

The global Great Bustard conservation publication

Otis

**GREAT
BUSTARD
GROUP**



Spring 2011

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is in
the
air!**



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Bustards prepare for the Spring lek



**Winter is almost over and
all eyes are on the birds**

We report on the upcoming lekking season

The magazine of the Great Bustard Group

Issue 35

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Editor's note

GREAT BUSTARD GROUP



The Great Bustard Group is the UK registered charity and membership organisation formed in 1998 to re-introduce the Great Bustard *Otis tarda* to the UK.

The GBG is actively involved in Great Bustard conservation and is working with other organisations, both nationally and internationally to save the world's heaviest flying bird.

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What the GBG has managed to achieve in its relatively short existence almost defines the phrase "punching above its weight". Starting with no resources (just a good idea by David Waters) the GBG has, in less than a decade, proven that the magnificent Great Bustard can not only be brought back to Salisbury Plain but helped to breed here once more.

How has the GBG managed to move the mountains that stood between it and a successful reintroduction? Endless hard work, innovation and a large dollop of humour and good luck!

The graft at the GBG is indeed endless. While new bustards must be brought into the UK to build up a viable and self-supporting population, the birds that are here already need to be monitored and looked after. In our regular

'Bustardwatch' feature
Project Site
Manager Al
D a w e s
details the

current situation on the Plain and in our News pages we take a look at all the latest events.

No matter how strong the core, all organisations need members and income. When financial times become tough and discretionary spending drops conservation organisations have to make a difficult decision: reign in the spending and wait out the crisis, or innovate and find new ways to attract support. The GBG has always been proactive, and recently we've launched two unusual membership and fund-raising initiatives: 'Cycle to Saratov' (a 4, 064 mile round trip), and 'Bustard Talks' a fortnightly podcast of news, updates and short interviews. We look at both in this edition of Otis.

Turning to 'humour and good luck', we've an interview with Ruth Manvell, who headed up the Avian Diagnostic Unit at the UK's Veterinary Laboratory Agency between 2001 and 2009 and without whose say-so none of our bustards would have been allowed to enter Britain. A fearsome character who holds the keys to the GBG's success in her steely grip? Find out on Page 10 (although if I say she's also an expert cake maker and is great friends with Dave and Karen Waters you can probably already guess the answer!).

How much more can one issue of Otis contain? We also have news from the Hawk Conservancy Trust on how our injured bustards are doing in their new home, a quick chat with Lynne Derry about visits to the Project Site, and updates from all around the GBG. As ever we welcome any comments you might have.

Wishing you a very Happy New Year and the very best for 2011!

Charlie Moores

In this issue



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Lekking season approaches



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Come to the Project Site in the Spring and you'll discover that it's not only our bustards who are feeling excited!

Update on Lower Saxony's feasibility study



Our thanks to Kai and his colleagues

Many of you will recall that in September the GBG hosted a visit by Kai Olaf-Kruger. Kai works for NABU, the German Birdlife International Partner and had been commissioned to write a feasibility study on the reintroduction of the Great Bustard to Lower Saxony. Lower Saxony is in the north west of Germany and somewhere in between the German Great Bustard population in Brandenburg and our UK population.

After months of work the conclusion of this study is that such a reintroduction is sadly

not feasible. Challenges such as finding a source of birds to use, coping with predation of a small population and power lines were all considered. However, the limiting factor was identified as being habitat. An expanding human population has reduced the number of potential sites and increased the pressure on these through disturbance. Kai noted that Great Bustards and wind farms have an almost identical landscape habitat requirement, and the best remaining area in Lower Saxony has just had a substantial wind farm built upon it. The issue being, not so much that Great Bustards would be hit by the rotating blades (although this could occur) but that the birds simply would not live in an area covered in sizeable turbines.

The GBG recognises all the problems identified in the study and congratulates Kai and his colleagues on the work. The GBG also hopes that the interest shown in the Great Bustard by those in Lower Saxony will remain high and that there may be other ways in which they could support the fortunes of this incredible bird.

Bustards in India

There are 4 species of Bustard in India that are under real threat. The largest and most threatened is the Great Indian Bustard. This splendid bird is of comparable size to a male Great Bustard and has been declining in both range and numbers for some time. The main threat is that of human pressure on its habitat, with over grazing by goats being a particular problem.

The Government of India has just formed a Task Force for the conservation of bustards in India. One of the options under consideration is a captive breeding programme for the Great Indian Bustard. There are no Great Indian Bustards in captivity at the moment. The task force has recognised that declining wild populations should be addressed as

a priority, but sees a captive breeding programme as a useful tool to supplement small populations and to prevent the total extinction of the species. The big challenge is of course that the species has not been bred in captivity with any regular success. A captive stock would need to be sourced and techniques developed to get them to breed. The GBG and our consortium partners have offered our help with this project.



The endangered Indian Great Bustard

Great Bustard painting sold for record amount

Estlin Waters reports on the sale of a most enigmatic painting.

An oil on canvas painting of a Great Bustard and other birds was sold at auction by Woolley & Wallis in Salisbury in December 2010. It was described as 'from the circle of Francis Barlow' who lived from 1626 to 1702. 'From the circle of....' is described as "a work by an as yet unidentified but distinct hand, closely associated with the named artist but not necessarily his pupil". The painting was the property of a Nobleman and estimated to sell for £6,000 to £8,000. On the day, it reached £25,000 (all hammer prices). The painting seems a good likeness of our bird except for the top of the head and the too thin legs. Francis Barlow was one of the Old Masters with a liking for painting very large birds such as the Ostrich and the Cassowary which were painted life-sized. This painting is nearly 4 ft high and over 5 ft wide. Barlow is described by Christine Jackson as one of the best animal painters of his century and for many years following. He is thought to have painted birds on the ceilings of many country houses. Despite a considerable bequest from a friend, he died in poverty. In view of the high auction price was this painting by Barlow or someone in his circle?



The stunning painting on display

LIFE gets off to a great start

We are delighted to report that the LIFE project has started to gather momentum. Despite the official start on 1st September 2010 it has taken some time for wheels to begin turning. Tracé Williams has now been in post as LIFE Project Manager for a few months and Bath University have recruited the new Post Doctorate Monitoring position, with a start date of 1st February. The remaining two new posts under LIFE have agreed job descriptions and are being advertised at the time of writing.

The Great Bustard Monitoring post at Bath University will be a very important undertaking.

You will see from this issue of Bustardwatch that we have huge quantities of data for the birds now coming in from the transmitters,

and from reports and photos sent to the GBG. What may not be clear from AI's detailed summaries is the complex nature of compiling this information into an intelligible form. The dots on the maps given by the

transmitter broadcasts link up to form a line which represents the movements of the bird. The dots merely join up to show a sequence of locations at set times. The birds do not fly in straight lines - far from it - there are big loops, double backs and dead ends in their flight patterns. These are not featured on the



transmitter data, but have to identified through all the other information sources. As well as the current data being

collected every day, we have 6 years of previous data which can be processed. A big undertaking, but one which will really help us understand where are birds are going, what habitat they use and what we can do to enhance the UK Great Bustard population.

Fred and Rona - fundraising superstars

GBG Fellows and all round stalwarts Fred and Rona Andrews are busy on the fund raising front again. They are holding a jumble sale at Durrington Village Hall on 26th February and are seeking as much jumble as anyone can find in addition to raffle prizes for the day. Ideally these should be dropped off at the village hall on the morning of 26th February, but please call the GBG on 01980 671466 to arrange collection or storage of either jumble or prizes if you cannot drop them off on the day.

The GBG has always faced funding challenges and these are both plentiful and ongoing. The GBG has met these challenges with a wide range of initiatives and with an army of supporters. Big strides forward can be made with strategic grants such as the LIFE Project, but without the continual stream of income from small local events the project would cease to function. Directly raised funds can be spent where they are needed, without strings. Dull and uninspiring bills like car tax, public liability insurance and phone bills all

need to paid. Rona's continued efforts over the years have generated a sizable sum, but the impact of her support is greater than mere pounds, shillings and pence would indicate.

The GBG can supply banners and literature and help promote any event should there be other members who can assist the project in a similar way.



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Fred and Rona work tirelessly in support of the GBG and are always quick to lend a hand

Tour de Great Durnford - 'Cycling to Saratov' begins

On Sunday 2nd January an extremely enthusiastic group of GBG supporters met up in the car park of the 'The Black Horse' Inn in Great Durnford, a beautiful village in the Woodford Valley just north of Salisbury. The group was present to support a team of sponsored cyclists (including David Waters, GBG Director and Allan Goddard, the GBG's Farm Liaison) as they whizzed through Wiltshire raising money through 'Cycle for Saratov', our new fundraising initiative which aims to raise money to buy a Land Rover for use at the Release Site.

Fortunately the snow of late December was just a distant memory and the cyclists were greeted by a slightly watery sunny sky and more or less dry roads (crucial for pedalling at the speeds the cyclists dreamt of reaching). Final preparations for such a gruelling event – the plan called for the finely-honed athletes to cycle in a loop around the Woodford Valley – included a quick discussion of the route over 'looseners' kept behind the well-stocked bar at 'The Black Horse' and – er, that was about it come to think of it...

With a short day-length and the 'rest stops' en-route shutting at four in the afternoon because of Sunday Licensing hours, the peloton finally headed out of 'The Black Horse' car park at about 13:00 surrounded by well-wishers who felt it best to calm their nerves by returning to the bar once the last cyclists had disappeared around the first corner!

