

The outcome and interpretation of data concerning the avifauna of Chorokhi delta along the Black Sea coast in Georgia during spring surveys 2014 – 2020

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The outcome is primarily based on analysis of the four bird surveys which were financed and instructed by the Dutch-Georgian Ornithological Foundation (DuGOF); some data from a previous survey (Wehrmann c.s.) are added. Rinse van der Vliet organised the survey of 2015 and he made the corresponding report. SABUKO organized all other surveys and made the respective reports.

| <i>I: Spring surveys during April</i> | Survey number | Year | Researcher(s) |
|--|---------------|------|--|
| <i>1 – 30 April :</i> | [1] | 2014 | Jasper Wehrmann/ Jonas von Tschirnhaus |
| <i>3 – 12 April :</i> | [2] | 2018 | Zurab Gurgendze; Dachi Shoshitashvili |
| <i>30 April :</i> | [3] | 2015 | Rinse van der Vliet |
| <i>II: Spring surveys during May and first half of June</i> | | | |
| <i>1 – 8 en 12/13 May</i> | [3] | 2015 | Rinse van der Vliet |
| <i>1 – 20 May</i> | [1] | 2014 | Jasper Wehrmann/ Jonas von Tschirnhaus |
| <i>15/16, 18, 20 May; 5,7,9,13 June</i> | [4] | 2019 | Aslan Bolkvadze |
| <i>21 – 24 May; 4 – 7 June</i> | [5] | 2020 | Aslan Bolkvadze |

During all surveys the following sub-areas of Chorokhi delta were visited: Chorokhi river; sea side; military camp; ponds and wetlands; places where sea and Chorokhi river meet. This means that the following habitats were included: Bushes, dry and wet grassy planes, marshes, a boulder plane, mudflats and seashore.

Preliminary remarks:

- Objective of the surveys was to generate data for future decisions on the status and conservation of the area and its fauna. Both SABUKO and the Ministry of Environmental Protection and Agriculture of Georgia (Ministry) underlined the need of data.
- In 2017 SABUKO became partner organisation of BirdLife International and in that year Chorokhi delta was given the status of Important Bird Area (IBA). Little later the Ministry made an end to hunting in Chorokhi delta during spring time.
- Chorokhi delta is the only wetland in Georgia of comparable size and with comparable diversity of habitats. Together with the unique locality in the SW of the enormous landmass of Asia, this gives rise to the supposition that Chorokhi delta is important to wetland-related long distance migrant birds. This supposition still had to be tested by field research.

Findings of the five spring surveys:

A. Species richness in Chorokhi delta is impressive during spring: > 170 bird species, bearing in mind that this number only concerns the time period of 1st April to 15th June. Species richness is further illustrated when focussing on specific bird families:

| | |
|--|------------|
| a) Waterfowl | 11 species |
| b) Osprey, Hawks; Falcons | 20 species |
| c) Herons | 9 species |
| d) Gulls, terns | 17 species |
| e) Plovers, Oystercatchers, Sandpipers | 22 species |
| f) Reed warblers and allies | 6 species |



Figure 1: Purple Heron, Chorokhi delta, 25 April 2015, Folkert de Boer.

Purple Heron – at least in May-- is one of the key species in Chorokhi delta. At least 55 sightings during the 2015 survey.

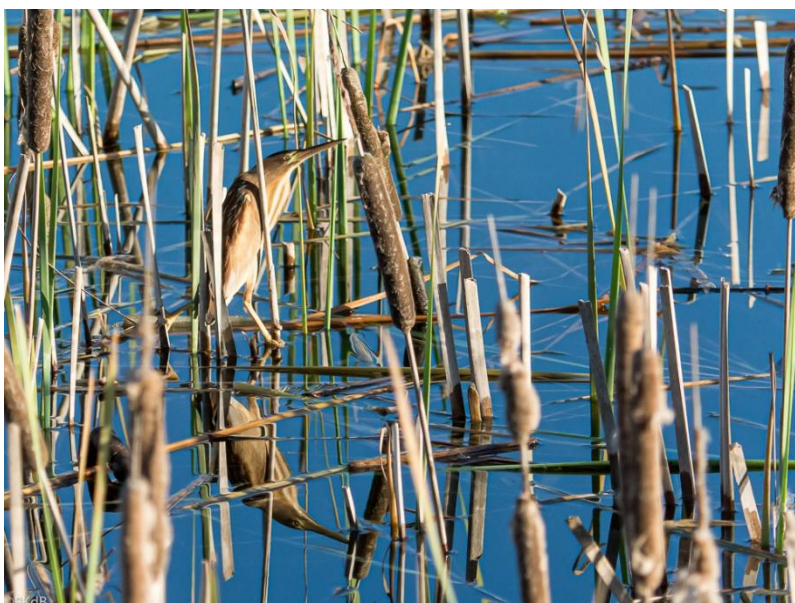


Figure 2: Little Bittern, Chorokhi delta, 25 April 2015, Folkert de Boer.

