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# GOOSE BULLETIN

## ISSUE 14 – MAY 2012

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**GOOSE BULLETIN** is the official bulletin of the Goose Specialist Group of Wetlands International and IUCN.

**GOOSE BULLETIN** appears as required, but at least once a year in electronic form. The bulletin aims to improve communication and exchange information amongst goose researchers throughout the world. It publishes contributions covering goose research and monitoring projects, project proposals, status and progress reports, information about new literature concerning geese, as well as regular reports and information from the Goose Database.

Contributions for the **GOOSE BULLETIN** are welcomed from all members of the Goose Specialist Group and should be sent as a Word-file to the Editor-in-chief. Authors of named contributions in the **GOOSE BULLETIN** are personally responsible for the contents of their contribution, which do not necessarily reflect the views of the Editorial Board or the Goose Specialist Group.

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## Editorial

In the last issue we asked for manuscripts about goose problems and feared a monster wave of frustrated reports about how geese endanger the long term survival of the farmers, aviation, open-air and sun bathing, park recreation, breeding habitats and water quality. But nothing happened.

Instead we received an excellent mixture of manuscripts about endangered species (Red-breasted and Lesser White-fronted Goose), about rather unknown species like the Bar-headed Goose as well as about goose hunting, catching, poaching and monitoring.

Besides an interesting mixture of different subjects and species this issue of the GOOSE BULLETIN also has a geographical mixture with articles from Finland, Romania, Bulgaria and France, Russia and China as well as Northern America.

Editing all these manuscripts is time consuming and all the editors have jobs that are time consuming. Combined with the fact that most manuscripts still arrive around the deadline, it makes it difficult to keep the time schedule of two issues per year, one in May and one in November. Therefore the Editorial Board has decided to bring forward the manuscript deadline by one month to leave more time for editing and layout of the manuscripts. So the manuscript deadline for the November issue of the Goose Bulletin will be 31 August 2012.

We hope you enjoy reading GOOSE BULLETIN 14 !

**The next issue of the GOOSE BULLETIN is planned to appear in November 2012, which means that material for this issue should have reached the editor-in-chief not later than the 31 August 2012.....but earlier arrival is allowed!**

The Editorial Board



## The 14th GSG-meeting, 17 – 21 April 2012 in Steinkjer, Norway.

Bart Ebbinge (Chairman GSG), Thomas Heinicke, Jesper Madsen, Ingunn Tombre and Berend Voslamber (board members GSG).

The 14<sup>th</sup> meeting of the Goose Specialist Group (GSG) held in Steinkjer, Norway from 17 – 21 April 2012 was an outstanding success. The meeting was hosted by the University College in Nord-Trøndelag (HiNT) at the Faculty of Agriculture and Information Technology in Steinkjer.



Fig.1. Participants of the 14<sup>th</sup> meeting of the Goose Specialist Group in Steinkjer, Norway.

The inspiring opening words by Hanne Solheim Hansen from the University College set the scene for a very fruitful and lively meeting, which was attended by 70 participants from 18 different countries.

Students from the Nord-Trøndelag University college filmed all the talks during the conference and also the excursion and the results from the videostreaming can be found at the following webpage:

<http://video.hint.no/lastopp/gsg2012>.

To access this site you will need a username and password, which will be given to you on request from Per Ivar Nicolaisen ([pernic@me.com](mailto:pernic@me.com)) of the organizing committee.

On the special conference website

(<http://www.gsg2012.com>) you can also find pictures from the conference.



Fig.2. Opening of conference by Hanne Solheim Hansen

The Stichting Support Meetings of the Goose Specialist Group managed to obtain € 10,000 from sponsors to support 13 participants from 7 countries covering part of their travelling and conference costs. This support was generated from generous gifts from the Dutch Faunafonds, WWF-NL and Wetlands International. The meeting itself was sponsored by the hosts at HiNT, as well as from the Norwegian Directorate for Nature Management and the Department of the Environment at the County Governors Office (Fylkesmannen i Nord-Trøndelag). We greatly acknowledge these sponsors.

The local organizers Paul Shimmings, Per Ivar Nicolaisen and Jan Eivind Østnes supported by Sonja Ekker, Rolf Terje Kroglund and Tor Kvam did an excellent job in organizing this meeting. The scientific committee, consisting of Jouke Prop, Carl Mitchell, Paul Shimmings and Ingunn Tombre selected 46 oral presentations and 6 poster presentations for this conference, which focussed on Svalbard populations of Pink-footed (*Anser brachyrhynchus*) and Barnacle geese (*Branta leucopsis*), of Greylag Geese (*Anser anser*) nesting in Norway and wintering in Spain, but the programme also included more general themes, like:

- how Greater White-fronted Geese (*Anser albifrons albifrons*) follow the green wave during spring migration through central Russia,
- about the breeding biology of the strongly increasing population of Barnacle Geese on Kolguyev Island, Russia,
- about a circumpolar meta-analysis on the impact of global warming on breeding success of arctic-nesting geese, etc.



Fig. 3. Neckbanded Pink-footed Goose  
*Anser brachyrhynchus*

In addition, special workshops were held on marking techniques, reporting of marked geese through websites like [www.cr-birding.org/](http://www.cr-birding.org/) and [www.geese.org](http://www.geese.org) to help volunteer observers submitting their observations, monitoring goose numbers, and a workshop on the impact of hunting on goose populations. The marked increase in numbers in most, but not all (!), goose populations is met with the request to control goose numbers at a desired level in several countries. This, however, requires sound knowledge about the impact of control measures on the population dynamics of geese and such knowledge is lacking in most European countries. It was therefore encouraging to hear that both Denmark and Norway have made funds available for research into such control

measures envisaged for the population of Pink-footed Geese nesting on Svalbard, which is one of the best studied goose populations in the world with both a high proportion of marked individuals and very accurate annual censuses of the entire population.

The proceedings will be published in the online journal ORNIS NORVEGICA (<https://boap.uib.no/index.php/ornis>). Ornis Norvegica is a peer-reviewed, online and open access journal publishing papers in all fields of ornithology. Both subscription and publishing are free of charge and we will gain from the flexibility in length of the papers, pictures and colourful graphs. All manuscripts will be “labelled” so that it is easy to see that this was a contribution in our conference (they may also be labelled with our new logo, if that is finished by the time our first paper is released). Paul Shimmings will have a co-editorial responsibility for our manuscripts, and we expect all to contribute in terms of referee-work. Each author has to register as guided on the web-page for Ornis Norvegica, and thereafter submit the manuscript and its attachments as an email-message.



If you are interested in having your presentation, or a part of it, included in the proceedings send a message that you will contribute with a manuscript to [goosesg2012@gmail.com](mailto:goosesg2012@gmail.com) before 25th of May 2012. After that send your contribution when ready, but before 1 October 2012, and these will be published consecutively.



Fig. 4. Great welcome in Beitstad, Vellamelen  
by the local school children

During the mid-conference excursion we saw thousands of spring-staging Pink-footed Geese and White-tailed Eagles (*Haliaeetus albicilla*) in the beautiful Norwegian fjords. Many neckbands of Pink-footed Geese were identified and we received a great welcome in Beitstad, Vellamelen by the local school children, dressed up as geese with pink legs, who celebrate the spring migration of Pink-footed Geese during a special Goose Day.”Gjess we can” was one of the slogans (Gjess is Norwegian for geese).

Our specialist group does not yet have a logo, and several drafts of possible logos were shown to the participants by Berend Voslamber. Because none of these draft logos generated an immediate enthusiastic response by the participants, it was decided not to choose one of the presented examples, but to send ideas and comments on these drafts to Berend ([berend.voslamber@sovon.nl](mailto:berend.voslamber@sovon.nl)) and to finally involve all GSG-members (660 by now) in selecting an appropriate logo. More news about this logo-selection will be on our website later this year.

The Goose Specialist Group is part of a much larger family of Specialist Groups under the umbrellas of the IUCN-Species Survival Commission and Wetlands International. The chairman reported briefly about the recent meeting in Abu Dhabi of all Specialist Group Chairs ([http://www.iucn.org/about/work/programmes/species/who\\_we\\_are/about\\_the\\_species\\_survival\\_commission\\_/](http://www.iucn.org/about/work/programmes/species/who_we_are/about_the_species_survival_commission_/)), and at the end of the meeting a renewed contract with Wetlands International was signed on behalf of the GSG-board by the chairman.

At the closure of the meeting the chairman once more reported to all participants that further financial support for the continuation of the work of the Goose Specialist Group is needed. Anyone who would like to contribute even the smallest amount is kindly requested to donate to the charity “Stichting Support Meetings of the Goose Specialist Group.” (see <http://www.geese.org/gsg/> under Sponsoring). This will not only allow this charity to support GSG-members to attend our regular meetings, but also to support the website to track marked geese [www.geese.org](http://www.geese.org), which from now on will be run officially by the Goose Specialist Group.



## Observations of Lesser White-fronted Geese *Anser erythropus* in Finland in the early 1900s

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### Abstract

Information relating to the Lesser White-fronted Goose (LWfG) in ornithological studies in Finland about 100 years ago was analyzed. Special attention was paid to the breeding range, numbers and migration routes of the species. The breeding range was limited to the subalpine and alpine zone of Finland. Population size was estimated at c. 1 000 geese at that time.

Two authors had conflicting views on the migration routes. In the light of later information it seems that the geese made a nonstop flight from the Oulu region (65° N) to the northernmost Norwegian coast and somewhat later returned back to the subalpine and alpine zone in northernmost Fennoscandia to their breeding habitat as these areas lost their snow cover in spring. On the western coast of Finland there were two important resting sites (Fig. 1). Apparently the northern one was the most important. The estimation of at least 10 000 geese made by E. Merikallio in the Oulu region may have been somewhat exaggerated. The number of the resting birds was, however, much greater than the Finnish breeding population. The Finnish resting sites were formerly of great importance for the entire LWfG population breeding in Fennoscandia.

**Key words:** *Anser erythropus*, breeding range, population size, migration routes.

### Introduction

Many studies were made of the bird fauna of northernmost Finland in the late 1800s or early 1900s. This article summarizes available information from those studies in northern Finland dating back 90-120 years.

### The breeding range and goose numbers

The Lesser White-fronted Goose (*Anser erythropus*) (LWfG) was only of minor interest in most of the studies of the bird fauna of northern Finland as it bred in very remote areas. In many cases, the knowledge of local hunters, police or regional foresters were gathered and documented by the authors. They made clear distinctions between the large (= Bean Goose *Anser fabalis*) and small geese (= LWfG) found in the area and often had local names for the species.

SUOMALAINEN (1912) stated that LWfG was found only outside the pine forest region. LWfG were found in a few dozens often with Bean Geese. His observations were from the western part of Enontekiö from Kaaressuvanto to the Kilpisjärvi region (subarea I, Fig. 1).

According to MUNSTERHJELM (1911) LWfG bred in the lower parts of the alpine region, however, not close to Könkämä river valley because of the intensive spring hunting. It was still numerous in Kumaeno region south east from Kilpisjärvi (subarea I, Fig. 1).



Fig. 1. The breeding range of the Lesser White-fronted Goose in Finland in the early 1900s. Letters refer to the subareas in the study by HAAPANEN & NILSSON (1979). The two important staging sites on the western coast of Finland are also marked. In the Pori region the staging sites were natural pastures in Kokemäenjoki river delta and nearby Yteri coastal areas. In Oulu region, the staging sites were on coastal pastures on Hailuoto island and on the mainland marked with (x).

MONTELL (1917) was a well known naturalist and forester in Lapland. His study area was mostly in the boreal zone south from the northern limit of the pine forests. LWfG was not observed by him, but he reports two observations from the northern part of his study area north from the pine forest limit made by a retired police officer and a local hunter.

FINNILÄ's (1913 and 1914) observations were from the central part of Finnish Lapland, mostly from the northern boreal zone. He saw a flock of 20 LWfG flying northwards close to the southern slopes of Saariselkä fjelds. According to the Same people, LWfG were breeding numerously in Saariselkä fjelds (subarea H, Fig. 1). FINNILÄ (1914) mostly studied areas, which are now on the Russian side of the Russian Finnish border. He did not see LWfG in those low fjelds and stated that the southern limit of the breeding range was in Saariselkä (68° 13' north).

NORDLING (1898) had observations from Inari region and from Utsjoki, northern Finland (subarea G, Fig. 1). He stated that in the bags of hunters in the subalpine areas, one half of the birds were LWfG, the other half Bean Geese. In the low lands all were Bean Geese. He concluded that LWfG was breeding only in the subalpine and alpine zone. In the autumn, fairly large flocks were seen flying over Inari lake southwards. However, he regarded the LWfG to be as a fairly rare species in Inari region.



To conclude, all the authors in the early 1900s agree that LWfG was breeding only in the subalpine and alpine zone of northern Finland (“Fjeld Lapland”) (Fig. 1). In the breeding range shown by NORDERHAUG & NORDERHAUG (1984) quite extensive areas of the northern boreal zone in eastern Finland were included. This probably did not reflect the true situation although there were single observations of the species from that region. South from 68°13'N there is only one observation of a brood. It was from Mäntytunturi fjeld in the alpine zone in Kuusamo, Finland in 1935 (now on the Russian side, 66° 20' N) (SUOMALAINEN 1952).

The breeding range covered the subareas G and I plus Saariselkä fjelds, only a part of subarea H of what HAAPANEN & NILSSON (1979) used (Fig. 1).

The area comprises c.16 200 km<sup>2</sup>. There are much more extensive areas of suitable range in Sweden and Norway (cf. HAAPANEN & NILSSON 1979).



Fig. 2. Juvenile Lesser White-fronted Goose *Anser erythropus* (© Johan Mooij).

The authors of those papers early last century did not describe the habitat types used by LWfG, nor is it possible to make a clear estimation of the size of the breeding population at that time. The amount of suitable habitat may vary greatly within these areas. Although in certain areas LWfG may have been rather numerous as in the area between Kilpisjärvi and Lätäseno in northwestern corner of Finland (subarea I, Fig. 1). The last breeding sites in Finland were found in the early 1990s in subarea G close to the eastern Norwegian border. The area must have been good habitat for the species. The density of water bodies per 25 km<sup>2</sup> was 75, the highest in their whole study area of northern Fennoscandia (HAAPANEN & NILSSON 1979). The small water bodies are surrounded by mire vegetation, which provides good feeding habitat.

Taking into account that the authors in many cases have seen dozens of LWfG during their field trips which covered only a small part of the area, there must have been some hundreds of LWfG in that subarea at that time.

The best guess by the author of this paper regarding the Finnish population size about 100 years ago is that there may have been up to one thousand or more LWfG in the whole area of Fjeld Finland. In the review by SIIVONEN (1949), the author states that the Finnish summer population of LWfG in the 1930s may have been 2 100 birds according to the information given by E. MERIKALLIO. These two figures are not too far from each other.

## Observations on the migration and resting sites

### Arrival at the breeding range

MUNSTERHJELM (1911) made observations on the arrival of LWfG in Könkämä valley, Saarikoski (about 65 km to north east from Karesuvanto), north western corner of Finland (68° 45' N). He observed the arrival of birds from late March to early June. The first LWfG arrived on 11 May.

As far as arrival routes are concerned, his Swedish original text is cited here:

*“According to the literature LWfG is migrating through Finland. It means the migration is taking place in south west Karelia, Savo region and over Oulu and Tornio. But where the migration is directed after that to? ... Assumption that the migration would go along the Tornio and Muonio rivers cannot be correct as one must take into account the big numbers of LWfG which are breeding every year in the northern alpine region of Norway, Sweden and Finland and the low numbers of these geese which are seen along these rivers in their migration time. There is the possibility that the LWfG breeding in these areas are using a more eastern flyway. Migration would go from Karelia to Kola peninsula and from there to the summer breeding areas in Norway, Sweden and Finland. My observations in Saarikoski (north eastern corner of the Finnish Fjeld Lapland close Swedish border) support this theory as the LWfG are arriving to these areas from the Norwegian coast and are flying high straight ahead as those birds on migration are doing. Whereas those LWfG flying northwards are flying on low level, slowly as birds are doing when they are searching and studying habitats.”*

During 3 years MUNSTERHJELM (1910) has studied birds in Lapland further south in the boreal zone. He never saw LWfG there, whereas the Bean Goose was commonly seen on their resting sites. Many breeding sites were known, too. These observations –he states– verify his conclusions on the migration routes given above (See, however, the text below. Observations by MERIKALLIO 1920).

### Migration through Southern Finland

On migration, LWfG were found in different parts of southern Finland about 100 years ago. Some observations are uncertain, especially those told by a local people. There were, however, two regions where these geese were regularly seen. These were on the Finnish western coast of the Baltic Sea. The most southerly was at the coastal areas near Pori (6° 30' North) (SUOMALAINEN 1927, HORTLING 1927 and SOIKKELI 1973) and the other was near the city of Oulu (about 65° North) (MERIKALLIO 1915 and 1920) (Fig. 1).

These areas were used both in spring and in autumn. LWfG arrived in the Oulu region during the first week of May, peaked in mid-May and the migration was over by the end of May or first days of June (MERIKALLIO 1920). LWfG observations from Oulu area were made over a long period, the oldest dating back to 1792 and through the 1800s. Many authors stated that LWfG were seen in huge numbers.

It is very difficult to estimate the numbers of LWfG as the observations were not systematic and often derived from local hunters. It seems that MERIKALLIO trusted the identifications by locals as only two goose species were found, namely the big one and the small one called locally kiljukas.

Only once MERIKALLIO gave numbers other than single flocks. During May 16-19, 1913, at least 500 LWfG flew past Hailuoto. Given that different resting sites were fairly far from each other and systematic observations only occurred on three days the total number of spring migrants must have been greater. MERIKALLIO (1915) stated that the total number of LWfG in the whole Oulu region, must have been at least 10 000 birds. This seems unlikely and the data on which this estimate is based, were not given, so it is difficult to accept it as accurate. E. MERIKALLIO was a man who devoted his lifetime to developing counting methods to apply to Finnish bird populations. This estimated number of LWfG may, however, be somewhat exaggerated as he was at that time still a junior researcher.



Fig. 3. Flying Lesser White-fronted Goose *Anser erythropus* and Greater White-fronted Goose *Anser albifrons* (© Hans Glader)

In autumn, the first LWfG arrived in late August, a report on August 10 which was regarded as exceptionally early. Most LWfG disappeared by mid-September and the last by 1 October. Total numbers were larger in spring but the flock size was smaller. In spring, single pairs were often seen to migrate northwards.

MERIKALLIO (1920) gathered these data in order to show that MUNSTERHJELM (1911) was not right in his conclusions. His last remarks are cited: “*The present literature hardly gives any support to the assumption that those LWfG breeding in Lapland .. (in this case Lapland possibly covers the alpine and subalpine areas of all three countries.) .. could have migrated through Karelia to the Kola peninsula and from there to the west along the Arctic Sea.*” It is quite possible that the Bean Goose and LWfG used different strategies during their migration northwards. LWfG may have taken a nonstop flight from the Oulu region to their resting sites on the Norwegian coastal areas and from there they continued into the summer range where the snow melting took longer as NORDERHAUG & NORDERHAUG (1984) have described. LWfG arriving from the Norwegian coast to the Finnish fjelds in Enontekiö arrived from the north as MUNSTERHJELM (1911) had observed. It seems that MUNSTERHJELM came to the wrong conclusions based on his own observations.

In the Pori region LWfG were sometimes also seen in big flocks. SUOMALAINEN (1927) gives information about just one big flock of 400 geese. In spring 1926 (SUOMALAINEN 1927) and autumn 1926 (HORTLING 1927) they saw only a few dozen LWfG. SOIKKELI (1973) saw up to 600 LWfG in one flock in 1953. It is impossible to know the true total numbers of LWfG which migrated through this area in the early 1900s.

