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# Black-tailed Godwit Demographic Project

# Spring migration of Black-tailed Godwits in Iberia from 1 to 26 February 2020

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



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

University of Groningen, FSE, GELIFES, Conservation Ecology Group P.O. Box 11103, 9700 CC Groningen, The Netherlands

Groningen, December 2020

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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, where they join their conspecifics that have spent the entire winter there. Here they are largely confined to three areas: Doñana NP and Extremadura in Spain and 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 2020.



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

Resighting colour-ringed birds during this 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 areas, we would assume that this individual is dead and therefore underestimate annual survival, because in the breeding areas individuals have very different resighting probabilities.
- Secondly, with enough resightings from 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 that 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 rings, 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 Blacktailed 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. I. 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.

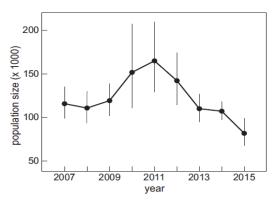


Figure 2. Population size of Black-tailed Godwits *Limosa limosa limosa* of the East-Atlantic Flyway based on colour ring densities on the staging sites. These estimates include godwits from de Icelandic subspecies *Limosa limosa islandica* using Iberian rice fields, which we assume to be 6.5% of the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

#### **Summary and overview sightings 2020**

#### **Overview Sado and Tejo estuaries**

It had rained a lot in the greater Lisbon area in the weeks before the godwits and we arrived in Portugal in late January. We encountered suitable conditions for godwits in the rice fields. In the core area between Porto Alto and Vila Franca de Xira (Giganta/ Ponta da Erva/ Cardal-rice fields) many fields were already ploughed and during February, freshly ploughed fields became available regularly, also outside the core area in the surrounding rice fields of Belmonte, Benavente and Samora Correia. The situation in the Sado was not ideal: only in the area near Comporta ploughing had started but around Alcacer do Sal many fields were ploughed. In other parts, a lot of the fields were unploughed and sometimes covered with tall grasses (Zambujal).

Foraging conditions for godwits were therefore perfect in the Tejo-area because they prefer wet, freshly ploughed rice fields to forage on. Except for some foggy days, weather conditions for ring reading were excellent with hardly any days lost due to bad weather.

The hotspot were again the Cardal/ Giganta/ Ponta da Erva-ricefields near Porto Alto. When we arrived on 1 February, there were already 70-80.000 birds present in this area. The Carragado rice fields had not been ploughed yet. At Belmonte ploughing was in full swing; at Benavente/ Samora Correia just a few had been ploughed. At all these sites the conditions were wet but no godwits were found. In the south, around de Sado estuary only a few hundred godwits were found on the few fields that had been ploughed. Unlike other years, the godwits spent almost the entire day in the Cardal/ Giganta/ Ponta da Erva-ricefields, roosting at Cardal close to the Giganta entrance and from there spreading out over the wet ploughed fields in all 3 sections to forage. This pattern remained the same till half February and by then >50% of the fields had been ploughed. The birds spent a lot of time on the roost, also during daytime, with predominantly good opportunities for ring reading in the first and last hours of daylight and struggling for a handful of sightings during midday when birds were inactive and mostly standing on one leg. The low ring densities hinted at a considerable amount of islandica-godwits, which makes perfectly sense when you realize that in The Netherlands, that holds 85% of the limosa-population, the population has declined to less than 30.000 breeding pairs. On the 16<sup>th</sup>, numbers had dropped to 50.000 and we noted new colour ring combinations suggesting a shift. The next days we saw almost all birds leaving at dawn in N-NE directions; we tried to follow them but they were not encountered at Cara Larga and Ze do Pinho (N of the N10), or the fields around Samora Correia or Benavente. In the afternoon they still returned to the Cardal roost, but from a NW direction. This suggested that Carregado was now suitable for them as well, and that turned out to be right: on the 22<sup>nd</sup> we found 20-25.000 godwits in the freshly ploughed fields, that also spent the night there. The numbers at the Cardal roost dropped to 10.000 on the 24<sup>th</sup> coinciding with reports of godwits arriving in The Netherlands. The mild spring conditions resulted in record early arrivals in the breeding areas.

This year we had no indications of (illegal) hunting practices, other disturbances or deterioration of the staging habitat in the greater Lisbon area (except for the airport plans.....)..

In total 2156 resightings were made of 736 individuals with a full colour ring combination of the RUG-program in the Tejo estuary and 0 in the Sado estuary. That is a bit lower compared to previous years.

#### **Overview Doñana and Extremadura**

Like in previous years, we started the first days of February in Doñana. The godwits wearing satellite transmitters indicated that this year the eastside of the Rio Guadalquivir was apparently attractive for godwits: many satellite locations came from the ricefields around the Brazo del Este. We could not find any birds there, mainly because many road and tracks were chained off and the satellite data suggested that they might have used this area mainly as a roost. The only significant numbers were encountered at Veta la Palma. This fish farm is developed on an extensive and semi-extensive basis over an area of 8,000 acres of shallow ponds. Normally godwits could be found at Lucio de Cuquero Grande, a natural depression on the premises of the fish farm, but for some reason not this year. They were present in several ponds and in the wet grassy vegetation in the south of the area. We estimated that 12.000 were present but numbers appeared to be declining during our stay. That is about half the number we counted last year but comparable to previous years. We also checked the El Rocio marshlands but found only 50, but more might have been present in the restricted parts of the National Park. In the ricefields around Isla Mayor we did not find any godwits.

The situation in Extremadura was again 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 and no more than 1500 godwits were found. Despite the second year with good conditions in a row, the number of godwits was comparable or slightly higher than last year: about 4500 . They concentrated in the traditional core area, the rice fields in the triangle Hernan Cortes – Valdehornillos - Santa Amalia. Here a part of the fields had been ploughed or was ploughed when we were there. Outside the core area we only found a few hundred near Yelbes. The Vegas Altas – Palazuelo area was without godwits despite the good conditions in the latter. The roost was this year in the fields N of Valdehornillos. The help of our colleagues of the University of Badajoz was indispensable to locate the birds!

The most famous godwit Amalia, sat tagged in 2013 in Extremadura, went off the radar in August 2019 in the Casamance, S Senegal. But we had high hopes that he would be alive because we had already established in the previous breeding season that his transmitter was about to fall off. Still it was a relief to see him back, indeed without a transmitter! After years of decline, the numbers in Extremadura might have stabilized. The cause of this decline remains unclear: competition with Cranes, decrease of the area used for rice cultivation, increased raptor presence, (illegal) hunting or the most prevalent option: better or at least more predictable staging conditions near the Tejo (see Box below) and at Veta la Palma, where godwits traditionally left in January. On the Spanish east coast numbers don't seem to have increased.

We heard some gun shots but have not seen any hunters this year; the presence of cartridges indicated that the area is still used for hunting. In Cardal/ Giganta/ Ponta da Erva hunting is prohibited.

In total 661 resightings were made of 140 individually marked birds with a full colour ring combination from the RUG-program in Extremadura and 189 resightings of 107 individuals in Doñana.

# 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 fromadult 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

A significant increase of the number of sightings was achieved between 2012 and 2014; since then the number of sightings has decreased slowly from about 3800 to just over 3000 this year. The number of individuals seen has dropped by 10%. This year we performed again slightly worse compared to last year (see figure 2) with less resightings and individuals in Portugal and Doñana. In Extremadura it was the other way around: more resightings and individuals. A few days more spent in Extremadura at the cost of days spent in Doñana is one explanation: we went there earlier because there were slightly more birds in Extremadura already from the very beginning, whereas they arrived late last year, when birds stayed longer and in bigger numbers in Doñana. One explanation for the lower numbers in Portugal is that we encountered a lot of inactive birds, staying at the roost for a long time resulting in less opportunities for to read rings. Another explanations is an increasing dilution of *limosa's* with *islandica's*. That simply means that you have to check more birds before you encounter a bird from our scheme. This hypothesis was confirmed by low ring densities in the ring density samples. This is becoming a serious handicap if we want to use ring density samples from Portugal for calculations of the population size of the *limosa* subspecies.

The decrease in individuals seen in Portugal resulted also in a decrease of the resighting-rate of the colour-ringed population. As you can see in figure 3 below, we still have resighted 60% of the ringed population which is an excellent score but clearly with a decreasing trend.

The estimated number of alive ringed individuals has levelled of 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.

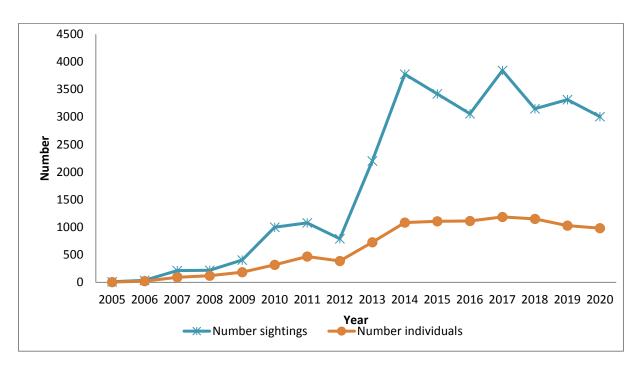


Figure 2: Total number of sightings and observed ringed individuals in Extremadura, Doñana NP, Tejo-Sado in January-February of each year (no code flags).

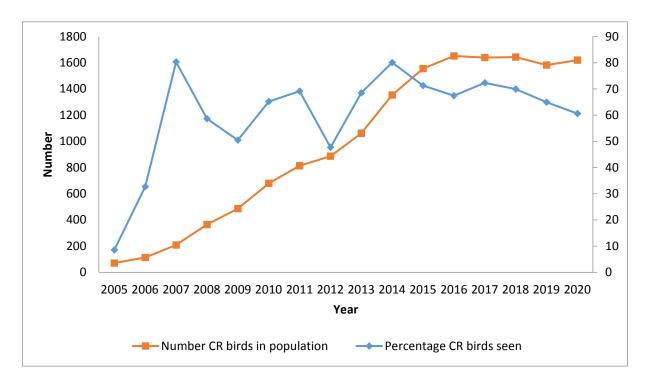


Figure 3: Estimated number of colour ringed birds in the population that are still alive and the observed percentage of those birds in Extremadura, Doñana NP, Sado and Tejo Estuary all together in January-February of each year (no code flags).

# 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, Pipe Abad and Julian Cabello Vergel (University of Extremadura); you were great company again and indispensable to find the birds in Extremadura. Miguel Medialdea granted permission to do field work in Veta la Palma.

