# Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme

Summer 2002 Report

Y. T. Yu



## Waterbird Monitoring at the Mai Po Inner Deep Bay Ramsar Site

#### Waterbird Count Coordinator

YU Yat Tung

#### **Project Funding**

Agriculture, Fisheries and Conservation Department

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Cover photo: Common Sandpiper Actitis hypoleucos at Mai Po (Photo by: WONG Tin Wa)

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# Waterbird Monitoring Programme at the Mai Po Inner Deep Bay Ramsar Site

### Summer 2002 Report

Y.T. Yu

## Introduction

Comprehensive counts of waterbirds in the Deep Bay area were first carried out as part of an annual waterbird census first undertaken by the Hong Kong Bird Watching Society (HKBWS) in 1979. These continued in January every winter (excluding 1980) until 1992-93 when they were expanded to cover the winter period from November to March. With the establishment of the Mai Po Inner Deep Bay Ramsar Site, a monthly waterbird monitoring programme was developed. This long-term project, which commenced in March 1998, was coordinated and carried out by the HKBWS and subvented by the Agriculture, Fisheries and Conservation Department. Monthly counts of waterbirds in the site form a major part of this programme, the others being counts of shorebirds during the migration season, and egretry surveys during the breeding season. This report concerns the monthly waterbird monitoring component.

## Methodology

The methodology used and the areas covered are described in detail in the *Waterbird Count Handbook* (Carey undated, Carey 2002, Map 1, Map 2). In general terms, however, it involves surveying specified areas and, where possible, mapping birds to individual fishponds or *gei wai*. Other variables, such as the vegetation surrounding each pond, the height of exposed edge to the pond and the percentage of pond bottom exposed as a result of drain-down are also measured. Tidal areas of Inner Deep Bay were surveyed simultaneously so as to ensure as little double-counting as possible occurs. During summer months counts occur at high tide. During the winter months when there are substantial numbers of birds in the bay and when there are no diurnal tides of a sufficient height to force inland all birds off the mudflat and onto roost sites inland, counts occur on a rising tide, preferably one that comes to about 2.0 m. Higher counts of individual species one week either side of the count day.

Monthly summary reports are produced, while seasonal reports are produced bi-annually, one for the summer period from April to September, and the other for the winter period from October to March. This report concerns the summer period of 2002.

## Results

The results of each monthly count are provided in detail in Appendix 1.

## April

The April 2001 waterbird count took place on the 14<sup>th</sup>. Coverage of the Ramsar Site and the Deep Bay area was complete. A total of 10,399 waterbirds was counted in the Deep Bay area including the Futian National Nature Reserve at Shenzhen, of which 8319 (80%) were present in the Ramsar Site. The largest group in April comprised waders, whose peak of occurrence in terms of numbers occurs in the latter half of the month. Up to 8318 (80%) waders were counted. The next largest group is ardeids, and a total of 1745 (17%) were counted in the Deep Bay area. No Great Cormorants were counted, while ducks and grebes have dropped to low numbers at this time of year, and only 130 (1%) were counted. Table 1 summarizes the April count. Table 2 compares the total of Deep Bay area and the Ramsar Site with previous years.

	Deep Bay Area	%	Ramsar Site	%	SW	SI
Cormorants	0	0.0	0	0.0	0	0
Ardeids etc	1745	16.8	965	11.6	49	677
Ducks, grebes, pelicans	130	1.3	58	0.7	0	3
Rails, Coot etc	127	1.2	65	0.8	0	11
Waders	8318	80.0	7152	86.0	16	6
Gulls and terns	79	0.8	79	0.9	0	0
TOTAL	10399	100	8319	100	65	697

Table 1. Summary of waterbird count for April 2002.

SW: Shuen Wan, SI: Starling Inlet

Table 2. April	waterbird counts	1998-2002.
----------------	------------------	------------

April	1998	1999	2000	2001	2002	Average	Std. Dev.
Deep Bay area	n/c	11,686	8049	12,858	10,399	10,748	2061
Ramsar Site	n/c	11,148	7826	11,683	8319	9744	1953

n/c: not counted

Table 2 shows that this year's Deep Bay area count was similar to the average, but that the number present in the Ramsar Site was lower than the average. It is because a total 1221 waterbirds were recorded at Futian.

## May

The May 2001 waterbird count took place on the 12<sup>th</sup>, and all sites within the Ramsar Site and Deep Bay area were surveyed. A total of 8028 waterbirds was recorded in the Deep Bay area, including Futian National Nature Reserve, Shenzhen, of which 7000 (87%) were present in the Ramsar Site. Waders comprised the largest group of birds, numbering 6276 (78%), and ardeids formed the second largest group, with 1657 (21%) present. This reflects the fact that some migrant waders were still present in Deep Bay area at this time of the year. Table 3 summarizes the May count. Table 4 compares the totals for the Deep Bay area and the Ramsar Site to previous years.

	Deep Bay Area	%	Ramsar Site	%	SW	SI
Cormorants	0	0.0	0	0.0	0	0
Ardeids etc	1657	20.6	1082	15.5	37	797
Ducks, grebes, pelicans	53	0.7	27	0.4	0	0
Rails, Coot etc	37	0.5	17	0.2	1	2
Waders	6276	78.2	5869	83.8	9	8
Gulls and terns	5	0.1	5	0.1	0	0
TOTAL	8028	100	7000	100	47	807

Table 3. Summary of waterbird count for May 2002	Table 3.	Summarv	of waterbird	count for	May 2002.
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SW: Shuen Wan, SI: Starling Inlet

Table 4. May waterbird co	counts 1998-2002.
---------------------------	-------------------

May	1998	1999	2000	2001	2002	Average	Std. Dev.
Deep Bay area	n/c	3,973	2,206	3,201	8,028	4,352	2555
Ramsar Site	n/c	3,438	1,862	2,238	7,000	3,635	2342

n/c: not counted

Table 4 shows that this year's counts of both Deep Bay area and Ramsar Site were far higher than previous years, and it is the highest since monthly waterbird counts has began. This year high number was resulted by the present of large number of waders, which only showed small numbers in previous May count.

## June

The June 2002 was scheduled for 16<sup>th</sup>. Coverage of the Ramsar Site and the whole Deep Bay area was covered, except for Deep Bay B (Mai Po Boardwalk). A total of 1879 waterbirds were recorded in the Deep Bay area, including Futian National Nature Reserve at Shenzhen. In the Ramsar Site, a total of 967 (51%) waterbirds was present. This is the lowest number

recorded in summer 2002, due to the absence of passage waders, wintering ducks and cormorants. As usual, ardeids comprised by far the largest group of birds at this time of the year, with 1719 (91%) recorded. The results of the count are summarized in Table 5, while Table 6 compares the total for the Deep Bay area and the Ramsar Site to previous years.

	Deep Bay Area	%	Ramsar Site	%	SW	SI
Cormorants	0	0.0	0	0.0	0	0
Ardeids etc	1719	91.5	864	89.3	36	381
Ducks, grebes, pelicans	69	3.7	32	3.3	0	0
Rails, Coot etc	35	1.9	17	1.8	0	1
Waders	56	3.0	54	5.6	0	0
Gulls and terns	0	0.0	0	0.0	0	0
TOTAL	1879	100	967	100	36	382

Table 5. Summary of waterbird count for June 2002.

