

# A REVISION OF THE WRENS OF THE GENUS THRYOMANES SCLATER.

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The present condition of the genera *Thryothorus* and *Troglodytes* is manifestly unsatisfactory. Either these groups must be better defined or no good reason can be found for recognizing more than one genus for all of the wrens in question. A careful examination of very nearly all the species concerned seems to indicate that *Thryothorus* and *Troglodytes* are capable of definition if the West Indian species<sup>1</sup> commonly referred to the former be transferred to the latter, and if *Thryomanes* be allowed to stand by itself. *Thryomanes*, indeed, is no more closely related to *Thryothorus* on the one hand than it is to *Troglodytes* on the other, and should include *Troglodytes insularis*. *Anorthura*, too, seems sufficiently distinct to be considered of generic value, as the species within its limits form a very homogeneous assemblage.<sup>2</sup> No trenchant characters appear to separate *Pheugopedius* from *Thryothorus*, though the former may profitably be retained as a subgeneric division.

The four genera may be characterized as follows:

## THRYOTHORUS.

Bill stout, somewhat curved, and with a conspicuous subterminal notch; angle of rami moderately acute; tarsi stout; tail five-sixths of wing, or more, but never longer than wing.

## THRYOMANES.

Bill slender, somewhat curved, compressed, slightly or not at all notched; angle of rami very acute, this most apparent in the skull; nasal fossæ more linear than in *Thryothorus* or *Troglodytes*; tarsi slender; tail at least nine-tenths of wing, sometimes longer than wing.

<sup>1</sup>These should therefore now stand as: *Troglodytes mesoleucus* (Sclater); *Troglodytes musicus* (Lawrence); *Troglodytes martinicensis* (Sclater); *Troglodytes rufescens* (Lawrence); *Troglodytes guadeloupensis* (Cory), and *Troglodytes grenadensis* (Lawrence).

<sup>2</sup>The North American forms should consequently be called: *Anorthura hiemalis* (Vieillot), *Anorthura hiemalis pacifica* (Baird), and *Anorthura ulascensis* (Baird).

## TROGLODYTES.

Bill rather stout, somewhat curved, and with no subterminal notch; angle of rami moderately acute; nares rather tear-shaped, broadest posteriorly, the superior membranes thickened; tail two-thirds to nine-tenths of wing.

## ANORTHURA.

Bill slender and depressed, the culmen almost straight, tomia with no subterminal notch; nares narrow and slit-like, almost covered by overhanging membranes, which are very slightly or not at all thickened; tail less than three-fourths of wing.

The following review of *Thryomanes* has been based upon the examination of 378 specimens, representing very satisfactorily almost all the forms treated. Although it may seem that the number of subspecies admitted is excessive, yet all rest upon characters capable of definition. In a word, the differences do exist, and it becomes simply the question of how far one should go in recognizing by name these geographical variations. The result in the present case will be found to correspond fairly well with the criterion already adopted for other wide-ranging and plastic forms.

## Genus THRYOMANES Sclater.

*Thryomanes* SCLATER, Cat. Coll. Amer. Birds, 1861, p. 22 (subgenus). Type, *Troglodytes bewickii* Audubon.

*Chars. gen.*—Genus generi *Thryothoro* affine, sed rostro debiliore et compressiore, vix vel haud dentato; tarsi gracilioribus.

*Geographic distribution.*—United States, north to Pennsylvania, Minnesota, Colorado, and on Pacific coast to British Columbia; south to Lower California, Guadalupe Island, Socorro Island, and on the mainland of Mexico to Oaxaca.

## ANALYTICAL KEY TO THE SPECIES AND SUBSPECIES OF THRYOMANES, BASED ON ADULT MALES.

- I. Large, wing averaging 57 mm. or more.
- A. Upper parts reddish brown.
- a. Dark ..... *percnus*.
- a'. Light ..... *cryptus*.
- B. Upper parts grayish brown.
- a. Paler, superciliary stripe narrower ..... *eremophilus*.
- a'. Darker, superciliary stripe broader.
- b. Larger and darker ..... *murinus*.
- b'. Smaller and paler ..... *bairdi*.
- II. Small, wing averaging less than 55 mm.
- A. Exposed culmen usually 15 mm. or more.
- a. Tail brown, not broadly tipped with whitish ..... *insularis*.
- a'. Tail black, broadly tipped with whitish.
- b. Upper surface light grayish brown ..... *leucophrys*.
- b'. Upper surface dark brown.
- c. Tail 49 mm. or more ..... *calophonus*.
- c'. Tail 45 mm. or less ..... *brevicaudus*.

II. Small, wing averaging less than 55 mm.—Continued.

B. Exposed culmen less than 15 mm.

a. Upper parts grayish or smoky brown.

*b.* Larger, crissum heavily barred..... *charienturus*.

*b'*. Smaller, crissum rather lightly barred..... *cerroensis*.

*a'*. Upper parts reddish brown.

*b.* Very dark.

*c.* Color above burnt umber brown..... *bewickii*.

*c'*. Color above more sooty..... *spilurus*.

*b'*. Moderately dark.

*c.* Darker and rather more sooty above..... *nesophilus*.

*c'*. Lighter and more rufescent above..... *drymaeus*.

### THRYOMANES BEWICKII BEWICKII (Audubon).

*Troglodytes bewickii* AUDUBON, Ornith. Biog., 1831, I, p. 96.

*Thryothorus bewicki* BONAPARTE, Geog. and Comp. List, 1838, p. 11.

*Telmatodytes bewicki* CABANIS, Mus. Hein., 1850, I, p. 78.

*Thryothorus bewickii* var. *bewickii* BAIRD, Review Amer. Birds, 1864, I, p. 126.

*Thryomanes bewicki* RIDGWAY, Bull. Nutt. Orn. Club, 1877, II, p. 60.

*Thryomanes bewicki a. bewicki* COUES, Birds Col. Vall., 1878, p. 169.

*Chars. subsp.*—Supra clare rufo-brunneus, infra albidus, hypochondriis dorsi colore lavatis; crisso nigro fasciato; striga alba superciliari mediocri.

*Measurements (18 specimens).*—Wing, 51.5 to 56.5 (average, 53.6) mm.; tail, 48 to 56 (average, 52) mm.; exposed culmen, 12.5 to 14.5 (average, 13.4) mm.; bill from nostril, 9 to 10 (average, 9.6) mm.; tarsus, 17 to 18.5 (average, 17.6) mm.; middle toe with claw, 14 to 16.5 (average, 15.2) mm.

*Type locality.*—St. Francisville, Louisiana.

*Geographic distribution.*—Southeastern United States, north, locally, to central Pennsylvania, southern New Jersey, southern Ohio, southern Michigan, and central Minnesota;<sup>1</sup> west to eastern Iowa, southeastern Nebraska, eastern Kansas, and, in winter, central Texas. Strictly migratory only along the northern border of its range, but apparently not a summer resident in the far South.

*Description.*—Adult; No. 32288, U.S.N.M.; Macon, Georgia, October, 1848; Prof. Joseph Le Conte. Upper parts uniform rich burnt umber brown, the superior tail-coverts distinctly barred with black, the feathers of the rump with concealed white spots. Wing quills fuscous, the innermost secondaries barred with the color of the back, outer webs of the other secondaries edged with burnt umber and marked crosswise with darker brown; primaries indented externally with ochraceous brown; wing-coverts like the back, the major series with obsolete dark markings. Tail black, the central feathers with regular bars of prout's brown; all the remaining ones broadly tipped with grayish white, and on terminal portion more or less barred externally with the same color, this being most extensive on the outer rectrices, decreasing with each succeeding pair until it is barely noticeable.

<sup>1</sup>Trippé, Proc. Essex Inst., 1871, VI, p. 115.

Lores, superciliary stripe and sides of head dull white, the lores and auriculars mixed with brown; postocular streak burnt umber. Lower surface dull white; sides of breast shaded with brownish gray, this color invading the sides of the neck; flanks washed with pale brown; inferior tail-coverts buffy white, barred with blackish brown; axillars and under wing-coverts grayish white.

*Young in first plumage.*—No. 1104, U.S.N.M.; Carlisle, Pennsylvania, July 5, 1843; S. F. Baird. Upper surface, including central tail-feathers and basal portion of exterior webs of all the rest except outermost pair, prout's brown, obsoletely barred on wings, head, rump, and tail-coverts with darker brown, the feathers of rump with indicated whitish markings, regularly barred on tail with blackish; remainder of tail clove brown, the two outer pairs of rectrices tipped and barred distally on external webs with buffy. Superciliary stripe and cheeks brownish white, the latter mixed with darker; inferior surface brownish white, mottled anteriorly with brownish gray; flanks and crissum ochraceous, the latter barred with brown.

The specimen from which Audubon described his *Troglodytes bewickii* came from near St. Francisville, Louisiana, and his plate and description clearly indicate that this name belongs to the form of *Thryomanes* inhabiting the eastern United States. This race is readily to be distinguished from all the other forms of the genus by the rich burnt umber brown of the upper parts.

The characters of *bewickii* are very constant, the principal variation being a seasonal one. Summer specimens are paler and grayer than examples taken in fall or winter, this difference being proportionate to the amount of wear to which the plumage has been subjected. The bird is always, however, easily distinguishable from *cryptus*, which these worn specimens somewhat resemble.

Two March specimens from Waukeelah, Florida, are duller and rather more grayish than other specimens of corresponding season, but are not otherwise different. Two examples from Texas—one from Waller County, the other from Brazos—are in every respect perfectly typical of *bewickii*.

A series of young birds exhibits a striking range of variation in the shade of the upper surface—from a dark sooty brown to a pale rufescent color; but the average is more reddish than in any of the other forms.

There appears to be no record of Bewick's wren for New York State, New England, or any part of the region north of the Great Lakes; and throughout the northern portion of its range it seems to be only locally common. There seems to be no account of its breeding in Florida, or in the Gulf region of any of the Southern States.

Thirty-four specimens of this form have been examined, these representing the following localities, breeding records being indicated by an asterisk:

Illinois: Sugar Creek Prairie;\* Silver Creek Prairie;\* Richland County;\* Wabash County.\*

Indiana: Wheatland.\*

Pennsylvania: Carlisle;\* Clearville;\* Springville;\* Needmore;\* Charlesville.\*

District of Columbia: Washington.