Little Bitterns in May and 1st week of June often present with 5-8 observations. But most birds flushed, so there could have been many more. Max. day-count is 24 (4 June 2020).



Figure 3: Great Reed Warbler, Chorokhi delta, 5 May 2016, Folkert de Boer.

Great Reed Warbler is a common spring migrant with tens of sightings on most days in May. In the first week of June day counts of 100 – 150 in different years.

More fieldwork is needed to find a clear pattern of breeding vs migration. This also applies to Blyth Reed Warbler, Marsh Warbler and even to Reed Warbler.



Figure 4: Glossy Ibis, Chorokhi delta, 25 April 2015, Folkert de Boer

Glossy Ibis is also a characteristic appearance in the delta during passage. On 6 May 2015 three groups totalling 96 birds migrated north.



Figure 5: Little Crake, Chorokhi delta, 25 April 2015, Folkert de Boer

Between 3 and 12 April 2018 there was a max. of 5 observations per day.

On 1 May 2015 Little Crake was observed or heard on eight localities in the delta. In 2020 on 22-24 May day counts of 6-8. Breeding codes low possibly due to hidden way of life.

On 4 June 24 observations. Late migration?



Figure 6: Barred Warbler, Chorokhi delta, 2 May 2016, Folkert de Boer

Barred Warbler is a rather common spring migrant with tens of observations per day in 2015. However, this pattern is not shown in the data of 2019 and 2020.



Figure 7: Red-backed Shrike, Chorokhi delta, 21 April 2015, Folkert de Boer.

In 2019 and 2020 from 2nd half May to 1st week June remarkable number of observations. Day-counts May max. 25, in June 50 (5 June) and 60 (6 June). Not yet clear to what extent these numbers refer to migrants.



Figure 8: Ortolan Bunting, Chorokhi delta, 20 April 2015, Folkert de Boer.

During the survey in 2015, in the first half of May, Ortolan Buntings were observed on ca. 25 locations in all areas of the delta.

- B.** One species of the family Petrels and one of the family Loons show that coastal waters of the Black Sea should be treated as part of the Chorokhi delta IBA:

| Yelkouan Shearwater | April (2018) | | | | | | | | | |
|---------------------|--------------|----|----|----|-----|-----|---|----|----|----|
| Date | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Counted | 97 | 94 | 10 | 30 | 752 | 593 | 0 | 13 | 0 | 0 |

