

University of Groningen

Godwit Survival Project – Mission report Iberia 2013

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Godwit Survival Project – Mission report Iberia 2013

*A mission supported by the Paul and Louise Cooke Endowment Ltd
through Global Flyway Network*



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groningen

Title Sheet

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Godwit Survival Project – Mission report Iberia 2013

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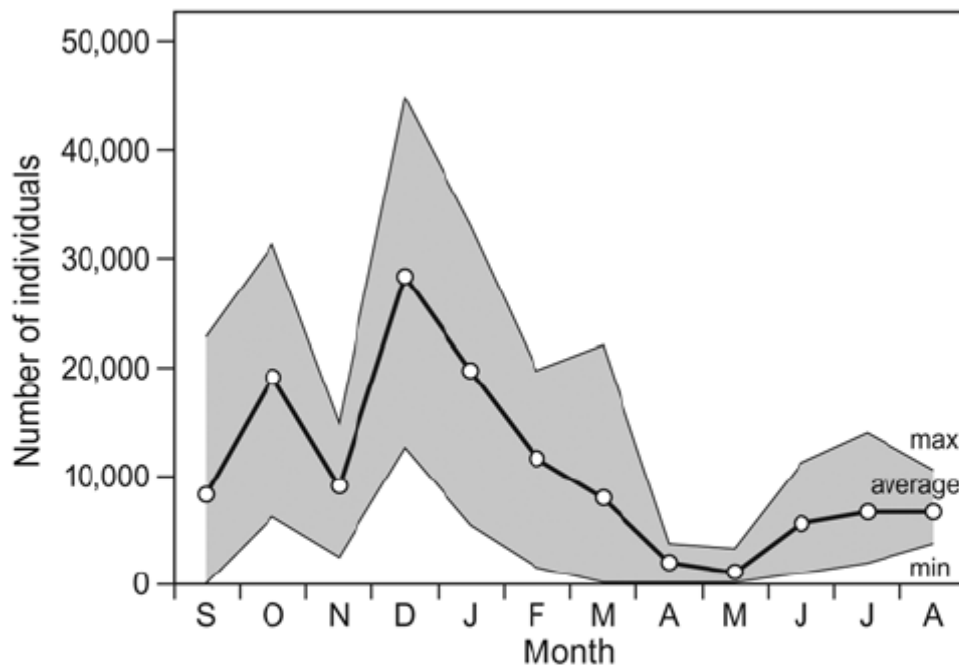
The Netherlands

Groningen, August 2013

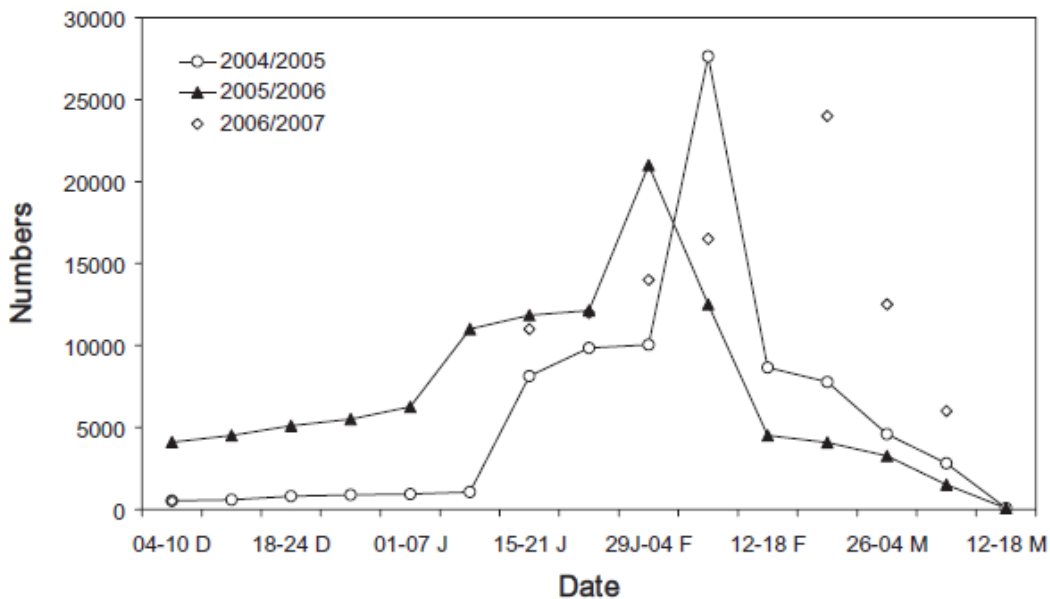
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Introduction

After their breeding season, Black-tailed Godwits (*Limosa limosa*) migrate in late spring and early summer to West-Africa where they winter (Zwarts *et al.* 2009). They can reach these wintering grounds non-stop or make a stopover in France or Spain but some birds stay in southern Iberia all winter, as we have learned from recent satellite telemetry data and these observations were confirmed during a survey in Doñana NP in November 2010. From half December onwards, the godwits leave West-Africa to their stopover areas in southern Iberia. Large numbers of godwits are found during the stopover period in three main areas: Doñana NP and Extremadura in Spain and the rice fields surrounding the Tejo and Sado estuaries near Lisbon in Portugal. Relatively little is known about the wetlands along the Spanish eastern coastline like the Ebro delta or Albufera NP near Valencia. Numbers can be as high as 45.000 in Doñana (Marquez-Ferrando *et al.* 2011), 24.000 in Extremadura (Masero *et al.* 2010) and 44.000 in Portugal (Lourenço *et al.* 2010).

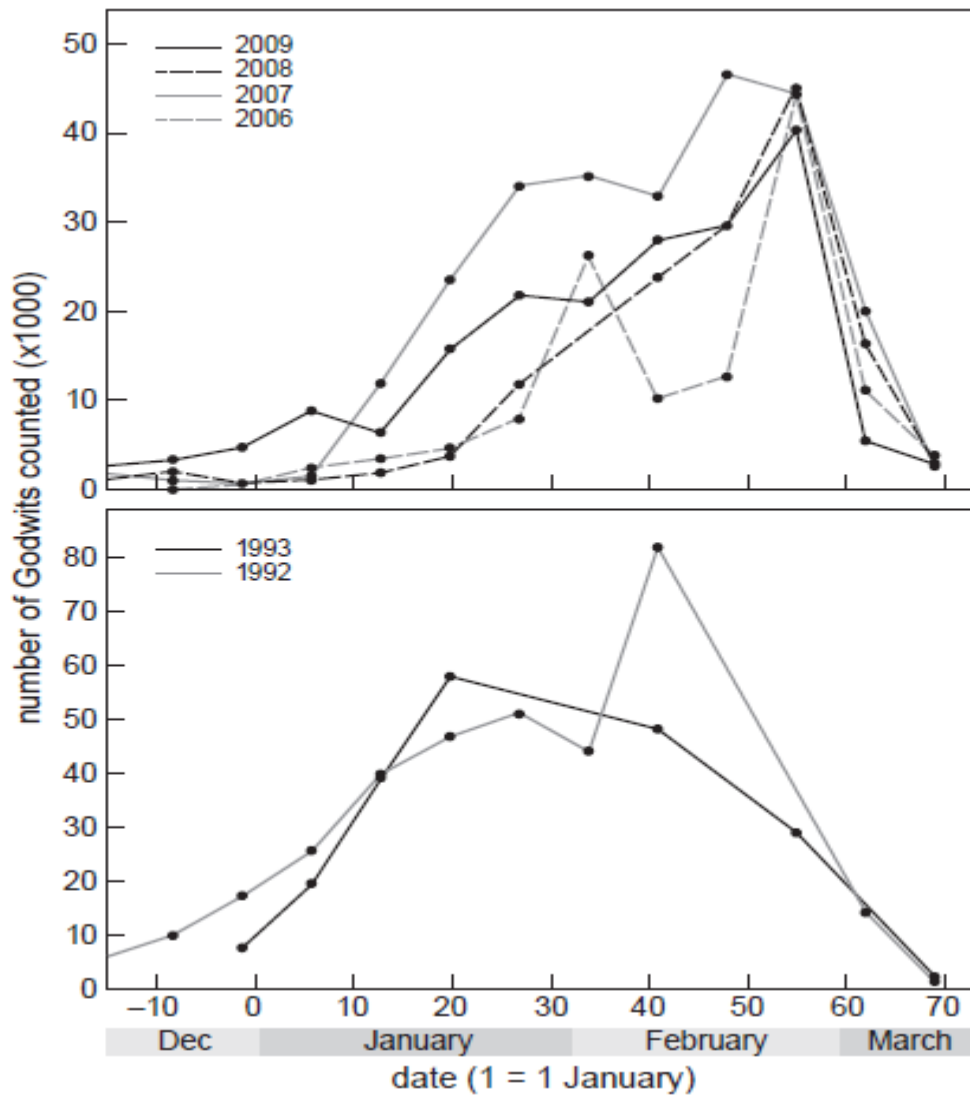


Monthly counts of Black-tailed Godwits carried out by Estacion Biologica de Doñana in Doñana Natural Park, SW Spain, during 2004-2010 (Marquez-Ferrando *et al.* 2011). 2004-2010 (www-rbd.ebd.csic.es/Seguimiento/mediobiologico.htm).



Black-tailed Godwit numbers in Extremadura rice fields. Data are weekly counts of the entire study area, except winter 2006/ 2007 (counts in the roosting sites at sunset). (Masero et al. 2010).

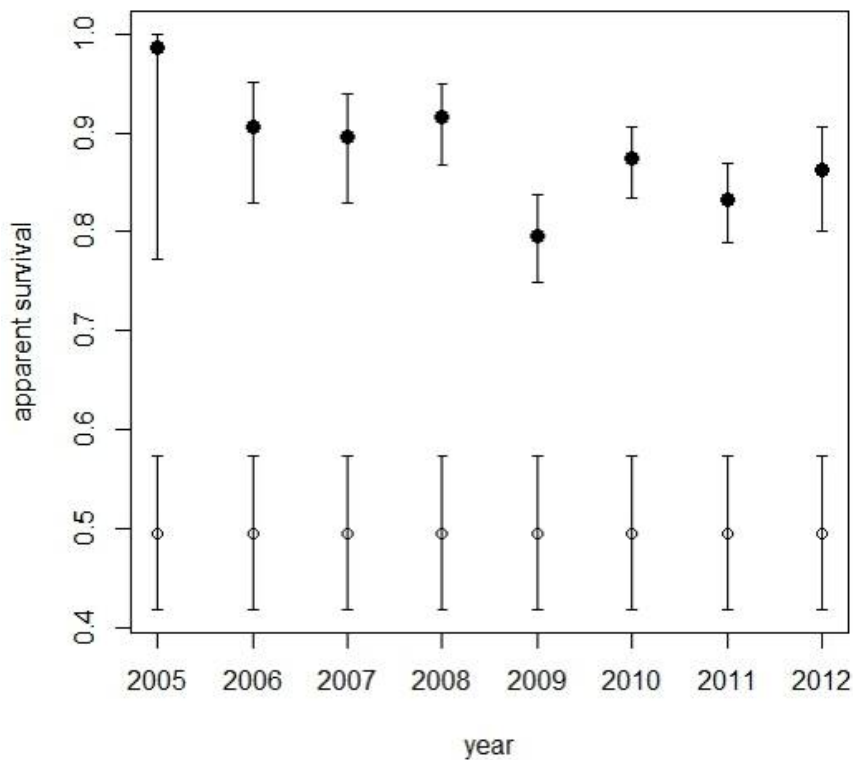
In Doñana NP godwits are surveyed year round nowadays since Rocio Marquez-Ferrando has started in 2011 a postdoc research project on godwit staging and migration at the Estacion Biologica de Doñana in Sevilla. This offers a great opportunity to learn more about the importance of this area for wintering and staging godwits and the connectivity between the 3 main staging sites in southern Iberia. She has already clearly shown that godwits of the *limosa* subspecies winter in considerable numbers in this important wetland. In dry winters like 2011-2012, these birds were predominantly found in Veta La Palma, an extensive fish farm complex. The area is probably so attractive because it holds constant water levels and food resources, making it a predictable and therefore favorable location for birds that prefer to spend the winter in a part of Europe, where precipitation amounts differ a lot between years.



