

## NOTES ON TERNS NESTING IN THE GULF OF THAILAND

by

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On 13 June 1964, through the courtesy of the Director-General, Fisheries Department, Thailand, facilities were generously made available for us to visit several small islets off the southeast coast of Thailand in the vicinity of Ban Phe, a fishing village somewhat to the east of the major centre of Rayong.

The islets on which we landed, Hin Khao, Hin San Chalarm and Koh Chan were small and rocky, Hin Khao being a sharp ridge of quartzite, the other two composed of more or less weathered red granitic material. Hin Khao and the larger Koh Chan carried some vegetation, mostly wind beaten shrubs with some coarse grass and small trees on the large islets. Hin San Chalarm was completely barren.

Later, on 7 July 1964, *Dickinson* and *Dr. Boonsong Lekagul*, who took all the photographs and has kindly permitted us to use them; visited Koh Rang Kwien, (Pl. I. fig. 1) Long 12° 47' 55" N, Lat 101° 58' E, northwestward from the Naval Base at Sattaheep. Arrangements for this later trip were made through the courtesy of the British Embassy, Bangkok, and Lt. *Pensak Kridikara* R.T.N., Liaison Officer. Thanks are due also to Lt. Cdr. *Viroj Supagarn*, R.T.N., Sattaheep, for his enthusiastic cooperation and assistance during the trip.

Only 3 species of Terns were recorded: *S. anaethetus*, **Bridled Tern**; *S. sumatrana*, **Black-naped Tern**; and *S. dougalli* (*bangsi*), **Roseate Tern**.

*Sterna anaethetus* (Pl. II. figs. 1 & 2.)

The **Bridled Tern** was the most common species around Hin Khao and Koh Rang Kwien, but on the former islet nesting was not far advanced. Some 35 or more birds were noted, but only 3 nests each containing a single egg were found.

On Koh Rang Kwien some 150-200 birds were seen and 30 nests located. Clutches varied from 1 to 3 and nesting was fairly well advanced with several nests containing 1-3 young, from newly-hatched

to birds with the primaries emerging from the sheaths. The **Bridled Tern** chicks were characterized by sooty grey down with leaden grey feet, legs and bills. One chick with distinctive reddish-chocolate down was thought to be referable to this species.

Nine of the Koh Rang Kwien chicks were ringed ( Ring size 3 having a 5 mm. internal diameter ) with rings numbered :

060-01501 to 060-01509. (Rings from M.A.P.S. )

Specimen clutches of eggs were taken from both Hin Khao and Koh Rang Kwien.

Table I Egg Data *S. anaethetus*

Clutch No.	Islet	Size ( mm. )	Incubation
1	Hin Khao	47.6 × 32.2	6 mm. embryo
2	Hin Khao	45.8 × 31.8	3/4 incubated.
3	Koh Rang Kwien	47 × 31	all eggs hardset, within a day or two of hatching
	„	46 × 32.5	
	„	44 × 31	
4	Koh Rang Kwien	45 × 32.5	
5*	Koh Rang Kwien	45 × 32.5	
	„	43 × 32.5	
	„	42 × 32.5	