Tennessee: Roane County.

Georgia: Macon.

Florida: Waukeenah.

Texas: Brazos; Waller County.

#### THRYOMANES BEWICKII CRYPTUS, new subspecies.

*Thryothorus bewickii leucogaster* BAIRD, Rev. Amer. Birds, 1864, I, p. 127 (nec *Troglodytes leucogastra* Gould, quae *Hemipura leucogastra*).

*Thryothorus bewickii bairdi* A. O. U. Check-List, 1886, p. 328 (in part).

*Chars. subsp.*—*Thryomanes* T. b. *bewickii* similis, sed major; notaeo dilutiore et canescentiore.

*Measurements* (18 specimens).—Wing, 53 to 61 (average, 56.8) mm.; tail, 52 to 61 (average, 56.3) mm.; exposed culmen, 13.5 to 15.5 (average, 14.1) mm.; bill from nostril, 10 to 11 (average, 10.4) mm.; tarsus, 17.5 to 19.5 (average, 18.3) mm.; middle toe with claw, 15 to 17 (average, 16.2) mm.

*Type locality.*—San Antonio, Texas.

*Geographic distribution.*—Texas, except the extreme western corner, States of Nuevo Leon and Tamaulipas, in Mexico, with probably Kansas, Indian Territory, and Oklahoma. Migratory north of Texas.

*Type.*—Male, adult; No. 112838, U.S.N.M.; San Antonio, Texas, January 5, 1887; C. W. Beckham.

*Description.*—Upper surface rich, warm broccoli brown, darker and more rufous on rump, the feathers of which have more or less concealed white spots; superior tail-coverts hair brown, obscurely barred with blackish. Wings fuscous; innermost secondaries and outer webs of the others marked transversely with the color of the back; primaries margined basally on external webs with buffy; wing coverts like the back, the greater series with obsolete fuscous bars. Middle tail-feathers, and at least basal portion of exterior webs of all but outer pair, hair brown, barred regularly, though not sharply, with blackish; remainder of tail black, with very faintly indicated paler bars, continuous with those on outer webs; two external pairs of feathers broadly tipped with grayish white, the outermost deeply indented with white on outer webs; remainder of rectrices tipped with hair brown. Superciliary white; lores and cheeks grayish white, mingled with brownish; post-ocular streak like the crown; sides of the neck brownish gray; lower surface grayish white, scarcely tinged with brownish on flanks; crissum slightly washed with ochraceous, and barred with black; axillars and under wing-coverts grayish white.

*Young in first plumage.*—Female; No. 112317, U.S.N.M.; Lomita, Texas, May 25, 1878; G. B. Sennett. Upper parts, including central rectrices and basal portion of outer webs of all but outermost pair, pale, grayish broccoli brown, lighter and more ochraceous on rump, the feathers of which have hidden grayish white spots; tail barred with black; wings and superior tail-coverts with obsolete transverse markings of darker brown; rest of tail black, the two outer pairs of rectrices tipped with dull gray and distally barred on external webs with dull white. Superciliary stripe dull white; cheeks brownish white, mixed with darker; lower parts brownish white, faintly mottled on breast with dusky; flanks rufescent gray; crissum tinged with ochraceous and barred with black.

This form of Bewick's wren is the one to which Baird's name *leucogaster* is applicable, as the range, "southern borders of United States into Mexico," given by him, taken in connection with the specimens he enumerates, clearly indicates. But it now seems quite certain that by perhaps an interchange of labels Baird was in error when he identified the Texas *Thryomanes* with Gould's *Troglodytes leucogastra*.<sup>1</sup> There seems to be no reasonable doubt of the authenticity of the specimen which Dr. Sharpe catalogues as the type of *Troglodytes leucogastra* Gould,<sup>2</sup> for it came from the collection of the Zoological Society, where Gould's type was supposed to have been; it was collected in Tamaulipas, Mexico, the type locality of *Troglodytes* (= *Hemiura*) *leucogastra*, whence, until recently, no other specimen (of *Hemiura*) has been recorded; and, finally, it is undoubtedly a *Hemiura*, thus agreeing perfectly with Gould's original description of *Troglodytes leucogastra*, while in that description the expression "*erissoque pallidi-brunnei*" could not possibly apply to any form of Bewick's wren. Baird's term *leucogaster*, as used for the *Thryomanes*, thus having been based upon a misidentification, can not, according to the usual procedure in such cases, be considered entitled to recognition; for in reality he proposed no new name, but merely referred his specimens to a species already described.

The Texan form of *Thryomanes* may be readily distinguished from *bewickii* by much paler, grayer coloration above, as well as by longer tail, wing, culmen and middle toe. In fact, the lack of intermediate specimens strongly suggests the possibility of specific distinctness; but the material at hand is not sufficient satisfactorily to determine this point.

Considerable individual difference is apparent in *cryptus*, even among birds taken at the same season, many being noticeably darker, duller, or more grayish brown above than the type. Worn summer birds are grayer and, of course, much paler than specimens in fresh plumage,

<sup>1</sup> Schater and Salvin, *Nomenclator Avium Neotrop.*, 1873, p. 155; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 1880, I, p. 95; Faxon, *Auk*, 1898, XV, p. 60.

<sup>2</sup> *Cat. Birds Brit. Mus.*, 1881, VI, p. 285.

and in this abraded condition are sometimes rather difficult to distinguish with certainty from *eremophilus*, though typical examples, particularly in fall and winter, are with little difficulty identifiable.

There have been available no specimens from Kansas, Indian Territory, or Oklahoma, but *cryptus* will doubtless be found to be the form occupying this region. Specimens from Rodriguez, Nuevo Leon, Mexico; Santa Rosalia, Tamaulipas; Mier, Tamaulipas; and Fort Clark, Texas, are apparently typical *cryptus*. Young birds seem to be usually paler than the young of any of the other forms.

Sixty-four specimens have been examined, from the following localities, breeding records being designated by an asterisk:

Texas: Cisco; San Angelo; San Antonio;\* Lomita;\* Dublin; Fort Clark;\* San Lorenzo Creek; Beeville; Bee County;\* Leon Springs; Brownsville;\* Sycamore Creek; Fort Davis; Roma;\* Brownwood;\* Mouth of Pecos River; Mouth of Devils River; Comanche County; Atascosa County.

Nuevo Leon: Rodriguez; China.\*

Tamaulipas: Mier;\* Santa Rosalia.\*

*THRYOMANES BEWICKII EREMOPHILUS*, new subspecies.

*Thryothorus bewickii bairdi* A. O. U. Check-List, 1886, p. 328 (in part).

*Chars subsp.*—*Thryomanes* T. b. *crypto affinis*; sed partibus superioribus magis griseis distinguendus.

*Measurements (18 specimens).*—Wing, 51 to 60 (average, 56.1) mm.; tail, 50.5 to 63.5 (average, 56.8) mm.; exposed culmen, 13 to 15 (average, 13.8) mm.; bill from nostril, 9 to 11 (average, 10) mm.; tarsus, 15 to 18.5 (average, 18) mm.; middle toe with claw, 13.5 to 17 (average, 15.5) mm.

*Type locality.*—Big Hatchet Mountains, Grant County, New Mexico.

*Geographic distribution.*—Extreme western Texas (in winter to central part), Arizona, New Mexico, and southeastern California, south over the table-lands of western Mexico to central Zacatecas; north to Colorado, southern Utah, southern Nevada, and possibly southeastern Oregon. Resident south of Colorado.

*Type.*—Male, adult; No. 126774, U.S.N.M.; Big Hatchet Mountains, Grant County, New Mexico, May 19, 1892; Mearns and Holzner.

*Description.*—Above uniform pale grayish sepia, slightly rufescent on the rump, the feathers of which have more or less concealed white spots; upper tail-coverts hair brown, faintly barred with darker. Wing-quills fuscous, indented externally with the color of the upper surface, wing-coverts like the back. Middle tail-feathers, and basal portion of exterior webs of the rest, with the exception of the outermost pair, hair brown, regularly barred with black; three outer pairs with broad grayish tips, and white indentations on exterior webs, these latter most numerous on the outer pair; other rectrices tipped with hair brown; remainder of tail black. Superciliary stripe white; lores and

cheeks grayish white, somewhat mixed with brown; postocular streak like the crown; sides of neck brownish gray; lower surface dull white, nearly clear white on chin and throat, washed with gray on sides and flanks; crissum heavily barred with black; lining of wing grayish white.

*Young in first plumage.*—Male; No. 128935, U.S.N.M.; Santa Cruz River, west of Patogone Mountains, Arizona, May 30, 1893; Frank X. Holzner. Upper parts brownish gray, this color extending over the upper surface of the closed tail, the latter barred with black; rump with concealed white spots; wings transversely marked externally with dull brown; rest of tail black, centrally tipped with slate color, the two external pairs of feathers tipped with gray and barred distally on outer webs with white. Superciliary stripe white; lores and cheeks grayish white, mixed with brownish; sides of neck brownish gray, mottled with brown and grayish white; lower parts grayish white, jugulum, breast, and sides thickly speckled with gray; flanks and crissum washed with brownish, the latter barred with black.

The difference existing between *eremophilus* and *cryptus* consists in the rather paler, much more grayish tint of the upper parts, and no difficulty will be experienced in identifying the great majority of specimens. Some intermediates, however, are to be distinguished only by the slightly paler or more grayish color of the wings. This subspecies is more closely allied to *bairdi* than to any of the other Mexican forms, although the ranges of *bairdi* and *eremophilus* are separated by the interposition of a race larger and darker than either.

As in *cryptus*, there exists a considerable amount of individual difference, even at the same season, this consisting principally in the darker or more rufescent color of the upper surface. Two breeding specimens from Paisano, Texas, are perfectly typical of the present race, though rather darker than most Arizona examples. Specimens from San Diego, Chihuahua, Mexico, White Mountains, and the region of Death Valley, California, are identical with those from Arizona and New Mexico. A winter bird from the Valparaiso Mountains, Zacatecas, Mexico, differs only in being slightly darker.

Young birds of *eremophilus* range in color above from a light rufescent gray, hardly distinguishable from the shade of young *cryptus*, to a very dark, dull brownish gray; averaging, however, very much darker than the Texan form. Many of the specimens are fully as deeply colored as the young of *charienturus*, though averaging rather less rufescent.