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

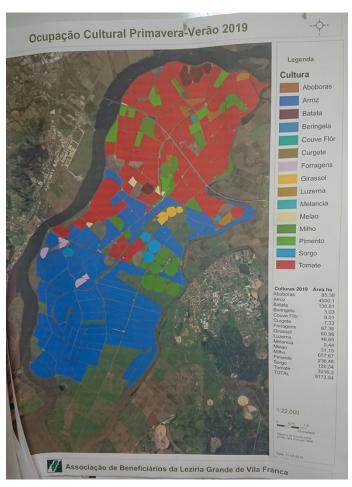
Last but not least, all the people and organizations that gave us their hospitality to be as a guest in their areas. We are very pleased that we could make use of this. Hope to see you all again next year!

#### Team 1 Portugal: Kees de Jager & Jan Vegelin, 1 - 10 February 2020

#### 1 February 2020

Weather: clouded, short periods with light rain / drizzle, max 18C

With some delay due to a late departure from Schiphol we arrived at Lisbon airport. We picked-up the car and drove to the office of Associação de Beneficiários da Lezíria Grande de Vila Franca de Xira to meet with Rui Paixão.



Map of land use in the area

We had a nice chat with Rui who showed us the map with the current land use of the area. A nice amount of rice fields. A small part of the area is open for hunting. Rui told me they have to do that to keep the amount of pigs within control. Also – during the seeding period – they have to scare away the flamingo and black ibises, because they prevent the seeds from growing with their way of foraging.

Of course, we discussed a bit on the planned airport south of the area. Rui was definitely not happy with the location and told us it was a political decision (friend politics). As we already knew from a message from Jos he told that multiple (nature related) organisations will protest against the planned location.

He also showed us the location where the godwits were spotted recently. After receiving the key card for the gates and the key for the chains we went searching for them.

First we went to the north of the N10 to check some fields where the godwits where foraging in 2018. These fields were not ploughed yet, so no godwits. Also the rest of the area did not resulted in any godwit although some fields seems to be suited for them.

Finished scanning the north part we went to the area – Ponta da Erva entrance - that Rui told us and he proved right. We directly saw some flocks flying, guiding us to the rice fields where they were foraging and resting. It didn't take long for us to spot the first ringed bird.

After a while most of the birds scrambled to the air, moments later we saw the cause of the commotion, a Peregrine Falcon was flying by. The godwits landed out of our direct sight and this was for us the sign to go for lunch in Porto Alto.

After lunch and some shopping, we went back to Ponta da Erva where we spent the rest of the afternoon scanning the groups of godwits that had returned to the same fields as before.

We estimated the total group we have seen today at 30.000 birds, but most likely there are more at fields we did not check.



Some birds seem to forage on the muddy road

#### 2 February 2020

Weather: foggy start, cleared around 10:00, afterwards sun, max 22 C

As soon as we drove out of Vila Franca de Xira we drove into dense fog. A bit further away from the river the sight was somewhat better, but still not good. First we checked the Ponta da Erva entrance of the rice fields. We found some godwits but only those close to the path were visible enough to check for rings.

We decided to do a little reconnaissance of the area, although this was pretty tough with the poor sight. As expected, no godwits to be seen, but the general impression of the area was that a lot of the fields are very wet. Some of them already ploughed, others still to be done. Although we didn't see any godwits, the trip was pretty good for other birds. A lot of small songbirds, but also some other waders like common greenshank, little ringed plover, dunlin and temmincks' stint. Around 10:00 the sun was strong enough to burn the fog away and we decided to go back to the area where we expected the godwits.



The sun almost managed to burn away the fog

Indeed the godwits were foraging (and some sleeping) in the same area as yesterday. They were spread over multiple fields and kept us busy for the rest of the morning. While we were taking a short break for lunch, all of a sudden the godwits panicked. The source of the panic soon became clear: a hunting Peregrine Falcon. All the birds flew off in the same direction, so we went there as well. At the same spot as the sleeping place of two years ago, they went down and stood in belly deep water. We estimated a total number of 60.000 birds. Besides the godwits there were a lot of Northern shovelers and some Northern pintails.

We were not the only one enjoying the spectacle, two more birders / photographers were as well. We spoke to one of them and he told us he thought more to the SW should be another resting place.

As we could not read that many rings in the resting group, we decided to verify the tip and this proved right. A group of +/- 10.000 birds were present as we arrived. Some flew of when we approached the group on foot (we couldn't get there by car due to the poor road condition), but enough stayed and gave us a good few on their legs (and rings).



A fraction of the group, hard to count (left), but more manageable if they stood in a row on some higher ground.

Around 15:30 we decided we must have seen them all (at least those on two legs) and we went back to the field with the big groups. This group now was even bigger than first and we estimated it on 70.000 birds. As they were still in belly deep water, we couldn't read much rings, so we drove on to search for even more birds. At first we didn't succeed, but a little before sunset we found a small group. The birds were foraging on the "wrong" side of the road however. We had bad light and couldn't read many new rings with enough certainty.

Around dusk there were flying in more and more birds. This seems to be the sleeping place of this year (and the same as last years). Because the birds were scattered over a few fields we couldn't make a good estimate before it was too dark.

On our way back we decided to check the resting place of the early afternoon and were surprised to see still a large group there. Also here more birds were still flying in. There seems to be more than one place for the night this year.

With this it was too dark to do any observations anymore and we went home satisfied. We estimated we saw a total of at least 75.000 – 80.000 birds this day.

#### 3 February 2020

Weather: sun, 22 C

This morning a clear blue sky and a rising sun when we entered the Giganta ricefields. We decided to first visit the SW sleeping spot as the sunlight was now better than yesterday in the afternoon.

At arrival there were approximately 10.000 birds present. We started with reading a small group that was beautifully in the light. The first rings were soon found as we scanned the group. Most of the birds were still foraging a bit against the light, but way better than yesterday. At the time we started reading this group, a portion had already left, but still enough birds present to check.

After a while a big flock of Northern shovelers flew over, soon to be followed by godwits (maybe scared somewhere else). The shovelers flew further, the godwits landed at the fields with the other birds. More birds to check and rings to read.

Around 10:00 we decided to go in the direction of the big sleeping area. Here was still a large group (min. 30.000) present but standing in belly deep water. We tried our luck but didn't manage to read much. A bit further – at what seems to be the main foraging area – a small group was foraging, and we managed to read some rings. As the light also became bad here, we went to Vila Franca to do some shopping. From there we drove to Carregado to check the fields nearby the powerplant. These fields were not ploughed at all, and no godwit to be seen.

Back to the Giganta ricefields where we only found small groups with bad light at the known area. We decided to check some other fields to see if some birds were foraging over there. Some fields were already ploughed, but the majority wasn't: no godwits found.

Around 15:00 we went back to the main feeding area as the light should be some better now. We found a small (2000-3000) group foraging and managed to get some rings. All in a sudden there was panic at the resting area and a lot of birds (at least 20.000) went down in the fields near us. A luxury problem, way too many birds to check them all ...



A field full of godwits, a luxury problem.

We stayed here till the sun went behind the hills and the light faded. Another beautiful day.

As we had a lot of scattered groups, a total amount of birds is hard to estimate, but based on feeling it was at least the same amount (+/- 80.000) as yesterday.

#### 4 February 2020

Weather: fog til 13:00, afterwards sun, 20C

As soon as we drove out of Vila Franca we drove into the fog. We tried to spot some birds at the Punta da Erva entrance but although they were standing pretty close, we could hardly see the legs of the birds.

We decided to change our intended schedule and went to Samora Correia to pick-up the key for the Belmonte rice fields. After some search for the correct location – google maps points to the wrong road when searched on street and city – we managed to find the office of COMPANHIA DAS LEZÍRIAS, S.A. where Rui Alves left the key at the reception.

As the fog was still there, we decided to go to Belmonte directly. We got the key for the second gate, with a more difficult access to the rice fields than the usual first gate. As the area is still pretty wet – it rained the last two weeks before we came in – we did not try our luck and went through the forested area to the access road of the first gate and entered the rice field area without any problem.

We saw a lot of gulls (mainly Lesser Black-backed and Black-headed) and it soon became clear why they were there. The fields were being ploughed and this attracted them. Although there were no godwits yet, we already put a new visit on our list for the end of the week.



Ploughing in progress in the Belmonte rice fields

After the visit of Belmonte, we went to the Benavente rice fields. Also this fields were very wet and some seems to be ploughed already, but no godwits to be seen.



The fields of Benavente; nicely wet, but no godwits

At last (around 13:00) the fog cleared and we went back to the Giganta rice fields to start reading rings. The godwits however weren't foraging but stood in belly deep water with no rings to be seen. Also on the smaller resting area in the SW we only found – a small group – standing in belly deep

water. As this pattern looked very similar to yesterday, we knew we had some time to spend before the godwits got active again.

We visited the southern areas (Evoa) where we didn't go so far. The rice fields near the roads in this area were almost all ploughed and all wet. Seems to be good habitat for godwits, but no bird to be seen. At Evoa we finally found our first black-winged kite, a bird we were already missing.



The first black-winged kite of the trip

Around 15:30 we went back to the resting place, where still a lot of godwits were resting. We managed to read a few rings and waited until the birds took off for feeding. That happened around 16:30 when the first couple of hundred birds took off and landed at exactly the same fields as yesterday. We positioned ourselves with the sun in the back and started reading. While the time passed, more birds were flying in and new rings appeared in our scopes. We "worked" until sunset made reading impossible.

When we drove back past the resting/sleeping place we made a quick estimate of the birds still standing there and came to at least 80.000! With those foraging in the fields behind it, the total number of birds in this spot should have been around 85.000 birds.

# 5 February 2020

Weather: sun, 21 C

The morning started nice with the sun rising just as we entered the rice fields. The birds seem to be all at the major sleeping place. The water seems to have dropped a bit (maybe due to the northern wind) and we managed to read some rings.

After a while there was some shooting in the fields behind the resting spot and groups of birds took off. As they flew in the direction of the sun, we couldn't follow them completely, but they seemed to go to the known feeding area. However, as we drove through that area, we only found a small group of birds at the end of a field and in terrible light. We checked other fields but couldn't find them.

Also the second sleeping place (SW, near the Tagus river) didn't have much birds on it. We scanned the group and were able to read some rings. Just as we departed a group of new birds came in, but not such an amount that to back for.

We decided to go shopping and do lunch at Belmonte, maybe the birds were there. Today we took the direct road from the second gate to the fields, but before we descended a steep slope, we checked the road condition. This wasn't that good, so we decided not to try our luck and stayed on the hill. The fields we could overlook didn't have any godwits and a bonelli's eagle that flew over, didn't scare any into the air.



