

## **The breeding sites and distribution of Black-faced Spoonbills *Platalea minor* in the Democratic People's Republic of Korea (DPRK)**

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### **INTRODUCTION**

The Black-faced Spoonbill *Platalea minor* is an endangered bird species whose known breeding sites are limited to the islands of the West Sea in the DPRK, and whose wintering sites are at the estuaries of large rivers and on the seacoasts of Kyushu in Japan, Hong Kong in China, Taiwan, and Vietnam (Won 1963, Chen 1987, Chong *et al.* 1996). The maximum number of breeding Black-faced Spoonbills confirmed up to 1997 on the inshore islands of the West Sea in the DPRK did not exceed 100, while that presently confirmed at wintering sites is about 608 (Dahmer & Felley unpubl. data, see Appendix 1 of these proceedings). Research on the distribution of the Black-faced Spoonbill was discussed in the workshop on Black-faced Spoonbills in Beijing, China in May, 1996, and clarifying the cause of the disagreement between the number of individuals at the wintering and breeding sites was proposed as a priority issue for its conservation (Dahmer & Felley 1995, Severinghaus *et al.* 1995). Here we report the results of the surveys conducted in 1997 and 1998 following this proposal.

### **Breeding period survey**

We aimed at identifying breeding flocks of Black-faced Spoonbills along the West Sea coast of DPRK, in order to decrease the discrepancy in the numbers of this species counted during the breeding and wintering periods.

The breeding period surveys of 1997 and 1998 were conducted by boat. In 1997, we surveyed an island in Dokdo and three islands in South Pyongan (June 5 - Aug. 13), and 10 sites in South Hwanghae (July 25 - Aug. 15), 39 islands in North Hwanghae (Aug 15 - 20). In 1998, we surveyed Dokdo (July 15 - 19), and North Pyongan (July 20 - Aug. 10).

We observed 93 Black-faced Spoonbills on 11 islands in 1997, and 11 nests on 6 islands. In 1998, 33 Black-faced Spoonbills were observed on 7 islands with 6 nests on 4 of the islands (Table 1, Fig. 1).

The two-year survey confirmed that Black-faced Spoonbills inhabited at least 12 islands widely distributed in the West Sea of Korea, and bred on 7 of them. Many of these sites are in North Pyongan and South Hwanghae where offshore inlands are abundant. The lack of survey efforts in South Hwanghae in 1998 may have contributed to the difference in the number of birds between 1997 and 1998.

Table 1. Results of the breeding period survey of Black-faced Spoonbills

	1997		1998	
	individuals	nests	individuals	nests
Is. Dokdo	19	5	8	2
Is. Hyengzedo	6			
Is. Zungdo	5		6	2
Is. Sesolbatsem	6	2	3	1
Is. Dongsolbatsem	4	1	2	
Is. Namsolbatsem	5	1	5	1
Is. Batoggisem	5	1	3	
Is. Zamori	3	1		
Is. Dansem	4			
Is. Oksem	5			
Is. Ryongmaedo, Gakhouido	31			
Is Aedo			6	
<b>Total</b>	<b>93</b>	<b>11</b>	<b>33</b>	<b>6</b>