A single adult bird from Grand Junction, Colorado, is apparently the seventh record for that State and the only one for the western portion.<sup>1</sup> Although no other Colorado specimens have been examined,

<sup>1</sup>For these other records see Cooke, Birds of Colorado, Bulletin 37, Colorado Experiment Station, 1897, p. 120; Further Notes on the Birds of Colorado, Bulletin 41, Colorado Experiment Station, 1898, p. 169.



the previous records very probably belong to the present race, with the exception of the birds noted at Burlington and Fort Lyon, which may prove to be *Thryomanes b. cryptus*. In his paper on the birds of south-eastern Oregon,<sup>1</sup> Major Bendire mentions the occurrence of *spilurus* at Camp Harney; but, notwithstanding the fact that within the Great Basin *cremophilus* is not otherwise known to reside north of southern Nevada, it seems almost certain that this reference, if correct specifically, should be here included, for the Pacific coast form does not, in all probability, extend eastward beyond the Cascade Range.

Sixty-seven specimens of *cremophilus* have been examined, from the following localities, breeding records being designated by an asterisk:

Texas: Del Rio; Paisano;\* San Angelo; Cisco; Eagle Pass; El Paso.

New Mexico: Grafton; Deming; Big Hatchet Mountains;\* Silver City.

Arizona: Dos Cabezos; Santa Rita Mountains;\* Apache; Santa Cruz River west of Patogone Mountains;\* Tanks;\* Santa Catalina Mountains;\* Fort Whipple;\* Calabasas; Los Nogales;\* Fort Huachuca;\* Tucson; Chiricahua Mountains;\* Huachuca Mountains;\* Camp Crittenden.\*

California: Resting Spring; White Mountains;\* Argus Range;\* Furnace Creek, Death Valley.

Utah: Santa Clara; Toquerville; Washington; Iron City.

Nevada: St. Thomas.

Colorado: Grand Junction.

Sonora: San Jose Mountains;\* Patogone Mountains.

Chihuahua: San Diego;\* San Luis Mountains; east side of San Luis Mountains.

Zacatecas: Valparaiso Mountains.

#### THRYOMANES BEWICKII PERCUNUS, new subspecies.

*Thryothorus bewickii spilurus* A. O. U. Check List, 1886, p. 327 (in part).

*Chars. subsp.*—*Thryomanes* T. b. *cremophilo* sat *similis*, sed corporis parte superiore colore valde saturatiore et rufescentiore, crisso latius fasciato, rostro alisque longioribus, striga superciliari paulo distinctiore, facile distinguendus.

*Measurements (10 specimens).*—Wing, 49.5 to 61.5 (average, 57.8) mm.; tail, 45.5 to 58 (average, 54.3) mm.; exposed culmen, 13.5 to 16 (average, 15) mm.; bill from nostril, 10 to 11.5 (average, 11) mm.; tarsus, 18 to 19.5 (average, 18.6) mm.; middle toe with claw, 15 to 16.5 (average, 16) mm.

*Type locality.*—Etzatlan, Jalisco, Mexico.

*Geographic distribution.*—State of Jalisco, north to Central Zacatecas, south to Guerrero.

*Type.*—Male, adult; No. 142993, U.S.N.M., Biological Survey collection; Etzatlan, Jalisco, Mexico, June 23, 1892; E. W. Nelson.

<sup>1</sup> Proc. Bost. Soc. Nat. Hist., 1877, XIX, p. 113.

*Description.*—Upper parts dull prout's brown, rather brighter on the rump, where the feathers have nearly hidden roundish white markings; superior tail-coverts hair brown, transversely marked with blackish. Exposed surface of wings like the back; outer webs of secondaries and greater coverts paler, barred with fuscous; primaries indented basally with buffy. Middle tail-feathers and proximal portion of external webs of all the rest, save the outer pair, hair-brown, regularly barred with black; remainder of tail black, excepting the terminal portion of the feathers—which, on the three outer pairs of feathers, is grayish white, on the others hair brown—and the exterior webs of the outermost pair, which are broadly barred with white. Superciliary stripe white; lores and cheeks grayish white, somewhat mingled with brownish; a dull vandyke brown postocular stripe; sides of neck and breast dull brownish gray; lower surface brownish white; the sides and flanks washed with gray; crissum regularly and strongly barred with black; lining of wing grayish white.

*Young in first plumage.*—Male; No. 142990, U.S.N.M., Biological Survey collection; Etzatlan, Jalisco, Mexico, June 23, 1892; E. W. Nelson. Above dark grayish brown; the rump with concealed white spots; upper tail-coverts faintly barred with blackish. Wing-coverts and edgings to wing-quills like the back, those on the primaries of a much lighter shade; bars on secondaries very faintly indicated. Middle pair of rectrices hair brown, regularly barred with black; proximal portion of external webs of all but outermost pair with same pattern of coloration; two outer pairs tipped with gray, and on distal portion indented exteriorly with dull white; remainder of tail-feathers tipped with hair brown; rest of tail black. Superciliary stripe white; lores and cheeks brownish white, mixed with dark brownish; lower surface brownish white, speckled anteriorly with dusky; flanks and sides washed with brownish gray; under tail-coverts washed with ochraceous and barred with black.

Mr. Ridgway has already called attention to the difference existing between the birds from western Mexico (Jalisco) and those from California,<sup>1</sup> but did not bestow a name upon the former, not being fully satisfied with regard to their distinctness. Additional material, however, contained chiefly in the collection of the Biological Survey of the Department of Agriculture, proves the Jalisco bird to be not only different from the California races, but separable as well from *bairdi* of Oaxaca and *murinus* of the Valley of Mexico. As there appears to be no name which can be applied to this form, it is here described as new.

The characters which separate *perenus* from *cryptus* are longer wing and culmen, much darker, duller color above, more conspicuous superciliary stripe, and more heavily barred crissum. From *eremophilus* it may be readily discriminated by its much darker, more reddish upper

<sup>1</sup> Manual of N. A. Birds, 1887, p. 551, footnote.

surface, more prominent superciliary stripe, more heavily barred lower tail-coverts, longer wing and culmen, and somewhat shorter tail. In the much duller brown of the upper surface, as well as the decidedly greater length of wing and tail, *perenus* is so different from *bewickii*, *calophonus*, or *spilurus*, that no detailed comparison is necessary.

An April specimen of *perenus* from Zapotlan, Jalisco, Mexico, is noticeably paler and less rufescent than the type, thus somewhat approaching *bairdi*. A female from Tonila, Jalisco, is rather peculiar, being very much smaller, and, in the color of the upper parts, decidedly more richly reddish brown than any of the other specimens of *perenus*. An adult male, collected by Sumichrast in August, 1868, at Puente Colorado, Guerrero, Mexico, is in fresh plumage, and seems to be perfectly typical of the present race. The young of *T. b. perenus* are apparently not with certainty to be distinguished from the young of *bairdi*.

Thirteen specimens examined, from the following localities, breeding records being indicated by an asterisk.

Jalisco: Etzatlan;\* Tonila; Zapotlan;\* Guadalajara.\*

Zacatecas: Plateado.\*

Guerrero: Puente Colorado.

#### THRYOMANES BEWICKII MURINUS (Hartlaub).

*Thryothorus murinus* HARTLAUB, Rev. et Mag. de Zool, 1852, 2d ser., IV, p. 4.

*Thryothorus bewickii murinus* RIDGWAY, Auk, 1887, IV, p. 350.

*Chars. subsp.*—*Thryomanes T. b. pereno* affinis, sed supra saturate cano-brunneus nec obscure rufo-brunneus.

*Measurements (10 specimens).*—Wing, 57 to 61.5 (average, 58.8) mm.; tail, 56 to 60.5 (average, 58.1) mm.; exposed culmen, 14 to 16 (average, 14.8) mm.; bill from nostril, 9.5 to 12 (average, 10.7) mm.; tarsus, 18.5 to 20.5 (average, 19.4) mm.; middle toe with claw, 15.5 to 18 (average, 16.7) mm.

*Type locality.*—Rio Frio, Mexico, Mexico.

*Geographic distribution.*—Mexican States of Hidalgo, Mexico, Tlaxcala, and northern Morelos.

*Description.*—Male, adult; No. 142976, U.S.N.M., Biological Survey collection; Amecameca, Mexico, Mexico, February 1, 1893; E.W. Nelson. Above warm grayish sepia, darker on the crown, the feathers of the rump with more or less concealed white spots; upper tail-coverts hair brown, obsoletely barred with blackish. Wing quills fuscous, the secondaries margined externally with sepia, and barred with darker brown, most of the primaries indented on basal portion of outer webs with pale brown; wing-coverts like the back, the greater series faintly barred with darker, and edged with lighter brown. Tail black, the central feathers with broad and regular bars of hair brown, the two succeeding pairs tipped, and on basal portion margined on outer webs with hair brown in the shape of broad transverse markings, like those

on the middle rectrices; three outer pairs with grayish white tips and terminal bars on exterior webs, these bars most numerous on the outermost pair. Superciliary white; lores and cheeks grayish white, with some admixture of brownish; postocular stripe sepia; sides of neck deep brownish gray; below grayish white, the sides and flanks brownish gray, more rufescent on the latter; crissum tinged with ochraceous and conspicuously barred with black; axillars and inferior wing-coverts grayish white.

As Mr. Ridgway has already shown,<sup>1</sup> there seems to be little doubt that the *Thryothorus murinus* of Dr. Hartlaub is a *Thryomanes*. If, indeed, any question of this fact remains it should now be set at rest, for Dr. Hartlaub has, by request, kindly reexamined the types, and with regard to them writes as follows:

The type specimen of my *Thr. murinus* (Hamburg Mus.) is before me, together with a fine adult specimen of *Thr. bairdi* in our Bremen collection. Both are Mexican. I can not discover the slightest difference . . . So that Mr. Ridgway is perfectly right in retaining my name *murinus* for Baird's wren.

It is a curious fact that my *Thryothorus murinus* is simply omitted in the Brit. Mus. Catalogue. In Vol. VI, p. 226, the name *murinus* is not to be found! As to the figure, pl. XIII, it is a rather good one. The white longitudinal spots or streaks in the uropygium and lower back are very distinct in my type specimen of the Bremen collection. In the Hamburg type specimen only one white spot is visible. But as to the identity of these two type specimens there is not the slightest doubt.

