

THE FLUCTUATION OF BREEDING NUMBERS OF RELICT GULL *Larus relictus* ON LAKE ALAKOL (SE KAZAKHSTAN): A REVIEW OF SURVEYS FROM 1968 TO 2001

Nihanja v številu gnezdečih reliktnih galebov *Larus relictus* na jezeru Alakol (JV Kazahstan): pregled popisov, opravljenih med letoma 1968 in 2001

BORUT RUBINIČ¹ & NIKOLAJ NIKOLAJEVIČ BEREZOVNIKOV²

¹Institute for bird research and nature protection Ornis balcanica, Pražakova 11, SI-1000 Ljubljana, Slovenia, e-mail: rubinic@siol.net

²Institute of Zoology in Kazakhstan, Alma-Ata, Kazakhstan, e-mail: instzoo@nursat.kz

Relict Gull *Larus relictus* (Colour appendix – Figure 1) is a globally threatened species, and is listed in Appendix I of the Bonn Convention and Appendix I of CITES (BIRDLIFE INTERNATIONAL 2001). It was first described as a subspecies of Mediterranean Gull *Larus melanocephalus relictus*, and was considered as an aberrant form of Brown-headed Gull *L. brunnicephalus*, or as a hybrid between the Great Black-headed *L. ichthyæetus* and the Brown-headed Gull (IL'IČEV & ZUBAKIN 1988). Relict Gull was described as a separate species as late as 1970, after the discovery of a monospecific breeding colony on an island in lake Alakol in SE Kazakhstan (IL'IČEV & ZUBAKIN 1988, DEL HOYO *et al.* 1996; Figure 1).

The species breeds very locally in dense colonies on inland steppe lakes of Central Asia in Mongolia, Kazakhstan, Russia and China. Its population numbers are considered to be small and in constant decline as a result of low breeding success caused by storms, predation and human disturbance at nesting sites (IL'IČEV & ZUBAKIN 1988, AUEZOV 1991, DEL HOYO *et al.* 1996, BEREZOVNIKOV 2001).

The world population is estimated at 12000 individuals, but numbers of breeding pairs are considered to be much lower since Relict Gulls reach sexual maturity in their third year, later than other similar size gull species (ROSE & SCOTT 1997). In its only Russian colony at the Torey lakes, the population varies from 0 to 1215 pairs; in China, in two colonies on the Ordos plateau, up to 2000 pairs were counted, while in Mongolia, where the species is known or suspected to breed on several lakes, detailed data are lacking (ROSE & SCOTT 1997).

In Kazakhstan, the breeding population of Relict Gull on its only regularly used nesting site at the saline steppe lake Alakol (SE Kazakhstan) has varied from 0 to 1200 pairs (Figure 2). In addition, one pair bred on the eastern shores of lake Balkhash in 1984 (IL'IČEV & ZUBAKIN 1988; Figure 1). During the period 1968 - 1989, the numbers breeding on lake Alakol were monitored annually (Figure 2). During the 1990s, the colony was visited only occasionally, and information on breeding numbers is lacking (AUEZOV 1991, BEREZOVNIKOV 2001). Gulls nested at lake Alakol at two main sites, on the small island of Srednyj (Figure 3), 42 km from the accessible western shore at 46°07'N, 81°51'E, where the species was first discovered in 1968, and on an island belonging to a group of smaller islands 100 m off the western shore at 46°12'N, 81°28'E. Srednyj island has an area of 0.6 ha, with a maximum altitude of 60 - 65 m (depending on lake water-level), whereas the group of small sandy islands where gulls bred from 1975 to 1985 are generally only a few meters above water level. Additional breeding sites, used only occasionally, are known from other localities on lake Alakol, most of them close to the above mentioned islands.

Between July 10th and 13th, 2001, we conducted an extensive search of lake Alakol in order to locate breeding Relict Gulls. All larger islands and various spots along the shore of the lake have been searched



Figure 1: Position of lake Alakol in Kazakhstan

Slika 1: Položaj jezera Alakol v Kazahstanu

thoroughly. We saw Relict Gulls on various occasions at lake Alakol. On both July 10th and 11th we spotted a single adult gull on Tchernaja kosa near Akshi village (81°38'N, 45°54'E) feeding on Chironomidae and mosquitoes on the lake shore, flying off in a NW direction afterwards. On July 12th we first saw 10 adult birds flying and feeding on the shores of Bolshoj Kamen island (81°47'N, 46°12'E). Since the colony on Srednyj island (81°52'N, 46°08'E) is only approximately 5 km away and we found no juveniles or any other evidence of breeding on Bolshoj Kamen island, the adults seen along Bolshoj Kamen most probably originated from the colony on Srednyj island. On July 12th, during our visit to Srednyj island, we found a colony of Relict Gulls in the middle of the highest slope of the island. It consisted of 120 fully fledged juveniles which, for the time of our observation, kept in a close group known as a kindergarten (Colour appendix – Figure 2). Immediately after counting from a moderate distance we left the spot without disturbing the birds which are known to be extremely sensitive to human

disturbance (DEL HOYO *et al.* 1996, BIRDLIFE INTERNATIONAL 2001).