Possibly, the numbers were much lower than in the Oulu region. It seems that the peak numbers were found in both places at the same time both in spring and in autumn. So it seems that on their migration through Finland LWfG used only one place to rest and to feed. Most probably these were alternative resting sites.

HORTLING (1929-1931) reported that LWfG were seen in inland areas, where some of these flocks may have staged as well. According to him the numbers of LWfG inland were much smaller than on the western coast.

### **General remarks**

LWfG used the Oulu region as a staging area both in spring and autumn. The numbers were higher in spring than in autumn. A part of the population must have migrated another way south. It may be possible that the non-breeders used moulting sites outside of northern Fennoscandia and they left along a different route south as they do nowadays (see ØIEN et al. 2009).

The autumn migration through southern Finland ceased altogether some decades ago. It lasted at least until the mid-1950s (TÖRNROOS 1958). In spring, the Oulu region is still used but by much smaller numbers (MARKKOLA 2001). In the Pori region, the spring staging area was abandoned in the 1960s (SOIKKELI 1973), so the present migration routes are different from what they were 100 years ago (cf. ØIEN et al. 2009).

At that time the staging areas on the west coast of Finland were likely of great importance for the whole Fennoscandian population.

The present LWfG population breeding in Northern Norway is less than 1 % of what the Fennoscandian population was 100 years ago. Such a remnant population cannot maintain all the traditions and the diversity of behaviour of the previously larger population.

All the authors in the early 1900s report N-S/S-N migration including some SE directions. It seems that one hundred years ago the migration pattern was more diverse than it is nowadays. Many old handbooks as well as recent studies based on the old observations (e.g. KIVIRIKKO 1948, KAMPE-PERSSON 2008, MOOIJ 2010 plus the literature listed in that paper) state that the wintering areas covered a very wide belt from western Europe east to the Caspian Sea and further east.

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## Newly discovered Lesser White-fronted Geese *Anser erythropus* in the Bolshezemelskaya tundra.

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Between 13 June and 3 July 2011, a survey of the Seida River basin, Bolshezemelskaya tundra, Komi Republic (Fig. 1.) was carried out.

The Seida River is about 150 km long, and originates from a system of lakes of glacial origin. In its upper stretches, the river flows north-eastward, then turns to the south. Crossing spurs of the Bolshezemelskij range, the river meanders strongly. In its middle and lower course, the Seida River is relatively straight and flows into the Usa River. The catchment is mostly between 197 and 217 m above sea level. A large number of tundra lakes occur in the upper and middle courses of the river. The river valley is wide (500-800 m) with several terraces. The floodplain vegetation includes willow trees and bushes. Sloping banks alternate with abrupt clayey-sandy slopes, rising up to 30-40 m. The course of the river is fast – up to 0,7 m/s, stony splits are frequent. The bottom of the river is mainly stony with occasional sandy banks. Aquatic vegetation near banks is dominated mainly by *Nardosmia frigida*. We walked 40 km counting routes and also covered 111 km in boats along the river.

Along one river segment of 56 km (coordinates 67° 28' - 67° 17' N 63° 10' - 62 ° 51' 10" E) we encountered Lesser White-fronted Geese *Anser erythropus* in typical habitats for them (willow and meadow vegetation with high abrupt banks). We suppose that for the greater part these were breeding birds. Practically all pairs of Lesser White-fronted Geese were found close to territorial or breeding Peregrine Falcons *Falco peregrinus* or Rough-legged Buzzards *Buteo lagopus*. Several geese showed signs of nesting behaviour. We were unable to conduct special searches for goose nests. During our journey in the floodplain we registered solitary birds, pairs and groups (up to 4 individuals), frequently in Bean Goose flocks. Feeding and resting birds were present in typical tundra habitats: near glacial lakes with steep and hilly coasts, with meadow vegetation along the water edge. During the course of our investigation we recorded 36 Lesser White-fronted Geese in different habitats, equivalent to a goose density in tundra biotopes of 0.2 individuals per 1 km<sup>2</sup>, or up to 2.1 individuals per 10 km length of watercourse.

Migrating Lesser White-fronted Geese flying from southern, eastern, north-western and north-eastern directions were seen from 20 July, comprising of single birds, pairs and groups of up to 4 individuals, mainly in the morning and in the evening. Local hunters reported migration of Lesser White-fronted Geese in large numbers along the course of the Seida River to the north.

At present, there is no anthropogenic influence on the ecosystems of the Seida River basin, which retain practically natural conditions for the geese. For the effective conservation of the Lesser White-fronted Goose, we proposed to the Ministry of Natural Resources of the Komi Republic the designation of a reserve in the Seida River basin covering an area of 28 km<sup>2</sup>.

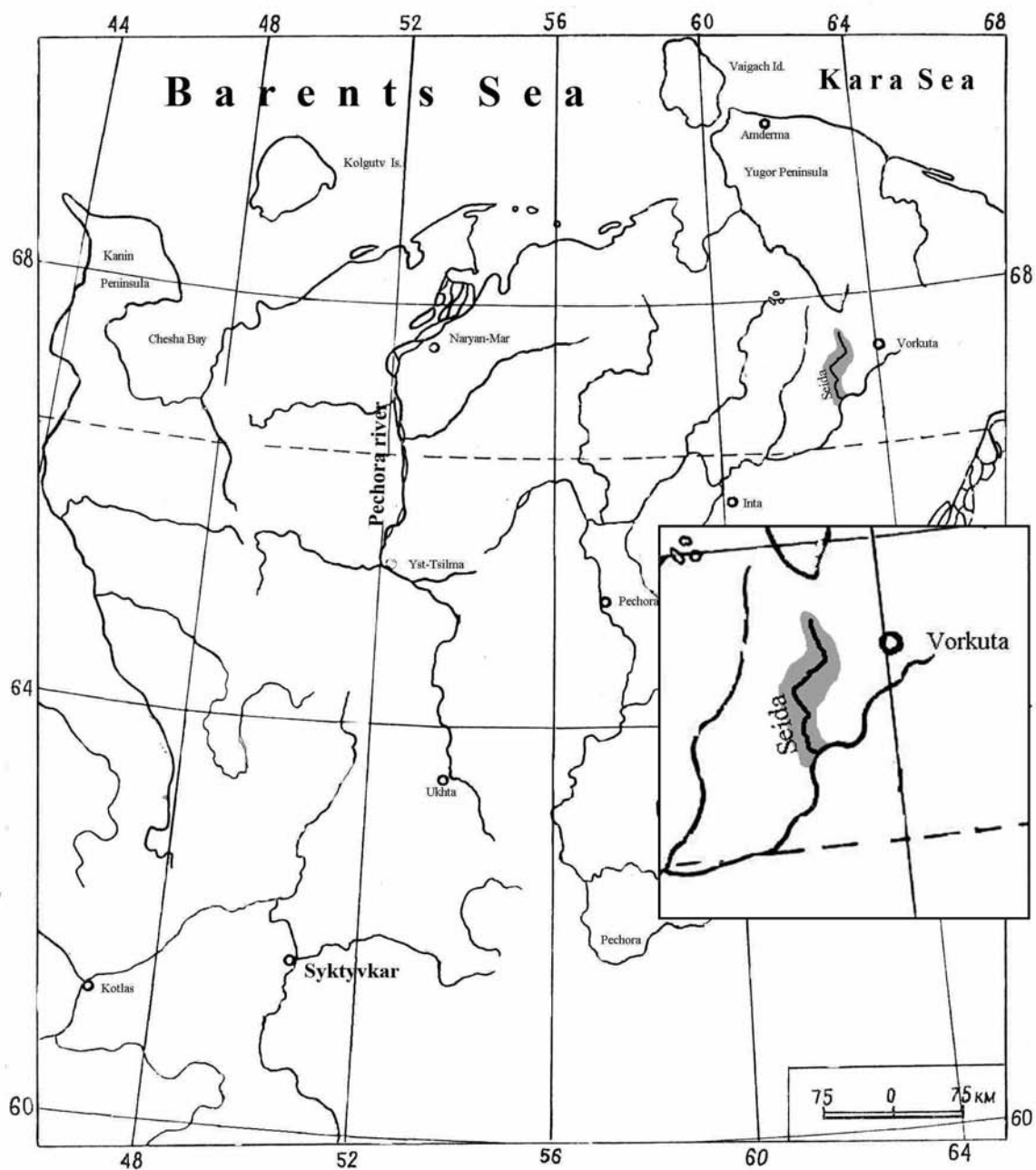


Fig. 1. Map of the research area in the Bolshezemelskaya tundra, Komi Republic.



## Agri-environment measures for Red-breasted Goose *Branta ruficollis* in Romania.

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### Abstract

During winter, Romania holds approximately **40%** of the global population of the Red-breasted Goose, *Branta ruficollis*. Initially roosting and feeding on the coastal lakes around the Black Sea, in recent years the geese have shifted also to inland lakes and/or the Danube. These areas were identified during the fortnightly counts conducted in Romania as part of the Red-breasted Goose Common Monitoring and Research Programme starting in 2003/04. Grazing geese cause losses of winter wheat with economic consequences for the Romanian farmers. These losses were quantified between **17 – 31 %** on winter wheat in the study *Winter feeding ecology of the Red-breasted Goose (Branta ruficollis)* conducted by Dan Hulea, 2002. In order to minimize this conflict, the Romanian Ornithological Society (SOR), the BirdLife partner in Romania, drafted an agri-environment measure with the aim of securing feeding areas for this endangered species.

The measures are proposed below and focus on supplying geese with corn in the first weeks of their arrival, and with wheat for the rest of their stay in Romania, either by creating corn feeding points per hectare or by leaving unharvest corn in the fields. We target farmers with arable land located in the Important Bird Areas where the geese occurred, covering **more than 90%** of their feeding and roosting areas in Romania.

**Key words:** *Branta ruficollis*, winter monitoring, crop losses, goose management.

### Wintering feeding areas for geese species (*Anser*, *Branta*) in Romania

The main wintering goose species in Romania are Greylag Geese (*Anser anser*), Greater White-fronted Geese (*Anser albifrons*), Lesser White-fronted Geese (*Anser erythropus*) and Red-breasted Geese (*Branta ruficollis*). Lesser White-fronted Geese and Red-breasted Geese are included in the Red List of Romania and the last two species are globally threatened. Other species such as Bean Geese (*Anser fabalis*), Snow Geese (*Chen cearulescens*), Canada Geese (*Branta canadensis*), Barnacle Geese (*Branta leucopsis*) and Brant Geese (*Branta bernicla*) are rare. Present arguments concern the main geese species on the territory of Romania which are influenced by agricultural practices. The wintering populations of goose species in Romania are as follows: Greater White-fronted Geese min. 66 000, max. 260 000, Lesser White-fronted Geese min. 31 - max. 50; Greylag Geese – min. 100 - max. 2 289; Red-breasted Geese *Branta ruficollis* – min. 4 300 - max. 21 500 (BIRDS IN EUROPE 2004).

The wintering population of the Red-breasted Goose in Romania, comprised a mean of  $34\,905 \pm 6\,578$  based on annual maximum counts between 1991 – 2001 (HULEA 2002), 40% of the world population and 53% of the European population.

The Red-breasted Goose is one of the most threatened goose species in the world as its population of 60 444 during 1998-2001 decreased to 38 500 during 2003-2005. Among the main reasons for the decrease is deterioration of the feeding habitats in the wintering areas (BIRDLIFE INTERNATIONAL 2011).

The first wintering Red-breasted Geese can be observed in Romania at the end of October/ beginning of November, but significant concentrations of geese usually arrive at the end of November. The majority of the geese remain in Romania until the end of February, but scattered small groups can stay even until the beginning of April.



Fig.1. Red-breasted Goose *Branta ruficollis* (© Hans Glader).

Key areas for Red-breasted Geese in Romania are located in Dobrogea. In the northern part, the main roost is situated on Lake Razim between Popina Island and the edge of Fundea Golf. In the central part, roost sites are located on Lake Golovita and in the southern part of Lake Sinoie. In the southern part of Dobrogea, there are two roost sites. Along the Black Sea coast, the main roost is situated on the south – west part of Lake Techirghiol. Along the Danube River near Calarasi, the main roost is located on Lake Iezeru (Hulea 2002).

The data collected during the Red-breasted Goose Monitoring and Research Programme conducted from the winter 2000/2001 until present shows that the geese are using the entire agriculture area of Dobrogea for feeding.

The data provided by the tagged geese in winter 2010/2011 shows that the geese prefer not only the historical roosts sites, but also the vast area of agriculture land from Balta Ialomitei and Insula Mica a Brailei. The geese were tagged in Bulgaria during a Life+ project: <http://bspb-redbreasts.org/>.

The feeding habitats of the geese overlap with the arable land used for intensive production of cereals posing a serious threat to the species. There is conflict between the maintenance of the feeding habitat in good condition and the damage caused by the geese to the crops. The results from research carried out on the damage caused by the Red-breasted Goose conducted by Dan Hulea estimated **17-31%** crop losses. As a result of this damage the farmers chase the wintering geese from the fields. Thus they adversely affect the geese as they deny them food and force them to fly greater distances for feeding. This problem is very serious especially at the end of the winter when the geese need to accumulate as much energy as possible for the flight to the nesting areas. Furthermore, the change in cereal prices has also resulted in the areas traditionally planted with cereals being planted with plant species which are not eaten by the geese and which deprives the geese of their feeding resource. The crop rotation on the farms is also important to provide the feeding resources in proximity to the resting areas for the geese.

The existence of feeding habitats of sufficient size and quality for the wintering geese near their resting areas and prevention of disturbance are key elements of the proposed agri-environmental scheme, and is of crucial importance for the conservation of the geese.

For example, the appliance of such national schemes of agri-environmental payments for farmers who secure suitable feeding habitats for wintering and migratory geese species have very positive results on the population of many species in Great Britain (COPE et al. 2006). Research on the conflict between farmers and geese implemented in different countries show that the best solution is the application of suitable compensatory and agri-environmental payments (VICKERY et al. 1994).

**Romanian Ornithological Society Proposal: Winter feeding areas for Red-breasted Goose (*Branta ruficollis*) in Romania.**

**Management requirements**

Each year of commitment, after 15th September, the farmer has to set up an autumn cereal crop (wheat, barley, rye) or rape.

The sowing of autumn cereal crops (wheat, barley, rye) or rape has to be finished by **15th October**.

The parcels under commitment must be seeded with corn, not later than **15th May**, while the corn cannot be harvest sooner than **15th September**.

When the corn is harvested, the farmer has to leave 5% of the total farm area unharvested, or if a corn crop is not seeded during the year of commitment, the farmer is obliged to ensure a quantity of 100 kg of corn seeds per hectare, in at least 1 feeding point in each parcel under commitment.

During the commitment period (5 years) it is mandatory to seed, at least for **2 years from 5**, corn during the summer.

If a corn crop is seeded, in the year referred to, on the parcel under commitment, the autumn crop has to be incorporated into soil not sooner than the **end of March**.

Pesticides and organic fertilizers cannot be used in the period between seeding the autumn crop and 15th March.

Agriculture practices are forbidden between **15th October – 15th March**.

It is forbidden to use any scaring methods and/or using poison in the period between **15th October – 31 March**.

Grazing is forbidden in the period between **15th October - 15th March**.

It is forbidden to plough the grasslands located on the farm under commitment.

The package can be applied on **80% of the arable land** belonging to a farm.

**Payment:** 171 Euro / ha.

***More information***

The measures are to be implemented starting from spring 2012. The farmers can apply in the period 1st March 2012 – 9th June 2012. The commitments are for 5 years.

At this moment there are farmers interested in applying and the feedback received from the Ministry of Agriculture and Rural Development, together with the Payment Agency, is very positive.

SOR is the Focal Point for the measure. The SOR role is to provide farmers with information at their request.



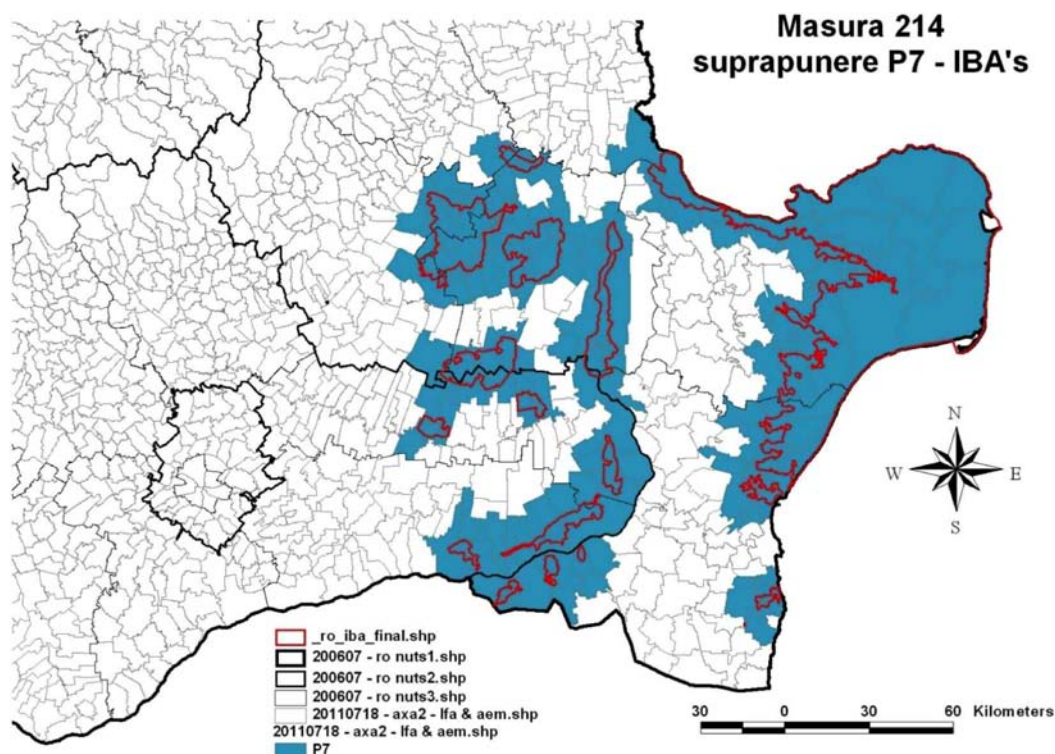


Fig. 2. Winter feeding areas for Red-breasted Geese in the Romanian Dobrogea (Red = IBAs; Blue = all the territory under the measure for RbG).

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## First successful satellite tracking of Red-breasted Geese *Branta ruficollis*.

Knowledge, Conservation Applications, Challenges and Preliminary Results

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### Introduction

The Bulgaria-U.S. Red-breasted Goose Project is a partnership between Le Balkan-Bulgaria Foundation and U.S. Fish & Wildlife Service - Division of International Conservation with an overall goal of facilitating greater conservation action by National governments, NGOs and stakeholders with interests or management responsibilities for the Red-breasted Goose *Branta ruficollis* (RBG) ([www.redbreastedgoose.org](http://www.redbreastedgoose.org)).

A satellite telemetry study was conducted to determine the movements and behaviour of RBG on the wintering grounds and during migration, to better understand foraging and roosting behaviours of the species and to unravel the secrets of their mysterious flyway and to identify the threats on stop-over sites.

### The project

This exciting Bulgaria-U.S. project, registered by the Argos Center under the number 04897, aimed to increase knowledge of RBG movements and behaviour to better inform management and policy for conservation of this critically endangered species especially concerning issues of hunting and public activities in protected areas.



Fig. 1. Photo of „Teddy”.

Teddy is a robust male Red-breasted Goose captured by foot noose on Feb 16, 2012 in a cereal field near Durankulak, North-East Bulgaria. Upon release Teddy flew strongly to a nearby flock of RBG, vocalizing, landing for a second and then clearly, leading the flock to a “safer” nearby location. He was fitted with a 30 g satellite transmitter ID # 105757, plastic red ring with white numbering inscription 02 on the right leg and metal ring 5-54822 on the left leg. Teddy has been named after Theodore Roosevelt who was a great conservationist and was responsible for starting the National Wildlife Refuge System in the USA in 1903.