Total counts of Black-tailed Godwits in Portuguese (Tejo and Sado) rice fields in 2006-2009 and 1992-1993 (Lourenço *et al.* 2010).

In the rice fields they forage on rice kernels which are spilled during harvesting of the crop (Lourenço *et al.* 2008). Since 2005 yearly expeditions have been made to Spain and Portugal during this stopover period to sight colour-marked Black-tailed Godwits (fig 1.). Godwits are declining rapidly in numbers (Birdlife International 2009), mainly caused by intensified use of agricultural grasslands in their breeding area (Vickery *et al.* 2001, Schekkerman 2008). To understand more about the effect of the intensification of the agricultural landscape on the godwit population, we started in 2007 a large-scale research

project on the demographical variables and site faithfulness of godwits in intensively and extensively managed agricultural land. Therefore we measure annual survival of young and adult birds (fig. 2), their reproduction and locate the nests during the breeding season in The Netherlands. With this information we can decide which areas act as source areas and which as sink areas. We color mark birds to make them individually recognizable. Resighting color marked birds during the stopover period is necessary for several reasons. Firstly, if a godwit disperses outside our study area, the chance that it will be resighted elsewhere in The Netherlands is small. Without the resightings in the stopover area, we would assume that this individual is dead and therefore underestimate annual survival. Secondly, with enough resightings in the Iberian Peninsula we can calculate seasonal survival. In other words, we can calculate in which period mortalities occur more often. Thirdly, by measuring the density of individuals with colour marks, we can monitor the population size of the western part of the Black-tailed Godwit population. Lourenço et al (2010) estimated this population to be 135.000 – 140.000 individuals in 2007-2009.



Annual survival of adult (black dots) and juvenile (white dots) Black-tailed Godwits between 2004 and 2012.

Results 2013

In total 10 experienced ring readers covered the most important stopover areas in the main staging period from the end of January until the beginning of March 2013. This year we also made a short visit to Albufera NP and the Ebro delta. In this period we made 1812 resightings of 658 individual birds.

In Extremadura we rented an apartment in Santa Amalia, in the heart of the study area. Unfortunately the University of Extremadura can no longer make use of the field station in Zujar, where we stayed for many years. In Portugal we rented, like last year, a summer cottage near Benavente (Foros de Salvaterra). In Doñana NP we could still sleep at Huerta Tejada, a field site of the EBD in mid-January but after that the location was closed due to budget cuts which will be another backset for future expeditions. In only three years' time, we have lost all our places to stay overnight which has serious budget consequences.

Extremadura

In Extremadura we combined the color ring reading with a satellite tracking program, in cooperation with the University of Extremadura. Fifteen Black-tailed Godwits were deployed with a small transmitter with solar panel on their backs so that we could track their movements as they migrated northwards from Spain to their breeding grounds in northern and Western Europe. The population of Black-tailed Godwits that breeds in continental Europe — *L. l. limosa* — has declined dramatically over the past 35 years. Its population now is roughly half of what it was in the middle of the 1970s. Much about this decline is known: it is caught up in the rapid intensification of the agricultural habitats used by the species throughout the year, from the rice fields in the West African countries of Guinea Bissau and Senegal, to the Iberian rice fields to the meadows in the Netherlands. But there is also much that remains unknown. For instance godwits now arrive on their breeding grounds up to five weeks before they begin laying eggs, but, when they do begin laying eggs, it is too late to match the phenology of their food resources. Why this happens, we do not know. Thus, our goal in tracking these godwits is to better understand how their movements and habitats affect when and where they breed.

Hopefully, with this data in hand we can begin to properly manage for this population before it is too late. So far, the project has been very successful. The birds coped well with the transmitters and could be followed on their northward migration. We could confirm that some of them have bred successfully and raised chicks. In July all birds left the breeding grounds and some of them made a stopover again in the same key areas in Southern Iberia as they use during northward migration. Backgrounds and tracks of all individual birds can be found at this website:

<http://volg.keningfanegreide.nl/>.



*Flooded area
around Medellin
in March (photo
Pipe Abad)*

Unlike last year, conditions for wintering and staging godwits were extremely good this winter. Southern Iberia experienced one of the wettest winters of the past 20 years. When we arrived in Extremadura, we found out that a lot of fields were suitable for foraging. A first roost count end January revealed that at least 25.000 birds were present compared to less than 5000 in winter 2011-2012 when most fields were completely dried out and frozen. It seems that numbers are back again at the level of 2004-2007. However, this abundance of suitable terrain, raised a new problem: how to find these birds in such a vast area as the rice fields of Extremadura? We drove for hours but never encountered more than 3-6.000 birds during daytime, which is still extremely good compared to last year but a bit frustrating when you know there must be 5 times more birds around

somewhere. In the second week of February numbers at the roost dropped to 15.000 birds and individual color ring combinations showed that the turnover over birds was high. Apparently many birds were on the move to their breeding grounds and left the area but were replaced by newcomers.

In the past years we have noticed a remarkable difference in approachability between birds in Portugal and Extremadura. This year we witnessed poaching in the fields near Santa Amalia where 10 birds were shot from a car, which explains the extreme skittishness in Extremadura. A striking difference with the Giganta rice fields near the Tejo river where you can walk up to 15 meters (!) before they start flying off. Both this and the low detectability explain the much lower resighting rate in Extremadura compared to other sites. Nevertheless we made 333 resightings of 146 individuals.

Doñana NP

Doñana NP is an important wintering and staging area for Black-tailed Godwits. Peak numbers up to 30-45.000 birds are generally counted in December and decline to on average 12.000 birds in February (Marquez-Ferrando *et al.* 2011). In the dry winter of 2011-12 Veta la Palma was a safe haven for wintering and staging godwits. However, the wet winter of 2012-2013 has shown that godwits also use the natural saltmarsh complexes. At Lucio de Mari Lopez for instance, we found a long-staying flock of 20-25.000 birds whereas the numbers at Veta la Palma remained below 5000. By end February numbers dropped below 3000 as most birds migrated up north. Due to limited budgets we could not continue to check for color rings intensively in February, although Rocio Marquez spent a few days in the field. Therefore we only have 29 resightings from this period but fortunately we had the opportunity to check a lot of birds during an expedition earlier in January.

Tejo and Sado

As in Extremadura, the rice fields in the Tejo and Sado estuaries were much wetter this year but a lot of fields in the Tejo area were still unplowed. In the Sado the situation seemed much more suitable. However the trend of ongoing lower numbers in the Sado estuary continued this year and we only saw a handful of Black-tailed Godwits and did

not read a single colour ring combination! It remains unclear what causes this decline. There is quite some hunting in this area but we have no indication that godwits are being shot or that the hunting pressure has increased. Moreover, the rice fields seem to be suitable for godwits that need to forage. One explanation could be the lack of a very good nearby roost site. But this is hard to believe since godwits sometimes make use of wet rice fields to sleep on. Another explanation could be the availability of a much better alternative. This could be the case within the borders of the Tejo NP in the Giganta, Ze do Pinho and Ponta da Erva rice fields. Some fields are especially managed to make them attractive for godwits and in combination with nearby roosts, either in the rice fields or on the banks of the Tejo river, makes this area the place to be in recent years. When we arrived in the first week of February, numbers were already as high as 45.000 individuals and all of them were concentrated in just a few fields. They seemed to be very relaxed, in very good condition and only started foraging around 11 a.m.! They used a few very wet rice fields for roosting and fed on nearby recently plowed fields. Around 10 February numbers dropped to about 20-30.000 individuals and they started foraging more actively. The fact that they can be approached easily on foot and by car suggests that they have no negative association with human presence and that hunting is not an issue here. By 20 February numbers had dropped to about 20.000 and birds were more scattered over the area as if depletion of the rice fields had taken place at the best places. By then, we started recording a lot of new color ring combinations indicating the arrival of new birds and the departure others and numbers even seemed to go up a little bit again to 23.000 individuals. The presence of a female Peregrine falcon that heavily specialized on godwits made them scatter of the area even more. One flock moved away from the Giganta/ Ponta da Erva-complex but landed on private property where the owner could not be convinced to let us have a look. Nevertheless we made 1430 resightings of 495 different individuals of the RUG scheme, which is an all-time record!

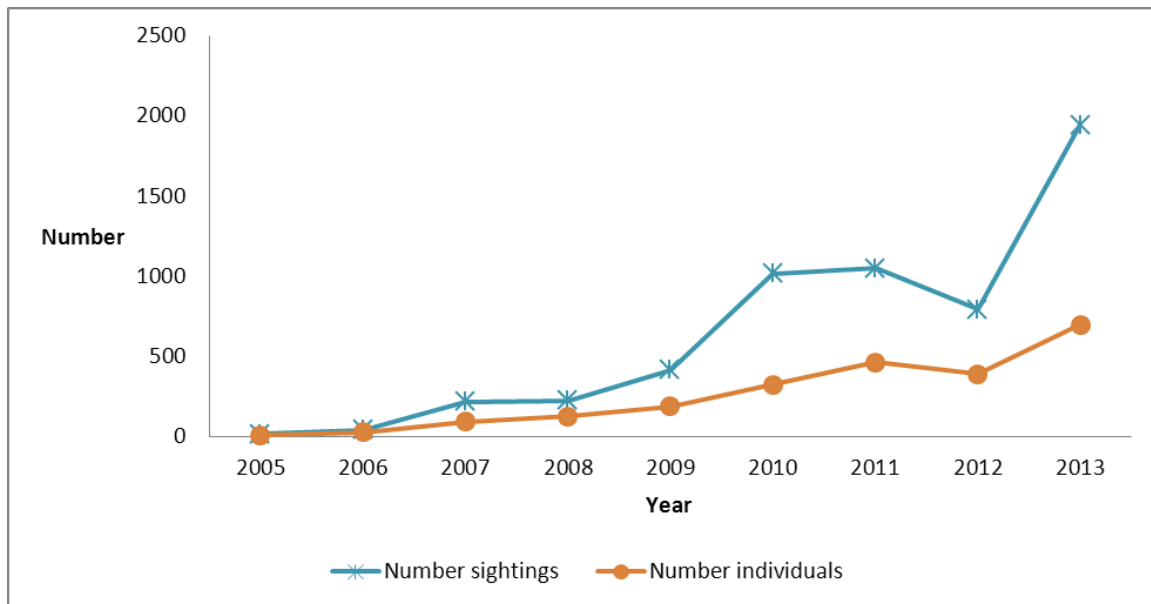
Albufera and Ebro Delta

This year we had the opportunity to pay a short visit to 2 important wetlands on the Spanish east coast, the Natural Parks Albufera and Ebro Delta. These could be important stepping stones between the sites in Southern Iberia and the breeding grounds. Therefore

we planned a visit as late as end February/ early March. In Albufera we found a group of 2200 birds in which we identified at least 22 different individuals. This ring density is comparable to other places in Iberia which indicates that they come from the same flyway population. The combination of the reserve area El Raco d'Olla and the adjacent rice fields like El Campot provides the godwits with an excellent area for roosting, preening and foraging. However, at El Campot rice does not seem to be the main food item but godwits forage on large earthworms, in size ranging from 20 to 80% of their bill length which they find very deep in the mud. These birds seem to be ready for the diet switch they have to make at the breeding sites. Local godwit experts told us that godwits also winter in this area and one leg-flagged individual has been seen annually since 2009. This would make Albufera the northernmost wintering area of continental Black-tailed Godwits! A 2 day visit to the Ebro delta was completely spoiled by the worst rain storm in years. A local scientist counted at least 2000 birds in the area in the last week of February.

