SPECIES INFORMATION SHEET *Philomachus pugnax*

English name: **Ruff**	Scientific name: ***Philomachus pugnax***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 4 years	
Past and current threats (Habitats Directive article 17 codes): Extra-regional threats (e.g. hunting; XE), Overgrowth of open areas (A04.03), Ditching (J02.01.01, J02.05), Climate change (M), Alien species (I01), Competition and predation (I02)	Future threats (Habitats Directive article 17 codes): Extra-regional threats (XE), Overgrowth of open areas (A04.03), Climate change (M), Alien species (I01), Competition and predation (I02)	
IUCN Criteria: **A2abcd**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC	Annex I EU Birds Directive: yes	
	Annex II EU Birds Directive: II B (FR, IT, MT)	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: EN, Estonia: EN, Finland: EN, Germany: 1 (Critically endangered), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: EN, Russia: –, Sweden: VU		

Range description and general trends

The ruff is a widespread breeder in much of northern Europe. The European breeding population amounts more than 200 000 reproductive females. Russia, northern Finland and Sweden are hosting the key populations. In Western Europe, the range of the species reaches to France and the UK.

The ruff is declining in all parts of Europe, but the decline is especially dramatic in the western and southern areas of the range of the species, where it currently is close to extinction (BirdLife International 2004). There is obviously a strong and rapid redistribution of the range towards the east (Rakhimberdiev *et al.* 2011). The ruff is also declining in its northern European core areas. In Norway, only 1 100–1 850 nesting females have been estimated in 2009, which means a reduction of 80% compared to the population numbers of 1990. The breeding range also has been reduced (Øien & Aarvak 2010). A similar trend has been observed in European Russia (Rakhimberdiev *et al.* 2011).



Philomachus pugnax. Pictures by Christopher Plummer (left), Hans Glader (middle) Lech Karauda (right).

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Population development in the Baltic Sea area

Despite the declining trend, the ***northern parts*** of the assessment area (north of 60° Lat.) still host considerable population numbers. The **Swedish** population counts about 16 000–35 000 breeding females in the northern Tundra areas, but also a few (*c.* 15 bf) at the northern Baltic coasts (Norrbotten änd Västerbotten). In **Finland**, the total population is about 5 000–8 000 breeding females; it has suffered a decline of 47% within 10 years. Not more than 500 females are breeding in coastal areas. Both the coastal and Tundra populations are declining. In the **St. Petersburg** region, a population minimum has been observed in the 1980s, but during the last 10 years the number of reproductive females is slowly increasing. However, there are considerable annual fluctuations.

In the ***southern parts of the Baltic*** (south of 60° Lat.), the decline of the ruff is dramatic. During the 19th and at the beginning of the 20th century the species was still a widespread and common breeding bird on coastal meadows and marshlands. However, during the whole 20th century the ruff has suffered a continuous decline and has disappeared or almost disappeared from many parts of its former range.

The southern **Swedish** population is small: Gotland 10–15 reproductive females in 2006, (111 in 2001), Öland 12 in 2008 (278 in 1988) and Skåne *c.* 5 (*c.* 50 in 1998), giving a total of *c.* 35 reproductive females. The decline in the southern Swedish areas is dramatic: on Öland, for instance, the population has reduced by 95% between 1988 and 2008 (Tjernberg & Svensson 2007; Ottvall *et al.* 2009).

In the Kaliningrad region of **Russia**, the ruff is currently a rare, probably not permanent breeder.

The **Lithuanian** Breeding Bird Atlas (Kurlavičius 2006) gives an estimate of 100–200 bf for the period 1995–2000. However, the current estimate is *c.* 100 bf only. The Nemunas Delta is the last permanent, stable breeding area in Lithuania.

In **Poland**, the breeding distribution of the ruff is more inland than coastal. Once it was a widespread breeder, mainly in the northern part of the country. The Biebrza Marshes have been probably the most important breeding place. In the 1970s and early 1980s the Polish population counted still 300–400 reproducing females, but this population declined rapidly to 150–200 during the mid-1980s and <50 in 1997/98 (Tomiałojć & Stawarczyk 2003; Sikora *et al.* 2007). After 2000, there have been only two confirmed breeding records around Zagórów (Warta river valley, central Poland).

In **Germany**, the trend is strongly negative. The species probably got extinct at the end of the 1990s at the Baltic coast of Schleswig-Holstein and declined in Mecklenburg-Western Pomerania from 60–70 in the 1980s to 1–2 in recent years. In 2012, the ruff was missing as a breeding bird. The trend of the population development as shown in Figure for Mecklenburg-Western Pomerania is probably representative for the whole southern Baltic.