In view of these facts it is evident that the term *murinus*, having priority over *bairdi*, must be used for some one of the Mexican forms of this group. Rio Frio, the type locality of *murinus*, is on the eastern side of the Valley of Mexico, and as the birds from this region are separable from those of Oaxaca, whence came Messrs. Salvin and Godman's type of *bairdi*, the name *murinus* may be restricted to the former race, and the retention of the subspecific term *bairdi* thus permitted for the latter.

From *eremophilus* the present race differs by reason of its average larger size, particularly the bill; darker coloration above; slightly deeper gray flanks; wider superciliary stripe; more strongly and regularly barred crissum. It may be discriminated from *peruus* by its grayish brown upper parts, which contrast noticeably with the dull reddish brown of typical specimens of the more western form. It may be readily distinguished from *cryptus* by the much darker and grayer upper surface, more heavily barred crissum, more prominent superciliary stripe, and larger general size.

The birds from Pachuca and Real del Monte, Hidalgo, should, however, perhaps be considered the typical examples of this race, for they are the most different from true *bairdi*. The specimen from Amecameca, State of Mexico, which is described above, is practically a top-type of *murinus*, since Rio Frio, the type locality, is but a short distance away and along the same slope of the cordillera. This specimen is

<sup>1</sup> Auk, 1887, IV, p. 349.

almost identical with those from the places in Hidalgo above mentioned, except for a noticeable brownish tinge to the upper surface, which shows a tendency toward *bairdi*. The specimens from Irolo, Hidalgo; Apexoco, Tlaxcala; and Tetela del Volcan, Morelos, are more or less intermediate between *murinus* and *bairdi*, though nearer the former.

Ten specimens examined were from the following localities, breeding records being marked by an asterisk:

Hidalgo: Tula; Real del Monte; Pachuca; Irolo.\*

Mexico: Tlalpam; Amecameca.

Morelos: Tetela del Volcan.

Tlaxcala: Apexoco.\*

**THRYOMANES BEWICKII BAIRDI** (Salvin and Godman).

*Thryothorus bairdi* SALVIN and GODMAN, Biol. Centr.-Amer., Aves., 1880, 1, p. 95.

*Thryothorus bewickii bairdi* RIDGWAY, Proc. U. S. Nat. Mus., 1885, VIII, p. 354.

*Chars. subsp.*—Thry. b. *murino* persimilis sed minor, superne pallidior, brunnescentior vel magis ochraceus; crisso paululum minus conspicue fasciato.

*Measurements* (8 specimens).—Wing, 55.5 to 58.5 (average, 56.7) mm.; tail, 54 to 56.5 (average, 55.6) mm.; exposed culmen, 13.5 to 15.5 (average, 14.1) mm.; bill from nostril, 9.5 to 11.5 (average, 10.3) mm.; tarsus, 18 to 19.5 (average, 18.8) mm.; middle toe with claw, 15 to 17.5 (average, 16.3) mm.

*Type locality.*—Oaxaca, Mexico.

*Geographic distribution.*—Oaxaca, southern Puebla, and southwestern Vera Cruz.

*Description.*—Male, adult; No. 142965, U.S.N.M., Biological Survey collection; Tamazulapam, Oaxaca, Mexico, November 14, 1894; Nelson and Goldman. Upper surface uniform dull brown, intermediate between hair brown and broccoli, the rump with more or less hidden white spots, the tail-coverts hair brown, inconspicuously barred with blackish. Wings fuscous, the secondaries edged externally with light sepia, and obsolete barred with dark brown; basal part of exterior webs of primaries margined with pale brown; wing-coverts the same color as the back. Tail black, the middle pair of rectrices, together with the basal portion of outer webs of all remaining ones except the outermost pair, hair brown, somewhat irregularly barred with black; three exterior pairs of feathers tipped with grayish white, the outermost pair with wide indentations of white along the whole length of external webs, the two succeeding pairs with similar markings confined to the distal portions; remainder of rectrices with hair brown tips. Superciliary stripe dull white; lores and postocular streak light sepia; auriculars grayish white, streaked narrowly with dark brown; sides of neck deep brownish gray; inferior surface grayish white, the chin and throat almost pure white; sides and flanks brownish gray, more rufescent on the latter, crissum slightly tinged with

ochraceous, heavily barred with black; lining of wing grayish white.

*Young in first plumage.*—Female; No. 142967, U.S.N.M., Biological Survey collection; Oaxaca, Oaxaca, Mexico, June 22, 1894; Nelson and Goldman. Above slightly rufescent hair brown, rather darker and more reddish on rump, some of the feathers of the latter with hidden whitish spots. Exposed surface of closed wings like the back, the greater coverts and secondaries obsolete barred with darker. Central rectrices and exterior webs of all the remaining ones except the outer pair, like the back, regularly barred with black; rest of tail black, the feathers tipped with hair brown; two outermost pairs barred distally with white on external webs. Superciliary stripe dull white; lores and cheeks grayish white, mixed with brownish; below brownish white, most nearly clear white on chin and throat, mottled with dull gray on jugulum and breast, heavily washed with brownish gray on sides and flanks, this most rufescent on the latter; crissum washed with ochraceous and barred heavily with black.

The name *Thryothorus bairdi* was proposed by Messrs. Salvin and Godman as a substitute for the untenable *Thryothorus bewickii* var. *leucogaster* of Baird; but the term *bairdi*, as at present understood, includes several recognizable forms, in differentiating which it becomes necessary to employ for one of these the designation *bairdi*.

True *bairdi*, then, as here restricted, may be distinguished from *murinus* by somewhat smaller size, particularly the bill; paler, more brownish or more ochraceous upper parts, and rather less heavily barred crissum. From *perenus*, of western Mexico, it may be separated by paler, more grayish brown upper parts, rather less heavily barred crissum, shorter wing and culmen. It differs appreciably from *cryptus* in darker, grayer color above, and has also a rather wider superciliary stripe. It may be differentiated from *eremophilus* by somewhat darker upper surface, broader superciliary, and rather darker flanks. It has a decidedly longer wing and tail than *charienturus*, besides being noticeably lighter on the upper parts, flanks, and sides. With *drymaeus*, from California, it can scarcely be confused, by reason of its much longer wing and tail, less rufescent upper surface, as well as paler flanks and sides.

With due allowance for individual and seasonal variation, the specimens which are here referred to *bairdi* present but slight aberrant characters. An April bird from Chalchicomula, Puebla, Mexico, is rather darker than the example from Oaxaca, above described, thus inclining toward *murinus*, but it belongs without doubt to the present subspecies.

Nine specimens have been examined, representing the following localities, breeding records being designated by an asterisk:

Oaxaca: Oaxaca; \* Tamazulapam.

Puebla: Chalchicomula; \* Tehuacan; \* Atlixco.\*

Vera Cruz: Maltrata; Perote.\*

*THRYOMANES BEWICKII* CHARIENTURUS, new subspecies.

*Thryothorus bewickii spilurus* A. O. U. Check-List, 1886, p. 327 (in part).

*Chars. subsp.*—*Thryomanes* T. b. *eremophilo* similis, a quo differt partibus superioribus et hypochondriis obscurioribus, striga superciliari paululum latiore, alis caudaque multo brevioribus.

*Measurements (23 specimens).*—Wing, 48.5 to 55 (average, 51.7) mm.; tail, 47.5 to 54.5 (average, 51.5) mm.; exposed culmen, 12.5 to 14.5 (average, 13.8) mm.; bill from nostril, 9 to 11.5 (average, 10.2) mm.; tarsus, 18 to 19.5 (average, 18.8) mm.; middle toe with claw, 14 to 16 (average, 15.4) mm.

*Type locality.*—Nashoguero Valley, Lower California (Mexican and United States boundary line).

*Geographic distribution.*—Coast region of southern California, north to about Pasadena, south to latitude 28°, Lower California; Santa Catalina Island, California. Resident throughout its range.

*Type.*—Male, adult; No. 134163, U.S.N.M.; Nashoguero Valley, Lower California, June 5, 1894; Dr. Edgar A. Mearns.

*Description.*—Upper parts dull grayish sepia, slightly rufescent on rump, the feathers of this part with more or less hidden roundish white markings; superior tail-coverts hair brown, obscurely barred with dusky. Wings fuscous, secondaries alternately barred on external webs with blackish and the color of the back; lesser and median coverts, with margins of greater series, also similar to the upper surface; primaries narrowly edged on basal portion of exterior webs with buffy. Tail black, the central rectrices hair brown, with regular bars of black; exterior feathers with terminal portion dull smoke gray, the outer webs barred with dingy white; remaining feathers barred on external webs and tipped with hair brown. Superciliary stripe white; lores and cheeks grayish white, mixed with brownish; postocular streak like the crown; sides of neck deep brownish gray; chin and throat white (soiled by wear); rest of under surface grayish white (adventitiously washed with brownish); sides and flanks tinged with smoke gray; crissum heavily barred with black; lining of wing grayish white.

*Young in first plumage.*—Male; No. 134165, U.S.N.M.; Nashoguero Valley, Lower California, June 5, 1894; Dr. Edgar A. Mearns. Above grayish sepia, this color extending over the middle tail-feathers and the basal portion of the external webs of all the rest with exception of outermost pair, these parts of the tail barred with black; remainder of tail clove brown, tipped with slate gray, terminal portions of the two outer pairs of rectrices rather paler, and external webs of outermost pair marked with dull buffy; rump paler than the back and with a few concealed whitish spots, faintly barred, as are also the upper tail-coverts, with darker; wings externally with somewhat obscure bars of dark brown. Superciliary stripe buffy white; cheeks brownish white, much

mixed with darker; lower parts dull white, faintly mottled with brownish gray on breast; sides and flanks smoke gray; crissum tinged with ochraceous and barred with blackish.

From *eremophilus* this race differs in decidedly darker flanks and upper surface, rather broader superciliary stripe, more regularly and heavily barred crissum, as well as much shorter wing and tail. From *murinus*, which it approximates very closely in color above, it differs in conspicuously shorter wing and tail, shorter culmen, darker flanks, and somewhat less heavily barred lower tail-coverts.