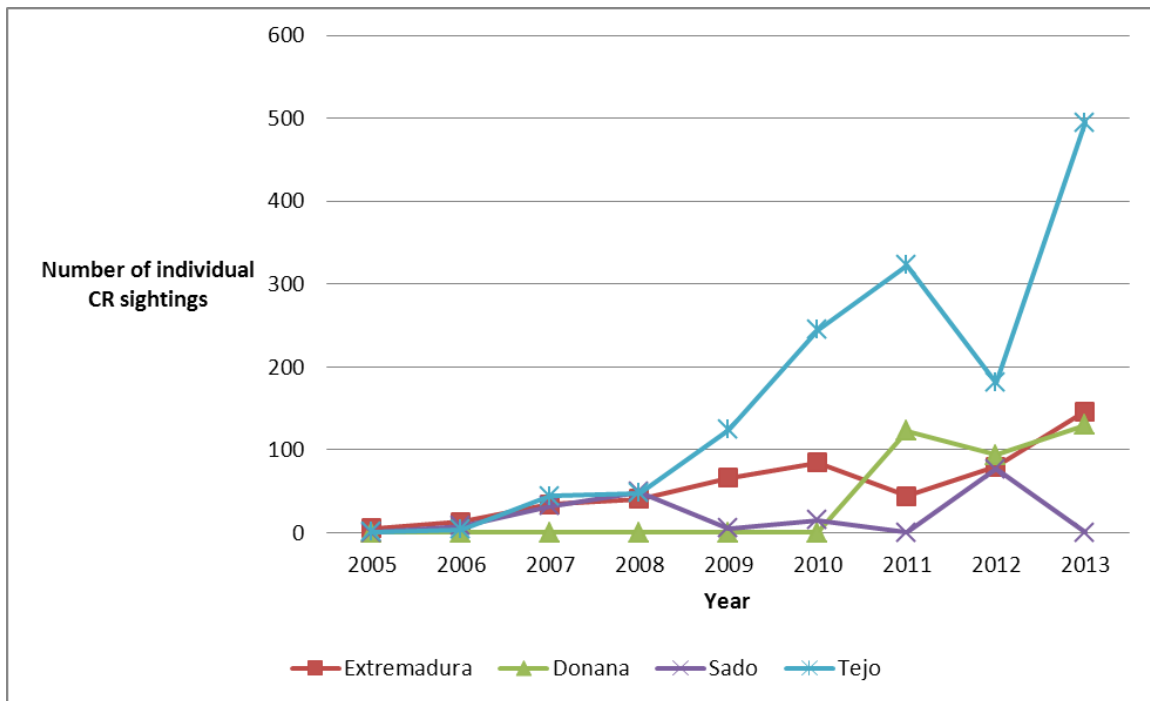
Sightings 2012

Since 2005, observers from the University of Groningen have visited southern Iberia to get resightings of individually colour-ringed Black-tailed Godwits during spring migration. At first this was mainly in Extremadura but since Pedro Lourenço started his PhD on the Portuguese staging sites in spring 2006, we have tried to cover both areas during the period that peak numbers occur. Since 2011, when Rocio Marquez-Ferrando started her project in Doñana NP, we also have resightings from this very important stop-over site and the number of sightings increased to almost 2000 CR observations in January-February in southern Iberia in 2013. The number of individuals seen in all 3 areas together grew from 91 birds in 2007 to 697 in 2013. The strong effect of the amount of precipitation is clearly visible with a drop in numbers in the extremely dry winter of 2012 and very high numbers in the wet winter of 2013.



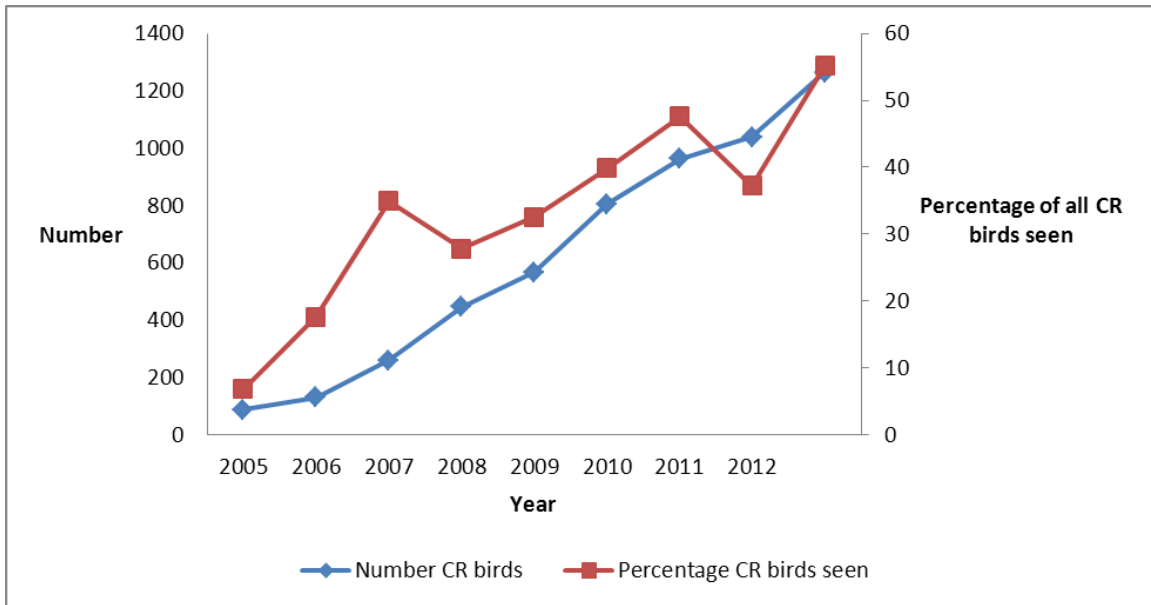
Total number of sightings and observed individuals in Extremadura, Doñana, Sado and Tejo Estuary in January-February of each year.

As can be seen in the figure below, this was mainly caused by much more resightings from the Tejo estuary where we saw almost 2.5 times the number of individuals of the year before, compensating more than enough for the complete loss of birds from the Sado estuary. Extremadura was also better than ever.



Number of observed individuals in Extremadura, Doñana, Sado and Tejo Estuary in January-February of each year.

Our efforts in the past 7 years to read as many colour rings as possible in late winter in South Iberia have generated an enormous dataset on staging Black-tailed Godwits. These data will be of great value to the thesis of Roos Kentie that will be finished next year. She will use this information to calculate annual and seasonal survival and dispersion of adult and juvenile birds in our study site in SW Friesland. In the figure below it becomes clear how massive this dataset is. We have managed in the past 5 years to see annually no less than on average 37-55% of our color ringed population during its stop-over on the South Iberian staging sites!



Estimated number of colour ringed birds that are still alive and the observed percentage in Extremadura, Doñana, Sado and Tejo Estuary in January-February of each year.

A preliminary calculation reveals that 14 % of the individuals that were seen in the Tejo Estuary, were also seen previously that winter in Doñana NP, opposed to 23% of the Extremadura birds. This suggests a stronger connection between the latter two sites but could also mean that the Portuguese sites get more fresh arrivals straight from Africa. Only 4% of the Tejo individuals were also seen in Extremadura, suggesting that there is some exchange across the peninsula but this also needs further analysis.

We also saw hundreds of birds from other godwit colour ring projects, which have been sent to the scheme coordinators.

Acknowledgements

These colour ring reading trips would not be possible without the financial support of the Paul and Louise Cooke Endowment Ltd through Global Flyway Network. We are indebted to your involvement in wader research! But without the enthusiasm of volunteers to do all these resightings we would still be nowhere. Thanks to all co-authors for taking days off from work to spend hours looking through your telescopes and driving around desperately to find godwits; and Bob Loos, thanks for dealing with the financial

part making all this possible. Thanks to Jose Masero for organizing the apartment in Santa Amalia; it was freezing cold but very convenient!

Literature

BirdLife International (2009) Species factsheet: *Limosa limosa*. Downloaded from <http://www.birdlife.org> on 30/3/2010

Lourenço, P. M. & Piersma, T. (2008) Stopover ecology of Black-tailed Godwits *Limosa limosa limosa* in Portuguese rice fields: a guide on where to feed in winter. *Bird Study* **55**, 194-202.

Lourenço, P. M., Kentie, R., Schroeder, J., Alves, J. A., Groen, N. M., Hooijmeijer, J. C. E. W. & Piersma, T. (2010) Phenology, stopover dynamics and population size of migrating Black-tailed Godwits *Limosa limosa limosa* in Portuguese rice plantations. *Ardea* **98**, 35-42.

Marquez-Ferrando, R., Hooijmeijer, J., Groen, N., Piersma, T. & Figuerola, J. (2011) Could Donana, SW Spain, be an important wintering area for continental Black-tailed Godwits *Limosa limosa limosa*? *Wader Study Group Bull.* 118(2): 82-86.

Masero, J. A., Santiago-Quesada, F., Sánchez-Guzmán, J. M., Villegas, A., Abad-Gómez, J. M., Lopes, R., Encarnação, V., Corbacho, C. & Morán, R. (2010) Long lengths of stay, large numbers, and trends of the Black-tailed Godwit *Limosa limosa* in rice fields during spring migration. *Bird Conservation International*, Published online by Cambridge University Press 27 Jan 2010 doi:10.1017/S0959270910000092

Schekkerman, H. (2008) *Precocial problems. Shorebird chick performance in relation to weather, farming and predation.* . PhD thesis, University of Groningen, The Netherlands.

Vickery, J.A., Tallowin, J.R., Feber, R.E., Asteraki, E.J., Atkinson, P.W., Fuller, R.J. & Brown, V.K. (2001) The management of lowland neutral grasslands in Britain: effects of agricultural practices on birds and their food resources. *Journal of Applied Ecology*, **38**, 647-64.

Zwarts, L. Bijlsma, R. G, van der Kamp, J. & Wymenga, E. (2009). *Living on the edge: Wetlands and birds in a changing Sahle.* KNNV Publishing, Zeist, The Netherlands.

Day to day report

Team 1

Nathan Senner and Mo Verhoeven

26 January 2013

I (Nathan Senner) arrived in Lisboa, Portugal at 06:25 and waited around for my luggage, grabbed some breakfast, and walked around a local park enjoying my first glimpses of Iberian birds. At 13:45 I jumped on a bus for Sevilla, Spain and got some rest after my overnight flight from Lima, Peru. In Sevilla, I was met by Rocio Marquez-Ferrando and spent the night at her house.

27 January 2013

At 10:00 Rocio and I left for a day in the field at Veta de Palma on the northern edge of Parque Nacional de Doñana. Despite windy and cool conditions (as well as high water levels) that made resighting godwits difficult, we had a successful time picking through a couple of flocks of godwits totaling more than 6000 individuals. I will admit that at times I found it hard to concentrate on godwits with all of the other birds swirling around and drawing away my attention — seventeen life birds in one day doesn't happen too often to me anymore!

At 19:30 that evening we met up with Mo Verhoeven at the airport in Sevilla and enjoyed an excellent traditional Spanish meal at the home of Rocio and Hugo.