SW: Shuen Wan, SI: Starling Inlet

Table 6. June	waterbird	counts	1998-2002.
---------------	-----------	--------	------------

June	1998	1999	2000	2001	2002	Average	Std. Dev.
Deep Bay area	891	1307	n/c	3324	1879	1850	1063
Ramsar Site	1194	999	n/c	1500	967	1165	245

n/c: not counted

From table 6 it can be seen that this year's June count of birds in the Deep Bay area was marginally higher than the average, while the number of waterbirds in the Ramsar Site was far lower than the average, and also the lowest since monthly waterbird counts has began.

## July

The July 2002 waterbird count took place on 14<sup>th</sup>. Coverage of the Ramsar Site was complete. With regard to the Deep Bay area as a whole, all other sites were surveyed completely, with the exception of San Tin, where the survey was incomplete. A total of 2135 watebirds were counted in the Deep Bay area, including Futian National Nature Reserve at Shenzhen. A total of 1217 (57%) was recorded in the Ramsar Site. Similar to the other summer months, ardeids comprised by far the largest group birds with 1603 (75%) recorded. Table 7 summarizes the July count, while Table 8 compares the total for the Deep Bay area and the Ramsar Site to previous years.

	Deep Bay Area	%	Ramsar Site	%	SW	SI
Cormorants	0	0.0	0	0.0	0	0
Ardeids etc	1603	75.1	759	62.4	48	535
Ducks, grebes, pelicans	49	2.3	22	1.8	0	0
Rails, Coot etc	24	1.1	7	0.6	2	0
Waders	459	21.5	429	35.3	1	0
Gulls and terns	0	0.0	0	0.0	0	0
TOTAL	2135	100	1217	100	51	535

Table 7. Summary of waterbird count for July 2002.

SW: Shuen Wan, SI: Starling Inlet

Table 8.	July	waterbird	counts	1998-2002.
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July	1998	1999	2000	2001	2002	Average	Std. Dev.
Deep Bay area	2439	1941	3020	n/c	2135	2384	471
Ramsar Site	1976	1273	1173	n/c	1217	1410	380

n/c: not counted

Table 8 shows that this year's count was lower than average.

## August

The August 2002 waterbird count took place on the 11<sup>th</sup>, and coverage of the Ramsar Site was complete, except for Deep Bay B (Mai Po Boardwalk) and fishponds 41-80 of Deep Bay F (Tsim Bei Tsui). A total of 4096 waterbirds was counted in the Deep Bay area, including Futian National Nature Reserve, of which 2463 (60%) were present in the Ramsar Site. The largest group comprised ardeids at 2575 (63%), and the second largest was migrant waders at 1401 (34%). The results of the count are summarized in Table 9, while Table 10 compares the total for the Deep Bay area and the Ramsar Site to previous years.

	Deep Bay Area	%	Ramsar Site	%	SW	SI
Cormorants	0	0.0	0	0.0	0	0
Ardeids etc	2575	62.9	1117	45.4	82	409
Ducks, grebes, pelicans	73	1.8	21	0.9	0	0
Rails, Coot etc	47	1.1	8	0.3	1	1
Waders	1401	34.2	1317	53.5	7	54
Gulls and terns	0	0.0	0	0.0	1	0
TOTAL	4096	100	2463	100	91	464

Table 9. Summary of waterbird count for August 2002.

SW: Shuen Wan, SI: Starling Inlet

Table 10. August waterbird counts 1998-2002.

August	1998	1999	2000	2001	2002	Average	Std. Dev.
Deep Bay area	3047	2784	3178	4124	4096	3446	623
Ramsar Site	2817	2287	2232	2858	2463	2531	293

A comparison with previous years' count and the average for the month is provided in Table 10. It can be seen that this year's count was higher than average, and is the second highest August count since monthly waterbird counts began.

## September

The September waterbird count was scheduled on  $22^{nd}$ , but the count was incomplete due to poor weather. Unfortunately, it was not possible to reschedule this count.

## **Migrant waders**

Each year, large numbers of waders pass through Mai Po and Deep Bay in spring and smaller numbers also stop over during autumn. Waders constitute the largest or second largest among different groups of waterbirds in these months. Table 11 summarizes the numbers of waders in the Ramsar Site in summer counts and compares these with previous years. It should be noted that these are single day counts that may not reflect accurately the real number of individuals present during the course of any season (especially in spring).

1998	1999	2000	2001	2002
n/c	10474	7350	10386	7152
1482	2363	1000	1232	5869
72	78	n/c	243	54
226	165	439	n/c	429
1153	1363	1331	1835	1317
3366	1889	2121	2379	n/c
	n/c 1482 72 226 1153	n/c 10474   1482 2363   72 78   226 165   1153 1363	n/c 10474 7350   1482 2363 1000   72 78 n/c   226 165 439   1153 1363 1331	n/c     10474     7350     10386       1482     2363     1000     1232       72     78     n/c     243       226     165     439     n/c       1153     1363     1331     1835

Table 11. Summary of numbers of waders in the Ramsar Site during summer waterbird counts.

Table 11 shows that highest numbers of waders are recorded in April and May, followed by a drop in June and July and a rise in August and September. The number of waders in May 2002 was the highest in this month since monthly waterbird count began, while the number present in June 2002 was the lowest.

## Ardeids

Egrets and herons are the main components of waterbirds during summer in the Deep Bay area and Ramsar Site. A summary of numbers of ardeids in summer counts 2002 and the previous years is shown in Table 12.

DB RS DB RS DB RS DB RS DB RS April n/c n/c May June n/cn/c July n/c n/c August September n/c n/c

Table 12. Summary of ardeids numbers in both Deep Bay area and Ramsar Site during summer waterbird counts.

DB: Deep Bay area, RS: Ramsar Site, n/c: not counted

Table 12 shows that numbers of ardeids in the Deep Bay area have increased since July 2000. This is due to the high counts of breeding ardeids in the mangrove at Futian National Nature Reserve. However, there was obviously fluctuation in the number of ardeids in the Ramsar Site not only in 2002, but also in previous years.

## Discussion

The summer counts covered migration period of the waders in spring and autumn. Numbers of waders were lower in April 2002 than other counts in April of previous years, but were higher in May. In late summer, numbers were lower in August. More details of migrant waders can be found in the Shorebird Count Report (Carey *et al.* 2002.). No clear pattern emerges with regard to the numbers of ardeids in the Deep Bay area or in the Ramsar Site. Breeding populations of ardeids are a better indication of the condition of the wetland ecosystem in the Deep Bay area, as a varying number of non-breeding birds are present in the summer months. For such information readers are referred to the Egretry Report (Wong 2002). The waterbird counts provide information on ardeid populations present in the whole Deep Bay area. Coverage of summer counts in 2002 was better than previous years, but numbers were not clearly higher. The increase in numbers in August that may involve appearance of juveniles.