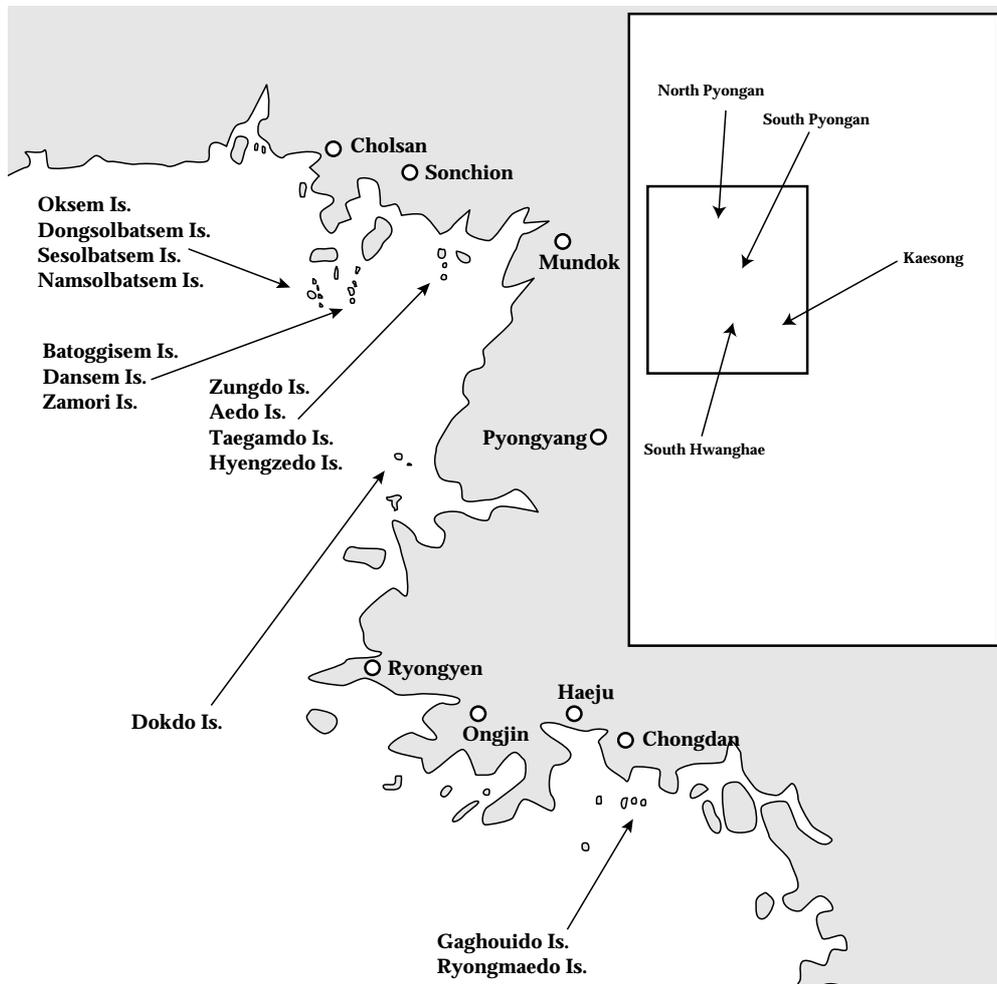


Fig. 1. Breeding sites of Black-faced Spoonbills in DPRK (Breeding sites confirmed till 1998)

Table 2. Number of questionnaires on Black-faced Spoonbills sent, and returned.

Province	County	Institution	Number of sent cards	Reply	Number of returned cards
North Pyongan	9	70	420	9	11
South Pyongan	5	44	264	3	3
South Hwanghae	12	86	516	21	34
Kaesong City	2	7	42	3	4
Total	28	207	1242	36 (17.4%)	54 (4.2%)

Table 3. Areas where Black-faced Spoonbills were observed. (\* &gt; = 10 individuals)

Province	County	Ri (dong)
North Pyongan	Ryongchon	Dekseung
	Gwaksan	Samdan
	Senchon	*Sekhwa
South Pyongan	Jongju City	*Namho, *Seima, Bosan, *Aedo (dong)
	Mundok	Dongrim
	Pyongwon	Sinsong
South Hwanghae	Onchon	Unha
	Gwail County	Punghae
	Ryongyon	Gokjeng
	Taetan	*Buyang
	Ongjin	*Gukgong, Jangsong, *Gurang, Namhae
	Gangryong	Bupo, Sayen
	Byekseng	Sewon
	Chongdan	*Yengsan, Geumhak, Namchon, *Sinpung
	Yenan	*Honam, Haenam, Yemzen (gu)
Baechon	Geumseng	
Kaesong	Panmun	Wolzeng, Sinheung, Zogang

### Distribution and number of Black-faced Spoonbills investigated by questionnaires

In 1998 we conducted a survey of the distribution and number of Black-faced Spoonbills in the DPRK by using a questionnaire.

We printed a guide for field identification on double postcards and inquiry items were printed on the attached return cards. A total of 1242 postcards were sent to 207 institutions, such as senior high schools, fishery enterprises, Yemzen enterprise and co-operative farms. These institutions are located in 120 ri (sites) of 28 counties along the seacoasts of north and South Pyongan Province, South Hwanghae Province, and Kaesong City in North-western DPRK.

The questions in the inquiry asked for:

1. The province, and the name of the site where Black-faced Spoonbills were observed.
2. The frequency of observation.
3. The season when Black-faced Spoonbills were observed.
4. The number of Black-faced Spoonbills observed.
5. Other notes.
6. Names and addresses of the observers.

The return rate of the questionnaire was 4.2 % of the postcards from 36 of the institutions (17.4%) (Table 2).

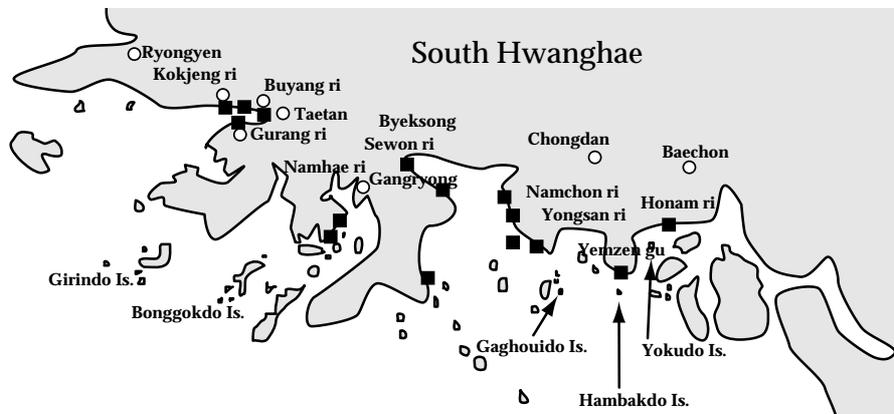


Fig. 2. Areas where Black-faced Spoonbills were reported in south Hwanghae Province.