28 January 2013

Rocio took Mo and I to the Northgate Rental Agency first thing in the morning where we picked up our Mitsubishi Montero — what a behemoth! — our sturdy workhorse for the next two weeks. After a quick stop at the supermercado, Mo and I were on our way north to Badajoz. Along the way, we enjoyed some of the finer birds of central Spain, including a flock of Great Bustards, Southern Gray Shrikes, and many, many Crested and Thekla Larks.

We arrived at the University of Extremadura in Badajoz at 15:00 and met up with Pipe Abad, Jorge Gutierrez, and our Alaskan team member, Lee Tibbitts. After a quick council, we packed up and headed for Santa Amalia and the rice fields of central Extremadura. That first evening we watched 20,000 Black-tailed Godwits stream into a roost site just north of the town of Vivares. A good sign for things to come!

29 January 2013

This morning we split up into two teams to try to track down where those 20,000 godwits that we had seen the night before were feeding. Despite exploring many of the traditional areas — Yelbes, Hernan Cortes, Santa Amalia, Miajadas, and Almoharín — we only had 2-3,000 birds to show for our efforts. Luckily among those birds, we were able to find 15 birds ringed from the Dutch scheme.

This year we have added an additional facet to our fieldwork: We want to capture 15 female godwits so that we can attach PTT satellite transmitters to be used to track northward godwit migration. This goal means that night catches with mist nets at roost sites are going to be a regular feature of our efforts and also that our days have the potential to become very long.

On this night we tried to capture at two separate roost sites north and west of Vivares, but with no luck. One of the sites was especially close to the main highway and a number of vehicles drove by the site during the critical period when the first birds were arriving. This scared these birds away and shifted the roost site a number of kilometres to the southwest, closer to the town of Hernan Cortes. Luckily from our vantage point we were able to pinpoint this new roost site and we will hopefully catch there later in the week.

30 January 2013

Today we had little luck resighting birds. Despite observing 25,000 birds coming into roost last night, we could find very few of these birds during the day. Again working in two teams, we surveyed widely. Jorge, Lee, and I worked our way from Yelbes to Medellin to Don Benito (where we also spent a frustrating two hours trying to buy a

prepaid internet connection!). Pipe and Mo went as far east as Presa Sierra Brava, also with little luck.

Luckily our catching efforts were considerably more successful. We captured 25 birds in total, deployed one transmitter, and took four others into temporary captivity for closer observation of attachment methods.

31 January 2013

After our late night of catching, we were not quick to rise. At 10:00 we left for Badajoz where we spent the day observing the godwits in captivity, trying out various attachment methods, and in general taking care of loose ends. In the evening Theunis and Petra arrived and we all enjoyed a big dinner and much discussion about godwits, rice fields, and T & P's recent trip to Mauritania. Everyone turned in very early.



*Release of a
bird with a
transmitter
near Hernan
Cortes.*

1 February 2013

With 20,000 birds still missing, we kicked into high gear trying to find any godwit that we could. Unfortunately fog and annoying mobile phone companies kept us from being

too successful, but we did run into decent flocks near Hernan Cortes and again at Almoharín. Combined we read 32 ring combinations, of which 20 were Dutch. In other ornithological news, Mo and I also had brief encounters with a Booted Eagle and a Great Spotted Cuckoo (separately!) during a quick jaunt up the castle in Medellin at midday. While not godwits, they at least got our hearts racing for a few minutes!

2 February 2013

While we didn't find any new godwits feeding areas, despite searching again the traditionally fruitful area of Palazuelo, we made a concerted effort to read rings at the known feeding sites today and this effort paid off. We observed 86 ring combinations, of which 38 were Dutch birds. These birds came from flocks of 4,000 at Almoharín and 2,000 at Hernan Cortes. We also had a very successful night of catching (with help from Auxi, Pepo, Marta, Juan, and Rocio) that netted nearly 60 birds. We took 14 of these into captivity to outfit with transmitters before release.

3 February 2013

Today the teams split up again. Theunis, Petra, Lee, Pipe, and Jorge went to Badajoz to attend to the birds in captivity and to observe their acclimation to life with a satellite transmitter. Mo and I retraced our steps from the previous days and resighted individuals at Hernan Cortes and Almoharín yet again. We continue to have success at these two sites and, in total, resighted 60 godwits, of which 27 were ringed with a Dutch scheme. Our bird list also continues to grow: today we had the thrill of observing two Greylag Geese. They seemed to be very out of place and it made us feel a long way from the Netherlands where they are such a common sight!

4 February 2013

Theunis, Petra, Lee, and Pipe concentrated today on releasing the satellite transmitter birds. Twelve of the 14 birds responded well to the transmitters and were released, bringing our total up to 13 in deployment. Two more were still acclimating and will hopefully be released soon. Mo, Jorge, and I and explored east through Palazuelo and then back through Medellin and Yelbes, again with no luck. Around Santa Amalia we did

come across a new flock of 800 birds, which yielded 22 ringed and 12 Dutch-ringed birds. The non-godwit related excitement of the day was a Short-eared Owl, the first of the trip, flying over our heads as we watched the godwits descend on their roost near Hernan Cortes. In the evening, for Theunis and Petra's last night, and in recognition of a successful catching campaign, we had a celebratory dinner in Medellin.

5 February 2013

Today Pipe brought the last two satellite transmitter carrying birds from Bajadoz and released them near Hernan Cortes. Both were doing well and now all 15 transmitters have been deployed! Hopefully they will start providing us with some useful data soon! Mo and I discovered a new flock of 800 birds near Rucas that held 24 ringed birds and 11 Dutch birds. We were incredibly thankful to find those birds, as we had spent the morning ranging far to the east, passing through Acedera, Madrigalejo, and Presa Sierra Brava without success. Eighteen thousand Northern Shovelers on Presa Sierra Brava was quite a sight to behold, however.

6 February 2013

Today we took as a "rest" day, as Lee wanted to be able to get out and see some of the sights. And what a day it was! We drove through the La Serena grasslands (reminding Lee and I of our Alaskan homeland), finding Great Bustards, Pin-tailed and Black-bellied Sandgrouse, Stone Curlews, Little Owls, and much more. Then we went on to the castle at Benquerencia where we were thrilled by a Bonelli's Eagle, two Blue Rock Thrushes, and 5 Eurasian Griffons! Unfortunately we had to hurry away too soon to get Lee to her bus back to Madrid. Afterward, Jorge, Mo, and I continued onto Presa Gargaligas where we helped Pipe and fellow grad student Manolo set up cannon nets for a duck capture the following morning.

7 February 2013

At the leisurely hour of 09:00 we drove up the Presa Gargaligas, made sure that some ducks were in the capture zone, and used a remote control to fire the cannon nets. The catch was successful, netting 14 Northern Pintail and one Northern Shoveler. As only one

pintail was needed (to receive a new satellite transmitter), we far surpassed what Manolo and Pipe had hoped for.

After a brief stop to see an Eagle Owl nest (!!!!!) that Pipe had found, Mo and I got back to work resighting godwits. Quick stops in Santa Amalia and Hernan Cortes gave us more than 2,000 birds and 47 ringed individuals (31 Dutch birds). We then watched the nightly roost site display, although tonight only 14,500 godwits showed up. We are not sure if this means that a second roost is being used or if some birds have begun to move on.

8 February 2013

This morning we started out at Almoharín, which we had not checked in quite a while. In spite of finding nearly 2,000 birds, we were a bit disappointed, as this was a smaller number of birds than we had been finding at the site. Nonetheless, we read many rings — 61 in total and 31 Dutch birds. Our afternoon was far less fruitful: A tour of recently occupied sites at Valdehornillos, Ruecas, and Hernan Cortes yielded barely 500 birds and very few rings (only three Dutch-ringed birds). It appears that a mass exodus did take place over the past few days. Tomorrow we will range farther afield to see if all of these birds have left Extremadura or just moved to other rice fields.

9 February 2013

Today Mo and I started out in Santa Amalia and found our faithful flock of 1,500 birds. Unfortunately many of them were feeding in a dry rice field filled with stubble, which makes ring reading hard. In the afternoon, we made our way through Vivares to Casar de Miajadas, Puebla de Alcollarin, and on to Palazuelo. We found no birds en route and in Palazuelo we only found a small group of 150 godwits and four Dutch rings. On the way back, we drove south through extensive rice fields on our way to Hernan Cortes, again with no godwits. Hernan Cortes was frustrating, with godwits flying before we could even pull the vehicle up and pull our scope out. We did see three of our satellite transmitter-carrying birds and they were all doing well.

Over night we received our first complete set of tracks for the 15 transmitter-carrying birds. We had hoped that these tracks would help us find the “missing” 20,000 birds.

Instead, all of the birds seem to be sticking to the places that we have already been checking: Alhomorrin, Hernan Cortes, Ruecas, and Santa Amalia. Maybe those 20,000 birds are soaring up in the sky all day long????



Flock near Santa Amalia (Photo Jose Masero)

10 February 2013

Today we did a grand tour of the known godwit sites and had good success scanning birds. It was clear, however, that many birds had left. Total number of birds and number of Dutch-ringed birds were both down significantly from 4-5 days ago. Nonetheless we resighted 69 ringed individuals, 30 Dutch individuals. However, only four of these Dutch birds were new resightings for the expedition. We thus may have reached saturation point for this group of birds.

The shock of the day was witnessing the shooting of 10 godwits at a site very near to the town of Santa Amalia. As we were reading rings at 17:00, a car sped up to the godwit flock we were observing and, before the birds could take off, fired three quick shots. The car then sped on a little way down the road before turning around, stopping by us to stare us down, and then continuing back to pick up their quarry. All of the men were wearing masks and it was clear that they were very uncomfortable (and surprised) with us being there. After getting their license plate number, we quickly left and called the police. Hopefully with their help these people can be apprehended. More generally, the event

explains the extreme skittishness displayed by almost every godwit flock that we have encountered. Very sad.

11 February 2013

We spent this morning in the police station in Santa Amalia filing an official complaint against the hunters that we saw yesterday. The police were very helpful, at least, and took us seriously. They said that they knew the men we were talking about immediately and said that they “shoot anything that moves.” Apparently we cannot bring them to trial without agreeing to stay in Spain for the next two months, but the police can fine them. So hopefully this all will act as a deterrent against them hunting godwits in the future... We spent the afternoon back at Alhomorin, our old friend. We found our faithful flock and were able to pick out four new combinations from amongst the 2000 or so birds. I am not sure where we would be this year if Pipe and Mo had not discovered this site.

12 February 2013

We spent the morning in the stubble fields of Hernan Cortes. Another faithful flock that yielded a few new birds this year. This afternoon we spent exploring west of Medellin and Yelbes, with no luck. Then, on our way through Yelbes to Santa Amalia, we came upon a completely unexpected flock of 1700 godwits in a spot that we had checked 4-5 over the past few weeks without ever seeing any birds there. Today, though, it was chalk full of godwits and many of those godwits had rings. We found 23 Dutch birds, of which 7 were brand new. A very good afternoon indeed! And we know where we will be first thing tomorrow morning...

13 February 2013

This morning we started out in Yelbes trying to refind the large flock that we had observed there yesterday evening. We were more than a bit disappointed to only find a few hundred birds there, most of which were without bands. From Yelbes we moved on through Santa Amalia to Casar de Miajadas, where a satellite transmitter bird had reported from yesterday. Casar de Miajadas is another site that we had previously checked, but never found anything. Today we found a number of small groups of birds

totaling no more than 400, also with very few bands and no trace of the transmitter-carrying bird. From there we went back to Alhomorin. There were found lots of birds, nearly 2000, but very, very few ringed birds. Finally it was back to Yelbes where we now found ~2000 birds, but very few rings. It appears that we have received another wave of arrivals from somewhere else and that this wave is comprised of very few Dutch birds. Given the intensive effort to ring godwits across much of the breeding range, I wonder where these birds breed. Sweden? Eastern Europe? Who knows?!