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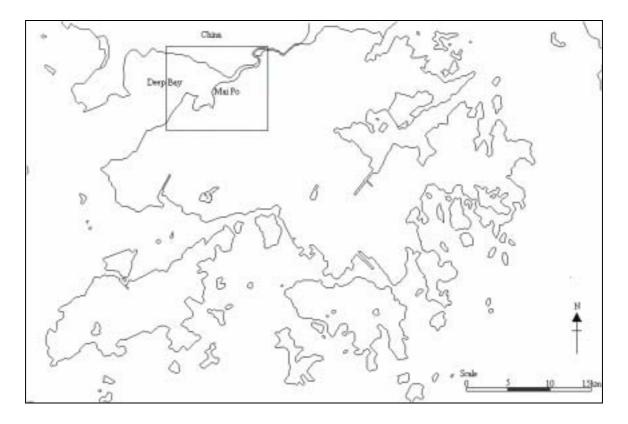
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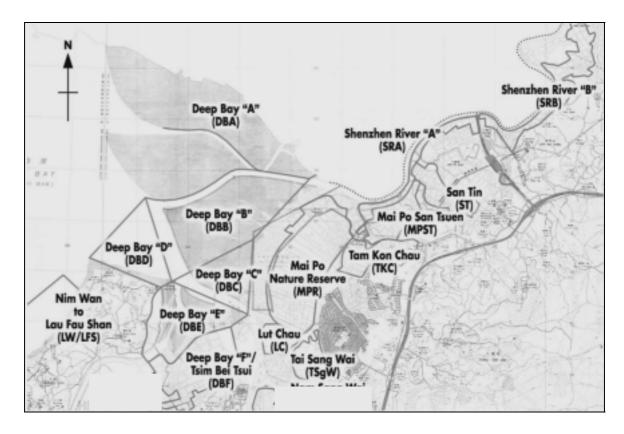
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Map 1. Map of Hong Kong showing location of the Mai Po Inner Deep Bay Ramsar Site



## Map 2. Locations of count sites of the Waterbird Monitoring Programme

# Summer 2002 Report on Waterbird Monitoring at the Mai Po Inner Deep Ramsar Site

Y. T. YU

# **APPENDICE**



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

#### Counts of waterbird in April 2002

Appendix	1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Little Grebe	42	28						20		3	4	7	4	0	0	36	0	36	108		3
Great Crested Grebe								1							0	1		1	1		
Great Cormorant	0	0						0		0	0	0	0	0	0	0	0	0	0		
Dalmatian Pelican															0			0	0		
Grey Heron	1	2	4				11	1	1	0	0	0	0	5	110	1	11	122	135	2	8
Purple Heron	1														2			2	3		
Great Egret	14	9	70		28		33	48	14	0	2	0	2	31	125	50	61	236	376	20	167
Intermediate Egret	0	0						1		0	0	1	1	0	0	3	0	3	3		2
Little Egret	22	25	266		8	9	50	121	67	5	6	29	11	24	156	153	67	376	799	8	95
Swinhoe's Egret				1											0		1	1	1		
Cattle Egret	51	7					5	76	1	28	12	4	4	2	16	110	5	131	206	10	17
Chinese Pond Heron	9	31	36				3	5	4	9	8	19	10	13	1	49	3	53	148	6	3
Striated Heron	0	0						0		0	0	0	0	0	0	0	0	0	0		
B-c Night Heron	0	0	2					0	6	6	0	0	0	0	4	3	0	7	18	3	385
Yellow Bittern	0	0						0		0	0	0	0	0	0	0	0	0	0		
Cinnamon Bittern															0			0	0		
Great Bittern															0			0	0		
Unidentified Ardeids														21	0			0	21		
Black Stork															0			0	0		
Black-headed Ibis															0			0	0		
Eurasian Spoonbill															0	1		0	0		
Black-faced Spoonbill	1														34			34	35		
Common Shelduck											1				0	1		0			
Eurasian Wigeon	0	0						0		0	0	0	0	0	1	1	0	1			
Falcated Duck															0	1		0	0		
Gadwall											1			1	0			0	0		
Baikal Teal											1				0	1	1	0	0		
Common Teal	0	0						0		0	0	0	0	0	1	1	0		4		
Mallard															0	1		0	0		
Spot-billed Duck											1				0	1	1	0	0		
Chinese Spotbill														1	0	1		0	0		
Burmese Spotbill															0	1		0	0		
Northern Pintail															0	1		0	0		
Garganey															0			0	0		
Northern Shoveler															0	1		0	0		
Common Pochard															0	1		0	0		
Baer's Pochard															0			0	0		
Tufted Duck											1				0			0	0		
Greater Scaup															0			0	0		
Red-breasted Merganser															0			0	0		
Duck sp.															0	1		0	0		
Slaty-breasted Rail															0			0	0		
Water Rail															0	1		0	0		
	4	7	1				<u> </u>  -	4		5	0	0	0	4	5	1	0		30		
White-breasted Waterhen	4	/	1				-			5	0	0	0	4	1	1	0	11			3
Watercock		4-	-				-			-	-		40	-	0	1	-		0		
Common Moorhen	20	17	6					1		5	0	1	12	3	32	1	0	54	97		8
Eurasian Coot															0			0			
Pheasant-tailed Jacana															0	1		0	0		
Black-winged Stilt	17												2		0			0	19		<u> </u>

#### Counts of waterbird in April 2002

Appendix '	1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Pied Avocet				289											0		289	289	289		
Oriental Pratincole	1														0			0	1		
Northern Lapwing															0			0	0		
Grey-headed Lapwing															0			0	0		
Pacific Golden Plover															0			0	0		
Grey Plover															0			0	0		
Common Ringed Plover															0			0	0		
Little Ringed Plover	10	0	2					26	5	1	0	1	1	1	0	28	0	28	47	5	1
Kentish Plover															0			0	0		1
Lesser Sand Plover															0			0	0		
Greater Sand Plover															0			0	0		
Black-tailed Godwit															290			290	290		
Bar-tailed Godwit															16			16	16		
Little Curlew															13			13	13		1
Whimbrel															5			5	5		
Eurasian Curlew															21			21	21		
Far Eastern Curlew															3			3	3		
Spotted Redshank															1108			1108	1108		
Common Redshank	6		832												823	1		829	1661		
Marsh Sandpiper	1											1			1224	1		1225	1226	3	
Common Greenshank								2							203	1		205	205		
Nordmann's Greenshank															4	1		4			
Green Sandpiper	1	13						2	3	2	0	1	0	14	0	+	0	5	36		1
Wood Sandpiper	160	1	1					51		9					450	1	0	618	762	1	
Tringa sp.														4	0	1		0			
Terek Sandpiper															19	1		19	19		
Common Sandpiper	13	20	2					27	6	14	18	15	8	29	2	1	0	79	154	2	5
Grey-tailed Tattler															0	1		0		1	
Ruddy Turnstone															0	1		0		·	
Red-necked Phalarope															0	1		0			
Pintail Snipe															0			0			
Swinhoe's Snipe															0			0	0		
Common Snipe	1 1												1		0			0	2	2	
Snipe sp.														10	0	1		0	10		
Long-billed Dowitcher															2	+		2	2		
Asian Dowitcher															7	1		7	7		
Red Knot															2	1		2	2		
Great Knot															35	+		35	35		
Sanderling															0	1		0	0		
Red-necked Stint	2												21		0	1		2	23		
Temminck's Stint	3							11					21		0	1		11	14		
	2	1						11			5				0	1		7		2	
Long-toed Stint Sharp-tailed Sandpiper	2				<u>├</u>			1			5		4		42	1		43	47	2	
								1					4			1			47 0		
Dunlin Curley Sendainer					-										0			0			
Curlew Sandpiper															2284	1		2284	2284		
Spoon-billed Sandpiper					<u> </u>											+		0	0		
Broad-billed Sandpiper								1		1					0	1		2	2		
Ruff															0	1		0	0		
Wader sp.		-	-												0	-		0	0		

