tundra was dry. Almost no waders occurred.

(L.I. Barsova)

15. Chukotka - southern coast

The unusually heavy winter snowfalls resulted in the tundra snow cover remaining for 4-6 weeks longer than in an average year. A mass arrival of waders took place at the beginning of the snow melt. The summer was relatively warm, though July and August experienced almost continuous rain. This caused widespread flooding in the river valleys. Arctic Foxes, Snowy Owls and skuas (three species) were numerous during summer. This is unusual as these species are normally only abundant in the area only winter and spring.

(N.B. Konyukhov)

16. Central and Northern Taymyr

At Malaya Logata, the 1989 breeding season was very poor for many tundra birds. Firstly, spring was two weeks later than normal and was accompanied by snow storms until 30 June. Secondly, predation by Arctic Foxes on both eggs and young was high because of low lemming (mainly Siberian Lemming) and high Arctic Fox abundance. For example, at Malaya Logata many breeding waders had started to breed very late, but few of them were able to raise their chicks. There was probably hardly any successful breeding of Brent Geese Branta bernicla in Taymyr in 1989. Potential breeding islands were still linked to the mainland by ice in late June so that Arctic Foxes could easily reach them. Although one nest of Knot Calidris canutus was found on the Sturmanov Peninsula, the large flocks of Knots and Bar-tailed Godwits present by mid-July indicated that the breeding season for many birds had already finished without success.

(P. Prokosch, H. Hotker)

CONCLUSIONS

As predicted in the previous year (WSG Bull. 57: 40-41) in most north-eastern parts of Europe and on Yamal Peninsula the high number of lemmings remained to the beginning of the 1989 summer and then decreased sharply. In more eastern regions (Gydan, Taymyr, Yakutya, Vrangel Island and many parts of Chukotka) the decrease of lemming numbers started earlier. The greater variety of conditions in the mountain regions of Chukotka resulted in some pockets remaining, with high lemming numbers. Arctic Foxes, which

reproduced numerously in 1988, did not reproduce in 1989, with the exception of some sites in Chukotka. They occurred in high numbers on the Bol'shezemel'skaya Tundra, on the Yugorskiy, Yamal and Gydan Peninsulas and on Vrangel Island. Widely roaming Arctic Foxes were noticed in northern Yakutya and in Chukotka. Where there were no lemmings, Arctic Foxes destroyed all nests and nestlings. As a result, there was extremely low breeding success of wader and other bird species in all northern tundras of the USSR.

In some areas, bad weather added further unfavourable effects for birds. In the European North and in the Yamal Peninsula, the spring was very early with a warm but wet summer, causing high nest (Yamal) and nestling (Murmansk coast) losses. In Gydan Peninsula the weather was average, whereas on Sibiryakov Island, in Taymyr and Yakutya coast, spring was much later, and the summer was cold (even with snowfalls). In Chukotka and on Vrangel Island, the weather generally was 'normal', though in some regions spring was either early or late, and summer - either dry or damp. In the Chaun lowland for example, the summer coolness and snowfall was the reason for the massive loss of wader clutches.

It is very difficult to predict the general conditions for waders breeding in 1990. It seems, however, that in some regions of Yakutya and Chukotka there will be major increase in lemming numbers. The number of Arctic Foxes in some regions ought to decrease because of food shortage, giving good prospects for small birds in 1990.

(P.S. Tomkovich)

Recent Ringing Totals

By Robin M. Ward

Tables 1 & 2 list the ringing totals listings that we have received for the period January to December 1990 inclusive. In addition, since the publication of the ringing totals listings for the years 1987 to 1989, we have received some additional listings for those years. These are listed in Table 3. The nomec; ature and sysetmatic order used in the tables follow Hayman *et al* (1986). Totals given in parentheses are for chicks, where these were reported separately from fully grown birds. For Western Europe the listings are providing an indication of both the species and numbers of waders being ringed. However, this has yet to be attained for other parts of the world, most notably, North America. We would like to encourage all members worldwide who catch and ring waders to send us their ringing totals enabling us to present the global picture.



Table 1. Reported totals of waders ringed in Europe between January and December 1990

