

ARTICLE XIV.—*A Revision of the Genus Xiphorhynchus Swainson, with Descriptions of two New Species.* By FRANK M. CHAPMAN.

Since Lafresnaye's famous monograph of the *Dendrocolaptinae* (Rev. et Mag., 1850, p. 145 *et seq.*), the genus *Xiphorhynchus* appears to have almost wholly escaped the attention of students of this difficult group; but two species have been added to the four he then recognized, and further notes or references are not only very limited but consist largely of mere notices of the occurrence of a given species in the region under consideration, with little or no discussion of its relationships or standing.

Messrs. Sclater and Salvin, in their "Nomenclator Avium Neotropicalium" (1873, p. 69), recognize only *Xiphorhynchus procurvus* Temm. (= *X. falcularius* Vieill.), *X. trochilirostris* Licht., and *X. pusillus* Scl.\* Further than this I am in doubt as to how ornithologists regard the claims of certain species to recognition, and have, therefore, been governed solely by the material before me in arriving at the conclusions presented.

This material consists of, first, the Lafresnaye Collection, including Lafresnaye's types, courteously loaned by the Boston Society of Natural History; second, the U. S. National Museum Collection, Mr. Ridgway having kindly forwarded the specimens requested; and, third, the Lawrence, Maximilian, and Verreaux Collections contained in the American Museum of Natural History.

To the first-mentioned institutions I desire to express my sincere thanks for the permission to examine the material which has made this paper possible.

GENUS **Xiphorhynchus** Swainson.

*Xiphorhynchus* SWAINSON, Zool. Journal, III, 1827, p. 354. Type, *Dendrocolaptes procurvus* TEMM. (= *D. trochilirostris* LICHT.).

*Dendrocopus* VIEILL.; Nouv. Dict. d'Hist. Nat., XXVI, 1818, p. 114 (in part; nec KOCH, 1816).

*Xiphorhynchus* SWAINSON, Classif. Birds, II, 1837, p. 313.

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\* *Xiphorhynchus pucheranii* Lafr. I have not examined, but would prefer to leave it in the genus *Drymornis* where Eyton placed it (*cf.* Jardine's Cont., 1851, p. 21).

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## KEY TO THE SPECIES.

- I. Bill reddish brown.
- A. Back olive or reddish olive brown, darker than the wings.
- a. Throat white or whitish, the feathers without or with only a slight lateral border of olive.
- a<sup>1</sup> Border to feathers of throat very faint; shafts of rectrices usually darker than feathers; bill less than 2.50.  
*X. trochilirostris* Licht.
- a<sup>2</sup> Border to feathers of throat heavier; shafts of rectrices of same color as feather; bill more than 2.50.  
*X. venezuelensis* Lafr. MS.
- a<sup>3</sup> Throat unmarked; longitudinal lines of the breast and back with a narrow border of black. . . . . *X. thoracicus* Scl.
- b. Throat white or whitish, the feathers with a distinct lateral and terminal border of olive.
- b<sup>1</sup> Back and abdomen entirely unmarked.  
*X. dorsoimmaculatus* Nob.
- b<sup>2</sup> Upper back and abdomen with longitudinal markings.  
*X. procurvoides* Lafr.
- B. Back rufous, of nearly the same color as the wings and tail.
- a. Longitudinal markings of the feathers white or whitish; bill less than 2.75. . . . . *X. lafresnayanus* d'Orb.
- a<sup>1</sup> Longitudinal markings of the feathers fulvous; bill more than 2.75. . . . . *X. rufodorsalis* Nob.
- II. Bill not reddish brown.
- a. Bill black or nearly black, more than 2.75; throat white unmarked.  
*X. falcularius* Vieill.
- a<sup>1</sup> Bill brownish white or horn color, less than 2.50; throat ochraceous, feathers bordered with olive brown. . . . . *X. pusillus* Scl.

***Xiphorhynchus trochilirostris* (Licht.).**

*Dendrocolaptes trochilirostris* LICHT., Abh. Ak. Berl., 1818, p. 207, pl. 3.

*Dendrocalaptes procurvus* TEMM. (nec auct.), Planche Col., 1820-38, pl. 28.

*Xiphorhynchus procurvus* SWAINS., Zool. Journ., III, 1827, p. 354.

