

SPECIES INFORMATION SHEET

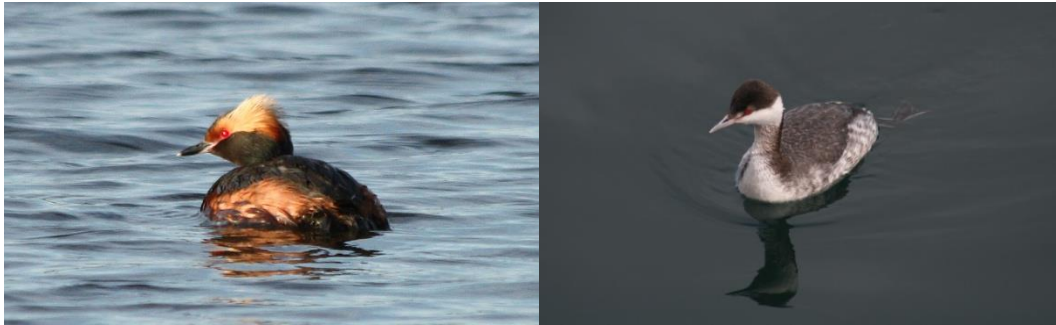
Podiceps auritus

English name: Slavonian grebe	Scientific name: <i>Podiceps auritus</i>	
Taxonomical group: Class: Aves Order: Podicipediformes Family: Podicipedidae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: <i>Podiceps auritus auritus</i> ; horned grebe	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Contaminant pollution (H04.01, H04.02), Alien species (I01), Competition and predation (I02), Extra-regional threats (XO) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Contaminant pollution (H04.01, H04.02), Alien species (I01), Competition and predation (I02), Extra-regional threats (XO) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria breeding: A2abce	HELCOM Red List Category breeding:	VU Vulnerable
IUCN Criteria wintering: D2	HELCOM Red List Category wintering:	NT Near Threatened
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex I	
Protection and Red List status in HELCOM countries: <i>Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)</i> Denmark: RE, Estonia: NT, Finland: VU, Germany:“strictly protected” under Federal Species Protection Decree (Bundesartenschutzverordnung)/R (Extremely rare), Latvia: –, Lithuania: 1 (E, Endangered), Poland: –, Russia: –, Sweden: NT (breeding)		

Range description and general trends

The slavonian grebe is distributed from North Europa to Kamchatka and from Alaska to Newfoundland. The European breeding population counts < 11 000 bp. The largest populations are found in Finland, Russia, Norway, Sweden and Estonia. European birds belong to the subspecies *Podiceps auritus auritus*. Two variants are distinguished due to differences in the shape of the bill: the thick-billed morph breeds in Norway, Iceland, Scotland and the Faroe Islands and winters along the coasts within its breeding range. The thin-billed morph breeds in Finland, Sweden, the Baltic States and areas further east in NE Europe. It winters in the southern part of the Baltic Sea, along the Atlantic and North Sea coasts from Norway to North France as well as in the Mediterranean Sea and Black Sea (Fjeldsø 1973, Wetlands International (2012). The thin-billed NE European winter population was estimated at 14 200 to 26 000 birds (Wetlands International 2012).

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Podiceps auritus breeding plumage (left, photo by Jannica Haldin) and winter plumage (right, photo by Nicole Sonntag).

Distribution and status in the Baltic Sea region

Breeding

The slavonian grebe mainly breeds in Finland, Sweden, Estonia and the St Petersburg Region of Russia. The Finnish and Swedish populations have been declining recently.

The total **Swedish** population has been estimated at 1 900–2 500 bp during the inventories of 1969 and 1972. However, this population has almost halved by 1996 (Tjernberg & Svensson 2007). The decline during 1990–2000 was estimated at 20–29% (BirdLife International 2004), but after that only a small reduction has been noted (around 5% during the period 1995–2010). The current population is estimated at 1 000–1 400 bp, of which 45 pairs are breeding at the coast.

In **Finland**, the decline was about 30% from 1990 to 2000 (BirdLife International 2004), but has exceeded 50% since then. In Finland and Sweden, the population declines concerns mainly the inland population, whereas coastal populations are thriving and expanding.

