

Basileuterus, I.

March 29, 1960  
Cerro Punta

Just a few words about the Black-cheeked Warbler = ~~melanopygia~~ = melanopygia. Re its role in mixed flocks

Black-cheeked Warblers are normally gregarious, and often associated with mixed flocks, and I do think that they may tend to keep to themselves as much as possible. We have frequently seen little groups of 3 or 4 Black-cheeked Warblers going around & themselves. Some times by themselves. Sometimes more or less near birds of other species, but usually ignoring the latter.

The Black-cheeked Warblers are very noisy little birds, but still quite difficult to see most of the time. They are quite skulking and usually moving about quite low - (much lower than the Chlorospingus birds), and often in the interior of scrubbery.

The Black-cheeks seem to utter a "song" which appears to be composed of a few CN's, followed by a Trill or R, and (usually) followed by 1 or 2 more CN's — — — — —

It is this vocalization which is so reminiscent of the Sooty Cops.

Basileuterus, I

April 13, 1961  
Cerro Punta

During the course of my observations of other species during the last few days, I have caught some brief glimpses of the behavior of Black-cheeked Warblers (mostly in the area half way between Cerro Punta and the upper pasture).

I have heard one bird utter a quite a prolonged R while it has

Paruleuterus, Apr. 15, 1967

ed another bird in an aerial chase.

I have also heard quite a lot of "songs" by these birds.

Yesterday morning, for instance, 2 birds (presumably mates) were flitting about in the bushes, more or less together. One or both birds uttered song phrases which were more or less comme ça:

"Tsit tsit ta-whit-hee-yoo" or "Tsit tsit ta-whit-hee-ee-yoo"

Sometimes an extra "Tsit-hee-yoo" tacked on the end. The last part of these songs (the "ta-whit-hee-yoo" and anything afterwards) was usually rather twittering in effect. Both birds also uttered a lot of "Tsit" CN's before and after the song phrases (and the initial notes of the song phrases themselves were probably nothing more than "Tsit" CN's).

There were no special postures or movements accompanying these song phrases.

I think I also heard one bird utter a slightly different song a couple of days ago in a different area. Perhaps comme ça:

"Tuh tuh tuh-tuh sreeeeeeee-ee-ya"

Paruleuterus, I.

April 16, 1967

Cerro Punta

7:20 a.m. Come across apparently single bird feeding low in shrubbery near upper pasture. Uttering song phrases at more or less irregular intervals. Rapid and twittering in effect. "Basic" phrase perhaps "Tuh-uh-taseee-taseee". Sometimes abbreviated. Sometimes lengthened, usually by insertion of one or two brief, thin and high-pitched, R's toward end. These songs were not accompanied by special postures or movements. Just a variety of feeding

Basileuterus, Apr. 16, 1962, II

(3)

g and/or unverte alized for flight postures

Basileuterus, I

April 17, 1962  
Cerro Punta

Working just below upper pasture again.

6:50 Watching a single Black-chuck feeding. Not the same bird that I watched yesterday. Long almost all the time not actually pecking at or swallowing food. Swallowing phrases. Usually including some R(s). Generally including at least a trace of an "seeoo" sound. Sometimes abbreviated. Sometimes reduced to a bare "Tit tit seeoo".

This species does not seem to sit motionless on a station to sing. Why? Perhaps it needs to get so much food so early in the morning that it cannot afford to delay.

This bird did not utter anything in the way of CA's.

But it did do a lot of flitting. Many WF's. Possibly even more frequent than TF's ??? Also many TF's. Largely or almost completely vertical. Probably both V-D and D-V.

October 30, 1962  
Bolivia

SEE ALL OF NOTES ON GENERAL MIXED FLOCKS THROUGHOUT THIS TRIP. Especially today's.

I am becoming convinced that Basileuterus, Thlypopsis, and Chlorospingus are all closely related to one another. General proportions, color pattern, Rattles, Howls, etc. One in a nest

Bonin Islands, Oct 30, 1953, I.

(4)

but feature they have in common is DC component of the high-frequency notes. Probably all related to Alapetes.

Bonin Islands, I

January 1954  
Hawaii

8:15 a.m. Apparent dispute between 2 regionalis. Birds come flitting with great speed thru low thick scrub, 3-4 ft above ground. Uttering lots of loud hard metallic "tuck" notes. In rapid but irregular series. There seem to be SHN's. Also one brief 2 or 3 Hoarse Notes (probably with rattle undertone). Then calm down a little. Continue flitting about, but somewhat less rapidly. One bird begins to utter series of its R's which seem to serve this species as song. I shall call these vocalizations "song R's". Accelerating

I am not sure if each note of the song R should be transcribed as "Tuck" or "Tuck". End of each song R phrase seems to be brief "coo"

Song R's quite reminiscent of both Pattee-Haw's performances of BCBT and accelerating "song" of Green-backed Sparrow

As far as I could tell, there was little or nothing in the way of ritualized postures or movements (except flitting) during this encounter. Possibly one bird was unusually fluffed, underneath, at least part of the time.

Dubusia, I

May 27, 1960  
Cerro P. Amalia

During the afternoon we caught several groups of a particular bird here, in the bays where we have been studying so many other species.

The only description I can give is vague. The back & wings appear to be black, with some blue in the wings (at least). The head is black with broad white or (possibly) light blue superciliary stripes. The throat is light brown or yellowish. The belly is yellow, the yellow color coming up to a point in the middle of the breast.

NOTE: July 23, 1960. This species is, in fact, Dubusia taeniata = ~~xxxxxxx~~

We caught one group of a pair of birds together, one afternoon. They were fairly low, on the outside of a hedge.

And from this we caught one group of an apparently single bird singing, quite high in a tree above a hedge. This song consisted of 2 long (most un-tanager-like) whistles. Very reminiscent

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of the Blue Solitaire in quality! Piercing and metallic - but not flat like the Solitaire.

We have heard identical songs quite frequently, every day in the morning and evenings, without being able to actually see the singing bird.



Dubusia, Jun. 1, 1960, II

(3)

His songs themselves were quite as described above on p. 1. This bird did all his singing while perched quite high in Eucalyptus trees. (Quite above at the time (although he found his mate a little while later). This would suggest that his songs were produced by some strutting of a pairing and/or sexual displays).

This bird also uttered quite a lot of CN's. "Seeee" Notes. Often uttered in fairly long series. "Seeee Seeee Seeee Seeee..." In flight; and also when perched just before, or between, flights. The tonal quality of these notes is quite distinctive. Quite musical and rather plaintive-sounding.

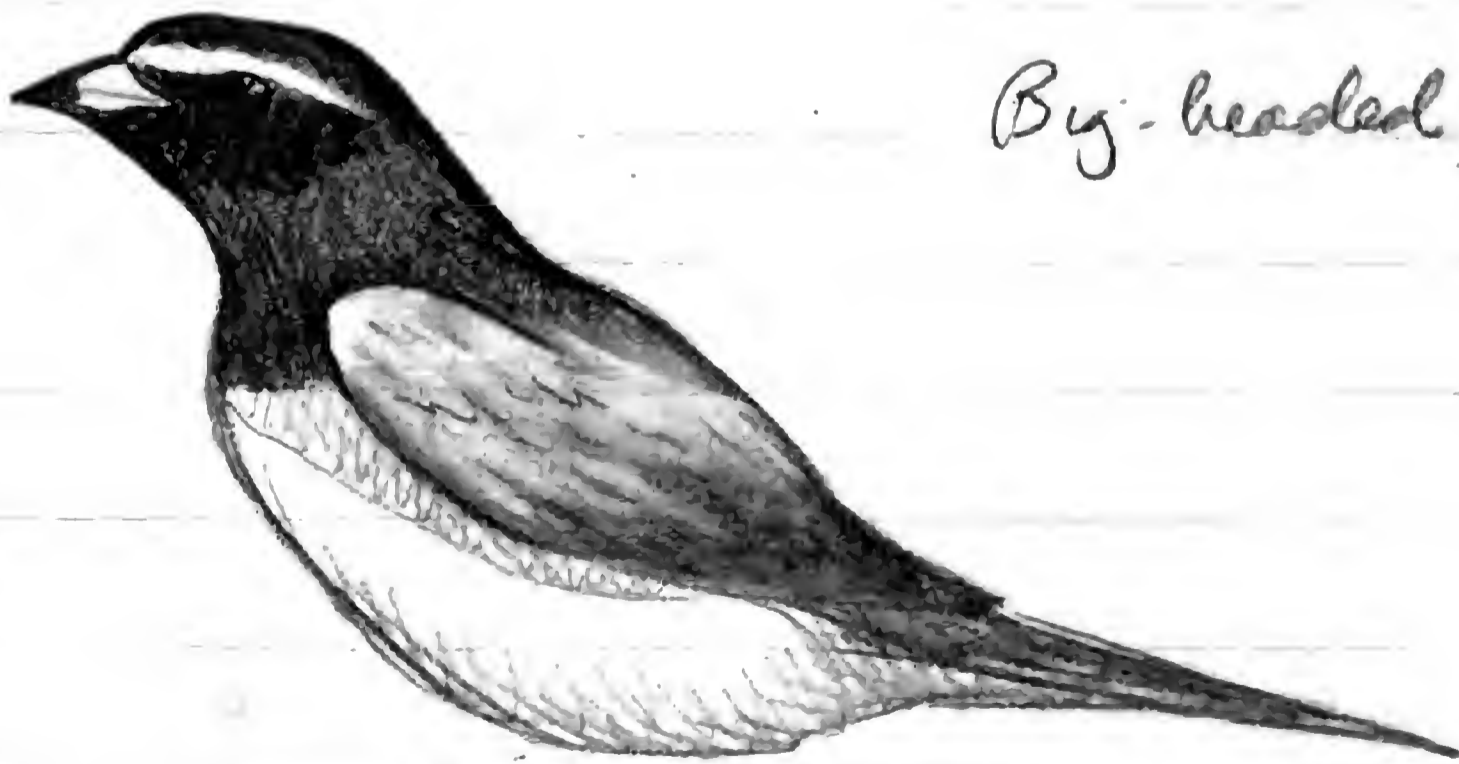
Dubusia I

June 2, 1960  
Cerro Pichincha

Working near Nono again today.

I got a fairly good but very brief view of one of these birds feeding in a hedge today.

Black tip  
to bill?



Big-headed, "chunky", bird

This bird was quite silent when feeding. I never actually heard a single "seeee" Note of the species today. Perhaps a bird only utters "seeee"s when it wants to call its mate.

There is no doubt but that this species sits rather low in shrubs.

Dubusia, June 2, 1960, I

(4)

↳ being almost all the time — except when (the presumed ♂'s are) singing. I still think it may be a flick.

Dubusia, I

May 20, 1961  
Cerro Peloncillo

Working now this morning, in exactly the same place as last year. The same birds seem to be around.

One (at least) of the birds uttered a lot of whistles this morning. Just like those described above on May 29, 1960, p. 1. Always arranged in doublets. Each doublet might be roughly transcribed as "Whewee - heeew". (I shall call each doublet "WH" from now on.)

