FIG. 2. The same male as in Fig. 1, lowered in the nest-cup in a position that could be mistaken for incubating or brooding behavior. Note that the body is not sufficiently lowered to be pressing against eggs or nestlings.

as the Chestnut-collared Longspur should be immediately suspect if the male wears brightly colored, display plumage and the female is concealingly colored. As the case of the Florida Scrub Jay shows, even sexually monomorphic birds may have division of labor in incubation. Therefore, we recommend that all reports of suspected male incubation in passerine birds be accompanied by sufficient observational details to rule out nest-defense as a possibility.— JACK P. HAILMAN, *Dept. Zoology, Univ. Wisconsin, Madison, Wisconsin 53706;* AND GLEN E. WOOLFENDEN, *Dept. Biology, Univ. South Florida, Tampa, Florida 33620.* *Accepted 25 Mar. 1985.*

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Nestling feeding schedules of Turquoise-browed Motmots in Yucatán, Mexico.—Skutch (Auk 62:489–517, 1945; Auk 64:201–217, 1947; Ibis 106:321–332, 1964; Wilson Bull. 83: 74–94, 1971) and Orejuela (Living Bird 16:193–208, 1977) have provided data on schedules maintained by adult members of the family Momotidae during provisioning of their young. For the Turquoise-browed Motmot (*Eumomota superciliosa*), one of the two most common members of this family, Skutch's (1947) data do not include nestling weights, and both he (1947) and Orejuela (1977) only provide data for portions of the first posthatching week. Here, we augment those data and supplement information provided by Scott and Martin (Biotropica 15:8–14, 1983) on other aspects of reproduction of this species in central Yucatán

TABLE 1
NESTLING FEEDING SCHEDULES OF TURQUOISE-BROWED MOTMOTS DURING SECOND WEEK POSTHATCH, JUNE 1984, AT UXMAL, YUCATÁN

Nestling age (days)[a]	Date	Time (h)	Disturbance[b]	Number of visits #1[c]	Number of visits #2	Number of visits Total	Visits per hour #1	Visits per hour #2	Visits per hour Total
7–8	20	07:38–10:42	–	10	11	21	3.2	3.5	6.7
		15:06–17:18	–	2	13	15	0.9	5.9	6.8
8–9	21	08:23–10:39	0	11	8	19	4.8	3.5	8.3
		10:43–11:59	+	4	3	7	3.1	2.3	5.4
		08:23–11:59	<+	15	11	26	4.2	3.1	7.2
		16:58–18:47	0	5	9	14	2.8	5.0	7.8
9–10	22	07:41–08:37	0	3	8	11	3.3	8.9	12.2
		08:37–08:59	+	2	1	3	5.4	2.7	8.1
		07:41–08:59	<+	5	9	14	3.8	6.9	10.8
10–11	23	05:48–07:31	0	6	14	20	3.5	8.2	11.8
		17:03–18:03	0	3	13	16	3.0	13.0	16.0
11–12	24	17:14–18:36	0	2	13	15	1.4	9.3	10.7

[a] For 2 oldest young. (Hatching is asynchronous in this species.) Estimates were based on nestling morphology and weights recorded on 21 June and on comparisons with similar data taken in Yucatán (Scott, unpubl. M.A. thesis, Univ. Texas, Austin, Texas, 1984) and Campeche (Orejuela 1977).
[b] Disturbance: 0 = no human disturbance observed; – = few humans present, separate data not recorded; + = presence of humans seemed to delay flights from reconnaissance perch; <+ = presence of humans sometimes delayed flights from reconnaissance perch.
[c] Parents were unsexed but color marked.

by providing weight-related feeding rates and associated information for midportions of the nestling period.