14 February 2013



Today was only our second foggy day of the entire trip; not bad given what it sounds like has befallen previous trips. We thus didn't get started until rather late, but our day was incredibly productive nonetheless. We read more than 30 Dutch combos, 60 combinations in total, and resighted 7 of our

satellite transmitters! Our stops included Hernan Cortes, Medellin, and Santa Amalia. With the exception of Medellin, all of the flocks that we encountered were larger than a 1000 birds. That is my kind of day! Our resighting efforts ended this afternoon very unexpectedly though. As we were reading through a flock, the entire group suddenly took off as a raptor swooped in. This was highly unusual and we had all been commenting on how little predation seemed to play a role in the environment here (for godwits at least). What made this more unusual was the identity of the raptor. At first we thought it might be an eagle, but after conferring with the bird book, we determined that it was a Long-legged Buzzard, a species normally resident in Northern Africa! For all we know, this may be the only Long-legged Buzzard currently in Europe and it decided to try to catch a godwit in front of us! After that, we headed over to Hernan Cortes again to try to watch

the godwits as they returned to roost. Unlike previous evenings, tonight the godwits spread out amongst a number of small roosts. It was still spectacular to watch ~16,000 godwits descend up the rice fields. An excellent way to end a fun day and our time in Extremadura.

Team 2

Haije Valkema and Pieter Breeuwsma

1 February 2013

It is 6 o'clock in the morning, we meet each other on the carpool place in Bolsward. After a good travel without traffic jam we arrive at 7.30 p.m. on Schiphol airport. At 10 o'clock we are on our way to Barcelona. Our next flight from Barcelona to Seville is 10 minutes delayed but this is not a big deal. When we arrive in the arrival hall Rocio arrives on the same moment, great timing. She will help us with the car rental. We get a nice 4X4 car, a big one! After we received the car we drive to Rocio her home. At this moment we enjoy a beautiful Spanish sunset. Tonight we stay in Seville and tomorrow in the early morning we depart to Portugal, first we want to check the Sado River. Hopefully we can find a lot of Godwits there.

2 February 2013

Today we travel from Seville to Foros de Salvaterra, again a day of traveling. We started the car at 7.30 a.m. and arrived about 12 o'clock in the Sado delta. During the car travel we saw a very beautiful group of 15 Griffon Vultures, Zitting Cisticolas, a group of Iberian Magpies, Eurasian Hoopoe, Red and Black Kites and a Black-winged Kite. In the Sado we checked first the complete south side of the river. Our first impression was very good! There were a lot of wet rice fields and most of the rice farmers start with plowing. In every area (U, T, S, R, P, Q) there were lots of suitable rice fields for Godwits. Unfortunately we were not lucky here, we didn't find any Godwits. Our last stop was Zambujal, previous year a good place for the Godwits because it was almost the only place with wet rice fields. This year the rice fields were also suitable, we found about 2000 Glossy Ibises but no Godwits. We walked around the whole area because the roads were too wet for driving. After this walk we call the day and drive to Foros de Salvaterra. Lou Scheurs was waiting for us. He showed us our home for the next 9 days. We stay in the same house as previous year.

3 February 2013



Big Flock with Godwits were present at the Giganta rice fields

Yesterday we did not see any Godwits, so today we need to find them, we were two men with a mission! We started at Benavente, we saw wet rice fields but no Godwits. The next stop was Porto Alto, previous year a good place for them, but all the rice fields were dry! We decided to talk with people from the big rice company nearby Porto Alto. Because it was Sunday we did not know if there were

any persons who could help us, but we were lucky. A friendly guy from the rice fields was there, he was also a biologist so he knew a lot of the area. He told us that there were thousands of Godwits in the rice fields from the company. We paid 25 surety for an access card.

We drive through the gate of the Giganta rice fields and after a few minutes we saw them! BINGO! We found them! The first flock we saw was a couple of 1000 birds. After an hour they flew away so we need to move. When we found the Godwits back, we saw incredible numbers of Godwits. First we counted 15.000 birds. After a whole day of reading the rings we located a rice field where they came for resting. We counted them again and our minimum estimation was 30.000 birds, but probably more, about 40.000. Great numbers of birds! At the end of the day we read 50 birds of our own projects and another 36 birds of other projects. A nice score!

4 February 2013

Today it was a long day with a lot of sightings. We started early in the morning at 8.00. When we arrived at the Giganta rice fields it was the same as yesterday. The Godwits were wide spread over the rice fields, they have plenty choice... For us it was nice to read a lot of combinations. We could choose the most suitable fields to observe color rings. The best fields to read combinations were 'clean' fields without high rice stubbles.



After a whole day of reading we read about 180 combinations. We count that the Godwits number are about 45.000 instead of 25-30.000. Hopefully we can count them more exactly after tomorrow. After a long day in the field we spend another 2,5 hours for the database administration.

5 February 2013

Today we started at 8.30 in the Giganta Rice fields. The Godwits were still there so the rest of the day we could check birds flock by flock. In average there are about 4-5 flocks



Special developed tractors plowing the rice fields. First they flow the rice fields with water from the Tajo River to make it suitable for plowing. After this they plow with big radar wheels.

differ in numbers from a 400-500 until 10-11.000 birds. For us it was easy to read the Godwits, after a couple of days they just accept our presence. We could stay about 40 meters from the Godwits, so nice observation conditions! After a whole day of sighting we call the day at 16.30. We checked some other ricefields nearby Samora Correia but we could not find any more Godwits there. After a couple of hours administration work

we find out that we read 120 different ring combinations from our own project and another 110 different ring combinations from other projects.

6 February 2013

New day, new round... Today we started at 8.30 in the Giganta rice fields again. When we arrived the most birds were still sleeping. So for us it was a nice chance to get an impression about the total number of birds in the area. The birds are sleeping in the rice fields from the company, they made a big nature reserve with wet fields, about 10 cm water. A perfect sleeping place and only 400 meters from the rice fields they use to forage. After a while the birds started to fly to the rice fields. We counted 45.000 birds (later that day we counted nearby the same numbers of birds). So the most birds start to eat at 9 o'clock (more than an hour after sunrise!).

We did more than 100 different sightings before 13.00. Yesterday we agreed with the birds that they could walk 40 meters from us, today we made a new (read: better) agreement. They came 15 meters from us and we could just walk out the car, no problem they accept our presence. Pieter saw a bird with only an aluminum ring, he could read the whole number



combination, incredible! In the afternoon we decided to check Salinas do Samouco, a beautiful reserve with salt pants that we discovered previous year. We met Marcia again, she is a biologist there. It was good to see here back, she gave us permission to check the area. We found about 200 Godwits, without color rings. In the end of the afternoon we drove back to the Giganta rice fields and counted again the numbers of Godwits there. Again we counted 45.000. It is the best estimation we can make with this circumstances. They fly in the end of the day very much and do not sleep at one place but use a couple of ponds to sleep in it. Tomorrow we are going to concentrate on coloring reading again and

hopefully we can read more than 250 combinations. Today we read 120 combination total.

7 February 2013

We started at 8.30, again we visited the Giganta rice fields. Most of the birds were still sleeping until 10.30. We guess that they are in very good conditions and don't need to eat a lot. Until 10.30 most of the birds just stay on one leg. The rest of the day we read coloring combinations. The birds start to move to another location in the Giganta rice fields. There are 5 farmers with tractors plowing the rice fields so every day there are more rice fields suitable. The last 2 days they stay at one location about 250 hectare but they are moving now to another place. We get the impression that the numbers of birds start to drop down, but maybe it is because they are more widely spread over the area. Today we read 105 combinations from our own projects and another 50 combinations from other projects.

8 February 2013

A new day, again we visited the Giganta rice fields. We checked also some other rice fields at Vila Franca (H1,2,3), a lot of rice fields are also suitable for Godwits there, but they only stay in the Giganta rice fields. Here are at least 500 hectare rice fields are suitable for them so we guess there is no reason for the Godwits to leave this area. The Godwits are in great conditions, they keep sleeping until 11 o'clock, some Godwits sleep almost the whole day!! So we started a little bit later at 9.30 and waited to 11 o'clock when the Godwits start to forage. They sleep on very wet rice fields, at this fields it is almost impossible to read colorings because they stay until their belly in the water, stay most of the time on one leg and stay very close to each other... We read the whole day coloring combinations until 4 o'clock (they became after 16:00 in sleep modus again...). Because there was a very strong wind it was hard to observe them. For this reason we only read about 80 combinations... Hopefully they start to forage tomorrow a bit earlier so we have more time to read combinations.

9 February 2013

Only two more days to go, but today we picked up the second team from the airport in Lisbon. They arrived at 3 o' clock in the afternoon so we could read the whole morning color rings in the Giganta rice fields. Again they start about 11 o'clock with foraging activities, before that we only could read a couple of color ring combinations. We get the impression that the numbers are dropped but still there are a lot of birds in the area (very hard to count, they are wide spread and fly a lot). Atleast we saw 30.000 birds today.

In the afternoon we pick up Ysbrand and Gjerryt from the airport. We drive again to the Giganta rice fields and did observations until 18.00. After that we drive back to Foros de Salvaterra. In the evening we eat something in a local restaurant and call the day. For us it was a great experience and tomorrow we fly back home!

Team 3

Gjerryt Hoekstra and Ysbrand Galama

10 February 2013

Arrived yesterday in the Portuguese sun, today on our first full day we had to cope with some showers, and foggy weather. It was windy and temperatures dropped to about ten degrees.

Haye and Pieter showed us the site with the majority of the godwits. However they seem to be spread out a bit more this day. We found about 10 thousand of the birds in the Giganta rice company fields and started to read colourings of al projects with fresh enthusiasm. It resulted in quite a good day given the circumstances. About 60 godwit rings and 10 spoonbill rings.

All day we spent in the same area, because the godwits where clustered. This was a side effect of the higher water level, because it rained a lot; that saved us a lot of driving around and searching for birds. In the end of the day after we dropped the other two guys at the airport. We did a bit of exploring in the area for good spots but it had no result. It really seems all the birds are in the same area. We called it a day around 6, since we had to organise the house and enter the freshly harvested data.



Flock of godwits in the Giganta Rice fields

11 February 2013

Started today at 8 o'clock and drove to the Giganta ricefields near Porto Alto. Then we made a tour to count the total number of godwits that were present in the rice fields. We

drove all the roads checking for flocks of godwits. In total we came to an estimate of approximately 18.000 individuals. Later that day we read about 60 new colour combinations. The godwit flocks were very weary and difficult to approach. After a day spent reading colour bands we returned to Salvacassa at noon. When we arrived we entered the collected data in the computer database.

12 February 2013

We drove off to the rice fields at 7.15 taking the first light with us on the road to the field of Giganta Rice Company. The place to be as it seems this year. We found the birds on the same place as the day before, today they were all on the backsides of the fields, huge fields, this made it hard to read rings, also today it was cloudy again which isn't really helping either. We tried out our new technique of walking slowly toward the godwits. This worked well for the sleeping groups, because we came much closer and the birds in the front started to walk a bit, we spent all day doing this and also from the car we tried. After all it was hard working but good result, about 90 different birds one or both of us saw. We read one stilt band and some ruffs. Also we saw a marsh harrier with prey on the ground, when we checked it where the remains of a godwit. No rings on those legs. At the end of the day at about ten past 6 we saw some flocks moving to one corner of the area, the sleeping place, we did a count there and came to a number of around 22.000 spread over 4 fields, a magical sight. Also other species like gulls flocked together on their roosts. In the darkness we drove back to enter some serious data.



Godwit legs with no rings..... and Ysbrand observing a resting flock of godwits.