When I first arrived in the area this morning, around 6:15 a.m., one of the birds was uttering WH's very frequently. So frequently, in fact, that they formed a sort of "dawn song." Quite like the "dawn songs" of other tanagers, saltators, & bush finches, except that each note of a WH is longer than the notes of the "dawn songs" of other species, and the pauses between WH's are usually or always longer than the pauses between the notes of the "dawn songs" of other species. It is obvious that the series of WH's uttered by these Dubusias are essentially indeterminate in length.

Unfortunately, I was never able to see the bird(s) uttering the WH "dawn song" this morning. But all these songs appeared to be coming from high in the trees. Not associated with any other vocal pattern(s).

The WH "dawn songs" were most frequent early in the morning. Almost stopped by about 8:00 a.m. But I heard a few additional



Dubusia, May 20, 1961, II

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one WH's, from time to time, as late as 9:30 a.m.

Some time in the morning, after the WH "claw" songs had ceased, I heard a Dubusia utter a lot of calls which were quite strikingly reminiscent of the 2-Note "songs" of Pallidiparus!!! somewhat variable. Essentially composed of doublets. Usually 3, 3 1/2, 4, or 4 1/2 doublets in a series. More or less comme ça: <sup>possibly</sup> ~~possibly~~

"Tsee-waa tsee-waa tsee-waa tsee-waa tsee" or  
"Tsee-waa tsee-waa tsee-waa tsee" or  
"Tsee-waa tsee-waa tsee-waa tsee" or

Obviously determinate in length

I think I shall call each "Tsee-waa" Note "TW" from now on

The bird uttering these TW "songs" was usually perched fairly low, but in a rather exposed position. Probably in an upright, alert posture. Almost certainly separated from mate

Both the WH and TW "songs" may be produced by the bird in a pairing drive. The WH may be higher intensity than the TW, produced when the pairing drive is stronger and/or when the bird is further away from its mate.

Very late this morning, I watched a Dubusia feeding in a hedge. Probably near its mate, (although I never managed to see the 2 birds together). Twice, it uttered this, high, soft "Zee zee zee zee zee" notes as it flew away from me. These may have been the same as the "zee zee" CN's described above on June 1, 1960, but today I wondered if they could be ALCN's? (I also wonder if these are the same as "Zee wee . . ." Notes heard by D. F. on May 31, 1960 ???) As far as I could tell, today, all the "Zee zee zee zee zee"

Dubuena, May 25, 1952

Notes were uttered in flight.

Dubuena, I

May 17, 1952  
Dubuena

Walking near home ... at dawn  
Running all first ...  
Came across ... with a ... light.

But not one of the first birds to sing around here

6:45 a.m. Watching a single bird uttering lots of WH's as it moved through thicket along ravine and then along a hedge (quite low while in ravine thicket, but moving higher into trees when it got to the hedge). All WH notes just as before (they really seem to be remarkably invariable). Uttered in ...  
... It seems quite possible that each WH is homologous with a single, busy-like note of the ... of other species. Pauses between notes hardly longer than notes themselves. Uttered from a great variety of unutilized perching and pre-locomotor postures (including a sort of forward crouch). Without CR. Bird ... fed between notes.

Same bird still uttering WH's 6:55, but now out of sight.

I might mention, for clarity, that these WH's do not sound like most X Notes, on first hearing, simply because they are much louder, not at all flute-like, and so invariable. I.E. the tone is distinctive, although the actual form of the pattern is not.)

Go away for a walk and then return 7:53 a.m. Probably same bird in same place still uttering WH's. This is certainly not

Dubuna May 17, 1942 II

(7)

a pure lawn

Bud

interrupt

glitew

May 8:15 am Only occasional jammers to  
a few minutes later. Possibly fu

My friend at Hono again this afternoon - but didn't  
have the slightest trace of any Dubuna WH's.

Dubuna =

May 22, 1942

Pickincha

May 19. Hearing at Hono again this afternoon. Better weather than on  
May 17.

Hear a burst of WH's, 3:58 pm

Bill is quite long



Another burst of WH's 4:50 pm.  
Quite long sustained. By single  
bird. Sitting high in eucalyptus  
Using 2 or 3 perches. Part of  
the time sitting in upright, front  
wings. Upright. Sometimes with  
belly fluffed. Apparently with  
CR as in drawing. (Probably  
feathers of crown raised just as  
notes are uttered)

After several minutes bird flies off to utter WH's in a distant tree

Dubuna, I.

September 28, 1962  
Páramo de Guasca

Working near Hono this morning.

5:55 a.m. One brief burst of WH's. Over almost immediately.  
Start again c. 6:00 a.m. Hono. WH's. Over almost immediately.

7:05 a.m. WH's. Over almost immediately. WH's. Over almost immediately.  
from a very low point, less than 10 ft above ground. Noisy, very active!  
Head just rounded on top (lots of black rubble).

This bird appears to be quite unmated this year!

It certainly has a definitely favored series of stations. Which it seems to visit more or less in the same order time & again.

Back at Hono 3:00 p.m. Cloudy & overcast rain.

Heard brief series of WH's, 3:25. Again a few more. In Hono.

Dubuna, I

September 29, 1962  
Páramo de Guasca

This morning, between approx. 5:45 and 9:00 a.m., I heard quite a lot of WH's like those of the Hono Dubunas. I may also have caught a glimpse of a single Dubuna with a large mixed flock (see today's notes on subject).

Myzomela, I

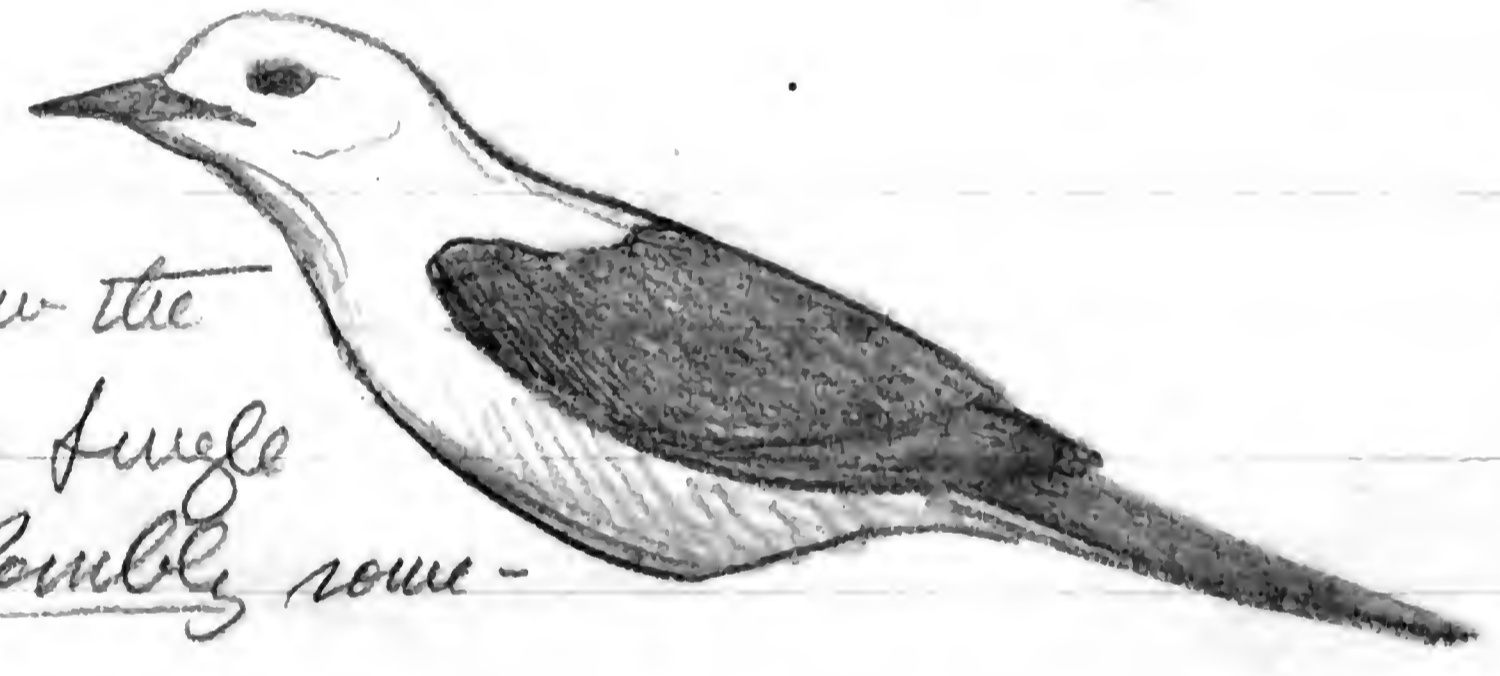
July 11, 1959  
Cerro Campana

~~Myzomela~~ = Myzomela (Black and Yellow Tanager)

4 saw a pair of these today. In one of the mixed "feeding associations" (see today's general notes). Very active flying about more or less like a warbler.

4 The only other bird of this species I ever saw (last year) was also in a mixed flock or "feeding association". In exactly the same place as the birds I saw today.

4 The general look of this species is quite distinctive



4 The only behavior I saw the birds perform today were CN's. Single Notes. Usually "Tail"-type. Probably sometimes "Schwarzb".

Myzomela, I

July 12, 1959  
Cerro Campana

4 Have caught a few more glimpses of this species today, but nothing very much. Again associated with FA's - but only, I think, for a relatively short time. At least, I usually find a whole group of birds of several species feeding in the same area, with a pair of Black and Yellows among them, and then find that the Black and Yellows have disappeared, while all or most of the other members of the group have not moved very much.

I heard the birds utter quite a lot of CD notes. Quite loud & hard sounding. Occasionally double "Trit" but I don't hear anything like a "Schauk".

I think that I may also have heard a more "song-like" pattern. Three notes come ca. — — — Each note like a "Trit", or possibly a somewhat less vibrant "Trit". I never actually saw a Blue and Yellow utter this, but I saw heard the call when Blues and Yellows were present in the neighborhood.

There was something about the quality of this performance which was more than a little reminiscent of the "songs" of such Piranga tanagers as the Summer and the Flame-colored.

Microsquirrels, I

July 28, 1959  
Barro Colorado

~~Microsquirrels~~ casinii

We saw several groups of birds of this species today, in the immediate environs of the town. In some groups or family parties I don't think we ever saw a group which included more than 4 birds. One group was in very thick underbrush along the banks of a stream in the forest (near an edge) and the group moved through moderately thick underbrush along the edge of the forest into the forest edge. The group along the stream was associated with a mixed flock of Formicivora, virens, etc., and the group in the scrub was not far from Yellow-rumped Tanagers (and a little further from other tanager species). I don't think that either group could be said to be part of a mixed flock itself.

The birds in general were very active and restless and rather shy. Most of their movements, including WF's and TF's (with tail spread) reminded me of Alouatta palliata.

They uttered a lot of sounds, all apparently variations (i.e. intensity levels) of a single pattern. Varied from a single note to long series of apparently identical notes. The notes of a series were always uttered so rapidly as to form a real R. Generally hard & metallic sounding (although much less "gong"-like than the notes of the Blue-black Grosbeak, for instance), but rather thin & weak sounding. I think that the longest R's included at least 10-12 notes, possibly more. Obviously hostile. Reaction to my presence. Probably containing a relatively strong escape component, as the birds always moved off as I approached.