*Xiphorhynchus trochilirostris* WIED, Beitr. zur Naturg., 1831, p. 1140 (syn. in part); GRAY, Genera Bds., 1844-49, p. 140; BONAP., Consp. Av., 1850, p. 207; REICH., Icon. Syn. Av., 1853, p. 183, No. 431, pl. Dxxxii, figs. 3660-61; BURM., Th. Bras., III, 1856, p. 16 (syn. in part); SCL., Cat. Am. Bds.,

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1862, p. 167; PELZ., Orn. Bras., 1868, p. 44; SCL. & SALV., P. Z. S., 1867, p. 575; GRAY, Hand-List, Vol. I, 1869, p. 178; SCL. & SALV., P. Z. S., 1879, p. 524; SALV., Ibis, 1885, p. 423.

*Xiphorhynchus procurvus* LAFR., Rev. et Mag., 1850, p. 373.

*Xiphorhynchus brevirostris* LAFR. MS. (juv.).

? *Dendrornis brevirostris* SCL., P. Z. S., 1858, p. 63.

"*Xiphorhynchus wiedii* 'BEHN' HARTL." (from Cab.).

*Description.*—Above reddish olive brown, passing into rufous on the rump and upper tail-coverts, the feathers of the upper back with ochraceous shaft-lines, those of the head centrally marked with whitish or ochraceous guttate spots bordered by brownish olive; on the neck these markings becoming more longitudinal and pass finally into the shaft-streaks of the back. Tail rich ferruginous rufous, the shafts of the median rectrices usually darker than the feathers; wing slightly lighter, the secondaries lightly and the coverts heavily margined externally with the color of the back. Below nearly the same color as above, sometimes a very little lighter, the feathers longitudinally marked with ochraceous; on the breast these marks are clear and distinct but pass posteriorly into mere shaft-streaks on the abdomen. Chin and throat white, the first unmarked, the feathers of the last with a fine lateral border of black or brownish black. Bill reddish brown of nearly the same color as the inner surface of the wings. Feet bluish black.

*Measurements.*—Average of nine specimens: Wing, 3.90; tail, 3.50; curve of culmen, 2.35. Smallest specimen: Wing, 3.80; tail, 3.40; curve of culmen, 2.28. Largest specimen: Wing, 4.00; tail, 3.65; curve of culmen, 2.40.

*Habitat.*—Brazil.

*Remarks.*—The variations shown by my series of nine specimens are apparently due to age alone, and consist mainly in the size and color of the longitudinal markings of the feathers, which in immature birds are less clearly defined and more ochraceous, and also in the intensity and richness of the general coloration.

*X. trochilirostris* finds its nearest ally in *X. venezuelensis* Lafr. MS., and it is very probable a large series of these birds, taken throughout their range, would show them to completely intergrade [1889.]

and perhaps connect them with other species of this genus. The material before me, however, is clearly referable to the two species as defined, and forces me to consider them distinct. As represented by my series, consisting of nine specimens of *trochilirostris* from Brazil, and ten specimens of *venezuelensis*, including Lafresnaye's types, from Brazil, Venezuela?, Bogota, Panama and "Central America," *trochilirostris* may be at once distinguished from *venezuelensis* by its smaller bill, which rarely reaches 2.50, and by the almost entire absence of border to the feathers of the upper throat and chin, which in *venezuelensis* are of a more fulvous color with a distinct margin of blackish or brownish olive.

*Xiphorhynchus brevirostris* Lafr. MS., the type of which I have examined in the Lafresnaye Collection, is a young bird of this species.

### ***Xiphorhynchus venezuelensis* Lafr. MS.**

*Xiphorhynchus venezuelensis*, LAFR. MS. VERREAUX, Cat. Lafr. Coll., p. 69; GRAY, Hand-List, Vol. I, 1869, p. 178; GIEBEL, Thesaurus, 1877, p. 766.

*Xiphorhynchus isabella* VERREAUX MS. (albinism).

*Description*.—Similar to *X. trochilirostris* Licht., but bill larger, throat not so white and more heavily margined with black.

*Measurements*.—Average of eight specimens: Wing, 3.81; tail, 2.63; curve of culmen, 2.68. Smallest specimen: Wing, 3.62; tail, 3.40; curve of culmen, 2.60. Largest specimen: Wing, 4.01; tail, 3.70; curve of culmen, 2.75.

*Habitat*.—Brazil, Venezuela?, Bogota, Panama.

*Remarks*.—The Lafresnaye Collection contains two specimens, Nos. 2246, 2271, labeled as types of "*Xiphorhynchus venezuelensis* Lafr." This, so far as I am aware, is a manuscript name, and these birds are, therefore, here described for the first time under the name which Lafresnaye had given them, but apparently never published. My ten specimens show only a slight variation among themselves; three examples from Panama and a single one from Bogota have somewhat darker tails and somewhat smaller bills than Venezuelan specimens, but beyond this they do not in any way differ from the types.