On 20 June 1984, we began observations of an unsexed color-marked pair of Turquoise-browed Motmots attending four nestlings at Uxmal, Yucatán (20°20′N, 89°46′W). Scott and Martin (1983; Biotropica 16:319–323, 1984) have provided detailed climatological, physiographic, and ecological descriptions of this site and the surrounding area. The forest and clearings were "green" during our study; and insects, the primary food of nestling motmots here, appeared abundant. The nestlings occupied a hole (vacant cross-beam socket), 2.33 m above floor level, in the wall of an elevated room off the east façade of an archaeological structure. The hole was located approximately 15 m distant from the outer entry to the room; timing of parental visits began and terminated when adults flew through this entry. The adults reconnoitered the site from perches at or near the forest edge before flying to the archaeological structure. Although visitation by custodians and tourists was infrequent during our observations, and the motmots here were habituated to man, we kept separate records for periods during which provisioning flights appeared to be delayed by the presence of humans. Observations were made through 8 × binoculars; weights of nestlings were taken to the nearest g with a 100-g Pesola spring balance.

The earliest (with regard to nestling age) feeding rates we recorded, those for 7–8-day-old young (6.7, 6.8 visits/h, Table 1), exceeded that observed by Orejuela in 1977 (5.3 visits/h) for 6-day-old Campeche nestlings of this species, and that recorded by Skutch (1947) for 7-day-old young in Honduras. On 21 June, at 08:00, the Uxmal nestlings weighed 40, 36, 33, and 29 g. Feeding rates generally increased with age of young (Table 1), and when the nestlings were only 10–11 days old, feeding rates exceeded that reported by Skutch (1964) for 19-day-old *Momotus momota* (11/h). One parent (#2) visited with signficantly greater frequency than the other ($\chi^2 = 16.86$; df = 1, $P < 0.005$; excluding visits affected by human disturbance), but this division of effort may not be representative of that over an entire day. Mean time spent per visit (room entry to exit) was 79.5 sec (N = 123; SE = ±4.7 sec). Few food items carried could be identified, but adult lepidopterans (≥3 species) represented at least 13% of provisions. At 17:30, 24 June, the (unmarked) nestlings appeared healthy and weighed 45, 43, 41, and 33 g; they had collectively gained 24 g during the preceding 3 days. Observations of this brood were terminated well before its projected potential fledging date.

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Arrival and departure patterns of Great Blue Herons at a South Dakota colony.—Two of the potential benefits of colonial nesting or roosting are predator protection (Lack, Ecological Adaptations for Breeding in Birds, Methuen and Co., London, England, 1968) and the use of the colony or roost as an "information centre" (Ward and Zahavi, Ibis 115:517–534, 1973). Weatherhead (Am. Nat. 121:237–243, 1983) recently suggested that the principal advantages of communal roosting may differ among birds in the same roost. Central roosters may benefit more from predator protection provided by roosting, rather than from information exchange, whereas less-dominant birds roosting on the edge may derive the most benefit from information exchange on favorable feeding sites. Evans (Auk 99:24–30, 1982) hypothesized that colonies in group-foraging birds may play an important role in preventing dispersal of foraging individuals by serving as central assembly points.

The Great Blue Heron (*Ardea herodias*) has been discussed as a colonial nester that may use the colony as a source of information on feeding areas (for differing opinions see Krebs, Behaviour 51:99–134, 1974; Pratt, Wilson Bull. 92:489–496, 1980; Bayer, Auk 98:589–595, 1981). Weatherhead's (1983) "two-principle strategies" hypothesis may provide an explanation for these differences.

Here, we report on departure directions, arrival and departure frequencies, the degree of colony synchrony, and the extent of clumping at arrival and departure from a colony of Great Blue Herons.

Study area and methods.—We observed arrivals and departures of Great Blue Herons at the Glendale heronry on the James River in Spink County, South Dakota. The heronry consisted of 66 active nests, all of which were visible from a blind constructed in a tree 50 m across the river from the heronry. A large opening allowed a view of the heronry, and smaller openings permitted the viewing of all birds approaching or departing from the colony. Observations were made from the blind from sunrise to sunset once each week from May through August 1980 for 156 h; the number of active nests did not change substantially