

ARTICLE XII.—On *Cyclorhis viridis* (Vieill.) and its near Allies,  
with Remarks on other Species of the Genus *Cyclorhis*. By  
J. A. ALLEN.

In the Smith Collection of Brazilian birds, recently purchased by the American Museum of Natural History, is a series of 46 specimens of *Cyclorhis*, all collected at Chapada, in the Province of Matto Grosso, as follows : 5 in January, 3 in February, 7 in March, 9 in April, 4 in May, 2 in June, 6 in July, 3 in August, 0 in September, 2 in October, 2 in November, and 3 in December. These specimens, while presenting great variations in respect to coloration, size, and particularly in the size and color of the bill, are obviously referable to a single species, the two extremes of the series being completely connected by intermediate phases. While there is evidently a wide range of individual variation, in coloration as well as in size and the character of the bill, much of the very great variation in plumage is unquestionably due to season and age. October and April specimens present the extremes of variation in respect to coloration, the former representing the adult breeding birds, the latter the freshly moulted birds. There is no apparent difference in the sexes, except that the females are found on measurement to average slightly smaller than the males.

No. 31,205, ♂, October 30, 1882, has the whole head, except the rufous superciliary stripes and lores, nearly pure gray, deepest and purest on the hind neck, a little lighter on the sides of the head, and still lighter on the chin, with a barely perceptible tinge of olivaceous brown over the top of the head,—merely a faint wash, most distinct on the hind head. Rest of the upper parts clear olive green. Jugulum and sides of breast greenish yellow; lower breast and abdomen grayish white, with a faint buffy tinge, deeper posteriorly. Upper mandible reddish flesh-color; lower mandible black basally for two-thirds of its length, gonys and tip lighter, like the upper mandible. Feet dusky horn color. This doubtless represents the fully adult bird in the breeding season.

No. 31,180, ♀, March 15th, 1883, has the whole top of the head and nape uniform deep olivaceous brown; lores and superciliaries rufous; sides of head pale ashy; chin ashy white; upper parts  
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yellowish green, much lighter and more yellowish than in No. 31,205; jugulum and sides of breast rather bright greenish yellow, the yellow many shades deeper and brighter than in No. 31,205; rest of the lower parts deep buff, a little lighter on the middle of the abdomen. Bill nearly uniform reddish horn color, without a dark spot at base of the lower mandible. This may be taken as representing the young of the year, with which many of the February, March, and April specimens essentially agree, although usually the basal black spot on the lower mandible is well defined.

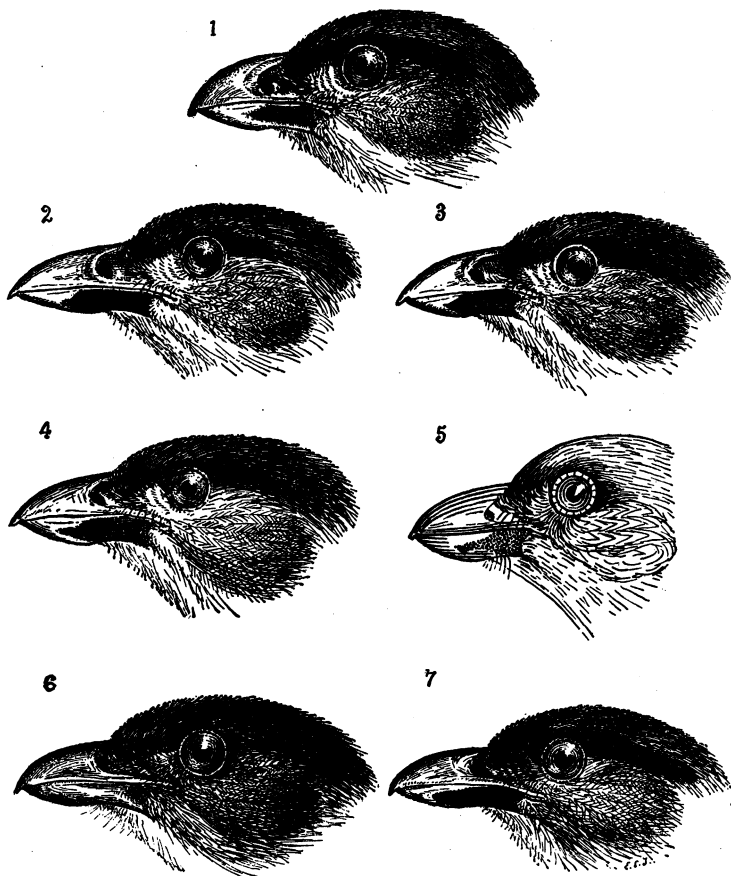
Between these two extremes is every grade of variation, with, however, very few with the head as gray as in No. 31,205, or as brown as in No. 31,180. The top of the head varies in different specimens from strong reddish brown to olive brown, with the gray beneath the surface showing through on the slightest displacement of the feathers.

