

CURRENT STATUS OF LITTLE TERN *STERNULA ALBIFRONS* IN NORTH EAST EUROPE: REGIONAL POPULATION PRODUCTIVITY, THREATS, MIGRATION ROUTES AND CONSERVATION PRIORITIES

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OUR WORK



Fig. 1. Little tern *Sternula albifrons*

The little tern *Sternula albifrons* (Fig.1) is a widespread but patchily distributed summer visitor (breeder) to much of Europe with evaluated status as declining. Recent European breeding population is rather small (<55,000 pairs;

BirdLife International 2014; downloaded from: <http://www.birdlife.org> on 08/08/2014).

The species is listed in the Directive 2009/147/EC of the European Union since most regional populations are decreasing (BirdLife International 2014). Within recent decades the population is declined mostly because of its poor breeding success, which had resulted from a combination of natural and human-related factors (Scarton 2010).

In the North East European countries (BirdLife International 2014) the little tern population is widely distributed but potential breeding habitats are usually very patchy (Fig. 2).

Because of specific breeding habitat preference, sea coastal breeding populations are potentially at risk from climate change, especially from rising of the sea level

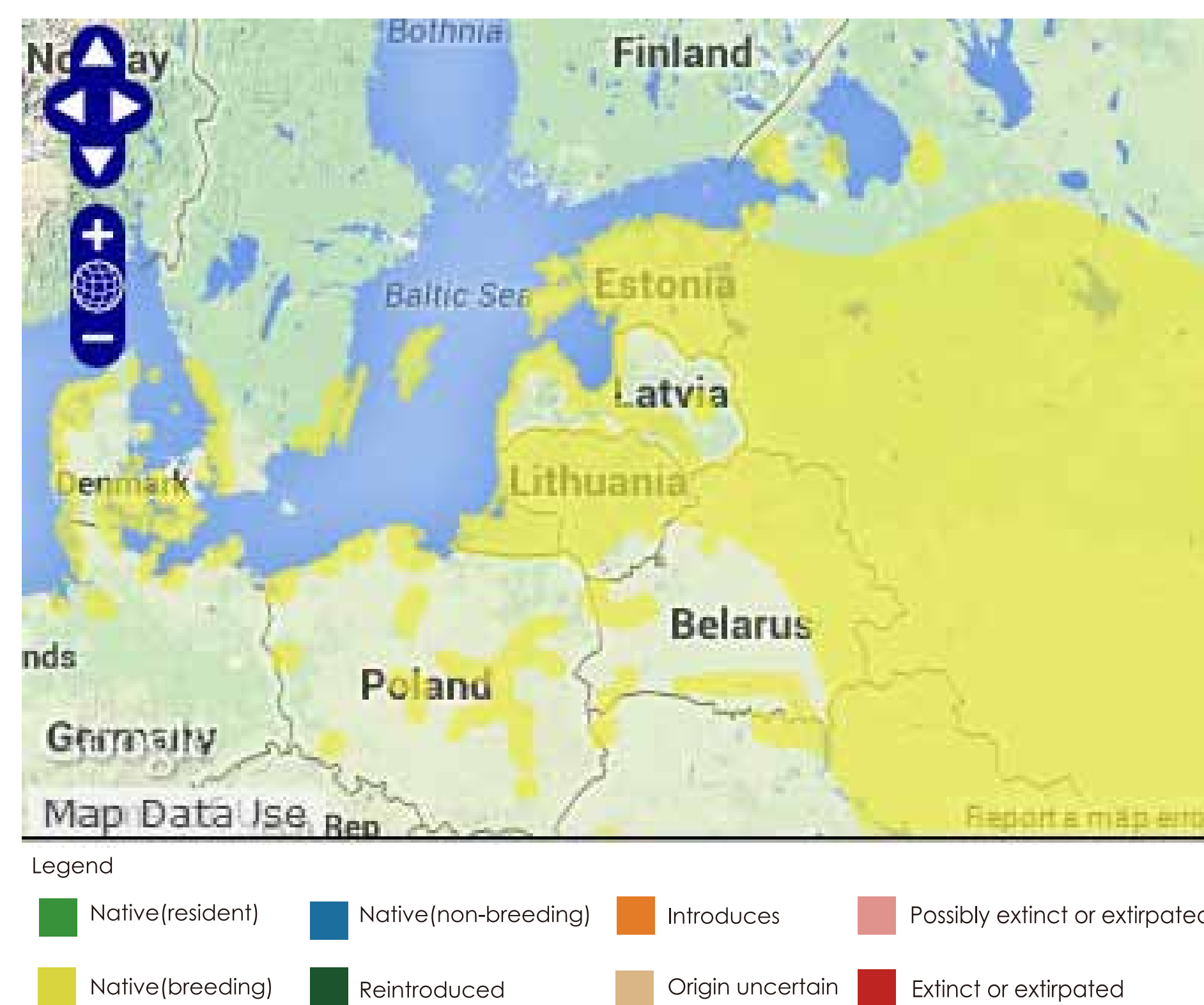


Fig. 2. Breeding distribution of the little tern in North East Europe. Source: BirdLife International 2014; species factsheet: *Sternula albifrons*. Downloaded from <http://www.birdlife.org/> on 08/08/2014.

