

temperature on the 8th. Although the adult repeatedly left the egg to dip, it seemed unable to lower the egg's temperature. As the egg cracked later that day and proved infertile, perhaps the heat of decay foiled the adult's attempts to lower the egg temperature.

On the 8th the adult had been able to maintain the egg's temperature 4° F below the air temperature. When the adult flew off to dip, the exposed egg's surface temperature rose 1 to 2° F while the bird was absent but then dropped 2 to 5° F within a few minutes after the adult returned. The adult did not hold the wet breast feathers against the egg, but held them right above the egg.

Although I have limited information, I suggest that dipping the breast feathers by incubating terns helps regulate either the egg's temperature or humidity. Some adults dipped often during incubation while others did so only rarely. If dipping the breast feathers is thermoregulatory it is puzzling that the tern does not hold the wet, cool feathers directly against the egg. Possibly the water dripping off the feathers onto the egg provides any moisture the egg may need.

Late in the breeding season adults continue to dip but seldom dip their breast feathers. On 27 June 1970 when most chicks were 6 to 8 weeks old and few eggs were present, nearly all of the hundreds of adults flying out from Bush Key dipped only their bill or occasionally their feet.

NEST RELIEF

Most of the 61 nest reliefs observed during incubation occurred during early morning or late afternoon (Table 4). Generally the adult lands near its scrape and walks up to its mate on the egg. The bird on

TABLE 4. NEST RELIEF DURING INCUBATION

Time	Number of exchanges	Hours of Observation	Exchanges/hour Observation
06:00—07:00	13	21.52	0.60
07:00—08:00	4	27.92	0.14
08:00—09:00	4	29.03	0.13
09:00—10:00	3	23.50	0.12
10:00—11:00	5	19.33	0.25
11:00—12:00	1	13.38	0.07
12:00—13:00	1	10.33	0.09
13:00—14:00	3	10.25	0.29
14:00—15:00	1	10.97	0.09
15:00—16:00	3	14.78	0.20
16:00—17:00	12	16.98	0.70
17:00—18:00	6	17.00	0.35
18:00—19:00	3	4.50	0.67
19:00—20:00	2	1.17	1.70
Total	61	220.66	0.28