

## SPECIES INFORMATION SHEET

*Calidris temminckii*

English name: <b>Temminck's stint</b>	Scientific name: <i>Calidris temminckii</i>	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Leisler, 1812	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Alien species (predation; I01), Competition and predation (I02), Tourism (G01), Other threat factors (J03, J03.02.03), Unknown (U)	Future threats (Habitats Directive article 17 codes): Alien species (predation; I01), Competition and predation (I02), Tourism (G01), Other threat factors (J03, J03.02.03), Unknown (U)	
IUCN Criteria: <b>A2a-c</b>	<b>HELCOM Red List Category:</b>	<b>NT</b> <b>Near Threatened</b>
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive -no Annex II EU Birds Directive- no	
Red List status in HELCOM countries: Denmark: –, Estonia: NA, Finland: VU, Germany: –, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC		

**Range description and general trends**

The temminck mainly breeds in Fennoscandia and Arctic Russia. The European breeding population is probably very large (85 000–420 000 bp). Russia and Norway are hosting the largest numbers of breeding pairs, followed by Sweden and Finland. In Estonia, the species is an occasional breeder, and a few breeding pairs are also found in Scotland (BirdLife International 2004).



*Calidris temminckii*. Photo by Christopher Plummer.

**Distribution and status in the Baltic Sea region**

In Fennoscandia, the core breeding area is in Lapland and the Scandes, but there is also a small population along the coast of the Bothnian Bay, both on the Swedish and Finnish side. The **Swedish** Bothnian Bay population counts currently c. 60 bp; the trend of the Swedish inland population is unknown.

## SPECIES INFORMATION SHEET

## *Calidris temminckii*

The **Finnish** Bothnian Bay population declined from 500 bp in the 1970s to 170–200 pairs in the late 1980s (Rönkä 1996), and subsequently to currently 100 bp. The Finnish Lapland population has been declining, possibly by 50% during the period 1990–2000. Currently, the breeding range of the Finnish Lappish population has retreated to the uppermost north, this probably resulting in lower recruitment from this core area to the peripheral Bothnian Bay population. DNA studies indicate a gene flow between these two subpopulations (Rönkä 2004).

In **Estonia**, the temminck is only a sporadic breeder (Elts *et al.* 2009).

Table 1: Population numbers of Temminck's stint in the Baltic Sea area. For population trends 0=stable, -=decreasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	5 400–9 600	2010	0	-
Finland	1 000–2 000	2006–2009	-	?
Estonia	Sporadic breeder	2003–2008		
<b>Baltic Sea</b>	<b>6 400–11 600</b>			

## SPECIES INFORMATION SHEET

*Calidris temminckii*

## Distribution map

*Calidris temminckii*

## SPECIES INFORMATION SHEET

## *Calidris temminckii*

### Habitat and ecology

The Bothnian Bay breeding areas are characterized by flat, low-levelled coastal plains and islands covered by wave-washed moraine. Natural habitats consist of sandy and gravelly meadows and heaths with sparse and low vegetation and extensive dunes (Rönkä 1996). Man-made habitats include industrial landfills and harbour yards, also sparsely vegetated fields around fishing huts and summer cottages. Loose colonies can be formed, but the numbers are currently low. In a sample of 48 nest sites, only three sites were occupied by more than five pairs, most had 1–4 pairs and the largest one had 20 pairs (Rönkä 1996). New potential sites are formed permanently by land uplift, while established sites become unsuitable due to rapid succession of the vegetation. Rapid colonization and disappearance is typical for the species. There is no tide in the Bothnian Bay, but abruptly rising sea water (up to 200 cm) regularly destroys nests. Flooding losses are accelerated by the narrowing of shorelines due to the termination of grazing. Overgrowth also hampers anti-predator behaviour of nesting adults, with the result of increasing nest predation (Koivula & Rönkä 1998).