Bonelli's eagle flying by at Belmonte rice fields

As the good time for Giganta was approaching, we decided to go back there. A large group (40-50.000) where sleeping or foraging there. We managed to get some rings. Around 16:00 birds started to fly off again to the known feeding area. This time we found them and started reading as more and more birds came in. Some of them from the direction of the sleeping place, others from the opposite direction, most likely the group that left this morning. Hopefully new transmitter data will show us where they stayed for the day.

Afterall again a very good day with an estimated 80.000 godwits (in the morning and afternoon) and a lot (100+) of ring readings.

# 6 February 2020

Weather: sunny start, at end of the day cloudy, 18 C

We started with a check of the fields where we left the birds last night. A small group was foraging here, but soon took off due to some disturbance and went (back) to the sleeping spot. We did the same.

At the sleeping spot a large group (60-70.000 birds) was present and the legs of the birds at the edges of the group were visible. We spent a great part of the morning at this spot. Again, a group birds (+/- 5.000) took off when a Marsh Harrier flew over. We could now follow them with the binoculars. A part flew straight east (most likely to the eastern edge of the area) and a smaller group flew more NE (direction Benavente / Belmonte). But as these groups were not that big, we decided to stay at the sleeping spot to do ring readings.



Transmitter bird B3RRBL was one of the birds showing his rings

At the end of the morning the birds flew a bit further to the back of the fields and we decided to go for shopping and lunch. As we knew we did not have to return before 15:00 to make a chance on foraging birds, we decided to check Alcochete. At the Sitio das Hortas, a nice place along the estuary coast, it turns out that it was high tide, not much waders to spot. Near the saltpans some more south we had lunch and afterwards we returned to the Giganta ricefields.

We found a group of godwits foraging at the same field as yesterday afternoon and we started reading again. A bit earlier than yesterday – around 15:30 – birds came in from the sleeping place and started foraging. As the group grew, the same did the restlessness amongst the birds. It didn't take long before the whole group took off again. Luckily, they landed some fields further. At first a bit far from the road, but while we waited, they came closer and showed us their legs (and rings).

As it became cloudy, the light faded earlier than the last couple of days and around 18:00 we could hardly read any rings. A Marsh Harrier caused panic amongst the birds. It seemed one bird wasn't quick enough as the Harrier dove down and seemed to get one. But after a few seconds flew up without any prey in its legs. Scanning the field, we however found one godwit on the ground (partially hidden behind some earth), most likely the victim of the Harrier. It was still alive, but most likely couldn't fly and won't survive the night.

A quick visit to the sleeping place showed there were still standing around 50.000 present. Together with all the birds still foraging, we estimated again between 70.000-80.000 birds in the area.

#### 7 February 2020

Weather: partly clouded, 18C

Today the trip to the Sado estuary was on the agenda. We drove directly to the most south western part at Comporta. Just before we entered Comporta from the south (along the N261) we saw some nice rice fields that were being ploughed. From the side of the road we had a good overview, but beside a lot of glossy ibis and some spoonbill (we managed to read two rings) nothing that took our attention.

At the ricefields north of Comporta there was also ploughing going on. It appears they just started, because only the fields close to the village were ploughed. On it a lot of glossy ibis (here with rings) and a lot of gulls (without any ring). Further away from the village the fields were still untreated and no birds to be seen. At the end of the road we climbed the little dike and looked over the estuary. The tide was already pretty high and all the waders stood along the shore. On the water we discovered a great skua, red-breasted merganser, black-necked grebe and – based on information of Egbert – a Great northern diver.



Glossy ibis sunbathing

We continued our trip along the coastal ricefields to the east. Also here none of the fields was ploughed and no birds to be seen. The fields further upstream of the Sado were hardly accessible. Most of the paths leading to the rice fields where closed by a fence or not accessible by car (and time didn't allow us to go by foot). From what we could see from the road and the bridge some of the fields were ploughed and most of them were at least wet.

At Alcácer do Sal we had a short lunch break next to the rice fields. These few fields were not yet processed and besides some glossy ibis, no birds. After the lunch we drove further north. Here the fields seem to be pretty dry with a lot of grasses; no suitable godwit habitat.

At the north side of the river (opposite of Zambujal) near the (old) bridge we discovered a group of +/- 200 godwits in the saltpans. Most likely the birds were there because the high tide. We scanned the group – as far as they didn't forage in deep water – for rings but didn't see one. Some of the 45 spoonbills present however did had rings and we managed to read a few of them.

After a last visit at the old fishponds Herdade de Gambia (with no godwits) we went back to the Giganta rice fields to end the day with godwits. We found a small group foraging at the same location as yesterday but there were not many ringed birds in it. Panic at the nearby sleeping place brought relieve. A large group (+/- 10.000) birds landed at the field in front of us and amongst the new birds several with rings.

As it was a bit cloudy the dusk started a bit early ( $\sim$  18:00) preventing us from reading more rings. We drove to the sleeping place for a quick count (+/- 60.000 birds present) and left the area afterwards.

#### 8 February 2020

Weather: started with fog and small showers, after 10:00 dry and partially clouded till the evening, at last light some showers again, 18C

We started the day again with fog. Somewhat less dense than the previous days and we could read some rings at the sleeping place. As birds started to fly away to forage, we followed and managed to find some groups at the fields east from the sleeping place (where they forage the last couple of days). At first we got some rain showers, forcing us to bird from the car, but later the weather improved and we could stand outside the car.

Around noon more and more birds started to rest – some flew back to the sleeping place, others stayed on the foraging fields – and the amount of ring readings dropped. We decided to go and get our lunch. After the shopping we drove to Belmonte and checked the fields there again; still no godwits. We ate our lunch in the field and went back to Giganta again.

Most of the godwits were still at the sleeping spot, but standing still in deep water, hiding almost any rings. As the number present wasn't the total group, we decided to search for the rest. We found some of them in the eastern part of the area, including one satellite tracker bird, that has shown this location to us.

Around 17:00 we drove back to the sleeping place where the birds were more active and showed us some rings. As the weather turned worse again, the light faded quickly and we decided to quit. Some spoonbills that flew in were a bit too late for us. We could see one ringed bird, but it wasn't possible to see any colours anymore.

# 9 February 2020

Weather: light clouds, mostly sun, 18C

We started at the sleeping place where we could read some rings. After some disturbance a few groups flew high up and away in the direction N of Porto Alto (approximately the direction of Benavente). Because there were still a lot of birds present, we stayed at the location until more birds flew off and landed in the field nearby.

The rest of the morning we stayed at these fields until the birds went for a siesta at the sleeping place again. As almost all birds were really sleeping (of course on 1 leg), we decided to go for getting our lunch. We ate lunch near Benavente but couldn't find any godwits in the fields there (although they looked pretty good).

After lunch we went back to Giganta where most of the birds were at the sleeping spot again. After scoping the edges of the group (at least 60.000 birds present) we went to check the second sleeping spot near the Tagus river. Here no birds to be found, so we went back again.



Satellite bird L3BRYL foraging at the edge of a resting group

As birds started to take off to feed again, we went searching them. We found a small group, but they took off before we could start reading. As we couldn't find any more groups, we went back to the sleeping spot again. We managed to read some rings before we were called by the next team that they landed in Lisbon.

We left the godwits and headed to Lisbon airport to pick-up Egbert and Rienk. As we had some daylight left, we decided to go back to the sleeping spot to show it to them. It was too dark to read some rings, but it was a nice start for Egbert and Rienk with that many godwits.

The total numbers were around the same number as the last days: 80.000 birds.

#### Team 2 Portugal: Egbert van der Velde & Rienk Jelle Hibma, 9 - 18 February 2020

#### 10 February 2020

Weather: 17°C, Wind SE2, sunny morning and clouded afternoon, 70k godwits.

We arrived yesterday just in time to check out the roost before sunset. Numbers appeared to be very high this year with around 70-80k birds, so a significant amount must be from the *islandica* subspecies. This morning we started at the Ponta d'Erva (PD) section of the Giganta ricefields where Kees and Jan had foraging groups the past few days. They used these fields again today so we started reading rings right away. There was quite some disturbance by Peregrine Falcon and Marsh Harrier and around 11AM the groups had returned to the roost. We went to the south western part of the Cardal section where around 5k godwits were still foraging, but light and distance made it difficult to read rings. Jan and Kees had to leave at the end of the afternoon so we decided to clean the car and return them to the airport early. When we returned at the roost the godwits started to fly to the PD section to forage again and we had a good reading session until sunset. Omrop Fryslân called us for a short radio report about our work in Iberia and the worrying news about the new Montijo airport.



The roost at sunset on the  $9^{th}$  with Kees and Jan.

#### 11 February 2020

Weather: 18°C, Wind SE2, cloudy with sunny moments, 70k godwits.

The day started misty and most godwits remained at the roost for the major part of the day. Because of inactivity we decided to check the foraging spots that were used yesterday and found a few thousand godwits under difficult ring reading circumstances. There was a lot of Marsh Harrier disturbance throughout the day and at the end of the morning all birds on the PD section went swarming around for a while. When peace returned 95% of the godwits moved back to the roosting



It's hard to read rings from godwits foraging between stubbles on the back-end of the fields.

spot and remained there until sunset. Although we didn't score abdominal profiles the average impression was that most godwits looked rather fattened up already. We searched for some foraging godwits, but only found around 2k in the Cardal section. In this area we noticed that most of the roads around the fields had been worked with glyphosate. Maybe a new approach to prevent seeding and growth of weeds in the rice fields later on in the season? We stayed at the roost until sunset. It was a difficult day to collect ring combinations considering the presence of 70k godwits.

#### 12 February 2020

Weather: 16°C, Wind S1, clouded, 70k godwits.

At breakfast at the hostel we met two guys that were going to carry out recordings for a Ruben Smit film production about the godwit. We gave them some useful information to help them on their way. At the rice fields at least half of the godwits present left the roost an hour after sunrise. The majority flew out of sight in north eastern direction. We found several smaller groups foraging nearby the roost in the first (most northern) fields of the Giganta section. After we scanned these groups thoroughly we saw large swarms of godwits dropping in the eastern PD section where we had some groups yesterday and found at least 30k godwits scattered through the area spread over many different fields. The majority was in resting mode throughout the day, but we managed to read a good amount of rings, mainly from some small groups (ca. 2k) in the fields that had been plowed recently. At dusk most of the godwits returned to the roost. We don't have the impression that the godwits at the roost are spending daytime outside the Giganta rice fields.



Luckily there was other wildlife around to entertain us when godwits were inactive: Iberian Treefrog and Egyptian Mongoose

# 13 February 2020

Weather: 17°C, Wind NE3, clouded with short heavy rain and sunny afternoon, 70k godwits.

