

A REVIEW OF THE GENUS PRIONOCHILUS STRICKLAND AND ITS CLOSEST ALLIES.

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The genus *Prionochilus* of the Catalogue of Birds in the British Museum* included several well differentiated generic groups. These have been partly segregated by subsequent authors, notably Oates,† Büttikofer,‡ and Hartert§; and the present paper is a further contribution to the same subject.

The old genus *Prionochilus* is now divisible into eight, which fall naturally into two main groups, one comprising three genera with a spurious primary, and another comprising five genera in which there is no evident spurious primary, and in which the wing is thus apparently nine-primaried, like most of the Dicaeidae. In fact, so different are these two groups that there is some doubt of the propriety of retaining the first mentioned in the family Dicaeidae.

In the present paper the comparative measurements used have been taken as follows:

Length of wing.—Measured in a straight line from the bend of the closed wing to the end of the longest primary, with the primaries in their natural position—that is, not straightened.

Exposed culmen (length of bill).—Measured in a straight line from the beginning of the feathers on the culmen to the tip of the maxilla—that is, the chord of the exposed culmen.

Width of bill at base.—Taken with dividers at the beginning of the feathers on the culmen.

Length of tarsus.—A straight line from the center of the heel joint on the posterior side to the middle of the joint between the metatarsus and the middle toe on the anterior side.

The conclusions hereinafter set forth are based chiefly on material in the United States National Museum. In addition, the writer is indebted to the authorities of the Academy of Natural Sciences at Philadelphia, Pennsylvania, through Dr. Witmer Stone, and those of the Museum of Comparative

*Sharpe, Cat. Birds Brit. Mus., X, 1885, pp. 63-76.

†Fauna Brit. India, Birds, II, 1890, after October, pp. 375, 381-386.

‡Weber's Zool. Ergeb. Reis. Nederl. Ost-Indien, 1894, pp. 302-303.

§Novit. Zool., IV, No. 3, December 3, 1897, p. 519.

Zoology, Cambridge, Massachusetts, through Mr. Outram Bangs; and to Mr. J. H. Fleming, of Toronto, Ontario, for the loan of additional specimens.

Pachyglossa Blyth.

Pachyglossa BLYTH (Hodgson MS.), Journ. Asiat. Soc. Bengal, XII, Part II, No. 143, for November (after November 13), 1843, p. 1009 (type, by virtual monotypy,* *Pachyglossa melanoxantha* Blyth, Hodgson MS., sp. nov.)

Description.—First (outermost) primary spurious, not as long as the tarsus (not longer than hind toe with claw); third primary longest; second primary much longer than the seventh; secondaries falling short of the tip of the wing by more than the length of the tarsus; wing very long, nine and one-half times the length of exposed culmen; tail square or slightly emarginate; bill moderately stout and relatively broad, its lateral outlines concave, its width at base nine-tenths of the length of exposed culmen; culmen strongly decurved; gonys moderately ascending and moderately convex; narial bristles few and poorly developed.

Type.—*Pachyglossa melanoxantha* Blyth.

Remarks.—The only species is *Pachyglossa melanoxantha* Blyth.

Anaimos Reichenbach.

Anaimos REICHENBACH, Handb. Speciell. Ornith., Nov. 1, 1853, p. 245, (type, by monotypy, *Pardalotus thoracicus* Temminck).

Diagnosis.—Similar to *Pachyglossa*, but first (outermost) primary at least as long as the tarsus; third, fourth, and fifth primaries longest; secondaries falling short of tip of wing by less than the length of the tarsus; wing less than 8 times the length of the exposed culmen; lateral outlines of bill practically straight; width of bill at base about $\frac{3}{4}$ of the length of the exposed culmen; gonys strongly ascending and much convex; narial bristles numerous and well developed.

Description.—First (outermost) primary spurious, but as long as the tarsus; third, fourth and fifth primaries longest; second primary much

*The expression "virtual monotypy," which has been previously used by the present writer, is intended to indicate that while in the original description of a genus there may have been more than one specific name mentioned, yet only one is to be considered in fixing the type. Such specific names include (1) nomina nuda, (2) absolute synonyms that could not by any possible chance be used for another species or subspecies, (3) species inquirendae from the standpoint of the author of the generic name, and (4) species doubtfully referred to the genus by its original describer. In the case of *Pachyglossa*, as above indicated, the following three other species were doubtfully referred to this group by Blyth: *Pipra squalida* Burton, *Piprisoma viroides* Jerdon, and *Pardalotus pipra* Lesson.

longer than the seventh; secondaries falling short of the tip of the wing by less than the length of the tarsus; wing long, 7 to $7\frac{1}{2}$ times the length of the exposed culmen; tail square, or very slightly rounded; bill moderately stout and relatively broad, its lateral outlines practically straight, its width at base about $\frac{3}{4}$ of the length of exposed culmen; culmen strongly decurved; gonys strongly ascending and convex; narial bristles numerous and well developed.