Mitrospingus, I

April 27, 1960  
Barto-Bello

Watching quite a lot of these birds here. Along the front part of the Las Cruces trail. Flying about in thick undergrowth, almost all of it second-growth, at the edge of the forest. All the birds we saw today were pairs. Almost always by themselves. They certainly did not associate with any of the Blue-Green Tanager-Honeycreeper flocks. There were quite a lot of Yellow-rumps in exactly the same areas as the Mitrospingi, but the two species did not seem to associate with one another any more that was absolutely necessary. Once we saw a pair of Dusky-tailed Ant-tanagers in the same bushes as the Mitrospingi. It is possible that the Mitrospingi joined the Ant-tanagers once (see David's notes), but they didn't stay together for more than a few seconds.

I can add a little to my descriptions of some behavior patterns last year.

The most common, single, CN's (the kind I heard last year) might be transcribed by something like "Chak". It is these "chak" CN's which are accelerated to form R's. This afternoon, I heard perched birds utter both single "Chak" CN's and R's, but I never heard an R uttered by a flying bird, although flying birds utter single "chak" CN's quite frequently. Neither the "chak"s nor the "R"s are accompanied by obviously ritualized postures or movements (except WF's & TF's - see below). Certainly none of the perched birds I watched utter "chak" CN's and R's today showed any trace of a CR.

I presume that the R's are produced by higher motivation, on the average, than the "chak" CN's, but I am not sure, now, that escape is



Mitrospingus, Apr. 17, 1952 II

(3)

really strong pursuit at which most birds seem to be least disturbed by our presence (one was returned for several seconds).

One bird (of another pair) which appears to be most excited by our appearance, flew back & forth in the nearby trees and bushes for several seconds, uttering a great many single "Chak" CN's intermingled with these "Chak" notes & some "Whit" Notes (These "Whit" notes were never repeated one right after the other. The bird would utter a series of "Chak"s, then a single "Whit", then another series of "Chak"s, then another single "Whit", etc. etc. etc.) The "Whit" notes seem to be similar to the "Whit" notes of Chrysomitris, but I am sure that there were no Yellow Rumps or Sangre-de-Toros around in the immediate neighborhood at the time. I am almost certain that this Mitrospingus uttered its "Whit"s only when it was actually flying. The occurrence of both "Chak" CN's & "Whit" CN's in the repertoire of Mitrospingus would certainly appear to be a highly significant resemblance to Chrysomitris.

(Before I forget, I should mention that the length of the R's of Mitrospingus seems to be extremely variable. Some R's are very short, while others appear to be moderately long. The R pattern as a whole does not appear to be very highly stereotyped in form.)

I did not hear any sort of "greeting" call, or observe any "greeting" postures or movements, when mated birds joined one another.

The WF's of this species are very frequent & conspicuous. The TF's are much less conspicuous. Probably every WF is accompanied by a TF, and all or most TF's are accompanied by FW, but the TF movement itself is not very extreme. Essentially lateral, with little or nothing in the way of a lateral component. (The tail of this species is not very long, not as long as those of Tachycineta spp. or Pelliopterus.)

Mitrospingus, I

July 14, 1962  
Rio Piedras

Observing approx. a mile up river, in same area I have watched, and am watching *Ploceus cupreus falcatus*:

7:40 a.m. See birds feeding in Cecropia along river bank. Very active and very noisy. Flitting from branch to perch. Lots of WF's, very conspicuous. Also TF's. Probably less common than WF's. All or most essentially D-V. Sometimes with strong lateral component. Sometimes without any lateral component. All or most of the TF's with lateral component synchronized with WF's. At least some TF's without lateral component occur by themselves alone, without WF's. Tail certainly fanned during TF's with lateral component, possibly or probably fanned with all TF's.

The notes uttered are all short, hard, and metallic. Some essentially simple. These are undoubtedly the same thing I called "chak"s before, but I think they might be better transcribed as "Tut". Obviously SHN's. The birds also utter a lot of notes which are very similar to typical SHN's, but include a rattle undertone or component. Comme ça: "Tsr-r-r-r-r" I shall call these "RSHN"s. Both types of notes uttered either singly or in series. In same series, apparently, jumbled at random. Not accompanied by special postures or movements. Possibly provoked by my appearance (across the river).

8:30 a.m. Suddenly come across a whole group of birds (definitely not the birds seen earlier) in heavy forest. I climb up over an Atta nest on a steep slope, to find myself surrounded

Monticompone Mar 14, 1962, II.

(5)

by flocks! Birds landing back and forth in all directions!! I think there are at least 10 birds here, possibly more, but I doubt it!

These birds become very vocal. I appear to hear many examples of two distinctly different types of calls: R's, and "Wbl".

R's like the ones I heard previously. Accelerated series of SHN's sometimes very long.

Wbl's reminiscent of Bell-throated Saltator, Orange-billed Sparrow, and P. ... Variable both in length and composition. Often including PN-like "sawee" notes. (Quite reminiscent of Wbl's of saltators). Sometimes ending in "saweeeee weee".

Both R's and Wbl's uttered by both perched and flying birds. R's often uttered just as a bird begins flight. R → Wbl sequences common.

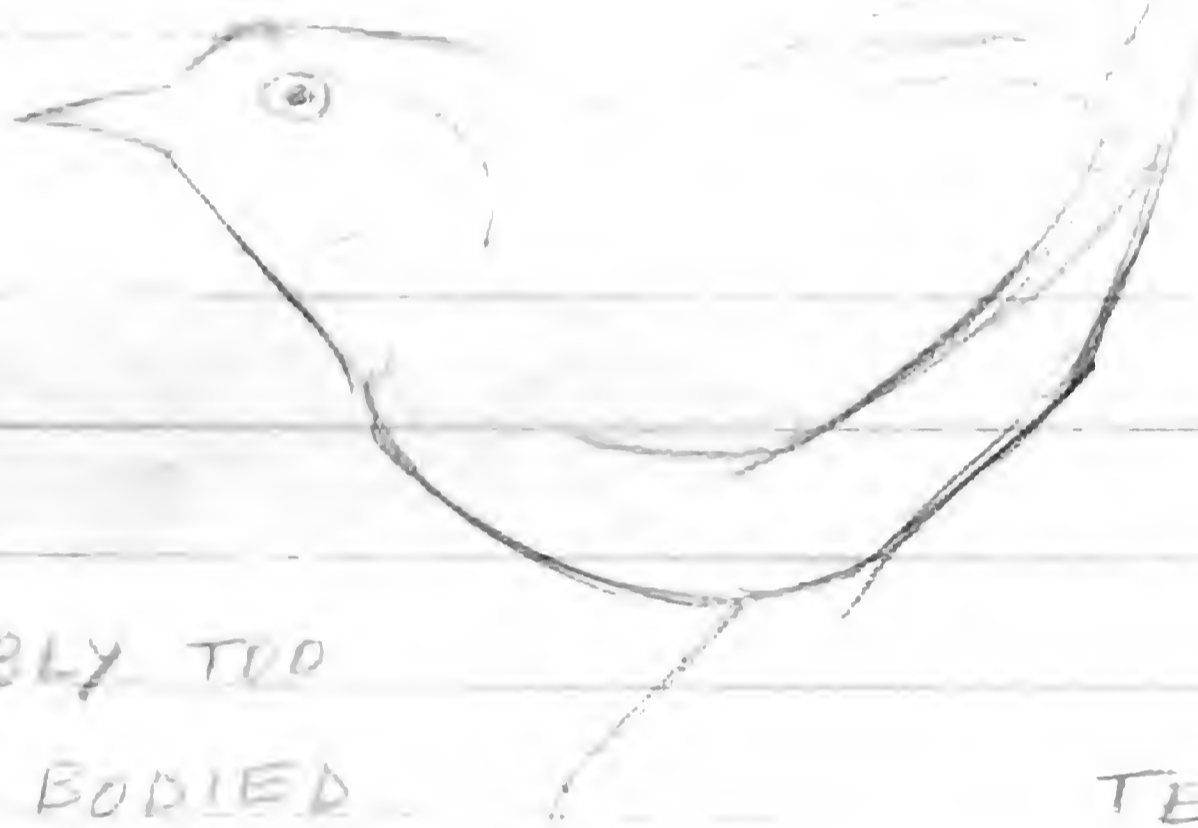
Birds seem to be reacting to both me and each other. They are essentially "mobbing" me. But also seem to get in one another's way very frequently. Some furious, incredibly fast, and violent chases develop!!!

8:35. One bird perches on twig above me. It utters several rather prolonged Wbl's (without R). Bill opens (widely) and closes with each note. Twice, during this performance, the bird assumes an extreme TV posture. Bill raised fairly rapidly (more slowly than during flapping movements of other species, but less gradually than in TV of BCBT), and then held there for some seconds, before relaxing. I think the tail is raised at the beginning of a Wbl phrase. This TV is not accompanied by BV or

any other special ritualized postural component. The wings were kept up on the back even when the tail was lifted.

The TV Posture may have been more encouraging:

No CR



PROBABLY TOO SHORT-BODIED

Only moderate fluffing of under parts

TENTATIVE!

Feel somewhat good

Then the bird flies off, without displaying further to us. A particularly violent and prolonged chase, involving at least 2 birds is accompanied by prolonged R. Followed by Wbl toward the end of the chase, or immediately afterwards.

A few seconds later, a bird perches and Wbl's at us again. (I don't know if this is the same bird as before or not.) Without TV. No special ritualized postures or movements of any sort.

More aerial chases beginning with R's and continuing with Wbl's.

Wbl's obviously contain a relatively stronger escape component than R's. R's may be quite aggressive. The usual R-Wbl sequence of this species is quite reminiscent of the Buff-throated Saltator.

Some birds are still behaving actively now (8:40), as before, but I think that several others have already moved off.

Mitrospingus, Mar. 14, 1962, IV.

(17)

Almost all the activity of the birds has moved from 3 to 20 ft above the ground, feeding now 5 to 20 ft above ground. Mitrospingus still active. Lots of young palms.

Birds still around and active, 8:45 a.m.

8:55. A bird comes up and Wbl's at me. No TV.

Gradually birds seem to be moving off. So I move on myself. Come across birds again almost immediately, a few yards up hill. Again a bird comes and Wbl's at me. This time with TV.

9:00 a.m. Move on to another place R's now then when I came upon the birds. The birds seem to me it without change. The birds seem to be rarer now than earlier. Wbl's still very common.

The Wbl's themselves can be accelerated almost to a rattle. The most rattling type of Wbl's are thinner, higher-pitched, and more irregular than the typical R's compound of accelerated SHN's. I shall call these rattle-like Wbl's "AccWbl".

Wbl. very still continuing at great rate, 9:10 a.m. R's still occur occasionally.

Shortest Wbl's might be transcribed by something like "I see tawee tsee". Very Buff-throat-like!

Birds drifted away now, 9:15. Leaving myself 9:17.

When I come back to the same area again, at 9:47 a.m., the birds are not visible or audible close by. But I may hear them in the distance.

The large group of birds here today was quite reminiscent of a lele !!!

This species is incredibly active. The only thing I have ever seen which was even remotely comparable to the activity here

Mitrospiza, Mar 14, 1962, VI

(8)

||| was the activity of Manacus males at their nest

||| This species is somewhat reminiscent of Rhodospiza in shape. Especially the bill.