		∢	В	υ	Q	ш	Ħ	ß	Н	I	5	М	1	×	z	0
Haematopus ostralegus	Eurasian Oystercatcher									15		13(75)	0(3)			
Recurvirostra avosetta	Pied Avocet								3(0)							
Vanellus vanellus	Northern Lapwing						-	(65)9	3(0)	79	0(17)	8(189)	0(45)	0(21)	47(577)	43
Pluvialis apricaria	Eurasian Golden Plover					-				4		102(1)		0(4)		7
Pluvialis fulva	Pacific Golden Plover	7		3(0)												
Pluvialis squatarola	Grey Plover	35	100	24(27)						3						7
Charadrius hiaticula	Ringed Plover	∞	\$			7			(0)	46		(72)09		12(1)		11
Charadrius dubious	Little Ringed Plover															1
Charadnus alexandrinus	Kentish Plover								10(2)							
Limosa limosa	Black-tailed Godwit										0(18)					
Limosa lapponica	Bar-tailed Godwit															==
Numenius phaeopus	Whimbrel									1		0(4)				
Numenius arquata	Eurasian Curlew									2		45(137)	0(10)	(5)		Z
Tringa totanus	Redshank							0(1)		16	2(5)	19(16)	0(10)	£(1)	(6)0	16
Tringa nebularia	Greenshank									1						
Tringa glareola	Wood Sandpiper									œ						
Arenaria interpres	Ruddy Turnstone	55	46							4		34(0)		(O) 9		
Phalaropus lobatus	Red-necked Phalarope		10	4(3)												
Phalaropus fulicarius	Grey Phalarope	7	4													
Scolopax rusticola	Eurasian Woodcock									-		4(0)		2(1)		
Gallinago gallingo	Common Snipe									31		71(3)		6(0)	0(13)	
Lymnocryptes minimus	Jack Snipe									46		16(0)				
Calidris canutus	Red Knot	35								53		2(0)		1(0)		
Calidris alba	Sanderling	-								1		37(0)				
Calidris minuta	Little Stint	257	139	32(35)						37		3(0)				
Calidris temminckii	Temminck's Stint	-		7(8)	4(0)					3						
Calidris maritima	Purple Sandpiper	4								4		128(0)				
Calidris alpina	Dunlin		83	27(43)				21(23) 169(86)	(98)691	754	44(62)	47(10)		80(0)		199
Calidris ferruginea	Curlew Sandpiper	98	49							74				3(0)		60
Philomachus pugnax	Ruff				32(0)					6	0(12)					



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Haematopus ostralegus	Eurasian Oystercatcher	1	328(0)	1029(0)	3(3)	2(25)	1	0(2)		1(0)		16(0)	45	3(0)	89
Recurvirostra avosetta	Pied Avocet					1(0)		0(3)					531		
Vanellus vanellus	Northern Lapwing				Ç	2(14)		0(23)	3			1(0)		9(95)	
Pluvialis apricaria	Eurasian Golden Plover											1(0)		1(0)	
Pluvialis sauatarola	Grey Plover	-		321(0)		16(0)	1		7	26(0)	60	127(0)	6	4(0)	21
Charadrius hiaticula	Ringed Plover	17	23(0)	14(0)	19(12)	5(1)	3		4	(0)9	82	(0)59	10	2(0)	
Charadrius dubious	Little Ringed Plover										18	2(0)			
Charadrius alexandrinus	Kentish Plover												143		
Limosa limosa	Black-tailed Godwit			1(0)		1(0)			11						
Limosa lapponica	Bar-tailed Godwit			(0)09						8(0)	1	20(0)	∞	1(0)	10
Numerius phaeopus	Whimbrel				1(0)					3(0)		4(0)			
Numerius arauata	Eurasian Curlew		1(0)	1(0)	2(0)	(0)8	7	-				8(0)	13		32
Tringa erythropus	Spotted Redshank						,			1(0)	6	4(0)		1(0)	
Tringa totanus	Redshank		110(0)	340(0)	1(1)	16(4)	œ	0(1)	8	(0)62	83	105(0)	10	22(0)	4
Tringa nebularia	Greenshank		2(0)	2(0)		4(0)	1		16	1(0)		3(0)	1		6
Tringa ochropus	Green Sandpiper					(0)9			1		-				
Tringa glareola	Wood Sandpiper									(0)6	19				
Actitis hypoleucos	Common Sandpiper							1(0)	7	16(0)	92	33(0)			
Arenaria interpres	Ruddy Turnstone	-	(0)/2	136(0)	22(0)	1(0)				45(0)	4	21(0)	7	3(0)	7
Scolopax rusticola	Eurasian Woodcock	1			3(0)										
Gallinago gallingo	Common Snipe				16(0)	12(0)	1		-	24(0)	4	32(0)			
Lymnocryptes minimus	Jack Snipe	7			7(0)	(0)6						24(0)			
Calidris canutus	Red Knot			1134(0)		1(0)			7	198(0)	8.1	121(0)	56	19(0)	42
Calidris alba	Sanderling	-		(0)/9						16(0)	19	1(0)			
Calidris minuta	Little Stint					1(0)			7	34(0)	612	14(0)			
Calidris temminckii	Ternminck's Stint									1(0)	7				
Calidris maritima	Purple Sandpiper	-		8(0)								1(0)			
Calidris alpina	Dunlin	62		6548(0)	108(0)	621(0)	76		291	2756(0)	3558	2129(0)	105	384(0)	319
Calidris ferruginea	Curlew Sandpiper			10(0)	1(0)	14(0)			6	144(0)	214	(0)28	-	7(0)	
Limicola falcinellus	Broad-billed Sandpiper									2(0)	10	1(0)			
Philomachus pugnax	Ruff	1				1(0)				16(0)	38	3(0)			2