The GBG would like to thank everyone who came along and for contributing to what was – as usual – a thoroughly enjoyable and relaxed event. The GBG will be having more get-togethers like this over the coming months and everyone – whether a member of the GBG or not – will be made very welcome. Thanks too to professional photographer and journalist Dave Kilbey, who came along to 'The Black Horse' and posted about the morning on both his own blog www.davekilbeyphotography.co.uk/blog/) and on the blog run by Wiltshire Magazine.

Would you like to donate to 'Cycle to Saratov'? Simply go to: www.justgiving.com/gbg-team. We also accept cheques – and you can download a form from www.greatbustard.org to give even more with Gift Aid.



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Al Dawes prepares his 'racer' Dave Waters & Allan Goddard.. quite a sight n lycra sportsgear!

Vital work completed at the Project Site

A cold and rainy January dawn did nothing to dampen spirits at the project site when our work party turned out to erect the new quarantine premises. The whole quarantine structure must be thoroughly disinfected after each use and then re-built on fresh ground for the following year. The moving of the structure is a good management practice to prevent the build up of pathogens or parasites in the ground. It is hard work shifting the heavy panels and netting. As the day wore on the sun shone and the workers were treated to a sighting of several bustards not seen at the site since before Christmas. A welcome reappearance indeed! It was a happy but tired team who left at the end of the day and we would like to say a huge thank you to all who turned out, and those who brought or lent tools. We are always looking for helpers and anyone interested should contact Al Dawes on 01980 671466.



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Al briefs the troops

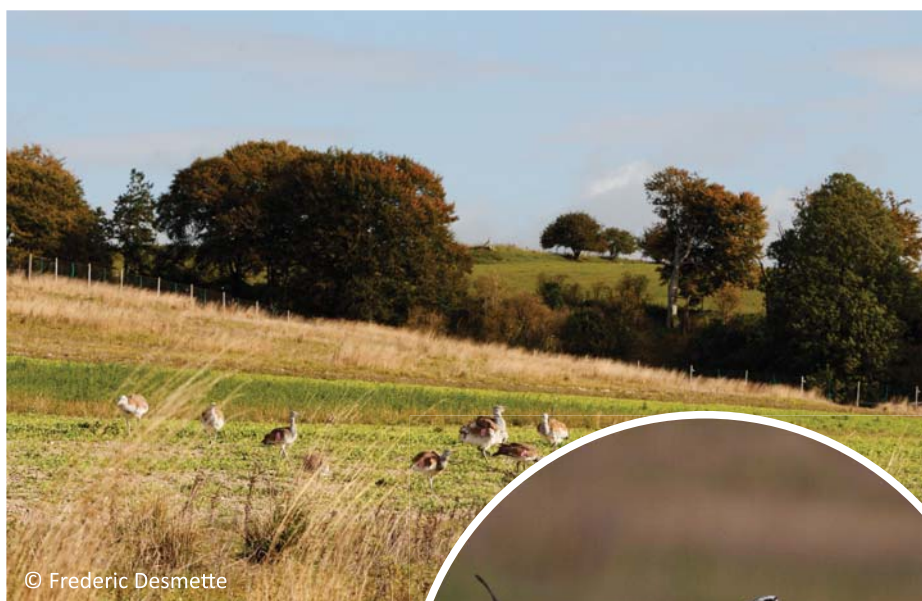


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The sun shines through for the work party

With Project Site Manager, Al Dawes

An update on our new birds - and great news from the site



© Frederic Desmette

Bustards feeding at the Site



© Frederic Desmette

Although this year's 22 'Pink' birds were divided into four groups and released in separate stages they all grouped together after release and were visited regularly by five older birds. After spending the first month in and around the Release Pen, the flock, or more correctly drove, moved out onto the surrounding Oil Seed Rape fields once the autumn crops had become well established, in November.

The first flurry of snow in Wiltshire, in early December, was not much to concern the birds. A good breeze had drifted the snow on the exposed hill top fields and the birds fed well on the exposed shoots of Rape.

However the second round of snow which fell on the 17th December came on less of a breeze and fell much thicker. Consequently the drove was left with little to feed on and by the 19th all birds had left the Project Site, presumably in search of some greenery.

The group of birds that dispersed from the Site from the 18th December comprised four older birds (Orange 15, Yellow 22, Purple 5 and Red 28) as well as some Pink birds. Four

of these have GPS satellite transmitters (PTTs) fitted (males Purple 5, Pink 1, Pink 4 and female Pink 15). This seasonal, hard weather dispersal has produced some of the most interesting movement data GBG have yet obtained from all released birds. What is also new is the amount of sightings that have been reported by members of the public that can be added to this PTT data, helping to join up the dots.

Sadly one of the young males, Pink 4 met an early end following a strike with an overhead cable in the Pewsey Vale. However, the other birds with PTTs undertook some impressive flights around the West Country.

Two of the birds with PTTs appeared to have stayed together on their departure and over the following two days. Males Purple 5 and Pink 1 both flew over 10 km to Shrewton before heading a further 30 km west to Stourhead. However we know from a sighting and excellent photographs of Great Bustards flying over Langford Lakes in the Wylde Valley on the 19th December that they did not take a direct route to Stourhead. Instead they took a diversion of 20 km. They

were

also not alone.

They were joined by three females – Orange 15, Yellow 22 and Red 28, which have no active transmitters on them so their movements are less well known. We do know that these three birds separated from each other at some point. Red 28 was seen back at the Project Site on Christmas Day before turning up in the Avon Valley near Ringwood in Hampshire over the New Year. These are the very same fields she used in January 2009. Orange 15 was seen 15 km north of Red 28, in fields next to the Avon, south of Salisbury into the first week of January 2011. The whereabouts of the fifth bird from the Langford Lakes sighting, Yellow 22, remained unknown at the time of writing.



After a good circuit of Wiltshire, R28 headed back to the Project Site for Christmas before settling on river meadows along the Avon near Ringwood in Hampshire for New Year.



Pk1 made his way to the milder climes of the Dorset coast to avoid the snow in December.



Pk15 on Portland Bill, Christmas Eve. Last seen flying high over sea out of sight towards France before turning around to land north of Weymouth.

From Stourhead, Purple 5 and Pink 1 also parted ways with Purple 5 taking an indirect route back to the Project Site. Data from the PTT of Purple 5 shows that he returned to the Wylve Valley, but a sighting in between PTT readings is another demonstration that the saying 'as the crow flies' is not one to use for Great Bustards! On Christmas Eve a GBG member saw Purple 5 flying high southeast over Tisbury, some 25 km out of his way to the Project Site.

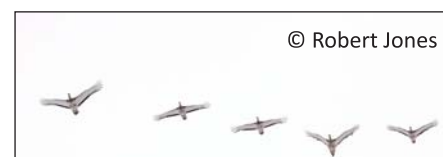
From Stourhead, Pink 1 made his way 55 km south to the Dorset coast. By Christmas Eve, he was settled on Oil Seed Rape fields overlooking The Fleet, behind Chesil Beach. The temperature here was well above freezing with no snow cover on the fields, in stark contrast to the rest of Dorset and Wiltshire at the time.

Pink 1 was not the only Great Bustard on the south coast for Christmas as female Pink 15 was also seen nearby on the 24th at Portland Bill. Pink 15 started out from the Project Site on the 19th December heading north towards Devizes before completely changing course and heading south all the way to the coast. The PTT data shows that Pink 1 and

Pink 15 set off to the coast one day and 45 km apart, but remarkably passed over the very same fields on the same day, 23rd December, in Mappowder in the heart of Dorset. However, as far as we know the birds have not met up on the south coast. Pink 15 was seen alone flying out to sea from the Bird Observatory at Portland Bill. Watched through a telescope until it was out of sight it seemed to be flying high and purposefully to France. That is until it decided to turn around and head north back inland when no one was watching. Its latest PTT readings indicate it is just a few kilometres northeast of Pink 1, towards Maiden Castle.

As for the new release method used this year (featured in Otis 34), it is still too early to determine whether the 2010 release strategy has had an effect on post-release survival but the initial general behaviour of the new recruits certainly appeared to be been more settled than previous years. This winter's dispersal is most likely due to the deep snow covering available food, which was not really a feature of the harsh winter last year and has muddied the water a little as to whether the release has helped to anchor the birds to the Project Site area. There is very little known

about the historical seasonal movements of Great Bustards in the UK so this data is extremely valuable. GBG will continue to follow and analyse the movements of the released birds. We await the next round of satellite PTT data with great excitement and eagerly anticipate their safe return to the Project Site in Spring.



Five Great Bustards over Langford Lakes, Wiltshire on 19th December. On close inspection of the photograph it was possible to identify the two males P5 (left) and Pk1 (second from right) and the smaller females O15, Y22 and R28 from the colour of the wingtags

Have you seen a Great Bustard?

We'd like to hear about it. Please report any sightings to the GBG sightings@greatbustard.org or telephone 01980 671466.



Ruth Manvell

Virologist (and cake maker!) extraordinaire



Ruth visits Russia annually with GBG vet John Chitty to check the health of the new birds

Charlie Moores talks to Ruth Manvell, head of the Avian Diagnostic Unit in the UK.

