

CONSERVATION OF THE CRITICALLY ENDANGERED EASTERN SUBPOPULATION OF DALMATIAN PELICANS IN WESTERN MONGOLIA

Report to the Rufford Small Grant Committee

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Introduction

The Depression of the Great Lakes (Great Lakes Basin) in western Mongolia belongs to the Central Asian Internal Drainage System and some of the largest lakes of the country are situated here. The extensive reed beds *Phragmites communis* of the basin represent some of the finest examples of this habitat remaining in Central Asia.

Khar Us, Khar and Dorgon Lakes, located in Khar Us Lake National Park (KUNNP) in the Depression of the Great Lakes, are highly important places for the nesting and summering of many wetland bird species including Dalmatian pelican. Besides that, a large number of birds use these lakes during spring and autumn migration.

2005 was an important year for the Dalmatian pelican conservation project which is a new initiative for the conservation of the critically endangered eastern subpopulation of Dalmatian Pelican *Pelicanus crispus*, in Mongolia. This species is the largest of the eight pelican species known in the world.



Figure 1. Pelican nesting in Airag Lake in 1998

Until 1960s and 1970s, Dalmatian pelicans were rather common with several hundred breeding pairs in large lakes and wetland areas of western Mongolia. Since early 1970s the population started to decline mostly because of habitat degradation and shooting. In 1999 the last big number consisted of 31 birds (24 adults and 7 young) was recorded at Airag Lake, which is the one of the two known breeding sites in the Great Lakes Basin in western Mongolia. Since then no one has seen such a big flock in Mongolia. However, some 26 pelicans including some young were observed in Minjiang River Estuary of China in spring of 2004. It is possible that these birds might be the same birds seen at Airag Lake or at least it is likely the birds that summer and breed in Mongolia. The closest

breeding birds from Mongolia are found in eastern Kazakhstan. But still there is no proven evidence that shows the birds from these areas do mix.



Figure 2. Khar Us Lake National Park, an important bird area in Mongolia

At present, the eastern subpopulation is estimated to be with less than 130 pelicans that breed only in western Mongolia and winter in south-eastern China. The species is seriously in danger of habitat degradation and human impacts. The overall aim of the proposed research and conservation program for the Dalmatian pelicans in western Mongolia is to ensure the survival of the species through protecting the pelican habitats and the lake ecosystem with rich waterbird communities and nationally and internationally important site for migratory birds.

The objectives of the project were to understand the role and consequences of changes occurring in wetland ecosystem, human use, demography and socio-economic transitions on Dalmatian pelicans and their wetland use; and to develop a mechanism to safeguard the Dalmatian pelican and fish habitats in western Mongolian wetlands where pelicans breed. The proposed program consists of three phases.

The following is the activities plan of the pelican conservation program.

- Phase I focuses on collecting basic information (species status, ecology, and socioeconomic influences, etc) that is useful to determine future research and conservation needs.
- Phase II focuses on understanding of the breeding habitat, feeding ecology, migration, impact of livestock and Muskrat on wetland system, etc. At the end of the phase, we will determine essential management and monitoring activities for the species based on the research results from phases I and II. Some timely imperative actions will be started.
- Phase III will be the critical period to initiate high priority management actions and continue population monitoring.

Outputs

Survey results

We conducted a survey in July-August 2005 with the aim of finding the present number and breeding locations of Dalmatian pelicans in western Mongolian lakes. Wildlife biologists from Wildlife Science and Conservation Center and National University of Mongolia, Mongolian Academy of Sciences, and Khar Us Lake National Park participated in the survey. Team spent nearly two weeks in the field searching nearly all known historical breeding and roosting sites for pelicans. For the period of survey, we did see a total of 14 pelicans at the southern part of Khar Us Lake. Also, during the survey, we learnt many important ecological and socio-economic aspects associated with Dalmatian Pelicans and their habitat.

