THE PALM-LEAF ORIOLE.

BY FLORENCE MERRIAM BAILEY.

Plates IV and V.

MAJOR BENDIRE, in his biography of *Icterus nelsoni* designates it as "the Arizona Hooded Oriole, also known in southern California as the 'Palm-leaf Oriole,'" and Coues in his fifth edition gives both names without comment. Major Bendire states that Mr. Walter E. Bryant when at Comondu, Lower California, found this oriole "nesting in the palm trees," and Mr. Brewster says that one of Mr. M. Abbott Frazar's Lower California nests was "attached to the underside of a palm leaf."¹

In southern California the growth of the birds' habit of nesting in fan palms seems to have paralleled the peoples' habit of planting fan palms in rows bordering their city streets, a habit frowned on by part of the population though persisted in, as a rebellious citizen complained, "to show the easterners that we can grow them here!" 'The palms are also used conspicuously as decorations for railroad station grounds — perhaps to preclude the possibility of escape from tropical impression — and noisy and unsuitable as the locations seem, oriole nests are sometimes found only a few yards from the tracks.

In eight towns and three country places in the general region between Redlands and San Diego in the summer of 1907 I counted forty nests made of palm fiber and hung in fan palms, and twelve others made of palm fiber and hung in other trees. This number doubtless represented but a small fraction of the actual nests in the places listed as they were noted largely in passing, sometimes while waiting for trains.

The great variety of palms used for decorative purposes in southern California gives the oriole a wide range of choice in nesting sites, but with one exception, that of a yucca-like palm in Santa Ana, the nests found were in the common native Washington fan

¹ Birds of the Cape Region of Lower California. By William Brewster. Bull. Mus. Comp. Zoöl. Harvard University, Vol. XLI, No. 1.

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PLATE IV.

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palm, or in one too nearly like it to be distinguished by the unbotanical. The wisdom of the choice is easily appreciated for the narrow leaves of the date palms offer no protection from the hot California sun while the wide leaves of the fan palms are natural umbrellas, and among fan palms the short-stemmed varieties with close-set leaves would give little of the breeziness given by this long-stemmed one whose leaves fan reasonably free of each other. The Washington palm in fact supplies at once three of man's inventions worked out from nature's patterns — the fan, the umbrella, and the fly or double roof. What better combination could a knowing bird take advantage of in a hot country? *Nelsoni* takes the fullest advantage of it, hanging his nest neither in the dome of the umbrella where there is the least breeze nor out on the fingers of the leaf where the sun comes in, but just above the fingers where there is not only shade but the most breeze.

In choosing between individual trees, the taller seem to be given the preference. At Corona where we found a palm fiber nest in a pepper tree, palms and peppers alternated down the street but the palms were not tall enough to raise their fans to a safe height. The largest number of nests found together were in two groups of particularly high palms. At Hemet, in the stately arc of high trees bordering the hotel grounds where a man on a ladder was sawing off the dead lower fans, eight nests were counted; and at the Cold Water Cañon hotel in the Santa Ana Mountains. in an assembly of venerable palms twenty to forty feet high, twentythree were counted. At Hemet there would doubtless have been more nests had the palms not been trimmed. In Cold Water Cañon the twenty-three found were probably only a part of those actually there for although the old fans were left on the trees, they had drooped so low that even by walking around the trunk and looking up inside the leaves it was hard to find the nests.

Only a few occupied nests were seen as the orioles begin nesting in April and most of the nests enumerated were found in late July and August. The discrepancy in dates among the occupied nests accorded with Major Bendire's statement that "two and possibly even three broods are sometimes raised in a season. Under date of June 11, at Palm Springs, my notes read: "Attracted by the sibilant cries of young birds from a palm in front of the house I found *nelsoni* feeding young in a straw-colored ball of a nest under



From Biological Survey, U. S. Department of Agriculture.

FAN PALMS SHOWING HOODED ()RIOLE'S NESTS.

a palm leaf made of palm fibers with strands dangling -- with just head space above. Both birds were busy feeding....Saw one perch picturesquely on the tip of an agave - the handsome yellow bird with the black face on the sage-colored agave." Under date of June 26, at Twin Oaks, I noted: "Several old nests are about the place, in oaks, umbrella tree and the one fan palm. There are two males about the house, one that perches on the windmill and one that, with his mate, is flying with streamers of palm fiber." The orioles were said to have built in this palm for several years but now disturbed by the presence of onlookers were gathering fiber to carry to another tree. On July 8, at San Diego, as we were passing a fan palm "on a lawn on Fifth Street," a handsome old male oriole almost flew into our faces as he dove in with food for the young. On July 23, in the hotel yard at Cold Water Cañon one oriole was seen feeding young and another starting to build. Here we were interested to find two old oriole nests occupied by linnets, the striped heads of the linnets looking amusingly out of place over the edge of the oriole's hanging basket. On July 29, at Hemet, the man who was trimming palms reported finding one nest with eggs and another with three young whose mother hung by the foot caught in the tangle of fibers depending from the nest.

The workman saved a fan with a nest for us, and the section containing the nest was brought east and photographed. The nest is supported on each side by fiber threads sewed through the leaf, and the nest itself, particularly the outer framework, intricately woven of the same fiber. The only lining is of finer threads.

The nest found in the pepper tree was not so dependent on strong sewing as that in the fan palm, for it was supported by the delicate twigs of the pepper sprays around which the fibers were securely bound. Palm fiber nests, besides this found in the pepper tree and those mentioned previously in oaks and umbrella trees, were seen and reported, one in a eucalyptus at Cold Water Cañon, where it made the twenty-fourth nest in a radius of a few rods, and another at Riverside where it hung from the gold of ophir and jasmine vines of a piazza.

By the time I had listed the fifty-two nests made of palm fiber, forty of which were hung in the palm, it seemed that, in southern California at least, *nelsoni* had won its right to the name of Palmleaf Oriole.