According to data collected over the period from 1968 to 1991 (Figure 2), the mean number of successfully fledged juveniles was 1.3 per pair. The proportion of failed broods due to heavy storms, human disturbance or predation by Yellow-legged Gull *Larus cachinnans mongolicus* is not included. Thus, we calculate that approximately 94 pairs could have bred successfully in 2001 on Srednyj island which is actually the only known nesting location for the species on lake Alakol.

The numbers of Relict Gulls breeding at lake Alakol in SE Kazakhstan have fluctuated considerably over the period for which census data are available. In some years no breeding pairs were observed at all, but in 1977 as many as 1200 pairs bred successfully on Srednyj island (Figure 2). Since lake Alakol is known for its heavy storms, heavy loss of nests and consequently extremely low breeding success has been recorded in certain years. This is especially obvious for the catastrophic years 1982,

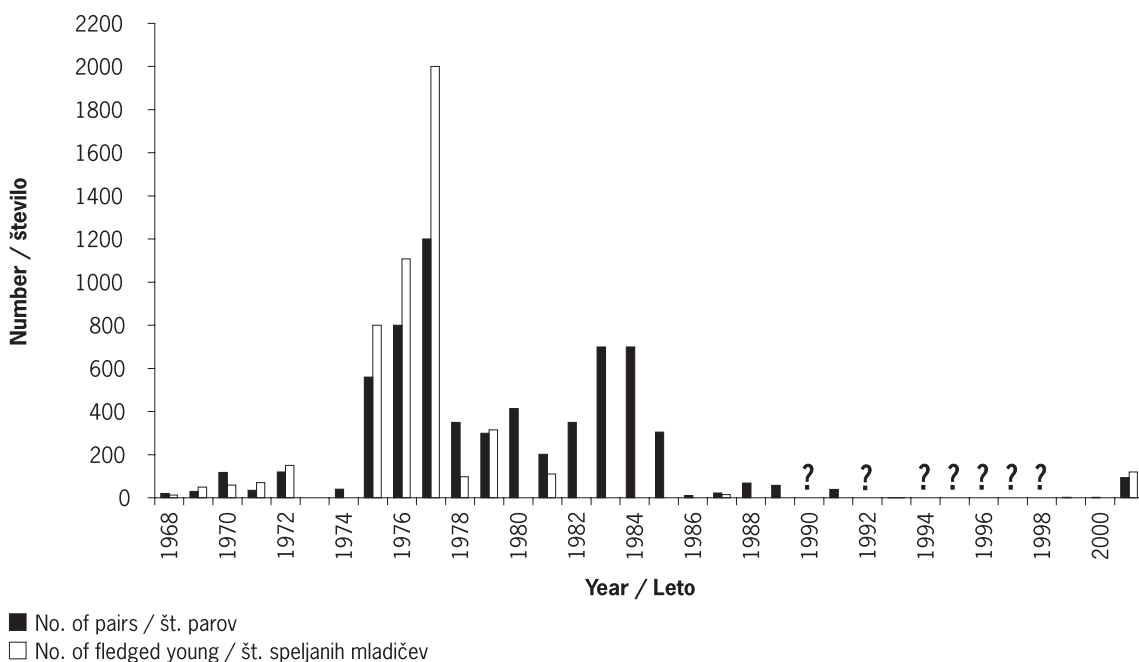


Figure 2: Population numbers of breeding Relict Gulls *Larus relictus* and numbers of successfully fledged young in the period 1968 - 2001 on lake Alakol, SE Kazakhstan. Sources: 1968-1989 (AUEZOV 1991), 1991 and 1999 (BEREZOVNIKOV 2001), 1993 (EROHOV pers. comm.), 2000 (ANISIMOV & URMAŠOV pers. comm.), 2001 (this work); no data available (?)

Slika 2: Število parov gnezdečih reliktnih galebov *Larus relictus* in število uspešno speljanih mladičev v obdobju 1968-2001 na jezeru Alakol, JV Kazahstan. Viri: 1968-1989 (AUEZOV 1991), 1991 in 1999 (BEREZOVNIKOV 2001), 1993 (EROHOV ustno), 2000 (ANISIMOV & URMAŠOV ustno), 2001 (to delo); ni podatkov (?)