#### Counts of waterbird in April 2002

Appendix 1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Black-tailed Gull															0			0	0		
Heuglin's Gull															0			0	0		
Yellow-legged Gull															0			0	0		
Slaty-backed Gull															0			0	0		
Pallas's Gull															0	1		0	0		
Brown-headed Gull															0			0			
Black-headed Gull	0	0						0		0	0	0	0	0	0	0	0	0			
Saunders's Gull				1							1				0		1	1	1		
Whiskered Tern				4											0		1	4	4		
				4											0		4	· · · ·			
White-winged Tern																		0			
Gull-billed Tern				56											14		56	70			
Caspian Tern															4			4	4		
Total	382	163	1221	351	36	9	102	399	108	88	74	93	134	162	7077	744	498	8319	10399	65	697
	Deep Bay Area	%	Ramsar Site	%	sw	SI															
Cormorants	0	0.0	0	0.0	0	0			1		1							1			
Ardeids etc	1745	16.8	965	11.6	49																
	1745	1.3	58		49																
Ducks, grebes, pelicans																					
Rails, Coot etc	127	1.2	65		0																
Waders	8318	80.0	7152		16																
Gulls and terns	79	0.8	79		0																
TOTAL	10399	100	8319	100	65	697															
Date of count: 2002																					
n/c = site not counted		High tide i	measured at	t TBT:																	
# indicates count consists of o	r includes a	a count ma	de up to on	e week eith	ner side of	the count d	late														
% = count made at evening ro																					
Wetland-dependant species	L																				
Species	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Osprey Black Kite	3	0		1	1		1	62	2	1	1	4	0	1	2		1	3	7 76	2	1
White-bellied Sea Eag	3	0					1		3	1	<sup>1</sup>	4	0	1	0		3	70			1
Eastern Marsh Harrier			1				· · ·				1			1	0			0			
Common Buzzard					ļ						ļ				0			0			
Greater Spotted Eagle	0	0						0	1	0					0			0			
Imperial Eagle Peregrine Falcon	0	0						0		4	0	0	0	0	0		0	3			
Pied Kingfisher	0	1	4					0		0	0	0	0	0	0	1	0	0			4
Common Kingfisher	1	7	1					3		0	0	3	3	4	2	8		10	24		
White-throated Kingfisher	0	1			ļ			1		0											2
Black-capped Kingfisher Red-billed Starling	0	0						0		0					0						2
Collared Crow	0	0						18		0					0					2	

#### Counts of Waterbird in May 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Little Grebe	20	5	1					2		1	1	7	5	0	10	15	1	26	52		
Great Crested Grebe															0			0	0		-
Great Cormorant	0	0						0		0	0	0	0	0	0	0	0	0	0		
Dalmatian Pelican															0			0	0		
Grey Heron	0	1					4	0		1	0	0	0	0	19	1	4	24	25		
Purple Heron															0			0	0		
Great Egret	0	27	66	1	22	2	160	58	12	13	4	4	4	9	75	67	192	334	457	11	239
Intermediate Egret	0	0						0		0	0	0	0	0	4	0	0	4	4		7
Little Egret	10	19	128	11	14	13	207	81	91	30	6	16	29	17	78	141	249	468	750	14	89
Swinhoe's Egret				1					1						0		1	1	2		
Cattle Egret	4	8	2				56	82	2	1	3	2	10	21	0	94	59	153	191	8	80
Chinese Pond Heron	7	21	26	1				14	15	22	3	12	12	22	8	55	4	67	163		1
Striated Heron	0	0						0		0	0	0	2	0	4	2	0	6	6		
B-c Night Heron	1	4	4	2			1	5		2	2	2	0	5	3	8	5	16	31	4	381
Yellow Bittern	0	0						0		0	0	0	0	1	0	0	0	0	1		
Cinnamon Bittern			1												0			0	0		
Great Bittern															0			0	0		
Unidentified Ardeids			1											18	0			0	18		
Black Stork			1								1				0			0	0		
Black-headed Ibis															0			0	0		
Eurasian Spoonbill			1												0			0	0		
Black-faced Spoonbill															9			9	9		
Common Shelduck															0			0	0		
Eurasian Wigeon	0	0						0		0	0	0	0	0	1		0	0	0		
Falcated Duck	1														0			0	0		
Gadwall															0			0	0		
Baikal Teal	1								1						0			0			
Common Teal	0	0						0		0	0	0	0	0	1		0				
Mallard															0			0	0		
Spot-billed Duck	1								1						0			0	0		
Chinese Spotbill									1						0			0	0		
Burmese Spotbill															0			0	0		
Northern Pintail															0			0	0		
Garganey															0			0	0		
Northern Shoveler									1						0			0	0		
Common Pochard															0			0	0		
Baer's Pochard															0			0	0		
Tufted Duck															1			1	1		
Greater Scaup															0			0	0		
Red-breasted Merganser															0			0	0		
Duck sp.									1						0			0	0		
Slaty-breasted Rail															0			0	0		
Water Rail			1										1		0			0			
White-breasted Waterhen	1	3	1			1		4	2	2	0	1	0	4			2			1	2
White-breasted Waternen	<u> </u> '	3						4	<u> </u>	2	0		1	4	4		2	0		1	2
Common Moorhen	4	0	1					0	1	0	0	0	2	0	1		0				
Eurasian Coot	+		<sup>1</sup>					0	1		0	0	2	0	4		0	4	4		
Pheasant-tailed Jacana													+		0			4	4		
Greater Painted-snipe													+		2			2			
Greater Fameu-Shipe	1			1	1				1		1		1	1	1 Z			2	2		1