The specimens with nearly pure gray heads, deep olive green upper parts, minimum amount of buffy below, and the yellow on the breast most greenish, are sexed and dated as follows: ♂, Oct. 30; ♂, Nov. 22; ♀, Jan. 18; ♂, April 26; ♀, May 23. Other April and May specimens differ from the foregoing mainly in the head being a little browner, and the yellow of the jugular region a little brighter. Many July specimens are scarcely different from these last, while others are much more buffy below and browner on the head. The specimens having the brownest heads and the strongest suffusion below are sexed and dated as follows: ♀, Feb. 1; ♂, Feb. 13; ♀, March 15; ♂, April 8. Some of the May, June, and July specimens present nearly the same features, so that more or less strongly suffused specimens occur from February to July.

In respect to other variations, the wing ranges in length in a series of 25 males from 71.63 mm. (2.82 in.) to 88.9 mm. (3.05 in.), and in 10 females from 73.15 mm. (2.88 in.) to 77.21 mm. (3.04 in.); the tail in the two series varies from 63.5 mm. (2.50 in.) to 69.6 mm. (2.74 in.) in the males, and from 63.5 mm. (2.50 in.) to 68.07 mm. (2.68 in.) in the females; the length of the culmen, in the same two series, from 14.48 mm. (.57 in.) to 16.51 mm. (.65 in.) in the males, and from 14.73 mm. (.58 in.) to 16.51 mm. (.62 in.) in the females; and the depth of the bill from 8.38 mm. (.33 in.)

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to 10.16 mm. (.40 in.) in the males, and from 8.64 mm. (.34 in.) to 10.67 mm. (.42 in.) in the females. The wide variation in the form and size of the bill is shown in the accompanying figures (Figs. 1-3).



#### EXPLANATION OF FIGURES.

Figs. 1-5, *Cyclorhis viridis*.—Fig. 1, No. 31,205, ♂, Chapada, Oct. 30; Fig. 2, No. 31,193, ♀, Chapada, May 23; Fig. 3, No. 31,201, ♂, Chapada, Aug.; Fig. 4 (No. 179, Coll. Lawrence), Bahia, without date or sex (type of *Cyclorhis cearensis* Baird); Fig. 5, *C. altirostris* Sal. (copied from Ibis, 1887, p. 320, fig. 3).

Fig. 6, *Cyclorhis ochrocephala*. No. 30,993, Mus. Comp. Zoölogy, ♀ Concepcion del Uruguay, Dec. 7, Coll. W. B. Barrows.

Fig. 7, *Cyclorhis guianensis*. (No. 178, Coll. Lawrence), ♂, Cayenne.

Figures all nat. size, from nature, by E. E. Thompson.

In respect to the color of the bill, one specimen has the bill entirely blackish; in another the upper mandible is wholly dusky; two have the bill wholly reddish flesh-color, without trace of black at the base of the lower mandible, while a third shows the faintest trace of a basal black spot.

As to what name this variable species should bear, the first difficulty in the way was to ascertain to what kind of a bird was given the name *Tanagra viridis* by Vieillot (Ency. Méth., II, 1823, p. 793, based on the *Habia verde* of Azara), this name having been applied to two very distinct species by even recent authors, one of these species being unquestionably the species here in hand. Other names certainly applicable are *Cyclorhis cearensis* Baird (1866); *C. wiedii* Pelzeln (1868); *C. albiventris* Sclater and Salvin (1873); and *C. altirostris* Salvin (1880). Dr. Hans Gadow's *C. viridis* (Cat. Bds. Brit. Mus., VIII, p. 318, exc. synonyms) is *C. ochrocephala* Tsch., but the *C. viridis* of Sclater (1858), of Baird, Berlepsch, and most recent authors is a bird with the rufous superciliaries extending to the nape and with a black spot at the base of the lower mandible, features absent in *C. ochrocephala*. After a thorough examination of the points at issue I quite agree with Count Berlepsch (Ibis, 1888, p. 89) that the *C. viridis* (Vieill.) is the same as the bird named *C. altirostris* by Mr. Salvin (= *C. viridis* Scl., P. Z. S., 1858, p. 448), which name (*altirostris*) Dr. Sclater prefers to adopt in place of *C. viridis* auct. plur., because the latter name has of late, by some authors, been applied to *C. ochrocephala*. (See Ibis, 1887, p. 223, and Argent. Orn., I, 1888, p. 24.)