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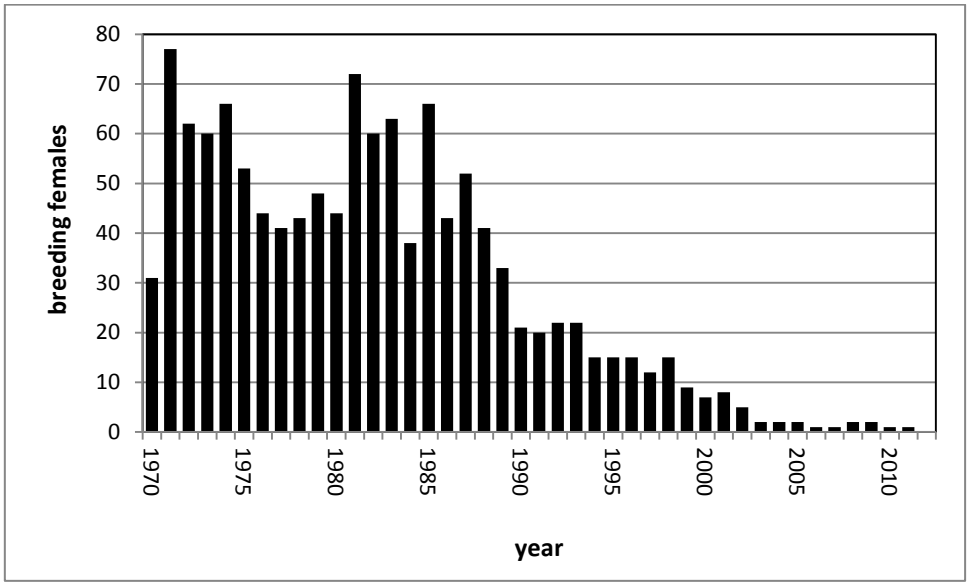

Figure 1: Population development of the ruff in Mecklenburg-Western Pomerania 1970–2012.

The **Danish** population has been continuously declining during the last 5 decades, and an extremely rapid decline has been observed since the mid-1990s (Sørensen 2011, Thorup 2004 and unpublished):

Table 1: The population development of the ruff in Denmark.

	1964–1972	**1986–1988**	**2009–2010**
Baltic	594	303	20
North Sea	661	567	43
Denmark total	1 255	870	63

Table 2: The current population of the ruff in the southern Baltic Sea area (south of 60° Lat.). The total figure even could be an overestimation, since there are no actual data available for Latvia. For population trends -=decreasing, --=strongly decreasing, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding females	**Year**		
Sweden (southern Baltic coasts)	35	2010	--	--
Estonia	20–50	2003–2008	-	--
Latvia	50–200	1990–2000	--	--
Lithuania	100	2006	?	--
Russia, KAL	0–2	2009	?	-
Poland	0–2	2000–2010	--	--
Germany - SH	0	2009		--
Germany - MV	1–2	2003–2011	--	--
Denmark	20	2009–2010	--	--
Southern Baltic	**225–410**			

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Distribution Map

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Habitat and ecology

The ruff breeds on marshlands and coastal meadows, and, in the archipelagos of the northern Baltic, on grassy treeless islets. The nest is a shallow ground scrape, lined with grass leaves and stems, and concealed with marsh plants or grass. Nesting is solitary, although several females may lay in the vicinity of a mating area (lek). Males display during the breeding season at a lek in a traditional open grassy arena. Territorial males are very site-faithful; 90% return to the same lekking site in the subsequent seasons, the most dominant males being the most likely to reappear (Widemo 1997). Ruffs show a high level of polyandry, i.e. the females are mating with different males. More than half of female ruffs mate with, and have clutches fertilised by, more than one male. Males do neither breed nor support the rearing of chicks.

Description of major threats

The reasons for the decline are not well understood, but habitat deterioration by intensified use of meadows, overgrowth of open habitats and ditching of mires, predation and hunting have been suggested. In Denmark, several breeding sites were lost due to embankment and hydrology control projects during the 1960s, and large areas of former ruff breeding habitat were converted into cultivated fields. However, ruffs did extremely well in the 1980s in the remaining areas, whereas in the last 10–15 years they have declined dramatically. It is still not well understood why ruffs (and most other meadowbirds) did so well in the 1980s. The recent declines are primarily due to bad habitat management in many of the previously best Danish breeding areas, together with the general decline of the European breeding population. Recent findings give evidence for a large-scale population shift of the ruff from the European and Russian European Arctic breeding sites towards the east, which has been attributed to a loss of habitat quality in the main staging sites in the Netherlands (Rakhimberdiev et al. 2011).

The vast majority of Eurasian ruffs winter in West African floodplains, where large numbers are captured and shot. Total catch has varied between 10 and 60% of the wintering stock, with the highest rate in dry years. However, catch variation due to deflooding cannot explain the steep decline throughout the 20th century (Zwarts et al. 2009), whereas heavy bias against females in the catch presumably is a contributing factor.

Assessment justification

The reduction of population size of the total Baltic population of the ruff during the last 10 years has been probably >30%. The species is classified as Vulnerable (VU) according to criterion A2abcd.

Considering only the southern parts of the Baltic range, the decline has been even more dramatic and exceeds 50% of the population size during the last 3 generations. Hence, the population of this area even meets the criteria for Endangered (EN A2abcd, C1).

Recommendations for actions to conserve the species

The main conservation action is the adjustment of the optimisation of the remaining breeding sites to the habitat requirements of the ruff. This includes both grazing and water management. Control of predatory mammals is also essential. Furthermore, the staging areas at the North Sea, especially in the Netherlands, play an essential role for the western European population. Efforts must be undertaken to improve the quality of these sites.

Hunting should be banned; the species should be deleted from Annex II of the EU Birds Directive.

Common names

Denmark: Brushane, Estonia: Tutkas, Finland: Suokukko, Germany: Kampfläufer, Latvia: Gugatnis, Lithuania: Gaidukas, Poland: Batalion, Russia: Турухтан, Sweden: Brushane

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