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CRITICAL COMMENTS ON SEED-EATERS OF THE GENUS AMAUROSPIZA

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The genus *Amaurospiza*, described by Cabanis (1861:3), has for years remained one of the lesser known genera of the Fringillidae from Central and South America. This can be attributed largely to the rarity of specimens representing the known members of this genus in the various museums of the world.

Sharpe (1888:156-157) recognized the following three species, the last two of which he described as new: *Amaurospiza concolor* Cabanis, occurring in Costa Rica and Panamá, *A. aequatorialis* Sharpe inhabiting Ecuador, and *A. axillaris* Sharpe of Brazil. The latter was found by Hellmayr (1904:516-518) to be identical with *Sporophila* [= *Amaurospiza*] *moesta* Hartlaub (1853:36). Later Griscom (1934:414-415) separated *Amaurospiza concolor* into three geographic races, two of which he described for the first time, *A. c. grandior* from Nicaragua and *A. c. australis* occurring in Costa Rica and Panamá. The type locality of *A. c. concolor* was restricted to Miravalles in northwestern Costa Rica although the validity of this action has since been questioned (Hellmayr, 1938:238). Griscom (1934:412), also proposed a new genus and species, *Amaurospizopsis relictus*, based on a single specimen from Chilpancingo, Guerrero, Mexico, which in his opinion differed sufficiently from any of the known forms of *Amaurospiza* as to warrant such separation.

Hellmayr (1938:237-239) recognized two species of *Amaurospiza*: *A. concolor* and *A. moesta*. As regards the former species he tentatively admitted three geographic races: *A. c. grandior* (with some reservations), *A. c. concolor* and *A. c. aequatorialis*. *Amaurospiza c. australis* was considered indistinguishable from *A. c. concolor*. Concerning *Amaurospizopsis relictus*, Hellmayr (1934:237) states it "appears to be an exact duplicate of *Amaurospiza concolor* in coloration, but is slightly larger and has a somewhat differently shaped bill. In spite of these structural divergencies it may, however, prove to be merely a northern race of that bird, and more material is greatly needed to establish its true taxonomic position."

It was the receipt of five specimens of the so-called *Amaurospizopsis relictus* by one of us (Ray) that led to a study of this group, the results of which are presented here. This series was taken by the veteran collector Wilmot W. Brown near Chilpancingo where he had previously secured the type and heretofore unique specimen of this rare and little known bird on May 19, 1932. Included in our series is an adult male taken on May 27, 1940, two females taken on May 9 and May 20, 1940, and two immature males, one of the latter a bird of the year taken on August 11, 1939, the other seemingly one year old taken on July 11, 1939. The adult male was found to agree essentially with Griscom's (*op. cit.*) description of the type of *relictus*. For confirmation, however, this specimen was sent to the Museum of Comparative Zoology for direct comparison with the type. This comparison was made by Mr. James L. Peters and Mr. Ludlow Griscom,

both of whom agreed with our determination. The close similarity between adults of *Amaurospizopsis relictus* and an adult male and female of *Amaurospiza concolor* in the collection of the California Academy of Sciences induced us to follow this matter further. Accordingly, ten specimens of *Amaurospiza concolor*, representing all three of the Central American races recognized by Griscom (1934), were borrowed from the American Museum of Natural History. For the generous loan of these valuable specimens we wish to extend our sincere thanks to the officials of that institution.

After a careful comparison of *Amaurospizopsis* and *Amaurospiza* we feel that the differences are not sufficient to warrant a generic distinction. Mr. Griscom later concurred with us in this opinion and indicated (*vide* letter of November 1, 1944) that his views on avian genera, especially in the family Fringillidae, had undergone a radical change since he proposed the genus *Amaurospizopsis*.

