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Waterbirds around the world

A global overview of the conservation,
management and research of the
world's waterbird flyways

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Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall.
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Shorebird migration studies in Kamchatka

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Kamchatka, a large (1 200 km long) peninsula in far eastern Russia, is of great importance as a staging and breeding area for many species of shorebirds on the East Asian flyway, with a total of fifty species of Charadriidae being recorded there. Research on shorebird migration in Kamchatka began in the mid 1970s, becoming more intensive from 1989 onwards when special counts of shorebirds during northward spring migration were started (Gerasimov 1980, 1988, Lobkov 1980, 2003), for further information and additional references see Gerasimov (2005). From 1990 to 2003 nine counts were made at eight different locations on the peninsula. Each count was carried out over a 15–30 day period during late April to early June, with additional daily counts being made on mudflats in Korf Bay. In addition, for southwards (northern autumn) migration, a large study was undertaken at the Penzhina Estuary in 2002 (12 July–10 August) and 2003 (11 August–10 September), at the northern end of the peninsula, as part of the implementation of the Action Plan for the Conservation of Migratory Shorebirds in the East Asian-Australasian Flyway: 2001–2005 (Shorebird Working Group of Wetlands International 2001). Five to six hour counts on mudflats were undertaken along a fixed 10 km shoreline length. Additionally, shorebirds were counted flying past the study area, and at night estimates were made based on the calls of birds flying past. The only previous autumn survey was of the Moroshechnaya Estuary between 2-18 August 1989. Survey locations and periods are shown in Fig. 1, and counts from selected years in Table 1.

Additional information on shorebird migration on Kamchatka was obtained from banded and flagged shorebirds, and satellite tracking of Eastern Curlew *Numenius madagascariensis* (Ueta *et al.* 2002). In the 1990s Dunlin *Calidris alpina* were also banded with plastic colour-rings. A series of papers on different shorebird species have been published from this research (Gerasimov & Gerasimov 2000b, 2001, 2002).

Observations of northward migration on west Kamchatka show that this coast is very important for shorebirds. Species including Dunlin, Red-necked Stint *Calidris ruficollis*, Great Knot *Calidris tenuirostris*, Bar-tailed Godwit *Limosa lapponica*, and Whimbrel *Numenius phaeopus* arrive either at the southwest and western coasts and migrate northwest, or arrive on in the southeast and migrate along the northeast coast. The largest shorebird concentrations were observed in 1990 at the mouth of the Moroshechnaya River on the mid-west coast of the peninsula, although full counts for all species (except for Great Knot) could not be made, and it is probable that total numbers of Dunlin, Red-necked Stint and Bar-tailed Godwit were much higher than counted.

Thousands of Wood Sandpipers *Tringa glareola*, Black-tailed Godwits *Limosa limosa* and Common Greenshanks *Tringa nebularia* were counted in 1999 at Karchinskoe Lake in central Kamchatka, but significant migration of these species

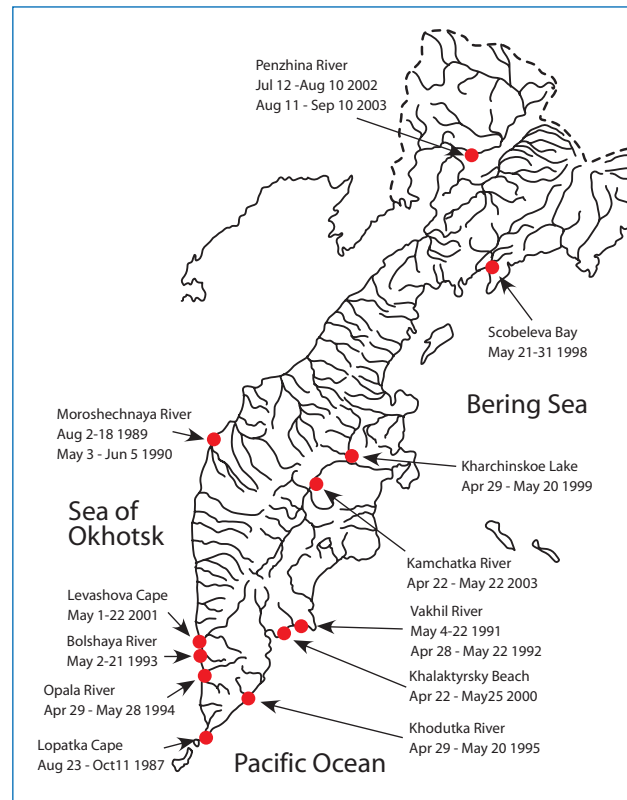


Fig. 1. Main locations where shorebird migration studies have been carried out on Kamchatka. Observations at Lopatka Cape were conducted by Lobkov (2003); all other observations were carried out by the author.

was not seen on west coast of the peninsula. So these species may be arriving at Kamchatka at high altitude and flying into the central part of the peninsula only after crossing its eastern mountain range, before dispersing to breed throughout the peninsula. Thousands of Common Snipe *Gallinago gallinago* and Long-toed Stints *Calidris subminuta* pass by Kharchinskoe Lake during the second half of May, but accurate counts could not be made as these species were migrating mainly at night. In contrast to the west coast, surveys in 1991, 1992, 1995 and 2000 found only small number of shorebirds using different parts of the south-east coast of the peninsula (Gerasimov 2001).

