



**CONVENTION ON
MIGRATORY
SPECIES**

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**CONSERVATION BREEDING PROGRAMME FOR THE CRITICALLY
ENDANGERED SPOON-BILLED SANDPIPER**

**PROGRESS REPORT SUBMITTED BY THE
WILDFOWL AND WETLANDS TRUST (WWT)**

CONSERVATION BREEDING PROGRAMME FOR THE CRITICALLY ENDANGERED SPOON-BILLED SANDPIPER

PROGRESS REPORT TO THE UNITED NATIONS ENVIRONMENT PROGRAMME/ CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS (UNEP/CMS)

BACKGROUND

The Spoon-billed Sandpiper *Eurynorhynchus pygmeus* is one of the most threatened birds on the planet. It breeds on the Chukotsk and Kamchatka peninsulas in the Russian Far East, migrates through Russia, Japan, North Korea, South Korea and China to winter in Bangladesh, Myanmar and Thailand, 8,000km from its breeding grounds.



Spoon-billed Sandpiper.

Its IUCN threat status was upgraded from Vulnerable to Endangered in 2004 and to Critically Endangered in 2008. The species has declined from an estimated 2,000-2,800 breeding pairs in the 1970s to 1,000 pairs in 2000 to less than 100 pairs in 2011, and in recent years the population has been declining at 26% per year. If this trend continues, the population could be extinct in 5-10 years.

Studies on the breeding grounds have shown that adult survival (76% p.a.) and productivity (about 0.6 young fledge per pair annually) are within the bounds of what would be expected for a small arctic-breeding wader species, but the proportion of fledged birds that return to breed is very low (0.05 birds recruited per adult per year). That is, the current population decline seems to be driven by very high mortality of young birds.

While the species long-term decline is thought to have been caused mainly by reclamation of inter-tidal staging sites in the Yellow Sea, trapping on the wintering grounds may be a key reason for the recent acceleration in the rate of decline. Young birds remain on their non-breeding grounds for their first two years, and are therefore likely to be more susceptible to trapping.

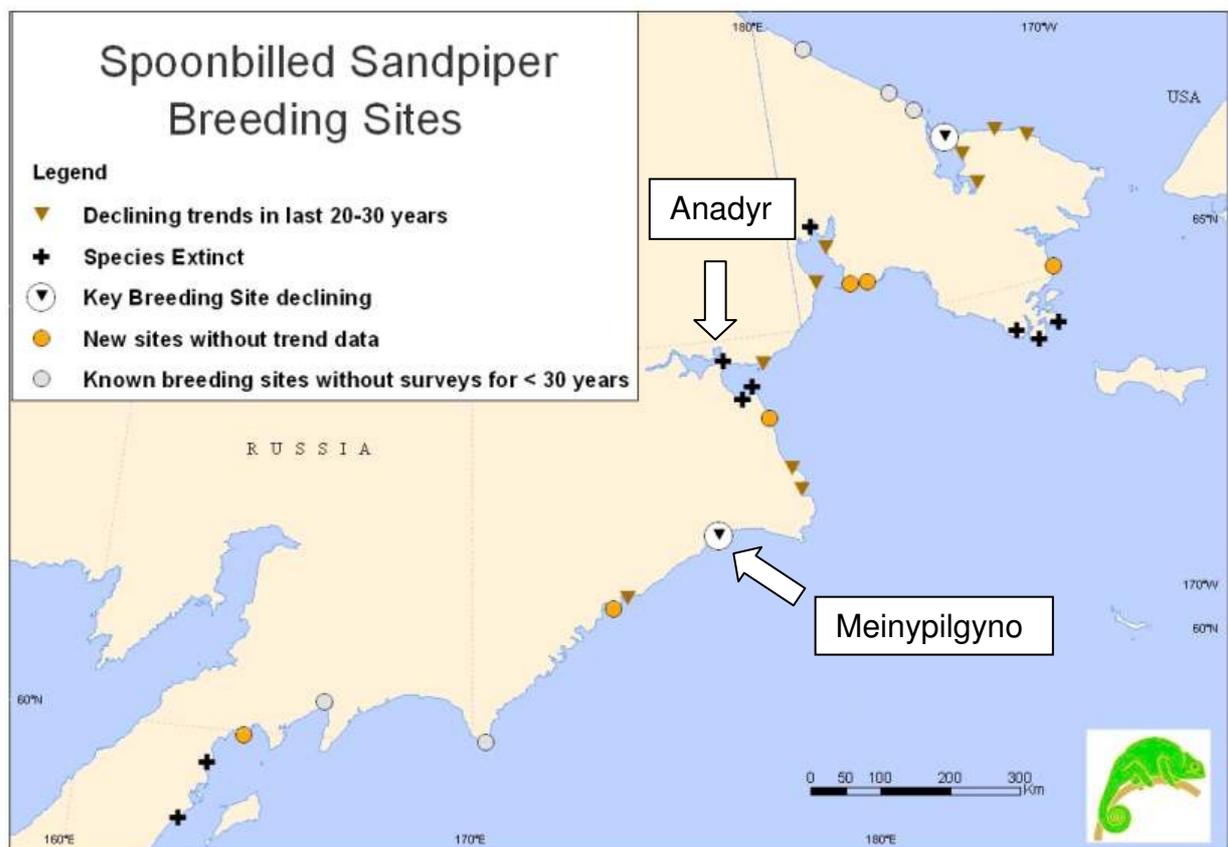
Good progress is being made to address this trapping mortality, by providing alternative livelihoods to bird trappers who, in return, sign agreements to cease hunting. However, population modelling work has shown that *if* the cause of the recent decline has been correctly identified and is indeed winter trapping, *and* this can be addressed rapidly and effectively (with a halving of winter mortality every five years from 2011) the population will still be at an extremely low level and highly vulnerable to extinction from stochastic effects for more than a decade. As there are no Spoon-billed Sandpipers in captivity, there is no safety net against extinction in the wild.