Type.—*Pardalotus thoracicus* Temminck.

Remarks.—This group is well differentiated from *Pachyglossa*, as may be inferred from the above diagnosis. The species are:

Anaimos thoracicus (Temminck).

Anaimos olivaceus (Tweeddale).

Charitociris,* nom. gen. nov.

Prionochilus STRICLLAND, Proc. Zool. Soc. Lond., 1841, (October, 1841), p. 29, (type, by subsequent designation [Gray, List Gen. Birds, ed. 2, August, 1841, p. 46], *Pardalotus percussus* Temminck), (nec *Prionocheilus* Chevrolat, *Coleoptera*).

Diagnosis.—Similar to *Anaimos*, but wing about 6 times the length of exposed culmen; second primary equal to the seventh, or shorter; bill relatively narrow and slender, not turgid, its width at base about three-fifths of the length of exposed culmen; culmen not much decurved, the gonys not strongly convex, nor strongly ascending.

Description.—First (outermost) primary spurious, but as long as the tarsus; third, fourth, and fifth primaries longest; second primary equal to the seventh, or shorter; secondaries falling short of the tip of the wing by less than the length of the tarsus; wing 6 times the length of the exposed culmen; tail square, or very slightly rounded; bill relatively slender and narrow, its lateral outlines practically straight, or but slightly concave, its width at base about three-fifths of the length of exposed culmen; culmen not strongly decurved; gonys moderately ascending and convex; narial bristles numerous and well developed.

Type.—*Pardalotus percussus* Temminck.

Remarks.—This genus differs from *Pachyglossa* in having numerous and well developed narial bristles; long secondaries, falling short of the tip of the wing by less than the length of the tarsus; the first primary at least as long as the tarsus, the second primary equal to or falling short of the seventh; the wing only 6 times the length of the exposed culmen; and in some other particulars.

**Charis*, gratia; *kiris*, ciris (avis mythica).

The generic name *Prionochilus* Strickland* is rendered invalid by *Prionocheilus* Chevrolat† for a genus of *Coleoptera*, as already explained by the present writer,‡ but the name *Anaimos* Reichenbach, that we used for this genus in its original sense, is not now applicable to the present group. It is further worth while mentioning that the type of *Prionochilus* Strickland usually cited is *Dicaeum ignicapillum* Eyton, but this species is not mentioned in the original diagnosis, and the proper type was therefore apparently first designated by Gray§ as *Pardalotus percussus* Temminck. The species referable to this group are as follows:

- Charitociris percussa percussa* (Temminck).
- Charitociris percussa ignicapilla* (Eyton).
- Charitociris xanthopygia xanthopygia* (Salvadori).
- Charitociris xanthopygia plateni* (Blasius).
(= *Prionochilus johanna* Sharpe).
- Charitociris maculata maculata* (Temminck).
- Charitociris maculata septentrionalis* (Robinson and Kloss).
- Charitociris maculata opistata* (Oberholser).

Piprisoma Blyth.

Piprisoma BLYTH, Journ. Asiat. Soc. Bengal, XIII, pt. I, No. 149, for May (after October), 1844, p. 394, (type, by monotypy, *Fringilla agilis* Tickell = *Pipra squalida* Burton).

Diagnosis.—Similar to *Charitociris*, but first (outermost) primary not spurious, and much longer than the fourth; second and third primaries longest; secondaries falling short of the tip of the wing by more than the length of the tarsus; and the wing more than 7 times the length of exposed culmen.

Description.—First (outermost) primary not spurious, much longer than the fourth; second and third primaries longest; secondaries short, falling short of the tip of the wing by more than the length of the tarsus; wing long, $7\frac{1}{2}$ to 8 times the length of exposed culmen; tail slightly rounded; bill rather slender and narrow, but broadening at base, its lateral outlines more or less concave, its width at base three-fifths to two-thirds of the length of exposed culmen; culmen not strongly decurved; gonys only moderately ascending and little convex; narial bristles few and rather weak.

*Proc. Zool. Soc. Lond., 1841 (October, 1841), p. 29.