At sunrise half the roost flew off to return a bit later to the eastern parts of the PD section just like yesterday. Unfortunately for us the majority continued resting there so we had to search a lot for active individuals. Because the godwits spread over several rise fields along different roads we spent almost two hours just driving around and searching. The godwits that leave the roost in the morning appear to have a low ring density of less than 2%. There was plowing going on in the same area, but the godwits didn't seem to bother. After spending some time at the roost desperate for ring combinations we started to see groups flying off and hopping into adjacent fields to forage halfway

the afternoon. We were able to compensate a bit for the lost morning. This behavior could be another signal that the godwits don't have any difficulty finding food or suitable rice fields this year. Most of the rice fields are wet with water levels varying between 1-30 cm's and more than half of the fields we've seen have been plowed.



Searching for godwits took a lot of our time this year as the birds moved a lot each day.

#### 14 February 2020

Weather: 17°C, Wind SE2, misty morning and sunny afternoon, 70k godwits.

Dense fog made it impossible to do anything godwit related so we went fishing with some improvised gear we managed to collect around a bridge but had no success. All the godwits left the roost during the morning and returned from the direction of Samora Correia at the end of the morning to rest some more. We had an interview with a Dutch NRC reporter together with José Alves about the plans and ecological impact of the new airport and the cooperation between the Dutch and Portuguese godwit research since 2005. At the beginning of the afternoon the fog had finally cleared and we were able to find 1k godwits foraging nearby the roost. After a lot of sightseeing and checking a few spots we had godwits earlier we returned to the roost where 99% was still resting. We had the impression not all the godwits were there, but at dusk we found the missing 10k resting next to the roost at some fields with high water levels that couldn't be checked by car.

#### 15 February 2020

Weather: 18°C, Wind E2, sunny, 40-70k godwits.

While driving towards the roost we saw large flocks (>20k) of godwits heading into the direction of Benavente. There wasn't much activity at the roost so we checked locations where we had foraging godwits earlier this week. We found ca. 5k nearby the roost and later in the afternoon many more spread over many fields on the eastern parts of the PD section. Around noon the groups started resting and we went to the western part of the complex between the church and the Tagus. The separated group (ca. 3k) that was there the last week was still there, but ring density was low. We decided to check the northern part of the Cardal section as well because we hadn't been there yet and found around 25k actively foraging godwits there to our big surprise. While entering the data of today the group appeared to contain many "new" individuals that had not been seen in Portugal yet this year. Maybe this group contained new arrivals or had these godwits been foraging here for longer time already and just returned to the undiscovered location every day, thus been missed so far? At dusk the roost contained significantly less godwits then previous days. Maybe the large group

that flew towards Benavente didn't return or the new found group was still in that area as some fields there were suitable for roosting as well. We only saw smaller groups flying in the roost from the direction of the new location and not from Benavente or the PD section. Because the godwits were scattered all over the Giganta complex it was not possible to make a total count today.



Locations we'd seen (foraging) godwits. The Giganta rice complex is split into three sections (Cardal, Giganta and Ponta D'erva) divided by the main roads and water canals (north =up).

#### 16 February 2020

Weather: 18°C, SW3, misty morning with a cloudy afternoon, 40-70k godwits.

We picked up Teade de Boer from the airport this morning. Witnessing the huge flocks of godwits had been on his bucket list for a while and now he had the opportunity. We started the day by driving to Comporta to check the Sado area from the opposite direction compared to other years working our way back towards Setubal. When we arrived the fog had just cleared. Few fields had been plowed and were suitable for godwits. We only saw large numbers of glossy ibis and red shank at Comporta.



At Comporta plowing had only just started and most rice fields appeared useless for godwits.

Most fields around the Sado were wet and several were flooded but as usual plowing hadn't started at most places, but at Alcácer do Sal many fields had been plowed and we found 13 unringed godwits. Further we only saw 25 godwits on the river banks at the bridge to Zambujal. The rice fields at Zambujal were wet but not flooded and covered with tall weeds. It's clear the Sado area had substantial rainfall this winter just like the Tejo area. Because many unplowed fields around the Sado had rather high grassy vegetation (weeds) in it godwits were unlikely to use them and would be invisible for us anyway. We checked the Belmonte fields on our way back. Several fields near the toll bridge were plowed and suitable but no godwits were found, only large numbers of gulls. We arrived at the Gigantas two hours before dusk. The "new" group was still at the Cardal section and again it yielded several ring combinations that hadn't been seen in Portugal yet for this year. At sunset we checked the roost but were unable to make an accurate count, though numbers were comparable to what we had seen previous days.



Back at the roost after many km's driving around the Sado with hardly any godwit to be seen.

# 17 February 2020

Weather: 15°C, SW4, clouded, at least 50k godwits.

Near the roost we saw huge flocks of godwits flying in the direction of Benavente again. It looked like most of the godwits left the Giganta complex and less then 10k birds remained resting at the roost. The hotspots at Cardal and PD were abandoned so we had to search the old fashioned way.



The tomato area north of the N10. Orange field as far as the eye reaches because of glyphosate use.

We checked the north side of the N10 between Villa Franca de Xira and Porto Alto and also scanned the fields west of Samora Correia but didn't find any godwits. All area's had suitable rice fields, some had been plowed and most had good water levels. We decided to just watch the fields and sky and after a while we noticed a group of godwits (ca. 300) flying into the direction of Benavente and bending to the east above the A10 bridge between Carregado and Benavente. The flock climbed higher and higher and we lost track when they seemed to be near Azambuja. There's a huge agricultural area along the Tagus from Carregado to the north with lots of rice fields. Because we already drove a lot yesterday and today and the godwits had been changing location and behavior almost every day since our arrival we decided to not go there and just return to the roost and hope for some data from the remaining godwits. This appeared to be an excellent choice as flocks started to return halfway the afternoon. The returning birds continued foraging, but we had difficulty approaching the roost with the sunlight from an effective direction. After trailing through car unfriendly roads, Lucerne fields and a few ditches we reached the perfect spot and because of the wind in our backs the godwits came foraging towards us op to very close proximity. We enjoyed the best ring reading situation so far and compensated for the "lost" morning. While reading rings huge flocks came falling in and they all approached from the direction of the power plant at Carregado. It was rather unexpected to see the birds leave in north eastern direction in the morning and see them return from the north western direction during the late afternoon.



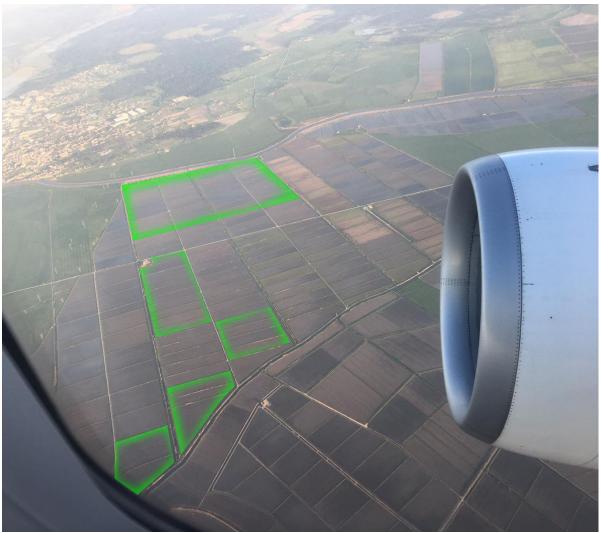
The roost from the perfect but hard to reach spot at sunset.

#### 18 February 2020

Weather: 14°C, S4, sunny, at least 40k godwits

Bob and Jacob arrived in the evening just in time for dinner. We were a bit late this morning and only found around 10k godwits resting at the roost. We showed our new colleagues the locations we'd seen godwits the past few days and decided to check the Carregado area together. Plowing had

started there and many gulls and glossy ibis were foraging behind the plow. In the fields that had been plowed earlier we found around 5k godwits foraging under difficult reading circumstances. After some disturbance the flock left and dropped at the other side of the railway. This area appeared to be fenced off without any information about the owner, but we could see a huge amount of actively foraging godwits on recently plowed fields far from the gate (that could be passed on foot). We decided to leave early to clean the car and head to airport so Jacob and Bob could benefit from the remaining afternoon. We had a challenging period in Portugal this year, but at least we left Jacob and Bob with the information they needed for a potentially more successful time.



The eastern half of the Giganta rice complex (Ponta D'erva) seen from the airplane. Many fields had been plowed and were flooded and therefore suitable for godwits. The green marked fields are locations we'd seen godwits (north = left).



The rice fields around Samora Correia are suitable for godwits as well, but we didn't find them there. Astrid Kant told us she saw a few thousand between SC and Benavente on the 20<sup>th</sup> (north = left).

#### Team 3 Portugal: Bob Loos & Jacob Jan de Vries, 17 - 26 February 2020

#### 17 February 2020

We arrived at the airport of Lisboa according the schedule in the late afternoon, where we were picked up by Rienk Jelle and Teade. We tried to pick up our mobile bird hide at the car rental desk already, although our car rental would start at the  $18^{th}$ . Of course it was possible to get the car today, but the financial consequences were unacceptable for us, so we had to return to the airport on Tuesday to pick up our car. It was already dark when we arrived at Vila Franca de Xira, so no Godwits for us today! That lack was more than offset by the dinner we had together with the Team 2 members, who informed us about tips and tricks for the forthcoming days.

#### 18 February 2020

Weather: clear sky. NW 4 Bft, 18° C

With Egbert, Rienk Jelle and Teade we first visited the sleeping place in Cardal. Around 07.50 there was only a quarter left of the number of Black-tailed Godwits they had counted the evening before. Where the birds had gone was not clear. A nice task for us to check out tomorrow morning at sunrise! The remaining birds were too far away to make ring reading effective.

A tour through the rice fields of Cardal and Ponte d'Erva didn't give any more Black-tailed Godwits. Worth mentioning was a group of about 20 Common Ringed Plovers in the company of four Little Stints and seven Spoonbills flying over. At 9:30 we arrived in the rice fields of Carregado where we found 5 to 8,000 foraging Black-tailed Godwits. Unfortunately with sunny backlight and just too far away to strike our first big blow. But still, a few could be noted; almost all of them had been read at Cardal the day before.

Behind a plowing tractor we counted a little over 1,000 Glossy Ibises, much more than the at best 500 birds Team 2 had seen at Cardal. A fresh dead White Stork seemed to be a victim of the low powerlines along the road.