3 3 6 6 42 7 ₽ 9 ద 136 ö Z 959 ₹ 75 139(0) 310(0) 43(48) 563(0) 122(0) 8(250) 162(0) 23(0) 0(1) 73(8) 1(0) 102(0) 2(0) 17(0) 88 9 <u>5</u>0 9 <u>%</u> 30 コ 0(265) (86) 0(12) 6(20) 0(22) 9 \mathbf{Z} 12 52 7 41 6 28 8 Ξ 138 562 32 56 Ξ જ 59 95(0) 138(0) 346(2) 68(4) 9 600 2(19) 14(0) 2(0) 7(0) 1(0) 34(2) 47(0) **2**(0) 79(0) ច 16(11) 28(91) 14(10) 13(7) 1(34) <u>(0)</u> 11(0) 4(0) <u>1</u> Ξ Ε 13 55 21(27) 3(0) 6(0) 222(0) 2(0) 3(0) 20(0) 7(0) 76(0) ā 1(0) 1(0) 9 **6** 92 Eurasian Golden Plover Broad-billed Sandpiper Eurasian Oystercatcher Little Ringed Plover Black-tailed Godwit Common Sandpiper Eurasian Woodcock Black-winged Stilt Northern Lapwing Mountain Dotterel Curlew Sandpiper Bar-tailed Godwit Spotted Redshank Ruddy Turnstone Purple Sandpiper Wood Sandpiper Eurasian Curlew Green Sandpiper Common Snipe Kentish Plover Ringed Plover Grey Plover Pied Avocet Greenshank Whimbrel Jack Snipe Sanderling Little Stint Redshank Red Knot Dunlin Table 1. (continued) Himanotopus himanotopus Charadrius alexandrinus Haematopus ostralegus Recurvirostra avosetta Charadrius morinellus Lymnocryptes minimus Charadrius hiaticula Philomachus pugnax Pluvialis squatarola Charadrius dubious Numenius phaeopus Calidris ferruginea Limicola falcinellus Gallinago gallingo Pluvialis apricaria Numenius arquata Arenaria interpres Scolopax rusticola Limosa lapponica Calidris maritima Vanellus vanellus l'ringa erythropus Actitis hypoleucos Tringa nebularia Tringa ochropus Calidris canutus Limosa limosa Tringa glareola Calidris minuta Calidris alpina Tringa totanus Calidris alba



		R1	S1	T 1	U1	V 1	W 1	X 1	Y 1
Haematopus ostrale gus	Eurasian Oystercatcher				2				
Himanotopus himanotopus	Black-winged Stilt		20	0(4)	1				(30)
Recurvirostra avosetta	Pied Avocet	38		0(6)	2	3			(2)
Burhinus oedicneaus	Stone Curlew			2(0)					(2)
Glareola pratincola	Common Pratincole		17						(7)
Vanellus vanellus	Northern Lapwing	10	20	0(18)	3				
Pluvialis apricaria	Eurasian Golden Plover				2				
Pluvialis fulva	Pacific Golden Plover		2						
Pluvialis squatarola	Grey Plover		9		4	1			
Charadrius hiaticula	Ringed Plover		1		10	3	1(0)		
Charadrius dubious	Little Ringed Plover	14	225	6(3)	9				
Charadrius alexandrinus	Kentish Plover	68	441	0(1)	57	52			(10)
Charadrius leshenaultii	Greater Sandplover		7						
Charadrius asiaticus	Caspian Plover		38						
Limosa limosa	Black-tailed Godwit		9		26				
Limosa lapponica	Bar-tailed Godwit			1(0)		5			
Numenius phaeopus	Whimbrel		11		10			2(0)	
Numenius arquata	Eurasian Curlew				1				
Tringa erythropus	Spotted Redshank	1	1		5	1			
Tringa totanus	Redshank	198	700	2(0)	2	46		1(0)	
Tringa stagnatalis	Marsh Sandpiper		23						
Tringa nebularia	Greenshank		1	1(0)	6	1		1(0)	
Tringa ochropus	Green Sandpiper		6	2(0)	1				
Tringa glareola	Wood Sandpiper	4	18	31(0)	7				
Xenus cinereus	Terek Sandpiper		222						
Actitis hypoleucos	Common Sandpiper	4	55	11(0)	61			12(0)	
Arenaria interpres	Ruddy Turnstone	1	9		3				
Phalaropus lobatus	Red-necked Phalarope	3	176						
Scolopax rusticola	Eurasian Woodcock				1				
Gallinago sterura	Pintail Snipe		1						
Gallinago gallingo	Common Snipe		176	3(0)	4	1	1(0)		
Gallinago media	Great Snipe				3				
Calidris alba	Sanderling				2				
Calidris minuta	Little Stint	5	453	12(0)	287	23			
Calidris subminuta	Long-toed Stint		18						
Calidris temminckii	Temminck's Stint		669						
Calidris alpina	Dunlin	69	8	9(0)	597	76	29(0)		
Calidris ferruginea	Curlew Sandpiper	128	524	7(0)	71	59	1(0)		
Limicola falcinellus	Broad-billed Sandpiper	21	12						
Philomachus pugnax	Ruff	5	84	15(0)	188				