In the **St Petersburg Region** of Russia, the population was estimated at 200–600 bp in 2009/2010. The short-term trend seems to be positive, the long-term trend, however, is unknown.

The **Estonian** population has declined from the 1970s until the 1990s, but this trend obviously has levelled off. For 1998–2002 and 2003–2008 the population was estimated at 200–400 bp (Elts *et al.* 2003; 2009).

In the southern Baltic, the slavonian grebe is a sporadic breeder. **Latvia** holds some tens of pairs with possibly a declining trend (BirdLife International 2004). In **Lithuania**, the only confirmed breeding dates to 1997. However, observations during the breeding season (mainly on commercial fishponds in different parts of the country, especially in Varena, Kelme, Salcininkai and Vilnius districts) suggest regular breeding. The population is estimated at 1–10 bp (Kurlavičius 2006).

In **Poland**, the slavonian grebe appears occasionally as a sporadic breeder in the north-east of the country. Single pairs bred in 1972 near Augustów, and in 1981, 1985 and 1988 near Białystok. Sightings during the breeding season, but without confirmation of nesting, have been reported from Siedlce (1995) and near Toruń (1996; Tomiałojć & Stawarczyk 2003; Sikora *et al.* 2007).

In **Germany, Schleswig-Holstein**, the slavonian grebe bred for the first time in 1981; during the 1980s and 1990s single pairs have been breeding in most years (Berndt *et al.* 2002). The last successful breeding record dates to 1999, the last sighting during the breeding season to 2004 (Berndt 2007; Koop *et al.* 2009). From Mecklenburg-Western Pomerania, no breeding has been reported so far.

In **Denmark**, breeding was suspected in 2000 and 2001 (2 and 1 bp, respectively), but there was no proven record (Grell *et al.* 2004), and no signs of possible breeding during the following years.

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Table 1: Population numbers of the slavonian grebe in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, (-)=(probably) slightly decreasing, (+)=slightly increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	1 000–1 400	2010	(-)	-
Finland	1 500	2008–2009	-	?
Russia, PET	200–600	2009–2010	+	?
Estonia	200–400	2003–2008	(0)	-
Latvia	20–50	1990–2000	?	(+)?
Lithuania	1–10	1999–2001	0	+
Poland	Sporadic, single pairs			
Germany, SH	Sporadic, single pairs			
Denmark	Sporadic, single pairs			
Baltic Sea	2 900 – 4 000			

Wintering

Slavonian grebes wintering in the Baltic Sea mainly originate from birds breeding in northeastern Europe (Wetlands International 2012), with largest breeding populations found in Finland, Sweden, Russia and Estonia (see above). The Baltic Sea is the most important wintering area of slavonian grebes in NW Europe. After leaving their freshwater breeding sites, slavonian grebes start their migration to the Baltic Sea, with peak numbers in October to November. Spring migration begins in March, but some birds remain in the northern Baltic Sea until May.

The main wintering area in the Baltic Sea is the Pomeranian Bay, where large numbers are particularly found on and around the Odra-Bank (Sonntag et al. 2009). In 2007–2009, birds were only observed in eastern German and Polish waters, with the majority of birds (83%) occurring in the Pomeranian Bight. Besides, significant numbers were only found in the Gulf of Gdansk (Skov et al. 2011). In contrast to the survey in the early 1990s, no birds were observed in Russian, Lithuanian and Latvian waters in 2007–2009 (Fig. 2). However, studies in German waters revealed small winter populations in the western parts of the German Baltic Sea (see Mendel et al. 2008, Sonntag et al. 2009), which are not indicated by Skov et al. (2011). Besides, wintering numbers between the two comprehensive surveys increased from 1 830 birds in 1988–1993 to 2 890 birds in 2007–2009, equivalent to an increase of 58% over 16 years.