■: Sites where Black-faced Spoonbills were observed.

Table 3 shows the areas where Black-faced Spoonbills were observed (also see Fig. 2).

The areas where Black-faced Spoonbills did not occur were Ryongampo-ri, Ryongchon County, North Pyongan Province, and Degan-ri, Gwail County in South Hwanghae Province.

This questionnaire survey showed that 12 regions had observation records of Black-faced Spoonbills ( $\geq 10$  individuals) during the summer months

#### An autumn survey during the non-breeding season

We made an autumn survey of Black-faced Spoonbills in 1998, to confirm the information obtained in the inquiry research. We surveyed South Hwanghae and North Hwanghae between September 1 and 5, and counted the individuals which flew in to forage along the shoreline.

We observed a total of 163 Black-faced Spoonbills at 5 sites (Table 4, Fig. 3). The number of individuals in a flock was relatively large during this period: 16, 25, 70, 29 and 23.

This total was higher than the maximum estimated of 100 birds counted during the breeding season surveys on the islands.

### CONCLUSION

The two-year survey of the breeding season confirmed the occurrence of Black-faced Spoonbills on 12 islands, seven of which had breeding nests. The survey of South Hwanghae and North Hwanghae confirmed the occurrence of the spoonbills in autumn, and counted 163 individuals in the area. This suggests that there are unknown breeding grounds on the western seacoast, or to the north of the Korean Peninsula. There are observation records of Black-faced Spoonbills during the breeding season in Yemzen-gu, Yenan County, which

Table 4. Number of Black-faced Spoonbill confirmed by field survey in south Hwanghae province (1998).

County	ri	Total number	Number within a flock	Research period
Ongjin county	Zangsong ri	16		Sep. 2
	Gurang ri	25	19, 4, 2	Sep. 1
Chongdan county	Yengsan ri	70	46, 14, 8, 2	Sep. 1-3
Yenan county	Yemzen gu	29	9, 15, 5	Sep. 4-5
	Honam ri	23		Sep. 4-5

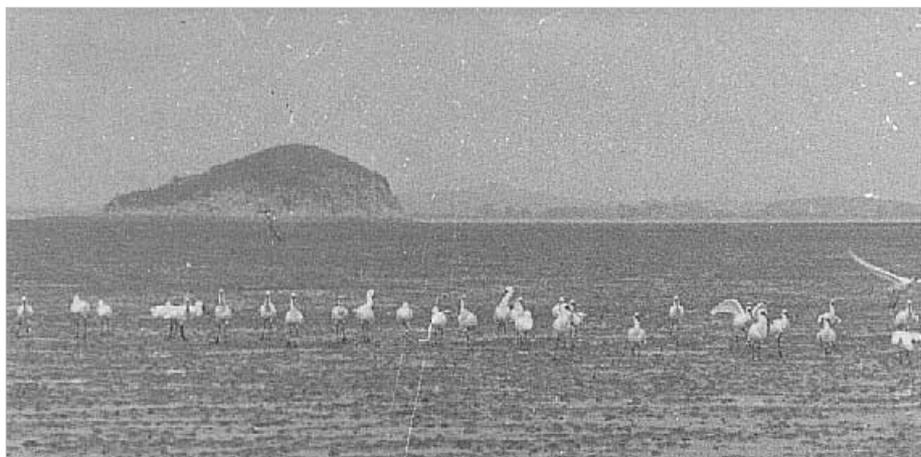


Fig. 3. Flocks of Black-faced Spoonbills on the coast at Yengsan ri, Chongdan county.

were seen to fly toward Gaghouido and Hambakdo Island, which are potential breeding sites of this species. Also breeding season records of Black-faced Spoonbills have been made on the seacoast of Honam-ri, Yenan County. The birds were seen to fly in the direction of Yokdo, which is another potential breeding site. Other sites where the spoonbills have been recorded in the breeding season include Jangsong-ri, Namhae-ri, Ongjin County. Further research in these areas may reveal further, as yet unknown breeding sites.

#### LITERATURE CITED

- Chen Tso-Hsin. 1987. A Synopsis of the Avifauna of China. Science Press. Beijing.
- Chong Jong-ryol, Pak U-il & Rim Chu-yon. 1996. Breeding biology of Black-faced Spoonbill *Platalea minor*. Strix 14: 1-10.
- Severinghaus, L.L., Koen B., Chan, S., Chong, J., Coulter, M.C., Poorter, E.P.R. & Wang, T. 1995. Action Plan for the Black-faced Spoonbill *Platalea minor*. Wild Bird Society of Republic of China, Taiwan.
- Dahmer, T. D. V. & Felley, M.L. 1995. Report on winter range survey Black-faced Spoonbill. 1994-1995. Ecosystem Ltd. Hong Kong.
- Won Hong Gu. 1963. Birds of Korea 1. Pp. 55-58. Academy of Science Press. DPRK.