Mitrospiza

March 13, 1962

Rio Pueras

Music area where all the birds were yesterday 6:07 a.m. No birds close by. But I hear something like R in distance just waiting to see what shows up.

6:15. Birds coming closer. Lots of Wbl's. Can't see them yet. Wbl's including mostly relatively long "zeeee" notes. In relatively short phrases

Phrases seem to be quite regular. Starting with moderately soft and moderately short notes. Working up to always longer and louder notes (S), sometimes followed by a repeating cluster once again.

All or most of these Wbl phrases uttered by one bird. These phrases might be less strongly hostile than most of the Wbl's during the "mobbing" yesterday.

Bird now Wbl-ing almost continuously 6:20 a.m. Phrases longer, but still largely composed of relatively long "zeeeee" or "reeeeee" notes.

Wbl's very loud and rilliant. Penetrating.

No trace of anything like Dawn Calling in neighborhood

Bird gone again 6:21. Can hear Wbl's in distance.

On two sides of me. But not simultaneously. Also occasional brief R.

6:27 Still no birds near me, 6:25. All areas are quiet,

There are obviously several pairs of unmated birds here. But the area does not seem to be a lek.

A few birds in distance again at 6:30. Pull for a second. Moving on 6:35 a.m. Trying to wide area where birds are (or were).

Now hear birds back in old area 6:50. Uttering SHN's. They seem to vary from something like "Trit" to something like "Tchak". More general quality. ... like notes of manakins (this is true of all the SHN's of the species).

They go for a long walk up side stream. Can hear Mitros almost everywhere!! Edges forest. Almost everywhere there is thick undergrowth. Seem to prefer areas where there are trees above the undergrowth. Unlike Yellow-rumps in this respect.

7:35 a.m. Come across apparently single bird. Sitting low in dense tangle where I can't see it. Uttering Wbl after Wbl. Each phrase like the ones heard earlier this morning. Relatively short, but composed of relatively long notes. Hostile reaction to me?

7:50. Come across pair feeding in surprisingly exposed position. Along river. Uttering SHN's and RSHN's when I first see them in distance. Then RSHN's and Wbl's when I get closer. Accompanied by flicking and escape int. movs. One RSHN prolonged into real trill. Much higher pitched and more rapid than R's. Shorter than long R's.

Are RSHN's alarm? Lower intensity than Wbl's? Some of the Wbl's uttered were nothing but "Zeeeee zeeeee zeeeee". Very emphatic.

Mitrospingus, Mar 15, 1962, III

(10)

8:30 a.m. Come across at least 3 Mitrospingus in exposed positions. Same place as before. Probably same birds. Again react to my appearance by uttering lots of RSHN's. I think these RSHN's may be what I called R when I watched the Porto Bello birds. (Definitely not what I call R now!!!)

Why do some birds utter RSHN's alone, apparently as a reaction to me? If the GSHN and Wbl are both "alarm", and RSHN is lower intensity than the Wbl, one would expect that every bird that uttered Wbl's would also utter RSHN's. (I might add that the birds which have uttered RSHN's have been further away from me, on the average, than the birds that have uttered Wbl's alone. But I can't interpret the significance of this difference.)

Mitrospingus I

March 17, 1962  
Rio P. - Brazil

Back to "Leh" area 6:00 a.m.

First bird appears, uttering Wbl phrases (as on Mar 15), 6:10 a.m. Cannot stay to watch it (the Yellow-rumps are starting to cut up); but I think the Wbl rag continues for only a few seconds. Come back 6:25, to find at least one bird uttering Wbl phrases. It reacts to me by R - Wbl - retreat (without my actual being able to see it).

There are also Dusky-tailed Ant-tanagers around. They were here on Mar. 14 too. I wonder if they flock with Mitrospingus?>>



March 18, 1962  
Rio Piedras

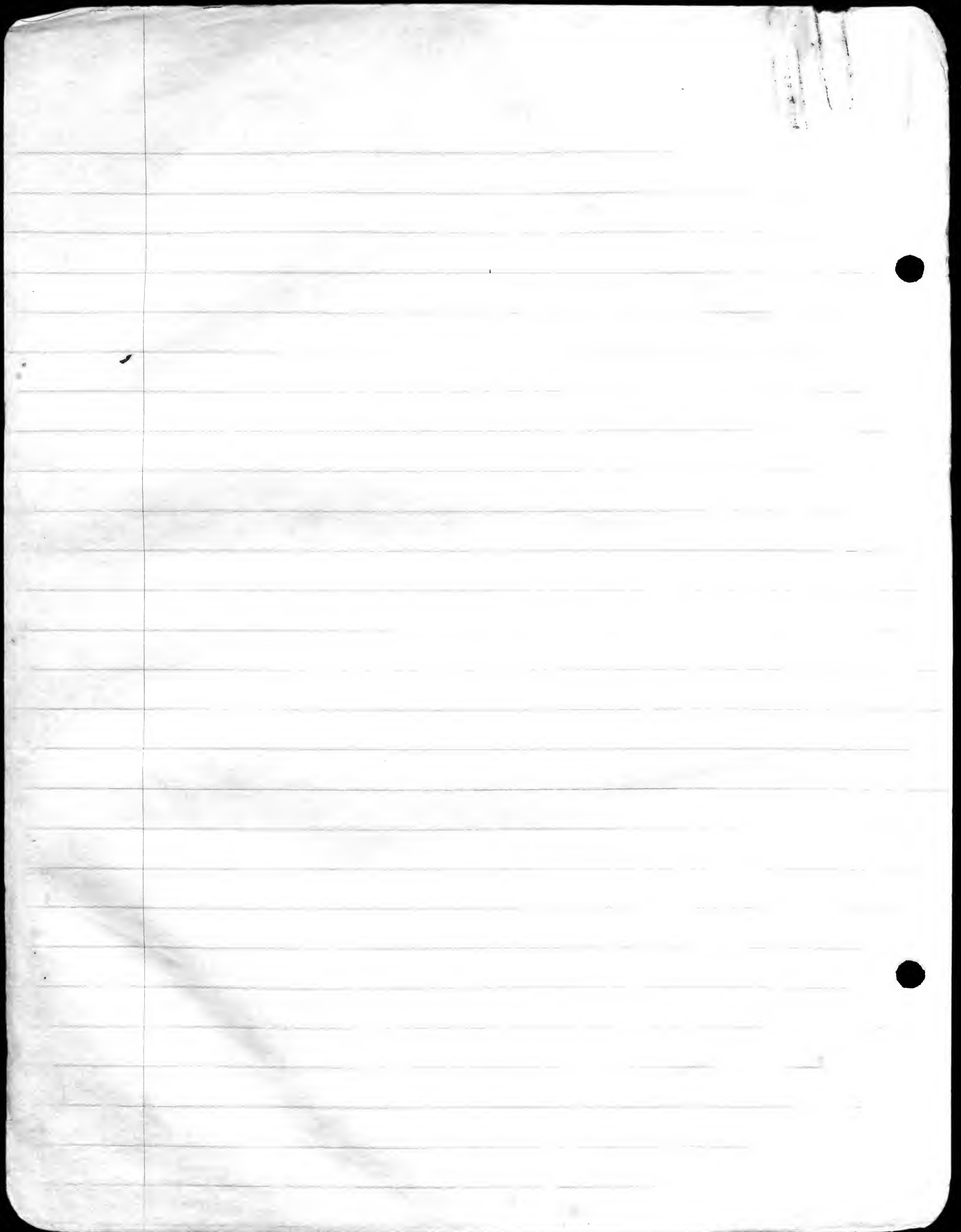
Mitrospingus I

Arrive area 8:30 a.m. ... around. 1 pair  
discovered 8:35. Fly in stages past me. ... SHN's, RSHN's,  
and Wbl's. Wbl's ... fairly long. Some of the ...  
entirely include "sreeseese" Notes.

Mitrospingus I

Ca. August 20, 1962  
Rio Piedras

7:25 a.m. Come across a pair of Mitro's unexpectedly.  
Very active. Obviously somewhat disturbed by me. Utter lots of  
rather low-pitched SHN's. "Took"s or "Tuck"s. Also lots of  
brief R's or low-pitched SHN's. "Trrrrrrrk"s — especially at first  
also a few Wbl's. Once apparently as "greeting".



Cyanocorpus, I.

①

January 7, 1958,  
Barro Colorado

Cyanocorpus, I. = Blue-black Forkbeak caucoides

I have only seen one of these birds since I've been here at the edge of the bush near the aviary. Didn't do anything but look at me, nervously, and do pronounced TF's. Definitely a conspicuous D-U.

Cyanocorpus, I.

January 15, 1958  
Barro Colorado

Heard a lot of noise in an orange tree near my house, and finally tracked it down to a pair of Blue-black Forkbeaks. Lots of what were apparently CN's, and Flicking. I didn't get a very good view of the whole performance, but what I did manage to detect was the following:

The CN's themselves were usually single notes. A few doublets. Apparently the same in the 2 sexes. Not too unlike the CN's of the Sangre de Torro, rather nasal, but louder and much more metallic. Both birds uttered them for a while, and then the ♂ flew away. The ♀ then began to give CN's at shorter intervals, giving quite a lot of them almost in a row, and then flew off herself, presumably to join the ♂.

Many of the CN's were accompanied by TF's, and a few TF's occurred by themselves alone, without notes. Quite extreme. Largely vertical D-U. A few with a slight lateral component, (but

Cyanocitta, Jan 15, 1958, II

(2)

much less than the lateral component in the TF of Spizella as the Savanna Sparrow - perhaps it would be best to say that there was very little lateral movement compared with the extent of the vertical).

The tail was often more or less fanned during the TF's but less so than is usual in the Savanna Sparrow.

Some TF's were accompanied by WF's of the usual sort. (I might add, incidentally, that the sound of these CN's is very much like much louder "chank" Notes of Spizella.)

Cyanocitta

February 12, 1958

Finally heard the "song", or part of it, of the Blue Black Grosbeak. 5, 6, or (most frequently) 7 notes. Describing the first part of the "song" as described by Chapman. Given from an apparently unritualized "sideways" sitting posture (rather erect) with very little or no erection of the crest feathers.

Cyanocitta, I.

February 16, 1958  
Barro Colorado

The pair which showed an interest in the orange trees appeared again this afternoon. Apparently both present at first. Did a lot of CN-ing, apparently duetting back and forth. I noticed that these CN's could be either single or doublets. Each note might best be transcribed "Titt", very loud. The doublets were

perhaps more common than the single notes most of the time. The ♂ apparently gave up after a short while — at least he stopped calling. The ♀ continued to give CN's with great frequency. This whole performance suggested that the CN's were used as a means of "calling in" the mate.

I have now heard a lot more singing, probably by more than one bird. But I still haven't heard anything like the second phase of the "song" described by Chapman.

October 30, 1958,  
Brown Zoo

Cyanocorpusca I

~~bird~~ = cyanea = Brazilian Blue Grosbeak

There are 2 birds of this species here, an adult ♂ and an adult ♀, in a cage with a lot of other finches.

When I first looked at the birds, the ♀ was down on the ground feeding, while the ♂ sat quietly in a bush. Then she flew up and sat beside the ♂. The 2 birds sat quite erect, turning to face one another, and repeatedly touching bills. This looked like some sort of friendly billing, but I think it was hostile. The ♀ flew off after a couple of seconds, hopping from twig to twig. The ♂ remained here.