Meanwhile, Astrid Kant and Ronald Messemaker also had arrived. Their first reading was immediately a sad one; the female B5BYBR, freshly dead. Probably a victim of a Peregrine. Jacob drove with Team 2 to the airport of Lisboa to pick up our car, and at 16:00 we returned to the sleeping place in Cardal where a few thousand Black-tailed Godwits stood in belly-deep water, resting or preening. Only a small part foraged, partly between the floating Shovelers, Pintails and a few Teals. Because of the backlight, we walked north through the Lucerne fields after which we observed the first two lime flags (one without ink, there would be more to follow) as well as our first transmitter bird L3BRYB. From 17:45 clouds of Black-tailed Godwits fell high into the rice fields coming from NE direction. This continued at least until 18:20 while the sun had already disappeared behind the hills.

Meanwhile 110 Spoonbills arrived in small groups, but too far away and too dim, so no luck in ringreading. We stopped at 18:20 without estimating the number of Black-tailed Godwits.

# 19 February 2020

Weather: clear sky, lovely sunny. N 2 Bft. 21° C

Around 4:45 (still dark) shortly "awakened" by a singing Black Redstart.



Amazing flocks of godwits (photo: Ronald Messemaker)

At 7:10 in morning twilight we were already at the famous Cardal sleeping place, where the 500-750 Glossy Ibises left around 7:20 in the direction of Vila Franca de Xira. The first hundred Black-tailed Godwits left at 7:30 in the East/Northeast direction, followed five minutes later by many thousands of them. All direction Carregado!? At 8:40 twice a double shot sounded quite far away, still for many Black-tailed Godwits reason to leave the sleeping place. We couldn't locate the shots, but as far as we know it is not allowed to hunt in the grounds of the Associação De Beneficiários Lezíria Grande de Vila Franca de Xira. In the other days we only heard a double shot once, and only found one hail cartridge. Estimation of the number of ducks at the sleeping place; Northern Shoveler 2,150, Teal 110 and a single Mallard. In addition, eight 2nd cy. Flamingos, two Spoonbills (the others left early), 60-70 Common Redshanks, one Golden Plover and a compact group of 320 Avocets.

At 9:20 we stopped successful ringreading, and checked the whole western corner of Cardal; no Black-tailed Godwit found. Around 10:45 (so just in time) enjoyed our breakfast, and at 12:30 back at the Cardal Ricefields. At 13:30 a few hundred Black-tailed Godwits invaded. Ten minutes later we estimated the proportion of foraging birds at 10%, the others were sleeping. At 15:05 7,100 Black-tailed Godwits were counted (per ten) of which 25% foraging or bathing, the others were (still) sleeping. A quarter of an hour later, a group of 150-200 birds invaded, but also several groups left in an easterly direction. At 17:10 we counted 6,000 – 7,000 Black-tailed Godwits. The big spectacle was short but very fierce around the same time when clouds of thousands of Black-tailed Godwits swirled down. However, hundreds of birds flew in the direction of Porto Alto (Benavente?).

Among the colour-ringed birds we saw also one from Finland.

A Black Kite flying in NE direction was one of the two we saw this week. Other species: shouting Tree Frogs, Chiffchaffs everywhere and also singing, several singing Bluethroats, some Marsh Harriers mainly young birds and females, possibly a female Pallid Harrier, a Bonelli's Eagle high up in the sky that caused a lot of unrest among the Black-tailed Godwits, and a hunting Osprey. Also dozens of White Wagtails with at least three Pied Wagtails were present.

#### 20 February 2020

Weather: during the morning cloud cover, clear sky in the afternoon and almost windless. 21° C.

At 7:25 we were standing with Geert Peenstra, a passionate meadow bird farmer from the Frisian town of Nes, and photographer/filmmaker Hans Hut at the well-known sleeping place of Cardal, where the same ritual of yesterday was repeated. Only now there were significantly fewer Blacktailed Godwits left behind, roughly 2,000 birds. After breakfast again in Carregado at 11:15 where a freshly ploughed rice field, sandwiched between a frequently used railway and a busy motorway, was completely covered with foraging Black-tailed Godwits. The ringreading went on, (we could even read an Arnhem metalring completely) so we skipped lunch. The fact that our car was completely stuck in the muddy verge, and Geert and Hans had to tow us out, was of course also a reason to skip lunch. At 15:35, 90-95% of the birds were in the resting position, so for us it was time to go to the sleeping place in Cardal. There we split up; one on the south side, the other along the Lucerne field on the north side in order to optimize the chances of good ringreadings. Unfortunately, the birds didn't search the field edges, so that on the north side only one ringed Black-tailed Godwit was read in just under two hours, but besides that he had (as consolation prize) two colour-ringed Avocets. Today together a little more than 200 readings, so no wonder that, except for four Golden Plovers and 23 Ruffs (at least one female), we had no further eye for other bird species.



A (large) part of the rings was covered with a layer of mud or smeared with mud, which made reliable reading, despite professional equipment, not easy and sometimes even impossible! (photo: Bob Loos; telescope: Jacob Jan de Vries)

#### 21 February 2020

Weather: clear sky, lovely sunny. NE 2 Bft. 20° C

At 7:00 we saw 35-40 Spoonbills flying towards south at the well-known sleeping place Cardal; did they spend the night with the Flamingos among the Northern Shovelers, or did they fly over by chance? (see 22.02) At 7:27 the first Glossy Ibises left again, followed a few minutes later by the first Black-tailed Godwits. There were enough left to produce a big ringreading list, including two colourringed Common Redshanks of the GAET Tagus Ringing Group (tagusringinggroup.weebly.com). At 8:55 we stopped for breakfast, and around 11:30 again in Carregado. Fewer Black-tailed Godwits than yesterday foraged in the same ricefield. The sun, actually our big friend, was playing tricks on us; backlight and very sharp light, so not really ideal ringreading conditions. Yet together about 130 readings. A Bamboo bush was used as a hide quite successfully. A few times a female Marsh Harrier flew over and some of the Black-tailed Godwits flew off shortly, but they landed on almost the same spot again. Remarkable, a female Marsh Harrier nibbling at a Lesser Black-backed Gull in the middle of the field; the Black-tailed Godwits kept a good distance, but did not take off at all. So they did for a hunting Peregrine. From 17:35 to 18:30 groups of Black-tailed Godwits from NNW direction regularly fell in, and birds also flew in the direction of Cardal. At 18:00 we counted 21,300 - 23,600 (per hundred). Around 18:40 this number was estimated again to the same numbers; incoming and outgoing birds kept, as far as we could see, quite in balance. It was dusk at 18:40, and for the last ten minutes there had been no more incoming birds, so it seems that this rice field in Carregado is also used as a sleeping place. A new phenomenon as far as we know.

An overflying Black-winged Kite gave no reaction from the Black-tailed Godwits. Alarming Kingfishers and Long-tailed Tits with nesting material were present in the brook in Carregado, and in Cardal we saw our first Hoopoe.

#### 22 February 2020

Weather: clear sky, sometimes small cloud cover, almost windless. 22° C.

At 7:27 we counted 26,200 Black-tailed Godwits at the sleeping place in Cardal. For what it's worth, because the groups were very compact, and on such numbers a (considerable) counting error creeps in unnoticed. One minute later the first thousand Black-tailed Godwits left in NE direction. It was striking that around 10 o'clock a group of 500-750 birds returned from the same direction. After the late breakfast, in Carregado at 11:45 where we found again in the same rice field fewer foraging Black-tailed Godwits than the day before. At 15:50 we counted 12,500 of which about 90% was sleeping. The rice fields on the other side of the railway, where Astrid and Ronald had successfully read the last few days, were completely empty for the first time. At 17:18 the first birds left for Cardal, and we followed the good example at 17:45.

To our surprise we counted 15 Spoonbills there, of which three were colourringed Dutch ones (Ventjagersplate and Vlieland) and one German bird. Small groups were added all the time, and at 18:35 there were already 75 individuals. Unfortunately it was already too dark to discover more colourrings. Ronald very nicely photographed a male Pallid Harrier (see photo on next page), this species appears to winter the last few years in Giganta ricefields.



Pallid Harrier, wintering in Giganta (photo: Ronald Messemaker)

noted. At 16:00 we counted at Cardal 7,000-8,300 Black-tailed Godwits.

#### 23 February 2020

Weather: clear sky, sometimes small cloud cover, almost windless. 22° C. A real Sunday!

At 7 o'clock the Spoonbills in Cardal had already left, but fortunately that was not the case for the Black-tailed Godwits. After the morning reading session and breakfast we surveyed the east side of Giganta ricefields; that didn't yield any Black-tailed Godwit. Astrid and Ronald told us that on the north side of the N10 there were no Black-tailed Godwit's either, and in Benavente just a few hundred, but too far away and between too high stubbles to read rings successfully.

A calling Quail on the Tagus bank, our first Yellow Wagtail and a female Montagu's Harrier could be

A sample of the Shovelers yielded 179 males and 174 females, most birds swimming pairwise. A new phenomenon was a loud honking car that slowly drove past the sleeping place. We could not see the direct effect because we were reading Black-tailed Godwit rings in a rice field further away, but when we came a little later to take a look at the numbers of Black-tailed Godwits and ducks, the situation did not seem to be any different than before the disturbance. Luckily, this Sunday hornist made himself heard only once during our fieldwork period! Between 18:00 and 18:25 exactly 30 Spoonbills landed and two Dutch and one Belgian combination could be read. An overflying Greylag Goose was only the second one we saw this week, in previous years this species was significantly more numerous.

#### 24 February 2020

Weather: clear sky, almost windless, but in the late afternoon NW 2-3. 22° C.

At 7 o'clock for the first time a singing Barn Swallow on a TV antenna was heard near our apartment. At 8:10 at the Cardal sleeping place where the number of Black-tailed Godwits seemed less than the days before. After several groups had flown away we counted at 9:30 3,000-3,300 birds of which about 90% was sleeping. An overflying Great Egret was for us only the second of this species. At 10:00 we took the N10 to Alcochete, where we passed two dead Barn Owls, one on each side of the road. Along the Tagus near Alcochete (low tide) we saw an Osprey, Common Sandpiper, two Kentish Plovers and dozens of Avocets, Common Redshanks, Grey Plovers, Common Ringed Plovers, Teals, Common Shelducks, Lesser Black-backed Gulls and Black-headed Gulls, but no Black-tailed Godwits or Eurasian Curlews. At the Salinas de Samouco our contact person was unfortunately not on the spot, so we did not get permission to visit the salt pans. To give rein to our frustration at that time we read in a group of 103 Flamingo's 12 colourrings. Along the Tagus (rising tide) on the east side of Montijo we found around 100 Black-tailed Godwits with three Portuguese colourrings. We didn't notice any protest against the construction of the new airport here in the form of posters or the like. At the bird information centre Moinho de Mare da Mourisca (today it was closed; the only day of the year they told us!) we saw one Sandwich Tern and three Azure-winged Magpie. We ran out of time, and decided to go back to Cardal. We arrived at 16:30, first in a rice field with foraging birds (500-750), then we went off to the sleeping place, which at 17:55 contained 7,300 Black-tailed Godwits. This was similar to yesterday when at 16:00 7,000-8,300 were counted. The Spoonbills didn't do what we wanted; a solitary group of seven flew on unfortunately, despite the 11 resting Flamingos (ten 2nd cy and one adult).