Imagine if you will, the Virology Department of the UK's Veterinary Laboratory Agency. Neat, stainless steel, clinical, a hushed atmosphere perhaps? Now picture the kind of woman who might head up the Avian Diagnostic Unit (ADU) of said department. Someone in a dark, business suit perhaps, who imperiously looks you up and down over half-moon glasses while you just know that she is obviously far, far more intelligent than you will ever be...?

Thankfully for your interviewer, Ruth Manvell, who was in charge of the ADU between 2001 and 2009 and worked on keeping Britain's poultry flocks clear of notifiable diseases (particularly Newcastle Disease (ND) and the H5 and H7 avian influenza (AI) strains) is one of the most approachable and friendly people you could wish to meet. Jovial, funny and something of an iconoclast, Ruth has been working with the GBG since 2004 when the UK's Department of Food and Rural Affairs (Defra)

announced – in response to an AI outbreak – that before any Russian Great Bustard chicks could be brought to the UK they would first need to be declared disease-free. Just as it looked that the reintroduction project could be halted in its tracks, John Chitty, a highly-respected veterinarian who was already helping the GBG after meeting David Waters (the GBG's Director), put Ruth's name forward to both Defra and David – the rest as they say, is history.

As both Ruth and David recount, at their first meeting they knew they were 'on the same page' from the get-go. As well as being pre-eminent in her chosen field, Ruth loved to travel, had the requisite go-to attitude and was just the sort of person who would be able to deal with the inevitable problems that occur in moving CITES-listed birds more than 2,000 miles! Ruth has now been

out to Russia with the GBG every year since 2005 and has become an integral part of the organisation. Her expertise and huge list of contacts has been invaluable – and just as importantly she has become a trusted and cherished friend.

Hugely entertaining and entirely without any sense of her own importance (my interview with her was more like a chat with a mate than with one of Europe's leading virologists) I was intrigued to see just how far Ruth Manvell is from the image of 'scientist' that most of us have.

Is she I asked, a clinical and obsessively tidy person at work? She responds with a laugh and says that her desk is a mess of papers and articles. She does she says, know where everything is but tidy...no. Never has been, never will be. So not the typical Doctor or Professor...? Ruth stops me immediately, saying – to my surprise – that she is neither a Doc nor a Prof. How, I want to know (on behalf of all of us non-academically-qualified types who would still like to believe that they too could one day achieve something worthwhile), does someone working in such a highly-important area get to the very top without a university degree?



It turns out and this surely explains Ruth's wonderful sense of normalcy, that she began right at the bottom and worked her way up, going straight from school in Australia (her parents emigrated in 1970) to working as an assistant in a lab near Brisbane. For eight years she worked on combating tick fever in cattle, before returning to the UK and finding a job in a college, then moving to the Viral Laboratory Agency in Weybridge, Surrey where she remained for thirty-two years until her semi-retirement in 2010. Along the way she gathered accolades and qualifications, became a Member of the Institute of Biology, working on projects from the importation of falcons and Corncrakes (the latter for the reintroduction in Cambridgeshire) to tracking down AI in countries all across the globe, and – for good measure – becoming a skilled cake maker.

Yes, Ruth Manvell, expert virologist, is also a dab hand at baking and decorating cakes, wielding a palate knife and turntable as proficiently as she does a throat swab and centrifuge. Every year she creates a specially-crafted cake for the GBG, capturing the year's successes in multi-coloured icing, and her eyes light up when she discusses what for her is obviously a favourite subject (plus, it has to be admitted, it's something she knows she can talk about without this eager interviewer pressing her for the inside story behind avian influenza outbreaks

and what she thinks of certain poultry suppliers...).

She originally took up baking, she says, in Australia, taking night-classes whilst learning about viruses during the day, working very long hours with the dedication that comes from really enjoying what you do. Once back in the UK she enrolled again and continued her upwards curve. It sounds an unlikely mix of talents but, I suggest to her, there are similarities between baking and working in a lab: white coats, stainless steel equipment, plenty of stirring and mixing...the need for cleanliness and keeping the work area germ-free and clear of clutter....

Typically, as she has done throughout the hour I spent with her, Ruth rocks with laughter and the discussion dissolves into an enjoyable wander through the history of

avian influenza, the problems faced by virologists working in labs that are pitifully equipped compared with the VLA back in Surrey, and various incidents and frankly unrepeatabe events on her travels: ask her, if you get the chance, about John Chitty and the swizzle-stick incident, or the effects of rice cooked in vodka.

In fact, if you get the chance to have a chat with Ruth, just take it. Your impression of seriously well-connected and highly-qualified virologists will never be the same again (which, I assure you, is a very good thing indeed!).



The Great Bustard - a population report

How the change in habitat has affected the Great Bustard

An insightful report edited for Otis by Charlie Moores.

The population status of the Great Bustard *Otis tarda* was assessed in three regions of Boukan, West Azerbaijan Province, Iran from 2002 to 2008. Surveys were based on data recorded in Sootav, Yenggija-Albelaq and Qazlian Plains. A growth in the maximum number and the density was found for Sootav while little change observed in Yenggija-Albelaq plain during the period. The Qazlian Plain seems less important compared to the two other areas. Mean maximum density per 10 square km was 2.26 ± 0.41 (N=23) in Sootav, 5.12 ± 0.98 (N=18) in Yenggija-Albelaq and 4.08 ± 1.43 (N=11) in Qazlian. Based on these observations, the current number of Great Bustards in this area is estimated to be about 35–40 individuals showing a dramatic decline since the last decade. Without effective conservation measures, the species may face extinction in Iran.

INTRODUCTION

The Great Bustard *Otis tarda* occurs in highly fragmented populations across the Palaearctic region, from the Iberian Peninsula and Morocco, eastwards, to China (del Hoyo et al. 1996, Alonso et al. 2000, 2003). During the

last two centuries, its Palaearctic distribution range has decreased due to habitat changes caused mainly by agricultural transformations and human infrastructures, but also by hunting pressure (Collar 1985, del Hoyo et al. 1996, Chan & Goroshko 1998, Palacin & Alonso 2008). This might cause a rapid population reduction equivalent to more than 30% in the next decade (BirdLife International 2004). The world population is estimated to be between 43,500 and 51,200 individuals, of which c. 60 % occur in Spain (Palacin & Alonso 2008). The overall population trend is believed to be declining worldwide as a consequence of agricultural intensification and in some places, hunting and infrastructure expansion (Palacin & Alonso 2008). Currently, it is considered as Vulnerable (Vu) in the Red List of Threatened Species (BirdLife International 2008).

In Iran, the species occurs in the western parts of the country, from northern provinces to Kermanshah in the central west (Scott 1971, Kahrom 1979, Cornwallis 1983, Razdan & Mansoori 1989, Amini-Tareh 2000). Twenty-one Great Bustards habitats in western provinces of Iran have been reported: seven in West Azerbaijan, one in

East Azerbaijan, five in Kurdistan, seven in Kermanshah and one in Hamadan province (Amini-Tareh 2000). In West Azarbaijan Province, three regions of Khaki, Sootav plain and Behi-e Boukan have been reported as suitable habitats for this species which are located in Boukan (Amini-Tareh 2000).

Habitat destruction and hunting have caused a sharp decline in Great Bustard population in Iran in recent decades and this species has disappeared from the majority of mentioned locations (Amini-Tareh 2000, Barati & Amireifar 2008). Currently, some areas of West Azerbaijan seem the most important habitats for Great Bustards in Iran (supported by A.A. Amerifar, pers. comm. and AB., pers. obs. in recent years). However, updated data on the status of the species are scarce (the Boukan habitats are Sootav plain, Yenggija-Albelaq plain, Qazlian plain, see Kaniyan plain, Khaver Zamin plain). Among the areas only Sootav plain is declared as a No-Hunting Area and other habitats did not receive any formal protection. In this paper, we studied the status of Great Bustards in three important habitats in Boukan area (Sootav plain, Yenggija-Albelaq plain and Qazlian plain) West Azerbaijan from 2002 to 2008.





The Great Bustard is known as *mÄ«Äj-morá,j* in Iran. In Persian this literally means a ewe-bird, or more accurately "the plump she-lamb of a (wedding) banquet

STUDY AREAS AND METHODS

This survey was carried out in three plains of Boukan located in the Mokryan region (Babani 1998) south of West Azerbaijan Province, Iran, namely Sootav, Yenggija-Albelaq and Qazlian plains. Sootav plain (36°33'–36°37'N, 46°08'–46°12'E; c. 44 square km, 1,410 m a.s.l.) lies 4 km north to the city of Boukan. Yenggija-Albelaq plain (36°26'–36°28'N, 46°13'–46°17'E; c. 21.7 square km, 1,465 m a.s.l.) is located east and southeast to Boukan between the Yenggija and Albelaq villages. Qazlian (36°28'–36°30'N, 46°08'–46°10'E; 9.8 square km, 1,330 m a.s.l.) is located 4 km southwest to Boukan. These measurements were gathered using GPS.

Sootav possesses low height hills, grasslands and vast dry fields where wheat, barley, chick-pea and lentil are dominant crops. In the dry fields of Yenggija-Albelaq, wheat, barley, lentil, chick-pea and to some extent, sunflower *Helianthus annuus* and oil seeds are the main crops. Traditional farming is more common in this plain. Qazlian plain is another habitat in which wheat, barley, chick-pea, lentil, canola *Brassica rapa*, alfalfa and clover are the main crops cultivated.