13 February 2013

Today we started like yesterday as soon as the light allowed to read the rings, ready to spend another day in the Giganta rice fields. In the morning we started to walk towards the birds on the rice fields edges. They were sleeping in the back of a big field and every ring could be considered as a bonus. After reading some rings we went back to the car and drove to some other fields nearby. The light was much better and this resulted in a nice result of an hundred colour combinations. Among them two chick flags who are usually hard to read, because they carry a small code of three digits. From eleven the birds were foraging and we found a new field halfway the afternoon where thousands of birds where feeding, this was amazing colour ring reading, which lasted till darkness fell over the birds. At 7 we returned at the house and of course entered all the data.

14 February 2013

Today we thought it was a good day to check the south side of our control area, the Sado riverbanks. Early in the morning we arrived at Zambujal, we saw a group of 300 godwits passing, but non of them on the Sado area, lots of glossy ibis and storks. We marched across a huge area and found none. We came across some snipehunters in action and talked a bit whit them in the few Portuges sentences we learned. It was nice, but it didn't bring us to the birds. In fact we didn't find any in the south, on our way back we stopped at the saltpans and read 5 Icelandic colour ringed godwits.



Halfway the afternoon we were back in the Giganta ricefields feeling happy, the godwits are these days spread over 15 fields or more, so we passed those fields and tried to read all the good once and pass to another field, like this we managed to read quite an amount of rings in a relative short period, about 50

each. In the end of the day we did a roost count again since a peregrine falcon chased the

godwits to the roosting place, a marsh harrier seemed to stalk him and profit from the panic he caused. But this is just a theory. We counted again around 20.000 birds; we estimate the max in the area on 25.000 birds.

After the roost counts we checked a place with thousands of shovelers and pintails, a fantastic sight. On the way back, still in Giganta we saw an otter passing the road. Some grey kites were hunting and we saw about 7 short eared owls hunting in the last daylight. Of course we ended the day entering data.

15 February 2013

Today we wanted to make a full good day in the Giganta rice fields, half past 7 we were present in the rice field waiting for the godwits, in the end the godwits were almost in the car and still invisible because of a tight mist. The mist lasted until half past twelve, quite frustrating. We could do nothing else than wait our time, we read one ring in the morning and did some bird watching on the sea side where it was a bit less foggy.



As soon as the sun started to rise, the temperature went to good real quick. We were thinking we could score now, but the godwits were spread over a lot of fields, everywhere where flocks of a few hundred up to a few thousand. We could read the rings in the groups but approaching is always time

consuming and we often had to switch because there were not much ringed birds. In the last half hour we finally had a big good group to read, but then the light was abandoning us to quickly, we roughly made a score of a big fifty colour rings each and we read one ruff. Reading a ruff is nice work, their often quick and can keep u busy for longer time. We left the rice fields quarter past six, a bit disappointed but ok, we did the max we could.

16 February 2013

It started again with a thick fog that lasted all morning, so we couldn't read rings in the morning. That was a bit frustrating of course, but as soon as the mist disappeared we saw the birds going on a newly ploughed field. It was a good spot for the birds, they were really happy and busy foraging so we could approach them a bit better. We read quite some rings there. Pete Potts a fanatic English ringer came to join us the afternoon which was nice. The light turned bad quite quickly and it was never really clear, we stopped a bit earlier for that reason and checked out some other birds. As usual we left the park at sunset.

17 February 2013

Today we woke up early and went to the rice fields at Giganta. We arrived at about 8 o'clock and saw some foraging groups on the rice fields. But it was difficult ring reading because of the continuous rainfall. The light was bad due to the constant showers. Nevertheless we managed to read some colour combinations. We also saw an otter on the rice fields with a big flock of black crows alarming above it. Later that day the weather



cleared up and we managed to read about 40 combinations each. Also we managed to score some chick code flags. At about 6 we drove to the airport to pick up the following team. After we picked them up we went back to the house in Forros da Salvaterra. After dinner we entered the data in the computer.

Female godwit with code flag LIAALB ringed at the Workumerwaard.

Team 4

Marten Sikkema and René Faber

18 February 2013

12C Wind 1-3 South

At 8.15 we (Gjerryt, Ysbrand, Marten en René) leave the apartment and head straight for the Giganta and Ponta d'Erva ricefields. We go to the location where Ysbrand and Gjerryt have been observing the godwits recently. In the rice paddies surrounding a former roost of the Black-tailed Godwits, there are still a few hundred birds foraging, among which some colour ringed birds and one bird with a code flag. We then continue to the place where the godwits have been staying for the past few days.



Foraging Black-tailed Godwits, which blend perfectly into this rice field with stubble leftovers. Nice detail is the fact that YIYBYB was seen on this same paddy daily, from 18-24th of February.

There are still about fifteen thousand birds present surrounding the rice paddies which they now use for roosting. We read about 40-50 individual combinations. The birds are scattered across many rice paddies and seem to forage in smaller groups (300-1000 birds), while other (larger) groups are resting.

It looks like many paddies are on the brink of depletion of rice, which might explain the nomadic behavior of the birds. A nice feature was the discovery, made by Marten, of two Egyptian mongoose (*Herpestes ichneumon*) on the dike of one of the rice paddies.

At four o'clock we leave for Lisboa Airport to drop off Gjerryt and Ysbrand. At the airport we briefly meet with José Alves. We agree to have dinner later this week and will see whether we can join him on one of his catching attempts.

19 February 2013

14C Wind 1-3 South/ South west spells of rain from noon onwards

At 8.15 we leave the apartment. At night it has been raining heavily so the road and tracks are even wetter than yesterday. We head straight for the Ponta d'Erva rice fields. In the morning we observe as many birds as possible in the rice paddies on the east side of the road that leads from the Ponta d'Erva gate to the 'House with the palm tree'. We read many rings and take some samples. It's remarkable that the birds use two paddies for foraging, while most of other birds are sleeping in four of the other paddies. Surrounding the sleeping birds there are always dozens up to 200 birds foraging on the side of the paddy. While scanning and counting all the paddies, we estimate that there are about 15-20.000 godwits in this area. About 12.000 birds are in the paddies we visit. We estimate that about 8-9.000 birds are resting. Of the remaining birds we have fully scanned about 2.000 birds for colour rings.

At 12.30 we take a break, the moment at which the weather turns rainy. A heavy shower accompanies us to Porto Alto, where we have a good cup of coffee. After half an hour we first scan the Samora Correia and Ze do Pinho area. In Samora Correia there are only a few paddies prepared for rice sewing, most fields still have to be ploughed. In Ze do Pinho some fields haven't been ploughed yet, others seem to have been ploughed in the fall, following the harvest. They still need to be ploughed before leveling the fields.



Unploughed rice field at Ze do Pinho

In Salgadoinho we see the same situation. We return by driving past Ruivo, Cara Larga and Toneca. Here most fields still have to be ploughed too. We then arrive at the N10 and enter the Giganta ricefields. Here at the paddies surrounding the old roost there are still a few hundred birds around, of which none are colour ringed. We then move on to the Ponta d'Erva paddies, which we scan from 15.00 to 18.15. The birds are still foraging in the same paddies as this morning, there are more birds foraging though, also spread over more paddies. From 16.30 onwards they start *hyper foraging*, moving swiftly across the paddies, from left to right. Most birds are foraging in the back of the paddies, but are being driven towards us by a marsh harrier. From five onwards the sun breaks through and we have excellent conditions for observing.

We read many colour rings. At 18.19 we call it a day and head for home. In the evening we calculate that today we read 61 individual birds of the RUG-scheme, of which 50 were new compared to yesterday

20 February 2013

15C Wind 1-2 East 8.15-11.00: misty 11.00-15.45: sunny 15.45-18.15: cloudy

Again it has been raining at night. However, when we wake up in the morning there is a heavy fog. We have a late start because of the fog. At 11.00h when the fog disappears, we make our first resightings. First we do a lot of resightings in the same paddies as the past few days. We see quite a lot of birds there that we haven't seen before. We also notice Black-tailed Godwits flying in from the north and landing there to rest. This is the first clue to start searching for godwits in the area. We drive around just after midday and see a large flock of birds together with gulls descending in a field. We didn't have to search long before we find the right field. Approximately 2700 BTG are foraging in a paddy where we can see them perfectly. Black-headed gulls are abundant and also some redshanks are present. In this paddy we see 11 godwits that we didn't see before. We also see a Ruff with RUG color rings which we manage to read. After we have scanned about all the legs in the group we drive back to the site where we have been observing the past few days. Due to heavy clouds we can't continue to read color rings as long as yesterday, but still we do read a few more.

In total we read 48 color rings of the RUG-scheme, of which 35 weren't seen by us in the past few days. We estimated about 23.000 BTG present at the roost, a little more than a few days ago. So it seems that new birds arrived in the area.

21 February 2013

15C Wind 4 SouthWest sunny

At nine we start at the new location where we found the flock of 2700 birds yesterday. The birds are there, a flock of about 3000 birds. We scan the flock for colour rings and read quite some combinations. Then, at 9.30, the owner of the rice paddies drives by and summons us to leave his premises. We seem to have entered private property where the access pass of the rice company is not valid. Later on, a second attempt to convince him of our good intentions and quiet behavior, doesn't convince the owner. He hangs on to his sturdy behavior, showing no interest what so ever in talking. Disappointed we leave and go back to the former location of the birds at Ponta d'Erva.



Black-tailed Godwits arriving at the newly discovered location in the Giganta rice fields. Unfortunately the owner doesn't allow us to be on his premises...

On our way to Ponta d'Erva we run into a nice flock of 500 birds, which are excellent for sampling. We take a sample, read six colour ring combinations (3x RUG-scheme, one German bird and two Islandica's) and then drive to the place where we ended our session of yesterday with 23.000 birds. Now there are 5-6.000 birds remaining, most of them are sleeping. This means that we have seen less than 10.000 birds this morning, quite different from yesterday's maximum. A scan in the surrounding area, including paddies that were ploughed yesterday doesn't show any godwits. We seem to have lost a lot of birds and will look for them tomorrow as we decide to go to the Sado estuary now.

This morning, in the Giganta/ Ponta d'Erva rice fields, we only read 11 color rings of the RUG-scheme, of which 7 weren't seen by us in the past few days.

The rest of the day we perform a thorough scan of the Sado Estuary. We start at Zambujal (block K), no godwits. In Marateca (L) and Palma Bridge (M) no godwits either. At Monte Novo da Palma (N) no luck, though there are quite some suitable fields. At Alberge (O) three rice paddies seem suitable, no birds here. At Alcacer do Sol (P+Q)

many fields were ploughed but no godwits. On the south side of the Sado estuary (N/R253) we visit the rice fields at Batalha, Santa Maria do Castelo, Montovil & Cachopos (R), Monte Novo do Sul (S), Carresquiera (T) and Comporta (U). At Montovil and Monte Novo ploughing is in progress, but no godwits. At Comporta (U) almost none of the paddy fields have been ploughed yet, still in stubbles. Our afternoon without godwits is being compensated by two short-eared owls at Comporta and a good cup of coffee in Alcacer do Sal.

22 February 2013

15C Wind 4-5 SouthWest Rainy in the morning and in the afternoon

Today we have an early start because we want to see where the birds from the roost (at Ponta d'Ervã) fly to. This is because we have the impression that we haven't seen a part of the birds during daytime, we don't know where they are. We arrive at the roost just before seven o'clock. There are about 10.000-12.000 birds in the middle of the rice paddy-complex. To our great surprise many birds (8.000 more or less) arrive from the Northwest before eight o'clock, joining the already present birds. From 8.00h onwards large flocks swirl up high and then leave in formation to the Southeast. We estimate that about 8-10.000 birds leave the area. When we look at the paddies again we notice that in the meantime (while we were looking at the leaving birds) many birds have also left, supposedly into the Giganta area. We decide to go and look for them. When we leave the roost there are 3-4.000 birds remaining, which are mainly resting. We read a few colour rings of the birds that are foraging on the edges of the roosting groups.