The objectives of the satellite telemetry component of the Bulgaria-U.S. RBG Project were:

- To increase knowledge of the movements and behaviour on the wintering grounds and migration routes, also to identify threats and investigate feeding ecology at stop over sites.
- To facilitate greater synergy, national and international cooperation among partners and stakeholders, and to implement priority actions identified in the Action Plan developed by the International Red-Breasted Goose Working Group.
- To facilitate agreements with large cooperatives, agricultural companies and farmers in the Coastal Dobrudja region, and implement agri-environmental measures suitable for foraging geese.

- To raise public awareness to promote conservation action.

### **Preliminary results and challenges**

During February 2012 the Bulgarian field team (Le Balkan Foundation and Branta-Tours) successfully captured three Red-breasted Geese in north-east Bulgaria and fitted them, for the first time, with Argos/solar/GPS satellite transmitters in order to monitor their movements on the wintering grounds in Bulgaria and Romania and during their migration northeast to breeding grounds in the Russian tundra.

On 11 February 2012, the Bulgarian field team captured a young Red-breasted Goose near Shabla (north-east Bulgaria) to which a harness with a 22g Argos/GPS satellite transmitter was fitted. As the bird weighed 900g, the transmitter represented 2.4% of the body weight. On 12 February, the young bird named Mini was successfully released in the vicinity of a large flock of Red-breasted Geese.

Note: Le Balkan-Bulgaria Foundation first attempted to place satellite transmitters on Red-breasted Geese in 1997 in the frame of Bulgarian-French Programme called “Branta-Migration”, approved and registered by “Argos Global Processing Centre” under the number 01746, but this was unsuccessful because of transmitter failures at the time.



Fig. 2 Photo of Mini: On February 12, 2012 the field team (Le Balkan & Branta-Tours), successfully deploys for the first time after 15 years break, a satellite transmitter on RBG.

On 16 February 2012, Teddy and Boris (two male Red-breasted Geese) were captured about 3 km north of Branta Conservation Center in Durankulak ([www.birdinglodge.com](http://www.birdinglodge.com)).

They were similarly fitted with 30 g satellite transmitters. As Teddy weighed 1 428 g this represented 2.1% of his body weight, while Boris weighed 1 170 g so the transmitter was 2.6% of his body weight.

Due to severe weather conditions Teddy and Boris were held for a day at Branta Conservation Center and were successfully released on 18 Feb 2012 at 08:00 am under perfect calm and sunny weather conditions. They flew beautifully and joined a large flock of Red-breasted Geese foraging near the village of Durankulak.



Fig.3. Boris (young male) was fitted with a 30 g PTT transmitter, plastic red ring with white numbering inscription 03 on the right leg and metal ring 5-54823 on the left leg.



Here we present some current information for public outreach and education; the more refined scientific analysis for technical reports and publications will come later. The following text and maps are based on both GPS data where a movement of more than 2 km was detected between readings, as well as the most accurate Argos satellite locations (less than 1.5 km resolution). Thus, the maps are preliminary and will be subject to modifications upon final and more complete data analysis.

We encountered several challenges in capturing Red-breasted Geese and deploying satellite transmitters. First of all, Red-breasted Geese have vast areas of winter foraging habitat to choose from in north-east Bulgaria and south-east Romania (over 1 600/sq km) and move frequently on a day to day basis reflecting weather, disturbance from hunters (both legal and illegal), farmers and the general public, and for reasons of their behaviour that thus far we do not fully understand. Identifying capture sites therefore requires sound knowledge of their patterns of behaviour relative to weather, hunting and agricultural activities, together with a measure of basic luck. When fortunate to have large numbers of geese at our capture sites, flocks were occasionally scared off by human intruders, much to our disappointment. To capture the birds we relied on a proven foot-noose capture method (an ancient technique used in India) requiring experience and patience. For this we were required to obtain written permission from Bulgarian Ministry of The Environment and Water.

During the first week of attempted trapping there was a transformation from severe arctic weather, where the ground was completely frozen (we had to stick the nooses under the snow and the layer of ice) to springlike temperatures. This resulted in conditions of wet fields such that Red-breasted Goose feet became caked with mud, causing trampling of the nooses, which failed to snag their feet as intended. As Red-breasted Geese are very suspicious of new and unusual objects in the field the nooses had to be smeared with mud by way of camouflage. Accidental capture of other birds such as common gulls created problems on occasion. A single captured gull is sufficient to alarm the geese and dissuade them from returning to the field for several hours. In one day 11 common gulls were captured in a space of 1-2 minutes!



Fig. 4. A flock of foraging Red-breasted Geese near Durankulak.

Transmitter technology proved another challenge and we are not at the outset clear as to why we experienced poor performance from the transmitters placed on Mini and Boris.

Mini's transmitter failed to emit signals and indicated battery failure, whereas Boris' transmitter showed a very low charge. It was hoped that Boris' battery would re-charge within the days following his release, and that his transmitter might start up again, which thus far has not happened. The likelihood of transmitter/battery failure appears to be high in both cases. Subject to good fortune a signal may one day be received once the battery is powered up by more increased sunshine.

Fortunately Teddy's transmitter has been sending high quality and frequent data which has shown us much about his movements so far, as well as foraging and roosting behaviour along his way. For example on the winter foraging grounds, Teddy directed us to a remote inland farmland location in the Bulgarian Dobrudja, which differs from the typical and well-known coastal foraging habitat around the lakes we are already familiar with. This site was located 70 km south-west of his Durankulak release position, and 15 km inland from the city of Balchik, thereby providing a hint of the complex strategy of selective feeding of wintering RBG.

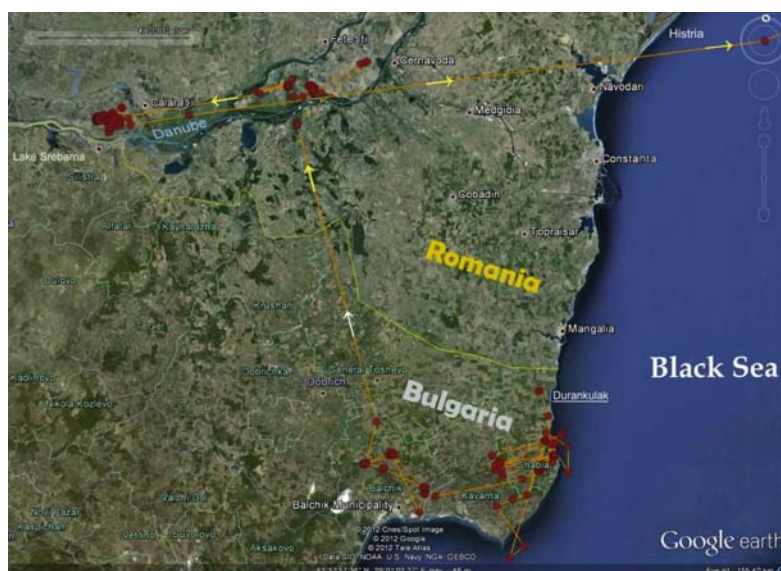


Fig. 5 Map of Teddy's Bulgarian movements

Furthermore, Teddy spent 2 weeks in Romania where his movements showed us other unknown inland areas (although often in or near existing Important Bird Areas), mainly along the Danube River around Calarasi, rather than the traditional waterfowl coastal locations in the Danube Delta.

Fig. 6 Map of Teddy's Romanian movements

Teddy finally began his eastward migration on 16 March with a big leap: he left the Danube at 13.00, and by 19.00 he was well over the Black Sea. Then by 13.00 the following day, exactly 24 hours later, he had completed a journey of 800 km to reach southern Ukraine.





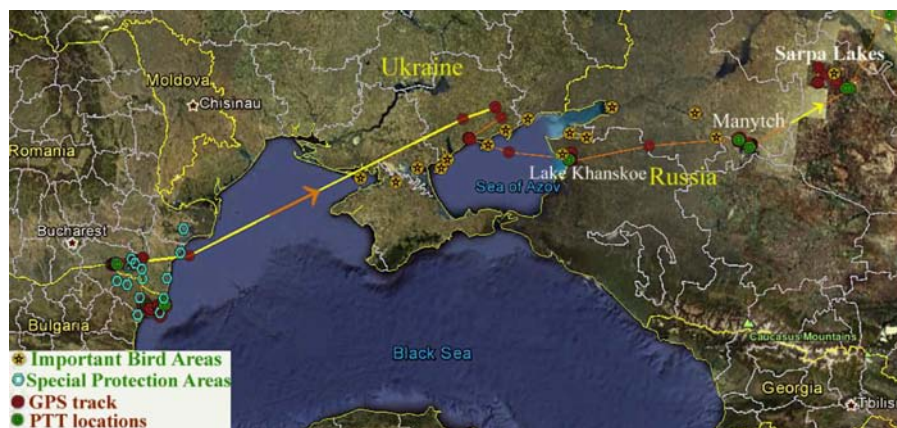


Fig.7. Map of Teddy's Ukraine movements, showing locations of nearby Special Protections Areas (blue circles) and/or Important Bird Areas (yellow stars). GPS track in red circles; PTT locations in green circles. Thick yellow line shows long flight 16 – 17 March.

Here he visited the Priazovsky National Park, just south of the village of Botjeve on the northern shore of the Sea of Azov that was founded by Bulgarians in the 18th century. It is worth adding that in the region of Zaporozie there is a large Bulgarian community and the village of Botjeve was named after Hristo Botev, a brilliant Bulgarian poet and revolutionary who died a heroic death in the western part of the Bulgarian Range on 1 June 1876 for the liberation of his enslaved Fatherland. So, conceivably, one of the reasons why Teddy spent another 3 days in this historic place!!

On 20 March, Teddy flew 195 km across the Sea of Azov and spent 7 days at Lake Khanskoje in Russia, which turns out to be a new stopover site of great importance for the conservation of Red-breasted Geese. Here we learned of a new aspect of Teddy's diet consisting of weeping alkali grass (*Puccinellia distans*) and the halophytic plant (*Aeluropus littoralis*), in contrast to the foraging preferences of geese in wintering farmland areas (with winter wheat and maize stubble).



Fig.8 Map of Teddy's movements at Lake Khanskoe

On 27 March Teddy made a 330 km journey eastwards and landed in the salt marshes of Vodny and Gorely Islands, located in the heart of "Rostovsky" Nature Reserve, just on the border of the Republic of Kalmykia, Russian Federation.

This area is part of the Kuma-Manych depression, which is a traditional stop-over site for RBG and large numbers of other waterfowl. Sonya Rosenfeld, Institute of Ecology and Evolution, Russian Academy of Sciences, reported that the spring hunting on geese and ducks has recently been prohibited in the regions of Rostov and Krasnodar to protect RBG, which is extraordinary news as well.

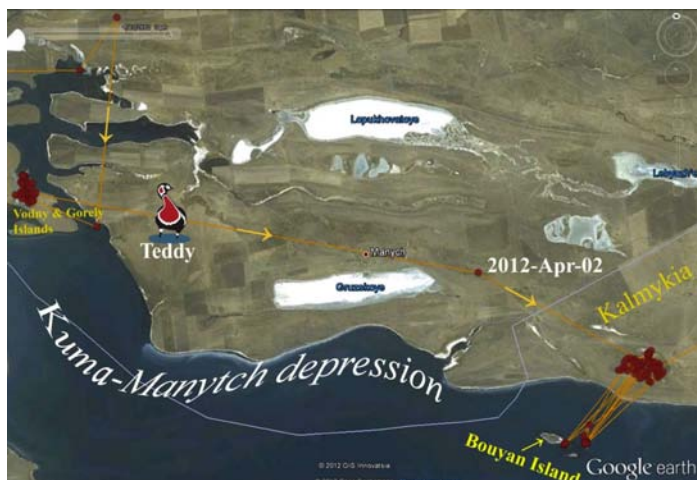


Fig. 9. Map of Manych

On 2 April Teddy entered Kalmykia and arrived at the protected nature reserve “Tzernie zemli” about 25km to the South-East from his previous location in “Rostovsky” Nature Reserve.

Teddy was roosting at the new site known as Bouyan Island and foraging 4 km northward in the fields near the north bank of the Kuma-Manych depression.

On April 10 Teddy made his next step towards the nesting grounds heading 230 km north-east, landing in the Sarpa Lakes - freshwater wetlands located in the north-central part of Kalmykia.

On 16 April 2012, at 04.00 in the morning, Teddy left the Sarpa lakes System and headed north-east crossing the Volga River. By 08:00, and 150 km later, he was over Akhtubinsk Airport (Astrakhan Region, Russia).

Moving rapidly on he had by 12:00 reached the western corner of Kazakhstan, spending about two hours on the Russian border; by 18:30 had flown a further 80 km inland Kazakhstan, passing over the town of Orda and, around 20:00, stopped nearby to roost: a total journey of 270 km. At 08:00 the following morning (17 April) Teddy retraced his course, refuelling 7 km to the south of his roosting site and, by 14:00, had progressed a further 450km, passing surreptitiously 50 km west of the huge and well known lake Shalkar, reaching the north-western corner of Kazakhstan at 20:00 on 18 April.

As of 19 April Teddy again crossed the Russian border and was located some 750 km from his previous location in the Sarpa lakes system in Russia (see Fig 11 showing one of the last GPS locations of Teddy). Looks like Teddy is headed for the Urals now.

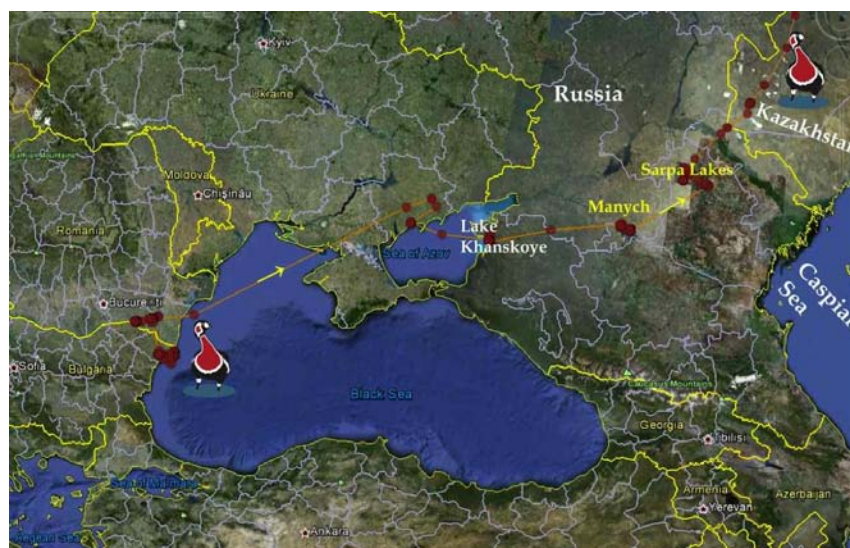


Fig. 10 – Map of Sarpa lakes and West Kazakhstan





Fig. 11 Last Map (Kazakhstan): Teddy covered more than 750 km in two days in what appears to be continuous flight! He appears to be headed as quickly as possible to his summer grounds.

On 13 May 2012 the last GPS location from Teddy was received. The location was 54.325 N, 70.993 E in Northern Kazakhstan.

As biologists and conservationists we are excited about these observations but also understand this represents just one segment of the migrating population. However, this constitutes a great positive beginning that is already suggesting important new stopover sites. Imagine the results of 10-15 transmitters being deployed in a season!

The importance of this project is not just its value for making critical management decisions for the species, but also because Teddy's travels are generating great interest and awareness among the public. Teddy is placing the spotlight on the plight of the RBG and its urgent conservation needs which can lead to a more energized and expansive conservation effort. For example, it is clear that in some places, Teddy is making use of established protected areas under the EU Birds Directive (Special Protection Areas) or known Important Birds Areas identified by Birdlife International, but elsewhere he is moving where habitats could deteriorate or hunting occurs.

### Epilogue

On 15 May 2012, in North-Kazakhstan Region, just near the Russia-Kazakhstan border, 8 km south of Ukrainka village and 180 km South-West of the City of Omsk (coordinates 54.37 N, 71.13E) Teddy's journey came to a tragic and abrupt halt as the bird was shot by a Russian hunter.

The reason for the sudden breakaway of signals was puzzling until hunter(s) returned the transmitter and legging to the hunting inspectorate in Omsk. The transmitter showed unmistakable signs of hunting activities (Fig. 12).

It is absolutely amazing that Teddy's status was resolved, and that we got a definite answer to the question why the transmissions stopped. The recovery of the transmitter must count as a great stroke of luck.



Fig 12. Teddy's transmitter after its return.

It is gratifying that hunter(s) turned in the transmitter and legging to the hunting inspectorate in Omsk, and that the Russian institutions concerned showed a willingness to cooperate. But the sad fate of Teddy might be another hint that hunting is one of the main threats responsible for the decline of the RBG population.

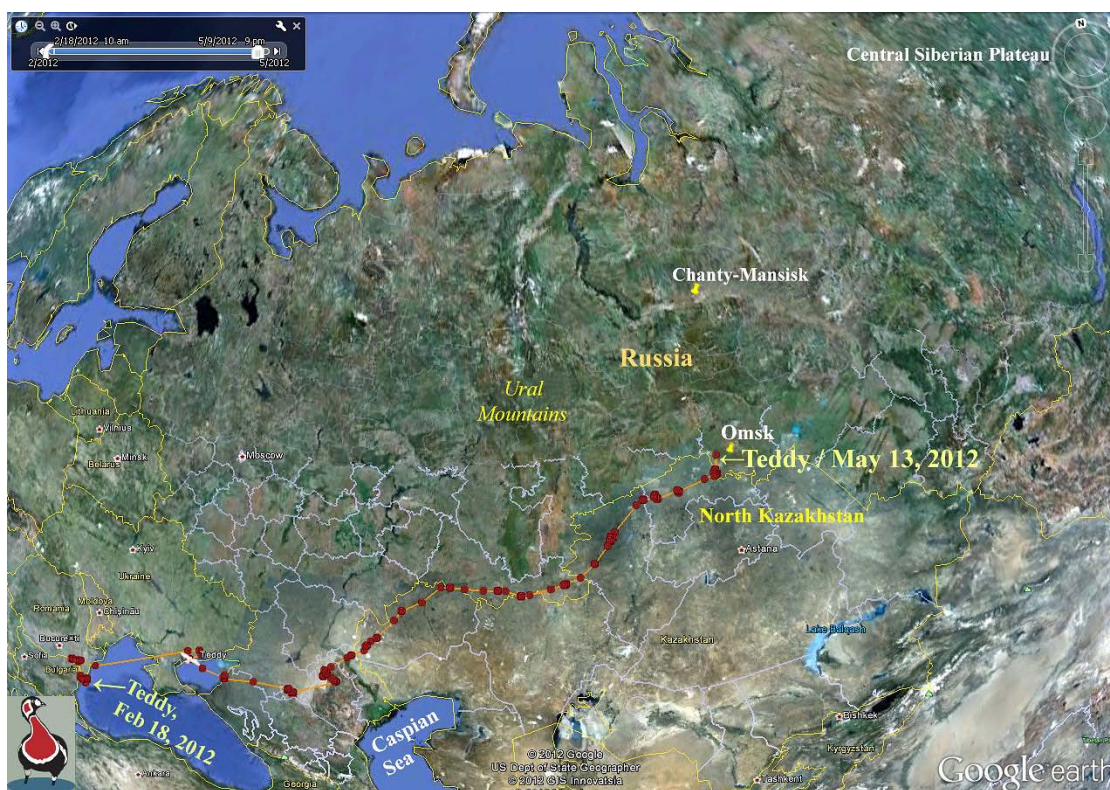


Fig. 13. Summary of Teddy's migratory route.

During his spring return flight, Teddy covered 4 336 kms over the course of 3 months, starting in Bulgaria, and crossing Romania, Ukraine, Russia and Kazakhstan. The data sent from his tag has produced a wealth of new information, the details of which we are only just beginning to understand and interpret.

