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Is The Netherlands a spring stopover site for Black-tailed Godwits breeding in European Russia?

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The Netherlands is an important spring stopover site for Black-tailed Godwits *Limosa limosa* (hereafter Godwits) that breed in Iceland (subspecies *L. l. islandica*; Gerritsen & Tijsen 2003). In the last decade The Netherlands has also proved to be an important spring stopover site for Godwits that breed in the Oulu region in Finland (65°1'18"N, 25°28'12"E). 18% of geolocator-tracked birds from the Oulu region stop in The Netherlands between 23 February and 25 April, with a maximum stay of 33 days (S. Timonen pers. comm.). In May 2021, a Godwit that was colour-ringed 5.5 weeks earlier in The Netherlands was photographed 2,300 km to the east in European Russia.

In The Netherlands, most colour-ringed Godwits are ringed as nesting adults or as non-fledged juveniles. Since 2000, one hundred Godwits have been ringed before and after the breeding season using clapnets (wilsternets) on foraging sites. On 23 March 2021, the second author caught a Godwit with a wilsternet in Friesland near Irnsum (53°74'40"N, 5°77'30"E) and ringed it with the colour-ring combination YRLf/LB (Fig. 1a). We were very surprised that this bird was photographed on 2 May 2021 near Palech in the Ivanovo Region of Russia (56°85'50"N, 41°90'00"E; Fig. 1b). The bird was seen in a cereal field and was paired, but further information on a possible breeding attempt is lacking. In 2022, YRLf/LB was seen in Portugal near Porto Alto on 6 February (38°91'70"N, 8°93'30"W) and from 3 to 8 March in The Netherlands. Therefore YRLf/LB stopped at least two years in a row in The Netherlands during spring migration. There are no observations of YRLf/LB in the Ivanovo Region or other areas of Russia in 2022; however, we suppose that in both 2021 and 2022 this individual bred in Russia.

In the second half of the 20th century, the breeding range of Godwits in European Russia expanded 450–500 km to the north; they started to breed up to the north of the boreal zone (Lebedeva 1998, Sotnikov 2002, Popov & Starikov 2015, Spiridonov 2020). Data on the breeding population in European Russia remain approximate. The most recent estimation varies widely from 12,000 to 117,000 breeding pairs (Spiridonov 2020), but the estimation of 25,000–45,000 pairs for 2010–2018 by

Fig. 1. (a) Godwit YRLf/LB during ringing in The Netherlands on 23 March 2021 (photo: Johannes R. Fokkens). **(b)** Godwit YRLf/LB seen in Russia on 2 May 2021 (photo: Dmitry Yu. Shchanitsyn).

Mischenko (2020) seems more realistic. The Ivanovo Region of Russia (21,800 km^2), where YRLf/LB was observed, is thought to harbour no less than 120 breeding pairs, but probably up to 400–500 pairs, whereas in the mid-2000s this was 500–700 pairs (Sviridova 2019).

In the central parts of European Russia, Godwits arrive from early April to early May, with most pronounced movements in the end of April (Sotnikov 2002, Sapetina *et al.* 2005, Golubev 2011). Departure of local birds after breeding occurs gradually and less noticeably at the end of June and in July. After mid-August, Godwits are rather rare in most areas of European Russia (Sotnikov 2002, Sapetina *et al.* 2005, Noskov *et al.* 2016), with the exception of the southernmost territories, where total numbers fluctuate from several hundreds to several thousands of individuals in July and August in the east of the Azov-Black Sea region and in the west of the Kuma-Manych depression in Ciscaucasia (Bukreev & Dzhamirzoev 2009, Chernichko 2015, 2019).