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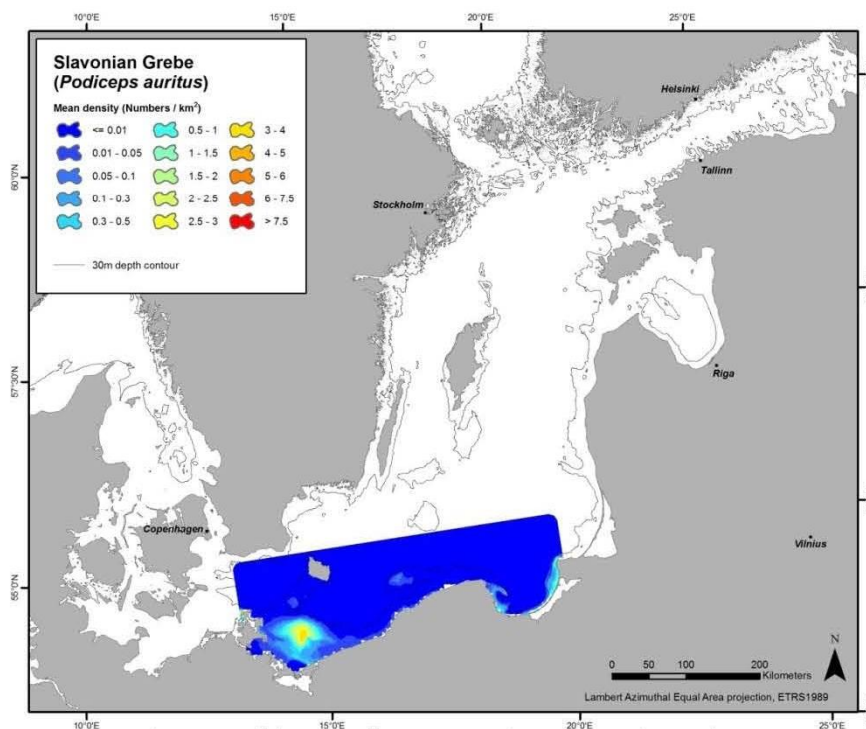
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Fig. 2. Distribution and density of wintering slavonian grebes (*Podiceps auritus*) in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

As **breeding** bird, the slavonian grebe inhabits shallow waters with luxuriant emergent and submerged vegetation and with small open water areas. Most of these environments are heavily eutrophicated. Besides small inland lakes and pools, brackish bays and lagoon-like areas along the Baltic coast are also used. Oligotrophic and dystrophic lakes are less preferred, and the clutch size tends to be smaller there, probably due to food shortage (Ulfvens 1988). In the Quark of Finland, the reproduction rate is found to be higher in coastal environments compared to inland waterbodies (well-grown brood size 2.9 vs. 1.5; Ulfvens 1989). In coastal areas, winter losses (locally up to 50%) are rapidly compensated (within 4–5 years, Ulfvens 1989), whereas the decreasing trend tends to be more persistent in lake areas.

During the **non-breeding** season, the slavonian grebe is predominantly found in marine and brackish waters as well as on larger lakes and rivers (Mendel et al. 2008). In its most important wintering area in the Pomeranian Bay, the habitat selection is significantly influenced by water depth and bottom sediment type. The grebes prefer shallow waters of up to 14 m depth and occur only over sandy sediments (Sonntag et al. 2009). The food in the wintering areas mainly consists of small fish, which is caught up to 20 m depth (Fjeldså 2004). In the Pomeranian Bay, demersal gobies are the main prey species (Sonntag et al. 2009).

Description of major threats

The reasons behind the decline of the breeding populations are probably related, *inter alia*, to **food competition with fishes** (Andersson 1982, Douhan 1998, Stedman 2000), hazards in wintering areas, and in inland waters also to **water acidification**. **Predation** by invasive predatory mammals (*e.g.* Mink, Raccoon Dog) also plays a role. These factors are expected to affect the slavonian grebe population also in the future.