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*Xiphorhynchus isabella* Verreaux, of which the type and only known specimen is in the Lafresnaye Collection, is simply an albinism of this species.

### **Xiphorhynchus pusillus** *Scl.*

*Xiphorhynchus pusillus* SCL., P. Z. S., 1860, p. 278 ; SALVIN, *ibid.*, 1870, p. 193 ; SCL. & SALV., *Nom. Neotrop.*, 1873, p. 69 ; BOUCARD, P. Z. S., 1878, p. 60 ; SCL. & SALV., *ibid.*, 1879, p. 524.

*Xiphorhynchus granadensis* LAFR. MS ; SCL. P. Z. S., 1858, p. 63 ; VERREAUX, *Cat. Lafr. Coll.*, p. 69 ; GRAY, *Hand-List*, Vol. I, 1869, p. 178 ; GIEBEL, *Thesaurus*, 1877, p. 765.

*Description.*—Above reddish olive brown, somewhat darker and more olivaceous than in *X. trochilirostris*; the lower back and rump rich ferruginous rufous of the same shade as the wings and tail ; head blackish, the feathers longitudinally streaked with fulvous, these markings slightly longer on the neck and passing into mere shaft-streaks on the upper back. Below of nearly the same color as the back, the feathers of the throat almost entirely fulvous with little, if any, marginal border of olive brown ; fulvous streaks narrowing on the breast and passing gradually into shaft-lines on the upper belly. Bill brownish or horn color, darker at the base, without reddish tinge, the lower mandible lighter. Feet blackish brown.

*Measurements.*—Average of five specimens : Wing, 4.02 ; tail, 3.89 ; curve of culmen, 2.20. Smallest specimen : Wing, 3.98 ; tail, 3.70 ; curve of culmen, 2.25. Largest specimen : Wing, 4.10 ; tail, 3.92 ; curve of culmen, 2.10.

*Habitat.*—Colombia to Costa Rica.

*Remarks.*—*Xiphorhynchus pusillus* may be at once distinguished from any other member of the genus by the color of the bill, which lacks the reddish tinge so evident in all the other species except *falcularius*. Two specimens in the Lafresnaye Collection, Nos. 2249 and 2250, are labeled as types of "*Xiphorhynchus granadensis* Lafr.;" but this, so far as I am able to discover, is simply a manuscript name, and the species was not described by Lafresnaye ; the name becomes therefore a synonym of *pusillus*.  
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Two specimens in the U. S. National Museum from Costa Rica (Zeledon), agree with a single specimen in the American Museum Collection, without locality, and differ from Bogota specimens of *pusillus* in being darker and more olivaceous, and in having the central feather-streakings narrower.

### ***Xiphorhynchus procurvoides* Lafr.**

*Xiphorhynchus procurvoides* LAFR., Rev. et Mag., 1850, p. 376 ;  
SCL., Cat. Am. Birds, 1862, p. 167.

*Xiphorhynchus procuroides* GRAY, Hand-List, I, 1869, p. 178 (err.  
typ.).

*Xiphorhynchus subprocurvus* REICH., Icon. Syn. Av., p. 183.

*Description.*—Back clear olive brown without rufescent tinge, rump, wings and tail ferruginous rufous ; head darker than the back, the feathers at the terminal half with a small elongated ochraceous spot bordered by olive and surrounded by black ; on the neck these markings grow larger and whiter, the black border disappears, and on the upper back they change finally into shaft-lines, leaving the middle and lower back unmarked. The color below is similar to that of the back, the feathers of the throat with squamate spots of white ; on the breast these spots assume a triangular shape, and on the belly pass into obscure narrow guttate markings. Bill reddish brown ; feet blackish.

*Measurements.*—Wing, 3.72 ; tail, 3.28 ; curve of culmen, 2.40.

*Habitat.*—"Cayenne."

*Remarks.*—The Lafresnaye Collection contains two specimens, Nos. 2241 and 2242, labeled as types of "*Xiphorhynchus procurvoides* Lafr." One of these, No. 2241, agrees with the original description, and from this specimen the preceding description is taken ; the other, No. 2242, is an entirely different species, and is the type of my *X. dorsoimmaculatus*.