Table 1. (continued)

KEY:

- Beringergemeinschaft Nordfriesisches Wattenmeer, Germany: Taimyr Peninsula. Siberia. ⋖
- Gdansk Ornithological Station, Poland: Sibiriakov Is., Taimyr, Siberia.
 - V.K.Ryabitser, Inst. of Plant & Animal Ecology, Ekatezinburg, USSR North Yamal.
- N.S. Alekseeva, Inst. of Plant & Animal Ecology, Ekatezinburg, USSR: Mid Yamal.
 - V.V.Morozov, USSR Research Institute of Nature Conservation & Reserves, Moscow: East Bol'shezemel'skaya tundra.
 - V.V.Morozov, USSR Research Institute of Nature Conservation & Reserves, Moscow: Vinogradovo, Moscow Region.
- D.Blomqvist & O.C.Johansson, University of Gotteborg, Sweden: Bohuslan & Halland Provinces.
 - P.E.Jonsson, University of Lund, Sweden: Falsterbo, SW Scania.
- Lista Ringing Group, Norway: Lista, Forsund & Flekhefjord community. Ole Thorup, Denmark: Tipperne Nature Reserve, Ringkobing Fjord.
 - Orkney Ringing Group, U.K.: Orkney Islands. F.J.Mawby, U.K.: Solway marshes & mosses.
- P.S. Thompson, Durham University, U.K.: Upper Teesdale, Co. Durham & Durham Ringing Group, U.K.: Vice-county Durham (66).
 - es Ringing Group, U.K.: N. Yorkshire moors & Teesmouth, Cleveland. Asby Mask, Cumbria.
 - Spurn Bird Observatory, U.K.: Spurn Point, Humberside.
 - SCAN Ringing Group, U.K.: Lavan Sands, North Wales. Wash Wader Ringing Group, U.K.: Wash
- Landguard Ringing Group, U.K.: Landguard Point, R.Deben & R.Orwell Suffolk..
 - Catchpole, West & Peters, U.K.: Suffolk coast. M.Wright, U.K.: Falkenham, Suffolk.
 - M.A.Adcock, U.K.: Foulness, Essex.
- Farlington Ringing Group, U.K.: South-east Hampshire.
- Gdansk Ornithological Station, Poland: Vistuala mouth (Gulf of Gdansk) Waterfowl Research Group "Kuling", Poland: Puck Bay
 - U.Brenning et al, University of Rostock, Germany (East): Langenwerder

- Beringergemeinschaft Nordfriesisches Wattenmeer, Germany: Schleswig-Holstein Wadden-Sea. A
 - Onnen, Germany: Crildumersiel, Friesland.
- G.Nikolaus, Germany: Wadden-Sea, R.Weser
- Inselstation Helgoland des IFV Vogelwarte Helgoland: Helgoland
 - O.A.G.Munster, Germany: Sewage farms of Munster. G.J.Gerritsen, Netherlands: West-Overyssel.
- Stelthperringgroep FFF, Netherlands: Provinces of Friesland & Groningen.
- Universty of Amsterdam Ringing Group, Netherlands: Schiermonnikoog Friesland CUERER
 - G.Th.De Roos, Agric. University, Vlieland, Netherlands: Vlieland & Dan Helder, Waddensea П
 - Castricum Bird Ringing Station, Netherlands: Castricum.
 - P.L.Meininger, Netherlands: Delta area.
- Office National de la Chasse, France: Departments of Vendee & Loire Atlantique. 보조고
 - Office National de la Chasse, France: Department of Gironde. Office National de la Chasse, France: France.
 - P.Delaporte & P.J.Dubois, L.P.O., France: Marais de L'ouest.
 - O.Pineau, France: Department of Herault.
 - Z22Z2Z
- A. Korzjukov, Odessa State University, USSR.: Odessa region of Black G.Nikolaus & A.Kabakov, Germany: Black Sea Reserve, Ukrainian
- Laboratory of Ornithology, Academy Sciences of Kazakh SSR, USSR.: South-east of Kazakhstan, Lake Alakol. S
 - All ringers in Yugoslavia: Yugoslavia.
- Anonima Limicoli, Italy: Northern Italy (3 main sites)
- Catalan Ringing Group, Spain: Ebro Delta, Tarragona

 - Gaivoton Ringing Group, Spain: O Grove. Gaivoton Ringing Group, Spain: Vigo.
 - Parque Nacional de Donana, Spain: Parque Nacional de Donana. **122**₹22