Together we read 70 Black-tailed Godwits, almost all of them in Cardal.

#### 25 February 2020

Weather: completely cloudy, in the afternoon brightened up, but also drizzle. NW 2-3. 17° C.

This time at 7 o'clock there were still 22 Spoonbills on the famous sleeping place Cardal; three Dutch colourringed and one French bird. At 7:45 8,600 Black-tailed Godwits were counted, of which a large part left in southeast direction. A passing Merlin gave almost no reaction of the foraging and sleeping Black-tailed Godwits. Between the 75-100 noisy Black-winged Stilts ran a colourringed bird from the Tagus Ringing Group. After breakfast we went to Carregado, but the rice fields were empty, except for a few Lapwings. In the 2018 report the west bank of Tagus at Vila Nova da Rainha and Azambuja was mentioned on 25.02 (reading former reports has proven its usefulness!) so these areas were also visited. Roughly 2,500 foraging Black-tailed Godwits but (too) far away and a fence too high. At the same time 330 Godwits foraged just along the road in bellydeep water which also did not benefit the ring reading. For the first time we saw a larger group of Mallard, about 100, next to two males Pintail. There were no Black-tailed Godwits on a puddle/drass terrain diagonally opposite the station of Vila Nova da Rainha, but we saw 144 Ruffs (no colourrings!), 143 Common Ringed Plovers, 22 Little Stints, six Kentish Plovers and two Wood Sandpipers. The actual number of Common Snipes can only be guessed at. Two colourringed birds could be identified; a Kentish and a Common Ringed Plover, probably Portuguese. The Common Ringed Plovers had their breeding colour bills again. We also looked at the area northeast of Azambuja, the Vala Azambuja (M642), but found no rice fields and therefore no Black-tailed Godwits. At 14:50 we were back in Cardal again, no count done because of the drizzle rain, read colourrings and viewed the 23 just landed Spoonbills, with also a Danish bird in between. We stopped at 18:00, it was almost dark with impending rain.

#### 26 February 2020

Weather: mass of clouds. SW 3. 17° C.

At 7 o'clock the Spoonbills in Cardal had already left except one, while twenty minutes later 10,900-11,300 Black-tailed Godwits were counted, just before the first ones left in east/southeast direction. Spectacular was a group of 250 Flamingos flying high over towards south; heading for the breeding areas? 300 Avocets were counted, of which about twenty foraging close; two of them were colourringed and legible.

We stopped at 9:15 and filled the rest of the day with inevitable activities; packing, returning keys and keycard, cleaning the car (has been more difficult in recent years!), returning the car and of course waiting, waiting at the airport.

During these nine field days a total of 1,102 readings were realized under (almost) perfect weather conditions. This is the number of readings, not the number of different individuals, that has still to be seen after entering the data. But we already know our target for next year!



Design and production: Ronald Messemaker

### Team 1 Spain: Siebe Bonthuis & Age Hulder, 3 - 11 February 2020

#### Doñana NP

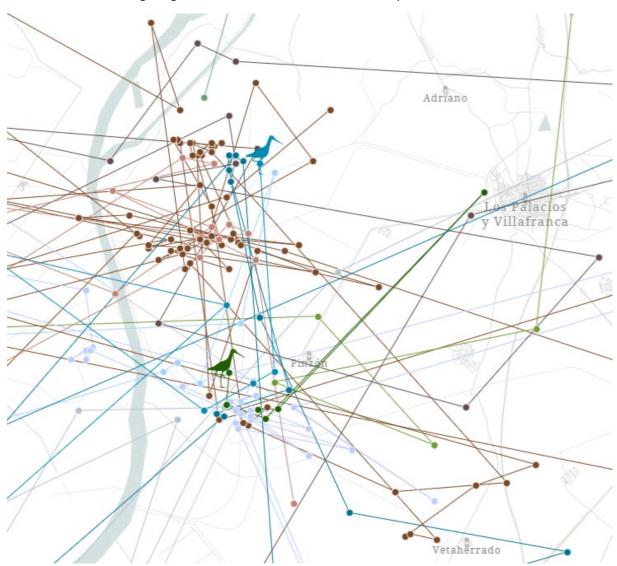
## 3 February 2020

After a delayed flight from our journey via Munich to Sevilla we were redirected to London! It took more than 5 hours of our precious time, how sad. Fortunately we were still able to pick up our rental car late in the evening in Sevilla. We were surprised that our suitcases were present after such a detour. But a supermarket couldn't be reached anymore, so nothing to eat and opening time next day was at 9.00. So you waste a lot of time only because of a delay of 45 minutes! We arrive late at our AirBNB address in Pilas.

## 4 February 2020

After a visit to the supermarket and a short breakfast we can go to work.

According to the website where you can the check the location of Black-tailed Godwits with transmitters (<a href="https://www.globalflywaynetwork.org/flyway/east-atlantic-flyway-inland-waders/map">https://www.globalflywaynetwork.org/flyway/east-atlantic-flyway-inland-waders/map</a>) we should start looking for godwits at the eastside of the Guadalquivir river.



This is the opposite way of what we did last year, when we went straight to Veta la Palma, the big fish farm near Isla Mayor. Rather nice nature here but also a lot of rice fields, mostly ploughed.

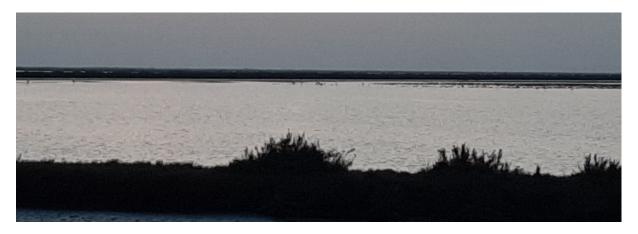
We searched hard in the whole area around Brazo del Este but soon we discovered that many areas are closed with chains. We are lucky to find one field that is unlocked and we just go in. Not long after that a farmer comes to us and asks what we are doing. After a talk with hand and feet we understand that we have no permission but we are permitted to stay for an hour because after that he will close the gate. Zero Godwits here and we saw so many locations of transmitter-birds on the website that for sure must have been there. Nice wet mudflats here as well but probably this is mainly a place to sleep and rest later in the evening and night.

We decide at midday to go just a moment to Veta la Palma but that is again one hour drive. We search there a lot but first we cannot find any godwits, in the Lucio de Cuquero Grande where we found last year many godwits is the water level high, only flamingos are foraging here.



Lucio de Cuquero Grande with unfortunately only flamingos

At the end of the day we discover a freshwater mudflat in one of the fishponds with Black-tailed godwits! We can read a few rings and we decide to drive a little bit further for a better position. But suddenly we drove in a place where it was a little bit too wet. We got stuck in the mud! It was already starting to get dark and in the middle of nowhere so we have huge problems. Apps and text messages sent to Miguel and Jos but no one there (later on Jos was there) to really help us. We decide to walk to the fish farm to see if someone is still there. After half an hour walking we see that there is one car at the fish farm. And yes there is also a person. Talking with our hands and Google translate we made him clear that we have a huge problem. He called to a colleague who is driving in the area and also has a 4x4 car. And indeed when they come they can pull the car out of the mud.



Freshwater mudflat at Veta la Palma

After a ride to a carwash we got rid of most of the mud and drive straight to Veta la Palma. We see that most of the birds are still there at the place where we found them yesterday evening, about 8000-9000 birds. The birds are very skittish and often they are just not in the good position that we can read there rings. Around afternoon we decide to drive off to discover other places where godwits might be. Accidently we run into another plight on a bad road. With lots of efforts and considerations we are able to turn around on a muddy track of hardly 2m wide.

When we arrive near the place where we found godwits earlier today, we discover at a distance of 1km another flock of godwits of about 3000 godwits flushed by a hunting Marsh Harrier. After discovering how to come there we found them between the fish ponds. Here we can come rather close to the birds and read several rings and some codeflags. We count them and take a ring density sample of the group.



The car got clean again after our muddy adventure in the dark

# 6 February 2020

In the morning we tried to read some rings, but the circumstances are not very good. There are about 6000 godwits on the mudflat. In the afternoon we decide to drive around the fishponds to the south end of Veta la Palma. This is a beautiful area for birding and we also find a few hundred godwits hidden between vegetation. The whole area is quite wet which can be the reason why the godwits are so dispersed.

Today we planned a trip to the west side Doñana NP near El Rocio. Transmitter-birds indicate that there are flocks in the area. El Rocio is a cute little town where it is all about horses. Even the roads are unpaved. We imagine ourselves in a wild west movie.



The pretty "western" village of El Rocio

When we want to go into the park we run into a gate. There is also a guard and it is not possible to go in unless you asked for months ago. We should have known this because the national park is under strict protection. At the entrance of the park we saw a flock of about 50 godwits, with 2 of them with a codeflag; unfortunately not readable.



Rice from Isla Mayor

We decided to go back to Isla Mayor to visit the Isla Minima ricefields where we look around in the area just to ensure if there are godwits or not. But we cannot go as far as the river: privada! Then we decided to visit just another time Veta la Palma. We see again less birds on the big mudflat with a maximum of 4500 godwits. But at least we manage to read some rings. Between the fishponds we also see less godwits, maximum 1500. But this place is by far the best reading place in Veta la Palma

and surroundings at this moment. They are less nervous than at other places in Veta la Palma. We see a nice Black-shouldered kite and also several Wild boars.

This was our last day in the south but with about 120 resightings each, all at Veta la Palma, the start of our trip was satisfactory.



Black-tailed Godwits in one of their favorite fishponds this year



Plenty of Wild Boar in Veta la Palma!

#### Extremadura

### 8 February 2020

After a long drive from Pilas to our AirBNB-address in Miajadas, we arrived at our apartment. Suddenly we got a message from Julian, a student of the University of Badajoz: Hey I am at Santa Amalia right now and there are lots of godwits. That is great, we dropped our luggage in the apartment and went straight on our way to Santa Amalia. On our way to St Amalia it gets really foggy and it also starts to rain a little bit, but we remained positive. Once we arrived the weather conditions where perfect for reading color rings and there are a lot of godwits, about 4000. We started at 13:00 and after one and a half hour we both saw 25 banded birds: a great start!



