

cacique makes elongated, basket-shaped, baglike nests of plant fibers, with the entrance at the top. On 12 August I saw one of these flycatchers repeatedly arrive with nest material in its bill and disappear with the material in one of the cacique nests, to reappear empty-beaked after some time. This activity took place during a large part of the morning. The same bird always brought the material but it was accompanied by its presumed mate, which alighted nearby when the other disappeared into the nest. Clearly the flycatcher was building a nest in the old cacique nest. I collected the nonbuilding bird (weight 20.2 g), which proved to be the male.—F. HAVERSCHMIDT, 16 *Wolfskuilstraat*, Ommen, Holland. Accepted 18 Feb. 72.

Notes on nectar feeding by orioles.—The orioles or troupials of the family Icteridae have a diversity of feeding habits. Members of this family have invaded virtually every food niche exploited by passerine birds (Beecher, 1951). Their diet includes both plant and animal matter, undoubtedly varying with the individual and to some extent with the season. Most early writers such as Bendire (1895) and Judd (1900) stated that orioles were principally insectivorous. In describing the feeding habits of hooded orioles near Los Angeles, Illingworth (1901) wrote that their chief food consisted of insects and injurious caterpillars. Not until recently have several authors (Beecher, 1951 and Blake, *in* Thomson, 1964) mentioned the icterids' nectarivorous habits. Recent observations support Blake's statement that some orioles are essentially frugivorous and nectarivorous, supplementing their diet with insects and other small terrestrial arthropods.

Nectar has not previously been listed as comprising a considerable part of the diet of orioles principally because it cannot be detected in stomach contents by the customary visual analysis. Thus although it was recognized that many orioles made frequent visits to blossoms, it was argued that the birds were in search of insects or were feeding directly on flower parts such as the petals. The recent widespread use of hummingbird feeders provides an answer to this question. Either many orioles have changed their feeding habits fairly rapidly to capitalize on this new food source of man-made nectar, or else we are now observing directly what could previously only be suspected. I believe the latter to be true.

While experimenting with color preference in hummingbirds at Loma Linda, California during the spring and summer of 1971 I had three California Hooded Orioles, *Icterus cucullatus californicus* (Lesson), that routinely patronized the feeders. Although their visits were somewhat irregular on some days, during continuous observation on 4 July the three birds made a total of 43 visits; 12 for an adult male, 11 for a female, and 20 for an immature male. Visits were made roughly every half hour with greater frequency in the morning and again near dusk, much like the hummingbirds. The first visit, by the adult male, was shortly before dawn at 05:43 and the last, by the immature male, at 20:06. These figures suggest that nectar formed an important part of these birds' daily diet.

At each feeding the orioles inserted their sharp, slender beak into the narrow delivery tube and gaped. Watching closely I was able to glimpse the tongue running in and out lapping up the sugar solution by a sort of capillary action as in hummingbirds. Periodically the birds lifted their head to allow the liquid to flow down their throat, just as most birds do when drinking water.

Peterson et al. (1963) point out that nearly one-fifth (1,600 species) of all the world's birds feed *mainly* on nectar. My observations, together with communication from others who have observed additional species with similar habits, lead me to

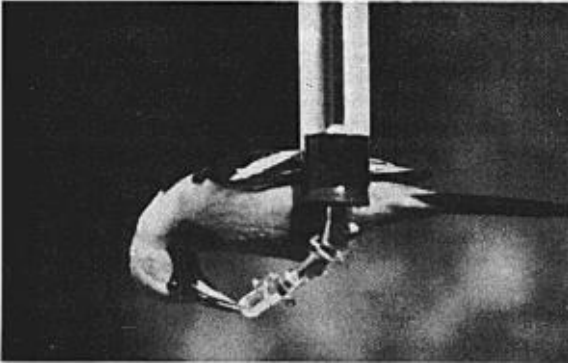


Figure 1. A male California Hooded Oriole, *Icterus cucullatus californicus*, sipping nectar from a hummingbird feeder.

suspect that when available nectar undoubtedly fills a larger place in the diet of all orioles than is commonly recognized. Their opportunistic exploitation of hummingbird feeders indicates that this may have always been true.

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Turkey Vultures casting pellets.—Pellet formation (the regurgitation of indigestible food portions) is known in a number of different avian taxa: Ardeidae, Accipitridae, Tetraonidae, Laridae, Strigiformes, Caprimulgidae, Apodidae, Coraciiformes (Alcedinidae, Meropidae), and a few Passeriformes (Corvidae, Cinclidae, Turdidae, Sylviidae, Meliphagidae, Dicaeidae) (Thompson, Ed., *A new dictionary of birds*, New York, McGraw-Hill Book Co., 1964, p. 608-609; Welty, *The life of birds*, Philadelphia, Saunders Co., 1962, p. 91). The phenomenon apparently never has been reported in Cathartidae, the New World Vultures.