(Scarton 2010). In these circumstances mainland populations breeding mostly in river islands (ex., in the North East Europe), can be of high species conservation value.

In 2014 we started a joined Japan-Lithuanian scientific applied long-term research project on ecology of the little tern. Main research topics will be as follows: the local population productivity, factors contributing to the low productivity (predation of chicks and eggs; nest loss due to flooding; food shortage; disturbance by humans, etc.); study of migrating routes and movements phenology. Using of geolocators and other modern equipment will make it possible to map their migrating routes and to study movements' phenology as well as to factors influencing productivity of the local populations.



Fig.3. A ceremony of signing of the international agreement on research of the little tern.

In 2014, our fieldwork was performed in Lithuania. It has been inventoried all potential breeding habitats known within last decade, where the little tern when nesting used to make colonies more than 10 pairs.

Our research results show that for nesting the little tern have used mostly flat sand and/or gravel predominating islands of various size partly overgrown with very little grass vegetation (Fig. 4 & 5). The smallest island, where have been nesting more than one pair of the little tern, was 0, 0175 ha. If the island was bigger than this threshold, its size was not an important factor for establishing of a colony.



Fig. 4 and 5. When nesting, the little tern have used mostly flat sand and/or gravel predominating islands of various size partly overgrown with very little grass vegetation.