We then go to the surrounding paddies where we find about five hundred birds, some of which are ringed. Further down the road –at the place where we were expelled from yesterday- we can see about 3.000 birds foraging. It's frustrating to look at the forbidden fruit, which can't be picked! After having worked for three hours in the pouring rain with steamy windows we decide to have a warm cup of coffee in Porto Alto. While enjoying our caffeine boost we agree to look for the birds that we saw leave to the Southeast. We try Barraco d'Alva (Block J), where we find rice fields that haven't been ploughed yet. Then we drive to Muge, where we have a look at the location where last year 2.000 godwits were seen in a rice paddy underneath the viaduct of the IC3. This year we can

see the effect of the wet season. The paddies are almost too deep for Spoonbills, so not suitable for hungry godwits. These paddies are situated in the lowest part of the valley, which explains why they were wet last year, during a dry winter.

From here we drive back to Giganta, checking out Ruivo, Toneca and Cara Larga on our way there. At Ponta d'Erva there are only 3.000 birds on the roost location. We scan the surrounding area and see a large flock of 2.500 Black-tailed Godwits joining the group (3.000) at the location we're not allowed to enter. This means that 5.500 birds are out of reach, which is rather frustrating... We go the office of the rice Company to see whether their biologist, Andrea Silva, is around. Maybe she can call the owner of the 'forbidden fruit-paddies'. She's not around, but the people at the office tell us where she is. We drive there, but get lost. Then we return to Ponta d'Erva and are welcomed by a roost that is fully packed which 14.000 (+ or - 2.000) godwits. They are preening and resting, preparing for the night. They are chatting loudly and lift twice, which truly is a breath taking experience! Today we read 14 unique colour ring combinations of which 4 were new to us.



Black-tailed Godwits at Ponta d'Erva 22-2-13

At 18.20 we drive to the spot Northwest of Ponta d'Erva, where we expect the birds to be roosting that came from this direction in the morning. It's empty... We then drive to Alcochete, where we have dinner with José Alves, Pete Potts' British guests and a group of French scientists, headed by Guillaume Gélinaud.

23 February 2013

15C Wind 6-7 North-northwest Sunny/ lightly clouded

First we check out Ze do Pinho. Nothing has changed here, no suitable fields for godwits. At Ponta d'Erva (the roosting paddies) a surprise awaits us: The paddies are filled with godwits, of which many are foraging, even in the paddies in which the birds are belly deep. The past few days only 10% of the birds in these paddies were foraging, while the rest were resting. Now much more birds are foraging. The only explanation we can come up with is that the strong wind generates a current that makes rice grains accessible that were previously inaccessible. Despite a strong headwind we read many unique combinations, up to fifty in 4 hours of uninterrupted observing, among which two birds with code flags.



Typical (left) and peculiar (right) behavior of Black-tailed Godwits. Foraging on the front side of the paddies, near the dirt track as well as on the dirt track....

At 14.30h we have a break after the godwits have been attacked by a peregrine falcon. At 15.30h we get back to the paddies where many birds have left. As we observe the remaining birds, there's another attack by a peregrine falcon. This evokes a heavy panic and the birds spread out in small flocks of a few hundred birds that scatter across the paddies. Shortly after quiet has returned, there's another alarm. Many Black-winged stilts

and godwits are hanging above a paddy in which one Black-tailed Godwit with a broken wing is desperately trying to get away. We try to see what the birds are looking at, but we can't see anything. Maybe it's a snake?

After this the birds retreat at the far side of the paddies, we decide to scan the area to see where the other birds have gone. We find a flock of a few hundred birds nearby, in which we find another 3 colour ringed birds. Driving on we see an adult female peregrine falcon that is hunting. We follow her charge and see her end up in a flock of 700 godwits. They flee and fly back to the roost. We accompany them and read a couple more rings. After this we end our day at the 'Palmtree house' where Marten reads a ringed avocet.

We end the day with a score of 53 unique combinations of which 32 (60%) were new for us. Interesting feature is that we saw more ruffs in the flocks of godwits today.

24 February 2013

15C Wind 5 North-northwest Sunny

Today we spent all day at the Ponta d'Erva-Giganta ricefields. When we arrived at the rice fields we see several large flocks of godwits scattered across the sky and a Peregrine falcon beneath them. By the time we arrive at the paddies which are most frequently used about 10.000 birds are resting in dense groups. This makes it almost impossible to read rings. We start looking for smaller groups that are foraging in the paddies nearby.

Then, far on the horizon, all of a sudden we see an enormous flock of Godwits being chased fiercely by a Peregrine falcon. The Peregrine performs several attacks on the godwits. Apparently the Peregrine has an appetite for Godwits, the last 3 days we have seen it hunting Godwits several times. The area where the attack found place is unknown territory to us, we reckon there might be suitable foraging paddies with high numbers of Godwits we don't know about. We search for it for a while, but can't find it. The search lead us through Porto Alto, a good moment for a coffee break. When we arrive at the rice fields again the biggest groups are still resting. So, again we're reading rings in the smaller foraging groups. There we have difficulties with the bright sunlight (glare on rings, high contrast) and birds that are in belly deep water, but still we see quite some rings. We also read rings of three Spoonbills and a Ruff. The largest group of Spoonbills seen was no less that 343! These are probably all of the Spoonbills present in the area.

We have to return the key card to the rice company at 17h. But just before we have to stop we had a nice ending to our week of fieldwork, a very large group of foraging Godwits with all the legs perfectly visible in the lowering sunlight. Perfect conditions for ring reading!

We end the day with a score of 31 unique combinations of which 18 (58%) were not seen before this week. The results of today bring our total at about 170 unique combinations of the RUG-scheme, of which 115 (73%) birds were ringed in Southwest Fryslân!

25 February 2013

Today is the day we return the 4WD to Sevilla and from there move on to the east of the Iberian peninsula. We arrive in Seville at 13.00h, clean the 4WD and have a nice meet 'n greet (lunch) with Rocio Marquez Ferrando. After this we hire a car at the airport of Sevilla and together drive to Northgate where we return the car. At 18.30 we head for Valencia.

26 February 2013

Wind 2 Sunny 15 C

After a long drive of almost 700 kilometers, we arrive in el Parque Nacional de L'Albufera at 3.30h. After a friendly check-up by the Guardia Civil, we sleep a few hours in the car and then meet with Nacho Dies. He invites us to the reserve Racó d'Olla, a former horse race track which was turned into a nature reserve in 1993. It's a well-known roost (and safe haven!) for godwits and right now there are 1.200 birds present, which are preening and resting. It's unknown whether they have slept here or have arrived in the morning. The same behavior was seen in 2009 when René Faber and some fellow godwit aficionados visited the Albufera NP. Back then the godwits arrived at 7.15 and preened and rested and then flew off to the rice fields.



The group of resting and preening Black-tailed godwits in Racó d'Olla

Today the birds stay until 10.40 and then fly to the rice fields. We have an excellent morning at Racó d'Olla, we read 5 colour ringed birds, which is great. After the birds have left we have a coffee in El Palmar and then drive to the rice fields where the birds have been seen recently. They are in a paddy field-complex called El Campot. At arrival (12.00) we count some 1.500 birds, at 14.20 this flock is joined by another group of 700 birds. This totals 2.200 birds which we can scan in the most ideal way! Because they forage on a paddy next to unpaved tracks that are somewhat higher than the paddy, the paddy has been ploughed and leveled so we can see the legs of the birds perfectly. In total we read 23 colour ringed birds, of which 19 belong the RUG-scheme and take some excellent samples.

Between 17.00-19.00 we perform a roost count at Racó d'Olla, but there are no godwits. This doesn't spoil our day though as we have read many many colour ringed godwits, which provides us with great information about the prenuptial staging of this species in eastern Iberia.

27 February 2013

Wind 4-5 Cloudy till 15h, Sunny after 15h 15C

At 7.30 we meet Nacho Dies at Racó d'Olla. From the bird hide we have an excellent view on an estimated 2.200 godwits (comparable to yesterday's count in the ricefields of El Campot). We don't know if the birds have arrived at night or early in the morning¹. Even though there's a strong back light we manage to read seven colour ringed birds, among which three new birds and two birds with a code flag! One of them is L1P28B, which was ringed in Southwest Fryslân as a nesting chick in May 2009 and then seen in Albufera in October of the same year. Since then it has been seen in Albufera yearly. So far unpublished records of Nacho Dies show that from July 2012 to February 2013 the bird has been seen in El Racó d'Olla, which proves that 'P28' is very loyal to this area and uses it for wintering!

At 10.25 all birds have left El Racó d'Olla. We then head for El Campot, where we find a few hundred birds foraging. The other birds are resting in a nearby paddy. When they



Black-tailed Godwits foraging at El Campot. Perfect conditions for colour ring reading!

¹ The aforementioned visit in 2009 showed that the godwits arrived at 7.15h, spent some time preening and resting and then returned to the ricefields.

start leaving, most of them head for the ricefields of La Tancat de Baldovi. We decide to go there but the entrance is closed. We walk to the fields, but encounter a few dogs and decide to go back. While returning we see the flock being disturbed and fly back in the direction of El Campot. We follow the birds. This process of shifting flocks continues all day and –as we note later on- is caused by the presence of a booted eagle. At El Campot we observe the birds and resight many of the birds we saw yesterday (and this morning at Racó d'Olla). We also take some detailed samples.

At El Campot the Godwits are on a very flat paddy where they were observed perfectly. While checking for colour rings we started to notice that the Godwits are walking a lot while foraging. In the rice fields around the Tagus Estuary in Portugal they could be standing in one place for a long time. They often had several food items in one spot (supposedly several rice kernels, possibly from one spike). However, here in El Campot the Godwits were obviously visually seeking their food items. We then started to carefully observe some individuals up close. It turns out the Godwits were feeding on worms, not rice! We could clearly see worms curling around the bills. The length of the worms was up to 80% of the bill length, but most were 20% of bill length. The smaller worms were eaten in once, the larger took several probes and swallowing movements. The worms were taken at maximum depth; most often the whole bill and the head (up until the eye) went into the soil. We found it remarkable that the worms were searched for visually, while foraging the Godwits were not probing often, and when they did it was very shallow (1 to 2 cm). For now, it remains unclear what worm species were taken. Some of the smaller prey items that were not seen, might also be other invertebrates such as larvae of *Chironomidae* or even small larvae of the Louisiana crayfish *Procambarus clarkii*. We made two short foraging protocols of in total 5:08 (min:sec) in which 11 prey were taken (5 times definitely a worm).

With this monitoring we conclude our visit to Albufera. It's been a short but very rewarding stay: 22 individuals of RUG colour ringed birds, three 'Moeze-birds' on a flock of 2.200 birds.

A ring density of one in a hundred birds is similar to measurements in other places, indicating that the birds here are part of the same population (and suggesting that we have seen most, if not all, of the colour ringed birds present at the moment in just 1,5 days).

Next to the colour ring reading, it's also heartwarming to be in touch with Nacho Dies and his fellow birders in the area. They have followed the godwits in the area for many many years now (since 1989!) and have an excellent insight in the movements of the birds in the area. The combination of the reserve area El Raco d'Olla and the adjacent rice fields provides the godwits with an excellent area for roosting, preening and foraging in both winter and spring. At 17.30 we leave L'Albufera and drive to the Ebro delta, the final destination of this years' mission.