A conservation breeding programme is urgently needed, either to augment the wild population with captive-reared juveniles to ‘buy time’ for conservation action to take effect before the wild population is lost or, if the worst happens and the wild population is lost, to provide birds for reintroduction. Population modelling using the estimated population size and information available on adult survival, productivity and recruitment indicated that taking eggs for conservation breeding would have a negligible effect on the wild population.

Since 2010, WWT has been working with Birds Russia, Moscow Zoo, RSPB, BTO, BirdLife International, the Birdlife Asian Partnership, ArcCona, the Spoon-billed Sandpiper Task Force, the East Asian - Australasian Flyway Partnership and the Convention on Migratory Species to plan such a conservation breeding programme.

THE 2011 CONSERVATION BREEDING EXPEDITION TO CHOKOTKA

The 2011 expedition to Chukotka, which aimed to establish a captive breeding population of Spoon-billed Sandpiper at WWT Slimbridge, was organised and conducted by WWT and Birds Russia. After determining that the expedition was logistically and financially possible in January 2011, there followed an incredible amount of work to plan the expedition, employ staff, arrange contracts, apply for work permits and state and national Russian Government permits for egg extraction and bird export, purchase and ship equipment and staff to Moscow, Anadyr, and ultimately to the Spoon-billed Sandpiper breeding site at Meinypilgyno.



Location of Anadyr and Meinypilgyno, Chukotka.

The UK team flew to Moscow on 14 May and, with Russian colleagues, arrived in Anadyr on 16 May. After two weeks in Anadyr waiting for equipment to arrive and for suitable conditions for the helicopter to fly, they arrived in Meinypilgyno with a tonne of equipment on 27 May.



Meinypilgyno.



Meinypilgyno.

The team established their base camp in a rented cottage then spent two days cleaning, disinfecting and setting up equipment before the search for birds began.



Base Camp.



Martin McGill cleaning the house in which the Spoon-billed Sandpiper eggs will be incubated.

The search area was about 100 square miles – with nine team members walking about 10 miles each day. The first bird - a singing male - was heard and seen on 2 June. Over the next few days, more males were located on territories. After a male was located the nest searching team backed off and re-visited two days later to check whether males were paired. Usually they were and copulation was even observed.



Male Spoon-billed Sandpiper on territory.

Early hopes were dashed when meltwater flooded out the earliest territories, and on 16 June, the team again started looking for nests in locations where paired birds had been observed. However the first nest they came across had been predated, along with the nesting female.



Predated nesting female Spoon-billed Sandpiper.



Incubating female Spoon-billed Sandpiper.

However, fortunes changed with the first eggs were collected on 19 June and the last on 3 July giving a total of 20, ranging from 0-1 days to 18 days incubated.



The first clutch of Spoon-billed Sandpiper eggs.

Eggs were collected from the field and artificially incubated.



Collecting the last clutch of Spoon-billed Sandpiper eggs.



Placing Spoon-billed Sandpiper eggs in an incubator.

The first clutch hatched on 5 July and the second two days later.



The first ever Spoon-billed Sandpiper to be hatched in captivity.



The same chick one day later.

The team were transported from Meinypilgyno to Anadyr on the “Spirit of Enderby” courtesy of the Heritage Expeditions tour company.



The Spirit of Enderby.