Two examples from San Quentin Bay, Lower California, are essentially similar to the type of *charienturus*, although one is darker, this difference being probably due, however, to adventitious stain, as the under surface is very much soiled. Another specimen from the same locality is much paler above, with a bright reddish back that is evidently abnormal. Breeding specimens from Pasadena, California, resemble the type, but are slightly warmer brown above, showing in this respect an inclination toward *drymæcus*.

Fall and winter birds are, as would be expected, darker and richer brown. A fine series from Pasadena shows some individual variation in the shade of the upper surface, but only one example can be considered in noticeable degree intermediate between *charienturus* and *drymæcus*.

The few young birds examined do not seem to be with certainty distinguishable from the young of *eremophilus*; they are rather darker than *leucophrys* and much less rufescent than *drymæcus*.

Thirteen specimens from Santa Catalina Island, California, taken in winter and spring, are not perfectly typical, though very much nearer the present form than to any of the others. In color these island birds are apparently a little darker and less rufescent; the bill and middle toe are slightly longer. These differences are, however, too slight and too inconstant to warrant even subspecific separation from the bird of the mainland.

Mr. Bryant has recorded "*spilurus*" from the mainland of Lower California at the latitude of Cerros Island,<sup>1</sup> but this, of course, refers to the present race, representing, apparently, the southern limit of its distribution.

Fifty specimens examined, from the following localities, breeding stations being designated by an asterisk:

California: Pasadena;\* Chilco (mountains 20 miles north of Pasadena);\* San Bernardino; Laguna, San Diego County;\* Santa Catalina Island.

Lower California: Nashoguero Valley, Mexican boundary line; San Quentin Bay.

<sup>1</sup> Proc. Calif. Acad. Sci., 1889, 2d ser., II, p. 316.



*THRYOMANES BEWICKII* DRYMÆCUS, new subspecies.

*Thryothorus bewickii spilurus* A. O. U. Check-List, 1886, p. 327 (in part).

*Chars. subsp.*—Thry. b. *charienturo* affinis, sed supra valde rufescens et paulo dilutior.

*Measurements (15 specimens).*—Wing, 47 to 54.5 (average, 51.4) mm.; tail, 45 to 53 (average, 49.8) mm.; exposed culmen, 13 to 14.5 (average, 13.7) mm.; bill from nostril, 9 to 10.5 (average, 9.8) mm.; tarsus, 17.5 to 19 (average, 18.4) mm.; middle toe with claw, 14.5 to 16.5 (average, 15.5) mm.

*Type locality.*—Baird, California.

*Geographic distribution.*—Sacramento and San Joaquin valleys, California, including west slope of Sierra Nevada, west to the coast about San Simeon; casually to Arizona. Resident in suitable localities throughout its breeding range.

*Type.*—Male, adult; No. 91610, U.S.N.M.; Baird, California, June 6, 1883; C. H. Townsend.

*Description.*—Above uniform dull rufescent hair brown, the rump with more or less concealed white spots, the tail-coverts slightly grayer than the back, obsolete barred with darker brown. Wings fuscons; innermost secondaries and outer webs of remainder broadly barred with the color of the upper surface and somewhat with blackish; wing-coverts like the back; primaries edged basally with buffy. Middle rectrices hair brown, barred with black; exterior webs of succeeding pair and basal portion of exterior webs of remainder, excepting outermost pair, like the middle feathers; outer pairs tipped with dull gray, external webs of outermost pair indented terminally on exterior web with white; tips of the other feathers hair brown; rest of tail black. Superciliary stripe white; lores and cheeks white, somewhat mingled with brown; postocular streak like the crown; sides of neck pale brownish gray; lower parts grayish white, adventitiously washed with brownish, lightest on the throat, the flanks and sides tinged with smoke gray, this deepest on the former; under tail-coverts tinged slightly with ochraceous, and barred with black; lining of wing grayish white.

*Young in first plumage.*—No. 91642, U.S.N.M.; Baird, California, June 6, 1883; C. H. Townsend. Above rufescent broccoli brown, more reddish on rump, the feathers of which have concealed whitish spots; tail-coverts faintly barred with dark brown. Edgings to wing-quills and their coverts brown like the upper parts, with obsolete darker bars. Middle pair of tail-feathers like the back, regularly barred with black; exterior webs of all but outermost pair of feathers the same; three outer pairs tipped with gray and barred on terminal portion of exterior webs with dull white; remainder of tail clove brown. Superciliary stripe white, lores and cheeks brownish white, mixed with darker; postocular

streak like the crown; lower surface brownish white, anteriorly with fine dusky markings; sides and flanks pale brownish gray, the latter more rufescent; crissum pale ochraceous, barred with black.

*Thryomanes b. drymaceus* may be distinguished from *T. b. charienturus* by rather paler, decidedly more rufescent flanks and upper surface, together with somewhat shorter tail. Compared with *cremophilus*, it is darker, more rufescent above, with a somewhat more prominent superciliary stripe, and decidedly shorter wing and tail. The characters which separate *drymaceus* from *cryptus* consist in rather darker flanks and upper surface, rather more conspicuous superciliary stripe, somewhat more heavily and regularly barred crissum, much shorter wing and tail. It differs from *leucophrys* in much more rufescent color above, more heavily barred crissum, and much shorter culmen.

A spring specimen from Wheatland, California, is, by reason of its darker, more sooty color above, somewhat intermediate between *drymaceus* and *spilurus*, but seems to be nearer the former. One example from Stanford University, taken in March, seems to be without doubt referable to *drymaceus*, though all the others from the same locality are typical *spilurus*. One of the winter birds from Pasadena, California, and an October specimen from Calabasas, Arizona, apparently also belong to the present race.

Young birds in first plumage are distinguishable from those of *charienturus* by their much more rufescent coloration. They are appreciably paler than the young of *calophonus*.

Twenty three specimens of this form have been examined, representing the following localities, breeding records being designated by an asterisk:

California: San Simeon; Jackson; Jolon; Tejon Mountains;\* Walker Basin; Baird;\* Ager;\* Placerville; Wheatland; Coulterville;\* Sacramento; Yreka;\* Los Angeles; Calaveras County; Pasadena; Stanford University; Nevada City.

Arizona: Calabasas.

#### THRYOMANES BEWICKII SPILURUS (Vigors).

*Troglodytes spilurus* VIGORS, Zool. Voynge Blossom, 1839, p. 18, pl. IV, fig. 1.

*Thryothorus bewickii* var. *spilurus* BAIRD, Rev. Amer. Birds, 1861, 1, p. 126 (in part).

*Thryothorus spilurus* COOPER, Birds Calif., 1870, 1, p. 69 (in part).

*Thryomanes bewickii spilurus* RIDGWAY, Bull. U. S. Geol. and Geog. Surv. Terr., 1876, 11, No. 2, p. 186 (in part).

*Chars. subsp.*—*Thryomanes T. b. drymoeco* similis; sed notaeo, lateribus, hypochondriisque conspicue obscurioribus, haud difficile dignoscendus.

*Measurements (18 specimens).*—Wing, 49 to 53.5 (average, 51.1) mm.; tail, 45 to 52 (average, 49.1) mm.; exposed culmen, 12.5 to 14.5 (average, 13.4) mm.; bill from nostril, 9 to 11 (average, 9.8) mm.; tarsus, 17 to 19.5 (average, 18.5) mm.; middle toe with claw, 15.5 to 16.5 (average, 16.1) mm.

*Type locality*.—Coast of California, probably vicinity of San Francisco.

*Geographic distribution*.—Vicinity of San Francisco Bay, California; occasional on Cosumnes River, California.

*Description*.—Male, adult; No. 162703, U.S.N.M.; Stanford University, California, January 9, 1897; Ralph Arnold.<sup>1</sup> Upper surface sepia brown, shading toward vandyke brown on rump, the feathers of the latter with more or less concealed white spots; superior tail-coverts sepia, obsoletely barred with blackish. Wings fuscous; exterior webs of secondaries margined with bistre and indistinctly barred with blackish; wing-coverts like the back; exterior webs of primaries edged basally with light brown. Tail black, the central pair of rectrices sepia, with imperfect bars of black; the succeeding pair tipped, and all the rest more or less margined externally with sepia, with also indicated transverse markings of blackish; the four exterior pairs of feathers grayish white on their terminal portions, the outermost pair indented externally with the same color. Superciliary stripe white; lores and sides of head grayish white, the two last mixed with the color of the back; postocular streak bistre; sides of neck dark brownish gray; under surface grayish white, lightest on chin and upper throat; sides of body heavily washed with gray; flanks rufescent gray; inferior tail-coverts tinged with rufous and heavily barred with black; lining of wing grayish white.

In the original description of his *Troglodytes spilurus* Vigors mentions no locality; but as the *Blossom* touched at no points on the Pacific coast of the United States excepting San Francisco and Monterey, it seems fair to assume that the type of this race came from one of these two places. No specimens from Monterey have been examined, but climatic and topographic conditions render very probable the supposition that there occurs here the same form of *Thryomanes* as the one found at San Francisco. Furthermore, both plate and description, insufficient and unsatisfactory as they are, seem to fit the San Francisco bird rather better than the one (*drymaceus*) which occupies the interior of California, reaching the coast at San Simeon; and this latter, in all probability, is the only other form to which the name *spilurus* could be applied. Under the circumstances, therefore, it seems reasonably safe to adopt *spilurus* for the race inhabiting the neighborhood of San Francisco Bay.

*Thryomanes bewickii spilurus* may be distinguished from *bewickii* by its duller brown upper surface, darker sides and flanks, broader superciliary stripe, shorter wing and tail, rather longer middle toe and tarsus. It may be separated from *charienturus* by darker, decidedly more rufescent flanks and upper parts and by shorter tail; from *drymaceus* by the much darker color of sides, flanks and upper surface.

Specimens at hand from the vicinity of the eastern and southern

<sup>1</sup>This specimen has been presented to the U. S. National Museum by Mr. Joseph Grinnell.

shores of San Francisco Bay are, with two exceptions, quite uniform in the deep sooty brown of the upper surface; these two exceptions being noticeably more reddish brown. Specimens from Nicasio are also more rufescent above and on the sides and flanks as well, some examples being, in this latter particular, scarcely distinguishable from *calophonus*. Two autumn or winter birds from the Cosumnes River are rather paler than typical *spilurus*, but should evidently be referred to this form, they having probably wandered thither from the coast region. Owing to lack of specimens from the northern part of the California coast, it is impossible to determine how far *spilurus* ranges in that direction.