Appendix 1

#### Counts of Waterbird in May 2002

Appendix 1	
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Black-winged Stilt	14													10	37			37	61		5
Pied Avocet				31											0		31	31	31		
Oriental Pratincole															0			0	0		
Northern Lapwing															0			0	0		
Grey-headed Lapwing															0			0	0		
Pacific Golden Plover															0			0	0		
Grey Plover															5			5	5		
Common Ringed Plover															0			0	0		
Little Ringed Plover	3	0						2	2	1	6	0	0	0	2	9	0	11	16		
Kentish Plover			1												0			0	1		
Lesser Sand Plover															25			25	25		
Greater Sand Plover															133			133	133		
Black-tailed Godwit					1										6			6	6		
Bar-tailed Godwit															1			1	1		
Whimbrel															8			8	8		
Eurasian Curlew															3			3	3		
Far Eastern Curlew					1										0			0	0		
Spotted Redshank					1										1086			1086	1086		
Common Redshank			5		1				1						262			262	268		
Marsh Sandpiper			9		1										13			13	22		
Common Greenshank		6			1										816			816	822	2	
Nordmann's Greenshank															11			11	11	2	
Green Sandpiper	1	0	1					0		1	0	0	0	0	0	1	0		3		
Wood Sandpiper	0							0		0					2	1	0		5		
Terek Sandpiper	0										0	0	I	0	214	!		214	215		
Common Sandpiper	9	3	2				1	4	3	6	7	6	0	6	7	28	1	36	54	2	
Grey-tailed Tattler	9		5					4	5		· · · · · ·	0	0	0	47	20		47	57	2	
			5					1	1						64	1		65	57 65	5	3
Ruddy Turnstone								1							04	I		0	0		
Red-necked Phalarope															0				0		
Pintail Snipe															0			0	0		
Swinhoe's Snipe															0						
Common Snipe																		0	0		
Long-billed Dowitcher															1			1	1		
Asian Dowitcher															7			7	7		
Red Knot															15			15	15		
Great Knot															5			5	5		
Sanderling															2			2	2		
Red-necked Stint			318					23							2551	23		2574	2892		
Little Stint															2			2	2		
Temminck's Stint															0			0	0		
Long-toed Stint									ļ									7	7		
Sharp-tailed Sandpiper			4												192			192	196		
Dunlin											ļ				0			0	0		
Curlew Sandpiper			1					2							215	2		217	218		
Spoon-billed Sandpiper					ļ										1			1	1		ļ
Broad-billed Sandpiper															30			30	30		
Ruff			l												0			0	0		
Wader sp.															0			0	0		
Black-tailed Gull															0			0	0		

#### Counts of Waterbird in May 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Heuglin's Gull															0			0	0		
Yellow-legged Gull															0			0	0		
Slaty-backed Gull															0			0	0		
Pallas's Gull															0			0	0		
Brown-headed Gull															0			0	0		
	0							0		0	0	0	0	0	1		0		0		
Black-headed Gull	0	0						0		0	0	0	0	0			0				
Saunders's Gull	ļ										ļ				0			0	0		
Whiskered Tern							3								0		3	3	3		
White-winged Tern															0			0	0		
Gull-billed Tern													2		0	2		2	2		
Caspian Tern															0			0	0		
Total	74	97	578	47	36	16	432	278	134	80	32	50	67	113	5994	454	552	7000	8028	47	807
	14		010			10		210	104	00			0,		0004		002	1000	0010		
	Deep Bay Area	%	Ramsar Site	%	sw	SI															
Cormorants	0	0.0	0	0.0	0	0															
Ardeids etc	1657	20.6	1082		37																
	1		1		1	1	1														
Ducks, grebes, pelicans	53	0.7	27		0																
Rails, Coot etc	37	0.5	17	0.2	1	2															
Waders	6276	78.2	5869	83.8	9	8															
Gulls and terns	5	0.1	5	0.1	0	0															
TOTAL	8028	100	7000	100	47	807															
Date of count: 2002																					
n/c = site not counted		High tide	measured a										1								
					 	4	1														
# indicates count consists of c		a count ma	ide up to on	le week eit	ner side of	the count	date														
% = count made at evening ro	ost										ļ										
Wetland-dependant species								DBF								Ramsar	Ramsar	Ramsar	DEEP	Shuen	
Species	SRA	SRB	DBA	DBB	DBC	DBD	DBE	(TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	ponds	intertidal	Site	BAY	Wan	Starling Inlet
Species Osprey					1			1	1			1		1	0	-	areas	1	AREA 5		
Black Kite	0	6			·'		1	21		1	4	4			1		4	· · · · · · · · · · · · · · · · · · ·	40	3	
White-bellied Sea Eag				1			1		·			·····	1	· · · ·	0		· · · ·	0	1		
Eastern Marsh Harrier															0			0	0		
Common Buzzard															0			0	0		
Greater Spotted Eagle	0							0		0											
Imperial Eagle Peregrine Falcon	0	0						0		0	0	0	0	0	0		0	0	0		
Pied Kingfisher	0	3					2	0		0	1	2	0	1	·····		0			1	1
Common Kingfisher	0						<u> </u>	5		1									22		
White-throated Kingfisher	0	0	1					0		0		0	1		0	1	0	1	1	1	
Black-capped Kingfisher	0	0						0		0		0							0		
Red-billed Starling	0						L	1		0		0									
Collared Crow	0	0		I	1			17		1	0	6	2	1	4	24	2	30	31	2	1

Appendix 1

#### Counts of Waterbird in June 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Little Grebe	22	9	1					22		1	0	3	1	0	10	22	0	32	69		
Great Crested Grebe															0			0	0		
Great Cormorant	0	0						0		0	0	0	0	0	0	0	0	0	0		
Dalmatian Pelican															0			0	0		
Grey Heron	0	0						0		0	0	0	0	0	4	0	0	4	4		
Purple Heron															0			0	0		
Great Egret	25	13	63		12	7	290	97	10	17	3	7	3	78	4	37	336	377	629	3	138
Intermediate Egret	0	0						0		0	0	0	0	0	0	0	0	0	0		
Little Egret	34	20	238		11	9	195	41	77	74	9	16	10	13	34	97	225	356	781	21	75
Swinhoe's Egret															2			2	2		
Cattle Egret	0	2					2	12	1	1	5	3	2	16	1	18	4	23	45		42
Chinese Pond Heron	8	11	48		2			28	13	11	18	19	13	18	7	72	9	88	196	6	3
Striated Heron	0	1	1					1		0	3	0	0	0	5	3	0	8	11		
B-c Night Heron	0	7	25					6		5	0	1	1	1	2	2	0	4	48	6	123
Yellow Bittern	0	0	1					0		0	0	0	1	0	0	1	0	1	2		
Cinnamon Bittern													1		0	1		1	1		
Great Bittern					1										0			0	0		
Black Stork															0			0	0		
Black-headed Ibis															0			0	0		
Eurasian Spoonbill					1										0			0	0		
Black-faced Spoonbill															0			0			
Lesser Whitstling Duck															1			1			
Common Shelduck	1												1	1	0			0			
Eurasian Wigeon	0	0						0		0	0	0	0	0	1		0		0		
Falcated Duck								Ŭ		Ŭ	Ŭ		† – – – ů		0			0			
Gadwall															0			0	0		
Baikal Teal															0			0			
Common Teal	0	0						0		0	0	0	0	0	0		0				
Mallard		0						0		0		0		0	0		0	0			
Spot-billed Duck															0			0			
Chinese Spotbill					+										0			0			
Burmese Spotbill															0			0	0		
															1			0	0		
Northern Pintail															0						
Garganey															0			0	0		
Northern Shoveler															0			0	0		
Common Pochard															0			0	0		
Baer's Pochard															0			0	0		
Tufted Duck															0			0	0		
Greater Scaup															0			0	0		
Red-breasted Merganser															0			0	0		
Duck sp.															0			0			
Slaty-breasted Rail														ļ	0			0	0		ļ
Water Rail															0			0			
White-breasted Waterhen	4	2	3					6	2	2	0	3	1	2	6		1	15			1
Watercock															0			0			
Common Moorhen	0	0	1					0		0	0	0	0	1	0		0	0			
Eurasian Coot															2			2	2		
Pheasant-tailed Jacana					ļ										0			0	0		
Black-winged Stilt										2					3	2		5	5		