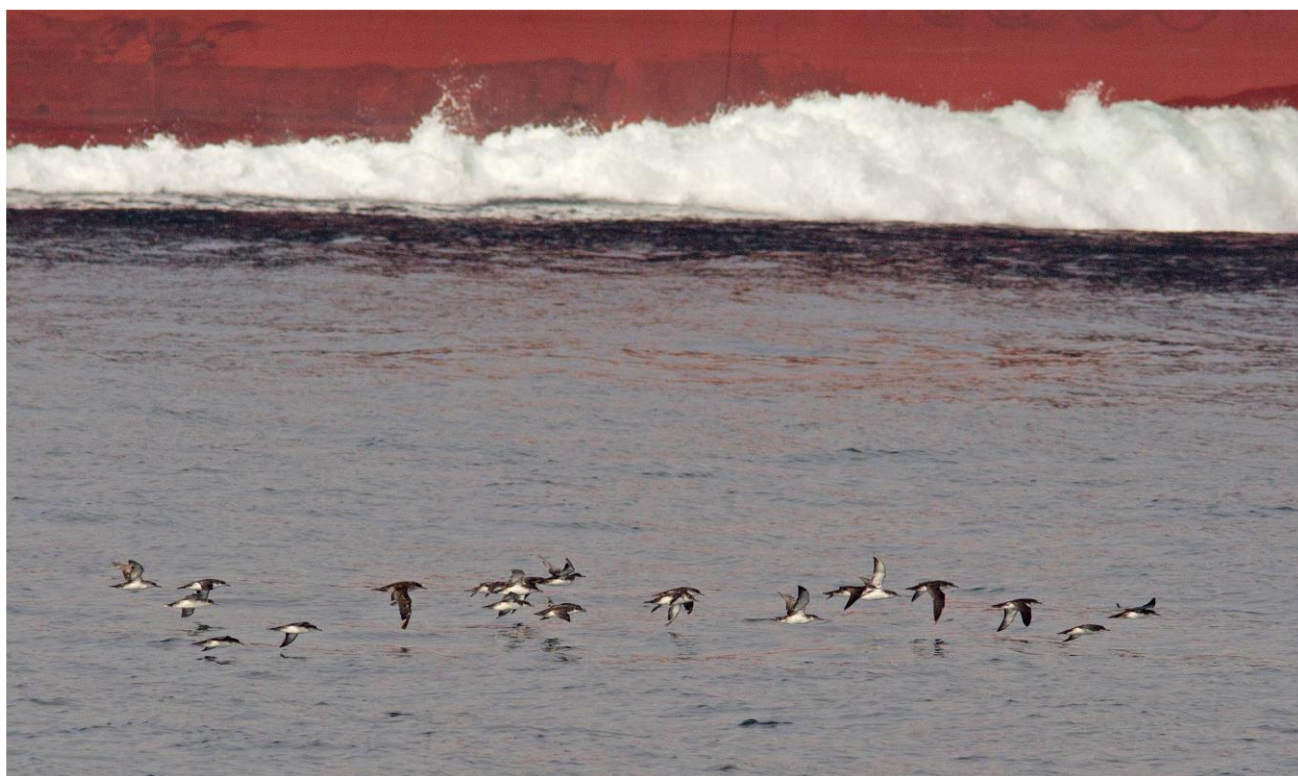


Figure 9: Yelkouan Shearwaters, 20 September 2001, Bosphorus, Istanbul, Turkey (René van Rossum). The observed numbers of April 2018 in Chorokhi delta underline the need for research on the distribution and ecology of seabirds in the South-Eastern part of the Black Sea.

| Black-throated Loon | April (2018) | | | | | | | | | |
|----------------------------|---------------------|-----|----|-----|-----|-----|-----|-----|-----|-----|
| <i>Date</i> | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| <i>Counted</i> | 197 | 225 | 37 | 168 | 334 | 416 | 428 | 229 | 216 | 135 |