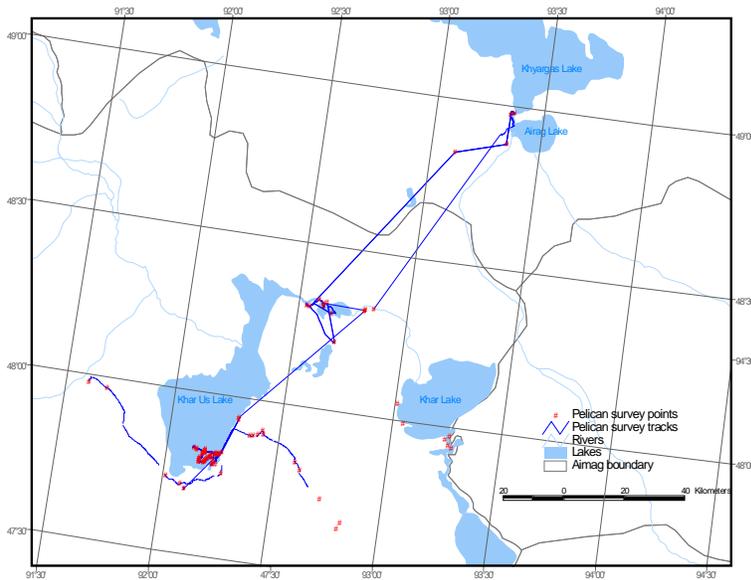


Figure 3. Dalmatian pelican survey route in August-September

At the end of August, we surveyed again the southern part of Khar Us Lake for pelicans. This time our objective was to replicate the survey to verify the number and location of the pelicans that recorded earlier August and search for other pelicans. We saw 14 pelicans again in same and nearby places observed early August. Our findings showed that there were at least 14 pelicans in the southern tip of Khar Us Lake. Although some birds may have been missed in other areas, a dangerously low number of pelicans suggests that this subpopulation is at the critical period of disappearance from wild.

In January 2006, we went to the pelican area in winter when lake was frozen. This time our objective was to have a better understanding on the livestock impacts to the last pelican habitats. We visited 113 herder families and recorded over 22000 livestock consisted of goats, sheep, cows, camels, and horses of three soums¹. We saw extensive nest site destruction and reed bed depletion by cows, camels, horses, and fishermen. Until 1970s, there was almost no livestock grazing problems in Tsagaan Gol area in the southern and Nariin Gol area in the north western part of the Khar Us Lake. We talked to herders about what impacts might have their livestock to the pelican habitats. Many of them say “they don’t know”. Some herders say, “fire is accidentally set into reed by herders and

¹ counties

fishermen”. According to Khar Us Lake administration, the frequency of reed fire is increasing year by year although the fire affected area is relatively small.



Figure 4. Pelican nest islands

According to soum governor, herders start leaving the lake shores around April 15th. Some herders stay till June 1-10th. In summer, most herders and animals are gone occasionally less than 20-30 livestock stay for summer months. In the fall, herders move down into lake and islands from mountains around August 15-20th at that time when mosquitoes and other bugs disappear. At first, herder families start settling along lake shore. In winter, Chandmani, Mankhan, Buynt, Jargalant soum. Jargalant soum has highest number of livestock and herder families.

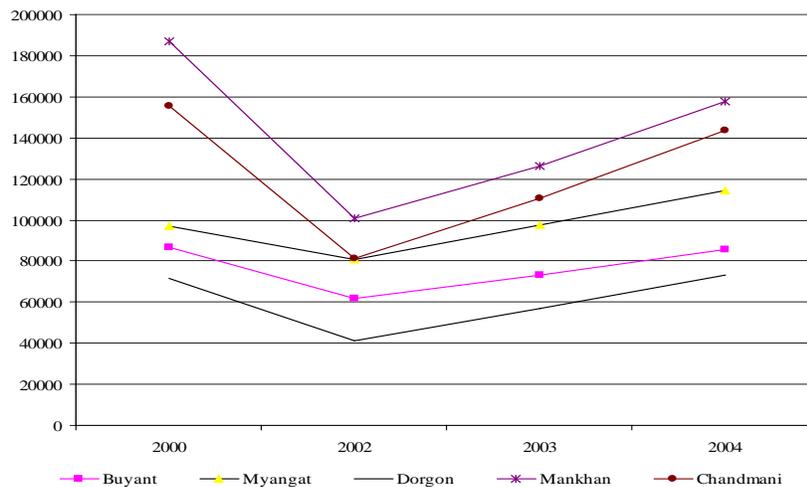


Figure 5. Recent livestock number change in counties attached to Khar Us Lake NP

During our visit to pelican habitat in winter we saw how livestock depletes islands used by pelicans in summer. Especially, cattle, camel, and horses were most destructive because of their large size. Mandal Island, where we saw some pelicans roosting in August, was full of cattle and horse dung and foot marks. There was vehicle footprints all over on an island in Nariin gol. We saw 3 pelicans roosting on this island. Therefore, the protection of islands seems to be very important. Two artificial nesting platforms for pelicans have been built in vwith the support from WWF Mongolia and the French Takhi Re-introduction projects in January 2006.