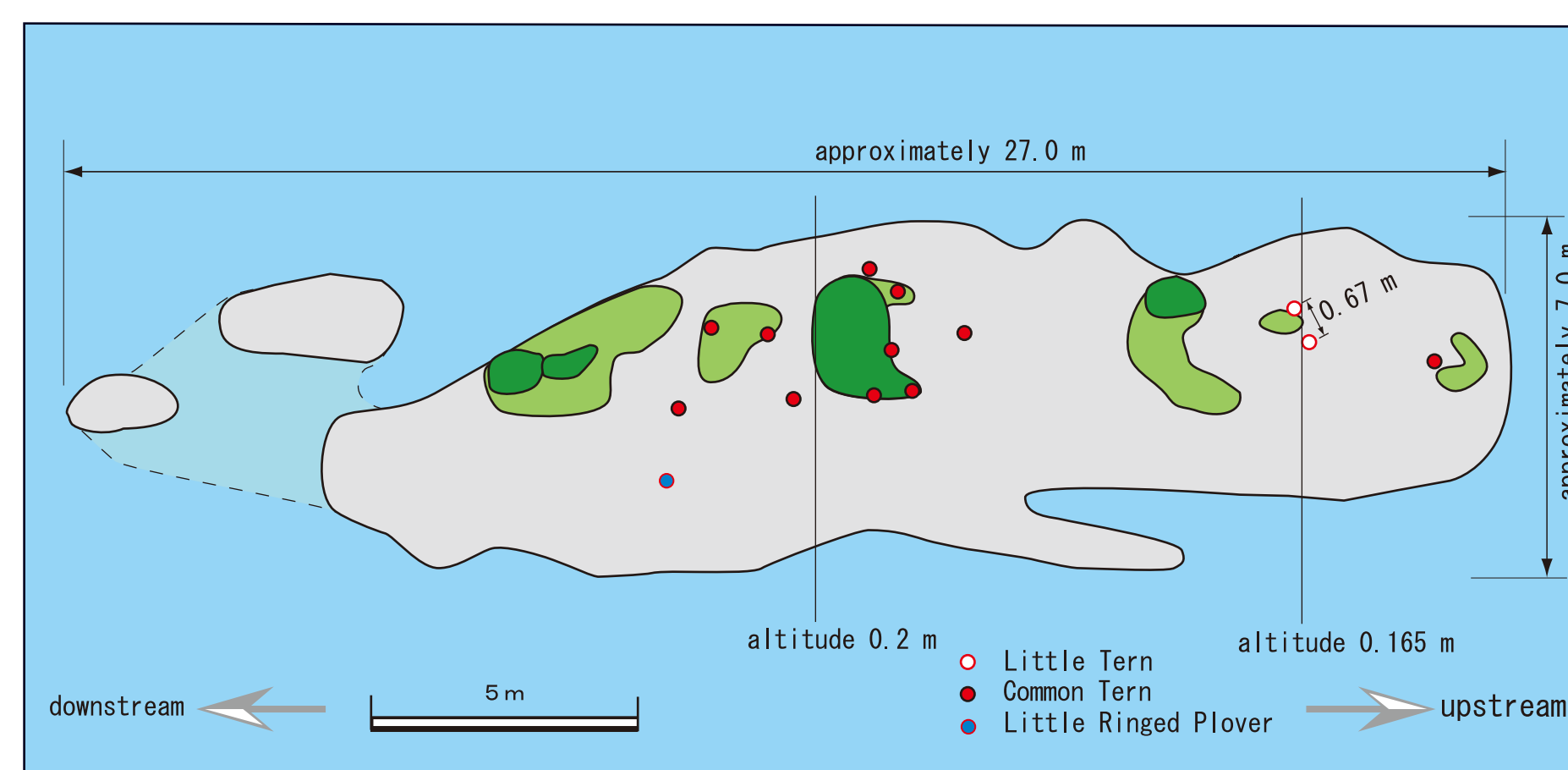


Fig. 6 & 7. The little and common terns have been nesting in mixed colonies on the same island. On some islands single pairs of the little ringed plover have been nesting in the tern colonies as well. The island is located in Neris River (second largest river in Lithuania).

The little tern has been making small mixed colonies and single pairs have been breeding as well. The little and the common tern *Sterna hirundo* have been nesting on the same islands (Fig. 6 & 7). In all cases the little tern has been nesting on the edge of the mixed colony

but a boundary between nests of the common and little tern was usually irregular. On some islands single pairs of the little ringed plover *Charadrius dubius* have been nesting in the tern colonies as well.

In Lithuania, the 2014 was very bad for breeding little tern pairs. In May, when the little tern have arrived from its wintering grounds, best potential nesting sites – flat islands have not been available yet due to rather very high water level on the largest Lithuanian rivers. Because of very early and rather hot spring, grassy vegetation has covered higher and resistant to the annual spring floods islands, and they have become unsuitable for nesting as well. In late June disturbance by humans have become very high due to very good conditions for recreation (mostly fishing, boating and camping). As a result, the local population productivity was about 0,2 fledged chicks

per nesting pair. Except of some natural factors (lack of suitable breeding habitats) and human disturbance, other factors were much less important for productivity of the local population of the little tern in 2014. In total about 10 times less pairs have been breeding in Lithuania in 2014, in comparison with known “productive” years in the past.

The birds have been captured in breeding colonies (bow net has been used, Fig. 8) in daytime or close to them at night time (mist net has been used; Fig. 9). All banded individuals have been measured (Fig. 10), weighted, banded (Fig. 11) and photographed.

For research of the migration routes of the little tern, we have been using the Intigeo-W50A9 model ultra light geolocators (Fig. 11). Their weight are 0.8g (including flag) each.

We are planning to continue the project for next several years and looking for potential partners from other countries of the North East Europe.