All these plains are almost entirely cultivated with cereals (mainly wheat *Triticum aestivum* and barley *Hordeum vulgare*) and legumes

(chick-pea *Cicer arietinum* and lentil *Lens culinaris*). Some minor crops are alfalfa *Medicago sativa*, clover *Trifolium* sp and oilseeds. Some areas (about 10%) are natural grasslands. The climate is characterised as dry with hot summers and cold winters. According to the Meteorology Organization data of Iran, mean annual temperature and rainfall are 13.2°C and 370.2 ml, with most rainfall occurring from November to May.

Great Bustard surveys were conducted from 2002 to 2008. Observations were made in early morning (07:00–09:00) or afternoon (17:00–19:00), at least four times each month (maximum number of birds was considered for each month, season and year). All observations were made with a 10×40 Bushnell binoculars or a 20–60× telescope. All drivable paths and hills were covered in each survey. We also recorded the types of crops and changes of agriculture activities where possible. Great Bustard numbers were recorded and reported monthly and annually. Variations in bird densities were calculated as a mean number of Great Bustards per 10 square km. One-way ANOVA test was performed for comparison of the mean densities between the areas.

RESULTS

Most observations occurred in spring and autumn. Mean maximum density per 10

square km in Sootav was 2.26 ± 0.41 (N=23), in Yenggija-Albelaq 5.12 ± 0.98 (N=18) and in Qazlian 4.08 ± 1.43 (N=11). One-way ANOVA test showed that the difference between the areas was significant ($F_{2,49}=3.479$, $p>0.05$). According to our observations, Sootav and Yenggija-Albelaq plains are important nesting habitat for Great Bustards. Although some fluctuations were observed, maximum numbers of birds showed little changes up to 2007. The highest number of birds in a single observation was seen in Yenggija-Albelaq area (33 individuals). Qazlian had lower maximum numbers than other areas especially during 2005–2007. In Yenggija-Albelaq, little fluctuations were found in bird numbers except in 2008 when the highest maximum number was observed. Our observations suggest that Yenggija-Albelaq areas are main habitats used by Great Bustards in autumn seasons.

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Looking at Lekking

Charlie Moores takes a look at the complex process of lekking

A term that often comes up when talking about Great Bustards is 'lekking'. Charlie Moores reports on the Spring lek and explains just what this mysterious word really means.

One dictionary definition of lekking is “a gathering of males, of certain animal species, for the purposes of competitive mating display” but there is in fact far more to what is actually a very complex piece of behaviour than that dry sentence implies...

One sure sign that spring is upon us is the metaphoric rising of the sap that Europe's animals feel as the days lengthen and warm. Hard stares designed to keep rivals away from a dwindling food supply turn into lingering glances as thoughts turn to reproduction, and males and females begin cosying up and planning the next generation...

Well, that's one way of looking at it. In truth, though, sex and reproduction in most animals is far more prosaic: the breeding period is a dangerous and extremely labour-intensive part of the year. Males, for example, have to fight for females (meaning they risk injury or even death); females are programmed to search for the best mate possible (or perhaps waste a huge amount of effort raising weak or genetically 'unfit' young) based entirely on their receptiveness to certain stimuli; and males in particular need to make themselves unusually visible during the very same period that predators are also out in large numbers looking to reproduce and feed their own offspring.

Reproduction for most animals is entirely devoid of romance – which is a shame actually, as 'lekking' in Great Bustards looks to our eyes like quite a romantic event, akin perhaps to a large party where all the best-

dressed boys and girls turn up to find a life-long partner. After all, the bustard males have filled out and are sporting large whiskers (which it turns out drive the gals wild, as the larger the whiskers the heavier and more sexually mature the male), while the females appear to be fluttering their eyelashes and sidling up to the males with a 'come hither' look...

Again, I'm sorry to be the one who pours water on the fire as it were, but in some respects putting a group of usually very wary birds on a parade ground and having them evolve to be as showy as possible doesn't leave much space for romance. The fantastic display of the males, for instance, where they almost turn themselves inside out and look from a distance like giant snowballs, is designed to attract a female – but consider why a male has such a dramatic but strange display.



The simple answer is that if male Great Bustards were gleaming white all the year round instead of brown and gold very, very few of them would survive longer than a few months. When they're displaying everything and everyone can see them – and that's not a useful survival tactic.

Which, in part brings us to lekking. Despite the risks males do need to find a female (and vice-versa of course), or their genes won't get passed on, which is the real reason for most animals to exist. Great Bustards live (or did historically) in vast grasslands with few individuals, and if they want to avoid inbreeding they need to make sure that their genes are potentially spread around as many females as possible. One answer would be to bring males and females from a wide area together for just a few hectic weeks and get all the reproduction over as quickly as possible: the lek.

Obvious really, but whilst lekking might seem to answer all the questions, it's a behaviour that has actually thrown up many questions. Why, for instance, should weaker males bother to turn up if they won't get chosen, and if they don't then won't the same males be constantly chosen by the 'best' females thus stopping the flow of genes anyway? And in such a competitive atmosphere – where many males and females are gathered in the same area – aren't females at risk of harassment from males and intense competition from other females?

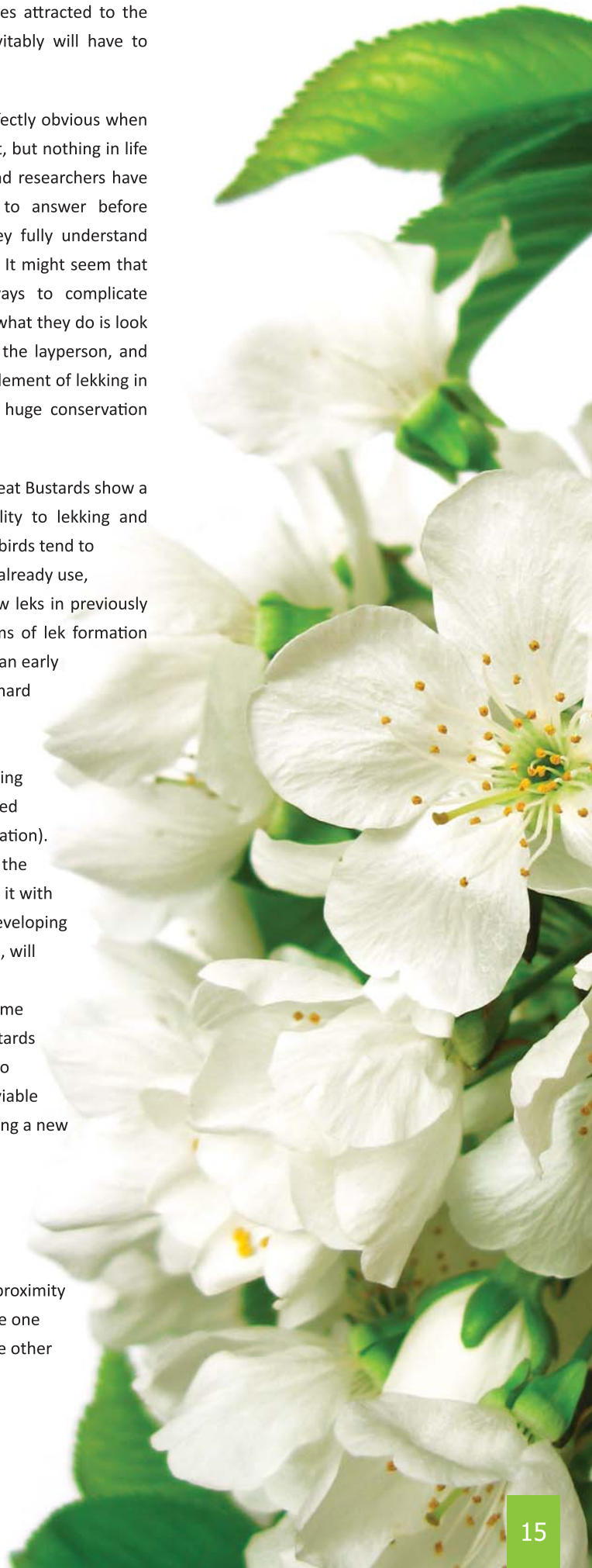
Like everything in nature, behaviour has to be weighed in terms of costs and benefits to the individual. For Great Bustards it seems that lekking strikes the right balance between costs in terms of travelling to the site, increased visibility and bringing competitors together in one place, and benefits in terms of not having to expend energy over extended periods searching for a mate and (for females) having many males to choose from in the same place. Even weaker males apparently benefit from something termed the 'hotspot' model. This is where they gain a chance of mating by being at the same

lekking site - the more successful males present, the more females attracted to the lek (some of which inevitably will have to settle for 'lesser' males).

All of this may seem perfectly obvious when you stop to think about it, but nothing in life is actually that simple and researchers have plenty more questions to answer before anyone can say that they fully understand what lekking is all about. It might seem that researchers can find ways to complicate everything but in reality what they do is look deeper and harder than the layperson, and they've discovered one element of lekking in Great Bustards that has huge conservation implications: site fidelity.

Both male and female Great Bustards show a strong year-on-year fidelity to lekking and nesting sites. As a result, birds tend to congregate in areas they already use, and are slow to form new leks in previously unoccupied sites. In terms of lek formation our own project is still at an early stage and we're working hard to establish a lekking site within an area under our immediate control (meaning we can create the preferred habitats and restrict predation). Because our birds 'know' the Project Site and associate it with safety and food a lek is developing well. A single site, though, will always be vulnerable to unforeseen events. The time will come when 'our' bustards must extend their range to establish a permanently viable UK population, and creating a new lek will be critical to that process.