#### Counts of Waterbird in June 2002

Appendix	1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA Wan	Starling Inlet
Pied Avocet	-														0			0		
Oriental Pratincole	-														0			0		
Northern Lapwing	_														0			0	0	
Grey-headed Lapwing													ļ		0			0	0	
Pacific Golden Plover															0			0	0	
Grey Plover	_														2			2	2	
Common Ringed Plover															0			0	0	
Little Ringed Plover	0	0	2	2				0		0	11	0	0	0	0	11	0	11	13	
Kentish Plover															0			0	0	
Lesser Sand Plover															0			0	0	
Greater Sand Plover															0			0	0	
Black-tailed Godwit															1			1	1	
Bar-tailed Godwit															0			0	0	
Whimbrel													1		0			0	0	
Eurasian Curlew											ĺ				12			12	12	
Far Eastern Curlew										1	ĺ				0			0	0	
Spotted Redshank															0			0	0	
Common Redshank						1									0			0	1	
Marsh Sandpiper										1		1			0			0		
Common Greenshank	1									1		1	1		15			15		
Nordmann's Greenshank		1				1									0			0	1	
Green Sandpiper	0	0				1		0		0	0	0	0	0			0			
Wood Sandpiper	0		1			1		0		0	1	1	1		1			1	1	
Terek Sandpiper								0					· · · · · ·		0			0		
Common Sandpiper	0	0						4		0	2	1	0		0		4	7		
Grey-tailed Tattler								4		0	2	· · · · ·			0		4	0		
	+													÷	0			0		
Ruddy Turnstone Red-necked Phalarope												1			0			0		
	-														1					
Pintail Snipe	-														0			0		
Swinhoe's Snipe	-														0			0		
Common Snipe															0			0		
Long-billed Dowitcher	-														0			0		
Asian Dowitcher															0			0		
Red Knot	-														0			0	0	
Great Knot															0			0		
Sanderling	-														0			0		
Red-necked Stint															0			0		
Temminck's Stint															0			0		
Long-toed Stint	_														0			0	0	
Sharp-tailed Sandpiper															0			0	0	
Dunlin										ļ		ļ			0			0	0	
Curlew Sandpiper		ļ								ļ		ļ			0			0		
Spoon-billed Sandpiper															0			0	0	
Broad-billed Sandpiper					ļ										0			0	0	
Ruff															0			0	0	
Wader sp.															0			0	0	
Black-tailed Gull															0			0	0	
Heuglin's Gull															0			0	0	
Yellow-legged Gull	1									1			1		0			0		

#### Counts of Waterbird in June 2002

Appendix	1
Appendix	

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Slaty-backed Gull															0			0	0		1
Pallas's Gull															0			0	0		
Brown-headed Gull															0			0	0		
Black-headed Gull	0	0						0		0	0	0	0	0	0	0	0	0	0		
Saunders's Gull										ŭ	ů	ŭ	ŭ		0			0	0		
Whiskered Tern															0			0	0		
White-winged Tern															0			0	0		
Gull-billed Tern															0			0	0		
Caspian Tern															0			0	0		
Total	93	65	383	n/c	25	16	487	217	103	113	51	53	33	129	112	277	579	968	1880	36	382
	Deep Bay Area	%	Ramsar Site	%	sw	SI															
Cormorants	0	0.0	0	0.0	0	0															1
Ardeids etc	1719	91.4	864	89.3	36	381															
Ducks, grebes, pelicans	69	3.7	32	3.3	0	0															
Rails, Coot etc	35		17	1	0	1															
Waders	56		54	1	0																
Gulls and terns	0		0		0																
TOTAL	1880	100	968	100	36	382															
Date of count: 2002					ļ																
n/c = site not counted			measured																		
# indicates count consists of o	or includes a	a count m	ade up to c	ne week	either side	of the cou	nt date														
% = count made at evening ro	ost																				
Wetland-dependant species																					
Species	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тsw	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Osprey															0			0		1	
Black Kite	0	0						11		2	1	1	4	1	0		0			2	
White-bellied Sea Eag Eastern Marsh Harrier															0			0	0		
Common Buzzard															0			0	0		
Greater Spotted Eagle	0	0						0		0	0	0	0	0			0				
Imperial Eagle	0							0		0	0	0	0	0	0	0	0	0	0		
Bonelli's Eagle		2				ļ													2		
Peregrine Falcon															0			0	0	······	
Pied Kingfisher Common Kingfisher	2						1	2			0			0					12 20	1	
White-throated Kingfisher	0						2							0					12		
Black-capped Kingfisher	0							0		0			0	0	0			2	1		
Red-billed Starling	0							0		0	and the second sec		0	0	1				0		
Collared Crow	0	0						13		0	0	1	0	0	0	9	0	9	14	3	

#### Counts of Waterbird in July 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Little Grebe	11	15	1					4		1	0	3	2	0	12	10	0	22	49		
Great Crested Grebe															0			0	0		
Great Cormorant	0	0						0		0	0	0	0	0	0	0	0	0	0		
Dalmatian Pelican															0			0	0		
Grey Heron	0	0						0		1	0	0	0	0	1	0	0	1	2	1	1
Purple Heron															0			0	0		
Great Egret	4	16	209	5	62	2	74	41	1	16	5	3	3	1	54	25	168	247	496	25	192
Intermediate Egret	0	0						0		0	0	0	0	0	0	0	0	0	0		2
Little Egret	9	26	301	20	2	1	5	93	4	34	19	34	9	4	114	131	47	292	675	13	116
Pacific Reef Egret															0			0	0		
Cattle Egret	1	12	6					83		21	4	2	0	0	4	86	0	90	133		90
Chinese Pond Heron	7	30	50					25	1	21	27	31	8	6	10	91	3	104	216	6	3
Striated Heron	0	1	1					4		0	0	0	0	0	9	4	0	13	15		
B-c Night Heron	0	3	42					13		0	0	1	6	0	0	12	0	12	65	3	131
Yellow Bittern	0	0	1					0		0	0	0	0	0	0	0	0	0	1		
Cinnamon Bittern															0			0	0		
Great Bittern															0			0	0		
Black Stork															0			0	0		
Black-headed Ibis															0			0	0		
Eurasian Spoonbill															0			0	0		
Black-faced Spoonbill															0			0	0		
Common Shelduck															0			0	0		
Eurasian Wigeon	0	0						0		0	0	0	0	0			0		0		
Falcated Duck									1						0		1	0	0		
Gadwall							1							1	0			0	0		
Baikal Teal															0			0	0		
Common Teal	0	0						0	1	0	0	0	0	0			0	1	0		
Mallard														1	0			0	0		
Spot-billed Duck															0			0	0		
Chinese Spotbill														1	0			0	0		
Burmese Spotbill														1	0			0	0		
Northern Pintail															0			0	0		
Garganey														1	0			0	0		
Northern Shoveler															0			0	0		
Common Pochard															0			0	0		
Baer's Pochard														1	0			0	0		
Tufted Duck															0			0	0		
Greater Scaup															0			0	0		
Red-breasted Merganser															0			0	0		
Duck sp.															0			0	0		
Slaty-breasted Rail															0			0	0		
Water Rail							1							1	0			0	0		
White-breasted Waterhen	2	2	1					6		0	1	1	3	1	1		1	7	18	2	
Watercock	Z	2									<sup>1</sup>			<u> </u>	0		<u>'</u>	0	0	Z	
Common Moorhen	0	0	6					0		0	0	0	0	0			0	1	6		
Eurasian Coot	0	0	0									0	0		0			0	0		
Pheasant-tailed Jacana															0			0	0		
Black-winged Stilt			1								12				2			2	15		
Pied Avocet											12				0			0	0		