### Acknowledgements

Several individuals have taken special interest in this project, providing valuable information on local conditions along Teddy's northward journey: Nicu Calin provided valuable information on RBG and investigated Teddy's locations in Romania, Yuriy Andryushchenko provided information about stop-over RBG sites in Ukraine, especially at Priazovsky National Park on the northern shore of the Sea of Azov; Paul Goriup provided invaluable technical support for analyzing the satellite data and supplied us with photographs and detailed information about the Sivash National Park in the Crimean peninsula in Ukraine; David Kent and Tanyo Michev for editing the text; Yuriy Lohman for providing information on the Khanskoje Lake in Russia during Teddy's one week stay in this newly discovered stopover site; Russian botanist Vitalij Kolomijtchuk for providing the list of natural plants of Lake Khanskoje and its botanical characteristics; Sonya Rosenfeld on the feeding biology, stop-over behaviour, hunting regulations and numbers of RBG in their traditional staging place in the Kuma-Manych depression in Russia; Strahil Peev and Mini Nagendran for providing critical training and assistance with harnessing techniques, also Kiril Bedev for assistance with field releases.

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## Population ecology and current status of Bar-headed Goose *Anser indicus* in autumn at the Altun Mountain Natural Reserve, Xinjiang, China

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### Abstract

The Altun Mountain National Natural Reserve is a paradise for wild animals, and every year many birds from Tibet migrate to here. Some breed while others stage at the reserve. Bar-headed Goose *Anser indicus* is one of the dominant species among migratory birds on the reserve. However, the Altun region is poorly studied for wildlife, and little research has been done in this area, especially on the Anatidae. We surveyed the ecology of the Bar-headed Goose, atypical plateau endemic species of this region during May to November in 2011. We studied the distribution, population number, family structure, population dynamics and behavioural characteristics of these geese. Interviews with local herdsman and staff of the reserve provided us with information about human settlements, domestic livestock, illegal poaching and predation situation. We collected a lot of additional information on the Bar-headed Goose and distinguished problems of this species. This information may be used for improvement of management and conservation of the Bar-headed Geese in China.

**Key words:** *Anser indicus*, population size, distribution, group structure, behaviour, Altun Mts.

### 1. Introduction

Bar-headed Goose *Anser indicus* is an endemic species to Asia. Most of these geese live on plateaus at high altitude. The breeding Chinese population is mainly distributed in Tibet, Xinjiang, Qinghai, Gansu, Sichuan and northwest of Inner Mongolia provinces. A small part of these geese breed in India (GOLE 1982), Middle Asia and Mongolia. Bar-headed Geese winter in southern China and northern India and Burma (ZHENG 1979; CHENG 1987; YANG 1995).



Fig. 1. A flock of Bar-headed Geese *Anser indicus* on the Altun and Kunlun Mts. (© Ming Ma)

The Altun Mountain National Natural Reserve is one of the most important breeding grounds for the Bar-headed Goose. The remote reserve is characterized by high elevations, low annual precipitation and extremely cold weather in winter that provide protection for the numerous wild animals, many of which are endemic and rare in China.

The plateau ecological systems and associated fauna are protected in the Altun Mountain National Reserve.

## 2. Study area and methods

The Altun Mountain Natural Reserve is one of the last great expanses of wilderness left on earth; it is located in Ruqiang County, Xinjiang Uyghur Autonomous Region, the west of China (E 87° 10' - 91° 18', N 36° 00' - 37° 49'), and it is the north extension of the Tibetan Plateau. The total area of the reserve is about 45 000 km<sup>2</sup>, with an average elevation of 4 500 m. The highest point is Muztagh Mount (6 973 m) and the lowest area is Ayak-kum Lake (3 876 m). Three large lakes exist in the reserve; Ayak-kum, Aqikekule and Whale Lakes, in total covering 1 150 km<sup>2</sup>. Moreover, there are also many rivers and small lakes in the area.

We conducted our survey of the Bar-headed Geese between May to November of 2011. We mainly used telescopes (Carl Zeiss, Diascope 85, 20-60; Minox BV 10x42 BR) to observe the number and behaviour of this species. Continuous Recording and Scan Sampling were used for study of their behaviour. We carried out our observations between 8:00 to 20:00 (Beijing Time) in conditions of mostly fine weather.

We also interviewed local herdsman and staffs of the reserve to understand the problems of encountered by geese.

## 3. Results

Bird migration was studied in the Altun Mountain Nature Reserve from May to November in 2011. The results showed that there were 164 avian species in the region belonging to 16 orders, 38 families and 91 genera, accounting for 36.2 % of the total bird species of Xinjiang Province (MA 2011).

### 3.1. Population size and distribution

We recorded about 15 400 Bar-headed Geese during our investigations and the total number is thought to exceed 20 000 in the whole of Xinjiang Province.



Fig. 2. *Anser indicus* on the Altun and Kunlun Mts. (@ Ming Ma)

Combined with previous records and some additional information, which was provided by members of the Xinjiang Bird Watching Society, we received a clearer understanding of the Bar-headed Geese distribution in Xinjiang Province (Fig. 3).

The Bar-headed Geese are distributed mainly in the southern region. In the north of Xinjiang, they are found only in a few areas, such as Hejing, Ili, Zhaosu, Tekes, Bole, Wusu, Urumqi and Yiwu counties.

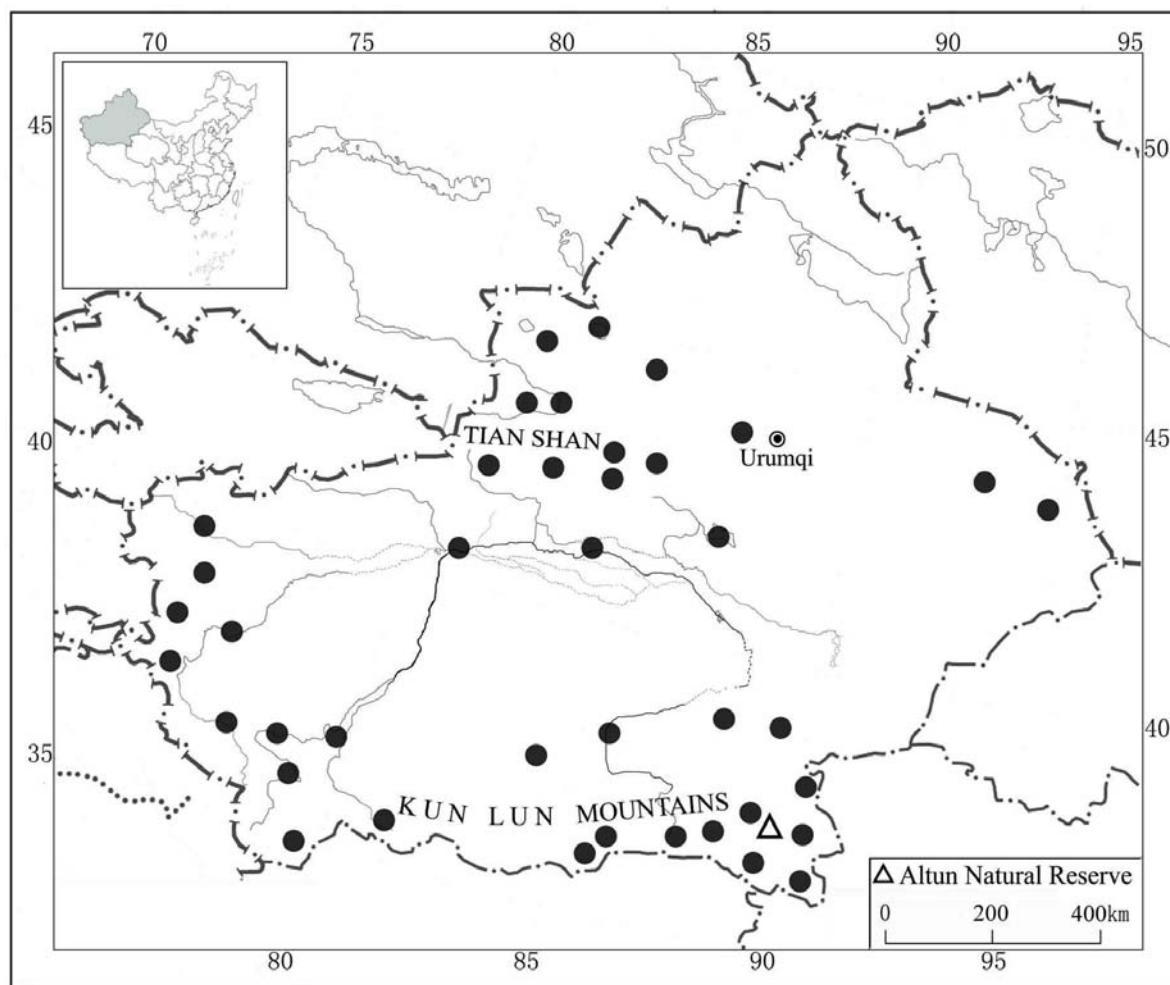


Fig. 3. The Bar-headed Goose distribution in Xinjiang Province

### 3.2. Population dynamics and the number of individuals in the family

Bar-headed Geese arrive in the Altun region in early April every year and most leave in October, remaining for about seven months every year.

The entire reproductive cycle takes more than four months, including ranging, nesting, mating, egg-laying and hatching. It also takes a long time for young geese to start to fly for long distances (MA & CAI 1997a). Some geese start their autumn southern migration in September, and the last individuals left the reserve at the end of October. We saw no Bar-headed Geese in this area after November.

We observed 110 families for testing the family member numbers in the Bar-headed Geese. Our results showed that the number of family members was commonly less than nine and most families had the three to six members (= pairs with 1 to 4 young) only. The proportions of different size of pairs and families were as following: 0.9 % were solitary birds, 13.6 % were pairs, 16.4 % were pairs with one young, with two young (16.4 %), with three (20.9 %), four (17.3 %), five (9.1 %), six (1.8%) or seven young (3.6%), respectively (Fig 4). During flying, different families keep some distances between each other and this was very easy to see.

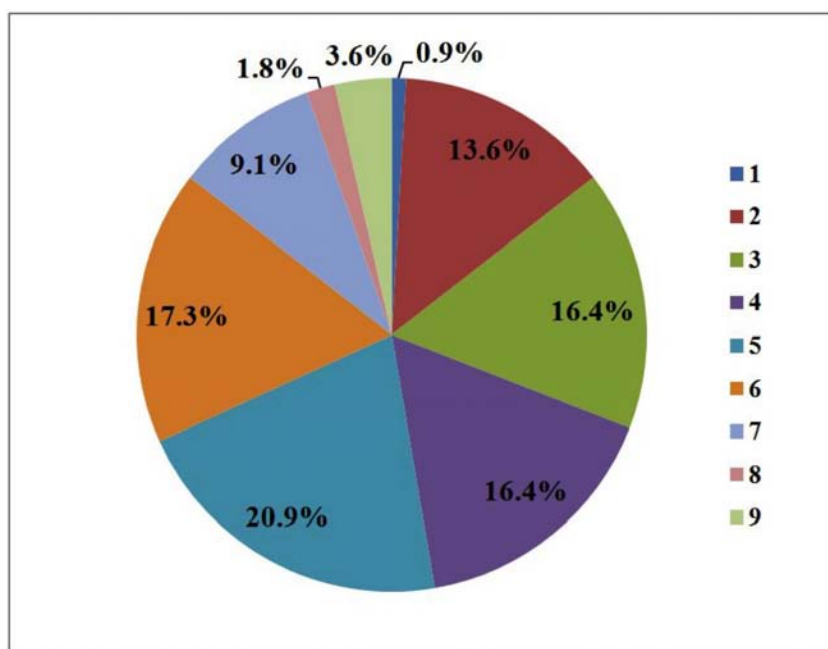


Fig. 4. The number of members in the pairs and families of the Bar-headed Geese in the autumn

### 3.3. Time budgets and rhythm of time budgets in daytime

Among the behavioural patterns of the Bar-headed Goose we distinguished eight categories: foraging, resting, alert, swimming, preening, flying, walking, and other behaviours. During the migration season, the most often observed behaviour pattern in the Bar-headed Goose was foraging, which equated to 38.9% of all activities. The second most common behavioural pattern was resting (16.2%). Other patterns including alert, swimming, preening, flying, walking and other special behaviours were more rarely observed: 12.3%, 11.1%, 8.2%, 6.7%, 5.5% and 1.1% of activity duration (Fig. 5).

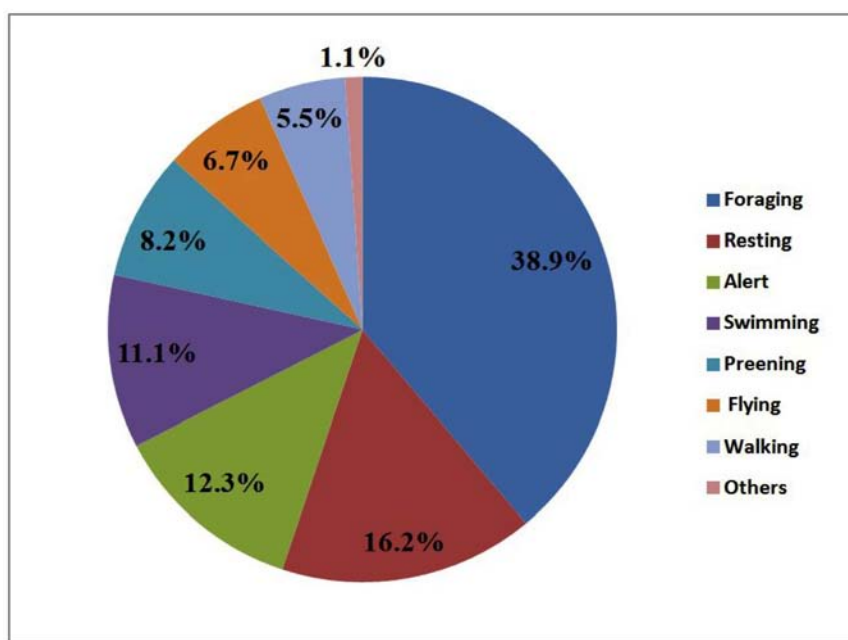


Fig. 5. The daytime budget of the Bar-headed Goose in the autumn

The proportional changes in various behavioural patterns are shown in Fig 6. During the study period, the geese devoted most of their daily budget to foraging, which was observed most often during the whole daytime except between 11:00-12:00 and 14:00-16:00. The peak of resting time occurred between 14:00-16:00. Alertness was positively related to foraging. Swimming peaked at noon, especially when some groups of geese were flying into the lake. The preening time was distributed almost evenly during the day. The period 11:00-12:00 was the peak time for flying. The peak time of walking occurred during the morning and at noon. Other special behaviours were noted very rarely.

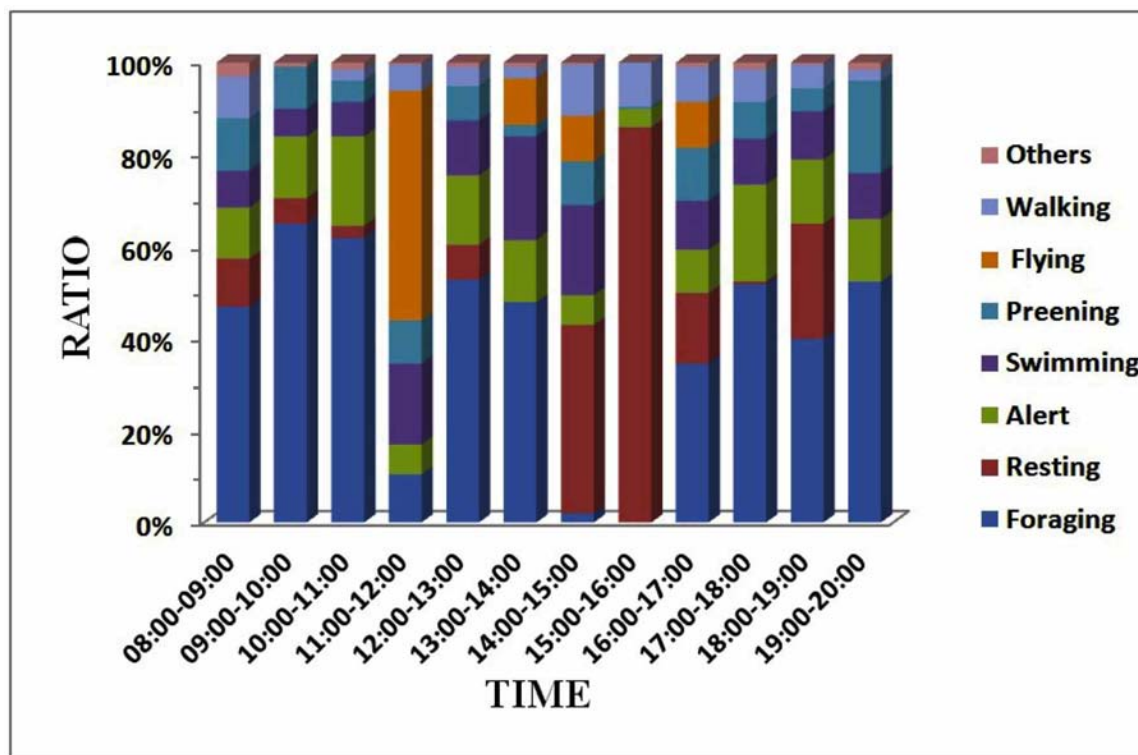


Fig. 6. Changing the budget of Bar-headed Goose during the daytime in autumn

#### 4. Discussion

According to data collected by the NATIONAL FORESTRY ADMINISTRATION (2009), there are 120 000 Bar-headed Geese in China. However, population size estimated by IUCN and BirdLife to be only 52 000 - 60 000 mature individuals. We think that there are about 20 000 Bar-headed Geese in Xinjiang. They are mainly distributed in the central of Tianshan, Kunlun-Altun and southern parts of the province, such as Ruoqiang, Qiemo, Hetian, Tashkurghan, Kashgar, Shaya, Yining, Bole, Urumuqi, Yiwu counties.

The Bar-headed Geese prefer to stay in large groups during foraging or resting, and often live in mixed groups with other bird species, such as Ruddy Shelduck (*Tadorna ferruginea*) and Greylag Goose (*Anser anser*).

During the study period, the Bar-headed Geese devoted most of their daily activity budget to foraging and resting to accumulate energy and prepare for migration.



Bar-headed Geese do not feed at night, and they consume energy during the nighttime. The peak resting time and negligible foraging at noon may be related to the plant-eating animals' demand for water (MACMILLEN 1990). Graminoids are the main food of Bar-headed Geese (LI et al. 1998), they decreased foraging and moved to the water for drinking and resting at noon, when resting and walking peaked at this time.



Fig. 7. The Bar-headed Geese in the Altun Mountain Nature Reserve on 20 September 2011 (© Ming Ma)

The potential threats to the geese were estimated from the various sources of information based on the data collected during preliminary interviews and our field work results. We found many serious problems, including increasing human-wildlife conflicts mainly resulting from increasing numbers of livestock, as well as mining and eco-tourism activities.

**(1) The mines impact.** Pollution of habitats and foraging grounds is the foremost threat to the geese. During the last few years, many mines have created serious environmental problems in the Altun Mountain Natural Reserve. In the 1990s, more than 35 000 people entered illegally into the protected area for gold mining. Such human disturbance has seriously endangered the ecological balance and reduced natural vegetation cover and animal populations. In addition, a large number of wild animals such as yaks, antelopes and geese were also hunted by tens of thousands of miners for food.

The migration routes used by the Bar-headed Geese have become more and more restricted, with the gradual reduction of wetland habitats. The distribution of geese has become increasingly concentrated. According to recent studies, the Bar-headed Goose, which was inhabitants of the middle of Xinjiang, started to concentrate to winter and breed on the Tibetan Plateau only (MA & CAI 1999; ZHANG et al. 2009).

