

Occurrences of *Sterna albifrons sinensis* and *Sterna hirundo longipennis* at Osaka Bay, Honshu, Japan

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The Eastern Little Tern (*Sterna albifrons sinensis*) and the Common or Nordmann's Tern (*Sterna hirundo longipennis*) are regular visitors to Japan.

The following account is based upon my own observations made at Osaka Bay, chiefly at the mouths of the Yamato, Kizu, Shinyodo and Muko rivers in the years 1950, 1951 and 1952.

Sterna albifrons sinensis

The Asiatic Little Tern is a summer visitor to Japan, breeding on the main island of Honshu and small adjacent islands.

(1) Migration

(a) Arrival in spring.

Year	Date	Numbers
1950	April 16 23	50 + 133
1951	April 15 22	1 24
1952	April 6 13	2 25

An early spring arrival date (seven individuals) for Tokyo Bay (Chiba Prefecture) was recorded by C. M. Fennell on April 20, 1952, two weeks after arrival of the species at Osaka Bay. (The direct distance between Osaka and Tokyo is approximately 270 miles).

(b) Departure in autumn.

During the latter part of July, large flocks migrate from northern Honshu, and remain in the Osaka Bay region for a week or so before leaving for more southern areas. During the autumn migration the birds are more numerous than in the spring, a flock of over 1,000 individuals often being observed. Apparently, juveniles reared in the vicinity of Osaka Bay join these flocks. After the middle of August there is a sharp decrease in numbers, the species disappearing altogether during the latter part of August or early September as the following observations will show.

The birds' arrival in spring appears to occur during the beginning or middle part of April and the departure in autumn, during the latter part of August or early September.

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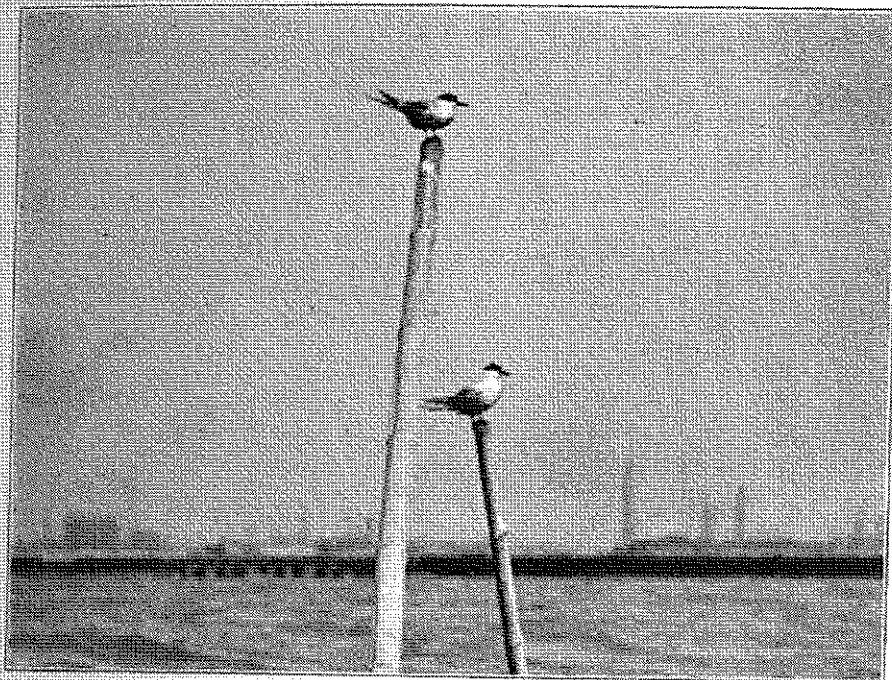
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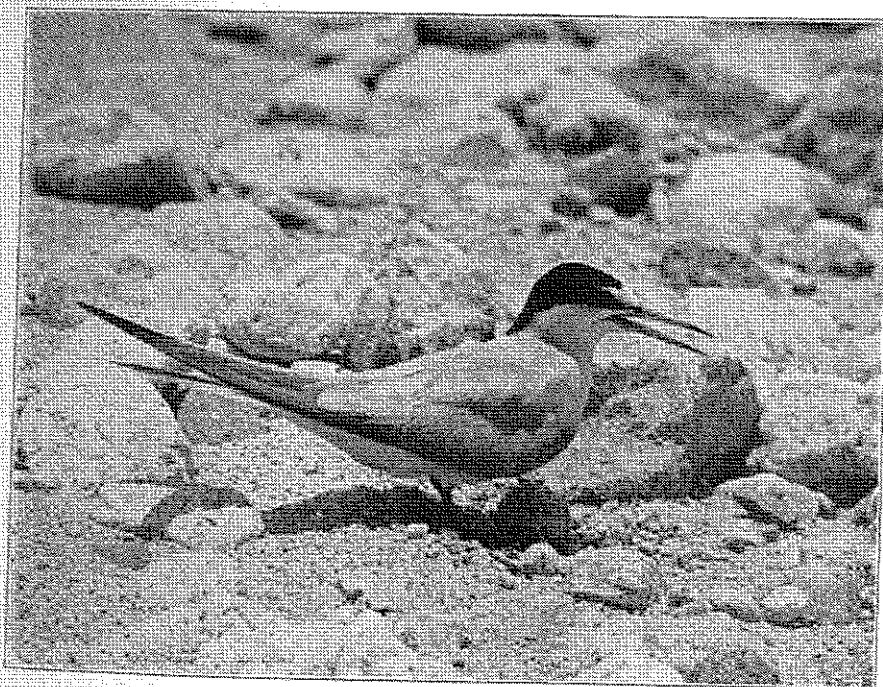
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Sterna hirundo longipennis, mouth of the River Yamato, Osaka Bay,
Japan, April 27, 1952.