There are almost no ring returns or direct observations to help understand the migration routes of Godwits breeding in European Russia (Spina *et al.* 2022, Russian Bird Ringing Centre unpubl. data). So we can only hypothesize about the migration route of YRLf/LB, primarily based on the known migration routes of Finnish, Estonian and Polish Godwits (Loonstra *et al.* 2019, Senner *et al.* 2019, S. Timonen pers. comm., M. Silva-Monteiro pers. comm.). It is supposed that the Godwits from European Russia stop during autumn migration on the northern and western coasts of the Black Sea, after which they fly over the Mediterranean countries and the Sahara to their wintering areas in Africa (Kube *et al.* 1998, Delany *et al.* 2009). During winter, Godwits move west through the Sahelian wetlands and ricefields, following the rainfall (Zwarts *et al.* 2009). During this westward movement the birds join Godwits originating from western Europe (mainly The Netherlands and Germany), which predominantly winter in the western Sahelian wetlands (Hooijmeijer *et al.* 2013, Verhoeven *et al.* 2021). So, in the springs of 2021 and 2022, YRLf/LB was probably part of the majority of the continental Godwits that migrate along the western coasts of Africa and Europe to arrive in The Netherlands mainly in March. If we are right in our suggestion about the possible loop-migration of YRLf/LB, this bird flies at least 16,000 km each year during migration (Fig. 2). If it first arrives in Africa in the Sudd basin in South Sudan instead of the more westerly Lake Chad basin, its yearly migration could approach 18,000 km. Hopefully future GPS-tagged birds will reveal the routes of 'Russian' Godwits.

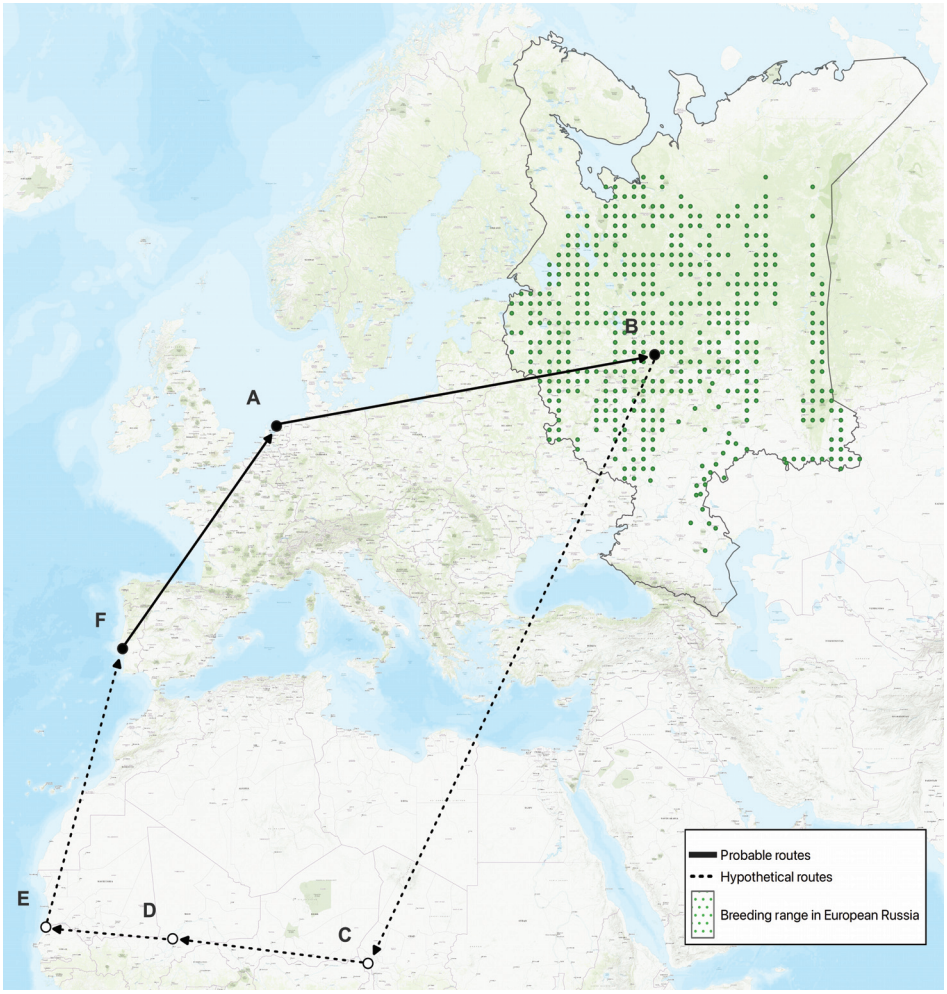

Fig. 2. Probable loop migration by YRLf/LB. Dashed lines represent hypothetical parts of the loop. **A:** Place of ringing during spring migration through The Netherlands (Friesland) and resighting in spring 2022; **B:** Probable breeding location in Russia (Ivanov Region); **C:** Possible wintering site along Lake Chad; **D:** Possible wintering site in Inner Niger-Delta; **E:** Possible wintering site in Senegal Delta; **F:** Certain spring site in ricefields around Lisboa. Breeding distribution based on Keller *et al.* 2020.

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