Figure 6. Rich herder man with full of accessories including a pelican beak scrapper

Uncontrolled fishing has become a major threat to the lake ecosystem. WWF sponsored a fishery survey to Khar Us Lake and the result showed that there was 19% decrease in fish stock. The reason of this drop might be due to large scale uncontrolled harvest in winter and fish habitat destruction by drag nets used by fishermen. Also, there was a significant change in location and distribution of fish in the lake system. We believe such changes in number and location of fish may have impacted the Dalmatian pelicans. Therefore, fishery management and law enforcement control are very important.

Shooting pelicans for beak still exists in Mongolia. The nomads use the upper mandible of pelican beaks to groom their horses because they believe that using the pelican beak makes their animals stronger and faster. This belief led to increased hunting of pelicans by nomad herdsman. According to Khar Us Lake NP ranger only one case of pelican shooting was recorded by law enforcement officers last year. Unfortunately, most shooting occurs in hidden ways. One pelican beak was traded with 10 horses and 30 sheep at the black market in Mongolia. This price is much higher than 10 years ago. Now pelican number is low, therefore the demand for pelican beak will likely increase.



Figure 7. Horse scrapper made with pelican beak

Shooting affects population number, disturbance during incubation, high adult mortality rate because breeding age birds are killed, young birds are shot as well, disturbance during foraging and migration, and forces pelicans to shift breeding locations. Therefore, strong law enforcement, habitat protection is needed.

Public awareness

We published a poster on conservation of Dalmatian Pelican. This poster was printed in two languages, Mongolian and English. These posters have been distributed to individuals, local administrations, and conservation groups etc. Over 300 copies were sent to local nomad families. Over 200 posters have been distributed to individuals and organizations in capitol cities of 19 provinces and in Ulaanbaatar, the capitol of Mongolia. Over 100 were sent aboard to international organizations and individuals whose have interest in Dalmatian pelican conservation. Especially, we sent many posters to Hong Kong and China from where we receive the observational records of Dalmatian pelicans in winter. Khar Us Lake National Park administration was responsible in distributing the poster in local communities in western Mongolia.

We published a newsletter article on Dalmatian pelicans in *Onoodoriinn Mongol* newspaper on February 2006. The article described the Dalmatian pelican ecology, migratory behavior, and their role in the ecosystem, and its conservation needs. Recently, we have received feedback from two provincial environmental protection agencies. They sent us letters that discussed various problems facing the waterbirds and other animals and the importance of cooperation for conservation in the future.



Figure 8. Poster and daily newsletter article on Dalmatian pelican

Conclusion

In 2005, we successfully started the project with the funding and support from Oriental Bird Club and Rufford Maurice Laing Foundation. Our project focal site was Khar Us Lake National Park, one of the Important Bird Areas (IBA) in Mongolia as designated by BirdLife International. Based on this year's activities, we have learned that the habitat disturbance by nomad herders and fishermen and shooting by herders for the beak are the most crucial threats to the species over other problems. But the frequency, intensity, and impact of habitat degradation is not known in detail. According to opinions of various people, over 90% of the pelican population drop was due to hunting pressure.

We discussed with the Policy Management and Implementing Agency of the Ministry of Nature and Environment (MNE) of Mongolia about halting the use of pelican beaks and snow leopard pelts in

Mongolia. We agreed to conduct a nationwide census of pelican beak and snow leopard pelts that already in hands of herders at first. Then start to mark and issue passports to the beak and pelt holders. After that obtaining new beak and pelts will be regarded as illegal and poached. Thus no one should try to own new beak and pelts, if someone intend do so they will face some strict legal measures. At present, we need money to carry out the census nationwide and hire lawyers to make a law amendment proposal that would legalize the ownership of those two items in Mongolia.