How might we do that? Establishing a second release-site within close proximity of the existing one may be one answer, but that's a whole other article of course...



Raising Great Bustards from rescued eggs

An analysis of artificial incubation of Great Bustard eggs

TA Pereverzin, AV Khrustov reports on the rescue of Great Bustard eggs doomed to clutch destruction, their artificial incubation and the rearing of chicks with subsequent release into the environment.

This is deemed to be the most effective strategy to preserve this species in modern ecological conditions (Zaguzov, Kudryavtseva, 1990, Flint et al, 2000; Khrustov et al., 2003).

MATERIAL AND METHODS

The collection of bustard eggs from 'doomed' clutches during agricultural cultivation for future artificial incubation is essential.

This, followed by the rearing of the chicks and the release of birds into the wild was carried out within the framework of a Russian-British project with the financial support of the Great Bustard Group in Fedorovsk, Petrograd, Soviet and Krasnokutsk regions of Saratov Volga from May 3 to June 23, 2010. Eggs were delivered from the place of discovery (in a portable incubator connected to the vehicle's electricity supply) to the biological station of the Saratov Branch of Problems of Ecology and Evolution in the Saratov region.

Before being put into the incubator the eggs were disinfected in 2.5% solution of "Dezoblayn" at 40-43 °C for one minute. Their linear dimensions were measured with a trammel with the accuracy of 0.1 mm, their weight with laboratory scales with the accuracy of 0.1g. The incubation was carried out in small Brinsea incubators at +37.0 °C and an air humidity of 60-70%. Rotation and cooling of the eggs were automatic. When eggs began to hatch they were transferred to a hatching incubator, where the temperature was +36.0 °C and humidity 75-80%. A stable humidity in the incubators was maintained by adding water to special chambers every three days. To monitor their progress the eggs were weighed every three days.

Our studies examined the biological indicators of the incubation process: the degree of egg shrinkage, when signs of life of the chicks in the egg were first noted, the timing of hatching, and its dependence on how long females sat.

RESULTS AND DISCUSSION

During the research 49 eggs from 26 nests were saved. Nests were discovered during cultivation of fallow land (69%), spraying of

winter crops (19%), spring crops sowing, plowing stubble, and the cultivation of sunflowers (4%). 77% of clutches consisted of two eggs, 15% just one, and only 8% of nests contained three eggs. Egg size was 50.7 – 59.5 × 67.3-82.5 mm (on average 56.2 ± 0,5 × 77.7 ± 1,2).

The weight of the eggs ranged from 93.1 to 146.9 g (on average 133.3 ± 2.7). During incubation there is a natural decrease in the egg's weight due to evaporation of moisture through the shell and the breathing of the embryo. We recorded an average shrinkage per day of 0.6 to 1.1g.

The development of the embryo at an early stage can be judged by means of a "water test" (Sukhanov, Mishchenko, 1986). During the final stages the embryo shows audible or visible signs (movement, squeak, shell drilling), which do not require the use of special techniques to pick up.



How long a female Great Bustard incubates has not been properly determined and according to a number of authors ranges from 21 to 28 days (Dudzinskii, 1979; Isakov, Flint, 1987; Khrustov et al, 2000; Wang J. et al, 1998). During our research we noted how long eggs took to hatch. Noticeable movement inside the eggs began 30 - 197 hours (on average 117.1 ± 8.9) before hatching - but it was not always possible to determine the movements visually. Squeaking of the chicks can be heard when they pierce the egg's undershell cover and begin to breathe using oxygen in the egg's air chamber. Squeaking was noted 16 - 41 hours before hatching (on average 28.6 ± 2.7). A few days before hatching (from 5.5 to 25, averaging $19.3 \text{ days} \pm 2.8 \text{ h}$) the chick drills through the shell and begins to breathe atmospheric air. At the same time the retraction of the yolk sac takes place and the chick begins to actively hatch.

Hatching in the incubator took place between May 27 and July 02. Most hatched

between the last days of May and early June. A relatively high number of the eggs we recovered hatched (82%), and of those that didn't we found that 8% were infertile (6% were eggs from two-egg nests, and 2% from three-egg nests).

It is not uncommon for human intervention to be necessary in the artificial incubation of eggs of wild birds (Fentzloff, 1979; Hartman et al., 1987). In our studies we provided assistance to two chicks that were apparently too weak to hatch independently. In the first the chick squeaked loudly but did not begin to actively hatch. We 'autopsied' the shell with sterile tweezers and found that the left wing of the chick was stuck to the undershell membrane. In the second case, the chick had begun to squeak: after 32 hours the squeak became stronger and the chick in the egg moved unnaturally. Another seven hours passed, but the chick hadn't yet started to drill the shell. It's known that if the egg is not drilled within 48 hours after the start of

squeaking, the chick needs assistance (Cranes: Biology, breeding and conservation, 2003). The shell was opened over the air chamber and we discovered that the chick was facing the wrong way (ie away from the air chamber). When the bill was found we made a small incision in the membrane and manoeuvred the beak into it so as to free the nostrils enabling the chick to breathe. In both these cases the chicks were born viable.

CONCLUSION

The results of these studies indicate that the chosen mode of transportation of the eggs from the collection site to the incubation station is robust, with an 82% hatching rate. It is both worthwhile and necessary, therefore, to continue collecting eggs from clutches destroyed during cultivation for further artificial incubation, as the rearing in captivity and subsequent release of birds into the wild will help preserve Great Bustard populations.



Egg rescue during cultivation has proven to be extremely successful, chicks are raised and health checked before release into the wild in Russia/UK



News from the 'podding' shed

GBG launches new podcasts



Charlie Moores writes about the latest information medium from the GBG. Catchy little 'radio' style programs you can listen to online!

Over the last twelve months the GBG has warmly embraced what has become known as the 'social media revolution', redesigning our website, setting up Twitter and Facebook accounts and now – in a step few conservation organisations have taken – we're creating our own podcasts.

Your initial reaction on reading that may well be "What?" followed by "Why?" Understandable enough given that until relatively recently podcasting has been a mainly American phenomenon, viewed with the sort of suspicion over here that (and I use the comparison deliberately) the great British public initially greeted biryanis and popadums with.

Yes, I really do predict that podcasts will soon form part of the staple diet of information consumers everywhere. Why? Because a podcast is a handy and entertaining package of information that you can listen to at anytime by visiting a website and clicking a

button! Usually served up as an mp3 file (a simple file commonly used for music), a podcast can be any length or on any subject. Most are around 30 minutes or less – which tends to be the average work commute, or the length of time it takes most people to fall asleep. In other words, podcasts are designed to fit in around us and our busy lives

All well and good: why, though, are the GBG now producing their own podcasts?

There are several reasons. Firstly, many of our supporters don't live close enough to the Project Site to visit us as often as they would like. So what better way to become more involved and stay updated than listening to regular updates and interviews on our website? Secondly, producing a professional, polished 'broadcast' is a great way to promote the GBG. And lastly, as anyone within an organisation can take part in a podcast they can be a great way to get know

the team. Cost-effective, simple to use, up-to-date and available to members and non-members alike for no cost whatsoever. What's not to like about that?

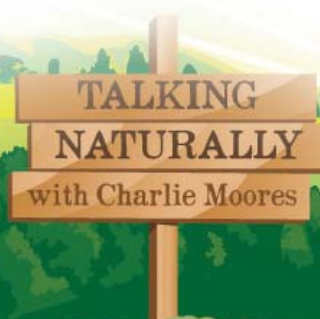
We currently have four fantastic podcasts available on our website. From an interview with GBG Director David Waters about his sponsored cycle prowess to a chat with Marketing Manager Suzy Elkins and the latest news from Project Site Manager Al Dawes it's all online for you to listen to right now.

What is a podcast?

A podcast is a pre-recorded audio program that is posted to a website, enabling you to listen to it on your computer.

Simply visit our website; www.greatbustard.org/podcast and click on the podcast you wish to listen to (ensuring that your speakers are turned up). The podcast will play automatically.

Keeping up to date with the GBG couldn't be easier!



The "Podding" Shed



Lynne Derry - GBG's Visits Manager



Lynne is also the public face of Friends of the Bustard



Lynne gives entertaining talks, trips and keeps guests smiling too

Many of our visitors say that as well as the breathtaking sight of a Great Bustard taking flight or a drove of birds appearing through the lens of a telescope, one of the best things about a day spent at the GBG Project Site is the broad smile and warm welcome they receive from Visits Manager Lynne Derry, who has now also become the 'face' of the Friends of the Bustard!

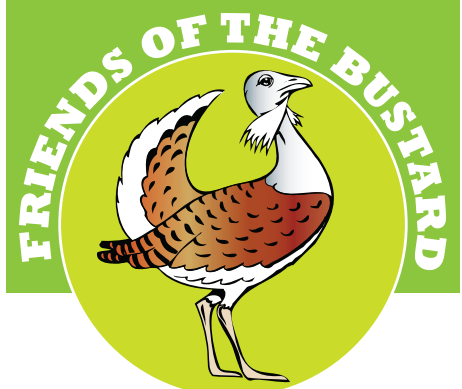
Lynne has been meeting and greeting visitors for the last 3 years and is usually the first point of contact for newcomers to the GBG. She is more often than not the voice at the end of the phone for visitor enquiries and is also a more than usually proficient driver, steering small or large groups to the right spot at the right time for the best views of our birds. Helped by a small group of excellent 'volunteers' they make sure that every visit experience is an enjoyable one.