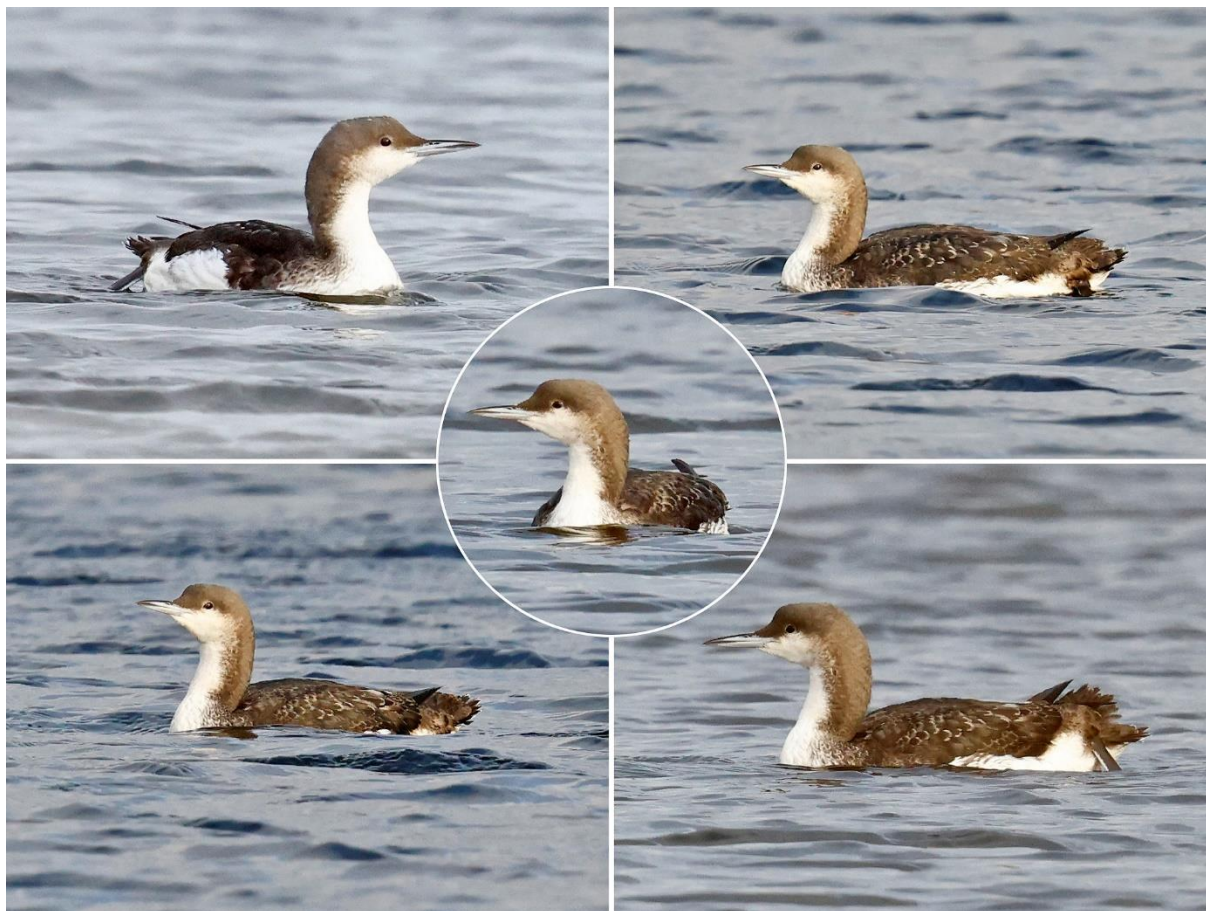


Figure 10: Black-throated Diver (all five the same bird in 1st winter, 21 January 2022, Katwijk aan Zee, The Netherlands (René van Rossum).

The observed numbers in Chorokhi delta April 2018 suggest that the south-eastern part of the Black Sea region probably is of importance to wintering birds.

C. Observations on raptors in Chorokhi delta¹:

| Osprey, Hawks and Falcons | Maximal day-count | | |
|------------------------------|-------------------|--|--------------------------------|
| | APRIL | 1 – 15 May | 16 May – 15 th June |
| Osprey | | | 1 |
| European Honey Buzzard* | | 100 - 500 | 3 |
| Black Kite** | 378 | 100-300 | 16 |
| Short-toed Eagle | | 10 | |
| Western Marsh Harrier | 2 | Probably at least 2 breeding territories in the entire delta | |
| Palid/ Montagu's Harrier | | 1 (In total 17 North) | |
| Pallid Harrier | 2 | 1 (In total two 2 nd cy; one ad) | |
| Montagu's Harrier | | 2 (In total 4 incl 2 ad female) | |
| Levant Sparrowhawk | | 55 | |
| Eurasian Sparrowhawk | 4 | 20 | 3 |
| Common Buzzard | 2 | 200 | |
| Long-legged Buzzard | | | 1 |
| Greater Spotted Eagle | 1 | | 1 |
| Lesser Spotted Eagle | | 4 | |
| Steppe Eagle | | 10 (one 2 nd cy) | |
| Booted Eagle | | 8 (In total mostly dark morphs) | |
| Lesser Kestrel | | 2 (In total 4, incl. 2 ad male) | |
| Common Kestrel | | 2 In total 4, incl 2 males, 1 female) | |
| Red-footed Falcon | | 1 (In total 3, all males) | |
| Eurasian Hobby | | 2 | 1 |
| Peregrine Falcon | | 1 (Ad male with prey) | |

*) On 13 May 2015 1.800 birds migrating North over Akhalsopali (near the coast, S of the river) between 14:20 – 15:10. On 6 May 2015 many thousands migrating over Sakhalvasho (one of the watchpoints of BRC); on that day a couple of hundred birds were seen over the delta. **) Including daily staging birds, especially on river banks and at the Dump site.

¹ These observations can improve the interpretation of monitoring results gained by Batumi Raptor Count (BRC) during 2008 - 2019

D. The **diversity of gulls and terns** in Chorokhi delta is high, but for clear understanding of patterns and ecology, fieldwork is needed year round.

