perform a very good and thorough count, totaling 2265 godwits. It is very nice to notice that our counts, the number of individual rings we can find and the ring density counts all add up very nicely. The ring density averages around 1:33-45, the number of individual rings is about 50-70 per day and we count about (2000-)2500(-3000) birds on the roost. During the whole week we find these numbers, which seem to fit each other fairly well. At 08:30 a group of 160 left in the direction of Palazuelo and another 50 to Yelbes. After counting the group we tried to get into position to read rings which is difficult with the morning light, but we managed to read 9. Then the car suddenly made a whole lot of noise! After pulling over and crawling underneath the car, Age found that it was a small stone caught between the exhaust pipe and the base plate. Problem solved. We could read rings from 11:15 until 13:15. Conditions were absolutely perfect again (sun in the back, hardly inundated fields with all legs well visible and godwits foraging constantly). The group was about 2000 and they changed fields from time to time, so we've seen most (if not all) of them in relatively short time. So we decided to go search for the groups that left earlier this morning. We first checked the fields east of the village Hernan Cortes. We heard one godwit calling in the distance, but we couldn't find a single godwit. This goes to show how difficult it can be, there must have been at least one. When we got in the car again, a Quail crossed the road before us. We stopped and could get a short look at it while it was hiding in the side of the road before it flushed and flew off. We continued the search and went north of Palazuelo where we found 6 (unringed) godwits in the exact same field where we found 5 the day before yesterday. As we stood there, 30 godwits came flying overhead and went east. We followed them with binoculars as long as we could and quickly gave chase with the car. We searched the whole area around Zurbarán, but found no godwits. But this sighting, together with the knowledge of groups of godwits leaving from Hernan Cortes in the morning in the direction east-northeast, did give us the idea that there are godwits around here somewhere. Later this week, this info, together with the satellite data brought

us Vegas Altas. Then it was 16:00 hrs so we rushed towards Hernan Cortes again to read some more rings. There was a small group, among which Amalia, in a newly used field near the main road. The rest were in the 'normal' fields where we could read about 30 rings each between 17:00 and 18:15. There were at least some new rings which we didn't see earlier this day. This brings the idea that there might be another roost somewhere of which we do not know. So tomorrow early in the morning we are going to check the field which was used as roost (of 3000-4000) when Pipe and the team were catching godwits. If they are not there, than we will check the site that Amalia used according to the transmitter data. After diner we went back to Gargáligas to write the report of today and yesterday and go to bed at 23:15.



*Perfect conditions again.*

## Saturday 16 February 2019

The alarm woke us at 06:45, we started driving at 07:10. We went to see if there is another roosting site other than the one at Hernan Cortes. We thought if they were maybe still roosting in the fields that they used just before we arrived, the same fields where the godwits were caught in the week Wim and Siebe were here. When we arrived there early in the morning, it was immediately clear that this site is not used anymore, there was almost no water on the field. So we directly went to three other fields that we have earlier this week and which seemed to be suitable. This was in between Valdehornillos and Vivares. In hindsight, these must have been the fields where the godwits roosted that we saw landing on the evening of 11 February. However, when we arrived there at 07:59 there were 3 godwits and about >500 Cranes present. Possibly some of the roosting godwits had left yet, but we think this is just a very small roost that is used in varying lower numbers. We then went for breakfast in Valdehornillos. On our way to Hernan Cortes we spotted a flock of godwits just east of Santa Amalia, near the road to Hernan Cortes. When we turned the car and got into position, we only had a very short look at the godwits before they were chased away by a hunting female Peregrine falcon. We then drove to the good fields south of Hernan Cortes, but found no godwits, possibly chased away by the same Peregrine. We then decided to check the fields in between Hernan Cortes and Yelbes. Only near Yelbes, on the same fields where we saw them earlier, we found a group of 199 godwits. We read all rings, took samples and made food intake protocols. We also saw another group that was chased away something we couldn't see (possibly a raptor). We tried to follow the



group but couldn't find it again. With all the disturbances, we had little success so far this day. So around 12:30 we decided to take the rest of the day off, to do some birdwatching in the steppes near Trujillo. That turned out to be a terrific choice! We saw lots of wonderful birds in a magnificent landscape. Some highlights were: Pin-tailed and Black-bellied Sandgrouse, Calandra Lark, Cirl Bunting, Crag Martin, Black Vulture, Great Spotted Cuckoo, Bonelli's Warbler, Orpean Warbler singing, and last but not least an adult Golden Eagle less than 100m from the car! We ended the day in Trujillo, which was a wonderful town to visit.

At Yelbes we made 3 foodprotocols:

R2RLLR, female: 2 minutes and 10 seconds -> 18 prey.

Unringed male: 2 minutes and 20 seconds -> 4 prey.

Unringed male: 2 minutes and 30 seconds -> 50 prey.