She has also become the coordinator of our 'Friends of the Bustard' volunteer group, sorting out any problems and offering help in a typically calm and soothing manner! Why, on top of what she already does for the GBG, has she taken on what could be quite a demanding role as the 'Friends of the Bustard' group develops and expands? Lynne herself plays down any thought that she is doing something special, simply saying that she loves meeting people, loves the bustards, and loves working on Salisbury Plain.

So the next time you phone the GBG Project Site and wonder what sort of reception you might get – wonder no more, as we can almost always guarantee that you'll be greeted with the warmth this special lady brings to the job she loves.

You can help too!

The 'Friends of the Bustard' are volunteers who help the GBG to raise money, maintain the Project Site and ensure that things run smoothly both locally and nationally. Joining is completely free and you only help when you can!



A New Year and a New Project!

Introducing Tracé Williams, RSPB's new LIFE+ Project Manager



Tracé has always had a love of nature

Hello! For those of you who do not know me, my name is Tracé Williams and I would like to take this opportunity to tell you how I became passionate about Great Bustards and how this led to my new job of LIFE+ Project Manager.

I grew up in a small village in Somerset, not too far from the Levels and from an early age was very interested in nature, especially birds. Many happy hours were spent on my friend Rachel's farm, from about five years old watching birds from our 'den' and drawing pictures of them. I still have some of these pictures and I was definitely better at watching than drawing!

Jumping ahead to age 24, my passion for wildlife was ever greater and I decided to change my career from working in a shoe factory to something altogether different. After all, there are only so many shoes one can stitch and the bird list from the factory window had reached its maximum! So I embarked upon a course of learning; six years altogether and studied to gain a degree with the Open University. Whilst continuing to work, I quickly realised that a degree without experience in conservation made the paper-

work next to worthless.

This posed a new problem, but one which was soon resolved as in 1996 the factory closed down. Being one of the few to rejoice at this fact, I set about writing to literally every conservation organisation and environmental company around at that time, asking for a voluntary work placement. The only proviso was that it must be for a minimum of six months and they must provide me with lodgings. Job Seekers Allowance didn't pay too well in 1996!

I was astounded to find that one night in August 1996, after two telephone calls, the whole of the next year was planned out! Both WWT, Slimbridge and ITE, Monkswood had offered me positions that would run consecutively starting from October! What followed was a wonderful year and a half of volunteering; studying white-fronted geese, assisting with aviculture helping catch and ring wildfowl, monitoring tit boxes, radio-tracking cormorants and muntjac deer, surveying for waterbirds. It was bliss!

By now it was April 1998. I had finished volunteering and decided to concentrate on finishing my degree, as it was the last year, when out of the blue I received a telephone call from the Head of Research at Jersey Zoo. She was looking for someone keen on birds (as most wanted to study furry things like lemurs) and promptly offered me my first paid position in conservation as a Research Assistant! Walking around the grounds of the Zoo during the next three years, I could not believe that here I was, a girl who used to stitch shoes, now working to spread the word of the great Gerald Durrell himself.

During my time there, I was also able to complete a part-time masters degree with the Durrell Institute of Conservation Ecology. Studying hatching in both Bali and common starlings led to square eyes after reviewing almost 2,000 hours of video taped behaviour! A cruel twist of fate in the shape of new

employment laws on Jersey, lead me to apply for two jobs with the RSPB.

I moved to Wiltshire and started as the RSPB's Chalk Grassland Project Officer in January 2001, where one of my first jobs was to read and comment on a proposal by the Great Bustard Group to reintroduce a population of Great Bustards onto Salisbury Plain! This is where I caught the 'bustard bug' and my interest in the reintroduction project grew.

Working with farmers to restore and create chalk grassland, I worked with MoD conservation officers on Salisbury Plain and Porton Down which gave me fabulous insight into how the army and conservation needs are balanced and access to some amazing places for wildlife. Between 2004 and 2008 I was involved with the Salisbury Plain LIFE Project, the aims being to improve the condition of chalk grassland, and improve the habitat for marsh fritillary butterfly, juniper bushes and the stone-curlew. Also in 2004 I had the opportunity to work with the Mauritius Wildlife Foundation on their captive breeding programmes; hand-rearing endemic passerines; Mauritius Fody and Grey White-eye, and the rare Olive White Eye, all of which were then soft-released on a nearby predator-free island. Of course this was also the year that a licence was granted for the Great Bustard Reintroduction Trial on Salisbury Plain to begin!



© Dave Klaer

Although the RSPB initially reserved their support for the reintroduction, local staff liaised with the project; there was often much cross-over of work in the same areas with the same landowners and we were able to support the Great Bustard work through things like the stone-curlew newsletter. In 2007 I was invited by David Waters to visit Saratov in Russia. This was a terribly exciting moment for me; the opportunity to see Great Bustards in the wild, the scale of agriculture, the farming practices, where Great Bustards nested and of particular interest to me, the incubation and hand-rearing side of the project.

Following two visits to Russia, I worked behind the scenes to develop egg transportation boxes to increase egg viability and produced a formula to work out the hatch date of Great Bustard eggs and gave presentations and reports about the operation in Russia. A huge step forward was when the RSPB signed a partnership agreement with the Great Bustard Group and Bath University and officially joined the Great Bustard Consortium in August 2009.

With the RSPB's acquisition of Manor Farm at Newton Toney in 2006, I became the Chalk Grassland Restoration Manager and responsible for reserve areas owned or tenanted by local farmers. I lead on work within the Stonehenge World Heritage Site, undertook monitoring and ringing of stone-curlews and was able to continue being RSPB's regional lead on the Great Bustard project.

Which brings us to autumn 2010, when I heard that a bid to secure European funding for a new 5-year LIFE project for the reintroduction of Great Bustards had been success

ful. Here was a chance for me to possibly work full-time on Great Bustards! I cannot portray how excited I was to get the phone call which said I had been offered the position as the RSPB's LIFE Project Manager. So now the view from my office window is of the Project Site on Salisbury Plain, seeing bustards flying overhead and it is great to be working with such dedicated and enthusiastic staff who have achieved so much already.

Our new EU LIFE+ project is a partnership between the RSPB, the Great Bustard Group, the University of Bath and Natural England. The grant is for 2.2 million Euros over a 5-year period. This is fantastic as it will provide 75% of the LIFE+ projects costs, however, the partners still have to raise the other 25%, and as LIFE+ is very much about new work, much of the existing work will need to be funded as before, relying heavily on donations, membership and visits.

The LIFE+ project is a more ambitious piece of work involving a large, experienced and influential delivery team. We will concentrate on several key topics; there will be a much greater emphasis on monitoring to help us answer many questions regarding habitat use, movements of birds, criteria for nest sites and causes of predation. With new equipment, an early impact of the project has been the way in which monitoring has been conducted, with 16 birds released in 2010 carrying GPS satellite transmitters. Information gathered in this way, will help us to improve the survival and reproduction of bustards.

We will be concentrating on developing bustard friendly habitat, providing advice in key areas where Great Bustards frequent,

seeking bustard management areas important for lekking or breeding and offering to source funding for landowners who wish to take part. We will also be looking at the possibility of a second release site. The old adage of 'all your eggs in one basket' comes to mind, which has a serious meaning. Providing a second site as a focus and meeting place for bustards will increase their ability to spread and establish in other areas. In order to achieve all this, there will be a further three new members of staff.

Other project actions include development of a national Species Action Plan and the addition of the Great Bustard to Schedule I of the Wildlife and Countryside Act 1981. This is essential to provide the same protection afforded most other UK breeding birds.

You can follow progress of the project by going to the Great Bustard Group website www.greatbustard.org and clicking on the LIFE logo which will lead you through to the official LIFE webpage - due to be launched in Spring 2011.

For further information regarding LIFE+, please contact Tracé Williams on 07715 371747 or email: trace.williams@rspb.org.uk



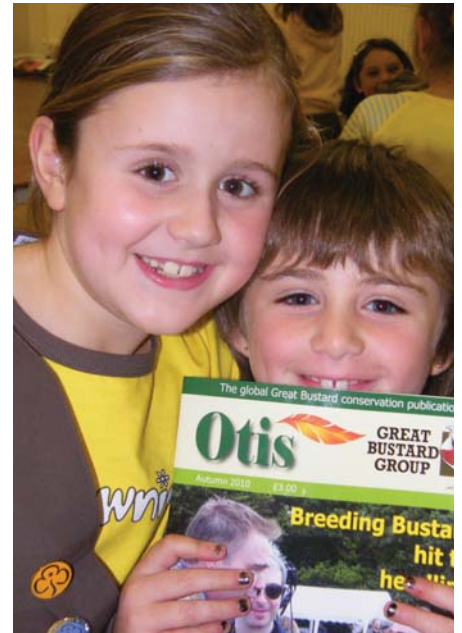
Wiltshire Brownies learn about the GBG



Maltilda and Mae with our latest posters



Mollie, Beth, Jasmine and Rebecca joined us to look through Otis and tell us what they thought



Karen Waters and Suzy Elkins report on a most entertaining evening spent with the 1st Marlborough Brownie Group.