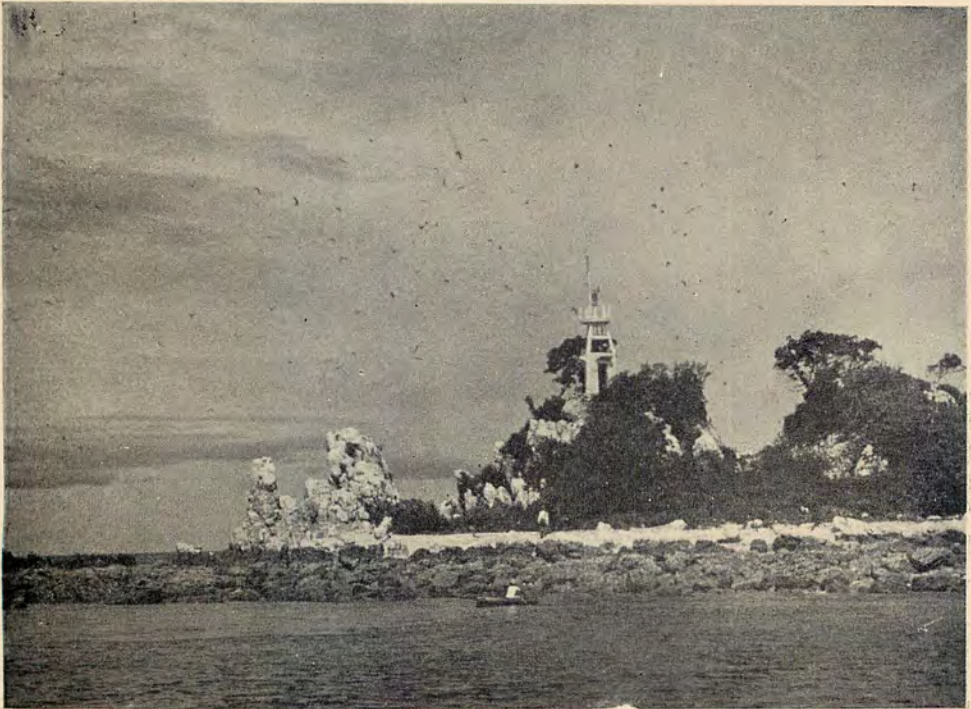
\* This remarkable clutch of three unmarked bluish-green eggs, rather more evenly oval and without the more obvious tapering of typical *S. anaethetus* eggs is tentatively referred to this species on a basis of the dimensions.

*Sterna sumatrana* (Pl. III. figs. 1 & 2. )

The **Black-naped Tern**, numerous around Hin San Chalarm and Koh Chan, indeed at the latter they virtually excluded *S. anaethetus*, were also common at Koh Rang Kwien.

On Hin Khao only about 15-20 birds were seen and 4 nests each containing a single egg were located. On Hin San Chalarm, 17 nests, 8 with single eggs and 9 with 2 eggs were seen. Most of the nests were concentrated up on a small patch of coarse coral fragments on





1. Kok Rang Kwien.



2. Ringing a Bridled Tern chick.



PLATE II



1. *S. anaethetus* chick.



2. *S. anaethetus* eggs.





1. *S. sumatrana* chick.



2. *S. sumatrana* eggs.





the northern side of the islet, but a few were found on the higher rocky parts, the eggs usually resting in shallow crevices in the rock, floored with a few rock chips and gravel.

On Koh Chan almost all the 32 nests were noted on a gently sloping stretch of weathered gravel and sparse tussocks of grass. Eleven nests contained single eggs and 21 nests two eggs each. About 80 birds were noted around the islet.

On Koh Rang Kwien, some 50-60 birds were noted and 12 nests located in exposed sites on the rocks, sometimes with sparse grassy tussocks as cover. Those eggs at higher levels had hatched, while those lower down were still unhatched. Clutches, usually of only two eggs, in 2 cases contained 3 eggs, and one nest with 3 downy young was recorded. The downy chicks were patterned with yellowish white base and grey linear markings, giving excellent camouflage. The bill and legs were reddish-orange. Eight birds were ringed with Size 2 rings (Pl. II. fig. 2.) (internal diameter 4 mm.), the ring numbers being:—

300061–300068 and marked NIYOM PHRAI.

Specimen clutches of eggs were taken from Hin Khao, Hin San Chalarm and Koh Chan.

Table II. Egg Data *S. sumatrana*

Clutch No.	Islet	Sizes (mm.)	Incubation
6	Hin Khao	36.3 × 2.60	6 mm. embryo
7	„	34.9 × 27.4	„
8	Hin San Chalarm	39.7 × 28.1	10 mm. „
		39.7 × 27.4	25 mm. „
9	Koh Chan	41.3 × 27.4	fresh

*Sterna dougallii* (*bangsii*)

The **Roseate Tern** was seen only in the first area visited and not more than 6 birds were seen during the day. There was no evidence of nesting, although one pair of birds, noted at sea approaching Hin

Khao had distinctly red bills, hence presumably approaching or in full breeding condition.

One specimen of a pair seen at Koh Chan was collected and had not reached breeding condition. The colour of the soft parts were as follows: Bill mainly black, tinged proximally with red, legs and feet bright orange red, eye black. The dimensions: Culmen 36.5 mm; Tarsus 20 mm; Wing 176 mm. (appr); Tail 181 mm. Unfortunately both wing tips were slightly damaged.

#### REFERENCES

Earlier references to sea birds nesting in the Gulf of Thailand include the following:—

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