In the wintering areas, various factors are likely to impose a threat on slavonian grebes:

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In the Baltic wintering areas, intense **gillnet fisheries** impose a high risk of **entanglement** and **drowning** for diving bird species. In the Pomeranian Bay, the most important wintering area of slavonian grebes, intense set net fisheries are operated in the coastal zones as well as offshore and overlap with the resting and feeding areas of slavonian grebes. Hence, the birds are particularly susceptible to becoming entangled in the nets while diving for their preferred prey near the sea bottom. Bycatch has been reported e.g. for the German part of the Pomeranian Bay (see Sonntag et al. 2009). Slavonian grebes are concentrated in the Pomeranian Bay and are particularly numerous in the Odra Bank area. This, as well as the habit of Slavonian grebes to spend large proportions of time swimming on the water, render them highly vulnerable to **oil pollution** in the area (Mendel et al. 2008). Slavonian grebes are very sensitive to **disturbance by ship traffic**. Although disturbance distance with regard to vessels is fairly short, the birds usually flee from approaching ships (Garthe et al. 2004, FTZ Büsum unpubl. data). This pronounced sensitivity to shipping movements may cause fragmentation and loss of suitable feeding and resting habitats. In their wintering areas at sea, slavonian grebes mostly move by swimming, but are assumed to fly between different resting sites. Migration movements usually occur at night, and the species has only moderate flight manoeuvrability. Hence, slavonian grebes are particularly at risk of colliding with **offshore wind turbines and other obstacles**, especially in unfavourable conditions with poor visibility. In the Pomeranian Bay, slavonian grebes feed mostly on benthic organisms and occur predominantly in areas with sandy sediments (Sonntag et al. 2009). Thus, the **reduction or destruction of such bottom habitats**, e.g. by sand extraction or by dredging activities for shipping channels and coastal development, may decrease the food availability for the species.

Assessment justification

Breeding

Within the last 15 years the declining trend of the slavonian grebe has been strong, especially in Finland (>50%). In Sweden, only a slight decline has been observed; however, the overall decline is estimated to exceed 30% during 3 generations (15 years) in the main breeding areas. The species is classified as *Vulnerable* (VU) according to criterion A2abce.

Wintering

The results of the two Baltic Sea surveys indicate an increase in the number of slavonian grebes wintering in the Baltic Sea from 1988–1993 to 2007–2009, equivalent to an increase of 54% over three generations (15 years, GL = 5 according to the Swedish Red List). In contrast to the survey in the early 1990s, no birds were observed in Russian, Lithuanian and Latvian waters in 2007–2009. This might indicate a restriction of the area of occupancy in the Baltic Sea wintering area. However, studies in German waters revealed small winter populations in the western parts of the German Baltic Sea (see Mendel et al. 2008, Sonntag et al. 2009), which are not indicated by Skov et al. (2011). There is scarcely any information about winter population trends. Only coastal counts in the Kattegat area allowed for trend calculation, revealing a significant positive trend in the period 1987–2009 with annual increases of 7.7% (Skov et al. 2011). Birds wintering in the German part of the Baltic Sea showed an uncertain trend for the period 2000–2007 (Dries & Garthe 2009). Although the breeding population in the most important areas has been decreasing during the last two decades (see above), the winter population in the Baltic Sea showed a marked increase and does thus not apply for a Red List classification under criterion A and C. Criterion B does not apply, as the extent of occurrence and the area of occupancy are higher than the respective threshold values, based on information in Durinck et al. (1994), Sonntag et al. (2009) and Skov et al. (2011). However, due to the small population size, the species classifies as *Near Threatened* (NT) according to criterion D2 (number of locations less than ten, imaginable threat that can make the species capable of becoming VU or EN within a very short time, e.g. oiling). If the population decline in the breeding areas continues, numbers wintering in the Baltic Sea are likely to decrease in the

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next years and the species may then qualify for a higher threat category in the Red List of wintering birds.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. At the breeding sites, control of predatory mammals may be an appropriate conservation action. In the wintering areas, measures to reduce the by-catch are required (e.g., avoidance of set net fisheries during the migration and wintering period), general effort to reduce accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to benefit the species.

Common names

Denmark: nordisk lappedykker, Estonia: sarvikpütt, Finland: mustakurkku-uikku, Germany: Ohrentaucher, Latvia: ragainais dūkuris, Lithuania: raguotasis kragas, Poland: perkoz rogaty, Russia: Красношейная поганка, Sweden: svarthakedopping

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