Furthermore, it is important to determine the migration route(s) and stop-over sites from the breeding area to the wintering ground(s) and return. Also, we need to determine if the pelicans breeding in Mongolia form a discrete population that winter entirely in eastern China.



Figure 9. Herder using pelican beak scrapper

Appendix I. List of other species observed during surveys

<i>Gavia arctica</i>	<i>Fulica atra</i>	<i>Syrhaptes paradoxus</i>
<i>Podiceps cristatus</i>	<i>Anthropoides virgo</i>	<i>Apus apus</i>
<i>Podiceps nigricollis</i>	<i>Himantopus himantopus</i>	<i>Upupa epops</i>
<i>Phalacrocorax carbo</i>	<i>Recurvirostra avoetta</i>	<i>Calandrella cheleensis</i>
<i>Botaurus stellaris</i>	<i>Charadrius dubius</i>	<i>Eremophila alpestris</i>
<i>Ixobrychus minutus</i>	<i>Charadrius alexandrinus</i>	<i>Riparia riparia</i>
<i>Egretta alba</i>	<i>Charadrius leschenaultii</i>	<i>Hirundo rustica</i>
<i>Ardea cinerea</i>	<i>Vanellus vanellus</i>	<i>Anthus godlewskii</i>
<i>Ciconia nigra</i>	<i>Arenaria interpres</i>	<i>Anthus campestris</i>
<i>Platalea leucorodia</i>	<i>Calidris temminckii</i>	<i>Motacilla alba</i> ^o
<i>Cygnus cygnus</i>	<i>Calidris minuta</i>	<i>Motacilla flava</i>
<i>Anser anser</i>	<i>Calidris subminuta</i>	<i>Motacilla citreola</i>
<i>Anser indicus</i>	<i>Limosa limosa</i>	<i>Luscinia svecica</i>
<i>Tadorna tadorna</i>	<i>Tringa totanus</i>	<i>Oenanthe oenanthe</i>
<i>Tadorna ferruginea</i>	<i>Tringa erythropus</i>	<i>Oenanthe isabellina</i>
<i>Anas chapeata</i>	<i>Tringa nebularia</i>	<i>Oenanthe deserti</i>
<i>Anas platyrhynchos</i>	<i>Tringa glareola</i>	<i>Locustella luscinioides</i>
<i>Anas querquedula</i>	<i>Tringa ochropus</i>	<i>Acrocephalus agricola</i>
<i>Anas strepera</i>	<i>Tringa stagnatilis</i>	<i>Acrocephalus arundinaceus</i>
<i>Anas acuta</i>	<i>Actitis hypoleucos</i>	<i>Hippolais caligata</i>
<i>Anas crecca</i>	<i>Xenus cinereus</i>	<i>Sylvia communis</i>
<i>Netta rufina</i>	<i>Limnodromus semipalmatus</i>	<i>Sylvia curruca</i> ^o
<i>Aythya ferina</i>	<i>Gallinago stenura</i>	<i>Sylvia nana</i>
<i>Aythya fuligula</i>	<i>Gallinago gallinago</i>	<i>Phylloscopus borealis</i>
<i>Milvus migrans linneatus</i>	<i>Phalaropus lobatus</i>	<i>Muscicapa striata</i>
<i>Aegypius monachus</i>	<i>Larus ridibundus</i>	<i>Panurus biarmicus</i>
<i>Circus aeruginosus</i>	<i>Larus relictus</i>	<i>Lanius isabellinus</i>
<i>Buteo buteo</i>	<i>Larus Ichthyaetus</i>	<i>Corvus corone</i>
<i>Buteo hemilasius</i>	<i>Larus cachinnans mongolicus</i> ^o	<i>Corvus corax</i>
<i>Haliaeetus albicilla</i>	<i>Gelochelidon nilotica</i>	<i>Podoces hendersoni</i>
<i>Haliaeetus leucoryphus</i>	<i>Sterna hirundo</i>	<i>Passer domesticus</i>
<i>Aquila nipalensis</i>	<i>Sterna albifrons</i>	<i>Passer montanus</i>
<i>Falco tinnunculus</i>	<i>Sterna caspia</i>	<i>Emberiza aureola</i>
<i>Falco naumanni</i>	<i>Chlidonias niger</i>	<i>Emberiza schoeniclus</i>
<i>Falco cherrug</i>	<i>Chlidonias leucopterus</i>	