The various surveys permit a minimum estimation of the total numbers of different shorebirds using the peninsula during northward migration (Table 2).

There is much less information available for southward (autumn) migration. However, both areas surveyed – the mouth of Penzhina River in north-east Kamchatka and the Moroshechnaya Estuary on its mid-east coast – are important as staging places for shorebirds (Gerasimov & Gerasimov 1997, 1999, Huettmann & Gerasimov 2002, Gerasimov 2003, 2004). However, observations showed that shorebirds generally remain

Table 1. Numbers of shorebirds counted in different parts of Kamchatka.

Species	Northward migration (spring)					Southward migration (autumn)
	1990	1991	1993	1994	1999	2002 & 2003
	Moroshechnaya	Vakhil	Bolshaya	Opala	Karchin-skoe	Penzhina
	Estuary E coast	River mouth SE coast	River mouth SW coast	River mouth SW coast	Lake central	River mouth NE coast
Pacific Golden Plover	156	43	3	1	122	475
Grey Plover	129	5	–	–	–	85
Common Ringed Plover	–	–	–	–	1	55
Lesser Sand Plover	393	279	71	43	683	48
Eurasian Oystercatcher	440	–	1	–	–	1
Red-necked Phalarope	–	–	–	–	–	10 776
Grey Phalarope	–	–	–	–	–	2
Ruddy Turnstone	353	49	86	8	4	2
Dunlin	39 509	1 347	54 993	33 821	7 290	370 136
Long-toed Stint	–	33	–	–	130	18
Temminck's Stint	–	–	–	–	8	109
Red-necked Stint	19 489	60	1 583	894	1 101	62 774
Sharp-tailed Sandpiper	–	–	–	–	–	5
Sanderling	2	–	–	–	–	30
Red Knot	188	77	–	90	–	51
Great Knot	35 985	364	–	343	46	12
Spoon-billed Sandpiper	107	1	–	–	–	1
Ruff	–	–	–	–	6	22
Wood Sandpiper	87	75	1	2	3 600	1 260
Spotted Redshank	2	4	–	1	13	321
Common Greenshank	13	55	22	6	1 652	48
Grey-tailed Tattler	–	–	–	–	24	195
Wandering Tattler	–	–	–	–	–	1
Common Sandpiper	5	2	4	–	10	76
Terek Sandpiper	162	–	–	–	18	383
Long-billed Dowitcher	–	–	–	–	–	210
Black-tailed Godwit	54	40	16	14	3 722	–
Bar-tailed Godwit	1 813	726	284	2 747	60	145
Eastern Curlew	80	434	173	552	56	19
Whimbrel	1 959	2 542	137	5 341	1	125
Common Snipe	3	3	5	1	*	53
TOTAL	100 929	6 119	57 379	43 865	18 547	447 438

Table 2. Estimates of minimum numbers of the main shorebird species using Kamchatka during northwards (spring) migration.

Species	West coast	Central peninsula	East coast	Total
Grey Plover	1 000	–	1 000	2 000
Pacific Golden Plover	1 000	500	500	2 000
Lesser Sand Plover	2 000	1 000	2 000	5 000
Ruddy Turnstone	1 000	–	2 000	3 000
Eurasian Oystercatcher	500	–	–	500
Wood Sandpiper	10 000	10 000	5 000	25 000
Common Greenshank	5 000	5 000	2 000	12 000
Red-necked Stint	100 000	10 000	10 000	120 000
Dunlin	200 000	20 000	30 000	250 000
Great Knot	40 000	500	2 000	42 500
Red Knot	3 000	–	–	3 000
Eastern Curlew	1 000	200	300	1 500
Whimbrel	10 000	–	5 000	15 000
Black-tailed Godwit	1 000	5 000	1 000	6 000
Bar-tailed Godwit	10 000	–	1 000	11 000
TOTAL	385 500	52 200	61 800	498 500

at the Penzhina River mouth in north-east Kamchatka for only one day, as there are no suitable roosting places for species such as Dunlin and Red-necked Stint during high tide. In addition, large numbers of shorebirds overfly the mudflats and so are not included in the mudflat counts.

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A Red-necked Stint *Calidris ruficollis* colour marked in Australia. Many thousands of stints pass through Kamchatka on spring and autumn migration, and colour-marking has assisted in understanding the migration ecology of this species on the East Asian – Australasian Flyway. Photo: Chris Wilson.