*Xiphorhynchus procurvoides* finds its closest relationships in *X. pusillus* Scl. and *X. dorsoimmaculatus* Nob. From the first of these it may be distinguished (1) by the color of the back, which lacks the rufous tinge showing in *pusillus*, (2) by the color and shape of the central markings of the feathers, which are white or

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ochraceous, not fulvous, and (3) by the color of the bill, which in *pusillus* lacks the reddish tinge present in *procurvoides*. From *X. dorsoimmaculatus* it may be known (1) by the lack of rufous in the olive of the back, (2) by the presence of triangular white spots on the neck, which are entirely wanting in *dorsoimmaculatus*, and (3) by the markings of the under parts, which in *procurvoides* are white, larger, and reach to the lower belly, while in *dorsoimmaculatus* they are smaller and confined to the throat and breast.

***Xiphorhynchus dorsoimmaculatus*, sp. nov.**

*Xiphorhynchus procurvoides* LAFR., Rev. et Mag., 1850, p. 376 (in part).

Type, No. 2242 of the Lafresnaye Collection in the Museum of the Boston Society of Natural History.

*Chars. sp.*—Similar to *X. procurvoides* Lafr., but back unmarked reddish olive, not clear olive with shaft-streaks; under parts minutely marked with whitish ochraceous spots confined to throat and breast, not larger white spots reaching to the belly.

*Description.*—Above reddish olive brown, darker than in *X. trochilirostris*, but not as dark as in *X. pusillus*; back absolutely unmarked; rump, wings and tail ferruginous rufous. Head blackish, darker than the back, the feathers with a small linear spot of ochraceous situated in their terminal half. Below of the same color as the back, the throat with rounded spots of whitish-ochraceous which on the upper breast become linear, and disappear entirely on the lower breast. Bill dark reddish brown; feet blackish.

*Measurements.*—Wing, 2.66; tail, 2.40; curve of culmen, 2.36.

*Habitat.*—Cayenne?

This description, of the only specimen in my possession, is taken from No. 2242 of the Lafresnaye Collection, which is labeled as one of the types of "*Xiphorhynchus procurvoides* Lafr.," from which, however, as the diagnosis shows, it is quite distinct. The label bears no locality, and the exact habitat of this species is uncertain. Lafresnaye, however, remarks (orig. descr., l. c.) that all the specimens which he had examined came from Cayenne. 1889.]

**Xiphorhynchus thoracicus** *Scl.*

*Xiphorhynchus thoracicus* SCL., P. Z. S., 1860, p. 277; *ibid.*, p. 291; TACZ., *ibid.*, 1877, p. 323; BERL. & TACZ., *ibid.*, 1883, p. 563; TACZ., Orn. du Pérou., 1884. p. 181; TACZ. & BERL., P. Z. S., 1885, p. 98; *ibid.*, p. 122.

*Description.*—"Brunneus : alis, uropygio, et cauda ferrugineo-rufis : gula sordide alba : dorsi superi capitis undique et pectoris plumis medialiter ochraceo-albidis, hoc colore nigro anguste circumdato, plumarum marginibus externis : rostro rubescente : pedibus fuscis.

"Long. toto 10.0, alæ 4.0, caudæ 3.7, rostri a rictu ad apicem linea directa 2.7." (Sclater, orig. descr., l. c.)

*Habitat.*—Ecuador, Peru.

*Remarks.*—I have not seen an example of this species, but Mr. Sclater remarks (l. c.), easily recognizable by the clear elongated spots occupying the centre of the feathers of the breast and back. These spots are narrowly surrounded by black, and broadly margined outwardly with the general brown ground-color."

**Xiphorhynchus lafresnayanus** (*d'Orb.*)

*Dendrocalaptes lafresnayanus* D'ORB., Voy., Ois., p. 368, pl. liii, fig. 2.

*Dendrocalaptes procurvus* D'ORB. (nec TEMM.), Syn. Av., ii, p. 12 (Mag. de Zool., 1838).

*Xiphorhynchus lafresnayanus* LAFR., Rev. et Mag., 1850, p. 377; REICH., Icon. Syn. Av., 1853, p. 183, pl. 3659; SCL., Cat. Am. Birds, 1862, p. 168; PELZ., Orn. Bras., 1868, p. 44; GRAY, Hand-List, I, 1869, p. 178; SCL. & SALV., P. Z. S., 1879, p. 623.

*Description.*—Similar to *X. trochilirostris* Licht., but bill slightly longer, back rufous, of the same color as wings, and feathers of the throat terminally as well as laterally bordered with blackish.

*Measurements.*—Wing, 4.00; tail, 3.55; bill, 2.64.

*Habitat.*—Bolivia.

*Remarks.*—The single specimen of this species in my possession is from the Lafresnaye Collection.