Suddenly I see the most famous godwit Amalia, that was satellite-tagged back in 2013 but went off the radar this winter. It is without transmitter walking through my sight and I say: "Hey Siebe, Amalia is still alive, he is over there and is not having a transmitter!" "No... you are kidding", said Siebe, "What is the color ring combination of Amalia?" L3YRYL it is! And Siebe looked in his notebook and it turns out that Siebe already saw this bird, actually it was the third bird that he noticed that day. We really enjoyed that moment, mission accomplished!!

Amalia without a transmitter!

After a long time of reading we both noticed that there were less birds. They had probably already left to the roost and therefore we decided to check the area for a big roost. However, we couldn't find a roost at all.

# 9 February 2020

This morning we went early to St Amalia to check if the godwits where foraging in the same area again. Compared to yesterday there was only half the number of godwits, about 2000. But during the morning small flocks of godwits dropped in the rice field what means that there are other good places to eat. We stayed until 11:00 and did some resightings with bad light. The biggest part of the group was sleeping the whole time so we decided to check other areas.

We found potential foraging fields and we also visited the ricefields with lots of gps points of transmitter-godwit Ojeda; it could be that this is a big roosting place.

In the afternoon we went back to St Amalia to check if there where already more godwits. The same group was still there but now they here all foraging right in front of us with the sunlight in our backs. We did a lot of resightings and a few ring-density samples. For a moment I thought that I saw two birds with exactly the same Spanish color ring combination: White/Red , Black/White Yellow A, but it turned out that one of the two was discolored, what means that the other one was White/Red, Blue/White Yellow A.

Suddenly we realized that it was getting dark. We want good quality resightings so we decided to quit for today. It was a nice day but with less birds and no Amalia today.



It is not uncommon to find Cranes and Black-tailed Godwits together in Extremadura

Today we started again in St Amalia, we could get close to the birds with good light and we have been able to read color rings and we did samples until the farmer found it necessary to make a walk around that rice field and scared the birds. They where foraging right in front of us. Unfortunately they did not go back to the same place anymore. This was the only place with good light, so we decided to check the area again for other flocks.

We drove all the way to Vegas Altas because last year this was a perfect foraging place but we found out there were no plowed rice fields at all. On the way back to St Amalia we also checked the big rice fields at Hernan Cortes because you never know. At the first sight, no godwits but in the very last rice field, the one you can't check because it lies above the road level, there was a flock of 2000 godwits. Siebe stayed with this big flock and Age went back to St Amalia to check if there were still flocks of godwits to get an indication off the total number of birds in the area at this moment. He found a flock of +/- 1000 birds and he stayed there for a while to do some readings and samples.

When Age went back to Hernan Cortes, the flock followed him, because the same ring combinations he saw at St Amalia were now at Hernan Cortes. Today we saw Amalia again at Hernan Cortes.

When we got up this morning and looked outside, there was a dense fog. The plan was to took a day off to visit the steppes but that was a bad idea. We decided to go to St Amalia hoping that the fog would disappear. But.. it didn't. So we waited until 11:00 in a local bar with something to eat and something to drink. Once we were back in the fields we did a few resightings. Later that day we went to Hernan Cortes, Valdehornillos and Palazuelo but we haven't seen any godwits at all. At the end of the day we went back to St Amalia and suddenly there was a nice flock of godwits and the light became much better so the reading conditions were perfect: end good, all good.

This evening Sytze and Wim will arrive in Miajadas to take over from us and tomorrow we fly back.



Hoopoes can be quite common in winter in Extremadura

#### Team 2 Spain: Wim Tijsen & Sytze Algera, 11 - 20 February 2020

#### **Extremadura**

### 11 February 2020

Traveling day

For the second time Wim Tijsen is in Spain for Black-tailed Godwit research; for Sytze Algera it is the first time to be involved in this project of the RuG. Sytze is however familiar with Spain and also a very good ring reader of all bird species; nice to have such company who also speaks Spanish very well. The first day of our trip is a travel-day with some inconveniencies, like more than an hour delay at departure from Amsterdam resulting in missing our connection in Madrid to Sevilla. But standing in a long queue at the helpdesk of Madrid airport, we are offered to take a flight in a few hours in the early evening. However, this flight also has one hour delay, so in the end we arrive at 01.15 in the night at Miajadas after a three hours' drive. Siebe Bonthuis is waiting for us to show us our bedrooms. His companion in the first Spanish team Age Hulder woke up from his new companion Sytze for one night..., while Wim chooses to sleep with his old mate from last year. The weather forecast for the next 10 days is very good, with no wind and no rain. Siebe and Age are very enthusiastic about the number of birds, so a nice prospective for this period!

### 12 February 2020

Weather: A bit foggy start, cloudy, no wind and 16C. Perfect ring reading on the first day.

The night was short and very welcome! With the four of us we have breakfast at our local café in Santa Amalia from last year, at half an hour drive from Miajadas. It seems that there are more birds than last year. For Sytze everything is new, so the oh's and ah's are in the air when we see our first flock of godwits at 11:00. The first bird is a bird which we caught last year here together with the team from University of Badajoz and those birds were all ringed with the new scheme from Badajoz, with a yellow A on the right tibia. Siebe and Age had to go to catch their flight without reading any birds, but they must have seen enough the last 10 days...



One of the first birds is Amalia! Without transmitter which is lost, but feeding with an Abdominal Profile Index of 2

Ring reading circumstances are very good next to Santa Amalia: cloudy and no wind. Our first flock is around 1.000 birds, but a car is causing too much disturbance. Most birds leave to the Hernan Cortes area in an eastern direction, where we find them back plus more...! Julian, from the University of Badajoz, shows up and he tells us that there must be between 7 to 8.000 birds in the area, which is twice the number from last year. Revival of Extremadura for godwits...? Wim managed to film Amalia, who lost its transmitter, but is in very good condition and feeding well. At the end of the day we saw approx. 4.000 birds in this area. Putting in Sytze's records at the end of the day in the database shows us that we saw at least 6 new birds, which were not seen by Siebe and Age. Which shows that there has been new arrivals! Wim's total is 45 records, which is more in one day then in 5 days in last year's research trip in this area! So we definitely deserve a good meal in a restaurant in the city center of Miajadas. With almost 10.000 inhabitants there are enough options.

## 13 February 2020

Weather: Wind S 1 a 2, 17C, totally cloudy in the morning, later on some clearing spells.

After our local breakfast in Santa Amalia for 6 Euro's for the two of us, and making a daily report we start at 10 o'clock where we ended yesterday at the fields south of Hernan Cortes. The godwits are still there, although in smaller numbers.



The farmer continued ploughing the rice fields, so that will attracts more godwits.

We split, because there are more fields to look at, and Wim is looking out from the car, while Sytze is checking the fields on the south end of the road and finds himself a nice shelter behind a barn, where the godwits are walking towards him. It is always good if you can hide from the birds, so they walk more or less towards you. Sytze also has some attraction from local people who were asking what he was doing, and he is a very good Spanish talking guy, so always good company! During midday we got

a message from Julian, that they will check the Santa Amalia area, so we are working nicely together. He asks us to check some good rice fields between Santa Amalia and Valdehornillos where he saw 800 godwits yesterday, so that will be our goal after lunch and coffee break. Which turns out to be at 14.30, because there are too many birds around us! Sytze found himself a nice position in the back of the car to look at the birds with his tripod on the bottom of the car. So that will be nice to look both from the same position to the birds. Wim is working with the window mount and Sytze with the normal tripod.

After a nice tortilla de patatas in our local coffee shop, we are heading for the place recommended by Julian. Google maps pointed it out for us, the sun is clearing the sky and there they are 650 godwits, together with 150 Cranes and 150 Ruffs.



Wim is filming a bit with those nice conditions but *a dog walker sadly enough disturbs the flock* so we are missing half of it, before we are able to read all the rings.... Grrr!

A lime code flag is too far away so Wim walks a bit towards it from a small dike and is finally reading the flag as PTT. While Sytze is looking at a nice flock of 13 Kentish plovers. That was a good advice from Julian! We have never been at this area last year.



When we are driving with the car and leaving the place where we were looking at the birds, suddenly Sytze's eye falls on his notebook on a small concrete wall.... Oops! That was just in time!

Three miles further when we have to stop for some farmers herding cows, Wim is grabbing for his glasses... but where are they....? Oops.., must have left them somewhere in the field where he was looking for the PTT bird! Or while he was filming the Kentish plovers....

So back again, and luckily he found them on the small dike where he was taking some pictures of the Kentish plovers. Oops! Unforgettable moments for two older men in the field, because Sytze also lost his glasses somewhere in the house or in the bar where we were yesterday evening!





That deserves a snicker, two lucky guys....!

Weather: Foggy start of the day, wind NW 1, temperature 16C, clearing up at 15.00, then sunny

It was a foggy start of the day, so our breakfast was longer than usual in the Santa Amalia coffee shop. And Wim had to update his blog on Facebook and Twitter, so no hurry at all. We wanted to start nearby the flock between Amalia and Valdehornillos, where we ended yesterday. We arrived at 11.00 but still rings are almost unreadable in the fog. It cleared a bit and the flock was about 520. We saw Transmitter bird Ojeda but a raptor broke the group in two and we lost some birds. It turned out that the English E-bird from yesterday was not an E-bird but a whitish ring from Fred Robin, and letters standing across which looked like an E. We read all rings from the group at the end, but it took lots of time. In the end it was finally clearing up a bit. We went for coffee break and finally there she was, the sun!



Sytze in our breakfast and coffee café at Santa Amalia, very well ordering in Spanish!

First we did a tour near Santa Amalia, but then linea recta to the fields south of Hernan Cortes, where the ploughing farmer was still active like the days before. And godwits immediately used the fields from yesterday's ploughing; only the sun was now a bit of a problem... Fortunately the farmer scared with his tractor the godwits towards the right fields for us, with the sun on the right side of the car and shining on the birds! So the next three hours were perfect for ring reading, with at the end three Lime code flags and also three Spoonbills, Greenshank, Spotted redshank and Grey heron. A farmer passing by is claxoning and yelling which made all birds fly up to the sleeping place... so that is the end of the day! In total 50 different rings is not bad at all!



Lots of Dunlins, Ruffs and also Little stints were also talking advantage of the wet ploughed fields

Weather: Bright weather, sunny up to 17C, no wind at all.

The plan is to count all birds in the area, in cooperation with Julian, who will do the western part between Yelbes, Santa Amalia, Valdehornillos and Almoharin. We will do the eastern part, the best as possible, so we first have a look and count all birds at Hernán Cortes, which was 4.200 in total. We had a talk with some birders watching the cranes and Sytze is explaining what we are doing and so on, which took some time.