**(2) Overgrazing.** Overgrazing by livestock has greatly reduced survival and damaged natural vegetation. It forced the geese to leave their habitats with increasing human-wildlife conflicts. During our investigations, we observed four sheep flocks along a very short sampling line. Each flock contained more than one thousand sheep. The grazing density is relatively high.

**(3) Eco-tourism activities rapid development.** We found from our investigations that several hundred tourists come to the Altun Reserve in spring or autumn. This period is the breeding and migration season for Bar-headed Geese. Tourist activities increase rapidly from year to year, with the gradual increase in anthropogenic interference. As a result, the Bar-headed Geese were forced to fly to the water during feeding and leave the grasslands and are forced to spend more time feeding (LIU 2004). Human interference also likely cause geese to abandon their nests or eggs.

If the female geese are disturbed from the nest, the eggs are often displaced from the nest during such a moment of panic when the bird leaves, a common cause of abandoned eggs (MA & CAI 1997b).

**(4) Illegal capture.** Before the 1980s, illegal hunting was almost unmanaged in this region. It was very usual for people to catch ducks and geese. These activities could not be controlled effectively before the Altun Natural Reserve was established in 1983. However, poaching incidents also occurred occasionally at present time. We found that almost every family of herdsman has a steel trap, which was used for capturing small mammals and large birds. We have found several steel traps around the lake. We have no doubt that local people used these traps for capturing wild waders and waterfowl, such as cranes, ducks and geese.

**(5) Other problems.** Many businessmen enter into the reserve in order to catch the Brine Shrimp (*Artemia monica*), which are used as food for fish and other species in the aquaculture industry. But the shrimps are very important food also for most waterbirds. Decreasing food capacity in the pools will lead to the declining of birds and change the local ecological balance drastically.

Through the investigation, we know that a considerable number of eggs were taken by local herdsmen. In the spring, they often use boxes to collect eggs. Most of these eggs were laid by geese, which would further decrease the size of their population.



Fig. 8. The Bar-headed Geese in the Yixieke-party River (© Ming Ma)

### Acknowledgements

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## **An influx of European White-fronted *Anser albifrons* and Bean Geese *Anser fabalis* in Scotland during winter 2011/12.**

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(Originally written for and published in volume 32(2) of 'Scottish Birds', the journal of the Scottish Ornithological Club [www.the-soc.org.uk](http://www.the-soc.org.uk); published here upon approval of Ian Andrews, Scottish Birds).

On 12 November 2011, a flock of 38 'whitefronts' were seen near Kingussie, Scotland (57.08 N, 4.00 W). Initially, it was assumed that they were Greenland White-fronted Geese *Anser albifrons flavirostris*, since a small number have irregularly wintered in this area in recent years. How wrong we were, since the sightings heralded a remarkable influx of European White-fronted and Tundra Bean Geese into Scotland.



Fig. 1. European White-fronted Goose *Anser albifrons albifrons*

Seven flocks of European White-fronted Geese *Anser albifrons albifrons* were reported on Saturday 12 November from Lothian to Moray, including the Kingussie flock. On the same day, two flocks of Tundra Bean Geese *A. fabalis rossicus*, two birds at Sumburgh, Shetland and 11 on North Ronaldsay, Orkney were also seen. The days that followed saw a steady arrival of both species across many parts of Shetland, eastern and south central Scotland. Records were, in part, driven by birdwatchers hearing the news of the first few sightings and making an effort to check local flocks of Pink-footed *A. brachyrhynchus* and Greylag Geese *A. anser*. But the timing of the sightings suggests that the arrival was over a prolonged period rather than a spectacular "fall" driven by a weather event.

Assessing the scale of the arrival proved difficult due to multiple records from locations close to each other or movements of geese between sites within Scotland. However, estimates of the numbers involved are given below and have been calculated by:

1) for multiple records at sites within 10km of each other, the highest count reported was used (this may have slightly underestimated the number of geese involved).



2) an attempt was made to try to account for large groups reported at different sites. For example, 300 European White-fronted Geese were recorded at Loch of Strathbeg, Aberdeenshire on 19 January and 101 geese were reported at Garmouth, Moray (120 km to the west) 11 days later, building to 221 birds on 19 February. This may have involved some of the same birds and hence only the largest count was used. However, the movement of smaller flocks within Scotland was hard to detect and this may have slightly overestimated the number involved in the influx.

The arrival patterns of the two species appeared to be different. By adding the records from November from different sites, larger numbers of European White-fronted Geese appeared to arrive earlier, notably so around 16 - 18<sup>th</sup> of the month, than Tundra Bean Geese (Fig. 2), the latter appearing to arrive steadily throughout November.

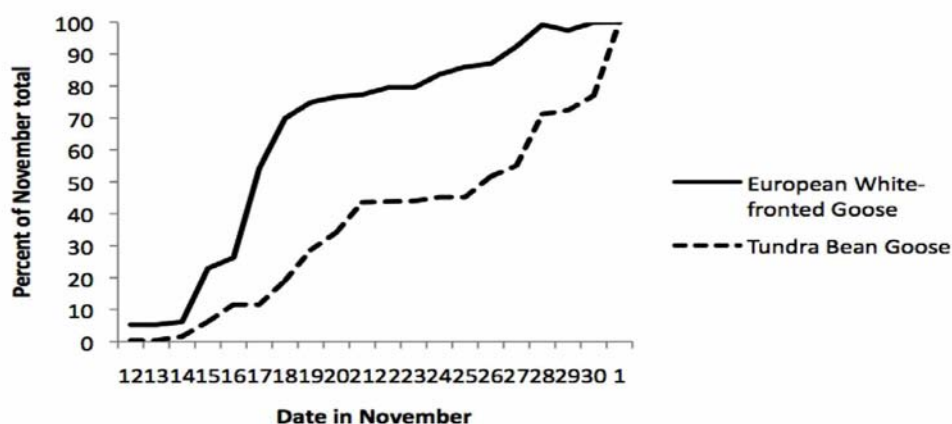


Fig. 2. Cumulative counts of European White-fronted Geese and Tundra Bean Geese expressed as a percent of the November total.

The influx may not have been restricted to November either since the highest counts tended to occur later in the winter, for example 158 Tundra Bean Geese at Loch of Strathbeg, Aberdeenshire on 10 December and 300 European White-fronted Geese at the same site on 19 January (see below). This suggests that the arrival was staggered over several weeks – and hence the initial arrivals were not associated with a particular weather pattern (see below).

A regular wintering flock of 200 - 250 *fabalis* Taiga Bean Geese near Slammanan, Falkirk and about a half of the world's population of Greenland White-fronted Geese on the west coast allow Scottish birdwatchers to familiarise themselves with both of these races. However, an influx of *rossicus* Tundra Bean Geese and European White-fronted Geese into Scotland provided some interesting identification challenges. Autumn 2011 also saw small parties of Greenland White-fronted Geese displaced from their normal wintering areas on the west coast and birdwatchers needed to be wary of quickly assigning races. Light conditions played an important factor when scanning whitefronts. Bubble-gum pink bills and paler upper body parts of the European White-fronted Geese appeared darker on overcast days or those without bright sunshine. Bill shape and size, neck length and again, upper body colour, was variable both within Tundra Bean Geese and between *rossicus* and *fabalis* Bean Geese. All good stuff to keep identification skills honed.

In all, 686 records were used in this brief assessment of the scale and distribution of the influx. It is recognised that these records do not represent a complete picture of the influx and that more records are likely to be submitted to county recorders in the fullness of time – so this brief assessment should be treated as preliminary. Many sightings involved mixed goose flocks with both European White-fronted and Tundra Bean Geese seen in the same flock (30% of the records) and either species seen together with Pink-footed Geese and/or Greylag Geese.

#### **European White-fronted Geese** *Anser albifrons albifrons*

There were 384 records, ranging from 1 to 300 birds (median 12 birds) and these probably refer to c. **3 220** birds at 108 sites (Fig. 3). The largest count was of 300 birds at Loch of Strathbeg, Aberdeenshire on 19 January, 2012 (Tab. 1). Records were widely scattered in Scotland with the largest number on Shetland, the east coast and in south central Scotland (Fig. 3). However, smaller flocks were also reported in Badenoch & Strathspey, Caithness, the Moray Firth, Argyll, Ayrshire, Dumfries & Galloway and the Outer Hebrides.

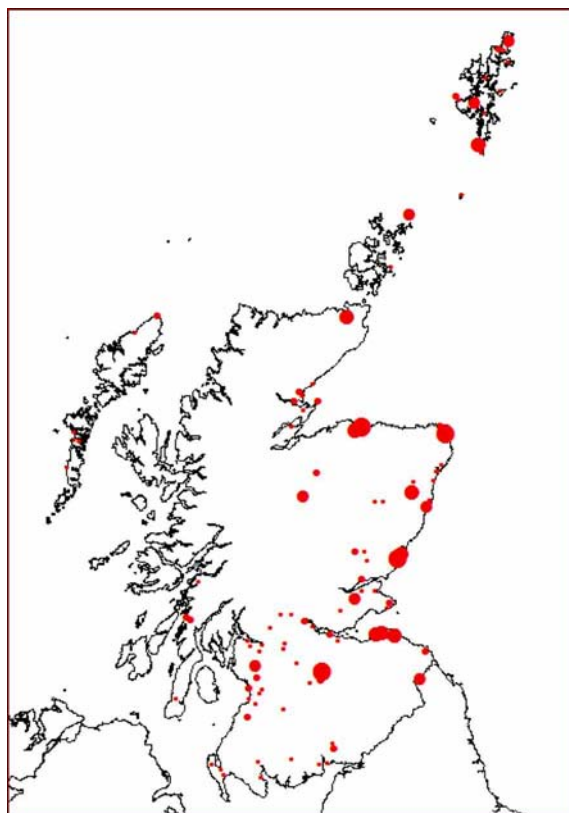


Fig. 3. Distribution of maximum counts of European White-fronted Geese recorded at 108 'sites' in Scotland during winter 2011/12.

#### **White-fronted Geese** (not assigned to race)

There were seven records of Greater White-fronted Geese (not assigned to race), ranging from 1 to 111 birds, and these probably refer to a further 123 geese. The largest count was of 111 birds at Loch of Strathbeg, Aberdeenshire on 5 December, however, like most of the other six records these were eventually assigned to race and recorded on separate occasions.

### **Taiga Bean Goose** *Anser fabalis fabalis*

Away from the traditional wintering area at Slammanan near Falkirk, there were 27 records, ranging from 1 to 22 birds, and these probably refer to c. 50 birds at ten sites. Sightings included 22 geese at Portlethen, Aberdeenshire seen on 12 November a date too late to involve birds on passage to Slammanan. Records were widely scattered with 3 (possibly 6) reported from Benbecula, Western Isles, 3 on Islay and 6 on Shetland. Taiga Bean Geese at six of the sites were recorded together with Tundra Bean Geese posing identification challenges.

### **Tundra Bean Goose** *Anser fabalis rossicus*

There were 375 records, ranging from 1 to 158 birds (median 6 birds) and these probably refer to c. **1 350** geese at 103 sites (Fig. 4). The largest count was of 158 geese on 10 December at Loch of Strathbeg, Aberdeenshire (Tab. 1). Records were widely scattered in Scotland with the largest number on Shetland, the east coast and in south central Scotland (Fig. 4). The distribution of records is remarkably similar to that of the European White-fronted Geese, partly a reflection of careful scrutiny of goose flocks by birdwatchers. However, there were few records from Ayrshire and Dumfries & Galloway.

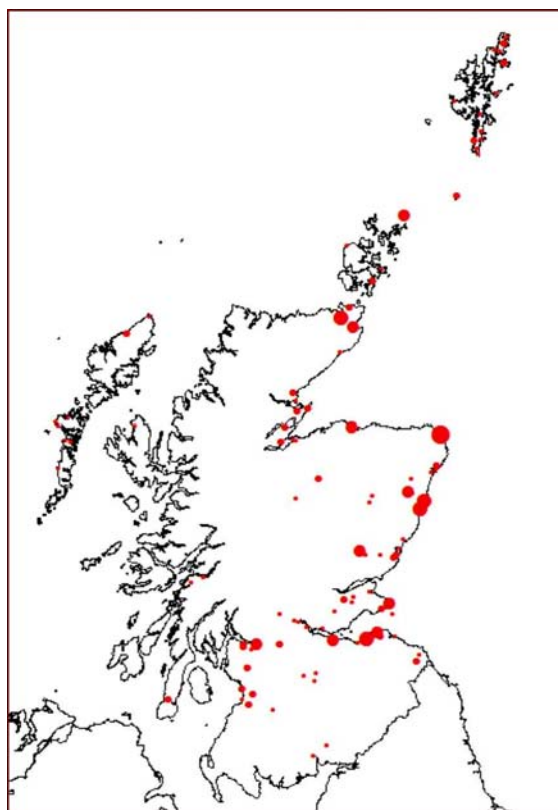


Fig. 4. Distribution of maximum counts of Tundra Bean Geese recorded at 103 'sites' in Scotland during winter 2011/12.

### **Bean Goose** (not assigned to race)

In addition to the records of *fabalis* Taiga and *rossicus* Tundra Bean Geese, there were 38 records of Bean Geese not assigned to a race. These ranged from 1 to 59 birds (median 6) and probably refer to a further 310 birds at 25 sites.

The largest count was of 59 geese on 14 November on Fair Isle, Shetland. The majority of these were probably Tundra Bean Geese, thus the influx is likely to have involved more than the c. 1 350 birds noted above, although some were undoubtedly seen again, assigned to a race and recorded separately. Thus, we have a little less confidence in the number of Tundra Bean Geese involved in the influx, but it is likely to be between 1 350 and 1 500 birds.

Table 1. The ten largest counts of European White-fronted Geese and Tundra Bean Geese in Scotland during winter 2011/12. Whilst attempts have been made to try to account for large groups reported at different but nearby sites, the symbol \* indicates likely counts of some geese than may have been recorded at two sites.

European White-fronted Geese			Tundra Bean Geese		
Site	Count	Date	Site	Count	Date
Loch of Strathbeg, Aberdeenshire	300	19/1/12	Loch of Strathbeg, Aberdeenshire	158	10/12/11
Inverkeilor, Angus & Dundee	240	3/12/11	Newtonhill, Aberdeenshire	95 *	27/11/11
Carnwath, Clyde	232	27/12/11	Rigifa Pool, Aberdeenshire	82 *	28/11/11
Garmouth, Moray & Nairn	221 *	19/2/12	Longniddry, Lothian	59	21/12/11
Loch of Skene, Aberdeenshire	150	24/12/11	Durran, Highland	53	24/2/12
Fenton barns, Lothian	120	11/12/11	Lochill, Moray & Nairn	42	18/11/11
Durran, Highland	104	24/2/12	Loch of Skene, Aberdeenshire	42	24/12/11
Urquhart, Moray & Nairn	100	9/1/12	Fenton barns, Lothian	31	11/12/11
Tynninghame Bay, Lothian	88	14/11/11	Loch of Kinnordy, Angus & Dundee	30	14/1/12
Aberlady Bay, Lothian	85 *	16/11/11	Erskine, Clyde	29	11/12/11

Both European White-fronted Geese and Tundra Bean Geese winter in very large numbers in The Netherlands and Germany, with recent winter population estimates of c. 800 000 of the former and c. 250 000 of the latter in The Netherlands alone. Thus, the winter influx into Scotland involved relatively modest number of birds compared to wintering numbers on the near continent.



However, compared to winter records of both species in normal winters the winter 2011/12 influx appears to be the largest in living memory. There were two records of colour-marked European White-fronted Geese in Scotland and records of these geese in previous winters suggest that the influx stemmed from birds than normally winter in The Netherlands rather than birds from more northerly haunts on the continent.

The cause of the influx remains a mystery. Weather conditions, particularly the strength and direction of wind in the week preceding 12 November and the week that followed, did not reveal any indications of strong south easterlies or easterlies ([www.wetterzentrale.de/topkarten/tkfaxbraar.htm](http://www.wetterzentrale.de/topkarten/tkfaxbraar.htm)) which may have aided a rapid influx. Nor was the arrival related to a cold weather movement associated with occasional influxes in mid winter from continental areas. For example, from mid January to early March 1996, more than 20 Tundra Bean Geese (and more than 100 'Bean Geese') and at least 600 European White-fronted Geese were recorded in eastern Scotland during a cold spell on the continent (FORRESTER et al. 2007).



Fig. 5. Tundra Bean Goose *Anser fabalis rossicus*

Weather charts for early November suggest a period of relative calm prior to the first arrivals. A high pressure system was sitting over the southern Baltic Sea area on 11 and 12 November providing only light southern easterlies across the continental part of the North Sea. However, weather records from Terschelling (off the north west coast of The Netherlands, 53.38 N 5.35 E) reported fog on 8, 9 and 10 November. Could a combination of fog and light south easterlies be sufficient to promote a drift to the north and west over the North Sea? Kees Koffijberg and Kees Camphuysen (NL) kindly reported that 11 European White-fronted Goose carcasses were found on beach surveys in the month of November and that this number was unusually high. Perhaps some migrating white-fronts became dis-orientated on arriving at the North Sea, some perishing, others migrating further west.

However, this does not explain the staggered arrival of Tundra Bean Geese. An alternative, and perhaps more plausible, explanation is that rather than over-shooting The Netherlands or north Germany (the normal autumn migration route is via countries along the southern part of the Baltic Sea), the arrival may have been from mid to northern Scandinavia. Perhaps some European White-fronted and Tundra Bean Geese were displaced north on autumn migration, migrated across Scandinavia and continued south and west eventually crossing the North Sea.

This might explain the early records from Shetland, Caithness, the outer Hebrides, for example, and even the west coast of Norway.



Fig. 6. European White-fronted Goose  
*Anser albifrons albifrons* (© Alfred Steins)

Contact with the Wetlands International Goose Specialist group confirm that the influx was not restricted to Scotland. Large numbers of both European White-fronted Geese and Tundra Bean Geese were reported from Norway, Denmark and east England.

Tony Fox (Denmark) indicated that both European White-fronted Geese and Tundra Bean Geese have been increasing in number in south east Denmark in recent years from their normal wintering areas in The Netherlands and Germany and perhaps the overspill into eastern Scotland was a progression of this.

Johan Mooij (Germany) mentioned that European White-fronted Geese ‘discovered’ Flanders and the lower Rhine as wintering areas as recently as the early 1960s and that their numbers increased dramatically there from the early 1980s.

Perhaps Scotland has witnessed a periodic influx of colonisers exploring new wintering grounds.

Unusually, many flocks of European White-fronted and Tundra Bean Geese in winter 2011/12 remained until well into early spring (the flock of 38 Whitefronts seen near Kingussie on 12 November built to 101 birds by 3 February and remained there until the second week of March). There will be considerable interest next autumn to see if any of the long-staying ‘wintering’ birds of 2011/12 return to Scotland. For the first-winter geese which arrived in autumn 2011, Scotland is now their ‘normal’ wintering area.

A larger review of the scale and distribution of this displacement from the ‘normal’ winter areas would be welcomed, as would an assessment of what may have caused such an unusual movement of so many geese.

#### Acknowledgements

Thanks go to Stephen Menzies who kindly provided records submitted to BirdGuides ([www.birdguides.com](http://www.birdguides.com)) and to birdwatchers in Scotland who took the time to record their sightings. Tony Fox, Johan Mooij, Thomas Heinicke, Kees Koffijberg and Kees Camphuysen are thanked for their thoughts and provision of records.



## Regulation of spring and autumn hunt in the Kumo-Manych depression.

**Sonia Rozenfeld**

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### Introduction

Thanks to the African-Eurasian Waterbird Agreement (AEWA), some proposals from the Strategy of wise use of Anseriformes of Kumo-Manych stopover site have already been implemented at the regional level in Kalmykia republic.