I have also been led to the conclusion, after the examination of a large amount of material in addition to that in the Smith Collection, that a number of still currently recognized species have been based on seasonal and individual variations of the bird properly to be called *C. viridis*. As expressing my views I present the following synonymy:

***Cyclorhis viridis* (Vieill.).**

*Saltator viridis* VIEILL., Ency. Méth., II, 1823, 793 (based on the *Habia verde* of Azara).

*Cyclorhis viridis* BURM., Thiere Bras., III, 1856, 107 (in part only);  
SCLATER, P. Z. S., 1858, 448; BAIRD, Rev. Am. Bds., 1866,  
392; BERLEPSCH, Ibis, 1888, 91.

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*Cyclorhis cearensis* BAIRD, Rev. Am. Bds., 1866, p. 391 (in text—specimens examined); BERLEPSCH, Ibis, 1888, p. 91 (specimens examined).

*Cyclorhis wiedii* PELZELN, Orn. Bras., ii, 1869, pp. 74, 137, 138; GADOW, Cat. Bds. Brit. Mus., VIII, 1885, p. 318 (in text); BERLEPSCH, Zeitsch. f. ges. Orn., 1885, p. — (p. 20 of separate); *ib.*, Ibis, 1888, pp. 88, 91.

*Cyclorhis albiventris* SCL. & SALV., Nom. Av. Neotr., 1873, p. 156 (type examined); GADOW, Cat. Bds. Brit. Mus., VIII, 1883, p. 87; SCLATER, Ibis, 1887, p. 323; BERLEPSCH, Ibis, 1888, pp. 86, 91.

*Cyclorhis altirostris* SALVIN, Ibis, 1880, p. 352; GADOW, Cat. Bds. Brit. Mus., VIII, 1883, p. 319; SCLATER, Ibis, 1887, p. 323; *ib.*, Argent. Orn., I, 1888, p. 24, pl. iii, fig. 2. (Cf. BERLEPSCH, Ibis, 1888, p. 89.)

*Thamnophilus guianensis* MAXIMILIAN, Beitr. zur Naturg. Bras., III, ii, 1831, p. 1016 (specimens examined).

*Laniagra guianensis* D'ORB., Voy. dans l'Amer. Mérid., Ois., 1835-44, p. 160 (excl. synonyms and part of the text).

*Habitat*.—Middle, Eastern, and Southern Brazil, Bolivia, Paraguay, and the Argentine Republic.

### ***Cyclorhis ochrocephala* Tsch.**

*Cyclarhis ochrocephala* TSCH., Wieg. Arch. f. Naturg. Sch., 1845, i, p. 362 (diagnosis; syn. and remarks in part only).

*Cyclorhis ochrocephala* PELZELN, Orn. Bras., ii, 1869, pp. 73, 138; SCLATER, P. Z. S., 1858, p. 448; *ib.*, Ibis, 1887, p. 323; *ib.*, Argent. Orn., I, 1888, p. 23, pl. iii, fig. 1; BERLEPSCH, Zeitsch. f. ges. Orn., 1885, p. — (p. 20 of separate); *ib.*, Ibis, 1888, pp. 87, 91.

“*Cyclarius guianensis* SWAIN., Bds. Brazil, 1834-41, pl. 58” (*apud* BAIRD).

*Cyclorhis viridis* CAB., Mus. Hein., I, 1850-51, p. 64 (syn. in part only); GADOW, Cat. Bds. Brit. Mus., VIII, 1883, p. 318 (excl. synonyms); BARROWS, Bull. Nutt. Orn. Club, VIII, 1883, p. 88 (specimens examined).

*Habitat.* — Southeastern Brazil and southward (Argentine Republic).

