



PROF. F. E. L. BEAL

Few eastern ornithologists are better known to Californians than Prof. Beal, who has spent much time with us, studying in the field the relations of our common birds to agriculture and horticulture. Prof. Beal's name has long held foremost rank among the economic ornithologists of the country, and it is safe to say his papers on economic ornithology have been more potent in influencing farmers and fruit growers, than a legion of state laws. Under the auspices of the Biological Survey of the U. S. Department of Agriculture, with a corps of able assistants, he is rapidly and successfully impressing upon the minds of our practical class the relation of birds to the matter of dollars and cents.

We are much indebted to Mr. W. Otto Emerson for the opportunity of presenting this excellent portrait.

The Status of the Southern California Cactus Wren

BY HARRY S. SWARTH

IN a recent review of the cactus wrens of the United States Dr. Means describes a new desert race under the name of *Heleodytes brunneicapillus anthonyi* and ascribes the birds of the coast region of southern California to the subspecies *bryanti*. Believing him to be mistaken in both statements I have been to some pains to bring together a series of cactus wrens from the regions inhabited by the two supposed varieties; and what with those in my own collection, together with specimens loaned me by different members of the Cooper Club I have had at my disposal, in all, forty-eight skins, representing the following localities: 22 from southern California (San Fernando, Pasadena, San Bernardino, and San Geronio

Pass), 11 from the Colorado Desert (Cohuilla Valley, Walters, New River, Pilot Knob, Cameron Lake, Vallecito, and Yuma), 13 from south-eastern Arizona (Tucson, Fort Lowell, and the Huachuca, and Santa Rita Mountains), and 2 from Sonora, Mexico. Taking these up in regular order we will first consider the birds from the coast region of southern California, which should represent the subspecies *bryanti*. In Anthony's original description of *bryanti* (Auk XI, 1894, 210) the distinguishing features of the race are not made at all clear, but from the accompanying text it is evident that one great point of difference between *bryanti* and *brunneicapillus* is that in the former all the rectrices but the middle pair are more or less perfectly barred with white, while in the latter the outer tail feathers only are barred on the inner web. Besides this striking feature Dr. Mearns ascribes to *bryanti* a back broadly striped with white.

In the series of twenty-two southern California skins before me there is just one with a perfectly barred tail. This is a juvenile male taken at San Gorgonio Pass, the edge of the desert; and I do not think that great importance can be attached to it, as the juveniles from all parts show more white markings on the tail feathers than do the adults, and in the post-juvinal moult, which takes place in September, the rectrices are lost with the rest of the juvenal plumage. Of the remainder of the series there are one or two with not even the outer feathers perfectly barred on the inner web; many of them have illy defined spots on the second feather and one from San Bernardino has a few irregular white spots on all the feathers.

As to the striped back, supposedly diagnostic of *bryanti*, I believe it is to some extent seasonal, being more apparent in breeding birds in rather worn plumage than in autumnal specimens; but it is far more conspicuous in the desert birds at hand than in any of the California or Arizona specimens.

Passing on to the Colorado Desert birds I find in the tail feathers exactly the same markings as in specimens from the coast region; one with the inner web of even the outer feather imperfectly marked, one with some white markings on all but the middle pair, and most of them with some slight marks on the second feather. As I before remarked the desert birds show a greater tendency to longitudinal stripes on the back (these markings being more broken up in the coast specimens) but the difference is not great nor constant enough to justify any separation of the races. One specimen, a male from the Cohuilla Valley (Coll. G. F. Morcom, April 15, 1886) is noteworthy as being conspicuously paler than any other bird in the entire series. The throat is sparsely marked with black, the back has broad longitudinal white stripes and the crown is very light colored, almost chestnut, in striking contrast with the dark brown pileum of the rest of the specimens. In tail markings, however, it is like many others, the outer feathers perfectly barred, one or two white markings on the second, and just a trace of white on the third. A female in my collection taken at San Fernando, California (No. 2181, October 18, 1901) is very similar to this bird in general appearance, the only differences being due to the one being in perfectly acquired autumnal plumage, while the other has the plumage more worn and abraded.

