## FROM FIELD AND STUDY

Notes on Hummingbirds and Orioles.—Since reporting on "Hummingbird Boarders" in the Condor of September, 1931, the writer has maintained a constant supply of sugar syrup for the birds' use, and for more than two years there was always at least one male hummingbird making regular visits to the bottles, though there have been occasional changes in individuals. In times of abundant flowers, approaching darkness always stimulated free use of the artificial food, even though it might be somewhat neglected through the day. Very few new recruits, however, have been gained during the period from February to June. It is for this reason, as previously stated, that the benefit of the feeding had been confined almost exclusively to the resident Anna Hummingbirds (Calypte anna), in so far as adults were concerned.

However, at the beginning of July, 1931, a time of year prior to which the increasing scarcity of flowers has ordinarily caused the departure of the adult male Costa Hummingbirds (C. costae) from their local breeding grounds, one of them suddenly appeared at the feeding station, making constant use of it until August 14.

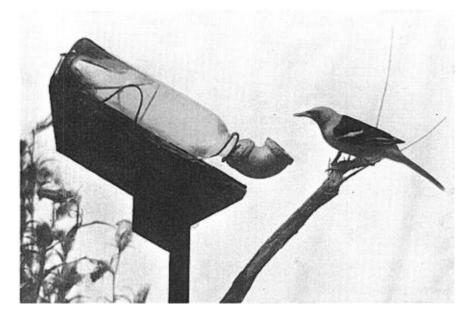


Fig. 6. Adult male Arizona Hooded Oriole, with feeding device made by cementing the neck of a bottle into a galvanized "ell". For humming-birds only, a smaller bottle is more convenient, and a slotted cover over the open end of the ell will discourage bees, wasps and uninvited birds. Ants are kept away by passing the upright support through the slit bottom of a small can, which is then sealed so that it may be filled with water.

The following year he again presented himself in midsummer (assuming this to have been the same individual) and remained until September 4, taking up a station overlooking the syrup bottle and vigorously driving away the larger Anna Humming-birds. In the spring of 1933, the first Costa Hummingbird to be seen, immediately showed his entire familiarity with the feeding devices and continued to use them until September 2.

While the September dates are not later than other records for the species in Los Angeles County, it is two months later than I have seen any other adult male Costa Hummingbird in this neighborhood. This instance, together with the unwontedly continuous presence of certain adult male Anna Hummingbirds, may well illustrate the

distinction between post-breeding movements in search of a more plentiful food supply, and true migration in response to some instinctive compulsion.

During July and August of each year the body plumage of this Costa Hummingbird has appeared slightly ragged or unkempt, but in 1933 it was again in excellent condition by the time of departure. There was no sign of molting of crown and gorget as long as the bird remained, and it may be assumed that this takes place later in the fall, as was found to be the case with the Anna Hummingbird.

The syrup for the hummingbirds has ordinarily been prepared by adding as much sugar as the cold water would dissolve. When the demands on this supply by a colony of Arizona Hooded Orioles (*Icterus cucullatus nelsoni*) became rather heavy, the solution in the bottle which they usually visited was reduced to half strength. The orioles seemed perfectly content with the diluted syrup, but the hummingbirds showed some dissatisfaction and for the most part transferred their attention to another bottle containing a saturated solution.

The relatively small number of female hummingbirds availing themselves of the sugar solution has been very noticeable throughout, though they have never indicated any lack of taste for this kind of food. The explanation for this preponderance of males at the feeding station is not readily apparent, so it may be attributed either to superior perspicacity or to such other causes as one's personal prejudices may suggest.

The extreme tameness of hummingbirds may produce an impression of lack of intelligence, as it did, in fact, to W. H. Hudson. I have noticed on one or two occasions, however, that this fearlessness is tempered by a wise discretion, in that the hummingbird refused to approach a cat as closely as it would have approached a person who remained equally quiet.

On April 26, last, when migrant hummingbirds were unusually numerous, it seemed that the various species were being attracted to the bloom of the avocado trees in greater numbers than to that of the adjacent orange trees. While the presence of bees attests that the former is well supplied with honey, one would not expect flowers of such small size and inconspicuous coloring to prove particularly attractive to hummingbirds.

On the same date I first observed a variation of the hyperbolic, diving type of "nuptial flight" of the Rufous Hummingbird (Selasphorus rufus). The flight of this individual started as ordinarily, passing the object of his attention at high speed with the usual three or four twanging notes, but instead of continuing upward in a smooth curve, the speed was abruptly slackened within twenty or twenty-five feet, and the flight continued horizontally for a few feet with spread tail and a weaving movement of the body, after which the bird turned about and mounted to repeat the flight from the same direction.

The squeaky "song" of the male Anna Hummingbird has elsewhere been referred to as peculiar to the breeding season, but it is actually heard at all times of year with substantially equal frequency. On April 27, 1933, I was attracted by a song of rather "amateurish" character, and found it to be produced by what appeared to be a female Anna Hummingbird, but doubtless was a young male of the current year, whose gorget was represented only by a small throat-patch. The Costa Hummingbird's two- or three-syllabled whistling call, though much less persistently uttered, appears to be almost exactly analogous to the song of *C. anna.* 

In contrast to the preceding year, Rufous Hummingbirds were abundant during the spring migration of 1933, being in evidence almost constantly from February 26 to May 1. Male Calliope Hummingbirds (Stellula calliope) remained here, two miles from the base of the San Gabriel Mountains, until May 4, the latest date at which I have seen or heard them in the valley.—ROBERT S. WOODS, Azusa, California, September 4, 1933.

Dancing Movements of Old-World Gulls.—The unusual antics of Larus canus brachyrhynchus described by Laidlaw Williams (Condor, 35, 1933, p. 161) is a very well known habit in the small Old-World gulls which I have seen on many occasions

well known habit in the small Old-World gulls, which I have seen on many occasions. In my "History of the Birds of Suffolk" (p. 398), under Larus canus canus Linnaeus, the following account is given: "The dancing of the smaller gulls on mud to attract worms and stir up other food is well known, and this trait was observed by Hele in a captive Common Gull on a grass lawn." Such is instinct! And again