### Description of major threats

Nothing is known about the reasons for the decline of the northern Lappish population. The basic reason for the population low in the Bothnian Bay is nest predation leading to lesser recruitment and to a higher rate of site shifting by those birds which face nest losses. The gene flow from Lapland into the Bothnian Bay population is currently low, compared to the observed immigration. This is due to immigrants becoming emigrants as soon as they fail in breeding, while the locals tend to remain philopatric regardless of the breeding result (Pakanen *et al.* 2010). This emphasizes the need for measures to protect nests from predation and to restore habitats to attract protective species like Terns and larger waders to set among the Temminck's stints. Already in the 1960s, the hatching result was found to decrease from the "natural" 58% to 33% due to increasing predation rates (Hildén 1978). In experimental studies, fenced nests deterred avian predators effectively, such as common Gulls, resulting in a hatching rate of 3–4 chicks, whereas they cannot resist mammalian predators such as Raccoon Dogs, which can devastate the entire local population within one season (Rönkä 2004).

### Assessment justification

The population of the Finnish breeding areas has suffered strong declines in recent times, whereas there are no strong indications for a decrease in Sweden. The total population of the Baltic Sea countries classifies probably as *Near Threatened* (NT) according to criterion A2a-c.

However, considering the Bothnian Bay population separately, the species meets the criteria for *Vulnerable* (VU) according to A2ac and D.

### Recommendations for actions to conserve the species

In the Bothnian Bay, deterring predators by erecting fences around nests with eggs has been among the few activities carried out so far. Large-scale campaigns to remove predatory mammals should also be carried out. Restoring breeding habitat by re-introducing grazing would shift the breeding territories farther away from the flood zone to upper land. Awareness among authorities when planning and implementing the use of sandy shores is needed. All these activities would benefit the local recruitment. However, to prevent inbreeding, recruitment from outside should be safeguarded as well.

### Common names

Denmark: Temmincksryle, Estonia: Värbrislä, Finland: lapinsirri, Germany: Temminckstrandläufer, Latvia: Temminka šņibītis, Lithuania: Teminko begikas, Poland: biegus mały, Russia: Белохвостый песочник, Sweden: Mosnäppa

## SPECIES INFORMATION SHEET

## *Calidris temminckii*

### References

- BirdLife International (2004): Birds in Europe. Population estimates, trends and conservation status. BirdLife Conservation Series 12, Cambridge UK.
- Eltis, J., A. Kuresoo, E. Leibak, A. Leito V. Lilleleht, L. Luigujõe, E. Mägi, R. Nellis, R. Nellis & M. Ots (2009): Status and Numbers of Estonian Birds, 2003-2008. *Hirundo* 22, 3–31.
- Estonian Red List of Threatened Species (2008). Available at <http://elurikkus.ut.ee/prmt.php?lang=eng>.
- Hildén, O. (1978): Population dynamics in Temminck's Stint *Calidris temminckii*. *Oikos* 30: 17–18.
- Koivula, K. & A. Rönkä (1998): Habitat deterioration and efficiency of antipredator strategy in a meadow-breeding wader, Temminck's Stint *Calidris temminckii*. *Oecologia* 116: 348–355.
- Mikkola-Roos, M., Tiainen, J., Below, A., Hario, M., Lehikoinen, A., Lehikoinen, E., Lehtiniemi, T., Rajasärkkä, A., Valkama, J. & Väisänen, R. A. (2010). Linnut, Birds. Aves. In Rassi, P., Hyvärinen, E., Juslén, A. & Mannerkoski, I. (eds.). Suomen lajien uhanalaisuus – Punainen kirja 2010. Ministry of the Environment & Finnish Environment Institute, Helsinki. P. 183–203.
- Pakanen, V.M., A. Rönkä, E.J. Belda, A. Luukkonen, O.L. Kvist & K. Koivula (2010): Impact of dispersal status on estimates of local population growth rates in a Temminck's Stint *Calidris temminckii* population. *Oikos* 119: 1493–1503.
- Rönkä, A. (1996): Distribution, status and population trends in the Temminck's Stint *Calidris temminckii* in the Finnish Bothnian Bay. *Ornis Fennica* 73: 1–11.
- Rönkä, A. (2004): Kauanko sirri sirisee? *Linnut* 39 (1): 20–22.