Fig. 1. Goose flight in the Kumo-Manych stopover site (Kalmykia republic).

In 2009, a “Strategy for the wise use of waterbird resources of Kumo-Manych stopover” was proposed and a range of interagency and interregional agreements was signed. Within the framework of this strategy the spring and autumn hunt has been restricted on the Kumo-Manytch depression area in Kalmykia since 2009.

Based on the resolution of the International conference “Waterfowl of Northern Eurasia: geography, dynamics and population management” (Elista, Kalmykia, 2011) the Plan for waterfowl resource management was developed and signed by the Minister of Natural Resources of Kalmykia. This plan aims to manage hunting through a flexible system of open/close seasons depending on the pattern of migration of the rare species through the key sites, as well as to optimize game management, and raising awareness amongst hunters and encourage actions to protect rare species.



МИНИСТЕРСТВО ПРИРОДНЫХ РЕСУРСОВ,  
ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ  
И РАЗВИТИЯ ЭНЕРГЕТИКИ  
РЕСПУБЛИКИ КАЛМЫКИЯ



## *“Regulation of spring and autumn hunting on waterbirds in Kumo-Manych Depression”*

2010 - 2011

«Утверждаю»  
Министр природных ресурсов,  
охраны окружающей среды и  
развития энергетики Республики  
Калмыкия  
В.Н. Мирошниченко  
«12» октября 2011 г.

М.п.

План  
периодических мероприятий по рациональному использованию ресурсов  
гусеобразных Кумо-Манычской миграционной остановки  
в Республике Калмыкия

В целях реализации Стратегии по оптимизации использования гусеобразных  
Кумо-Манычской миграционной остановки утвердить следующие  
периодические мероприятия на территории Республики Калмыкия:

### 1. Производство охоты

- 1.1. Организовать весеннюю охоту на водоплавающую дичь на территории  
Кумо-Манычской миграционной остановки Республики Калмыкия
- 1.2. Разрешить производство осенней охоты на гусей в общедоступных  
охотничьих угодьях на установленных участках и охотничьих хозяйствах.
- 1.3. Вести гибкую систему сроков открытия и закрытия охоты на гусей в  
следующих ключевых районах:
  - Ики-Бурульского района (территории Манычского СМО,  
Зунгазловского СМО, Чогайского СМО)
  - Приютненского района (территории Приютненского СМО,  
Октябрьского СМО, Парийского СМО)
  - Яшалтинского района (территории Яшалтинского СМО,  
Октябрьского СМО, Салвинского СМО, Манычского СМО и  
Багатуевского СМО)
- 1.4. Привлечь для исследований и консультаций Калмыцкой государственной  
университет, ГИЗ «Черные земли», Рабочую группу по гусеобразным  
Северной Евразии.

### 2. Оптимизация системы организации охотничьих хозяйств

- 2.1. Разработать и установить нормативы промысловой способности  
охотхозяйств при охоте на водоплавающую дичь в Республике Калмыкия.
- 2.2. Обеспечить руководство охотничьих хозяйств:
  - 2.2.1. предоставлять в Министерство природных ресурсов, охраны  
окружающей среды и развития энергетики Республики Калмыкия в

- 2.2.2. проводить бизнес-информационные мероприятия по созданию  
современных хозяйств для гусеобразных;
- 2.2.3. обеспечить наличие подготовленной территории для  
охоты на гусей и контролировать соблюдение охотника  
условий охоты на гусей;
- 2.2.4. при выдаче разрешений на охоту на гусей выдать  
опытному охотнику информационную листовку о редких и  
охраняемых видах.

### 3. Меры по повышению культуры охоты и пропаганде сохранения видов гусеобразных

- 3.1. Осуществлять контроль, надзор, выдачу разрешений в области  
использования объектов животного мира Министерством природных  
ресурсов и развития энергетики Республики Калмыкия  
и органами охраны окружающей среды и развития энергетики Республики Калмыкия  
с привлечением специалистов КГУ, Рабочей группы по гусеобразным  
Северной Евразии и других общественных организаций:
  - подготовить плановый отчет о состоянии охотничьих, со спец  
указанием редких видов птиц, добыча которых запрещена;
  - установить информационные пункты в ключевых районах  
Манычской впадины, где проводится охота на гусей;
  - распространять по всем охотничьим хозяйствам информа  
ционные листовки с изображением редких видов гусеобразных птиц, птиц  
Красной книги Российской Федерации и региональные Красные  
книжки.
- 3.2. Поручить отделу животного мира и видов объектов и в  
контроль, надзор, выдачу разрешений в области охраны и  
использования объектов животного мира Министерством природных ресурсов,  
охраны окружающей среды и развития энергетики Республики Калмыкия  
с привлечением специалистов КГУ, Рабочей группы по гусеобразным  
Северной Евразии и других общественных организаций организовать ре  
сурсное обеспечение охоты на гусей в охотничьих хозяйствах и передаче  
проблем, в том числе, связанных с браконьерством;
- 3.3. Рекомендовать Министерству образования, культуры и  
Республики Калмыкия с привлечением специалистов КГУ, Рабочей гру  
пы гусеобразных Северная Евразия и других общественных организаций:
  - разработать и включить в учебные программы природ  
оохоты на редких видах животных, обитающих в Республике Кал  
мыкия;
  - подготовить информационную информацию для высшей школы  
средних и начальных школ по красной книге, охоте, охотничьим  
хозяйствам и охотничьим животным, в том числе  
регулируя охоту на водоплавающих птиц в местах их обитания.

МИНИСТЕРСТВО ПРИРОДНЫХ РЕСУРСОВ И  
ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ РЕСПУБЛИКИ КАЛМЫКИЯ

ПРИКАЗ  
г. Элиста

«12» октября 2011 г.

№ 13/12

«О мерах по сохранению редких видов гусеобразных Кумо-Манычской  
миграционной остановки в Республике Калмыкия»

В целях сохранения редких видов гусеобразных Кумо-Манычской  
миграционной остановки в Республике Калмыкия, в соответствии с резолюцией  
Международной конференции «Гусеобразные Северной Евразии: география,  
динамика и управление популяциями», проведенной в г. Элиста 25 – 29 марта  
2011 г., Планом первоочередных мероприятий по рациональному  
использованию ресурсов гусеобразных Кумо-Манычской миграционной  
остановки в Республике Калмыкия, утвержденным Минприроды РК 01 марта  
2011 г.

приказываю:

1. Установить в охотничьих угодьях Ики-Бурульского, Приютненского и  
Яшалтинского районов Республики Калмыкия на период осенне-зимнего сезона  
охоты на пернатую дичь временные передние зоны покоя для редких видов  
гусеобразных, каждая площадью не более 1 тыс. га.
2. Отделу по контролю, надзору и выдаче разрешений в области охраны и  
использования объектов животного мира и охотпользователям Республики  
Калмыкия организовать регулярный мониторинг охотничьих угодий с целью  
слежения за передвижением птиц и своевременным перемещением временных  
зон покоя в места концентрации редких видов гусеобразных.
3. Охотпользователям Республики Калмыкия информировать Министерство  
природных ресурсов и охраны окружающей среды о появлении на  
подведомственной территории редких видов перелетных гусеобразных видов.
4. Контроль за исполнением настоящего приказа возложить на Заместителя  
Министра Каюмова Ю.Б.

Министр

В.Н. Мирошниченко

Fig. 2. Plan of urgent measures for wise use of waterfowl resource of Kumo-Manych stopover in Kalmykia (left) and the order about the creation of hunting free zones during autumn& winter hunting season in Kalmykia (right).

## Hunting regulations

### 1. Spring hunt 2011

The duration of the spring hunt was restricted to 9 days and all key sites and wetlands were closed to hunting. In 2012, this regulation of the spring hunt should be done automatically according to the new hunting rules, developed taking into account the importance of the Kumo-Manych depression.



ХАЛЪМГ  
ТАНЪЧИН  
ТОЛЪАЧ



ГЛАВА  
РЕСПУБЛИКИ  
КАЛМЫКИЯ

358000, Республика Калмыкия, г. Элиста, ул. А.С. Пушкина, 18  
тел.: (847-22) 3-30-88, факс: (847-22) 3-41-58, www.glava.region08.ru, e-mail: ki@region08.ru

Иск. АВ-01-01/0345

" 9 " сентября 20 11 г.

Директору Института проблем  
экологии и эволюции  
им. А.Н. Северцова РАН  
академику Д.С. Павлову

На Ваш иск. № 2173/111 от 10.02.2011г.

Уважаемый Дмитрий Сергеевич!

Исходя из принципов рационального использования охотничьих ресурсов, распоряжением Главы Республики Калмыкия от 28 февраля 2011 года № 20-рг «О сроках открытия весенней охоты на водоплавающую дичь на территории Республики Калмыкия в 2011 году» принято решение об ограничении сроков весенней охоты на территории Калмыкии до 9 дней, с 12 по 20 марта текущего года. Охота в указанный период может осуществляться только в специально обозначенных местах: на разливах и временных водоемах.

Также, в 2011 году полностью запрещена охота на водоемах Кумо-Манычской впадины, которые являются важным пунктом промежуточной остановки для мигрирующих птиц. Запрет на охоту введен также на территориях природных заказников регионального значения и на всех крупных водоемах, имеющих ключевое значение в жизнедеятельности птиц.

С целью создания благоприятствующих условий для гусеобразных Кумо-Манычской миграционной остановки Министерством природных ресурсов, охраны окружающей среды и развития энергетики Республики Калмыкия утвержден План первоочередных мероприятий по рациональному использованию ресурсов гусеобразных Кумо-Манычской миграционной остановки в Республике Калмыкия.

Глава  
Республики Калмыкия

*С уважением,*  
*А.М. Орлов*

А.М. Орлов

Fig. 3. The letter from the president of Kalmykia to the director of IEES RAS about the restriction of the spring hunt in 2011.

## 2. Autumn hunt 2011

Based on the order of the Ministry of Natural Resources of Kalmykia, flexible hunting free zones were created depending on the distribution of rare goose species in a given year.

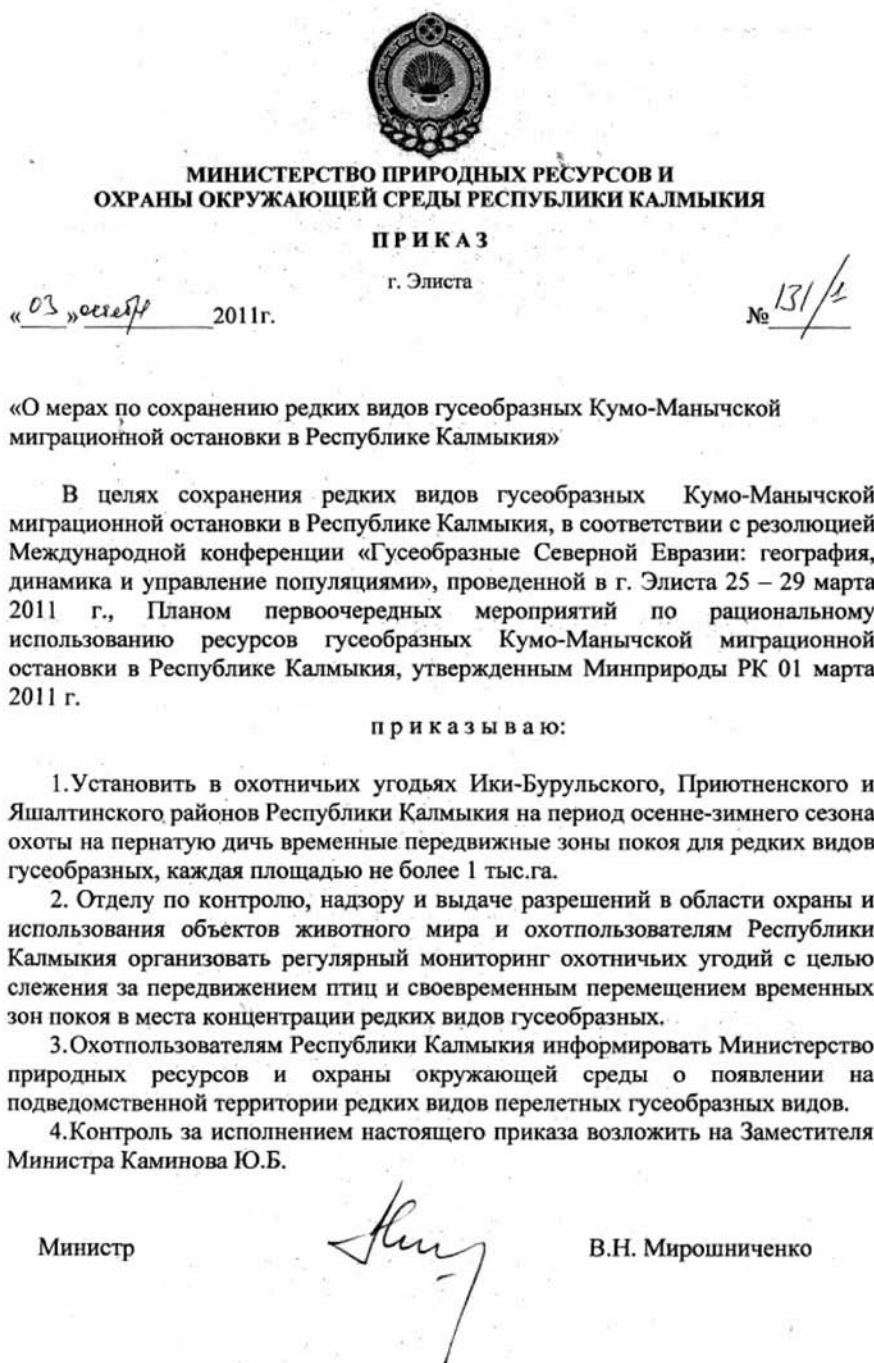


Fig. 4. Order of the Ministry of natural resources of the Kalmykia Republic about the creation of flexible hunting free zones.





Fig. 6. Terrestrial and aerial counts.

### 5. 2011 autumn migration pattern

The autumn migration of Red-breasted Geese *Branta ruficollis* (RBG) and Lesser White-fronted Geese *Anser erythropus* (LWFG) in the Lower Ob River, (from breeding sites) in 2011 started on 9-10 September. The first WFG and GLG arrived to Northern Kazakhstan on 3-4 September, the first LWFG and RBG appeared in Northern Kazakhstan on 22-24 September, and the main arrival of LWFG and RBG was on 8-10 October, and of GWFG on 20-25 October. Thus, the autumn migration was late in 2011 due to an extremely warm September in the Lower Ob River, South of Russia and Northern Kazakhstan.

The geese started to migrate from Kazakhstan to Russia only in the first days of November. Probably the smaller species (LWFG and RBG) arrived earlier from 9-10 October, but nobody saw them within the project area. We suppose that the very warm autumn with the very rapid change to frost led to such a pattern of goose migration.



In the project region the main goose arrival occurred on 10 November after the first frosts, similar to reports from Dagestan.



Fig. 7. Goose flight in the Kumo-Manych stopover site (Kalmykia republic).

We estimated the total population of LWFG and RBG in Kazakhstan during the 2011 autumn monitoring mission as:

*Anser erythropus* -15 460 individuals

*Branta ruficollis* – max 67 000, min 58 600 individuals

(See AARVAK et al. 2012).

The first big flocks of migrating geese were registered in the project area during the car monitoring counts only from 12 November. The results of these counts are presented in Table 1.

Table 1. Results of the goose counts in the Kumo-Manych stopover site (Kalmykia republic).

Place	RBG	GWfG	LWfG
Fields near Stavropol-Volgograd federal road	15	400	27
Fields near Uldutchiny village		280	
Wright island of Manytch-Gudilo lake		450	
Fields of S-W part of Priyutnoe region	40	1500	6
Dolgonky bay	80	3000	13
Fields of “Manz” game husbandry (Manytch bay)	30	700	
Fields of “SPK im. Kirova”	28	650	4
Total	193	6980	50

After receiving this information we started the total goose counts and the study of their distribution within the study area. The entire Kumo-Manych depression was counted during 14-15 November.



Fig. 8. Steppe under snow 17 November 2011

During the counts the night-time temperature was -10 to -13 degrees, by day c. -5 degrees, and the fields and the steppe were covered by snow. Probably some RBG preferred to not stop in this area and follow their migration route to the wintering sites directly without stopping in the Kumo-Manych depression. According to data from our colleagues in Ukraine, the first RBGs were seen in Odessa district on 25 October.

The results of the counts are presented in Tables 2-4.

Table 2. The coordinates of the sites of geese feeding flocks in eastern part of Kumo-Manych depression 14 November 2011 (RBG = Red-breasted Goose; GWfG = Greater White-fronted Goose; GLG = Greylag Goose; LWfG = Lesser White-fronted Goose).

N	E	RBG	GWfG	GLG	LWfG
45°49'58.3"	44°08'18.9"		4000		
46°06'22.0"	43°49'30.6"		50	20	11
46°07'36.5"	43°43'45.3"			120	
46°02'56.7"	43°29'43.0"		8400	3600	5
45°59'18.8"	43°30'21.6"		180	80	8
45°55'01.3"	43°32'48.4"			80	
44°06'22.0"	43°49'30.6"		4000		
45°45'07.8"	44°15'46.4"	8	2800	730	7
45°55'15.0"	43°23'19.0"		5850	650	4

Table 3. The coordinates of the sites of geese feeding flocks in western part of Kumo-Manych depression 15.11.2011 (Legend: see Table 2).

N	E	RBG	GWfG	GLG	LWfG
46°28'05.5"	42°38'58.0"	3	580	120	
46°22'33.2"	42°53'04.5"		7000		22
46°12'32.0"	43°10'58.5"	560	27400		56
45°59'56.3"	43°19'34.3"		7000		14
46°00'05.3"	43°20'43.2"		2100	1400	5
46°01'08.5"	43°18'39.4"		1324	200	
46°06'05.7"	43°08'47.2"	250	5000	300	3
46°07'39.8"	42°04'34.3"		120		
46°09'17.0"	42°58'39.8"	60			
46°12'04.2"	43°00'28.5"	25			
46°11'29.0"	42°55'14.2"				7
46°08'15.0"	42°50'33.3"	7200	13200	3600	15
46°18'43.0"	42°13'34.3"		240	60	
46°21'35.2"	42°11'58.7"			70	
46°22'53.8"	42°16'17.9"		900	600	6
46°35'15.9"	41°53'55.2"		6000		
46°34'24.5"	42°00'54.1"	23			
46°36'33.5"	42°05'13.0"		4950	730	
46°35'09.1"	42°13'15.5"		160		
46°32'27.5"	42°22'11.6"		4000	500	
46°28'28.2"	42°35'48.9"		19150	400	102

Table 4. Total number of geese within the study area in 14-15 November 2011 (Legend see Table 2).

Region of Kumo-Manych Depression	RBG	GWfG	GLG	LWfG
Eastern part (Divnoe-Tchogray water reservoir, both coasts): Apanasenskiy region of Stavropol district and Priyutnenskiy region of Kalmykia	8	25280	5280	37
Western part (Divnoe-Egorlyk river mouth) Rostov district Yashaltinskiy and Priyutnenskiy region of Kalmykia	8121	99120	7980	230
<b>Total number (max)</b>	<b>8130</b>	<b>124400</b>	<b>13260</b>	<b>257</b>

By our point of view, the average percentage of LWFG on the mixed flocks (n=14) was about 1.4%, thus we expect that about 2000 LWFG migrated through this area which corresponds with earlier estimations of the number of LWFG migrating/wintering within the Kumo-Manych depression.