*Cyclorhis viridis* may be easily distinguished from *C. ochrocephala*, with which it has been repeatedly confused, by the continuation of the rufous superciliaries to the nape, by the deeper bill, with a blackish spot at the base of the lower mandible, and in the more or less grayish color of the cap in adult birds, in which it is sometimes nearly pure gray. In *C. ochrocephala* the rufous superciliaries do not extend beyond the posterior corner of the eye, the bill is nearly uniform reddish flesh-color (somewhat dusky in young birds) and less thickened vertically, and the cap seems to be always brownish, varying from deep rufous brown to paler olivaceous brown, much as in immature or freshly moulted examples of *C. viridis*.

*Cyclorhis viridis* differs from *C. guianensis* (Gm.), with which it has also been repeatedly confounded, especially by the earlier writers, by its larger size, much stouter bill, buffy suffusion below, paler and narrower superciliaries, and the less pure gray of the cap. Typical specimens of *C. guianensis* seem characterized (as compared with *C. viridis*) by their small size, very small bills, the pure gray of the cap and hind neck, and the pure gray of the middle of the breast, upper abdomen, and flanks. It is possible that a large series would, especially in immature birds, show color variations in the direction of *C. viridis*, though its nearest ally is doubtless *C. flavipectus*, to which it is closely related, and from which it differs mainly in having much less yellow on the breast.

Mr. Barrows's *C. viridis* (l. c.), wrongly determined some years since as this species by myself, is the true *C. ochrocephala*, and is hence incorrectly placed by Mr. Sclater (Argent. Orn., I, p. 24) under his *C. altirostris*.

The specimens on which the late Professor Baird based his provisional name *C. cearensis* prove, on comparison of two of his three specimens mentioned under this name, to be in no way distinguishable from a number of specimens in the Smith series from Matto Grosso, agreeing closely with what may be fairly termed average specimens (see Fig. 4). Two other specimens identified as *C. cearensis* Bd. by Berlepsch are strictly similar.

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The description of *C. wiedii* Pelzeln agrees satisfactorily with the specimens in which the lower mandible lacks the basal dusky spot, with the cap olivaceous brown and the lower parts strongly buffy,—in other words, with immature birds. Pelzeln cites under this species "*Thamnophilus guianensis* Pr. Neuw.," and "*? Cyclorhis viridis* Baird....Parana" as synonyms, and gives "Bahia (Sellow); Rio Parana (Natt. Baird?), Goiaz, Cuyaba, Engenho do Gama (Nattererer)" as localities. Two of Maximilian's specimens are before me, one of which has the usual black spot on the lower mandible, while the other lacks it, and is otherwise obviously a young bird. Baird's Parana specimen, also before me, has the whole basal portion of the bill dusky, without a distinct black area on the lower mandible, and is also a young bird, corresponding with several immature specimens in the Chapada series. Count Berlepsch, in maintaining *C. wiedii*, describes one of Pelzeln's Nattererian specimens from Engenho do Gama, Matto Grosso (a locality not far from Chapada), his description showing beyond question, to my mind, that the specimen was young, and in every way similar to Chapada "birds of the year." Berlepsch further adds that Baird's Parana specimen of *C. viridis* "evidently belongs to *C. wiedii*." While the black spot on the lower mandible is not always absent in young specimens of *C. viridis* (and it may be wanting occasionally in adults), I am convinced that *C. wiedii* is based, as interpreted by Count Berlepsch, on such exceptional examples. As is well known, the black mandibular spot is often lacking in other species in which, as a rule, it is present, as happens in both *C. flavipectus* and *C. flaviventris*.

Authentic specimens of *C. albiventris* Scl. & Salv. (some of them labeled in Mr. Sclater's handwriting, and including one marked "*Cyclorhis albiventris*, sp. nov. iii. Bahia, Brazil, Wucherer. Type. Ex. Mus. O. S. & F. D. G.") agree perfectly with several of the paler bellied examples in the Smith series and are obviously not separable.

The *C. altirostris* Salvin has already been referred to the true *C. viridis* by Count Berlepsch, and the correctness of the reference has been admitted by Dr. Sclater to be "perhaps correct," he preferring the name *altirostris*, however, on the ground that *viridis* has been frequently used for *C. ochrocephala*. It seems to agree 1889.]

with the thicker-billed brown-headed birds in the Smith series. (Compare, for example, in respect to the bill, Figs. 1 and 4, p. 125.)

