

Calgary in June the average daily minimum is 6.9°C (44.5°F) and in July it is 9.5°C (49°F). The unusual nest clumping, although common in the family Ploceidae and in the Spanish Sparrow, which hybridizes with *P. domesticus* (Meise 1936), may provide for a warmer nest microclimate. This would be particularly true for nests that were housed within the same structure. In some cases only a thin wall separates the nest chambers, through which some heat transfer is inevitable. If the clumping phenomenon is related to climate, then other high latitude sites should show similar House Sparrow nesting dispersion.

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Louisiana Herons Gleaning Dragonflies^a

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In review of the feeding behaviors of herons, Kushlan (1978, *Wading Birds*, Natl. Audubon Soc. Res. Rep. No. 7: 249) found that gleaning was recorded in only two species of American herons—the Great Egret (*Casmerodius albus*) and the Cattle Egret (*Bubulcus ibis*). Clark (Florida Field Nat., in press) noted Green Herons (*Butorides striatus*) gleaning honeybees (*Aphis mellifera*).

While making observations in 1979 from a blind at the Haulover Canal Heronry (28°44'N, 80°45'E) on the Merritt Island National Wildlife Refuge in Brevard County, Florida, I noted nesting adult Louisiana Herons (*Hydranassa tricolor*) foraging for dragonflies (species unknown) in patches of glasswort (*Salicornia virginica*). After leaving the nest site, which was in white mangrove (*Laguncularia racemosa*), a bird would land at the edge of a glasswort patch and slowly walk into the plants with its body crouched low and head retracted. Insects were stalked to a distance of 25-35 cm before being seized after a quick dart of the heron's neck.

Adults from three of the six nests under study were observed stalking dragonflies, and one was seen feeding the insects to its young. Eleven stalks and strikes by the birds were noted, of which nine (82%)

^a Merritt Island Ecosystems Studies Contributions No. 22.

were successful. A fledged but not yet independent juvenile was observed gleaning grasshoppers and dragonflies. During a 7-min period, this bird stalked 4 insects, struck at 3, and captured 2.

Palmer (1962, *Handbook of North American Birds*, New Haven, Connecticut, Yale Univ. Press, pp. 464–472) and others mention Louisiana Herons taking dragonflies, but gleaning as a method of prey capture has not been previously recorded in this species. The utilization of a food resource in the vicinity of the nest is certainly an advantage to the birds, especially when they generally forage 2–5 km from the breeding site.

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Aspects of the Annual Cycle in Highland Populations of the Rufous-collared Sparrow, *Zonotrichia capensis*

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The form of the annual cycle of *Zonotrichia capensis* has been described from several localities in Latin America (Miller 1959, 1961; Miller and Miller 1968; Wolf 1969; Davis 1971; King 1972a, b, 1973a, b, 1976). While in northwestern Argentina, I collected information on certain of the breeding activities of this species at altitudes between 2,000 m and 3,000 m. The data supplement those of King (1973a, b) on populations at 550 m and 2,000 m in the same part of Tucumán Province, Argentina. Data were collected from various localities around and above the village of Tafí del Valle (hereafter referred to as Tafí) in the upper Angostura valley, which runs north-northwest into the Sierra del Aconquija, a pre-Andean range in the province of Tucumán, northwestern Argentina. Handford and Nottebohm (1976) show the location and give a description of the vegetation and climate of the general area.

Above 1,900 m, the Angostura valley is a wide, flat, semi-arid zone of scrub and grasses with some isolated trees, and extends 11 km to Tafí at 2,000 m, with its domestic gardens and orchards. Above Tafí, this wide valley climbs through rough pasture, which grades into rough bunchgrass (predominantly *Festuca heironymii*) from about 2,750 m to the pass of El Infiernillo at 3,040 m. Above 1,900 m, the valley receives virtually no rain from May through September. The heaviest rains are in December through February, giving a yearly total in the region of 300 mm (Meyer and Weyrauch 1966). The onset of the summer rains appears to be quite variable: in 1972, the first significant rain fell 13 November, which was 3–4 weeks late according to local information. In 1973, showers began in mid-October, and between 7 December 1973 and 21 January 1974, 110 mm of rain fell in Tafí and 132 mm fell near El Infiernillo. Twice in January 1973 there were heavy hailstorms in the valley above 2,850 m, which badly flattened the grasses. Between Tafí and about 2,600 m, the grasses began to green by November, but the area above 2,850 m preserved a dry, brown aspect late into December in both years of this study. Between 2,600 m and 2,750 m, the grasses produced flowering shoots by mid-December, and they seeded by mid-February, while above 2,850 m, flowers did not appear until mid-January. Although vegetative growth is thus retarded in the higher levels of the valley, there is dense, tall (~40 cm) cover available year round, for it is little grazed.

The artificial watering employed near Tafí and neighboring inhabited areas has a marked effect on the growth of the vegetation there. Thus on October 1972, apple trees were in bloom and willows around Tafí were in leaf, while willows 1–2 km from the village but at the same altitude were still in tight bud, as were natural alders just outside the village limits. These alders did not leaf until the first week of November.

In the first week of January 1972, vast numbers of a pierid butterfly began flying in most of the valley, and they persisted until about the end of January. During this period of abundance, they were commonly fed upon by many species of birds, including *Zonotrichia capensis*. These butterflies were rather scarce in 1969–70 (J. R. King in litt.) and also in 1973–74, single individuals being first observed 30 December 1974. Overall, then, this valley shows considerable variation both within and between years in the appearance of new vegetation and in the availability of insect food. In addition, the highest areas are subject to occasional severe storms.

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