#### Counts of Waterbird in July 2002

Appendix	1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	TSW	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Oriental Pratincole															0			0	0		
Northern Lapwing															0			0	0		
Grey-headed Lapwing															0			0	0		
Pacific Golden Plover															0			0	0		
Grey Plover															0			0	0		
Common Ringed Plover															0			0	0		
Little Ringed Plover	0	0						1		0	11	0	0	0	2	11	0	13	14		
Kentish Plover															0			0	0		
Lesser Sand Plover															0			0	0		
Greater Sand Plover															0			0	0		
Black-tailed Godwit															36			36	36		
Bar-tailed Godwit															2			2	2		
Whimbrel															0			0	0		
Eurasian Curlew															24			24	24		
Far Eastern Curlew															0			0	0		
Spotted Redshank															0			0	0		
Common Redshank		1												1	291			291	291		
Marsh Sandpiper							1	ĺ							0			0	0		
Common Greenshank	1						1								40			40	40		
Nordmann's Greenshank															0	1		0	0		
Green Sandpiper	0	0						0		1	3	0	0	0	0	4	0	4	4		
Wood Sandpiper	0	0		1				0		0	6	0	0	0	0 0	6	0	6	6		
Terek Sandpiper															0			0	0		
Common Sandpiper	0	0	7					4		2	4	1	1	2			2	11	21	1	
Grey-tailed Tattler	1													1	0			0	0		
Ruddy Turnstone		1													0			0	0		
Red-necked Phalarope	1			1							1			1	0			0	0		
Pintail Snipe	1												1	1	0			0	0		
Swinhoe's Snipe															0			0	0		
Common Snipe	1	1		1											0			0	0		
Long-billed Dowitcher	1												1	1	0			0	0		
Asian Dowitcher															0			0	0		
Red Knot														1	0			0	0		
Great Knot															0			0	0		
Sanderling	1													1	0			0	0		
Red-necked Stint															0			0	0		
Temminck's Stint				1											0			0	0		
Long-toed Stint				1							6			<u> </u>	0			0	6		
Sharp-tailed Sandpiper	1														0			0	0		
Dunlin															0			0	0		
Curlew Sandpiper	1														0			0	0		
Spoon-billed Sandpiper															0			0	0		
Broad-billed Sandpiper	1			1											0			0	0		
Ruff	1			1											0	1		0	0		
Wader sp.															0			0	0		
Black-tailed Gull															0			0	0		
	+	+		+											0			0	0		
Heuglin's Gull				1											0			0	0		
Yellow-legged Gull	+																	0			
Slaty-backed Gull		1		-		1		1						1	0			0	0		

#### Counts of Waterbird in July 2002

Appendix	1
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SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	тsw	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Pallas's Gull															0			0	0		
Brown-headed Gull															0			0	0		-
Black-headed Gull	0	0						0		0	0	0	0	0	0	0	0	0	0		
Saunders's Gull															0			0	0		
Whiskered Tern															0			0	0		
White-winged Tern															0			0	0		
Gull-billed Tern															0			0	0		
Caspian Tern															0			0	0		
Total	34	105	626	25	64	3	79	274	6	97	98	76	32	14	602	394	221		2135	51	535
																			2100		
	Deep Bay Area	%	Ramsar Site	%	sw	SI															
Cormorants	0	0.0	0	0.0	0	0										1					
Ardeids etc	1603	75.1	759	62.4	48	535															
Ducks, grebes, pelicans	49	1	22	1.8	0																
Rails, Coot etc	24	1	7	1	2	0															
Waders	459	1	429	1	1	0															
Gulls and terns	0	1	0	0.0	. 0																
TOTAL	2135	1	1217	100	51											1					
TOTAL	1 2100	100		100																	
Date of count: 2002																1					
n/c = site not counted		High tide	measured a	t TRT·																	
# indicates count consists of o	ar includes				her side of	the count	date														
% = count made at evening ro						the count	uate														
% = count made at evening it																					
W-41	1																				
Wetland-dependant species	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW/LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal	Ramsar Site	DEEP BAY	Shuen Wan	Starling Inlet
Species Osprey	+														0		areas	0	AREA 0		
Black Kite	1	1						13		1	1	2	0	0			1	15		2	
White-bellied Sea Eag															0			0			
Eastern Marsh Harrier		ļ													0			0			
Common Buzzard Greater Spotted Eagle	0	0						0		0	0	Ö	0	0	0		0				
Imperial Eagle	0							0		0											
Bonelli's Eagle		2																	2		
Peregrine Falcon	-							0							0			0			
Pied Kingfisher Common Kingfisher	1							3		0		0									1
White-throated Kingfisher	1	0	6				1	8	1	1	0	2	3	0	1	11	2	14	24	1	1
Black-capped Kingfisher	0							0		0		0									
Red-billed Starling	0							0		0		0	0								
Collared Crow	0	0		1	l	L		8		0	1	1	0	0	0	8	0	8	10	2	<u>.</u>