**Xiphorhynchus rufodorsalis**, sp. nov.

Type, No. 33,654, Am. Mus. Nat. Hist. Collected by Herbert H. Smith, Feb. 26, 1886, at Corumbá, Matto Grosso, Brazil.

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*Chars. sp.*—Differing from all known members of the genus in having the back rich ferruginous rufous, of nearly the same color as the wings and tail.

*Description.*—Above rich ferruginous rufous, of nearly the same color as the wings and tail, somewhat browner on the lower back and wing-coverts, and more fulvous on the neck; head blackish olivaceous, the feathers centrally marked with ochraceous bordered by olive and margined by black; neck with extremely narrow median streaks of fulvous, which are continued on the back as shaft-lines; below lighter, rich tawny ochraceous, with a wash of rufous, resembling thus the color of the neck; chin dirty white, the feathers with narrow black edgings, rest of the under parts longitudinally marked with fulvous, which appears as shaft-streaks on the abdomen; shafts of remiges and rectrices black or blackish. Bill dark reddish-brown; feet plumbeous.

*Measurements.*—Wing, 4.25; tail, 3.92; bill, 3.15.

*Habitat.*—Corumbá, Matto Grosso, Brazil; Paraguay.

*Remarks.*—While this new species bears no close relationship to any known member of the genus, it finds its nearest ally in the Bolivian *X. lafresnayanus* d'Orb., from which, however, it may be readily distinguished by its more tawny color below, by the central markings of the feathers being fulvous, not white or whitish, and by the white markings of the throat being longitudinal, not squamiform. No. 20,957 of the U. S. National Museum Collection, collected by Capt. Page on the Parana, is slightly darker below, but in other respects resembles the type.

### ***Xiphorhynchus falcularius* (Vieill.).**

*Dendrocopus falcularius* VIEILL., Encyl. Méthod., 182-, p. 626; LESSON, Traité d'Orn., 1831, p. 313; VIEILL., Gal. Ois., 1834, p. 286, pl. 175.

*Xiphorhynchus falcularius* GRAY, Genera Bds., 1844-49, p. 140; REICH., Icon. Syn. Av., 1853, p. 182; No. 427, pl. Dxxxii, fig. 3657.

*Xiphorhynchus procurvus* CAB., Mus. Hein., ii, 1859, p. 39; SCL., P. Z. S., 1854, p. III; Cat. Am. Bds., 1862, p. 167 (syn. in part). PELZ., Orn. Bras., p. 44; GRAY, Hand-List, I, 1869, p. 178; BERL. & JHER., Zeit. für ges. Orn., 1885 (p. 51 of author's separates).

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*Xiphorhynchus trochilirostris* WIED, Beitr. zur Naturg. Bras., p. 1140 (syn. in part); LAFR., Rev. et Mag., 1850, p. 374.

*Description.*—Back olive brown, unmarked, passing into rufous on the rump and upper tail-coverts; head black, the feathers centrally streaked with white or whitish; tail deep ferruginous rufous, wings slightly lighter, the coverts and secondaries margined with the color of the back. Under parts slightly paler than the back, the throat white, feathers of breast centrally streaked with same, belly unmarked. Bill black, or brownish black; feet plumbeous.

*Measurements.*—Average of five specimens: Wing, 4.05; tail, 4.09; curve of culmen, 2.90. Smallest specimen: Wing, 3.98; tail, 4.00; curve of culmen, 2.85. Largest specimen: Wing, 4.15; tail, 4.30; curve of culmen, 3.02.

*Habitat.*—Brazil.

*Remarks.*—This is the most distinct and easily recognizable species of the entire group, the coloration of the head and bill separating it at once from any other member of the genus; for this reason I cannot understand why it should have been confused with the *procurvus* of Temminck, which is described as having the head of the same color as the back and the bill reddish, characters possessed by almost every other species of the genus except the one in question.

Temminck, himself, recognized in the red-billed *trochilirostris* of Lichenstein his own subsequently-described *procurvus*. The next available name is *falcularius* of Vieillot, whose description and figure (*Galerie Oiseaux*, l. c.) agree well with our species; indeed, aside from the fact that the names are not synonymous, it is by no means certain that *procurvus* Temm. antedates *falcularius* Vieill.; the first appears in the fifth livraison of "Planches Coloriées," or sometime in the year 1820, while *falcularius* was first described in the *Encyl. Méthodique, Ornithologie*, Tom. II. The title page of this work, dated 1791, we know to be incorrect, so far as it assumes to be the date of the final issue of the volume, which certain contained references lead us to suppose was really published sometime between 1820 and 1823, the date at which the third and succeeding volume appeared.

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