| Gulls and Terns ² | Maximal day-count | | |
|---|-------------------|---|--------------------------------|
| | APRIL | 1 – 15 May | 16 May – 15 th June |
| Little Gull | 24 | | 15 |
| Slender-billed Gull | 6 | | 11 |
| Black-headed Gull Ad. and imm. Birds in about equal numbers | 1.500 | 500-1.000 | 5 |
| Mediterranean Gull age classes 2cy, 3cy,>3cy | 218 | 20 | 10 |
| Pallas's Gull | | | 36 |
| Mew Gull | | | 1 |
| Caspian and Yellow-legged Gull together, 2cy (80%), 3cy+4cy (12%) and >4cy (8%) | | 2.500 – 3.000 | |
| Caspian Gull On river banks and dump site; | 400 | Some 10s | 5 |
| Yellow-legged Gull By far the most common Gull On river banks and dump site. Many sleep on river banks east of the bridge and were seen flying west in early morning. Breeding on river islands. | 158 | Min. 30 p. from river mouth to halfway the two bridges | 68 (Breeding birds) |
| Armenian Gull On river bank 3 birds: 2cy, 3cy, ad. | | 2 | 1 |
| Lesser Black-backed gull/ Heuglin's Gull On river bank. | | 2 | 4 |
| Gull-billed Tern All ad. birds | | 5 | 2 |
| Caspian Tern | | | |
| Whiskered Tern | | 4 (or 6) | 3 |
| White-winged Tern | 7 | | 1 |
| Common Tern | 1 | | 1 |
| Sandwich Tern All seen well enough were ad.; river mouth and coast. | 3 | 69 (468 in Batumi Harbour) | 2 |

² cy= calendar year referring to age of observed birds; ad= adult birds



Figure 11: Squacco Heron, Celibad, Azerbeidzjan, 2 June 2018 (René van Rossum). The Squacco Heron is an example of long distance migrants (from Asia to Africa v.v.) for which the aspect of conservation is of utmost importance in integrated management of the Chorokhi delta

- E.** Chorokhi delta is probably important as stop-over area for several long-distance migrants. The available spring surveys seem to support this hypothesis. Therefore we present the results of 9 species out of 5 bird-families in more detail. “First half max. 90” means “In the first half of the month the maximal day-count was 90”. Wi= winter area

| <i>Family</i> | <i>Species</i> | <i>Comments</i> |
|--------------------------|--------------------|---|
| Waterfowl | Garganey | Highly migratory; Wi: Africa S of Sahara, probably birds from European and C-Asian population. April: first half max. 90; second half 1. May: first half max. 36; second half: 0 June: first half max. 12 |
| Sandpipers | Little Stint | Highly migratory from its extensive breeding range in the tundra zone to Africa. April: 1-5 May: first half max. 44; second half: 3 June: first half 0 |
| Hérons | Purple Heron | Partially migratory; migrating to tropical and E-Africa. April: during first half 7; second half: (no data) May: first half 55 sightings, almost anywhere in suitable habitat, seen every day. Usually 10-25 birds a day; second half max. 8 June: first half max. 2 |
| | Squacco Heron | Highly migratory; Wi: mainly to Africa, S of Sahara. April: 0 May: first half 5; second half 4 June: first half 10 |
| | Little Bittern | Highly migratory; Wi: Africa from tropics to south. April: first half 1; second half (no data) May: first half, in total 23 sightings (2015). Most birds flushed, therefore there could have been many more birds present than the number of sightings suggests.; second half max. 8 June: first half max. 24 |
| Shrikes | Red-backed Shrike | Highly migratory; Wi: Africa S of Sahara, probably all birds of Eurasia involved. April: 0 May: first half max. 25; second half max. 72. June: first half 60; |
| Reed Warblers and allies | Great Reed Warbler | Wi: Africa, S of Sahara, probably all birds of Eurasia involved. April: first half 1; second half (no data) May: first half a very common migrant. Every day many tens of individuals seen or heard; second half max. 21 June: first half max. > 150 |
| | Marsh Warbler | Wi: mainly in (W: mainly E-Africa, such as Malawi, Zambia and Zimbabwe. April: 0 May: first half max. 9; second half max. 5. June: first half 15 |
| | Reed Warbler | Wi: Africa S of Sahara. April: 0 May: first half 15; second half 105 June: first half 0 |



Figure 12: Little Stint, adult in summer plumage, Tsiknias/ East River, Lesbos, Greece (René van Rossum). Little Stint is an example of long-distance migrants with fast spring passage during the first half of May to their arctic breeding areas.

IV: Interpretation and conclusions:

The findings A – E of the spring bird surveys from 2014 – 2020 can be used in two different ways:

1. In the first place the results show us convincingly that the Chorokhi delta has outstanding natural values. This is in line with the assignment of Chorokhi delta as Important Bird Area (IBA) by SABUKO/ BirdLife International in 2017. The current results add to our knowledge of the area's avifaunistic aspects. This could stimulate a process that leads to sustainable and integrated management of the area and to public awareness of the natural values as part of Georgian heritage.
2. The results can be used as a starting point and stimulus for more fieldwork. In this way the delta can develop an educational surplus that will pay off in future when the need to handle climate change increases.