Table 2.	Reported	totals of	waders	ringed	outside	Europe	during	1990

		A	В	С	D	E	F	G	н	I	J	
								1				
Microparra capensis	Lesser Jacauna						1	3				
Actophilornis africana	African Jacauna					2	1 29	2				
Rostulata benghalenisis	Painted Snipe				((0)	L	29	2				
Dromas ardeola	Crab Plover			2400	6(0)					02(0)		
Haematopus ostralegus	Eurasian Oystercatcher			2(0)						92(0)	7(0)	
Haematopus fuliginous	Sooty Oystercatcher							•		16(0)	7(0)	
Himanotopus himanotopus	Black-winged Stilt			0(0)				2			41(0)	
Recurvirostra avosetta	Pied Avocet			2(0)							12(0)	
R. novaehollandie	Red-necked Avocet						•				13(0)	
Burhinus senegalensis	Senegal Thick-knee			0(2)		1	2					
Glareola pratincola	Common Pratincole			0(2)					722(0)		9470	
Glareola maldivarum	Oriental Pratincole							8	733(0)		84(0)	
Vanellus armatus	Blacksmith Plover			1.(2)			1	0				
Vanellus spinosus	Spur-winged Plover			1(2)			1	•				
Vanellus senegallus	Senegal Wattled Plover							2			470	
Vanellus miles	Masked Lapwing								1.470	10(0)	4(0)	
Pluvialis fulva	Pacific Golden Plover	_							14(0)	13(0)		
Pluvialis dominica	American Golden Plover	7									22/01	
Pluvialis squatarola	Grey Plover	2		7(0)				1			22(0)	
Charadrius hiaticula	Ringed Plover			5(0)	3(0)	1	6					
Charadrius dubious	Little Ringed Plover						2		1(0)			
Charadrius melodus	Piping Plover		0(5)									
Charadrius pecuarius	Kittlitz's Sandplover			2(9)		1	1	11				
Charadrius tricollaris	Three-banded Plover							2				
Charadrius alexandrinus	Kentish Plover			86(66)								
Charadrius marginatus	White-fronted Plover							2				
Charadrius ruficollis	Red-capped Plover									2(0)	41(0)	
Charadrius bicinctus	Double-banded Plover									245(0)		
Charadrius mongolus	Lesser Sandplover										82(0)	
Charadrius leschenaultii	Greater Sandplover										769(0)	
Charadrius veredus	Oriental Plover										5(0)	
Charadrius melanops	Black-fronted Plover										4(0)	
Charadrius cinctus	Red-kneed Dotterel										102(0)	
Limosa haemastica	Hudsonian Godwit									926(0)		
Limosa lapponica	Bar-tailed Godwit									120(0)		
Numenius phaeopus	Whimbrel				1(0)						10(0)	
Numenius madagascariensis	Far Eastern Curlew									133(0)	1(0)	
Tringa totanus	Redshank			11(0)	2(0)	1	5					
Tringa stagnatalis	Marsh Sandpiper					2	3	14			28(0)	
Tringa nebularia	Greenshank			2(0)		1	1	1	2(0)		9(0)	
Tringa ochropus	Green Sandpiper					1	1					
Tringa glareola	Wood Sandpiper					2	12	47	9(0)		1(0)	
Xenus cinereus	Terek Sandpiper										427(0)	
Actitis hypoleucos	Common Sandpiper			1(0)		4	6	6	6(0)			
Actitis macularia	Spotted Sandpiper		21(35)									
Heteroscelus brevipes	Grey-tailed Tattler										781(0)	
Phalaropus lobatus	Red-necked Phalarope	50										
Phalaropus fulicarius	Grey Phalarope	36										
Arenaria interpres	Ruddy Turnstone			1(0)				3		100(0)	168(0)	
Gallinago stenura	Pintail Snipe	•							24(0)			
Gallinago megala	Swinhoes's Snipe								1(0)		1(0)	
Gallinago nigripennis	African Snipe							33				
	-											