†In Dejean, Cat. Col., ed. 3, 1837, p. 451.

‡Smithson. Miscell. Col., LX, No. 7, October 26, 1912, p. 22.

§List Gen. Birds, ed. 2, August, 1841, p. 46.

Type.—*Pipra squalida* Burton.

Remarks.—The three preceding genera all have a spurious first primary, so that *Piprisoma* is distinguishable from them at a glance.

The generic term *Piprisoma* is not of neuter gender as commonly considered, since, being a compound appellative, it must be either masculine or feminine. In view of the feminine form of its ending, it is probably better considered to be of that gender.

The species referable to this genus are:

Piprisoma modesta modesta (Hume).

Piprisoma modesta remota Robinson and Kloss.

Piprisoma everetti everetti (Sharpe).

Piprisoma everetti sordida Robinson and Kloss.

Piprisoma squalida (Burton).

Cryptociris,* gen. nov.

Diagnosis.—Resembling *Piprisoma*, but with secondaries long, falling short of the tip of the wing by less than the length of the tarsus; width of bill at base more than three-fifths of the length of exposed culmen; tail strongly rounded.

Description.—First (outermost) primary not spurious, much longer than the fourth; first, second, and third primaries longest; secondaries long, falling short of the tip of the wing by less than the length of the tarsus; wing long, about $7\frac{3}{4}$ times the length of the exposed culmen; tail strongly rounded; bill rather slender and relatively narrow, but broadening at base, its lateral outlines more or less concave, its width at base about $\frac{3}{4}$ of the length of the exposed culmen; culmen not strongly decurved, but relatively more so than in *Piprisoma*; gonys only moderately ascending and moderately convex; narial bristles few and weak.

Type.—*Pardalotus obsoletus* Müller and Schlegel.

Remarks.—This monotypic group is most nearly allied to *Piprisoma*, but is readily distinguishable as above indicated. Its only species is *Cryptociris obsoleta* (Müller and Schlegel).

Chromatociris† gen. nov.

Diagnosis.—Similar to *Cryptociris*, but with the second, third, and fourth primaries longest; the first (outermost) primary shorter than the fourth; wing not decidedly more than 7 times the length of the exposed culmen; tail only slightly rounded; bill stouter; culmen strongly decurved; narial bristles more numerous and better developed.

* *kryptos*, color; *kiris*, ciris (avis mythica).

† *Chroma*, occultus; *kiris*, ciris (avis mythica).

Description.—First (outermost) primary not spurious, but shorter than the fourth and equal to the fifth or longer; second, third, and fourth primaries longest; secondaries long, falling short of the tip of the wing by less than the length of the tarsus; wing six and two-thirds to seven times the length of the exposed culmen; tail slightly rounded; bill moderately stout and basally wide, its lateral outlines more or less concave, its width at base three-fourths to five-sixths of the length of exposed culmen; culmen strongly decurved; gonys moderately or slightly ascending and straight or slightly convex; narial bristles numerous and well developed.

Type.—*Prionochilus quadricolor* Tweeddale.

Remarks.—The narial bristles appear to be rather weaker in *Chromatociris bicolor inexpectata* than in the type of the genus, *Chromatociris quadricolor*, but otherwise the former is typical. The species referable to this group are:

Chromatociris bicolor bicolor (Bourns and Worcester).

Chromatociris bicolor inexpectata (Hartert).

Chromatociris quadricolor (Tweeddale).

Acmonorhynchus Oates.

Acmonorhynchus OATES, Fauna Brit. India, Birds, II, 1890, after October, p. 381 (type, by monotypy, *Prionochilus vincens* Sclater).

Diagnosis.—Similar to *Chromatociris*, but with bill narrower and more slender, its lateral outlines practically straight, its width at base only two-thirds of the length of exposed culmen; culmen not strongly decurved; second and third primaries longest.

Description.—First (outermost) primary not spurious, shorter than the fourth, sometimes only as long as the fifth; second and third primaries longest; secondaries long, falling short of the tip of the wing by less than the length of the tarsus; wing only six and two-fifths times the length of exposed culmen; tail moderately rounded; bill slender and relatively narrow, its lateral outlines practically straight, its width at base about two-thirds of the length of exposed culmen; culmen not strongly decurved; gonys moderately (not abruptly) ascending, and but little convex; narial bristles many and well developed.

Type.—*Prionochilus vincens* Sclater.