Once he went down into a low hunched posture, with neck stretched forward a little, back feathers ruffled, and did definite G. The ♀ moved off again, and the ♂ relaxed.

Cyanocorpus, Oct. 30, 1958 II

(4)

I have been watching the Skidburg of this bird with considerable interest. The WF's are about "normal" in form or frequency. Some of the TF's are D-V, like those of the Blue-blacks at BCI, but at least half, and probably the majority, are U-D! and with a considerable lateral component.

Cyanocorpus, I

November 1, 1958

Prison 300

A lot of disputing between the ♂ and ♀ Brazilian Blues this morning. Actual aerial fights & chases. I don't know what started them off, but I think that it was just that one bird got too close to the other. The actual fights were accompanied by single, distinct but repeated, loud sharp notes. Might be transcribed as "Whit" or "Whāt" sounded quite like the CN's of the Blue-blacks at BCI, but somewhat less metallic. I presume that they are analogous with the HAC Notes of other species (and possibly remotely or indirectly homologous), but sounded quite different. Between and/or after fights the 2 birds stood facing one another in G, often for long periods of time. G definitely silent. Given from postures rather like the one drawn above p. 3, with some differences. Slightly variable, but almost always with head somewhat low, neck not stretched forward very much, little or no fluffing or ruffling of any feathers, wings held well out of the "pockets", and tail very spread. (The only marked departure from this was one G by the ♀, with crest raised quite high and lower



Cyanocompsa, Nov. 1, 1958, I

(5)

breast and belly feathers very fluffed. This may have been due to the fact that the ♀ was standing by a pool of water, getting ready to bathe, when the flight broke out, while she was in G.)

Cyanocompsa, I

September 2, 1959

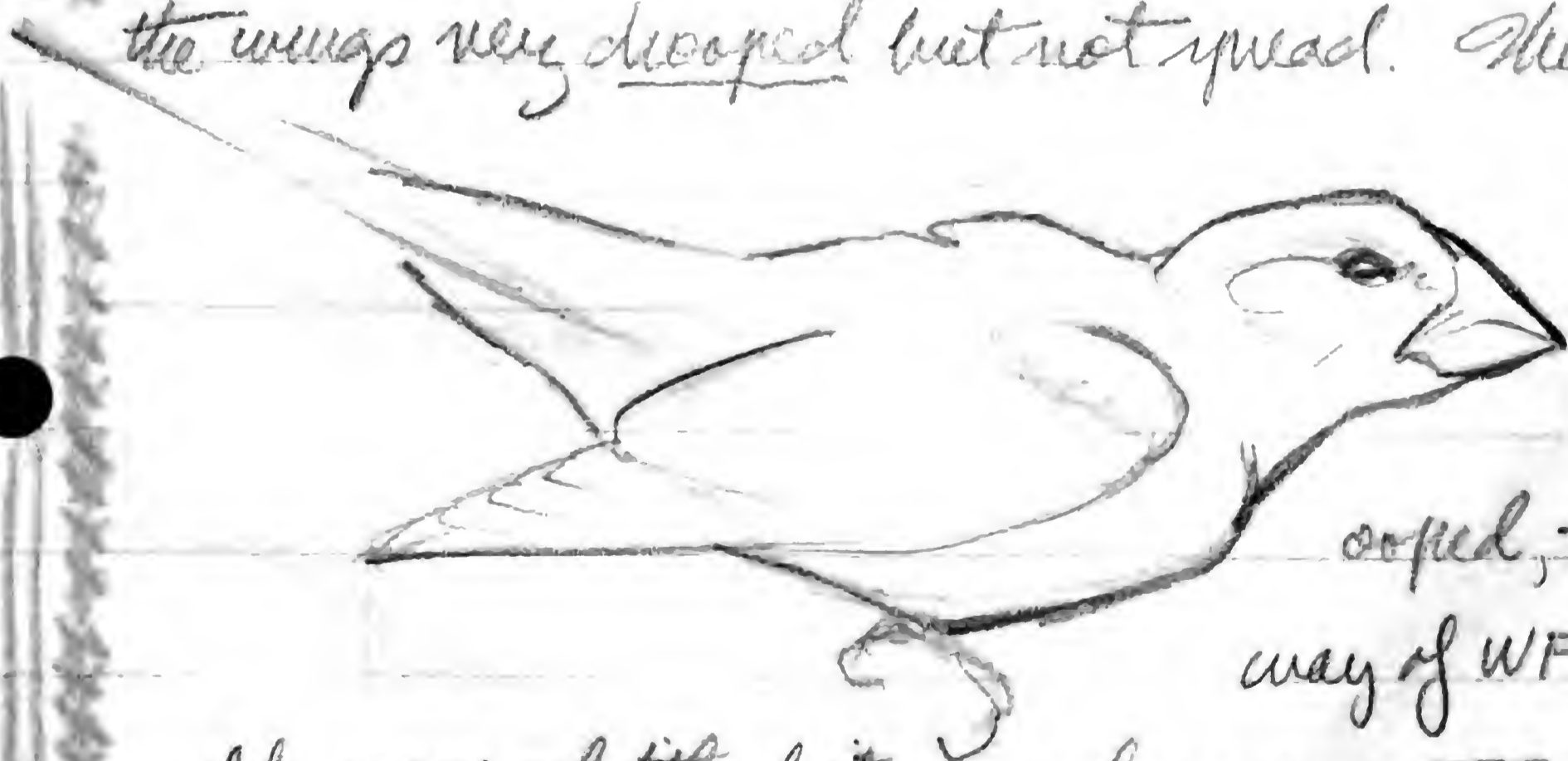
Broux Zoo

Watching the pair of Cyanocompsa in the same cage, as last year. The ♀ at least seems to be in breeding condition. Doing some nest-building, and even incubating on a half-finished nest. The ♂ seems much less active.

I have noticed, however, that whenever the ♂ seems "excited", by my approach or the activities of some other bird(s) in the cage, he tends to do fast and rapid, very extreme TF's, of exactly the same type as the Rhamphocelus tanageris, up-over-down (& back), with the wings very drooped but not spread. The tail feathers are sometimes

(at least) slightly spread during the TF's.

While the wings are drooped, there is little or nothing in the way of WF (although the wings probably move a little bit whenever a TF occurs). This TF & wing droop may be combined with a variety of apparently unritualized utturing & hopping postures, low, diagonal, high, etc.



One thing I have just noted, during this wing-spreading. The carpi are apparently always visible when the wings are displayed and the wings may be stretched out horizontally a little (without being spread to any appreciable extent) at the same time as they are spread.

Aha! All this tail-wagging & wing-drooping are apparently only low intensity indications of a more extreme display! Probably a hostile display. When a ♀ Cardinal flew past the ♂ Grosbeak, he flew after her, uttering a fairly long series of hoarse notes as he did so. They might possibly be transcribed as "Tah tah tah-whet-a-whah". Obviously a form of HAC, or closely related to it. The ♀ Cardinal was going down to feed; and when she landed, the ♂ Grosbeak landed about a foot above her, clinging to the wire of the cage, with all his head & body plumage smoothed down very flat, tail cocked diagonally high in the air, tail feathers definitely spread, and wings held out almost horizontally (again without the primaries being greatly spread). Carpi very conspicuous (they are a lighter and brighter blue than the rest of the wing & body plumage), although they were not held out very far from the body. I shall call this whole posture "the spread" (S). This extreme S was quite silent.

The ♀ Cardinal quite ignored the ♂ Grosbeak, and he eventually gave up & flew away. Spent the next several minutes flying from perch to perch around the cage. Each time he flew he usually uttered a brief series of more or less HAC-like notes. For instance, "Tah tah



Cyanocorypha, Sep. 2, 1959 III

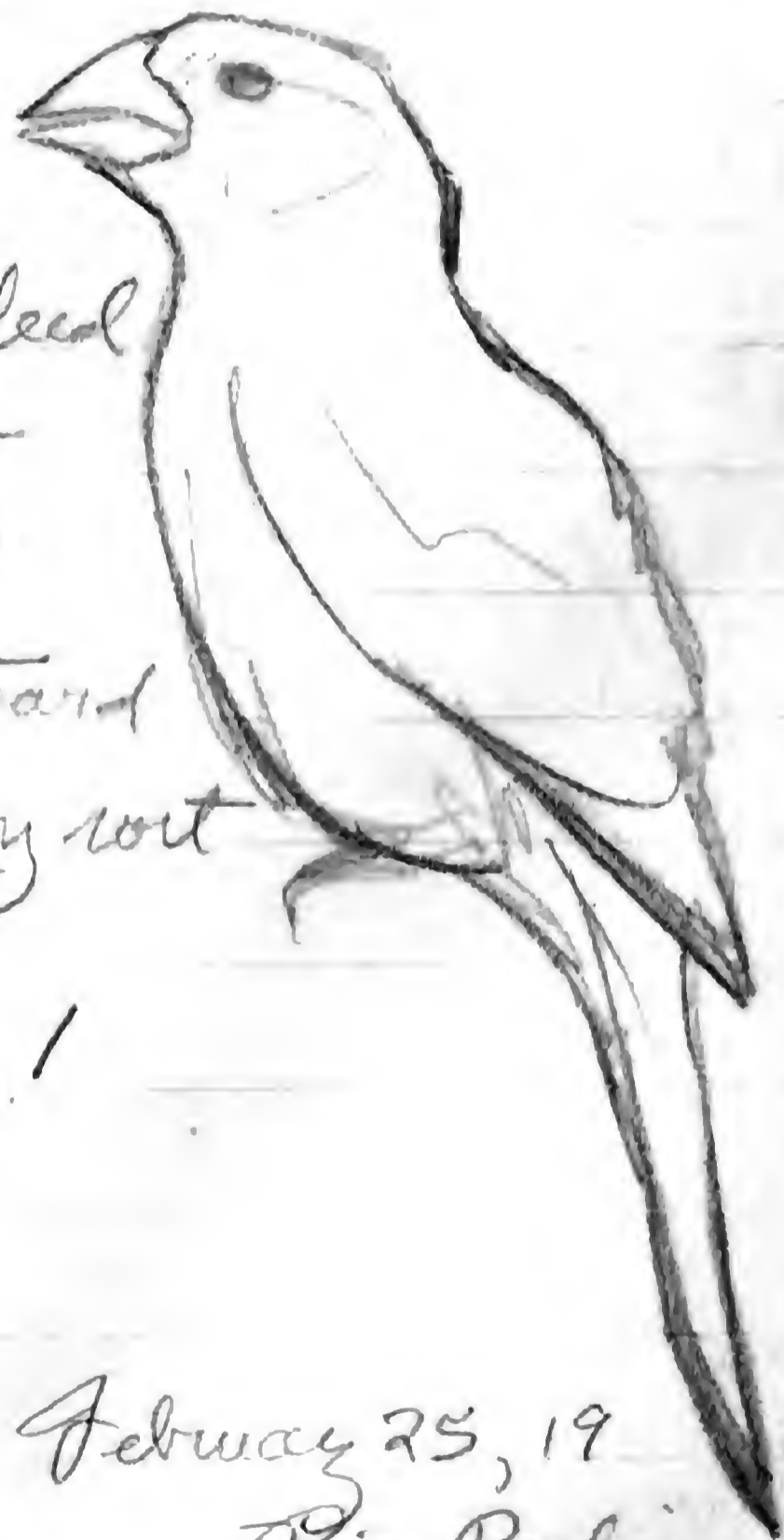
(17)

"Sak" or "Sak Sak" etc. And each time he landed, he usually assumed a more or less horizontal position of the S. Eventually, after several minutes of this kind of display.