Twenty-one specimens examined, from the following localities, breeding stations being designated by an asterisk:

California: Stanford University; Palo Alto; Nicasio; Oakland; San Francisco;\* Alameda; San Mateo; Berryessa;\* Cosumnes River.

*THRYOMANES BEWICKII CALOPHONUS*, new subspecies.

*Thryothorus bewickii spilurus* A. O. U. Check-List, 1886, p. 327 (in part).

*Chars. subsp.*—Thry. b. *spiluro* persimilis, sed paulo major; rostro multo longiore; neonon hypochondriis paululum rufescentioribus.

*Measurements* (17 specimens).—Wing, 50.5 to 54.5 (average, 53) mm.; tail, 49.5 to 54.5 (average, 51.4) mm.; exposed culmen, 13.5 to 15 (average, 14.8) mm.; bill from nostril, 10 to 11.5 (average, 10.8) mm.; tarsus, 17.5 to 20 (average, 19.3) mm.; middle toe with claw, 16 to 17.5 (average, 16.9) mm.

*Type locality.*—South Park, King County, Washington.

*Geographic distribution.*—Pacific slope, from Oregon north to southern Vancouver Island, the valley of the Fraser River, and slightly farther along the mainland coast. Resident probably throughout its range, at least from Puget Sound southward.

*Type.*—Male, adult; No. 135210, U.S.N.M.; South Park, King County, Washington, December 19, 1894; L. M. Turner.

*Description.*—Above rich dark bistre, slightly deeper on head, shading to vandyke brown on rump, the feathers of which have more or less concealed white spots; upper tail coverts sepia, inconspicuously marked transversely with darker brown. Wings fuscous, their coverts and the exterior webs of secondaries mostly like the back, the latter obscurely barred with blackish, basal half of outer primaries margined exteriorly with pale brown. Tail black, middle feathers sepia, with narrow bars of black; all the rest tipped with dull gray and more or less distinctly barred externally with sepia; outer pair with indentations of grayish white on terminal portion of exterior webs. Superciliary stripe white, lores and cheeks grayish white, the two last mentioned mixed with dark brown; postocular streak reddish sepia; sides of neck deep brownish gray; lower parts grayish white, most nearly pure white on chin, strongly tinged with brownish gray on sides, this color

becoming more ferruginous and more conspicuous on flanks; lower tail-coverts heavily barred with black; lining of wing grayish white.

*Young in first plumage.*—No. 7129, U.S.N.M.; Shoalwater Bay, Washington; Dr. J. G. Cooper. Upper parts, including central rectrices and outer webs of the others, excepting the outermost pair, dark rufescent broccoli brown, more reddish on rump, some feathers of which have concealed whitish spots; wings obsoletely barred with darker; tail regularly barred with blackish; remainder of tail clove brown, the two outer pairs of rectrices tipped, and barred externally on terminal portion with buffy. Superciliary stripe buffy whitish; cheeks brownish white, mixed with brown; under surface brownish white, heavily mottled on breast and jugulum with dull smoke gray; flanks rufescent gray; lower tail-coverts ochraceous, barred with blackish.

Since the type of *Troglodytes spilurus* Vigors undoubtedly came from California, the present race seems to have received hitherto no distinctive title. It differs from *spilurus*, its nearest ally, in conspicuously larger bill, besides averaging greater in all its other measurements. The upper surface seems to be usually rather deeper and richer brown; the flanks somewhat more rufescent. From *hewickii*, *calophonus* is easily distinguished by deeper, more sooty brown above, much darker sides and flanks, wider superciliary stripe, decidedly longer bill, tarsus and middle toe. It may be readily separated from *drymæus* by the much darker flanks and upper surface, larger bill and feet. Compared with *nesophilus*, it differs in darker, more reddish brown upper surface, and in larger size, this most apparent in the tail and culmen. From *charienturus* this northwest coast form may be readily discriminated by darker, much more reddish brown flanks and upper surface, longer middle toe and culmen.

Very little difference in color appears to exist between winter and summer specimens of *calophonus*, though birds in very much worn plumage are perhaps slightly paler and more grayish. There is, however, much individual variation, the upper parts ranging from deep sooty brown to a much lighter and strongly rufescent color. Young birds in first plumage are similar to those of *drymæus*, but are more deeply brownish.

There seem to be no published records for this bird north of the valley of the Fraser River, and it is probably a permanent resident in that region, since specimens have been obtained at Agassiz, British Columbia, as late as December 5. It appears to be confined strictly to the region west of the Cascade Mountain divide.

Twenty-six specimens examined, from localities in the appended list, breeding records being designated by an asterisk:

Oregon: Salem;\* Cedar Mills, Washington County; Forest Grove.\*

Washington: Seattle;\* Mount Vernon;\* South Park, King County; Fort Steilacoom; Tenino;\* Shoalwater Bay.\*

British Columbia: New Westminster; Agassiz.

## THRYOMANES BEWICKII NESOPHILUS, new subspecies.

*Thryothorus bewickii spilurus* A. O. U. Check-List, 1886, p. 327 (in part).

*Chars. subsp.*—*Thryomanes* T. b. *charienturo* affinis, a quo differt notaco, lateribus hypochondriisque obscurioribus ac rufescentioribus.

*Measurements (6 specimens).*—Wing, 49 to 53 (average, 51.4) mm; tail, 47 to 51 (average, 48.8) mm; exposed culmen, 13.5 to 14.5 (average, 14.1) mm; bill from nostril, 10 to 11 (average, 10.2) mm; tarsus, 18.5 to 19.5 (average, 18.8) mm; middle toe with claw, 15 to 16 (average, 15.7) mm.

*Type locality.*—Santa Cruz Island, California.

*Geographic distribution.*—Santa Rosa and Santa Cruz islands, California.

*Type.*—Male, adult; No. 117641, U.S.N.M., Santa Cruz Island, California, February 7, 1889; C. H. Townsend.

*Description.*—Above grayish bistre, rather darker on head, somewhat more rufous on rump, the feathers there with more or less concealed white spots; upper tail-coverts hair brown, obscurely barred with blackish. Wings fuscous, the secondaries marked on external webs, the innermost ones on both, with alternate bars of brownish olive and blackish; primaries indented basally on outer webs with buffy; lesser and middle coverts like the back; greater series barred on exterior webs and tipped with this same color. Central rectrices and exterior webs of all but outer pair like the back in color, but regularly barred with black; tips of the feathers hair brown, indentations on distal portion of external webs of outer pair dull white; remainder of tail black. Superciliary stripe white; lores and cheeks grayish white mixed with dull brown; postocular streak brownish olive; sides of neck brownish gray, under surface dull brownish white, most nearly pure white on chin and throat; sides washed with brownish gray; flanks strongly tinged with the same; under tail-coverts slightly washed with ochraceous and heavily barred with black; lining of wing grayish white.

*Young in first plumage.*—Female; No. 136705, U.S.N.M., Biological Survey collection; Santa Rosa Island, California, July 3, 1892; C. P. Streater. Upper surface grayish sepia, slightly more reddish on rump, a few feathers of the latter with hidden white spots; superior tail-coverts obsoletely barred. Exposed surface of the closed wing like the back, barred, except on the median and lesser coverts, with darker; very narrow edgings to primaries pale buffy. Tail black; the central feathers, with external webs of all but the outermost pair, like the upper parts in color, barred regularly with black; all the rectrices tipped with hair brown, the two outer pairs more or less indented on external webs with white. Superciliary stripe white; lores and cheeks brownish white, mixed with brown; lower parts brownish white,

heavily mottled on throat and breast with dull gray; sides and flanks dark brownish gray; crissum ochraceous, faintly barred with dusky.

This new subspecies may be distinguished from *charienturus* by the darker, more rufescent coloration of the upper surface, sides and flanks; the tail also averages appreciably shorter. It is noticeably lighter and rather more grayish than *spilurus*, besides having a somewhat longer culmen. From *drymæus* it is without difficulty separable by the noticeably darker and rather more sooty color of the flanks and upper surface. The tail also averages slightly shorter.

Four of the adult examples, though summer birds in very poor condition, are practically identical with the type, if anything somewhat darker. A July bird from Santa Cruz Island is rather lighter and more rufescent than the type, which, however, may be the result of wear, as the latter is in fresh winter plumage.

The young in first plumage are apparently not to be discriminated from those of *charienturus*, though they perhaps average more rufescent. They are usually darker than the young of *drymæus*.

Eleven specimens examined, from the following localities, breeding records being indicated by an asterisk:

California: Santa Rosa Island; \* Santa Cruz Island.\*

#### THRYOMANES BEWICKII LEUCOPHRYS (Anthony).

*Thryothorus leucophrys* ANTHONY, Auk, January, 1895, XII, p. 52.

*Chars. subsp.*—Thryomanes *T. b. charienturo similis*, sed supra pallidior; rostro longiore; subcaudalibus minus conspicue nigro fasciatis.

*Measurements (16 specimens).*—Wing, 48 to 56.5 (average, 52.8) mm.; tail, 46.5 to 55 (average, 50.7) mm.; exposed culmen, 14 to 16 (average, 14.9) mm.; bill from nostril, 10 to 11.5 (average, 10.8) mm.; tarsus, 19 to 20.5 (average, 19.4) mm.; middle toe and claw, 14.5 to 17 (average, 15.7) mm.

*Type locality.*—San Clemente Island, California.

*Geographic distribution.*—San Clemente Island, California.

*Type.*—Male, adult; No. 5514, Coll. A. W. Anthony; San Clemente Island, California, August 27, 1894; A. W. Anthony.