*Besides a whole lot of Cranes, there were at least 3 godwits using this field as roost. Cranes, however, seem to be roosting in all locations where godwits roost as well. The Spanish team has a theory of decreasing godwits because of competition for roosting sites with the increasing Cranes, seems unlikely us. The godwits are literally standing in between the Cranes. However, people always assume a causal link whenever there is an increase of one species correlating with the decrease of another (think of geese and godwits in the Netherlands; despite a whole lot of research, a link was never found. Yet many people refuse to accept the truth that there is no causal connection).*



*Miss Peregrine chased away the godwits*

## Sunday 17 February 2019

**Weather:** 5C, low wind, sun.

We started the day again at the roost in Hernan Cortes. It was cold this morning, a bit more humid. There were only 600-700 godwits present at the roost. They were in a very dense flock in a field where it was impossible to read colour rings with the sunlight coming from the wrong side in the early morning. We searched for options to try to read colour rings anyway, but decided that it was impossible. The low number of birds on the roost, suggests that there is another roost somewhere else. Our only guess was the fields where we found 3 godwits yesterday morning, so we raced to get there as soon as possible. Unfortunately, there were no godwits there. We then had breakfast again at Valdehornillos and went back to Hernan Cortes in the hope that the flock of 600-700 was still there. However, when we drove through Santa Amalia we saw a motorized paraglider flying over Hernan Cortes. When we got there, there were no godwits. We thought the 'flying lawnmower' had scared them away. But then we saw a hunter coming out of his hide to pick up a shot Lapwing from the ricefield directly next to the roost. We observed him for a while from a distance, and moved on. So we lost the godwits again. We send a message to Ruth Howison asking for maps with good quality fixes of the satellite tagged birds. We started searching for the godwits. We found a small group just north of the road, about 40 godwits and no rings. We continued to search, but decided quickly to go east, in the direction of one transmitter bird (L5YLYB) near Acedera. On our way there, we got response from Ruth. The maps gave us more detail on where to look. It also showed us that all but one of the fixes were in locations we had previously checked for groups, so the one in a weird location was the one we were after. It is also in the easterly direction, we had seen several groups going east in the early mornings, but never found groups in this direction (near Palazuelo for instance, where we searched twice). That turned out to be the right choice! We easily found a group of 1700 godwits near Vegas Altas. After having spent some time (13:10-14:30) reading colour rings, we must have seen most of the rings present in the group. We then drove on to search for possible roosting sites in the surrounding area. We found another group of 47 godwits, with two colour rings which we also saw earlier in the big group. We then returned to Hernan Cortes to see if the 600-700 that were there in the morning had returned. That was not the case, we never found this group again. When we arrived there were 8 godwits in the first field next to the road. When we drove past the empty fields, we found 2 godwits. One lonely female, and one lonely bird which turned out to be L3BRBY. This is a satellite tagged bird which hadn't been seen since it's release. There were some worries about it's condition, as it did not walk properly when it was released and also the transmitter stopped working. When we saw it, it seemed to have some sort of wound in the neck. It was feeding

superficially, but it walked alright. We filmed the bird for a while, so we could show it's behavior to others involved in ringing and tagging. We then moved out of the area because the Cranes wanted to sleep there. We quickly went to look at the site directly east of Santa Amalia, there were 250 godwits still feeding there at 19:20. We suspect that they also slept there that night. We returned to Hernan Cortes to the field near the road, there were 24 roosting godwits now, together with roosting Ruff, Glossy Ibis and Dunlins. Another long and interesting day had come to an end. Time for us to go roosting too.

Foraging protocols:

11:30 hrs, Santa Amalia. Unringed female: 49 sec = 13 prey

11:30 hrs, Santa Amalia. Unringed female: 52 sec = 10 prey



*Perfect conditions again, but this time in Vegas Altas.*



*Nice mixed species flock of godwits, Glossy Ibis, Ruff and Dunlin in a small field near the road. This was also a small roost.*



Monday 18 February 2019

We started the day early again, at 07:50 we were at the site near Vegas Altas to see if the site is used as a roost. In one of the fields where we saw the day before, the water level is a bit higher and this field they did use as a roost. It is easy to miss, as the flock is dense and takes only little space behind a ditch filled with Cattails (*Typha*). There were 980 godwits roosting. So not all of them stayed in the area or perhaps there is still another site used for roosting in the vicinity. We could stay until 09:00 and read quite some rings in that time, among which a few that we didn't see earlier this week. We then went back to Gargáligas, packed our suitcases and went to Hernan Cortes to meet Pipe. We had breakfast, returned the key of the house to Pipe and most importantly we shared all our findings of the past days with Pipe. Pipe was very surprised to hear that the godwits had been roosting near Vegas Altas, he said that they haven't roosted that far east in over 10 years. We then had one more short chance to check to Hernan Cortes fields before we had to start cleaning the car and return to Seville for the airport. There were no groups of godwits anymore at Hernan Cortes. However, we saw a dead Godwit in one of the rice fields. We feared that it was L3BRBY. So Age went barefoot into the muddy rice field to pick it up. Luckily it wasn't L3BRBY, it was an unringed male in poor condition (sharp keel/breastbone). So it wasn't L3BRBY or the female which we saw all alone the day before. From the way it was simply lying on its belly in the mud, it was probably sick and weakened. So we called Pipe, agreed to meet once again at the carwash, so we could give him the dead Godwit to preserve. That was it for this trip. We cleaned the car, drove to Seville, delivered the car, took the taxi to the airport, did some data entry on the airport and the airplane, and drove back home where we arrived around 02:00 in the night.



*The end of our trip. Age picks up the dead Godwit from the rice field.*