Fig. 8. Capturing by bownet

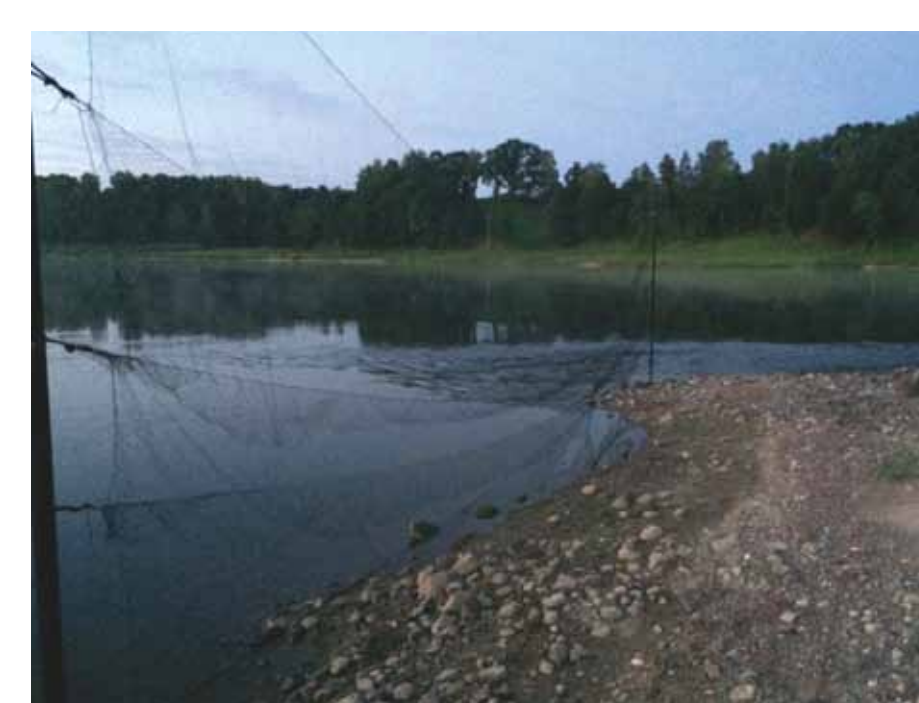


Fig. 9. Capturing by mist net



Fig. 10. All banded individuals have been measured.

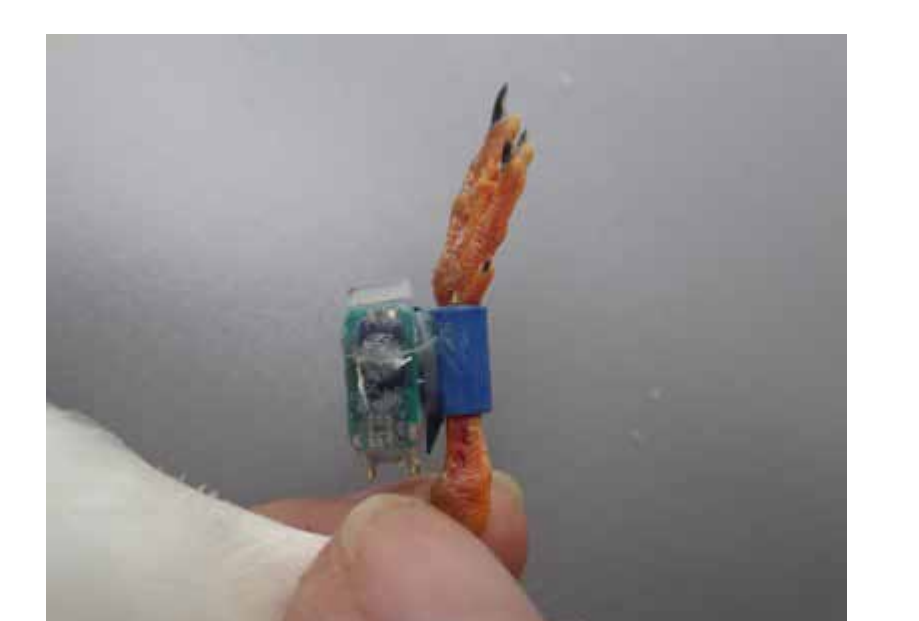


Fig. 11. We have been using geolocators of model type Intigeo-W50A9.



Fig. 12. Banded and supplied with geolocator little tern.

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