Mr. Sclater, in his recent review of this genus (*Ibis*, 1887, pp. 320-324) places much importance upon the size and form of the bill as a diagnostic character, making this the basis of his synoptical key to the species. That he has placed too much stress upon this variable feature has already been pointed out by Count Berlepsch (*Ibis*, 1888, p. 84), who calls attention to the fact that "in this organ much individual difference is observable"—a statement emphatically borne out by the series of '*C. viridis*' forming the basis of these remarks, and as is indicated by the accompanying figures and measurements. One of the largest bills is shown in Fig. 1; a longer, shallower bill is shown in Fig. 2; while in Fig. 3 is shown one of the smallest bills of the series. The gradation, however, of one form into the other is complete and by almost imperceptible stages. The average form would fall about midway between Figs. 1 and 3.

Having in hand, through the kindness of Mr. Robert Ridgway, Curator of Birds in the U. S. National Museum, the National Museum series of the genus *Cyclorhis*, including Mr. Ridgway's types of his *C. flaviventris yucatanensis* and *C. insularis*, as well as what purport to be types of *C. flavipectus* Scl. and *C. albiventris* Scl. & Salv., two of the three specimens for which Baird proposed the name *C. cearensis*, and two specimens labeled "*C. albiventris* Scl. & Salv. = *cearensis* Bd" by Count Berlepsch, and much other authentic material; and also, through the kindness of Mr. William Brewster, Curator of Birds at the Cambridge Museum of Comparative Zoölogy, the Cambridge Museum series, making, with the large series of the American Museum of Natural History, 123 specimens, and representing all the species of the genus except *C. atrirostris* Scl., I venture to make a few observations on other species of the genus.

***Cyclorhis flavipectus*.**—As Count Berlepsch has pointed out (*Ibis*, 1888, p. 85), *C. flavipectus* from Bogota differs from specimens from Trinidad and Venezuela, in having the under parts of a "much purer and deeper golden yellow." I have before me 10 specimens of *C. flavipectus* from Trinidad, which form a very

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uniform series, with the yellow of the under parts of a decidedly greenish cast, thus contrasting markedly with a series of specimens from Colombia, in which the yellow of the lower parts is not only much deeper and purer, but generally more extended along the flanks, reaching the sides of the crissum, and in some specimens slightly tinging the lower tail-coverts. *C. flaviventris* was originally described by Sclater as "*Hab.* In ins. Trinit., Venezuela; et rep. Nov. Grenad." He also says: "Of the present bird I have examples from Trinidad, from Venezuela collected by Mr. Aug. Sallé between La Guara and Caraccas, from S. Martha received from M. Verreaux, and from Bogota collections" (P. Z. S., 1858, p. 448). Fortunately among the specimens from the U. S. National Museum (No. 32,719) is the original S. Martha specimen from the Verreaux Brothers, labeled with the well-known "Maison Verreaux" label, "*Cyclorhis flavipectus* Sclat."... "S<sup>te</sup> Marthe, N<sup>le</sup> Grenade," with "Type" indorsed on the back of the label. With this specimen three others from Bogota and one from Carthagena agree. To this interior or Colombian form I would hence restrict the name *flavipectus*, and designate the form from Trinidad, and possibly the adjoining Venezuelan coast, as *C. flavipectus trinitatis*, subsp. nov., should the Trinidad race seem worthy of recognition.

***Cyclorhis flavipectus subflavescens.***—This form, though nearest related to the Colombian race of *flavipectus*, differs from it in being larger, in the more extended area of yellow below and its darker, duller, somewhat greenish shade, which nearly resembles the yellow of the lower parts of *C. flaviventris yucatanensis*. It thus varies, both in size and color, towards *C. flaviventris*, from which it differs in being somewhat smaller, with a more or less broad area of whitish on the belly, and the dingy green shade of the yellow of the lower parts. Some examples of *subflavescens* differ from small specimens of *C. flaviventris* mainly through the whitish abdominal area present in the former.

***Cyclorhis flaviventris.***—The series of specimens I refer to *C. flaviventris* includes 10 from Orizaba, 1 from Tehuantepec, 4 from Guatemala, and 3 from Southern Yucatan. As a whole they are very uniform in respect to the yellow of the lower parts, though 1889.]

in some of the Guatemalan and Yucatan examples the yellow is perceptibly paler on the lower abdomen and crissum.