At all times this morning the ♂ was sitting by himself, while the ♀ was incubating. His song is made up of clear, whistled notes - quite loud - but is rather less obviously organized than the song of the Blue-black Grosbeak at BCI. Might possibly be translated by something like "Whee-whee whee-whee tawhee-uh-uh-wheew". The first part is composed of whistles the last part is a warble. Frequently repeated. The bird is usually sitting, or standing, slightly fluffed standing or sitting posture.

Later on this morning I saw the ♂ feed the ♀ on the nest. I didn't see him as he first approached the ♀, but the actual feeding itself (and he made at least 5 separate "passes" toward the ♀) was not accompanied by any display of any sort by either bird.

My God! The ♀ laid an egg today!



Cyanocorypha, I

February 25, 1962  
Rio Piedras

7:15 a.m. A ♀ Blue-black Grosbeak lands in bush near me. Obviously very nervous about my presence. Utters lots of metallic notes, the type of note I used to call "CN". Obviously SHN's. Sometimes single

Frequently in doublets. She also performs many TF's, all essentially D-V, but with a very strong lateral component. The tail is fanned during each TF, spread very conspicuously at the beginning of each movement, and then folded again at the end of each movement. This is by far the most highly conspicuous and well conspicuous type of TF that I have ever seen. (When I see a group of birds I see a group of TF's as well as during them.)

The ♀ also utters another conspicuous call from time to time. Loud, hoarse, screeching "Isawee" notes. Single, double, or triple. Interspersed among the SHN's. Usually fairly well separated (by a pause) from the SHN's, but sometimes a single "Isawee" occurs immediately after a doublet of SHN's without intervening pause.

As far as I can tell, neither the SHN's nor the "Isawee" notes are very rigidly correlated with the TF's.

The ♀ certainly definitely does not have any trace of CR during this performance. Probably does not do any WF's either!

After the ♀ has been behaving like this for some months, I hear the ♂ singing about 20 or 30 ft away. Typical song. Then the ♀ begins to answer the ♂. Utters a single song phrase immediately after he utters single song phrase. Repeatedly. Her songs are nearly, but not quite, identical with his. The first phrases of her songs (5 or 6 notes) are definitely softer than the first phrases of his songs, although similar or identical in tone, pitch, and length. The second phrases of her songs are brief flourishes, too short to be called warbles. (I don't know what the second phrases of the ♂'s songs are like. He is too far away for me to be able to hear them.) It is possible

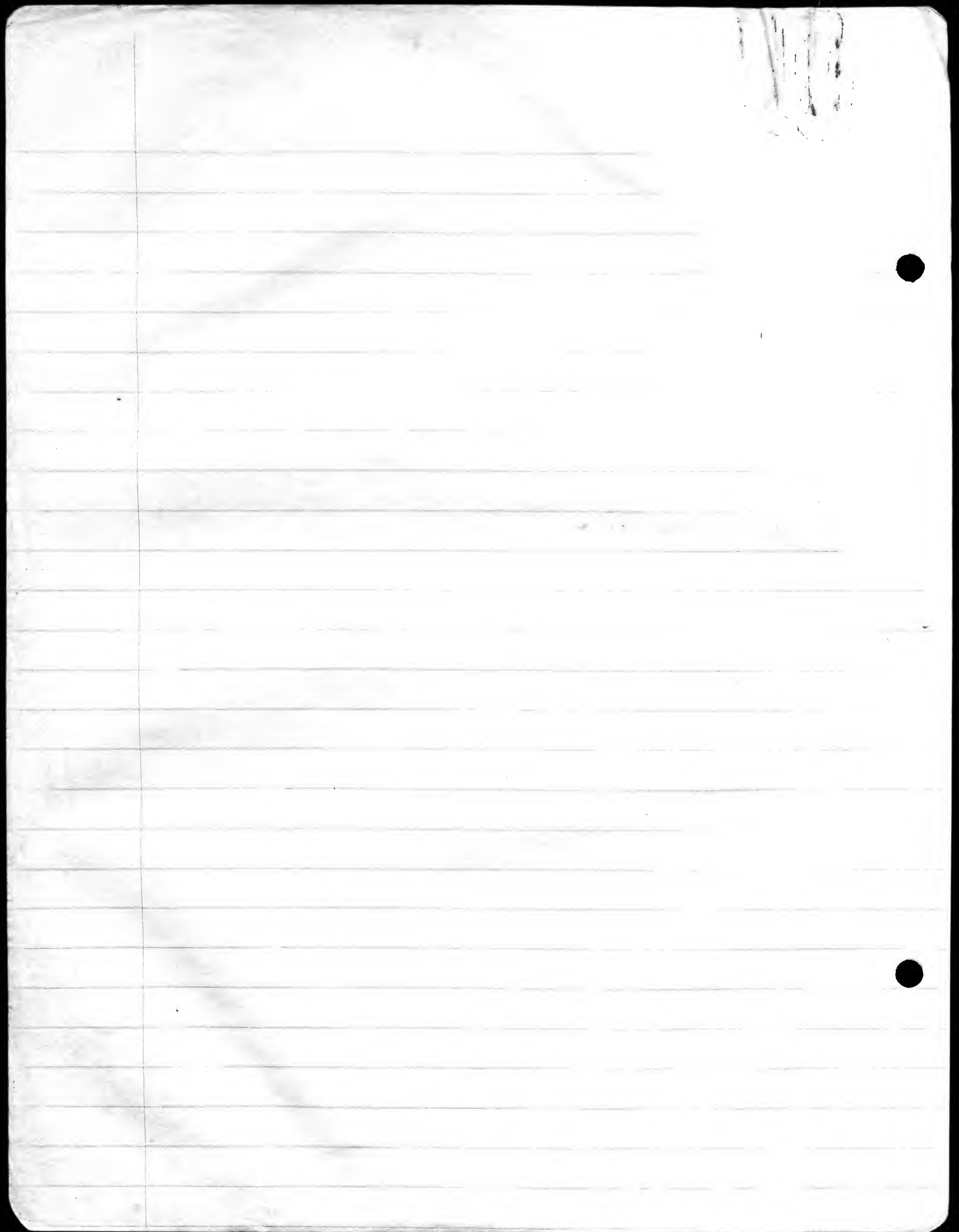
Opus 120, Feb 25, 1962, III (9)

is that the ♀ is ... the second phase in the song, but I am not sure of this.

Then the ♂ flies to the ♀. Birds might be ... some sort of vocal "greeting" between ... which I did not catch carefully well. Apparently a brief series of "Tsa-ua" notes, softer and more ... like than the notes it uttered earlier. I don't know if these notes were uttered by one or both birds.

Then the ♂ sings about ... reacting to me in much the same way as the ... always ... Surprisingly enough, he does not utter any SHN's. Does TF's like the ♀. No WF's or CR.

Then the ♂ flies away. The ♀ follows. One or both uttering SHN's as they go.



Halua, I

①

March 10, 1958  
Forest Reserve

Ant-tanager (or Green Dusky-tailed Ant-tanager (or Red-throated Ant-tanager).

In the course of various explorations around the zone, I have heard a lot of scolding notes uttered from deep thickets. Finally today I was able to prove that they were uttered by Ant-tanagers. Certainly by ♀'s and almost certainly by ♂'s. Sound as much like the Pop's of the Green Honeycreeper as any other tanager I know, but deeper, lower, & louder (I think).

The TF's of these birds seemed to be extremely variable. They seemed to perform all conceivable kinds, as far as I could see, depending upon the position in which they were perched at the time. But I think that the usual form was Up (fast) - Down (slower), with a fairly marked lateral component.

Halua, I

March 17, 1958  
(K-6, near Arraiján)

Surprised some Ant-tanagers in scrub. One bird gave the usual scolding notes (Sc), "Cluck"-like Notes (alCN) and all intermediates between the two, as it flew off. These "Cluck"s sounded just like the alarm call notes of other species, and must, I think, have been essentially the same thing.

A few minutes later I surprised another bird, this time definitely a ♂, in similar scrub. He uttered a few Sc Notes,

Habia, Mar 17, 1958

3

then sat looking alert, uttered a few more *Sc* Notes, sat looking alert, etc. etc. His nest was somewhat raised during the periods when he sat silent, and also (at least) during the Court Displays of *Sc*. Comme ça:

Many of these bouts just four notes Kraa



*Sc* Notes included "Kraa kraa kraa"

These however *Sc* not strictly homologous with Green Honeycreepers or the B<sub>33</sub> of the Honeycreepers. Actually, they probably much like HCN's of Blue Honeycreepers as anything. Just another example of moderately high intensity notes, with an appreciable aggressive component, developing a hoarse harsh quality - perhaps more or less independently of the similar, rounding notes of other species. (It would be interesting to know, however, if the *Sc* Notes are particularly closely related to the R's of the Summer Tanager ????)

Notes are probably the Rsp of the phrasing round as

After this period of alternate silent sitting and bouts of *Sc* Notes, the ♂ flew away suddenly, with a burst of pure "chuck" Notes. His flight was so sudden that it looked like escape and would seem to confirm the interpretation of these "chuck"s as ALCN's.

Habia, I

March 28, 1958

K-6

I caught a ♂ Ant-tanager in my net near here yesterday

Habia Mar 28, 1958, I

(3)

When handled in the net, this bird uttered typical "Tanager" H Ser Notes (almost identical with those of the Saltator). These were also obviously identical or, at least, very similar to the Sc Notes.

The bird later uttered both H Ser-Sc Notes and "chuck" Alc Notes. The H Ser-Sc were not accompanied by CR - at least in most cases.

Unfortunately, this bird refused to eat and died today.

Habia

August 10, 1958

Cerro Campana

See end of today's notes

Quite a lot of these birds around here, more or less at the lower limit (I think) of the montane forest.

I watched one flock, including at least 2 adult ♂'s, and 3 or 4 females (or juveniles?). Rather loosely organized, but definitely moving together. Quite suspicious. Near tops or middles of small trees - not in underbrush. Briefly in same tree as mixed flock of several Savina's Tanagers and a pair of Blue Dacnis, but soon moved on.