	A	В	С	D	E	F	G	Н	I	J
Common Snipe						3				
Long-billed Dowitcher	1									
Asiatic Dowitcher										10(0)
Red Knot									7(0)	173(0)
Great Knot										642(0)
Sanderling			4(0)							
Semipalamated Sandpiper	203									
Red-necked Stint									3959(0) 450(0)
Little Stint			337(0)	5(0)	40	70	94			
Long-toed Stint								1		4(0)
Temminck's Stint						2				
White-rumped Sandpiper	1									
Bairds Sandpiper	2									
Pectoral Sandpiper	118									
Sharp-tailed Sandpiper									110(0)	95(0)
Dunlin	15		216(0)	1(0)		16				
Curlew Sandpiper			70(0)			1	86		1247(0) 401(0)
Broad-billed Sandpiper			45(0)	1(0)						162(0)
Stilit Sandpiper	45									
Buff-breasted Sandpiper	41									
Ruff			14(0)		17	17	127			
	Long-billed Dowitcher Asiatic Dowitcher Red Knot Great Knot Sanderling Semipalamated Sandpiper Red-necked Stint Little Stint Long-toed Stint Temminck's Stint White-rumped Sandpiper Bairds Sandpiper Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Broad-billed Sandpiper Stilit Sandpiper Stilit Sandpiper	Common Snipe Long-billed Dowitcher Asiatic Dowitcher Red Knot Great Knot Sanderling Semipalamated Sandpiper Red-necked Stint Little Stint Long-toed Stint Temminck's Stint White-rumped Sandpiper Bairds Sandpiper Pectoral Sandpiper Dunlin 15 Curlew Sandpiper Broad-billed Sandpiper Stilit Sandpiper 45 Buff-breasted Sandpiper 41	Common Snipe Long-billed Dowitcher 1 Asiatic Dowitcher Red Knot Great Knot Sanderling Semipalamated Sandpiper 203 Red-necked Stint Little Stint Long-toed Stint Temminck's Stint White-rumped Sandpiper 1 Bairds Sandpiper 2 Pectoral Sandpiper 118 Sharp-tailed Sandpiper Dunlin 15 Curlew Sandpiper Broad-billed Sandpiper Stilit Sandpiper 45 Buff-breasted Sandpiper 41	Common Snipe Long-billed Dowitcher 1 Asiatic Dowitcher Red Knot Great Knot Sanderling 4(0) Semipalamated Sandpiper 203 Red-necked Stint Little Stint 337(0) Long-toed Stint Tenminck's Stint White-rumped Sandpiper 1 Bairds Sandpiper 2 Pectoral Sandpiper 118 Sharp-tailed Sandpiper Dunlin 15 216(0) Curlew Sandpiper 70(0) Broad-billed Sandpiper 45 Buff-breasted Sandpiper 45	Common Snipe Long-billed Dowitcher 1 Asiatic Dowitcher Red Knot Great Knot Sanderling 4(0) Semipalamated Sandpiper 203 Red-necked Stint Little Stint 337(0) 5(0) Long-toed Stint Tennminck's Stint White-rumped Sandpiper 1 Bairds Sandpiper 2 Pectoral Sandpiper 118 Sharp-tailed Sandpiper Dunlin 15 216(0) 1(0) Curlew Sandpiper 70(0) Broad-billed Sandpiper 45 Buff-breasted Sandpiper 45 Buff-breasted Sandpiper 41	Common Snipe Long-billed Dowitcher 1 Asiatic Dowitcher Red Knot Great Knot Sanderling 4(0) Semipalamated Sandpiper 203 Red-necked Stint Little Stint 337(0) 5(0) 40 Long-toed Stint Tennminck's Stint White-rumped Sandpiper 1 Bairds Sandpiper 2 Pectoral Sandpiper 118 Sharp-tailed Sandpiper Dunlin 15 216(0) 1(0) Curlew Sandpiper 70(0) Broad-billed Sandpiper 45 Buff-breasted Sandpiper 45 Buff-breasted Sandpiper 41	Common Snipe	Common Snipe	Common Snipe	Common Snipe Long-billed Dowitcher Asiatic Dowitcher Red Knot Sanderling Semipalamated Sandpiper 203 Red-necked Stint Little Stint Long-toed Stint Temminck's Stint Bairds Sandpiper 2 Pectoral Sandpiper 118 Sharp-tailed Sandpiper Dunlin 15 216(0) 1(0) 10 Stilit Sandpiper 45 Buff-breasted Sandpiper 41

KEY

- Troy Ecological Research, USA: Prudhoe Bay, Alaska Oring, Nevada University, USA: N.C.Minnesota P.L.Meininger et al (WIWO/FORE/IWRB project): Nile Delta, Egypt
- B C D B.Behrouzi-Rad, Iran: Bandar abbas
- P.Delaporte & P.J. Dubois, L.P.O., France: Parc National du Djoudj, Senegal A.Sauvage et al (O.A.G.Munster/Rijksinstituut voor Natuurbeheer/CRBPO project): Parc National du Djoudj, Senegal A.J.Tree & D.A.de la Harpe, Zimbabwe: Zimbabwe Australasian Wader Study Group, Australia: Java, Indonesia Victorian Wader Study Group, Australia: Coast of Victoria, Australia
- G
- Η
- I
- Australasian Wader Study Group, Australia: N.W. Australia.