## 6. The pattern of distribution of the geese flocks in the Kumo-Manych depression

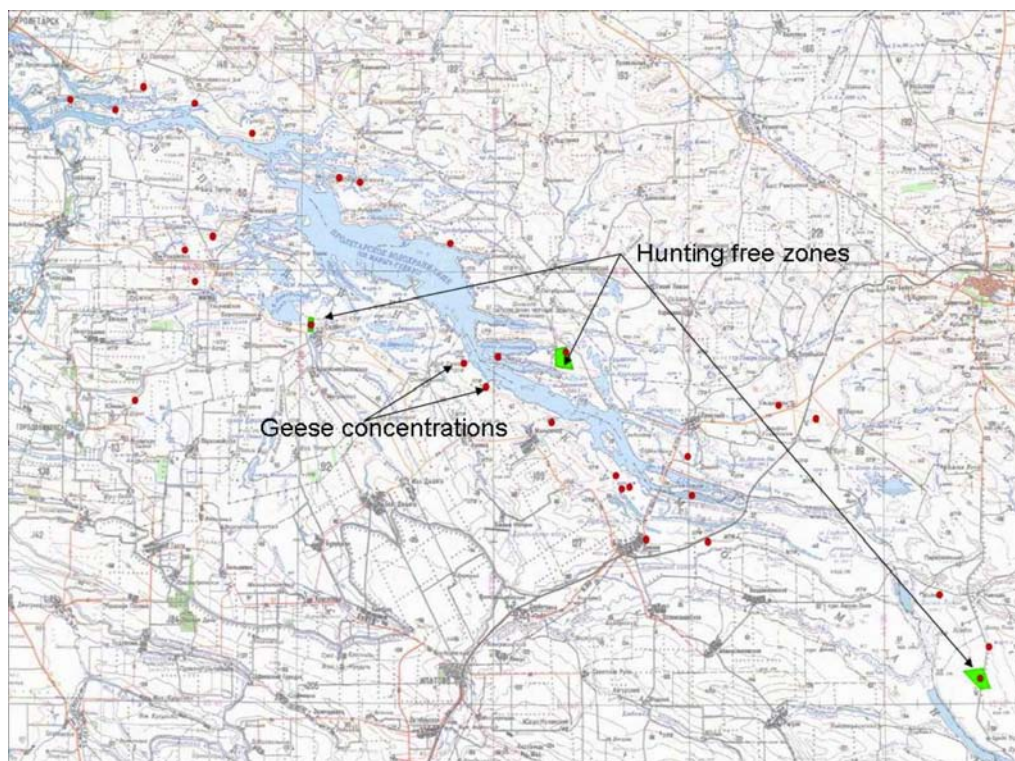


Fig. 9. Geese distribution and location of hunting free zone in Kalmykia 17-24 of November 2011.

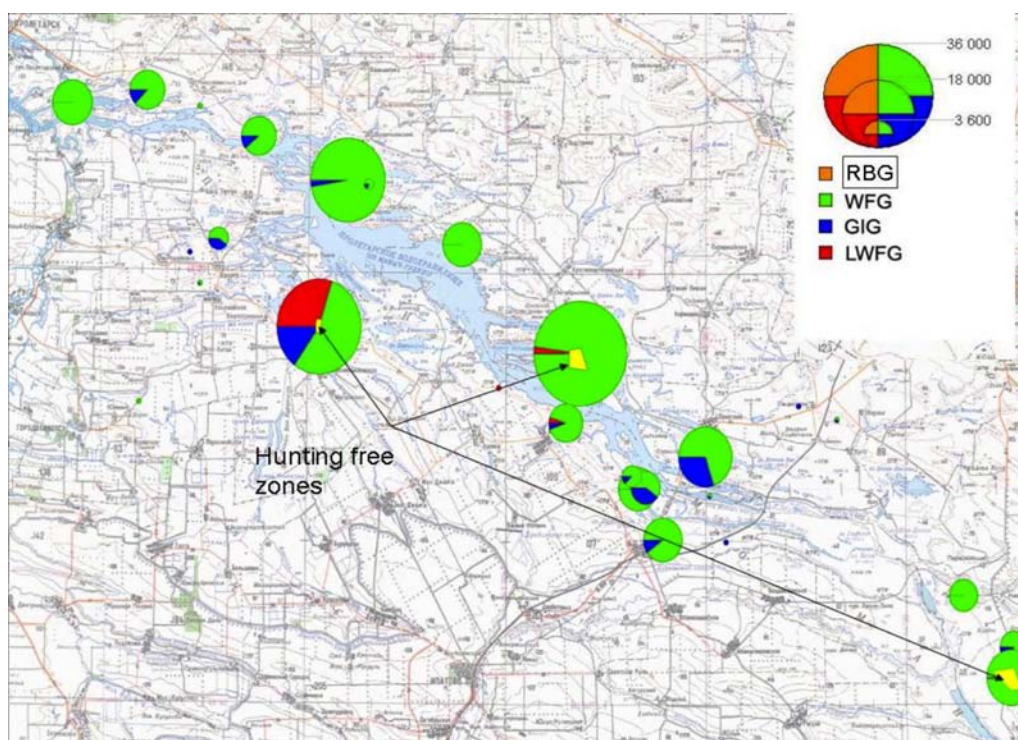


Fig. 10. Distribution of the different geese species in Kalmykia 17-24 of November 2011



## 7. Creation of hunting free zones

The initial designations of hunting free zones were delivered to land owners/users and game managers by the order of The Ministry of Natural Resources of Kalmykia in October. The same information was published in a local newsletter.

### ГУСИ В ЗОНЕ ПОКОЯ

Людмила САРАНГОВА

**П**ередвижные временные зоны покоя дичи будут установлены в охотничьих угодьях Ики-Бурульского, Приютненского и Яшалтинского районов в период осенне-зимнего сезона охоты. Такое решение было принято Министерством природных ресурсов и охраны окружающей среды РК в целях сохранения редких видов гусеобразных Кумо-Манычской миграционной остановки в Калмыкии.

- Зоны покоя будут маркированы

аншлагами, нарушителям грозит привлечение к административной ответственности в соответствии с природоохранным законодательством. Ранее на территории Кумо-Манычской впадины были созданы мобильные группы по мониторингу характера пролета птиц. В зависимости от результатов мониторинга на ключевых территориях миграционных остановок, где отмечены массовые скопления редких видов гусеобразных, охота на определенный срок

закрывается. Таким образом, создается гибкая сеть зон покоя, способствующая сохранению редких видов птиц, - сообщили «ИК» в отделе охотнадзора Минприроды.

Отметим, что в республике уже введены серьезные ограничения на весеннюю охоту, благодаря чему удалось временно выполнить международные обязательства по охране редких видов гусей и казарок России.

Fig. 11. Article about hunting free zones for geese in the newspaper “Kalmykia News”

Based on the data received from counts on 17 November, one hunting free zone (1000 hectares) was established in Priyutnensky region and marked by 6 banners. This zone was near the point N 46°12'32.0" E 43°10'58.5" where about 28 000 Greater White-fronted Geese *Anser albifrons* (GWFG), 560 RBG and 60 LWFG were feeding. All hunters were excluded from the area and a constant patrol of this area by regional rangers was organized.



Fig. 12. Explaining to hunters the location of hunting free zone.

The coordinates of the hunting free zone in Priyutnensky region are:

46°28'05.5" / 42°38'58.0",

46°11'06.4" / 43°11'43.2",

46°12'57.2" / 43°10'47.4",

46°12'44.0" / 43°09'28.3",

46°11'21.9" / 43°09'27.1".



Fig. 13. The hunting free zone in Priyutnensky region.



Fig. 14. Goose flock within the hunting free zone in Priyutnoe region.

Another hunting free zone – 960 hectares, was created on 18 November in Yashaltinsky region and marked by 7 banners. The constant patrol of this zone was provided by the regional hunting society “Yashaltinskoe”.



Fig. 15. Geese flock within the hunting free zone in Yashaltinsky region.

The coordinates of the hunting free zone in Yashaltinsky region are:

46°14'21.5" / 42°31'15.5",  
46°14'58.0" / 42°31'14.2",  
46°15'22.0" / 42°31'18.5",  
46°15'19.1" / 42°31'45.4",  
46°14'53.5" / 42°31'45.4",  
46°14'25.2" / 42°31'41.7",  
46°14'22.4" / 42°31'42.4".



Fig 16. Banners “Temporal hunting free zone, hunt is forbidden”

On 24 November, a 1 000 hectare hunting free zone was established in Iki-Butul region after a report from the local administration about the arrival of geese.



Fig. 17. The creation of the hunting free zones 17-18 of November



Based on the autumn/winter constant monitoring data, these 3 zones can be moved to other places if and when the rarer species of geese are registered in larger numbers.

### Public awareness

Banners were placed in the key villages (on the administrative buildings or on the federal roads) of the Kumo-Manych depression: Stavropol, Rostov-on-Don, Divnoe, Priyutnoe and Yashalta. Also such banners and leaflets were made available in all of the offices of the hunting societies where the hunters pay for their hunting licenses.



Fig. 18. Banners for hunters about rare geese species.

A special field guide “Anseriformes of Russia” was published in 2011 and distributed among the key game managers and hunters in Stavropol district (160), Rostov district (100) and Kalmykia republic (160).



Fig. 19. Anseriformes of Russia.



## 8. Cooperation with the Ministry of Education

An agreement between the Ministry of Natural Resources and the Ministry of Education was signed on 28 March 2011 during the International conference «Waterfowl of Northern Eurasia: geography, dynamics and population management » (Elista, Kalmykia, 2011). Implementation of the school programme including a course about rare bird species of Kalmykia was discussed as a part of working plan of the strategy.

The draft of the special edition of a Manual “Rare birds of Kalmykia” for the course of zoology for schools was prepared and sent to the Ministry of Education for approval.



Уважаемая Лариса Борисовна!

В ходе Международной конференции «Гусеобразные Северной Евразии: география, динамика и управление популяциями», проходившей в г. Элиста с 24 по 29 марта 2011 г., было подписано Соглашение о взаимодействии между Министерством природных ресурсов и охраны окружающей среды Республики Калмыкия и Министерством образования, культуры и науки Республики Калмыкия.

В данном Соглашении отражена необходимость совместной разработки и издания учебно-методических пособий, учебников, направленных на экологическое просвещение, образование и воспитание подрастающего поколения, включения в школьные программы природоведения раздела по редким видам животных, обитающих в Республике Калмыкия, подготовки необходимой информации по редким водоплавающим и околоводным животным для внеклассной работы средних и начальных школ.

Подготовка и разработка необходимой информации по редким видам животных может быть частично профинансирована из средств Малого гранта АЕВА 2011 г. (Соглашения о сохранении Афро-Евразийских мигрирующих видов водоплавающих птиц).

Просим Вас назначить лиц, ответственных за проведение данной работы в Министерстве образования, культуры и науки Республики Калмыкия, и связаться их со специалистами Минприроды РК по т. 4-04-94 для разработки совместного дальнейшего плана действий.

Приложение: на 1 л. в 1 экз.

Министр

Убунтаев т.4-04-94

*[Handwritten signature]*

В.Н. Мирошниченко

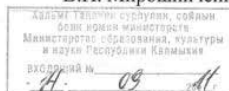


Fig. 20. The letter from the Minister of Natural Resources of Kalmykia to the Minister of Education, Culture and Science of Kalmykia about the preparation of a special course about rare wildlife species of Kalmykia.

### From Kalmyk experience to federal level

The preliminary results of this project were announced in the special workshop “In search of international cooperation mechanisms in conservation of migratory birds and hunting regulations” in Hannover and proposed as a model for developing governmental policy on the wise use of Anseriformes in Russia in the report “The review of the basic steps to the preparation for the conversion of management of geese population in Russia to new level on both federal and regional levels”.



Fig. 21. The banner about the workshop “In search of international cooperation mechanisms in conservation of migratory birds and hunting regulations” in Hannover.

The problem needed to be solved because of the lack of a system, which can manage migratory bird resources in Russia and the lack of efficient international cooperation on the rational use of migrating birds.

To solve this problem we need to urgently undertake the following steps:

1. To transfer the key responsible authority for migratory bird resource management to the federal level (including the definition of the hunting seasons, the size of bags, daily norms of bag);

2. To impose the concept of migration flyways and migration regions as a management area where the coordination and resource planning is taking place;
3. To impose the concept of “Migration Population” (flyway) as the ultimate unit of management;
4. To develop and implement the federal plan for migrating birds under Russia resource management;
5. Intensify the international cooperation within the scope of various international agreements to ensure:
  - Effective assessment of the hunting bag at the population level and ensure that this is appropriate at the flyway level.
  - Taking urgent measures to restore the rare species at key stopover, breeding and wintering sites.

At the moment, much preliminary work on implementing these issues has been carried out in Russia.

At the Federal Level:

New hunting rules came into effect (order MNR from 16.11.2010 N 512) at 15.06.2012. They include a number of important, science based restrictions:

1. The hunting of wildfowl is restricted to 1 May to 16 June, during 10 calendar days on waterfowl and during 10 calendar days on upland birds.

Forbidden is:

2. The use of any kind of vessels (boats, ships, rafts etc.) during the spring hunting but for the collecting of killed animal;
3. The use of any electronic devices imitating animal sounds;
4. The use of any mechanical vehicles and aircraft;
5. The use of vessels with working engine;
6. The hunting of woodcock during morning roding;
7. The hunt “on approach” (hunting without the hide) during spring hunting period, except hunting of wood grouse on the lek;
8. The goose hunt during the spring hunting season
  - on Kolguev and Vaygach islands;
  - less than 200m from the water edge at the moment of the hunt on the 46 rivers and on water reservoirs formed by these rivers, as well as on the 6 lakes and islands of these basins.

Currently, the Department in collaboration with RGG and RAS have prepared the draft of the new Hunting rules. This document contains important points concerning the spring hunt on waterfowl in Russia:

According to these rules:

1. The spring hunt on geese is forbidden:
  - on Kolguev, Vaygach, Oleniy islands;
  - less than 200 meters from rivers water edge and river floods at the moment of the hunt;
  - less than 1 km from the coast line of the lakes and water reservoirs formed by the rivers and on the islands of basins and watercourses (list of watercourses are indicated in the appendix).



2. The spring hunt runs from from 1 March to 1 June except on the Taymyr and Yakutia, where the spring hunt ends on 10 June.
3. The duration of the spring hunt is 10 days.
4. The spring hunt of drakes without the use of live decoys is forbidden in Central Federal district and in Privolzhsky federal district.
5. Destruction of nests and eggs collecting is forbidden except for the local people of the extreme North.

In addition, the cadastre and the description of the key waterfowl stopover sites in Russia is written. According to this cadastre the bounds of territories with limited hunting on waterfowl and restriction on spring hunt are described.



Fig. 22. International key stopover sites in Russia

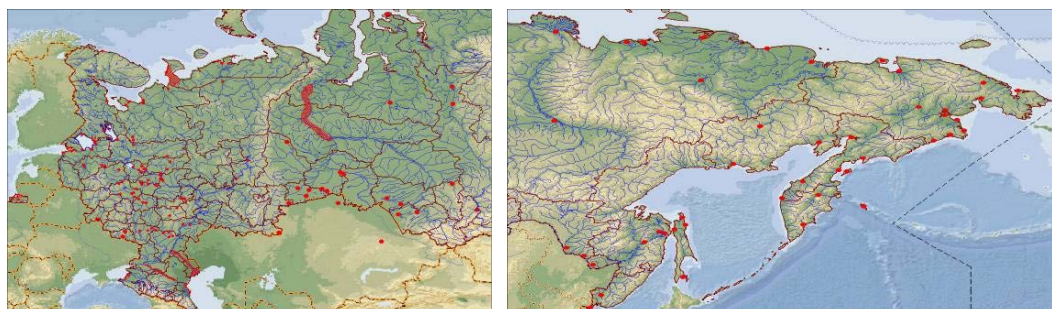


Fig. 23. Map of the areas with proposed restrictions on spring hunting on waterfowl and geese

The list of areas demanding the restriction of the spring hunt on waterfowl and the prohibition of goose hunting bag is proposed for the whole territory of the Russian Federation.



Also the following proposals were sent to the Ministry of Natural Resources of Russia:

1. A list of key nesting areas for geese with a total restriction on spring hunt has been proposed. The exception is made for local people to hunt at 20 km distance from any village with 1000 citizens or less and at 50 km distance from the villages with populations of more than 1000 citizens.
2. A list of RF regions where the spring hunt should be stopped has been prepared (except for the hunt using live decoys starting from 2012 for a 5 years period). In Dalnevostochnyi and Sibirskiy regions, hunting is prohibited “until the restoration of populations at least for 5 years”.
3. The proposals on determination on the hunting grounds capacity and on the scheme of licensing for hunting grounds for waterfowl are given.
4. According to the latest knowledge about bird populations the “List of hunting species (birds)” was reviewed.
5. The proposals for toughening of the “Hunting minimum” are made.

### Spring hunt 2012

The spring hunt in 2012 in Kalmykia republic was closed according to the Governmental Decision from 02 March 2012 № 44. The constant patrolling by the group of inspectors of the Ministry of Natural Resources and Environmental Protection of Kalmykia Republic the Kumo-Manych depression area was accomplished during March and April 2012. The spring hunt was also closed in Rostov district, Astrakhan district and Krasnodar district. The spring hunt in 2012 in Stavropolsky kray was restricted according to the Governmental Decision from 06 March 2012 № 80-п.

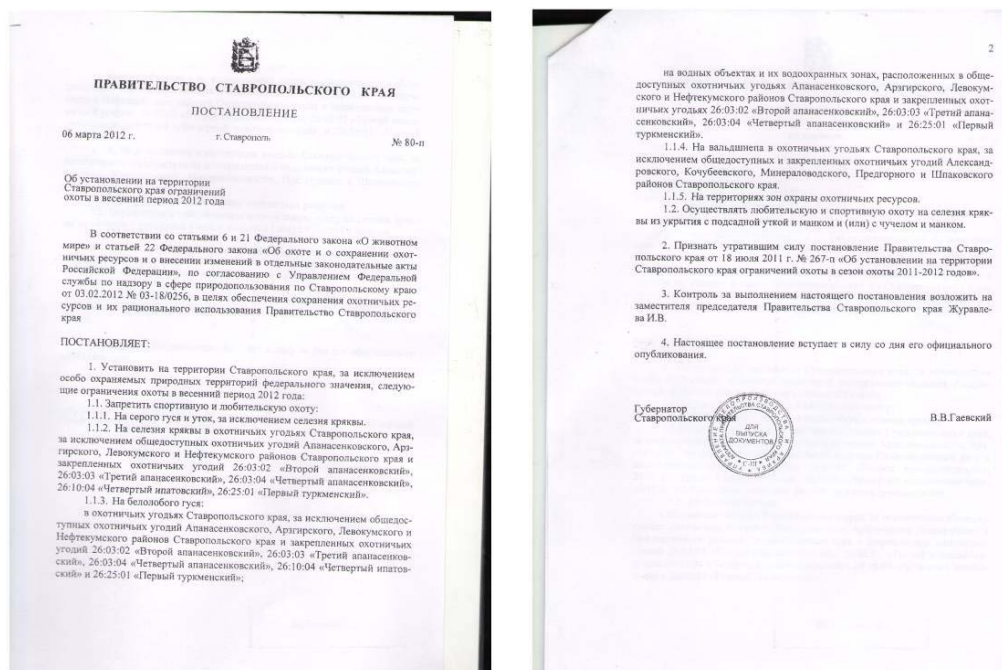


Fig. 24. Governmental Decision of Stavropolsky kray from 06 March 2012 № 80-п.

The positive experiences from this project were approved during the third Meeting of Hunting council of Ministry of Natural Resources of Russia (protocol 28.04.2011 №01-15/1-cox).

According to the assessment of the Minister of Natural Resources of Russia, Yuriy Trutnev, the success and effective experiences from implementing the “Strategy of wise-use of the waterfowl resources of Kumo-Manych stopover” and “Plan of urgent measures” should be applied to all of Russia. At the present, the Hunting Department of the Ministry of Natural Resources of Russia prepares the programme of regulation for the spring hunt. This programme should be coordinated at the flyway scale and implemented through the waterfowl hunting plans for the 7 okrugs of Russia.