***Cyclorhis flaviventris yucatanensis.***—In the series before me are 4 specimens referable to Mr. Ridgway's subspecies *yucatanensis*, including the type (No. 37,917) collected at Merida by Schott, and two collected by Gaumer at the same place, and another Gaumer specimen from Temax. These differ from true *flaviventris* in the clearer gray of the pileum and nape, the much paler tint of the superciliaries, the much duller, grayer shade of the green of the upper parts, and the much less intense yellow of the lower parts, as so clearly pointed out by Mr. Ridgway (Proc. U. S. Nat. Mus., 1886, p. 519). This well-marked form will in all probability prove to be restricted to the northern portion of Yucatan, as specimens from Southern Yucatan prove to be not appreciably different from Guatemalan examples of true *flaviventris*.

***Cyclorhis insularis.***—This species is represented by the two specimens from Cozumel Island described by Mr. Ridgway, one of which (No. 102,659) is the type of the species. This specimen presents a singular combination of characters, the upper parts being of the same dull grayish green seen in *C. flaviventris yucatanensis*, while the lower parts agree closely, as Mr. Ridgway has pointed out (Proc. U. S. Nat. Mus., 1886, p. 566), with the same parts in average examples of *C. ochrocephala*; and the cap is of the same color in both. But here the resemblance with the last named species ceases, *C. insularis* having the lower mandible black for the greater part of its length, and the broad rufous superciliaries continued to the nape. In respect to the color of the *lower parts (only)*, the agreement is almost perfect with typical specimens of *C. guianensis*, including the greenish yellow of the jugular region and the clear whitish gray of the breast and the rest of the lower parts. But this is the only close resemblance of *C. insularis* to *C. guianensis*, the green of the back being of a very different shade in the two, while *insularis* is nearly twice the size of *guianensis*. If the type represents the prevailing form of *Cyclorhis* at Cozumel Island, its position as a "good species" can scarcely be questioned. The other Cozumel specimen, described by Mr. Ridgway in his account of *C. insularis* (l. c.) as differing

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in important details from the type, I should, however, refer almost unhesitatingly to the form Mr. Ridgway has since described as *C. flaviventris yucatanensis*, were it not for the broad whitish area covering the lower belly and crissum. In respect to the lower parts this specimen closely resembles Costa Rican specimens of *C. flavipectus subflavescens*, both in the dull greenish yellow of the general under parts and the white abdomino-crissal area. The difference between this specimen and the type of *C. insularis* consists in the extension of the greenish yellow of the jugular region over the breast and upper abdomen and the corresponding restriction of the white area to the lower abdomen and crissum. Its affinities are, however, much nearer the type of *C. insularis* than with *C. flaviventris yucatanensis*, or any other hitherto described form.

**Cyclorhis guianensis.**—As shown by the synonymy already given (pp. 126, 127), *C. guianensis* has repeatedly been confused with *C. viridis* and *C. ochrocephala*. The specimens of *Cyclorhis* before me, most of them labeled many years ago by various ornithologists of high standing, indicate still further the extent of this confusion. Of 16 specimens labeled *Cyclorhis guianensis* only 4 are referable to this species, 7 being *C. viridis* and 5 *C. ochrocephala*! Judging from the material I have been able to examine, true *C. guianensis* is a rare bird in collections—certainly so in American ones. Of the four before me one (Lawrence Collection) is from Cayenne, and another is from Para (U. S. Nat. Mus. No. 112,264, ex C. B. Riker), and two from Santarem (Coll. C. B. Riker). The Cayenne specimen is the type of Baird's description of this species (Rev. Am. Bds., p. 389), and the specimen on which Fig. 5 of this paper is based. The bill is of the elongated slender form for this genus, and the superciliaries are broad and nearly as deep rufous as in *C. virenticeps*. In the Para specimen the bill is thicker and of the *C. viridis* form, and the superciliaries are very narrow and pale. In other respects—in size and coloration—it agrees with the Cayenne bird. On the other hand it almost exactly agrees with small-billed, blue-headed, light-bellied specimens of *C. viridis* from Chapada (e. g., Nos. 31,206, 31,183, 31,189), having the bill quite as large and of the same form, with the coloration the same throughout, except lacking the very faint buffy tinge of 1889.]

the lower parts perceptible in the Chapada birds. It hence agrees with the pale-bellied phase of *viridis* called "*albiventris*," except that the cap is purer gray, and that all trace of buff is lacking below. It is suggestive that the label shows the bird to have been first named "*C. albiventris*?" by Mr. Ridgway, and renamed "*C. guianensis* (Gm.)," with which later determination I agree, although were the specimen labeled Chapada instead of Para I should unhesitatingly pass it as *C. viridis*.