Figure 3: Island Srednyj on lake Alakol, SE Kazakhstan (photo: B. Rubinič)

Slika 3: Otok Srednyj na jezeru Alakol, JV Kazahstan (foto: B. Rubinič)

1983, and 1984, when Relict Gulls bred on low sandy islands and no young were fledged since nests were washed off by high waves. Including the years when no breeding pairs could be found (excluding years when no surveys were made: 1990, 1992, 1994 - 98), the mean number of breeding pairs of Relict Gulls on lake Alakol is 248. Since 1986, an overall decrease in breeding numbers is apparent. The main cause was most probably intensive human disturbance in the 1970s that were reflected in an overall decrease of nesting pairs in the late 1970s and early 1980s (BEREZOVNIKOV 2001). In the 1980s, an additional decrease in nesting population occurred due to heavy storms (AUEZOV 1991). The random censuses carried out between 1991 and 2000 showed no more than two pairs breeding annually on lake Alakol. Even a few focused expeditions failed to find any breeding Relict Gulls during the period 1991-2000 (ŽATKANBAEV *et al.* 1998, BEREZOVNIKOV 2001).

Although lower than the numbers for the 1970s and 1980s, the calculated number of 94 breeding pairs in 2001 indicates a considerable increase of the breeding population on lake Alakol over that during the 1990s. Further research is needed for a better understanding of the great fluctuations of breeding numbers of Relict Gull on lake Alakol.

Summary

Relict Gull *Larus relictus* was described as a species in 1970. For a long time, lake Alakol in SE

Kazakhstan was known as the only breeding place of this central Asian species. After the discovery of the breeding colony in 1968, annual surveys of breeding numbers were conducted until 1989, and estimates varied from 0 to 1200 pairs. During the 1990s, surveys of population numbers and reproduction were restricted to occasional observations, and accurate data from that period are almost completely lacking. On July 12th, 2001, we visited the nesting places of Relict Gull at lake Alakol and counted 120 fully fledged young on Srednyj island. Based on the mean breeding success known from years of regular surveys at lake Alakol, when 1.3 young fledged per pair, we calculated that approximately 94 pairs have nested on the lake in 2001. This number, although lower than the average number of breeding pairs at lake Alakol during the 1970s and 1980s, indicates a recent increase in numbers of the population and in breeding success. The breeding population over the last ten years is considered to be much smaller, due to numerous disturbances.

Povzetek

Reliktni galeb *Larus relictus* je bil kot vrsta opisan šele leta 1970. Dolgo je kot edino znano gnezdišče te srednjeazijske vrste veljalo jezero Alakol v JV Kazahstanu. Od odkritja gnezditvene kolonije leta 1968 pa vse do leta 1989 so bila redno opravljena vsakoletna štetja gnezditvene populacije, z ocenami od 0 do 1200 gnezdečih parov. V devetdesetih letih 20. stoletja so bili podatki o številu gnezdečih parov in številu speljanih mladičev omejeni na naključna opazovanja, zato natančnih podatkov iz tega obdobja ni. Dne 12.7.2001 sva obiskala gnezdišča reliktnega galeba na jezeru Alakol in na otoku Srednyj preštela 120 ravno speljanih mladičev. Glede na gnezditveno uspešnost, ki je v letih uspešnih gnezditve vrste na jezeru Alakol znašala 1,3 speljanega mladiča / par, sva izračunala, da je tega leta na tem mestu gnezdilo približno 94 parov reliktnih galebov. Kljub temu da je število nižje od povprečnega števila gnezdečih parov skozi leta opravljenih popisov na jezeru Alakol, je število vzpodbudno, saj kaže na trenutno zvišanje števila gnezdeče populacije in uspešno speljanih mladičev. Ta je bila v predhodnih desetih letih zaradi številnih motenj najverjetneje zelo nizka.

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Figure 1: Adult summer Relict Gull *Larus relictus*. Srednyj island, lake Alakol, SE Kazakhstan, July 12th, 2001 (photo: B. Rubinič) – see page 185

Slika 1: Odrasel reliktni galeb *Larus relictus* v poletnem perju, otok Srednyj, jezero Alakol, JV Kazahstan, 12.7.2001 (foto: B. Rubinič) – glej str. 185



Figure 2: A part of the kindergarten of 120 fully-fledged juvenile Relict Gulls *Larus relictus* on Srednyj island, lake Alakol, SE Kazakhstan, July 12th, 2001 (photo: B. Rubinič) – see page 187

Slika 2: Del vrtna 120 speljanih mladičev reliktnega galeba *Larus relictus* na otoku Srednyj, jezero Alakol, JV Kazahstan, 12.7.2001 (foto: B. Rubinič) – glej str. 187