*Description.*—Upper surface rather light rufescent hair brown, slightly deeper on head, the feathers of the rump with more or less concealed white spots; superior tail-coverts hair brown, very faintly barred with darker. Wings fuscous, the innermost secondaries and outer webs of the rest barred with the color of the back; primaries margined on basal part of external webs with pale brown; lesser and middle coverts similar to the upper parts, greater series obsoletely barred and tipped with the same color. Central tail-feathers and proximal portion of exterior webs of all the rest save the outer pair, hair brown, regularly barred with blackish; remainder of tail black, the three outer pairs of rectrices broadly tipped, and barred on terminal portion with grayish white, this most extensive on outer webs of exte-

rior pair; remaining feathers tipped with hair brown. Broad superciliary stripe white; lores and cheeks white, somewhat mingled with brownish; postocular streak like the crown; sides of neck brownish gray; chin and throat pure white; rest of lower surface grayish white; sides and flanks tinged with brownish gray, this color deepest and most brownish on the latter; crissum tinged with ochraceous, and barred narrowly with black; axillars and lower wing-coverts grayish white.

*Young in first plumage.*—Male; No. 308, Coll. J. Grinnell; San Clemente Island, California, June 2, 1897; J. Grinnell. Upper parts, including middle rectrices and proximal portion of outer webs of all but exterior pair, brownish gray, slightly paler on the rump, the feathers of which have hidden spots of dull white; tail barred with black; remainder of tail black, tipped with slate gray, the two outer pairs of feathers barred distally on external webs with dull white. Edges of greater wing-coverts slightly rufescent, outer margins of primaries buffy; secondaries and greater coverts obsoletely barred with dark brown. Superciliary stripe white; lores and cheeks grayish white, mixed with brown; postocular streak dark brown; lower parts brownish white; throat, breast, and sides thickly mottled with dasky, this light and dark marking invading the sides of the neck; sides and flanks pale brownish gray, more rufescent on the latter; crissum washed with ochraceous and barred with blackish.

The characters which separate *T. b. leucophrys* from *charienturus* consist in the rather paler, grayer flanks and upper parts, the longer bill, and less heavily barred inferior tail-coverts. Compared with *nesophilus*, *leucophrys* is readily distinguishable by its much paler and grayer coloration, less heavily barred crissum, longer bill, somewhat longer wings and tail. The interior form, *eremophilus*, approaches very close to *leucophrys* in color above, though averaging rather more rufescent, at least in winter, but differs in its narrow superciliary stripe, paler flanks, decidedly longer wings and tail, shorter bill and tarsus.

The examination of good series of *leucophrys* and *charienturus* shows that no one of the characters which serve to separate these forms is entirely constant. Some specimens of *leucophrys* are quite as conspicuously barred on the crissum as is *charienturus*; gray examples of the latter almost exactly match the darker ones of *leucophrys*; while the broad superciliary stripe, a character emphasized by Mr. Anthony in the name *leucophrys*, is one common to apparently all the Pacific coast forms, though it is due to say that the type of *leucophrys* presents in this respect a rather exaggerated phase, a difference not borne out by the other specimens from San Clemente Island, even after proper allowance has been made for reduction in width by natural abrasion. In view of these facts it seems unadvisable longer to accord *leucophrys* more than subspecific rank.

The type is a bird in fresh fall plumage, and seems to be noticeably more rufescent above than any of the other specimens in similar con-



dition. Some of these are considerably darker on the upper parts than is the type; others are appreciably lighter. Specimens in worn plumage are considerably browner, though not conspicuously paler.

Young in first plumage appear to be quite uniform, and paler than the young of *charienturus*. The dusky spotting of the anterior lower parts is apparently more conspicuous than in any of the other forms the young of which has been available, *bewickii* and *calophonus* excepted.

Thirty-one specimens of *leucophrys* have been examined, all from San Clemente Island, California.

#### THRYOMANES BEWICKII CERROENSIS (Anthony).

*Thryothorus cerroensis* ANTHONY, Auk, April, 1897, XIV, p. 166.

*Chars. subsp.*—*Thryomanes* T. b. *charienturo* persimilis, sed rostro brevius; nec crisso late nigro fasciato.

*Measurements (5 specimens).*—Wing, 49 to 51 (average, 50.4) mm.; tail, 47.5 to 52 (average, 50.1) mm.; exposed culmen, 12.5 to 13.5 (average, 12.9) mm.; bill from nostril, 9 to 10 (average, 9.4) mm.; tarsus, 17.5 to 18.5 (average, 18.1) mm.; middle toe with claw, 14.5 to 16 (average, 15) mm.

*Type locality.*—Cerros Island, Lower California.

*Geographic distribution.*—Cerros Island, Lower California.

*Type.*—Adult; No. 7391, Coll. A. W. Anthony; Cerros Island, Lower California, September 3, 1896; A. W. Anthony.

*Description.*—Above slightly rufescent hair brown, rather darker on head, more rufescent on rump, the feathers of the latter with more or less hidden white spots; upper tail-coverts hair brown, obsoletely barred with dusky. Wings fuscous, the secondaries transversely marked on outer webs with the color of the back; primaries edged basally with the same; margins of greater coverts, together with all of the lesser and median series, of the same shade as the back. Tail black, the central rectrices, together with basal portion of external webs of all but outer pair, hair brown, regularly barred with black; three outer pairs of feathers broadly terminated by dull smoke gray, the remainder by hair brown; outermost pair marked transversely on external webs with dull white. Superciliary stripe white; lores and cheeks grayish white, somewhat mixed with brown; postocular streak of same color as the crown; sides of neck brownish gray; chin and throat white; rest of under surface grayish white medially, smoke gray laterally, deepest on flanks; crissum tinged with ochraceous, barred with black; lining of wing grayish white.

This island form is very closely allied to *charienturus*, from which, however, it may be separated by somewhat smaller size—this most appreciable in the bill—and by rather less heavily barred lower tail-coverts. With the type and the few other specimens at present avail-

able for comparison, there is observable little, if any, material difference in color above, though *cerroensis* appears to be rather lighter.

Although the characters above given will serve to discriminate *cerroensis*, they can be considered only average distinctions, and consequently do not warrant more than subspecific rank, which status it seems therefore necessary that *cerroensis* should occupy. The wide terminal band of gray on the tail-feathers and lower tail-coverts, which Mr. Anthony regards as a character separating the Cerros Island bird from *charienturus*, is a purely individual variation, and consequently of no diagnostic value. The same may be said of the indistinctness of the barring on the central rectrices, which is observable to a greater or less extent in all the forms of the genus. The wide lateral areas of gray in the type are apparently due in part to the make of the skin and are probably not of much diagnostic importance, for some specimens of *charienturus* are very similar in this respect.

The present subspecies of *bewickii* is well differentiated from *Thryomanes brevicaudus* by its conspicuously longer tail, longer wing, and very much shorter culmen, aside from its somewhat paler upper surface. From *nesophilus* it may be distinguished by its much paler and less rufescent upper surface, grayer flanks and sides, shorter bill, and slightly greater length of tail. It averages also rather less in all its other measurements. The characters which separate this form from *leucophrys* are the darker upper parts, rather more deeply gray flanks, much shorter bill, appreciably shorter wing and tarsus. It differs from *drymaeus* in somewhat darker, much less rufescent sides, flanks, and upper surface, less heavily barred crissum, shorter bill, and slightly shorter wing.

A May specimen is rather more grayish than the type, this being possibly due to abrasion. Three other birds, when allowance has been made for their worn condition, are but slightly different from the type.

Five specimens examined, all from Cerros Island.

#### THRYOMANES INSULARIS (Lawrence).

*Troglodytes insularis* LAWRENCE, Ann. N. Y. Lyc. Nat. Hist., 1871, X, p. 3 (ex Baird, manuscript).

*Chars. sp.*—*Thryomanes* T. b. *leucophryi* affinis, sed alis caudaque brevioribus, rectricibus fuscis utrinque fasciatis, nec late albido terminalis, striga superciliari magis restricta, corpore infra ochraceo lavato, crisso maculato nec fasciato, primo visu distinguendus.

*Measurements (10 specimens).*—Wing, 46.5 to 51 (average, 48.7) mm.; tail, 12 to 47 (average, 44.5) mm.; exposed culmen, 15 to 16 (average, 15.2) mm.; bill from nostril, 11 to 12 (average, 11.5) mm.; tarsus, 18.5 to 21 (average, 19.9) mm.; middle toe with claw, 14 to 17 (average, 15.4) mm.

*Type locality.*—Socorro Island, western Mexico.

*Geographic distribution.*—Socorro Island, western Mexico.

*Description*.—Male, adult; No. 117482, U.S.N.M.; Socorro Island, western Mexico, March 8, 1889; C. H. Townsend.<sup>1</sup> Above hair brown, inclining to rufous on rump and superior tail-coverts, the back with narrow obsolete transverse markings, feathers of the rump with more or less concealed subterminal white spots. Tail fuscous, broadly barred with buffy white on external rectrices, this color deepening to hair brown on central feathers and becoming more or less obsolete, at least basally, on all but the middle pair. Wings fuscous, the innermost secondaries and exterior margins of the rest broadly barred with hair brown; two outer primaries narrowly edged, remainder indented basally on external webs with buffy white; greater and lesser wing-coverts like the back, the former barred distally with fuscous; outer edge of alula buffy white. Lores, superciliary stripe, and sides of head dull buffy white, the lores and auriculars slightly mixed with dusky; postocular streak hair brown; sides of neck pale wood brown, shading gradually into the color of the nape; under surface brownish white, the sides washed with grayish brown; flanks light wood brown; crissum mixed with ochraceous buff, the feathers with shaft spots of dark brown; lining of wing dull white.

Although a very distinct species, *Thryomanes insularis* seems to be most closely allied to *Thryomanes b. leucophrys*, from which it differs in its less conspicuous superciliary stripe, more rufescent rump, spotted instead of barred crissum, pronounced ochraceous tinge to the lower parts, usually evident cross markings on the back, together with fuscous tail-feathers barred on both webs and not broadly tipped with whitish. The wing and tail of *insularis* are shorter than those of *leucophrys*, approaching nearer to *brevicaudus* than to any other member of the genus. The base of the bill below is yellowish, at least in dried skins, whereas in all the other forms it is generally whitish or grayish.

The principal individual variation consists in the depth of the buffy or ochraceous suffusion beneath, and in the depth of the color above, although the range of neither is great. The crissum is sometimes almost immaculate, though occasionally the spots have become almost bars. Several of the specimens examined have been for a long time in the U. S. National Museum collection, and are much more brownish than those recently collected.

There can be no doubt about the propriety of placing this species in the genus *Thryomanes*, for in structural characters it agrees perfectly with other members of the group, although the wren<sup>2</sup> occupying Clarion Island, some distance to the westward, can not be considered congeneric, but must, at least for the present, be referred to *Troglodytes*.