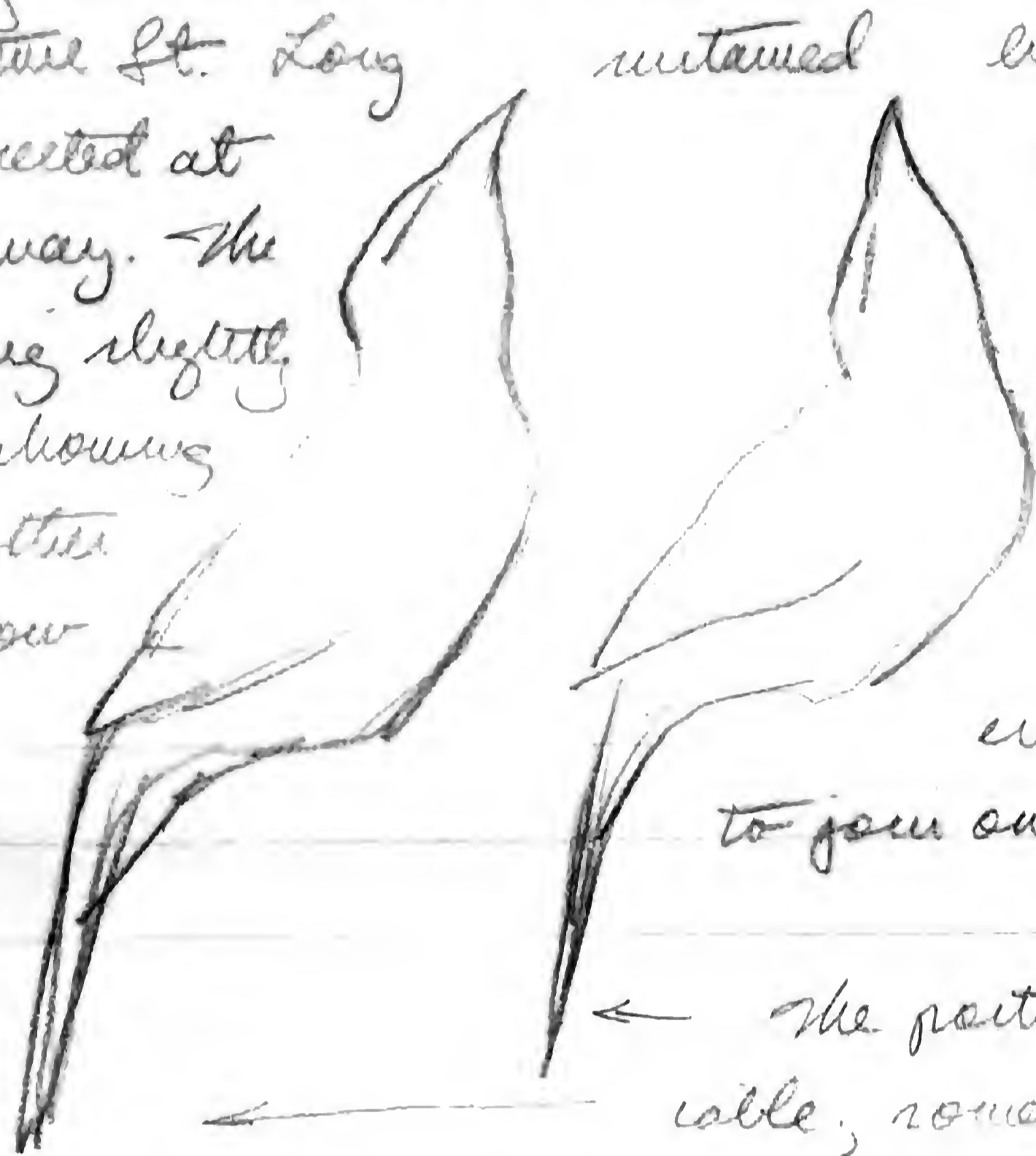
Whenever one bird flew and landed near another, it uttered a series of harsh chuck-like notes, usually five, "Tuck tuck tuck tuck tuck", — — — — — Very very reminiscent of the "Land Call" chuck notes of the streaked Saltator and Black-winged Palm Tanager!! Obviously homologous.

These notes were certainly uttered by the ♀'s, and almost certainly by the adult males as well.

Albion, Aug. 10, 1950

(4)

One of the adult ♂'s also went into definite elaborate display. An extreme ft. long. Apparently directed at about 5 ft away. The ♂ kept turning slightly backward - thus showing breast. The other unimpaired began playing ♂ a few yards,



untamed but gave about another adult ♂ displaying to face the other off the red. ♂ seemed quite even, and the dis- eventually flew away to join one of the other ♀'s

← The posture was quite variable, sometimes very high, sometimes less so. Bill probably usually more nearly vertical in the less high versions

A brief pecking dispute between 2 ♀'s (or juvs) was accompanied by apparently unritualized ♂ by one bird.

Later on, a pair of these birds, one ♂ and one ♀, began to call from a thicket by the roadside as I walked along. Probably provoked by me. The ♂ quit rat, in an unritualized posture (although I couldn't see if his nest was raised or not) and uttered whole bursts of accelerated "Tuck" Notes. Bill opening & closing a little, or at least vibrating while held partly open, in rhythm with the syllables of the call. Each burst was so long, and contained so many rapid notes (15-20?), that the whole thing was very reminiscent of an R - although probably less rapid, and less mechanical-sounding, than the R's or Tills of most other species I shall



Halbea, May 12, 1958, III

(5)

call it JckR. (The birds fly from perch to perch, giving JckR's again & again. (The birds probably not actually in flight between perches))

On the birds (the ♀?) uttered quite a lot of very distinctive single syllable & hoarse notes.

The latter might possibly have been very faint versions of Sc Notes - although I doubt it - but this brings up the peculiar fact that none of the birds I have watched during the periods I saw H and G and heard JckR gave Sc Notes of the typical kind!!! Why?? (I did hear a few typical Sc Notes earlier, before I started to take notes, coming from bird I consider - see in a thicket.)

On second thought, it seems likely that the birds I actually observed today were Red-crowned Ant-Tanagers = rubica = ~~rubra~~

January 29, 1959  
Barro Colorado

Halbea, I

Watching 3 or 4 Dusky-tailed Ant-Tanagers associating with a mixed flock of ant birds. Coming to roost in the usual way. Again can confirm that the nest is hardly raised at all during Sc. Just barely visible, come for.

with ACC Notes as usual.

This Sc alternated

One new thing I noticed as toward or away from me, they accelerated series of sharp notes, probably a series of ACC-type notes accelerated almost enough to form a brief R.



When the birds flew, they almost always give an

Halua, I

May 8, 1967

Local race of rufica = rufica

Copulation seen by D. Snow. ♀ crouched and quivered her tail. ♂ flew on to top of her. Copulation probably successful.

Second copulation (another pair) probably successful.

Halua, I

May 8, 1967  
Galeta Station

I have seen Dusky-tailed Ant-tanagers in many areas during the last 2 years. I have noted various calls with 1 by them, without actually trying to study them in detail. As a result of these observations, and re-reading my earlier notes, the following points seem fairly obvious.

The "Sc" of this species is HAC. Really quite typical. Must contain an appreciable attack component. The usual response of birds when they first see me, before retreating.

The "Chuck" Notes are SHN's. Usually given by birds as they fly away from me. (I am not sure that I have ever actually heard a bird of this species give SHN's except in flight.)

This morning I worked in the heavy, low, wet forest on the navy station here. On the mainland, not on Galeta Island itself. It rained almost steadily throughout the period I remained. Some times very heavily.

Habia, May 8, 1947, II

(7)

At 5:45 I heard several musical phrases coming from thick shrubbery. The phrases were musical phrases uttered by at least 2 birds, usually 3 or 4.

The phrases were largely composed of triplets, usually (not always) with a complete triplet at the end. Usually  $3 \frac{2}{3}$  triplets.

"Huh-hoo-heee huh-hoo-heee huh-hoo-heee huh-hoo"

These phrases were reminiscent of some of the notes of some species. Even more reminiscent of some other notes (at first I thought I must be hearing some unknown species). There was usually or always a distinct pause after every phrase.

There were some variations in some phrases. Some phrases included 1 or 2 (possibly more?) extra triplets. Some phrases ended with a complete triplet.

I was never able to see the bird(s) uttering these phrases. They were always well hidden in the vegetation. Both of the birds uttering these phrases seemed to be single, and stationary while uttering the phrases. They both moved about a little, going from station to station, uttering phrases at each station (but I never saw them in flight). The phrases were inhibited by my presence. Whenever I approached closely, the performing bird(s) shut up. This would suggest that the phrases were not hostile.

After approximately 15 minutes, I began to hear typical Dusky tail HAC & SHN's from the bushes when I approached the sites from

which the triplet phrases were issuing. At the same time, the triplet phrases themselves tended to stop.

The first great burst of triplet phrases was seen on 2/2/03 at 7:00 a.m., I saw across a small group of Dusky-tails in another area. At least 1 ♂ and 1 ♀ + juvenile. They uttered the usual HAC and SHN's (plus a few low-triplet phrases), when I first approached. I did not actually see one of these Dusky-tails uttering a triplet phrase, but it was quite obvious that the phrases must have been uttered by one or both of the Dusky-tails, as there were no other birds around. When I continued watching the birds, they continued uttering HAC + SHN's, but stopped the triplet phrases. It is possible that the bird which uttered the triplet phrases when I first approached was not yet aware of my presence at that time.

7:40 a.m. I saw across still another group of Dusky-tails in a third area. Including at least 3 birds. Uttered vocalizations just like the group observed at 7:00. Again, I did not see a bird actually uttering triplet phrases, but the phrases must have been uttered by one or more of the Dusky-tails.

These triplet phrases must be the "song" of this species. Probably produced by frustration of sex drive(s). The individual triplets are reminiscent of the "Eh-uh-hoh"s of Rose-breasted Nuthatch-tanagers. The arrangement of triplets in distinct phrases, and the continued utterance of phrases well after dawn, is reminiscent of the "KV Song" of some spp. of Piranga.

It is possible that Habia spp. may form a nice connecting link between Rhodinocichla, Piranga, Vireo, and Rauphaea.

Habia, May 8, 1962, IV.

(9)

elus. (I may have to redraw my dendrograms a bit!)