The Great Bustard Group has many aims. Protecting and maintaining this historic species of bird being the one most commonly recognised. But the work of the GBG in Russia is often overlooked and many people do not understand the link between the two countries. In previous articles we have highlighted how we work with the birds in both areas and have often touched on our visits to Russian schools, but this year we aim to further these links and begin a structured education programme that provides a direct link between schools and children's organisations in the UK and Russia.

The Great Bustard Group team are always happy to give talks to children and were delighted to be invited to speak to the girls of the 1st Marlborough Brownies in November

2010. Karen Waters gave a most entertaining talk and was bombarded with questions from the enthusiastic girls afterwards. Game Brawl Owl Karen Dobie donned the dehumanisation suit to demonstrate how essential it is for those caring for the young chicks to hide their figure to avoid imprinting. The girls

were then treated to a chance to try out the chick rearing puppet and find out how 'great' the wingspan of a Great Bustard really is. We would like to thank the Brownies, adults and youngsters alike, for their warm welcome, enthusiastic response and for the lovely cards they made and sent to us after the evening!

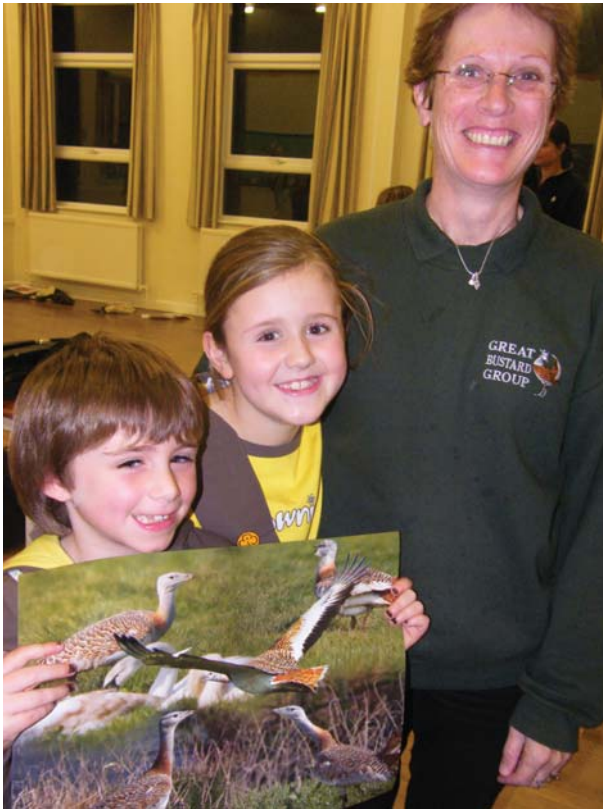


What a sport! Brown Owl Karen Dobie

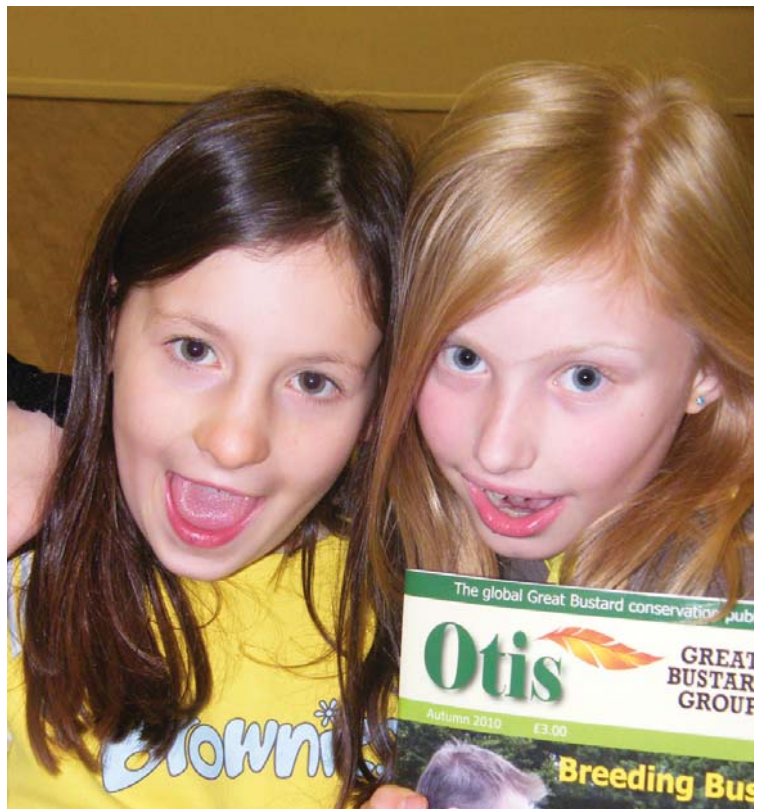


Georgie joins our group of readers

If you would like the GBG to visit your school or organisation please contact Suzy Elkins on schools@greatbustard.org. We give talks to all ages and interests and have something for everyone.



Rebecca and Jasmine with Karen Waters



Charlotte and Tai were extremely good sports and kept us all entertained too!

A big thankyou to all our UK penfriends



Courtney Lodge of Harnham Junior School writes to Russia!

We are also delighted to report that we have received a huge level of support from local youngsters wishing to write to the children of School No 1 in Krasny Kut, Russia. Students from Marlborough College in Marlborough, Harnham Junior School in Salisbury and even a school in Berkshire have sent letters and emails to the Russian pupils. We would like to thank all who have participated and invite anyone else who may be interested in having a Russian penfriend to contact Suzy at schools@greatbustard.org. Suzy is visiting several schools in Russia between January 13th and January 22nd to deliver letters, magazines, dvds and drawings from British children and there will be a full report on her trip in the next edition of Otis magazine.



Why not bring a class to meet our captive birds in the UK's only Great Bustard aviary at the Hawk Conservancy Trust in Hampshire? Contact schools@greatbustard.org for more information, or see our website.

GBG Go Deadly with the BBC

We join Steve Backshall at the BBC's Deadly Day Out

The Great Bustard Group was lucky enough to be offered a partner stand at the BBC's Deadly Day Out in Southampton in November. Charlie Moores reports on a 'cracking' day out.

In the early hours of Sunday 7th November GBG (staff and volunteers) packed up Hercule, our ever-faithful stuffed bustard, several tanks of gloriously wriggly live mealworms and as much promotional material as we could carry and headed down to Southampton as invited guests of the BBC's 'Live 'n' Deadly – Deadly Days Out' project.

To celebrate Steve Backshall's new CBBC show Live 'n' Deadly, Steve and the crew gave everyone the chance

to get up close and personal with some amazing British wildlife and have a go at some awesome activities!

Specifically designed to promote Live 'n' Deadly, which airs regularly on CBBC and does a great job of introducing children to the UK's fantastic wildlife, the Deadly Day Out took place on a largely sunny day in Southampton's Hoglands Park, a wide open space in the middle of the city.

Our role? To help entertain the children who came along and to

talk about the 'deadly side' of the Great Bustard's life from the

food it eats to the foxes that prey on its chicks. The GBG was located (along with the RSPB and Hampshire and Isle of Wight Wildlife Trust) in a futuristic tent near the main stage. Our small area was continually manned by GBG (both staff and much appreciated volunteers) and the day was a huge success – mostly because an almost unbelievable ten thousand or so people turned up (with some coming from as far as London, Oxford and Bristol)!



With the site not officially opening until 9am, there were queues quite literally stretching right around the park by 8.30 and there was a line of people waiting to get into our tent right from the outset.

Fortunately the good folk queuing up outside had some entertainment while they waited, as Paul Betchley from the Hawk Conservancy Trust had brought along a Barn Owl and a rather wonderful 'egg crushing machine' which demonstrates how much weight a

chicken egg can take before it explodes in a shower of yolk and shell (our record for the day was a remarkable 47lbs!).

Equally fortunately the weather remained good throughout the day and a great time was had by visitors, guests, performers and an undeniably charismatic TV star alike...and of course all of us 'GBGers' who did our very best to spread the GBG message along the south coast!



Puzzled faces all round as Charlie shows the unbroken egg

As the lighter evenings approach we look forward to 2011



Hannah Rose of the GBG updates us on happenings at the Hawk Conservancy Trust - and looks forward to the coming season.

Some of you may by now have seen the three new bustards that arrived at the Hawk Conservancy Trust in early December 2010 and may be wondering about the story behind these handsome young birds. All three bustards (Pink 3, 8 and 24) came over from Russia in August of 2010, but unfortunately became injured in some way, rendering them unfit to be released into the wild fully. Two of the birds, Pink 3 and Pink 24 will be put into the release pen in spring 2011, where they can live safely (but due to territory won't be able to fly in and out with

the other wild birds). These two birds will be a vital part of the project as they will encourage our free flying birds to use the pen and will help to promote the natural flocking instinct of the bustards. Pink 3 and Pink 24 each need someone to sponsor them and give them a name! The third bustard, Pink 8, has kindly been sponsored by Joan New and named Nelson; he will live at the Hawk Conservancy Trust along with Fergus, who is also sponsored by Joan. If you would like to sponsor a bustard please contact Karen Waters – karenwaters@greatbustard.org.

We will be holding more photographic days in the spring of 2011. These will be run at the Hawk Conservancy Trust with professional photographer Dave Kjaer our forever enthusiastic photographer and are the perfect opportunity to get that close up shot! The cost is £40 and the dates are: Tuesday 8th March, Thursday 24th March and Tuesday 5th of April.