28 February 2013

Wind 6-7 Clouded and heavy rain all day 9°C

When we wake up in Deltebre it's raining cats 'n dogs. When we return to our hotel at 17.30 it's still raining cats 'n dogs. The rain is accompanied by a strong wind, el temporal, coming from the Mediterranean sea.

At 9.00h we arrive at the office of the PN del Delta de L'Ebre. Here we meet with Antoni Curcó, who informs us on the latest whereabouts of the Black-tailed Godwits and hands us our permit for entering the reserves of the Parque Natural. At 9.30 we drive to Illa de Buda where the birds have spent most of the winter and have been seen recently. At first we can't reach the warden, so we can't cross the Canal de Migjorn (this canal has to be crossed by a manually operated ferry/ pond). We decide to drive to the Torre de Alfacada. From this tower we can scan the area and see whether there are wet rice paddies nearby. We see some suitable paddies in La Tamarit, and see several hunters hunting and shooting a Mallard (hunting is allowed on Thursday, Sunday and festive days), and drive back to the ferry/ pond, but still no warden. On our way back we meet David Bigas, ornithologist in the area. He manages to contact the warden of Illa de Buda, Javier LLambrich, and we now can cross the Canal de Migjorn and enter Illa de Buda. We first have a chat with David and Javier. David hands us some resightings of godwits and ruff which he noted in February. One of the godwits is a bird ringed in Southwest Fryslân in May 2012! David tells us that yesterday 2.000 godwits were present on Buda and together we perform a thorough scan of the Island. Conditions are very bad, strong wind and heavy rains, with some dirt tracks that are –as David puts it- as slippery as shampoo. This is why we use his 4WD. Unfortunately we see no godwits, maybe they

left the island and are to be found elsewhere in the rice fields on the 'mainland' or on La Punta de La Banya. We leave Buda and search for godwits in the rice fields 'on the mainland', but we see no godwits. Because of the rain and strong wind it's hard to scan rice fields afar, but we are quite sure they are not there. On our way to Eucalyptus and Els Muntells we do see one solitary godwit. We have a coffee break in Sant Jaume d'Envega and then head for Rietvell. Here SEO/ Birdlife manages a (rice)farm in an ecological way. We meet the people here and spend some time in the bird hide.

Then we decide to drive to La Punta de La Banya, maybe the godwits stay here and try to find a shallow place to stay dry ... When arriving at La Barra del Trabucador we see it will be impossible to get to La Banya as La Barra is flooded.

We then drive to La Tancada, read some Audouin's gulls on our way there. Meanwhile we have a dry spell for 15 minutes, after which it starts raining again. We have another scan of the rice fields we visited in the morning, but still bad conditions and no godwits. Tomorrow we'll have another go, though the weather forecasts aren't that good.



La Barra del Trabucador, which is flooded so it's impossible to reach La Punta de la Banya

1 March 2013

Wind 6-7 Clouded and heavy rain all day 7°C

When we wake up it's still raining cats 'n dogs. We arrive at Illa de Buda at 8.00 and are transported by Javier. The water in the Canal de Migjorn has risen substantially because of the affluent rainfall. Javier tells us that this storm is the strongest they've had for years. It's quite a job to get our car on and off the ferry.

We scan Buda intensively but don't find the godwits. We save a kingfisher out of some kind of large birdcage with only one opening; it was probably blown in by the wind. We leave the Illa at 10.00 and drive through the adjacent rice field but only see eight godwits flying in the distance without being able to pin them down. Between Els Muntells and Eucalyptus we find a ringed dead barn owl (traffic victim).

At two we drive by the office of the PN and say goodbye to Antoni Curcó. After this we drive to Barcelona Airport, which concludes our successful Iberian mission.

Appendix 1: Fieldwork site details (see maps)

Below you will find information on the most important areas in Tejo, Sado and Extremadura but check other rice fields if you do not find them there. Please use these names for site description and in the database. Red arrows mean that the gate is normally locked. Green arrows indicate free access.

A: Samora Correia ricefields

Take a small road to the left at a crossroads just before you get to the highway. After 2 km you end up at a gate with two ferocious dogs which turn out to be quite nice. We should have a key of the gate. Farmer is called Paulo Caseiro (00351 964200953) but does not speak English.

B and I: Samora Correia ricefields

In Samora Correia take one of the last left turns on the road to Benavente. You will end up at a small bridge from where you have good views over the ricefields. If you turn right (for B) you will see a barn. If the farmer is there the gate is normally open and you can get in (but ask him if it is OK). If he is not there, come back another time or just walk if you see a flock. The fields on the left (I) are normally free to access.

C: Porto Alto, Ze do Pinho

Take the N10 from Porto Alto to the west; take the first big green gate on the right hand side. You need a key card to get access. You can get such a card at the office of the rice company next to the Repsol petrol station several kilometres down the N10. Deposit is €25 and they make a copy of your passport. You can get the card for the whole period. Contact is Andrea Silva. She speaks English and is a biologist.

D: Samorra Correia, Belmonte ricefields

Follow the road heading south from the last roundabout in Samora Correia all the way till you end up at a gate. This gate was left unlocked for us in 2010 after contacting the boss Orlando Silva who lives in SC. He has a storage building at the crossroads about 1 km

before you reach the gate. Contacts there are Nuno Machado and Alfredo Oliveira 00351 917066964.

E: Santo Estevão, Paul de Belmonte

Take the N10 from SC towards the southeast. About 2 km after the last building on the left hand side you will find a green gate. This gate is always locked but if you contact Rui Alves of the Companhia das Lezirias on his mobile 00351 966924333 one day before you plan to visit the area, he will unlock the gate. You can just send him an sms and remember also to send a sms when you go out again. He is very cooperative and speaks English.

F: Samora Correia ricefields

Enter from the N118 from SC to Benavente. You have to go on foot since we do not have a key. Huge numbers in 2010. Owner is Associacao de Regantes do Vale do Sorraia. Contact is Pedro Tadeia (00351 926730006) but let Luisa Mendes call him first to make an appointment.

G: Porto Alto, Giganta ricefields, Ponta da Erva

Take the N10 from Porto Alto to the west and you will find two big green gates on the left side of the road. You need a key card to get access. You can get such a card at the office of the rice company next to the Repsol petrol station several kilometres down the N10. Deposit is €25 and they make a copy of your passport. You can get the card for the whole period. Contact is Andrea Silva. She speaks English and is a biologist.

H: Benavente, Paul de Trejoito

Coming form SC, take a right turn after a small park in the centre of Benavente (R. Alvaro Rodrigues de Azevedo) in the direction of St Estevao. Take the 3rd road left after you leave the town (fields on left but still houses on the right side of the road). Keep to the right where the road splits and you will end up at the house of Carlos França 00351 914828207. You better speak with him first before entering this site. He can give you

details about the condition of the dikes (Pedro drove into a big hole once!) and might want to write down your licence plate number. He speaks English.

J: Alcochete, Barroca d'Alva

Leaving Alcochete, cross the big roundabout and take the road that goes over the IC3/ N118 to Porto Alto. At the first roundabout go left and follow this road till you end up at a farm. Birds might be present at either side of this road.

K: Zambujal

Take the A12/ E90/ IP1 all the way towards Setubal where you go left at the traffic lights, going east over the N10. Follow the N10 till you see a sign Zambujal to the right. This brings you to an old bridge. The road to the bridge gives you a good view over the ricefields. To enter the ricefields go right at the first farm on the right (blue gate). This is all private area and you have to ask permission first. Roads can be really bad here! Water level is sometimes too high to read rings. You can enter the western part of this area through an inconspicuous maze fence on the right with sticks to keep it standing up a few 100 meters after you pass a gigantic car company. At the end of the dirt track there is a very steep slope that can be slippery. Bad roads in this area; sometimes impossible to use.

L: Marateca

Access is as described at K (western part) but go left after the slope; drive as far as you can but you will have to walk to get close to the birds. The only part that is easy to scan, is in the western corner next to the road.

M: Palma, bridge over Rib. de Sao Martinho

Follow the N10, N5/ IC1 till you cross the bridge just behind Palma. Park the car after crossing the bridge and walk to the southwest into the ricefields. A small road on your left takes you to the part north of the bridge.

N: Monte Novo da Palma, Rib. De S. Martinho

Go right just before the bridge and turn left on a dirt road at the first possibility without a fence. You end up in the rice fields with good views to the north and south but driving there is usually impossible. Go back and continue along the tarmac road to the south until you end up in a small village. There are several options to enter the rice fields but the condition of the tracks is usually bad.

O: Alberge

Ricefields on both sides of the N5/ IC1. Hard to access by car but usually no birds.

P and Q: Alcacer do Sal

If you follow the N5/ IC1 you will end up in Alcacer do Sal. Take the turn off to the right at the Ecomarché and drive on till you see the rice fields. Although there are vast rice fields all around AdS, they are usually at site Q: turn left in the city centre and take the parallel road of the N253 till you end up at the bull fighting arena.

R: Montevil, Cachopos

Take the N253 in the city centre of AdS crossing the Sado river and turn right after the bridge in the direction of Troia and Comporta. After several km you will see a big rice factory on your right side. There are very good rice fields west of the village of Montevil which you can also enter if you go right on a dirt road after crossing some rice fields on both sides of the N253.

S: Monte Novo do Sul

Just turn right at the sign and drive through the village to the rice fields.

T: Carrasqueira

Just turn right at the sign and drive through the village to the rice fields and the small harbour.

U: Comporta

Follow the road in the direction of Troia and immediately after you pass Comporta take a dirt road north that leads to a huge rice fields complex. You can take a track that brings you to the far north of this complex. After checking the area you might as well take the ferry Troia-Setubal which saves you driving all the way back.

V: Santa Amalia

Rice fields on both sides of the N430. Lots of roads and tracks in this big area. Big flocks can be present just east of the village and can be spotted from the road behind the rice factory (you can ignore the No Entry sign).

W: Hernan Cortes

Rice fields on both sides of the N430. Lots of roads and tracks in this big area. Big flocks can be present just opposite the village on the southside of the road. You just have to drive around to find them. Roosts are usually found in wet rice fields between HC and Valdehornillos.

X: Valdehornillos

Usually only small numbers present and mainly along the road to Vivares.

Y: Vivares

Usually only small numbers present especially south of Vivares along the EX106.

Z: Yelbes

You can enter the area by going south from St Amalia and taking a right turn from the EX206 in the direction of Yelbes. The birds are normally between Yelbes and St Amalia but the locations vary from year to year.

AA: Palazuelo

On the N430 take in Valdivia the road to Zurbaran and Palazuelo. This is another big rice field complex. You just have to drive around to find them. Especially the terraces along the slopes of the hills in the north of this area can be good but it might be difficult to get a good overview.

BB: Conquista del Guadiana

Take the EX206 road west from St Amalia to the highway A5/ E90. Use the fly-over to get on the parallel road of the highway heading north. Birds are occasionally present at the indicated location.



CC, DD, EE: Toneca, Cara Larga and Ruivo

From the N10 between Vila Franca de Xira and Porto Alto take a left turn on the 621 towards Benavente. Along this road you will find the farms with these names. Gates might be closed but are usually open during working hours.

FF: Granho, Foros de Benfica, Paul da Casa do Cadaval

Take the IC3 towards Almeirim and just after Granho you will cross a rice field complex. Take the next exit towards Muge and try to find the rice fields.

Appendix 2: Team schedule 2013

Planning Iberia 2013	Extremadura		17 days	
	Sado/ Tejo		23 days	
	Donana NP		2 days	
	Albufera/ Ebro		3 days	
	Travel		9 days	
	Mo and Nathan	Haije and Pieter	Gjerryt and Ysbrand	Marten and Rene
	21 days	10 days	10 dagen	13 days