Ten specimens examined, all from Socorro Island.

<sup>1</sup>The type of this species is so discolored that the present description has been taken from a fresh specimen.

<sup>2</sup>*Troglodytes tanneri* Townsend, Proc. U. S. Nat. Mus., 1890, XIII, p. 133.

## THRYOMANES BREVICAUDUS Ridgway.

*Thryomanes brevicauda* RIDGWAY, Bull. U. S. Geol. & Geog. Surv. Terr., 1876, II, No. 2, p. 186.

*Thryothorus brevicauda* SHARPE, Cat. Birds Brit. Mus., 1881, VI, p. 227.

*Chars. sp.*—*Thryomanes* T. b. *cerroensi* affinis, sed cauda brevissima, rostro multo longiore, alis brevioribus, notaeo obscuriore, primo visu distinguendus.

*Measurements (1 specimen).*—Wing, 45.5 to 50 (average, 47.9) mm.; tail, 40.5 to 44 (average, 42.2) mm.; exposed culmen, 16 to 17 (average, 16.5) mm.; bill from nostril, 11 to 12.5 (average, 11.8) mm.; tarsus, 17 to 18.5 (average, 17.9) mm.; middle toe with claw, 15 to 16.5 (average, 16) mm.

*Type locality.*—Guadalupe Island, Lower California.

*Geographic distribution.*—Guadalupe Island, Lower California.

*Type.*—Adult; No. 70042, U.S.N.M.; Guadalupe Island, Lower California; E. Palmer.

*Description.*—Upper parts uniform dull grayish bistre, the feathers of the rump with no indication of white spots. Wing-quills fuscous, secondaries obsoletely barred externally, the innermost on both webs, with the color of the back; primaries margined basally with pale brown; wing-coverts like the upper surface. Middle rectrices, and at least basal portion of external webs of the rest, hair brown with regular bars of blackish; remainder of tail brownish slate, nearly all the feathers with obscure transverse markings of blackish, these continuous with those on the outer webs; tips of rectrices dull brownish gray, the exterior webs of two outermost pairs indented distally with grayish white. Conspicuous superciliary stripe dull white; lores and cheeks grayish white, mixed with brown; postocular streak brown like the back; sides of neck grayish brown, but slightly paler than the shade of the upper surface; under parts dull grayish white, almost pure white on chin and throat; sides and flanks deep brownish gray; crissum narrowly barred with black; axillars and lower wing-coverts grayish white.

*Young in first plumage.*—Female?; No. 141646, U.S.N.M., Biological Survey collection; Guadalupe Island, Lower California, May 25, 1892; C. P. Streater. Upper surface dark brownish gray, this color extending over the central pair of tail feathers and the external webs of all the rest save outermost pair, these portions barred with black; remainder of tail black, tipped with dull gray, exterior webs of outermost pair of rectrices marked with an irregular stripe of dull white, and margined with the same color. Rump slightly paler and more rufescent than the back, some of the feathers with concealed spots of light grayish; edgings of greater coverts somewhat rufescent, those of primaries buffy. Superciliary stripe white; postocular streak like the crown; lores and cheeks brownish white, somewhat mixed with darker; below

brownish white, chin almost pure white, the throat and breast with faint spots of gray; sides and flanks strongly tinged with brownish gray; crissum washed with ochraceous and finely barred with blackish.

The very short tail of *Thryomanes brevicaudus* will serve readily to distinguish this species from any of its congeners excepting *insularis*. It has, furthermore, much shorter wings and a decidedly longer culmen than *charienturus*, as well as more narrowly marked lower tail-coverts. Compared with *leucophrys* it is darker and appreciably browner on the upper surface; the wings and tarsus are shorter; the bill of greater length. It has a decidedly shorter wing, longer bill, somewhat shorter tarsus, and rather less heavily barred crissum than *nesophilus*, from which, in color above, it is not conspicuously different. The characters which separate it from *insularis* consist in shorter tarsus, somewhat shorter tail, longer bill, more extensive superciliary stripe, barred crissum, ochraceous wash below, and black tail broadly tipped with whitish. One of the three adult specimens examined is very much grayer throughout than the type, being also, from abrasion, somewhat paler.

The third specimen is intermediate in color between the type and the one just mentioned. The single young bird is darker than the young of *leucophrys*, but can apparently not be distinguished from some examples of *charienturus*.

Four specimens examined, all from Guadalupe Island, Lower California.

The present investigation has been based primarily on the collection of the U. S. National Museum, together with that of the Biological Survey of the Department of Agriculture. The writer wishes here to thank Mr. Ridgway for access to the former and Dr. C. Hart Merriam for permission to make use of the latter. He is also under obligation to Mr. Joseph Grinnell, of Pasadena, California, whose generous loan of series of California birds has in large measure contributed to the elucidation of the various western forms.

Table of measurements.  
MALES.  
[Measurements in millimeters.]

Number of specimens.	Name of species.	Wing.			Tail.			Exposed culmen.			Bill from nostril.			Tarsus.			Middle toe with claw.		
		Average.	Maximum.	Minimum.	Average.	Maximum.	Minimum.	Average.	Maximum.	Minimum.	Average.	Maximum.	Minimum.	Average.	Maximum.	Minimum.	Average.	Maximum.	Minimum.
13	<i>bericiki</i> .....	54.2	56.5	51.5	52.5	56	48	13.3	14.5	12.5	9.6	10	17.7	18.5	17	15.3	16.5	14	
13	<i>cryptus</i> .....	57.4	61	54.5	56.4	61	52	14.1	15.5	13.5	10.4	11	18.4	19.5	17.5	16.2	17	15	
13	<i>eremophilus</i> .....	57.5	60	55	57.9	63.5	50.5	14	15.2	13	10.1	11	18.1	18.5	17.5	15.5	17	14.5	
6	<i>percaus</i> .....	59.6	61.5	57.5	58.9	58	54	13.2	16	14	11.1	11.5	18.7	19.5	18	15.8	16.5	15	
6	<i>marinus</i> .....	57	58.8	56.5	56.5	56	54	14.9	16	14	10.6	12	19.3	20.5	18.5	16.5	18	15.5	
5	<i>baridi</i> .....	57	58.5	55.5	55.7	56.5	54	14.2	15.5	13.5	10.2	11.5	18.7	19	18	16.1	17	15	
14	<i>charienturus</i> .....	52.5	55	50	52	54.5	47.5	14	14.5	13.5	10.4	11.5	19	19.5	18	15.5	16	15	
10	<i>drymocus</i> .....	52.4	54.5	50	50.6	53	49	13.9	14.5	13	10	10.5	18.6	19.5	17.5	15.7	16.5	15	
13	<i>spiturus</i> .....	51.4	53.5	49	49.5	52	45	13.5	14.5	12.5	9.8	11	18.6	19.5	17.5	16.3	16.5	15.5	
11	<i>catophonus</i> .....	53.6	54.5	50.5	51.5	54.5	49.5	15	15	15	10.9	11.5	19.5	20	19	17	17.5	16	
5	<i>nesophilus</i> .....	51.9	53	50.5	51.5	54	47	14.2	14.5	13.5	10.2	11	18.8	19.5	18.5	15.6	16	15	
9	<i>leucophris</i> .....	53.7	56.5	52.5	52.1	55	49.5	13.5	16	14.5	11.1	11.5	19.3	19.5	19	15.7	16.5	14.5	
1	<i>cerroensis</i> .....	51	52	52	52	52	52	13	13.1	13.5	9.5	9.5	18.5	18.5	18.5	14.5	16	14	
6	<i>usularis</i> .....	48.3	50.5	46.5	45	47	42	13.1	13.5	15	11.5	12	20	20.5	19.5	14.9	16	14	
1	<i>brevicaudus</i> .....	50	49	49	42	47	42	16	16	16	11	11	17	17	17	16.5	16.5	14	

## FEMALES.

5	<i>bericiki</i> .....	52.1	53	51.5	50.7	53	49	13.5	14	13	9.6	10	17.4	18	17	15.5	16.5	14
3	<i>cryptus</i> .....	53.7	54	53	55.3	56	54.5	14	14.5	13.5	10.5	11	18.3	18.5	18	16.2	17	15
3	<i>eremophilus</i> .....	52.5	54	51	54.1	56	50.5	13.6	14.5	13	9.8	10.5	17.5	18.5	15	15.4	16	13.5
3	<i>percaus</i> .....	53.7	57	49.5	50.8	54	45.5	14.5	15	13.5	10.7	11	18.5	18.5	18.5	16.2	16.5	16
3	<i>marinus</i> .....	57.8	58.5	57	57.3	58	56.5	14	14	14	10	10.5	19.5	19.5	19.5	16.8	17	16.5
2	<i>baridi</i> .....	56.2	57	55.5	55.3	56.5	54	14	14.5	13.5	10.3	11	19	19.5	18.5	16.7	17.5	15.5
4	<i>charienturus</i> .....	50.5	52	48.5	50.8	53	49.5	13.4	14	12.5	9.9	10	18.4	19	18	15.2	16	14
9	<i>drymocus</i> .....	49.1	50	47	48.5	52	45	13.2	14	13	9.5	10	18.3	18.5	18	15.4	16	14.5
3	<i>spiturus</i> .....	50	50.5	49.5	47.7	48	47	13.2	13.5	13	9.5	10	18	18.5	17	15.8	16.5	15.5
6	<i>catophonus</i> .....	51.8	54	50.5	51.3	54	49.5	14.3	15	13.5	10.6	11	18.8	19.5	17.5	16.8	17.5	16
1	<i>nesophilus</i> .....	49	49	47.5	47.5	47.5	47.5	13.5	13.5	13.5	10	10	19	19	19	16	16	15
7	<i>leucophris</i> .....	51.7	54.5	48	48.7	53	46.5	14.7	15.5	14	10.3	11	19.5	20.5	19	15.7	17	15
2	<i>cerroensis</i> .....	50	51	49	49	50.5	47.5	12.8	13	12.5	9.3	9.5	17.8	18	17.5	14.8	15	14.5
1	<i>brevicaudus</i> .....	49	49	44	44	44	44	18	18	18	18	18	18	18	18	15.5	15.5	14.5