Some of the characters ascribed to *Amaurospizopsis* are possessed equally well by members of the genus *Amaurospiza*. Both have a ridged culmen and a series of faintly indicated diagonal ridges and grooves extend forward from the nostrils on either side of the upper mandible. We do not consider the nostril to have a marked operculum in *Amaurospizopsis* as was asserted by Griscom, but rather to be surrounded above and behind by a membrane. It might also be mentioned that W. W. Brown commented in one of his letters that he failed to recall any distinct operculum in the type specimen of *Amaurospizopsis* when he collected it. The presence of this membrane was described as typical of *Amaurospiza* by Salvin and Godman (1885:350). Likewise, but little difference can be discerned in regard to the length of the rictal bristles which are described as being twice as long in *Amaurospizopsis*. The principal characters distinguishing the two genera relate to color and size. As these, in our opinion, are insufficient to warrant a generic separation, we propose, therefore, that *Amaurospizopsis* be regarded as a synonym of *Amaurospiza*. *Amaurospizopsis relictus* Griscom accordingly becomes *Amaurospiza relictus* (Griscom).

The specific status here accorded *Amaurospiza relictus* is purely tentative. Undoubtedly *relictus* bears a close relationship to *Amaurospiza concolor* but in view of the extensive geographical hiatus that exists between the known ranges of these two species and in the absence of any indication of intergradation shown by the specimens at our disposal we do not feel justified in reducing *relictus* to subspecific rank at present.

As may be seen from the data included in the table beyond, there is no overlapping between *A. relictus* and any of the Central American specimens of *A. concolor* examined in regard to length of wing and length of tail, *relictus* being decidedly larger in these respects. The wing and tail measurements of several specimens were omitted because of extremely worn condition of plumage. Although the measurement for length of bill is essentially the same for both species, this structure is considerably shorter in proportion to body size in *relictus*. In color the adult male of *relictus* is decidedly grayer and duller than are any of the adult males of races of *concolor* examined by us. The female of *Amaurospiza relictus*, heretofore unknown, is dull brown as was predicted by Griscom (1934:414) and as is true of other members of the genus *Amaurospiza* as well as several closely allied genera. Two specimens in moderately worn plumage, taken in May, are nearest Saccardo's Olive (Ridgway, 1912) on the back. It is highly probable that in fresh plumage they would most nearly approach Saccardo's Umber as does the immature male in fresh postjuvinal plumage. The latter specimen is Tawny Olive ventrally. The plumage of the females similarly is paler on the ventral parts.

Regarding the status of the several described races of *Amaurospiza concolor* from Central America, it may be seen from the table that the size differences are insignificant

Measurements of *Amaurospiza* in Millimeters

	Males			Locality
	Wing	Tail	Bill from nostril	
<i>A. c. "australis"</i>				
C. A. S. 33414	63.0	53.0	6.7	Cerro de Punta, Chiriquí, Panamá
A. M. N. H. 515475	62.0	51.0	6.7	Boquete, Chiriquí, Panamá
A. M. N. H. 515474		molting	6.5	Boquete, Chiriquí, Panamá
<i>A. c. "grandior"</i>				
A. M. N. H. 102649	61.5	53.0	7.4	Tuma, Matagalpa, Nicaragua
A. M. N. H. 102650	64.0	53.3	7.5	Tuma, Matagalpa, Nicaragua
<i>A. relictus</i>				
Ad., Ray coll., P. M. O. 3334	70.2	63.0	7.5	Chilpancingo, Guerrero, Mexico
1st yr. bird, Ray coll., P. M. O. 3335		worn	7.3	Chilpancingo, Guerrero, Mexico
1st yr. bird, Ray coll., P. M. O. 3336	70.0	61.4	7.2	Chilpancingo, Guerrero, Mexico
	Females			
<i>A. c. concolor</i>				
A. M. N. H. 515479	62.0	52.0	7.1	Miravalles, Costa Rica
A. M. N. H. 392909	61.5	49.0	7.3	Miravalles, Costa Rica
<i>A. c. "australis"</i>				
C. A. S. 33415	58.0	50.0	7.0	Cerro de Punta, Chiriquí, Panamá
A. M. N. H. 515477	61.0	48.0	7.1	Volcan, Chiriquí, Panamá
A. M. N. H. 515478	60.0	worn	7.1	Chiriquí, Panamá
<i>A. c. "grandior"</i>				
A. M. N. H. 103812	57.0	worn	7.2	Peña Blanca, Nicaragua
<i>A. relictus</i>				
Ad., Ray coll., P. M. O. 3337	68.1	58.3	6.9	Chilpancingo, Guerrero, Mexico
Ad., Ray coll., P. M. O. 3338		worn	7.2	Chilpancingo, Guerrero, Mexico