Of the Arizona specimens, I have some from the extreme southeastern corner of the territory that are absolutely indistinguishable from others taken within a few miles of the Pacific Ocean. In the tail markings they vary exactly as specimens from the other localities do.

There is supposed to be some difference between *anthonyi* and *bryanti* in the character of the markings of the under parts, the spots in the former being smaller, more scattered, and linear in shape, while the latter is supposed to be heavily

marked with rather large, round, or ovate spots; but this seems to be purely individual variation, for I find specimens showing both character of markings in the Arizona, the desert, and the southern California series. The differences in the black throat patch are mainly seasonal. When the fall moult is completed the throat feathers, dusky at the base, then white, and with about the terminal third black, are slightly edged with grayish, producing, in birds shot up to about the end of October, a somewhat hoary effect in the otherwise black throat and upper breast. This is very soon lost, and by early spring much of the black has worn away as well, sufficiently so to expose much of the light colored portions of the feathers; so that in birds shot at this time the black is not nearly as "solid" in appearance as is the case with fall birds. In two June specimens, one from San Fernando, California, and the other from the Santa Rita Mountains, Arizona, abrasion has proceeded to such a point that the throat patch has entirely disappeared as a distinctive marking, and the two birds are practically uniformly spotted over the entire lower parts; while in the two Sonora specimens (♀ ad. and ♂ im. coll. F. Stephens, Aug. 18, 1884) the plumage is so abraded as to have lost all distinctive markings, and the lower parts are almost unmarked.

In the series of cactus wrens now before me I am quite unable to appreciate any decided pallor of coloration on the part of the desert birds as compared with specimens from the coast region; and it may be of interest to remark that the female of the two extremely pale colored birds mentioned above, and the darkest colored bird of the whole series, also a female, were shot on the same day, October 18, 1901, at the same place, near San Fernando, California.

Juveniles from all regions show great variation in markings and coloration; they are usually more or less spotted underneath, with some ochraceous on the flanks and abdomen, but one in my collection (No. 4080 ♀ juv. Santa Rita Mountains, Arizona, June 22, 1903) has the lower parts, from the throat to and including the lower tail coverts, strongly suffused with ochraceous, and, with the exception of some spots on the lower tail coverts, practically immaculate.

Bryanti as originally described was considered as intermediate both in coloration and habitat, between the Lower California *affinis* and the more northern *brunneicapillus*, and as such the race may have existence, though in southern California its habitat must be extremely restricted. None of the birds in the series I have gathered from this region are referable to that race, as I have demonstrated; and it is also apparent that, by whatever name it be called, but one recognizable variety of cactus wren occupies the region from the Pacific Coast in southern California, to, at least, eastern Arizona. Of the Texan form, *Heleodytes brunneicapillus couesi*, I cannot speak with any authority, having no specimens. *Anthonyi* is supposed to differ from both *bryanti* and *couesi* in being of paler coloration and having the lower parts less heavily spotted. There is assuredly no difference between desert birds and birds from the Pacific Coast region in these respects, and as the characters supposed to distinguish *couesi* and *bryanti* ("back narrowly striped with white, the stripes being broken up into spots; intermediate rectrices nearly all black, or slightly spotted with white") certainly habitually occur in the coast birds, the inference is that the supposed three subspecies *couesi*, *anthonyi* and *bryanti* are really one indistinguishable variety. Thus if true *brunneicapillus* proves to be a Mexican species, as appears to be the case, the cactus wrens occurring along our southern border from the Rio Grande to the Pacific will probably have to be known as *Heleodytes brunneicapillus couesi* (Sharpe); though, as I said before, a race *bryanti* may exist in the habitat ascribed to it by Anthony, though most assuredly not as defined by Dr. Mearns.

I wish here to express my thanks to Messrs. F. Stephens and G. F. Morcon for the loan of specimens from the Colorado Desert and various parts of Arizona, and to Mr. Joseph Grinnell for some additional specimens from southern California.