### **Main results**

1. Creation of a stable system of monitoring and patrolling in waterfowl key sites in Kalmykia .
2. Based on the data on rare species migration patterns create a network of flexible temporal hunting free zones in the key sites in Kalmykia during autumn-winter hunting season in the key sites.
3. Restriction of the spring hunt in Kalmykia since 2009.
4. Implementation in the Kalmykia schools programme a special course about the rare bird species of Kalmykia.
5. Proposals to implement a strategy of wise use of waterfowl resources for Ministry of Natural Resources of Russia.

### **Acknowledgements**

The implementation of this project was realized with funding from the Norwegian Directorate for Nature Management and with the assistance of Ms. Nina Mikander (UNEP/AEWA Secretariat). We especially wish to thank the following people for their help carrying out the work in Kumo-Manych depression area: the Minister of Natural Resources and Nature Protection of Kalmykia, Vladimir Miroshnitchenko, the deputy minister, Yury Kaminov, the employers of the department of hunting of the Ministry of Natural Resources and Nature Protection of Kalmykia: Anatoly Dardjiev, Bataar Ubushaev, Badma Appaev, Alexander Savkin, Ivan Ulumdjiev and regional rangers Yury Babitchev and Anatoly Naumenko.

The total counts would be impossible without the help of Alexander Nikitin, Alexander Nikitin jr. and the pilot of “Aero Trans Service” Igor Astrakhan.

Special thanks to Ludmila Sarangova for her help in constant publishing of the information about our work in local newsletter “Kalmykia news”.

We would also like to give a special thanks to photographer Garya Lidjiev for his help in the publishing of the flyers, banners and other awareness raising materials.

The advancement of this experience to federal level would have been impossible without the help of the groups of hunting experts: Anton Bersenev, Eugeny Syroetchkovsky, Valery Kuzenkov and Valentin Ilyashenko.

### **References**

- T. Aarvak, V. Vilkov, N. Petkov, S. Rozenfeld, A. Timoshenko 2012. The main results of the monitoring of condition of the habitats and seasonal geese migrations in Northern and North-Western Kazakhstan // Zoological and game management resources in Kazakhstan and adjacent countries. Almaty: 208-213.



## NorthBuyers goose drive trap

Norm R. North, Alice North, Carol Buyers and Gary Buyers

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Flightless geese (*Anser* and *Branta* spp.) are captured using a variety of methods during the moulting period. Often they are captured using a fish-type twine netting or wire attached to metal poles. Injuries to geese may occur in wire and net pens even when one is prudent. Injuries that may occur to the captured geese include abrasion to bills, feathers dislodging, torn toenails, scratched backs and strangulation. Removal of stuck wings and heads may be part of a capture routine when nets are used.

After using a drive trap made of fish-type twine net attached to metal poles for many years, a better material was discovered for the goose banding trap. This improved style of goose trap (Figure 1) to capture temperate breeding Canada geese (*Branta canadensis maxima*) reduced injuries to the birds, and the time to set-up the trap.



Fig. 1. NorthBuyers goose drive trap

The new design is constructed of 2.5 cm x 2.5 cm (1 in x 1 in) khaki coloured plastic privacy lattice (www.dimensionslattice.com). It may be purchased in a thickness of 3.18 mm (1/8 in) in sheets measuring 121 cm x 240 cm (4 ft x 8 ft).

The lattice can be cut using a hand held circular saw or may be cut with snips. It should be cut so there are no open “V” ends (Figures 2 and 3) to catch on other items. It should be low enough to be able to step over the walls, and high enough that the geese to be captured cannot escape – for *B. c. maxima*, between 84 cm to 92 cm (33 in to 36 in).

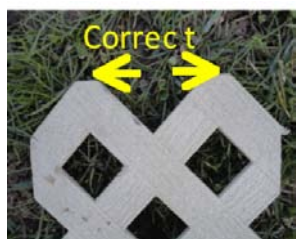


Fig. 2. Correct cut

The trap pen and leads can be made to any size by securing sections with cable ties or other fasteners. Since the pen's material is relatively self-supporting only a few light weight metal poles or other support is required.

These support poles may be woven through the lattice or put through two

small loops (cable ties can be used for loops). The leads should be separate from the pen section and should overlap on the inside of the pen, to keep geese from pushing between the lead and the trap wall. There is no need for heavy hammers and poles. Required poles may be carried in a small bag.

The pen and leads require no ropes, nor staking of the rigid bottom, thereby greatly reducing setup time. The pen's circular design requires no netting, and when separated from the leads allows the geese to move around unencumbered. This diminishes the birds from piling onto one another, reducing feather loss and scratching caused by toenails. Extra pods may be attached to allow easy transfer of geese, thereby allowing banders to work independently, which is useful when additional measurements or sampling are to take place.



Fig. 3. Incorrect cut





Fig. 4. "Full" size pen

can be reduced by using lattice with larger holes for the leads, or by removing some plastic toward the top of the pen. The trap is easily modified to adjust for many circumstances by adding or deleting pieces. The trap walls and captured geese can easily be moved sideways along the ground by slightly lifting the pen. The birds may be moved to a more preferred location; such as to more level ground or under shade, or to reduce the amount of goose droppings in the capture pen as the banding operation progresses.

The trap may either be rolled and tied, or laid flat for transport. Another advantage of the lattice is that it does not accumulate debris from the ground when being disassembled. When capturing geese over a broad range, the trap can be washed and sanitized, as the lattice dries quickly.

The inherent strength of the lattice provides a solid base to cover the pen with a solid top in the event of rain, or to prevent flying birds from escaping.

A self-sorter divider made of the same lattice within the trap allows the adults and small goslings to be separated within the pen with no effort. If the self-sorter is installed with space on bottom then the small goslings go through the opening. If the space is positioned to the top the adults jump over and the goslings remain behind. This feature is especially useful if there is a large catch of larger adults and smaller goslings.

A plastic goose decoy in the centre of the leads, and a removable plastic mirror at the back of the pen to entice the birds to enter the trap may be used, but is not necessary. The mirror must be removed after the geese are entrapped, as they crowd around the mirror. A number of other modifications can easily be made to the design in the field with a minimum amount of tools and effort.

Fewer injuries and no deaths to birds occurred when this trap was utilized. The geese seem less anxious when surrounded by this trap material. They remain calm even if there is a delay in the banding operation due to circumstances, such as blood sampling.

We appreciate the suggestions to potential design modifications that were made by Dr. Karen Shearer, and the students attending Sir Sandford Fleming College, School of Environmental and Natural Resource Sciences in Lindsay, Ontario, Canada.

The authors wish to acknowledge Barbara Campbell for her review and constructive comments on this manuscript.

As the numbers of geese dwindle in the pen, the area can be made smaller by sliding the ends past each other (Figures 4 and 5). We use small hand clamps to secure the top edges and ends.

The lattice does not entangle other equipment as netting does, and may be somewhat safer during helicopter capture operations when the trap material is being transported. Weight



Fig. 5. Reduced pen





## Second announcement on the 15th meeting of the Goose Specialist Group

Vincent Schricke, on behalf of the conference organizers.

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As announced on the website of the Goose Specialist Group, the 15th meeting of the GSG will be held in Arcachon, France, from 8-11 January 2013. This meeting will be hosted by the Palace of Congress of Arcachon – and ideal place for this kind of meeting, very close to the basin and with facilities to watch birds. A range of accommodation is available in the Palace. Many hotels are located close to the Palace.

The main topic of the meeting will concern Brent Geese, a numerous species in the basin of Arcachon (c. 50 000 birds in January).

The meeting will be held over two and a half days (talks, posters, etc.). There will be also a mid-conference excursion by boat (a visit of the basin) and by bus to the ornithological reserve of Teich.



Arcachon is situated on the Atlantic coast, about 60 kilometers south-west of Bordeaux. You can arrive by car, train from Paris to Arcachon and/or flights from Paris as well as from several other European airports directly to Bordeaux (Mérignac airport).

A special conference website will be soon established which can be accessed by following a link from the ONCFS website (<http://www.oncfs.gouv.fr>) and the GSG website ([www.geese.org/gsg/](http://www.geese.org/gsg/)). Conference costs as well as registration form for booking can be found on the same website.

Please check from the beginning of September 2011 the above websites regularly for any news, announcements, informations and such like.



## The International Waterbird Census (IWC)

Johan H. Mooij, Chair of the the African-Eurasian Waterbird Monitoring Partnership

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The International Waterbird Census (IWC) and associated waterbird monitoring activities operated by Wetlands International is one of the oldest international monitoring schemes and has produced one of the most extensive time-series datasets known.

After the middle of the 19<sup>th</sup> century, waterbird numbers decreased dramatically in the Northern Hemisphere. In order to collect reliable data about population sizes and trends for waterbirds systematic waterbird counts were initiated in a number of states during the 1930s. In 1963 these national counts started to be co-ordinated at an international level as IWC by Wetlands International and its antecessors.

Based on these long-term data regular estimations of population sizes and trends of most waterbird species have been produced and published. The global Waterbird Population Estimates publication and the AEWA Conservation Status Report are widely recognised sources of policy relevant information about trends and population sizes of waterbirds and used for the conservation of wetlands and waterbird populations.

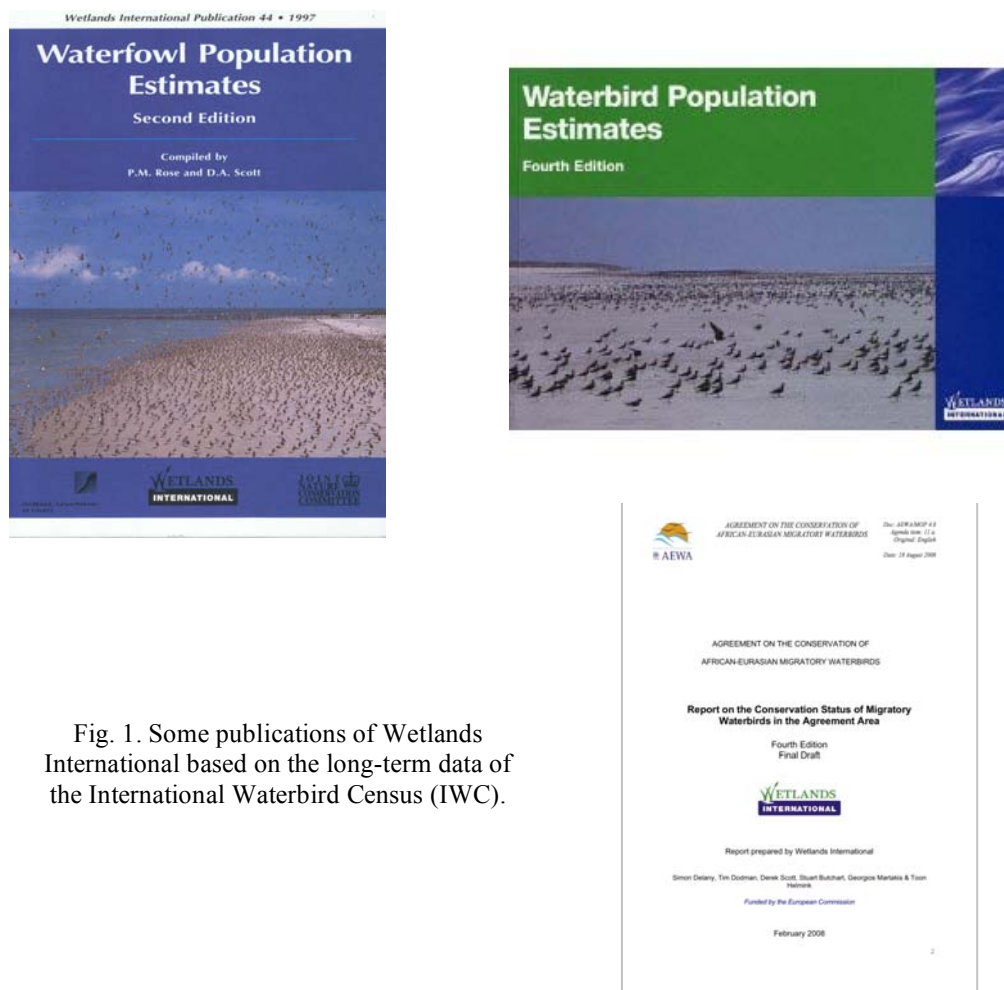


Fig. 1. Some publications of Wetlands International based on the long-term data of the International Waterbird Census (IWC).

During its long history the number of countries participating in IWC as well as the quality of the counts has grown considerably, but sometimes data flow seems to become more and more viscous.

For the goose counts, a very effective tool to re-liquefy data flow, proved to be regularly producing a table of all countries participating in the counts in the GSG Goose Bulletin, showing the status of the data supply for each country.

With this issue of the GSG Goose Bulletin, we revive this nice tradition and hope it will be as successful as it was in the 1990s. In the following table you can see the status of the data flow for IWC on the 31 March 2012.

Tab. 1. Status of data flow for the International Waterbird Census 31<sup>st</sup> of March 2012.

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ALBANIA	X	X	X		X								
ALGERIA										X	X		
ARMENIA				X	X	X	X	X					
AUSTRIA	X	X	X	X	X	X	X	X	X	X	X	X	X
AZERBAIJAN	X		X	X	X	X			X	X	X	X	
BELARUS	X			X					X	X	X		
BELGIUM	X	X	X	X	X	X	X	X	X				
BOSNIA	X	X	X	X		X	X		X	X	X	X	
BULGARIA	X	X		X	X	X	X						
CROATIA		X	X	X						X	X	X	
CYPRUS	X	X	X	X	X	X	X	X	X	X	X	X	
CZECH	X	X	X	X	X	X	X	X	X	X			
DENMARK	X	X	X	X	X	X	X	X	X	X			
ESTONIA	X	X	X	X	X	X	X		X	X	X	X	
FINLAND	X	X	X	X	X	X	X	X	X	X			
FRANCE	X	X	X	X	X	X	X	X	X	X	X		
GEORGIA				X									
GERMANY	X	X	X	X	X	X	X	X	X	X			
GREECE	X	X			X	X	X						
HUNGARY	X	X	X	X	X	X	X	X					
IRELAND	X	X	X	X	X	X	X	X	X	X	X		
ITALY	X	X	X	X	X	X	X						
KAZAKHSTAN				X	X	X				X	X		
KYRGYZSTAN			X	X	X	X							
LATVIA	X	X	X	X	X	X	X						
LITHUANIA	X	X											
MACEDONIA	X	X	X		X	X	X				X	X	
MONTENEGRO	X			X	X	X	X	X	X	X	X	X	X
NETHERLANDS	X	X	X	X	X	X	X	X	X	X			
NORWAY	X	X	X	X	X	X	X	X	X	X			
POLAND	X	X	X	X	X	X							
PORTUGAL	X	X	X			X	X						
ROMANIA	X	X	X	X	X	X	X	X	X	X			
RUSSIAN FEDERATION	X	X	X	X	X	X	X	X	X		X		
SERBIA	X	X		X	X	X	X	X	X				
SLOVAKIA	X	X	X	X	X	X							
SLOVENIA	X	X	X	X	X	X	X	X	X	X	X	X	
SPAIN	X	X	X	X	X	X	X	X	X	X			
SWEDEN	X	X	X	X	X	X	X	X	X	X	X	X	
SWITZERLAND	X	X	X	X	X	X	X	X	X	X			
SYRIA											X		
TAJIKISTAN				X	X	X	X						
TUNISIA			X	X			X	X	X	X			
TURKEY							X	X	X				
TURKMENISTAN	X			X	X	X	X	X	X				
UKRAINE	X	X	X	X	X		X						
UNITED KINGDOM	X	X	X	X	X	X	X	X	X	X			
UZBEKISTAN				X	X	X			X	X	X	X	X



## New Publications 2010/2011/2012

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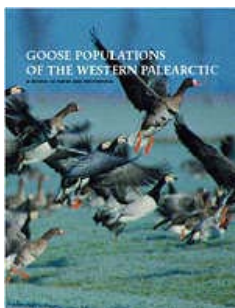


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## Literature



The Goose Specialist Group made an impressive compilation (edited by Jesper Madsen, Tony Fox & Gill Cracknell) of our knowledge on the status and distribution of the goose populations of the western palearctic. This book is not for sale anymore, but a digital copy can be downloaded for free from:

[http://issuu.com/jesper\\_madsen/docs/goosepopulationswestpalearctic](http://issuu.com/jesper_madsen/docs/goosepopulationswestpalearctic)

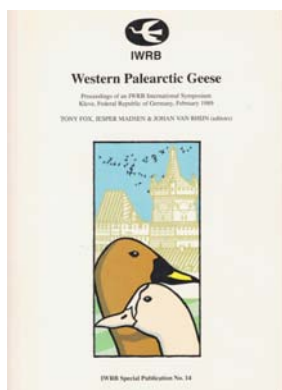
or from

[http://bios.au.dk/en/knowledge-exchange/about-our-research-topics/animals-and-plants/mammals-and-birds/goose-populations-of-the-](http://bios.au.dk/en/knowledge-exchange/about-our-research-topics/animals-and-plants/mammals-and-birds/goose-populations-of-the-western-palearctic/)

[western-palearctic/](http://bios.au.dk/en/knowledge-exchange/about-our-research-topics/animals-and-plants/mammals-and-birds/goose-populations-of-the-western-palearctic/)

The latest editions of the Wildfowl journal are now also available online, for free, at <http://www.wwt.org.uk/what-we-do/publications/wildfowl/archive/wildfowl-issue-61/>.

A few printed issues of the Proceedings of previous Goose Meetings are still available:



Proceedings Goose Meeting 1989  
(Kleve, Germany)

Interested? Please contact:  
[johan.mooij@bskw.de](mailto:johan.mooij@bskw.de)



Proceedings Goose 2007  
(Xanten, Germany)

Interested? Please contact:  
[johan.mooij@bskw.de](mailto:johan.mooij@bskw.de)



Proceedings Goose 2009  
(Höllviken, Sweden)

Interested? Please contact:  
[leif.nilsson@zooekol.lu.se](mailto:leif.nilsson@zooekol.lu.se)



**Call for help:**

As discussed during the Höllviken meeting we invite all goose researchers to send their publications to our data bank of geese literature. Not only international but also local publications (including those in languages other than English) are most welcome.

Please send your publications, preferably as a pdf file, to Fred Cottaar: [fred.cottaar@tiscali.nl](mailto:fred.cottaar@tiscali.nl)

The Goose Specialist Group still does not have a logo. During the Steinkjer Meeting several drafts of possible logos were shown to the participants by Berend Voslamber. Because none of these draft logos generated an immediate enthusiastic response by the participants, it was decided not to choose one of the presented examples, but to send ideas and comments on these drafts to Berend ([berend.voslamber@sovon.nl](mailto:berend.voslamber@sovon.nl)) and to finally involve all GSG-members (660 by now) in selecting an appropriate logo.

So if you have an idea for a GSG-logo, please send it to Berend Voslamber: [berend.voslamber@sovon.nl](mailto:berend.voslamber@sovon.nl)



**Instructions to authors**

The Goose Bulletin accepts all manuscripts dealing with goose ecology, goose research and goose protection in the broadest sense as well as Goose Specialist Group items.

All manuscripts should be submitted in English language and in electronic form. Text files should be submitted in “.doc”-format, Font “Times New Roman 12 point”, tables and graphs in “.xls”-format and pictures in good quality and “.jpg”-format.

Species names should be written with capitals as follows: Greylag Goose, Greenland White-fronted Goose etc. Follow an appropriate authority for common names (e.g. Checklist of Birds of the Western Palearctic). Give the (scientific) Latin name in full, in *italics*, at first mention in the main text, not separated by brackets.

Numbers - less than ten use words e.g. (one, two three etc) greater than 10, use numbers with blank for numbers over 1 000.

In case of doubt please look at the last issue of the Goose Bulletin.