The point of all this is the evident probability that eventually the Cayenne form known as *C. guianensis* will be found to grade into *C. viridis* though a paler race representing the species in Northwestern Brazil, from Ceara and Pernambuco, and perhaps further north, southward to Bahia, for which Baird's name *cear-ensis* (= *albiventris*). would be available.

In short, it seems probable that the whole group centering about *C. flavipectus*, including not only its several recognized subspecies but *C. guianensis* and *C. viridis*, and possibly also *C. flaviventris* (through its southern forms) will be found, when ample material for the study of the genus has been gathered, to imperceptibly blend.

My present impressions of the status, relationships, and distribution of the various forms of *Cyclorhis* may be summarized as follows:

1. *Cyclorhis flaviventris* Lafr. — Southern Mexico, Guatemala, and Southern Yucatan.
- 1a. *Cyclorhis flaviventris yucatanensis* Ridgw. — Northern Yucatan.
2. *Cyclorhis insularis* Ridgw. — Cozumel Island.
3. *Cyclorhis flavipectus* Scl. — Colombia and Venezuela (except northeastern coast region?).
- 3a. *Cyclorhis flavipectus trinitatis* Allen. — Island of Trinidad (and Venezuelan coast region?).
- 3b. *Cyclorhis flavipectus subflavescens* (Cab.). — Costa Rica.
4. *Cyclorhis guianensis* (Gm.). — Guiana, Cayenne, and Amazonia.
5. *Cyclorhis viridis* (Vieill.). — Northern Argentine Republic, Paraguay, and Eastern Brazil north to Amazonia.
6. *Cyclorhis ochrocephala* Tsch. — Southeastern Brazil and Argentine Republic.

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7. *Cyclorhis virenticeps* Scl. — Western Ecuador and “North-western Peru.”
8. *Cyclorhis contrerasi* Tacz.—Northern Peru.
9. *Cyclorhis nigrirostris* Lafr.—Colombia.
10. *Cyclorhis atrirostris* Scl.—Ecuador.

In conclusion I append the following key to the species of *Cyclorhis*.

- A. Superciliary stripes not continued behind the eye.
  - a. Bill (normally) uniform reddish brown ; cap brownish ochraceous.  
*C. ochrocephalus.*
  - b. Bill black, base of lower mandible flesh-color; cap green. . . *C. nigrirostris.*
- B. Superciliary stripes extending to nape.
  - a. Cap green ; sides of neck yellow, like the breast ; bill brown, base of lower mandible black . . . . . *C. virenticeps.*
  - b. Cap green ; sides of neck greenish ; bill wholly black . . . *C. atrirostris.*
  - c. Cap and sides of neck deep gray ; lower parts (except jugulum and sides) pure grayish white . . . . . *C. guianensis.*
  - d. Cap chestnut, more or less mixed with green ; sides of neck yellowish green, like the breast . . . . . *C. contrerasi.*
  - e. Cap pale ochraceous, varying to nearly pure gray.
    - e<sup>1</sup> Lower parts wholly deep yellow . . . . . *C. flaviventris.*
    - e<sup>2</sup> Lower parts paler, duller yellow . . . . *C. flaviventris yucatanensis.*
    - e<sup>3</sup> Breast light golden yellow ; sides strongly washed with pure light yellow ; belly whitish . . . . . *C. flavipectus.*
    - e<sup>4</sup> Breast and lower parts, except a small whitish ventral area, dull greenish yellow . . . . . *C. flavipectus subflavescens.*
    - e<sup>5</sup> Breast light greenish yellow ; sides washed with yellowish olivaceous ; broad abdominal area nearly pure white.  
*C. flavipectus trinitatis.*
    - e<sup>6</sup> Yellow nearly confined to jugulum ; sides washed with greenish yellow ; rest of lower parts buffy white, varying from strong buff to nearly pure white ; cap often pure gray . . . . . *C. viridis.*
    - e<sup>7</sup> Similar to *C. viridis* but much larger, green above darker, belly purer grayish white . . . . . *C. insularis.*