Sytze explains our 'job' to Spanish crane spotters who are just like us looking for rings!

That is very interesting and good to do, because they can provide records of godwits in future for the RuG and university of Badajoz. We explained the Bird-Ring-App and how to download it, so that was nice corporation with the local people. But in the meanwhile we did not notice that some birds left the area... We checked the area north of Hernán Cortes, and did east of Santa Amalia already in the morning, where no birds were present. We drove on the main road to the east to Rena and Palazuelo, but no birds were seen, not even in the wetter area around Palazuelo. We had a message from Julian, that he had a small flock near Yelbes and only 200 birds at Valdehornillos, and that was it. No birds near Ruecas and although it is almost impossible to check the whole area, we did not find more suitable wet rice fields. Most of them were dry and un-ploughed.



We notice that the landscape is changing in more places where we see just planted olive trees fields

We arrive in the late afternoon at Hernán Cortes again and started to read as many rings as we can with perfect circumstances in the last two hours of daylight. Julian found no more birds and got a phone call from the boss. He was not able to end his whole tour, but saw a flock of 1.000 birds flying over Valdehornillos at 11.00 hours, which must have been birds leaving from Hernán Cortes. A total of 55 ring readings done by Wim, and Sytze also discovered some new arrived birds or not seen earlier by us, so a very nice day. We deserve a nice bottle of Spanish Reserva wine ordered at our favorite restaurant in Miajadas. Long day driving and counting!

## 16 February 2020

Weather: A misty start at Santa Amalia, wind NW1, sunny rest of the day, and warming up to 19C

We first check again east of Santa Amalia, but no birds, so heading for Hernán Cortes again, where most birds were feeding during the day in the last ploughed fields; there must be plenty of leftover rice according to the 4 to 5.000 birds in that area every day. We start resighting at 10:30 and continue to read until 13.00. We also want to check the Yelbes area, because Julian found a very small flock over there yesterday. He gave us a point to check. We checked the whole area south of the busy road between Hernán Cortes and Santa Amalia but no birds. Then Wim realizes that he got

a google maps point from Julian. Behind the Tomato factory there is a path which we normally never would have found, but at the end over 200 birds are waiting for us. We see Amalia again, who has been fattening up to score 3. We got a message from Melchert Meijer zu Schlochtern from the film crew Ruben Smit that they will arrive at 14.30 at Santa Amalia, so we will meet up with them. But first things first, and these are the birds! In our local coffee and breakfast place we meet them and exchange information on the best places and where to go for filming and so on.



Top of the bill: Wieringer Jodekoeken, nice weather and perfect ring reading circumstances!

From 16.00 to 19.00 we had perfect ring reading at Hernán Cortes with birds flying in from other places. When the sun goes down 68 records are our deal, Portuguese numbers! The film crew made many good shots and in the end we see the birds flying to the roost over Hernan Cortes in a northern direction. In the evening we see the football match Real Madrid – Celta de Vigo in a crowded pub with some easy food this time.

## 17 February 2020

Weather: Foggy at Miajadas in the morning so first we entered some samples in the computer. Weather should be clearing according to the forecast, but stays cloudy during the day. Wind SW-2B.

After breakfast in Santa Amalia we first go for our site from yesterday behind the Tomato factory in the direction of Yelbes. And a good number of approx. 400 birds is feeding close to the road. The Kentish plovers are making the first attempts to breed and are displaying!



We manage to read a metal ring from a Lithuanian godwit after more than one hour. But never give up, especially Sytze said: "This is the icing on the cake for the day and maybe the whole week...!"

The density of color rings at this place is very high, so we have a nice morning. We have an early coffee-break and then drive up to Hernán Cortes, fore more rings. We decide to give the area around Yelbes and Medellin a chance first to look out for perhaps some birds. We made a tour along the famous castle and drove over the river Guadiana. More rice fields over there but all stubble fields so no birds, but always good to check other places.

Back at Hernán Cortes, the numbers have gone down by some shooting, or scaring by a gas canon. This disturbance brings the birds into the sky and into direction of Santa Amalia.



Coto social da Caza at Hernan Cortes means that everyone is free to 'use' this area, also for hunting...



The 'leftovers' from hunting in the Coto social de Caza area near Hernan Cortes

We manage to read 2 more metal rings on a few birds close by and at the end birds came back from other directions. So no need to drive around and search for new places. Pipe Abad and the team from Badajoz university will try to find the roost site this evening. And we call it a day a bit early because of the cloudy ring reading circumstances in the end, which makes it hard to distinguish the true colors.

### 18 February 2020

Weather: Partly cloudy start, temperature 8 to 18C, Wind SW 1B turning to NE 1B.

We got a message from Pipe Abad they found the roost last evening. The people of the university of Badajoz will try to catch birds in the mist nests this evening. That will be exciting also for us, so we decide to have a very good warm lunch (like the Spanish) somewhere between 2 and 4 o'clock in the afternoon. You will never know how long the evening catch will take and how many birds you have to ring and take measurements of and so on. We still have a bunch of the most famous Wieringer Jodekoeken to eat and we can share them with the Badajoz team. But first off all we start the day the other way around from yesterday, so first to Hernan Cortes! We start at 10:00 with the limping codeflag LUV (which reminds me of a famous Dutch girls singing group in the eighties). We have seen her more times here and she is always feeding on the edges of the rice field in the more quiet areas. It seems that birds have left this area, but when we look around the corner... loads of birds in the latest ploughed fields.

How to approach, with best light conditions, low disturbance and to get most ring readings? As always we make a plan how to approach the birds. Should we split in two, with Sytze in one part of the field with the sun in his back, and Wim looking from the car in other rice fields with the best conditions. Or, should we both stay in the car and have a view from different directions?



Splitting us in two teams gives more ring readings; Sytze in his element

We choose the first option, which will hopefully give us the most ring records... And it works well, so at 14.30 we finally stop and go for a good lunch at a restaurant opposite of Santa Amalia. After a cheap and fine meal we try the area behind the tomato-factory and read over 10 rings in a group of just 300 birds. Not bad at all!

We end the day with sunny and no wind conditions with temperature climbing up to 18 degrees.



The godwits also love the higher temperatures and were taking a bath!

The godwit film-crew is also in the area. The birds moved into a rice field with higher water levels, so ring reading is getting difficult when you have two codeflagged birds which do not want to move... and when they finally move, they are walking into deep water, grrrr!

We see the sun beautifully go down behind the hills and have a chat with the film crew at the end. They have one day left to film a ploughing farmer in a rice field, organized by José Masero, but let's first try to catch and ring some godwits in the evening. So we went for good coffee and a snack to Santa Amalia, before heading for the field station near Valdehornillos. The team is waiting for us, and until fully darkness we have some good chats about birds, football and so on. In the first round 15 Ruffs and 9 godwits are caught, and while we start the handling of the birds, some 40 godwits end up in the nets, so plenty of things to do!



Amongst the three recaptures a bird with the RuG-scheme that had lost its red flag, but we have no replacement flag for it, sadly enough for us and the bird...

And a green flagged bird which we read in the field at 16.09 hours! Because of the amount of birds and according to the time it takes to handle all birds twenty godwits are so lucky to be released

without new rings. We leave the field station after color ringing 21 godwits at 03.00 o'clock while the rest of the team is handling the Ruffs and at 04.30 their job is done. All 21 new godwits are ringed with the new scheme for the university of Badajoz, with a white ring over a yellow A-ring. We have just one day left to find them back in the field tomorrow...!



All godwits are measured and weight. And to keep the bird calm this tunnel is the best way to weigh them, they will be quiet!

## 19 February 2020

Weather: Sunny, wind NE-SE 0 to 1Beaufort, temperature 8 to 19Celsius at the end of day.

Our last day in the field and although it was a very short night, Sytze rings the alarm clock at 07.30 while normally Wim is first. We first bring some of our records and reports into the computer before we go to our breakfast club and coffee corner in Santa Amalia. But we start at 11.00 near the tomato factory south of Santa Amalia, where the first bird is a new ringed bird from last night!





Tomatoes everywhere around Santa Amalia... Storks also love them! We enjoy in T-shirt the coffee break and the White Storks nesting at the local pub, church and houses of Hernán Cortes.

But after a while all birds are flying into the air for a ???? Sytze saw some small flocks that were flying in a SW direction, so we make a small tour into that direction, but almost no good fields over there. When back at the first location most birds are still gone, so our hotspot, the Hernán Cortes area is our next goal. Here we immediately spot several of our new color ringed birds shining with their new rings in the field; so we are very happy! We continue until 14:00, when the sunlight gets intense and ring reading is a bit tricky with the different color schemes.

After the break we go back again for new ringed birds to the fields around Hernán Cortes. At the end of the day we read 12 different new birds from last night, which shows that many birds of this foraging area must have used the roost north of Valdehornillos. Not bad at all, because we were able to see 18 birds in total; 3 birds were taken for observation to the University Badajoz after the ringing session. Note: they all have been released within some days after the catch. So a really successful trip to Extremadura with good numbers and perfect ring reading circumstances; we were very lucky with the weather.



Especially ring reading with Wieringer Jodekoeken, nice quiet weather and lots of godwits is perfect..!

We almost reached an average of 60 ring reading records per day, which is really good for Extremadura compared to recent years. Miajadas is a good place to stay and not too far from the main areas where most of the birds forage, and has in the evening several pubs or restaurants for food. This makes it a pleasant place to stay in the evening, especially because Sytzes' Spanish made it easy to communicate everywhere and with everyone!



Orange glyphosate fields are becoming more and more common in this area. We saw a lot of herbicide spraying by farmers in the field, which causes pollution and is bad for soil health. One wonders why this is still used, because most of time after this application the field will be ploughed and new rice or maize is sown on those fields.

Hernán Cortés de Monroy Pizarro Altamirano, marqués del Valle de Oaxaca (Medellín, born in 1485 – died in Castilleja de la Cuesta, 2 December 1547) was a Spanish conquistador. Cortés was famous for his concurring of Mexico between 1519 and 1521. Now its name is famous for giving shelter and food to almost 10.000 Black-tailed godwits!



The only redshank we saw in 10 days...





Farmers are also trying to intensify the way of farming here, just like in the Netherlands, which will in the end result in large scale, biodiversity poor monocultures (picture above). We also saw several tractors and machinery in the field busy with equalisation of rice and other fields (picture below).



When we left on the 20<sup>th</sup> of February, transmitter bird Tjerkemar also left the area and flew with us to The Netherlands. It arrived a few days later and you can see from her fat abdomen that she was ready to migrate!