Another wonderful way to get up close and personal with Fergus and the new birds is to purchase a Raptor and Bustard Experience day. This proved to be very popular in 2010 and we hope will be even more so in 2011. Available on two Mondays per month and

with an intimate group of no more than five people you will spend the morning at the Hawk Conservancy Trust flying various birds of prey, then after lunch (which is provided) you will be handed over to a member of Great Bustard Group staff and given privileged access to the pen at the Hawk Conservancy Trust to meet Fergus. You will then move on and be given a guided tour of the Project Site and see the wild bustards on Salisbury Plain. This experience day is ideal if you fancy doing something different, or perfect as a gift for someone special who doesn't want or need conventional presents! People wishing to purchase this experience day should do so through the Hawk Conservancy Trust; more information is given on their website.

And finally, we are hoping to introduce informal talks on weekends and on bank holidays for visitors to the Hawk Conservancy Trust. These talks will most likely be given after the 2pm flying demonstration and will be held by the Bustard Bothy, giving a general overview of the project and the bustards at the Hawk Conservancy Trust and answer any questions of visitors. We look forward to seeing you at the Hawk Conservancy sometime in 2011!



The bothy is ready for another exciting season at the Hawk Conservancy Trust

An invaluable resource

An analysis of the use of captive birds by David Waters

David Waters, GBG Project Director looks at bustard species in captivity and considers their role.

There are a number of bustard species being kept in captivity across the world and they are being kept for a number of reasons. Some are part of conservation projects, others are bred and released under sustainable hunting programmes, still yet others are in zoos and bird collections and come under a banner of education and entertainment.

Only some of the species kept have been bred in captivity. The Smithsonian National Zoo team in the USA have been publicly congratulated on their excellent success with the Kori Bustard (see Otis 34). Houbara Bustards are bred and released by the thousand across the Middle East and North Africa as quarry for falconers. Little Bustards are being bred successfully by an exciting reintroduction project in France but have failed to breed in other collections.

Other bustard species kept in zoos or collections have proved difficult or impossible to breed. Great Bustards have bred in captivity very occasionally. Nobody can claim to have found a technique of keeping Great Bustards and producing young with any regularity. The Great Indian Bustard has been kept in zoos in the past but has not been able to sustain its numbers in captivity, let alone generate stock for release into the wild.

The GBG recognises that captive breeding is very much a second string to conservation, and that failing wild populations cannot be helped by merely releasing more birds; these will fail just the same. However, the ability to generate stock for reintroductions, have self-sustaining zoo populations and in the worse case scenario, prevent total species extinction is an important one.

The captive stock of the GBG consist of birds imported from Russia with the intention of releasing them into the wild, but due to injury after the import, release is no longer viable. These birds have a valuable role for

the UK project as ambassadors. They are excellent for education (especially for children and others who would be unable to see them in the wild), project promotion and media work and they also give an opportunity to study the species at close quarters. In 2010 a female suffered a wing injury and now, for the first time, the GBG has a female in its aviaries. It gives a unique chance to attempt to breed the species in captivity and it is a chance the GBG is determined to make the most of.

The GBG has been privileged to establish good relations with Moscow Zoo, who hold both Great and Little Bustards and are hoping to work together to hold a conservation breeding conference for all bustard species. The aim being to bring those with successes together with those still searching and to expand the list of successful bustard breeding schemes.

The conference is still at the planning stage, but is scheduled to take place in November this year. The intention is to keep the costs for those attending as low as possible and it may be desirable to offer some assistance with the travel costs to some attendees from smaller organisations.

Anyone interested in either attending the conference or those who would consider sponsoring travel costs can express an early interest by contacting David Waters davidwaters@greatbustard.org.

Captive bustards in Tumuji, Chinese Mongolia



Spring is the perfect time to visit

The Project Site is always an exciting place to visit but once the snows have retreated and the days start to lengthen there is a noticeable pick-up in activity. As the days become warmer our birds turn their thoughts from surviving the lean times at the end of the year to producing the next generation, with the formation of leks (from around February onwards) and the incredible 'inside out' displays of the males - all performed against a chorus of singing Skylarks, Corn Buntings, and Linnets.

As the summer comes there is a chance of seeing a female Great Bustard with a chick - and birding does not get much better than that - add in nesting Stone Curlews and a chance of a Montagu's Harrier and it can quickly become a red letter day. All through the year there are the Salisbury Plain specials like Corn Bunting, Sky larks, Grey Partridge, and seasonal visitors like Hen and Montagu's Harriers, Hobbies and with luck Quail.

Spring is a very exciting time of year for the project. So come along to the Great Bustard Project Site anytime over the next few



© David Tipling

In Spring the bustards begin to display and this makes for the most spectacular birdwatching

months and we'll do our very best to help you share our passion and enthusiasm as one of

the UK's great conservation success stories begins another chapter.



Bring a guest along - FREE

This voucher entitles a guest to one free visit to the GBG Project Site when accompanying a paying visitor.

Simply present this voucher to GBG staff when you visit the site and your guest will not be charged. Valid until March 31st 2011

Enclose payment, glue here, seal and post to the address overleaf

Join the GBG & help us to bring the bustard back

www.greatbustard.org • membership@greatbustard.org

Postal address: 1 Down Barn Close, Winterbourne Gunner, Salisbury, Wiltshire, SP4 6JP



MEMBERSHIP

Pay monthly from just £1.66 a month

Become a member of the Great Bustard Group to help secure the future of this amazing bird.

Simply fill out the form & send to the address shown above or give to a GBG staff member. Membership includes:

- Quarterly magazine OTIS • Booklet about the Great Bustard • Free guided visits of the release site • Invitations to all Fundraising and Social Events • Membership badge • Car sticker

Annual Membership (tick box)

Ordinary £20 Family £25 Fellow £75 Life Member (Single payment of min £500)

Your details

Organisation (if applicable)
Title Forename Surname
Address
Phone
Email
Post code

Payment method (please tick)

Cheque (payable to the Great Bustard Group) Monthly Standing Order

Instruction to your Bank/Building Society to pay Monthly Standing Order

To the Manager Bank/Building Society
Branch Address
Post Code

Account Name
Sort Code
Account Number

Please pay the Great Bustard Group (Nat West, 48, Blue Boar Row, Salisbury, Wiltshire, SP1 1DF, Account Number 29562325, Sort Code 54 - 41 - 19) the sum of (**minimum £1.66**) £ on 1st day of each month until further notice.

Donation

I would like to make a donation to the Great Bustard Group of £

Gift Aid.

If you are a UK taxpayer, the Inland Revenue will give us an extra 25p for every pound you give.

Please tick the box and sign. It's that simple!

I am a UK taxpayer and request that my membership and all gifts of money that I have made in the past four years and all future gifts of money that I make to the Great Bustard Group from the date of this declaration be Gift Aid donations. I understand that I must pay an amount of Income Tax and/or Capital Gains Tax for each tax year (6th April one year to 5 April the next) that is at least equal to the amount of tax that the charity will reclaim on my gifts for that tax year.

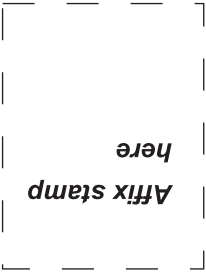
Signature Date

GBG is a registered charity number 1092515



www.greatbustard.org

Fold here, glue or tape edges closed



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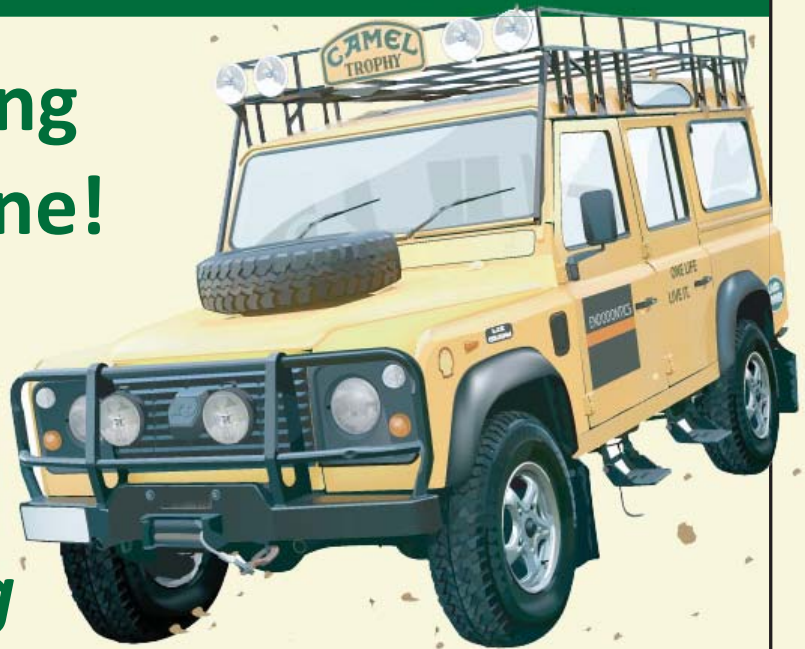
To book - ring or email

07817 971 327
visit@greatbustard.org

Our site needs a new Land Rover...

... and we're cycling
to Russia to get one!

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See www.greatbustard.org for more details



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This project is part financed by the European Agricultural Fund for European Development 2007-2013: Europe investing in rural areas. It is being delivered through Plain Action, the Local Action Group on Salisbury Plain, and the South West of England Regional Development Agency with Defra as the Managing Authority