due to the considerable individual variation exhibited by members of this species. If only the measurements for the males of "*australis*" and "*grandior*" were available, one would suspect a racial differentiation in size because of the greater size of the two males from Nicaragua. The measurements for the females, however, do not bear this out and we have little reason to believe that there is any marked sexual dimorphism in this regard, although more extensive series might show the males to average slightly larger than females. While no males of *A. c. concolor* were examined, the differences between members of this race and *australis* were based upon color rather than size according to Griscom (*op. cit.*:415). That such color differences fall within the range of individual variation has already been pointed out by Hellmayr (*op. cit.*:238). No material representing *Amaurospiza c. aequatorialis* Sharpe has been examined by us, but judging from Hellmayr's description it is but a weakly defined South American race of *concolor*, characterized by slightly smaller size and somewhat paler coloration. Accordingly we propose that only two races of *Amaurospiza concolor* be recognized: *A. c. concolor* occurring in Central America and *A. c. aequatorialis* of northern South America, with the possibility that further collecting may ultimately show *Amaurospiza relictus* to be a large, pale, northern race of *concolor*.

So far as we know nothing has been written on the sequence of plumages and molts for any of the forms of *Amaurospiza*. Since several specimens in our series of *A. relictus* shed some light on this problem, we feel it worth while to include this information here. The brown postjuvenile plumage of the male, which has already been described, appears to be assumed late the first summer and maintained for one year. It is then lost as a result of the first complete annual molt and replaced by the blue gray plumage charac-

teristic of the adult male. This is indicated by one specimen, presumably a year old male, taken on July 1. Most of the plumage appears to be of the postjuvenile type and very worn. However, on the forehead, the sides of the head and on the chin new blue feathers, similar to those of the adult male, have made their appearance. There are several new blue feathers in the scapular region. One of the inner secondaries of either wing has been replaced by the adult type of feather as also has one of the greater coverts on the left wing. Further evidence regarding this molt in *Amaurospiza* is supplied by a specimen of *concolor* from Chiriquí, Panamá, no. 515474 in the collection of the American Museum of Natural History. Although the label bears no date, the bird obviously is in the process of completing the first annual molt. The new blue plumage is nearly complete except for the innermost secondaries which have not yet been replaced and are of the postjuvenile type. Likewise, several brown postjuvenile feathers are present on other parts of the body.

LITERATURE CITED

- Cabanis, J.
1861. Uebersicht der in Berliner Museum befindlichen Vögel von Costa Rica. Jour. für Ornith., 9:1-11.
- Griscom, L.
1934. The ornithology of Guerrero, Mexico. Bull. Mus. Comp. Zool., 75:367-422, 1 text fig., 1 pl.
- Hartlaub, G.
1853. Beiträge zur exotischen Ornithologie. Jour. für Ornith., 1:30-44.
- Hellmayr, C. E.
1904. Über neue und wenig bekannte Fringilliden Brasiliens, nebst Bemerkungen über notwendige Änderungen in der Nomenklatur einiger Arten. Verh. Zool. Bot. Ges. Wien, 54:516-537.
1938. Catalogue of birds of the Americas. Field Mus. Nat. Hist., Zool. Ser., vol. 13, pt. 11, vi + 662 pp.
- Ridgway, R.
1912. Color standards and color nomenclature (Washington, D.C., published by the author), iii + 43 + 1 pp., 53 pls.
- Salvin, O., and Godman, F. D.
1879-1904. Biologia Centrali-Americana. Aves, 1:xliv + 512 pp.
- Sharpe, R. B.
1888. Catalogue of the Passeriformes, or perching birds, in the collection of the British Museum (London, printed by order of the Trustees), xv + 871 pp., 16 pls. [= vol. XII, Catalogue of Birds in the British Museum].

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