Sterna albifrons sinensis, River Muko, Hyogo Pref., Japan,
July 2, 1950.
Photos. by K. Kobayashi.

Year	Date	Numbers
1950	August 6	492
	9	15
	17	88
	20	610
	23	500
	27	1
	Sept. 2	0
1951	July 22	456
	29	1,146
	August 5	1,107
	12	10
	19	3
	26	96
	29	28
	Sept. 2	2
1952	9	0
	July 20	57
	27	1,217
	August 3	1,756
	10	417
	17	25
	24	6
	31	44

(2) Breeding

The laying period appears to extend from the middle of May to the middle of July, as indicated by the following records of early and late nestings.

Year	Date	Number of clutch
1950	May 21	4/1 c/2 c/3
1951	May 20	n/1 c/2 c/3
	July 15	n/1 5/2
1952	May 11	n/1
	June 15	c/2 c/3

They nest on the ground in colonies usually located on the highest parts of sand-bars or mud-flats.

(3) Plumage

Upon arrival in the spring all birds are in full summer plumage. During the autumn migration the majority are still in summer plumage, with some in juvenile plumage. However, after the middle of August some may also be seen in winter plumage.

Based upon specimens collected, those in winter plumage are young birds, so that it seems that the early-reared young attain their winter plumage before southward migration begins, whereas those reared later migrate while still in juvenile plumage. Of the flock of 28 observed on August 29, 1951, and of the flock of 44 observed on August 31, 1952, approximately half were in winter plumage. These

were the last flocks observed in the season and consisted mostly of young birds.

Sterna hirundo longipennis

Nordmann's Tern is only a bird of passage in Japan. So far as recorded, the breeding ranges nearest to Japan are located at Lake Taraika in Sagalien and in the North Kurile Islands. Those which breed in those areas are considered to pass through the Japanese Archipelago during migration.

(1) Migration

(a) Spring migration

	1950		1951		1952	
	Date	Numbers	Date	Numbers	Date	Numbers
Arrival:	May 14 21	1 635	April 22	35	April 27	197
Departure:	May 28	75	July 24	3	June 15	7

In 1952 the first spring record at Tokyo Bay (by C. M. Fennell, M. Hachisuka and K. Kobayashi) was made on May 3 and consisted of 79 individuals. As not even a single bird was observed on April 27 it apparently takes about a week for them to migrate from Osaka Bay to Tokyo Bay.

Thus the arrival in spring, depending upon the years, seems to take place from the latter part of April to the middle part of May, with the departure occurring between the latter part of May and the latter part of June.

(b) Autumn migration

	1950		1951		1952	
	Date	Numbers	Date	Numbers	Date	Numbers
Arrival:	Aug. 6	13	Sept. 3	4	July 27	3
Departure:	Oct. 15	1	Oct. 7	6	Oct. 12	43

In autumn the birds arrive at Osaka Bay between the latter part of July and early September and migrate southward during the early or middle part of October.

The largest flock seen consisted of 960 individuals observed on May 3, 1951.

(2) Plumage

Upon arrival in this area, during both the spring and autumn migrations, all birds are usually in full breeding plumage. However, on October 8, 1950, of a flock of 38 individuals, five were observed in juvenile plumage, while on October 9, 1952, of a group of 412, approximately 40 per cent were in juvenile plumage with the remainder in full breeding plumage.