Table 3. Additions to reported totals of waders ringed in and outside Europe during 1987-89

Rostulata benghalenisis Painted Snipe 10 70 Haematopus ostralegus Oystercatcher 5(5) Himanotopus himanotopus Black-winged Stilt 2 Recurvirostra avosetta Pied Avocet 10 Burhinus senegalensis Senegal Thick-knee 1 4 Glareola pratincola Common Pratincole 1								_
Nostitata desgratates States S			A	В	С	D	E	F
Himmanotopus Bilack-winged Stilt 2 Recurvirostra avosetta Pied Avocet 10 Burhinus senegalensis Senegal Thick-knee 1 4 Glareola pratincola Common Prutincole 1 Vanellus vanellus Northern Lapwing 0(28) 16(46) Vanellus spinosus Spur-winged Plover 7 3 Vanellus spinosus Spur-winged Plover 8 1 Charadrius suautarola Grey Plover 8 1 Charadrius dubious Little Ringed Plover 22 16 1 Charadrius dubious Little Ringed Plover 2 3 Charadrius dubious Kentish Plover 2 14 Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius phaeopus Whimbrel 2 2(7) 1 Tringa erythropus Spotted Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 Tringa nebularia Greenshank 5 5 5 5 5 Tringa ochropus Green Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 10 4(0) Lymnocryptes minimus Red Knot 8 2 Calidris canutus Red Knot 8 2 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea	Rostulata benghalenisis	Painted Snipe	10	70				
Burhinus senegalensis Senegal Thick-knee Burhinus senegalensis Senegal Thick-knee I	Haematopus ostralegus	Oystercatcher				5(5)		
Senegal Thick-knee 1	Himanotopus himanotopus	Black-winged Stilt	2					
Common Pratincole 1	Recurvirostra avosetta	Pied Avocet	10					
Vanellus vanellus Northern Lapwing	Burhinus senegalensis	Senegal Thick-knee	1	4				
Vanellus spinosus Spur-winged Plover 7 3	Glareola pratincola	Common Pratincole	1					
Pluvialis squatarola Grey Plover 8 1 Charadrius hiaticula Ringed Plover 1 5 1 6 Charadrius dubious Little Ringed Plover 2 3 Charadrius gecuarius Kittlitz's Sandplover 2 3 Charadrius alexandrinus Kentish Plover 2 14 Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius arquata Eurasian Curlew 2 7(7) 1 Tringa erythropus Spotted Redshank 2 5 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 Tringa nebularia Greenshank 5 5 5 Tringa glareola Wood Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1 Gallinago gallingo Common Snipe 1 10 4(0) Lymnocryptes minimus Red Knot 8 2 Calidris alba Sanderling Curlew Sandpiper 97 5 14 Calidris ferruginea Curlew Sandpiper 97 5 10 8	Vanellus vanellus	Northern Lapwing				0(28)		16(46)
Charadrius hiaticula Ringed Plover 22 16 1 6 6 Charadrius hiaticula Ringed Plover 1 5 1 6 6 Charadrius dubious Little Ringed Plover 2 3 3 Charadrius gecuarius Kittlitz's Sandplover 2 3 3 Charadrius alexandrinus Kentish Plover 2 14 Limosa limosa Black-tailed Godwit 76 6 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius phaeopus Whimbrel 2(7) 1 Tringa erythropus Spotted Redshank 2 Tringa erythropus Spotted Redshank 25 14 9(1) 1 0(1) Tringa stag natalis Marsh Sandpiper 4 Tringa nebularia Greenshank 5 5 5 5 5 5 5 7 5 7 7 1 Tringa glareola Wood Sandpiper 10 23 5 5 Actitis hypoleucos Common Sandpiper 1 1 1 1 30 Actitis hypoleucos Common Snipe 1 1 10 4(0) Lymnocryptes minimus Jack Snipe 3 3 3(0) Calidris canutus Red Knot 8 2 Calidris alba Sanderling Curlew Sandpiper 97 5 14 Calidris ferruginea Curlew Sandpiper 97 5 14 54 54 54 54 55 5 54 55 55 54 55 55 54 56 56 56 56 56 56 56 56 56 56 56 56 56	Vanellus spinosus	Spur-winged Plover	7	3				
Charadrius dubious Little Ringed Plover 1 5 1 6 Charadrius gubious Kittliu's Sandplover 2 3 Charadrius alexandrinus Kentish Plover 2 14 Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel Numenius phaeopus Whimbrel Numenius arquata Eurasian Curlew Tringa erythropus Spotted Redshank 2 7 Tringa totanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 Tringa nebularia Greenshank 5 5 5 5 5 5 Tringa ochropus Green Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1 Gallinago gallingo Common Snipe 1 1 10 4(0) Lymnocryptes minimus Jack Snipe 3 3(0) Calidris canutus Red Knot 8 2 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Pluvialis squatarola	Grey Plover	8	1				
Charadrius diabious Edite Ringer Flower 1 3 Charadrius pecuarius Kittlitz's Sandplover 2 14 Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius arquata Eurasian Curlew 2(7) 1 Tringa erythropus Spotted Redshank 2 7 Tringa fotanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 4 7 5 5 5 5 6 7 7 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 0(1)	Charadrius hiaticula	Ringed Plover	22	16			1	