#### Counts of Waterbird in August 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Little Grebe	26	10	2					9		2	0	3	6	11	3	17	0	20	72		
Great Crested Grebe															0			0	0		
Great Cormorant	0	0						0		0	0	0	0	0	0	0	0	0			
Dalmatian Pelican															0			0	0		
Grey Heron	0	0						0		0	0	0	0	0	13	0	0	13	13		4
Purple Heron															3			3	3		
Great Egret	13	41	410		24	74	58	11	19	9	5	4	18	11	58	38	158	254	755	41	209
Intermediate Egret	0	0						0		0	0	0	0	0	1	0	0	1	1		
Little Egret	20	40	452		32	244	88	17	125	23	17	45	10	25	81	90	367	538	1219	27	114
Swinhoe's Egret															0			0	0		
Cattle Egret	5	4						44		1	5	0	43	0	91	92	0	183	193	1	35
Chinese Pond Heron	29	13	69			2		5	12	23	16	37	22	50	4	91	2	97	282	8	3
Striated Heron	0	0	2					0		0	0	1	0	0	3	0	0	3	6	1	
B-c Night Heron	3	6	60					0		0	0	0	7	7	14	8	0	22	97	4	44
Yellow Bittern	0	0	2					0		0	0	0	0		3		0	3			
Cinnamon Bittern															0			0			
Great Bittern															0			0			
Ardeids sp.														1	0			0			
Black Stork															0			0			
Black-headed Ibis															0			0			
Eurasian Spoonbill															0			0			
Black-faced Spoonbill															0			0			
Common Shelduck															0			0			
Eurasian Wigeon	0	0						0		0	0	0	0	0	0		0				
Falcated Duck		0	~~~~~					0		0	0	0		0	0		0	0			
Gadwall															0			0			
Baikal Teal	+														0			0			
								0							1				1		
Common Teal	0	0						0		0	0	0	0	0	0		0		1		
Mallard																		0			
Spot-billed Duck															0			0			
Chinese Spotbill	+														0			0			
Burmese Spotbill															0			0	1		
Northern Pintail															0			0			
Garganey															0			0			
Northern Shoveler															0			0			
Common Pochard										ļ					0			0			
Baer's Pochard															0			0			
Tufted Duck	<b> </b>									ļ	ļ	ļ	ļ		0			0			
Greater Scaup										ļ		ļ			0			0			
Red-breasted Merganser										ļ		ļ			0			0			
Duck sp.															0			0			
Slaty-breasted Rail										ļ		ļ			0			0	0		
Water Rail															0			0	0		
White-breasted Waterhen	11	6	8			1		0		5	1	0	1	3	0	7	1	8	36	1	1
Watercock															0			0	0		
Common Moorhen	0	0	11					0		0	0	0	0	0	0	0	0	0	11		
Eurasian Coot															0			0	0		
Pheasant-tailed Jacana															0			0	0		
Black-winged Stilt			17											17	7			7	41		

Appendix 1

#### Counts of Waterbird in August 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Pied Avocet															2			2	2		
Oriental Pratincole															0			0	0		
Northern Lapwing															0			0	0		
Grey-headed Lapwing															0			0	0		
Pacific Golden Plover															0			0	0		
Grey Plover															1			1	1		
Common Ringed Plover															0			0	0		
Little Ringed Plover	2	0						0	14	0	0	0	0	0	16	0	0	16	32		
Kentish Plover															0			0	0		2
Lesser Sand Plover															0			0	0		
Greater Sand Plover															3			3	3	1	51
Black-tailed Godwit															10			10	10		
Bar-tailed Godwit															4			4	4		
Whimbrel															33			33	33		
Eurasian Curlew															23			23	23		
Far Eastern Curlew															0			0	0		
Spotted Redshank															0	1		0	0		
Common Redshank															391			391	391		
Marsh Sandpiper															1			1	1		
Common Greenshank															678			678			
Nordmann's Greenshank															0			0			
Green Sandpiper	0	0						0		1	0	0	0	0			0		1		
Wood Sandpiper	0				1	1		0		0	+	1			1		1		<u> </u>		
Tringa sp.	-													5	0			0			
Terek Sandpiper	1	1				1					1				6			6	1		
Common Sandpiper	10	1	3	3	<u> </u>	1	1	6	5	6	15	3	2	5			1				1
Grey-tailed Tattler						1			5				<u> </u>		1			1	6	5	
Ruddy Turnstone	1	1				1						1	1	1	1			1	1	_	
Red-necked Phalarope	-														0			0			
Pintail Snipe	-												1		0	*		0			
Swinhoe's Snipe	-												1		0			0			
Common Snipe															0			0		1	
Long-billed Dowitcher						1					1		1		0	*		0			
Asian Dowitcher														+	7			7			
Red Knot	+							·					+		0			0			
Great Knot	1					1					1	1			0			0			
Sanderling	+												1		0			0			
Red-necked Stint	+			+									+		33			33			
Temminck's Stint	+														0			0	1		
															0			0			
Long-toed Stint Sharp-tailed Sandpiper	+			+									+		0			0			
Snarp-tailed Sandpiper															0			0			
															30			30			
Curlew Sandpiper				+																	
Spoon-billed Sandpiper															0			0			
Broad-billed Sandpiper															0			0	0		
Ruff				+											0			0	0		
Wader sp.												· · · · ·			0			0	0		
Black-tailed Gull															0			0			
Heuglin's Gull															0			0	0		

#### Counts of Waterbird in August 2002

SPECIES	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Yellow-legged Gull															0			0	0		
Slaty-backed Gull															0			0	0		
Pallas's Gull						1				1		1			0			0	0		
Brown-headed Gull															0			0	0		
	0	0						0		0	0	0	0	0	0		0		0		
Black-headed Gull	0	0						0		0	0	0	0	0			0				
Saunders's Gull															0			0	0		
Whiskered Tern												L			0			0	0		
White-winged Tern															0			0	0		
Gull-billed Tern															0			0	0	1	
Caspian Tern						1									0			0	0		
Total	119	121	1036	n/c	56	321	147	92	180	70	59	93	109	135	1558	376	529	2463	4096	91	464
			1000	100	00				100				105	100	1000	010	010	2-100	4000		
	Deep Bay Area	%	Ramsar Site	%	sw	SI															
Cormorants	0	0.0	0	0.0	0	0															
Ardeids etc	2575	62.9	1117	45.4	82	1															
******						1															
Ducks, grebes, pelicans	73		21	0.9	0	1															
Rails, Coot etc	47	1.1	8	0.3	1	1															
Waders	1401	34.2	1317	53.5	7	54															
Gulls and terns	0	0.0	0	0.0	1	0															
TOTAL	4096	100	2463	100	91	464															
Date of count: 2002																					
n/c = site not counted		Ligh tide	measured							·											
					L	l															
# indicates count consists of c		a count n	hade up to o	ne week	either side	e of the cou	int date														
% = count made at evening ro	ost																				
Wetland-dependant species																					
Species	SRA	SRB	DBA	DBB	DBC	DBD	DBE	DBF (TBT)	NW / LFS	ткс	LC	тѕѡ	MPST	ST	MPNR	Ramsar ponds	Ramsar intertidal areas	Ramsar Site	DEEP BAY AREA	Shuen Wan	Starling Inlet
Osprey					1				1		<u>-</u>	ļ <u>-</u>	ļ	ļ	0			0			
Black Kite White-bellied Sea Eag	0	6					4	1	1	1	5	5	0	4	1		1	13 0		1	
Eastern Marsh Harrier															0			0			
Sparrowhawk sp.												1			0			1	1		
Common Buzzard															0			0	0		
Greater Spotted Eagle	0	0						0		0			0								
Imperial Eagle	0	0						0		0	0	0	0	0	1		0				
Peregrine Falcon	0							0						1	0		0	0			2
Pied Kingfisher Common Kingfisher	1	1						2													3
White-throated Kingfisher	2						1	3												2	2
Black-capped Kingfisher	0	0				1		0		0			0					2			-
Red-billed Starling	0							0		0	l	·									
Collared Crow	0	0						3		0	0	6	0	0	0	6	0	6	9	3	

Appendix 1