Remarks.—The Ceylon species *Prionochilus vincens* Sclater, for which this genus was originally instituted, seems to be strictly congeneric with *Prionochilus aureolimbatus* Wallace. Although we have not examined *Acmonorhynchus annae* Büttikofer*, this species is likewise apparently correctly referred

*Weber's Zool. Ergeb. Reis. Nederl. Ost-Indien, 1894, p. 302.

to the present group. The species apparently belonging to this genus are:

Acmonorhynchus vincens (Sclater).

Acmonorhynchus aureolimbatus aureolimbatus (Wallace).

Acmonorhynchus aureolimbatus sanghirensis (Salvadori).

Acmonorhynchus annae Büttikofer.

*Chilociris** gen. nov.

Diagnosis.—Resembling *Acmonorhynchus*, but wing more than $7\frac{1}{2}$ times the length of the exposed culmen; secondaries falling short of the tip of the wing by the length of the tarsus or more; third and fourth primaries longest; bill stouter, its lateral outlines more concave, the culmen strongly decurved; the gonys much convex and abruptly ascending.

Description.—First (outermost) primary not spurious, equal to the fourth or shorter; third and fourth primaries longest; secondaries shorter, falling short of the tip of the wing by the length of the tarsus or more; wing long, 8 to $8\frac{1}{2}$ times the length of the exposed culmen; tail square, or very slightly rounded; bill turgid, widening at base, its lateral outlines more or less concave, its width at base two-thirds to seven-tenths of the length of the exposed culmen; culmen strongly decurved; gonys abruptly ascending and very convex; narial bristles numerous and well developed.

Type.—*Prionochilus aeruginosus* Bourns and Worcester.

Remarks.—The type and only specimen of *Chilociris* has apparently given ornithologists considerable trouble to allocate generically. Originally described as belonging to *Prionochilus*, it has successively been placed in *Acmonorhynchus* and *Pipri-soma*, but as is shown by an examination of its characters, it can not properly be referred to any one of them. It really forms a well differentiated monotypic genus, and should stand as *Chilociris aeruginosa* (Bourns and Worcester).

* *Cheilos*, rostrum; *kiris*, *ciris* (avis mythica).

Key to Genera Allied to *Prionochilus*.

- a*¹. First (outermost) primary spurious.
- b*¹. Narial bristles few and weak; secondaries short, falling short of the tip of the wing by more than the length of tarsus; first primary not as long as tarsus.....*Pachyglossa*.
- b*². Narial bristles numerous and well developed; secondaries long, falling short of the tip of the wing by less than length of tarsus; first primary at least as long as tarsus.
- c*¹. Wing 7 to 7½ times the length of exposed culmen; second primary much longer than seventh; bill relatively broad and stout, decidedly turgid, its width at base at least seven-tenths of the length of exposed culmen; culmen much decurved; the gonys strongly convex and strongly ascending.
Anaimos.
- c*². Wing about 6 times the length of exposed culmen; second primary equal to the seventh or shorter; bill relatively narrow and slender, not turgid, its width at base about three-fifths of the length of exposed culmen; culmen not much decurved; gonys not strongly convex nor strongly ascending.....*Charitociris*.
- a*². First (outermost) primary not spurious.
- b*¹. First primary much longer than fourth; narial bristles few and weak.
- c*¹. Secondaries short, falling short of the tip of the wing by more than the length of tarsus; width of bill at base not more than three-fifths of the length of exposed culmen; tail only slightly rounded.....*Piprisoma*.
- c*². Secondaries long, falling short of the tip of the wing by less than the length of tarsus; width of bill at base more than three-fifths of the length of exposed culmen; tail strongly rounded.....*Cryptociris*.
- b*². First primary not longer than fourth; narial bristles numerous and well developed.
- c*¹. Wing not decidedly less than 8 times the length of the exposed culmen; secondaries falling short of the tip of the wing by the length of the tarsus or more; bill somewhat more turgid; gonys much convex and abruptly ascending.....*Chilociris*.
- c*². Wing decidedly less than 8 times the length of exposed culmen; secondaries falling short of the tip of the wing by less than the length of the tarsus; bill less turgid; gonys but little, if any, convex, and not abruptly ascending.
- d*¹. Bill slender and narrow, its lateral outlines practically straight, its width at base two-thirds of the length of exposed culmen; culmen not strongly decurved; second and third primaries longest.
Acmonorhynchus.
- d*². Bill relatively stout and basally wide; its lateral outlines more or less concave, its width at base three-fourths to five-sixths of the length of exposed culmen; culmen strongly decurved; second, third, and fourth primaries longest.....*Chromatociris*.

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