Charadrius pecuarius Kittitus Sainipavotis 2 14 Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius arquata Eurasian Curlew 2(7) 1 Tringa erythropus Spotted Redshank 2 7 Tringa totanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 4 4 4 7 7 1 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 1 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0(1) 0	Charadrius dubious	Little Ringed Plover	1	5	1		6	
Limosa limosa Black-tailed Godwit 76 6 23(77) Numenius phaeopus Whimbrel 1 17(0) Numenius arquata Eurasian Curlew 2(7) 1 Tringa erythropus Spotted Redshank 2	Charadrius pecuarius	Kittlitz's Sandplover	2	3				
Dimbota times a limited 1 17(0) Numenius phaeopus Whimbrel 1 17(0) Numenius arquata Eurasian Curlew 2 2(7) 1 Tringa erythropus Spotted Redshank 2	Charadrius alexandrinus	Kentish Plover	2	14				
Numenius arquata Eurasian Curlew 2(7) 1 Tringa erythropus Spotted Redshank 2	Limosa limosa	Black-tailed Godwit	76	6		23(77)		
Tringa erythropus Spotted Redshank 2 Tringa totanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 4 5 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Numenius phaeopus	Whimbrel		1		17(0)		
Tringa totanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4 4 5 5 5 5 5 5 5 5 5 5 7	Numenius arquata	Eurasian Curlew				2(7)	1	
Tringa totanus Redshank 25 14 9(1) 1 0(1) Tringa stagnatalis Marsh Sandpiper 4	Tringa erythropus	Spotted Redshank	2					
Tringa nebularia Greenshank 5 5 Tringa ochropus Green Sandpiper 1 Tringa glareola Wood Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1 10 4(0) <	Tringa totanus	Redshank	25	14		9(1)	1	0(1)
Tringa neolitaria Green Sandpiper 1 Tringa glareola Wood Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1 10 4(0) 4(0) Lymnocryptes minimus Jack Snipe 3 3(0) 3(0) Calidris canutus Red Knot 8 2 2 Calidris alba Sanderling 2 2 Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Tringa stagnatalis	Marsh Sandpiper	4					
Tringa glareola Wood Sandpiper 10 23 5 Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1	Tringa nebularia	Greenshank	5	5			5	
Actitis hypoleucos Common Sandpiper 1 1 1 30 Arenaria interpres Ruddy Turnstone 1		Green Sandpiper		1				
Actitis hypoteucos Common Sanapaper 1 1 4(0) 4	Tringa glareola	Wood Sandpiper	10	23			5	
Gallinago gallingo Common Snipe 1 10 4(0) Lymnocryptes minimus Jack Snipe 3 3(0) Calidris canutus Red Knot 8 2 Calidris alba Sanderling 2 Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Actitis hypoleucos	Common Sandpiper	1	1	1		30	
Lymnocryptes minimus Jack Snipe 3 3(0) Calidris canutus Red Knot 8 2 Calidris alba Sanderling 2 Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Arenaria interpres	Ruddy Turnstone	1					
Calidris canutus Red Knot 8 2 Calidris alba Sanderling Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Gallinago gallingo	Common Snipe	1	10		4(0)		
Calidris candidas Red Klick Calidris alba Sanderling 2 Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Lymnocryptes minimus	Jack Snipe		3		3(0)		
Calidris alrea Sandelling Calidris minuta Little Stint 213 25 1 54 Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Calidris canutus	Red Knot	8				2	
Calidris alpina Dunlin 40 12 55 5(4) Calidris ferruginea Curlew Sandpiper 97 5 14	Calidris alba	Sanderling					2	
Calidris ferruginea Curlew Sandpiper 97 5 14	Calidris minuta	Little Stint	213	25	1		54	
Cauaris ferriginea Curiew Saintpipes	Calidris alpina	Dunlin	40	12			55	5(4)
Philomachus pugnax Ruff 170 17 2(0) 8	Calidris ferruginea	Curlew Sandpiper	97	5			14	
	Philomachus pugnax	Ruff	170	17		2(0)	8	

KEY

- A.Sauvage et al (O.A.G.Munster/Rijksinstituut voor Natuurbeheer/CRBPO project): Parc 1987: National du Djoudj, Senegal
- A.Sauvage et al (O.A.G.Munster/Rijksinstituut voor Natuurbeheer/CRBPO project): Parc 1988: National du Djoudj, Senegal
- A.Sauvage et al (O.A.G.Munster/Rijksinstituut voor Natuurbeheer/CRBPO project): Parc National du Djoudj, Senegal G.J.Gerritsen, The Netherlands: West-Overyssel Rozkos Ringing Group, Czechoslovakia: Rozkos dam, N.E. Bohemia D.Blomqvist & O.C.Johansson, University of Goteborg, Sweden: Bohuslan & Halland 1989: \mathbf{C}
 - D

 - E F provinces