The eight chicks and 12 eggs were moved onto the boat on 7 July to travel to Anadyr where the chicks would be reared before being flown to Moscow. On the journey a further nine eggs hatched.



Eggs and chicks aboard the Spirit of Enderby.



Spoon-billed Sandpiper chicks aboard the Spirit of Enderby.

The 17 chicks and three eggs arrived in Anadyr on 10 July where they were reared in a bedsit by WWT's Roland Digby and Liz Brown, a wader breeding expert from the New Zealand Department of Conservation.



Rearing chicks in a bedsit in Anadyr.

One egg failed to hatch and two chicks died without feeding. At 5-10 days old the 17 chicks were transferred to a rearing facility on the tundra next to an ex-army base.



Spoon-billed Sandpiper rearing facility in Anadyr.



Fledged juvenile Spoon-billed Sandpiper in Anadyr.

Unfortunately one full grown chick died on 9 August and the remaining 16 chicks were transported to Moscow Zoo on 18 August where they underwent a period of quarantine. Two chicks died in quarantine. The remaining 14 chicks were flown to the UK on 13 October.



Quarantine facility in Moscow Zoo.



Juvenile Spoon-billed Sandpipers in quarantine at Moscow Zoo.

WINTER ACCOMMODATION AT SLIMBRIDGE

After a further period of quarantine, the Spoon-billed Sandpipers will be moved into new purpose built winter accommodation at Slimbridge.



Spoon-billed Sandpiper winter accommodation under construction at Slimbridge.

MEET THE TEAM



Martin McGill (WWT), Jochen Dierschke (biologist and volunteer) and Simon Buckell (wader enthusiast and volunteer).



Lisa Tambovtseva (Project coordinator - Birds Russia).





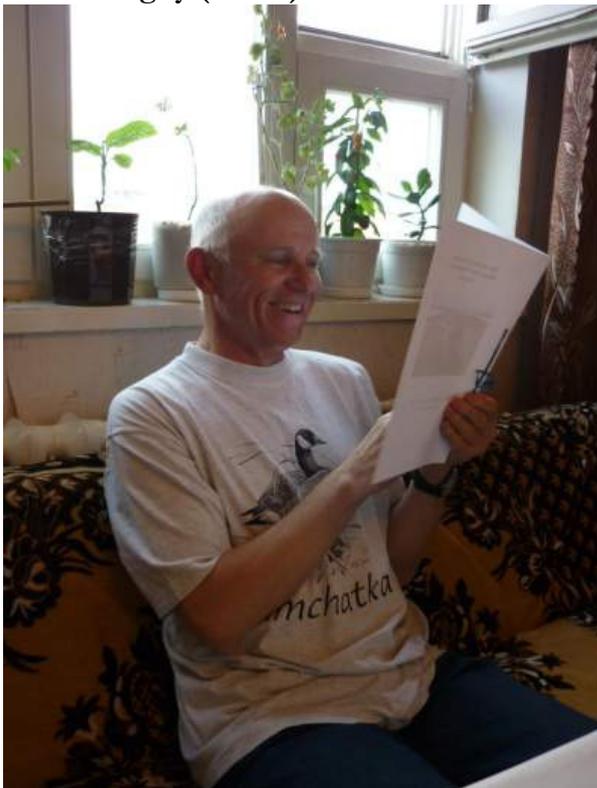
Nigel Jarrett (WWT) & Nicolay Yakoshev (Nest search team leader).



Liz Brown (New Zealand Department of Conservation).



Roland Digby (WWT).



Pavel Tomkovich (Head of Ornithology, Moscow State University).



Egor Loktionov (biologist and volunteer).



Gerritt Vyn (photographer / film maker from Cornell University).



Sveta Belogorodceva and her grandchildren (accommodation, food, washing, storage, ATV transport, chair of local Spoon-billed Sandpiper Friends Club).

FUTURE PLANS

Another expedition will be mounted to Chukotka in 2012 to collect eggs and export chicks to the UK to complete the captive breeding population.

In summer 2012, outdoor breeding aviaries will be constructed in time to settle the birds into them before they are first due to breed in summer 2013.

ACKNOWLEDGEMENTS

The Spoon-billed Sandpiper conservation breeding programme is a collaboration between WWT, Birds Russia, Moscow Zoo and the RSPB working with colleagues from the BTO, BirdLife International, ArcCona and the Spoon-billed Sandpiper Task Force.

The project is funded by WWT and RSPB, with additional financial contributions and support from BirdLife International, the East-Asian Australasian Flyway Partnership, the Convention on Migratory Species, Heritage Expeditions, the Australasian Wader Study Group of Birds Australia, the BBC Wildlife Fund, the Mileage Company and many generous individuals.