8:00 a.m. After a single  $\sigma^7$  uttering lots of HAC Notes

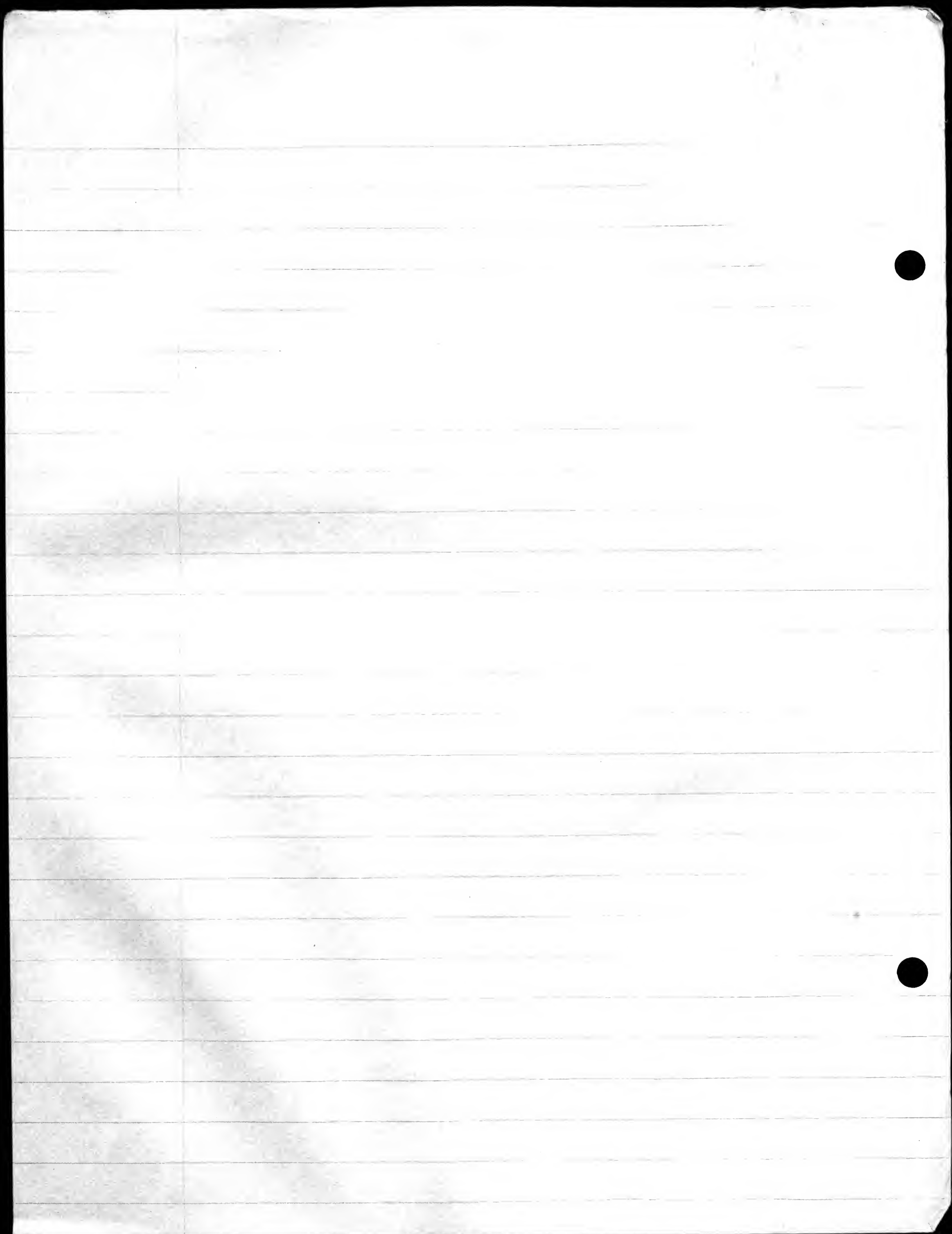
In series as well as in pairs. Sometimes more.

Perching on branches, watching me, wings flight pattern. No CR or  
Shly. Lots of TF's, probably slightly different than usual. Tail  
fanned to a very extreme degree, both during and between TF's.  
Absolutely no WF's. Most of the TF's were largely or completely  
lateral, with only a trace of D-V, if that. A few were vertical,  
definitely D-V. It is possible that the form was more extreme with  
the lateral TF's than with the vertical ones.

After some minutes,  $\sigma^7$  flew away, uttering a series  
of SHN's as he did so. Quite rapid, almost an R. I have heard  
other birds utter similar rapid series in similar circumstances.  
I am not sure that such series are really homologous with the  
R's of many other species.

This  $\sigma^7$  fell silent after he disappeared from my view.  
Then, a minute or so later, I heard what was almost certainly the  
same bird uttering a single triplet phrase.

Some of the birds I observed earlier had also performed  
TF's while I watched. All essentially D-V and/or lateral.



Oryzoborus, I

①

March 30, 1958  
Barro Colorado

~~Never Once found~~ laevius.

I caught an adult ♂ of this species in my nets at K-6 a couple of days ago, and I have let it loose in the aviary — where it has done practically nothing at all.

It seems to have TF's more or less like Sporophila and Volatinia, but they are rarer than in the other species, and perhaps less extreme.

Surprisingly enough, I haven't seen this Oryzoborus give any WF's yet!

No! I take it looks - partly. This bird does do some very slight WF-ing, almost always in conjunction with TF's. The form of this movement is also more or less normal, but it is certainly much lighter than that of most of the other finches I am studying.

This is certainly one of the silent species — like Sporophila I haven't heard this bird give a sound yet.

Oryzoborus, I

July 20, 1958  
Barro Colorado

This single capture ♂ just sat around doing practically nothing, until I let 3 new ♂'s and a ♀ in this afternoon.

The old male is unbanded; the 3 new ♂'s are banded green left, lavender right, red right; and the ♀ is banded

Oryzoborus, July 7, 1959

2

When I put the new birds in, the old ♂ spent quite a bit of time chasing the new ♂'s. Not very exciting. Mostly chasing and chasing attacks.

I did see, however, that the old ♂, and not the new ♂'s, did quite a lot of CR. Apparently, quite extreme, like that of the Yellow-bellies or the other *O. v. v.* (I don't know), (a little difficult to tell exactly, as the old ♂ is going to attack, but the old ♂ would sit with CR for some time, then fly to attack, smoothing down the head feathers just before flying.

There was one vigorous fight between the old ♂ and one of the new ♂'s, on the ground. Accompanied by loud, repeated, & rather irregular HAC Notes. Quite like those of the Yellow-bellies, but perhaps a little clearer and more trumpet like.

Once, when the old ♂ was hanging on the side of the aviary, facing one of the new ♂'s and with his crown feathers raised, he quivered one wing, (the free one away from the aviary wall). Int. mov. of flying ???

One of the new ♂'s apparently gave a CHN's, in rapid succession, once when he was apparently nervous about my approach.

Oryzoborus, I

July 7, 1959  
Frijoles

I have heard several ♂ Thick-billed Seed-finches very recently, both here and on the Atlantic side near the Rio Piedras. In all intents identical with the typical WS of the Sporophila sp. I have



Oryzoborus July 7, 1959, II.

(3)

stated, including "chaffy" trills and occasional harsh notes, but all uttered in a stronger, louder voice, as would be expected in the case of a larger bird. The main part of the WS of the Black-billed Cuckoo also seems to be rather more melodious than the equivalent pattern of Myiophobus. Probably just because its voice is louder.

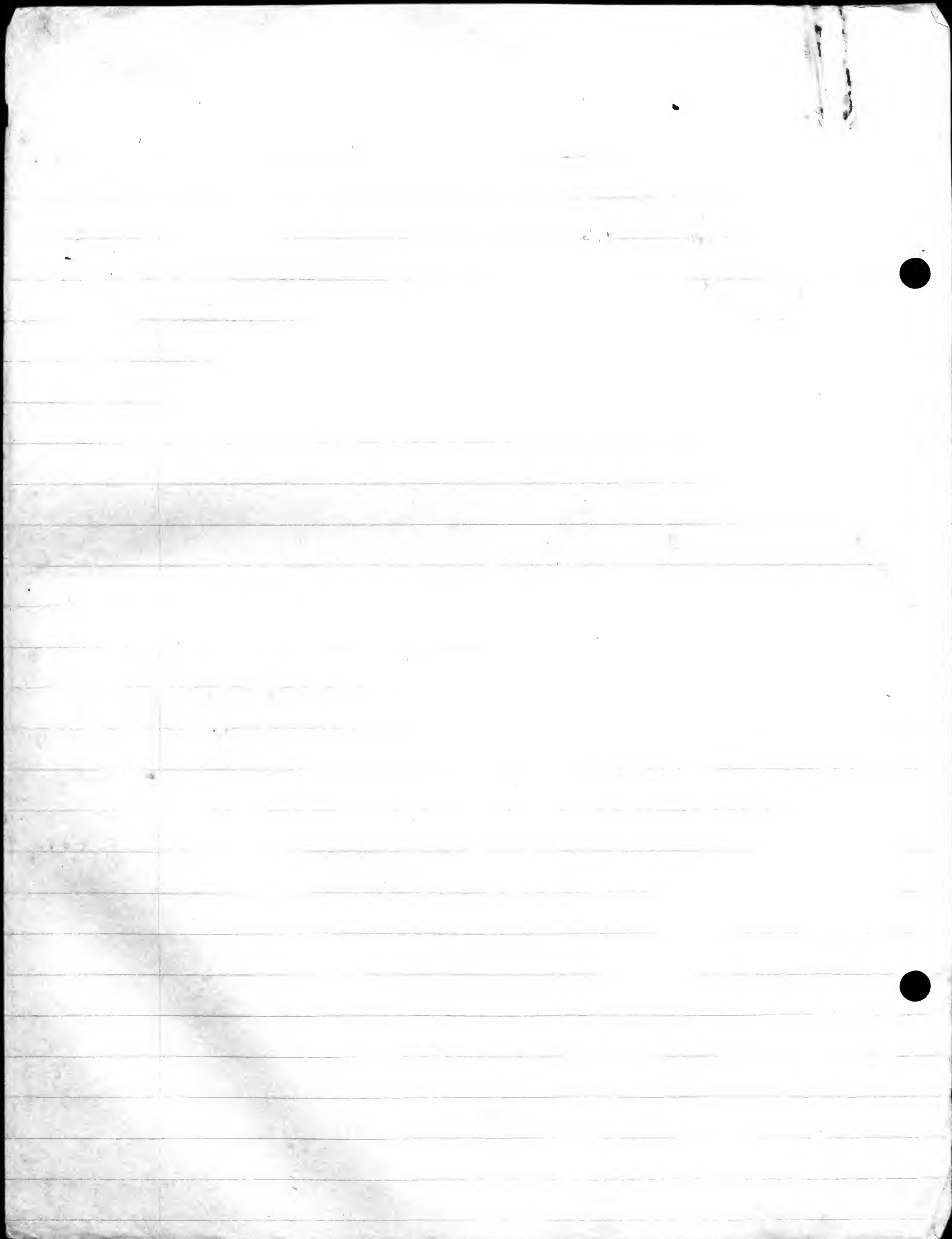
The ♂ I watched uttering WS's today sat fairly upright, with a slight trace of CR toward the nape.

Oryzoborus =



July 8, 1959  
Frijoles

Returning to the same ♂ I listened to yesterday, giving WS's as before. This time I noted he interspersed Chaffy Trills, and R's, and occasional, small, double, bell-like notes in the middle or at the end of the usual melodic phrases.



Oryzoborus, I

(4)

December 14, 1958

Iquitos, Peru

~~XXXXX~~ = augustinus

is a small gold finch - or a tree-eyed finch like which I can't identify. All black, except for chestnut lower breast & belly, and white or light gray wing-linings.

A single bird, presumably a ♂, has been singing in a way that is most reminiscent of both Sporophila and Sporus

a lot  
Sporophila



ordinary sitting posture

This song is quite loud. Includes a lot of pleasant, whistled, doublets — —, and also some pleasant warbling phrases. And each song phrase includes 1, 2, or 3 real loud R Notes (too much like R to be called "chaffy trills")

I shall call this the "Brown & black finch" for the time being.

Oryzoborus, I

December 17, 1958

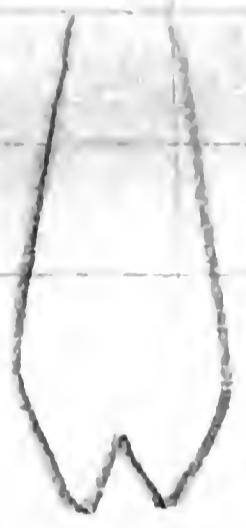
Iquitos.

A few more of these birds around here this morning, and got a better look at them.

The ♂ sang quite a lot. The WS just about as described a couple of days ago showing some tendency to end with the R. The ♂ always

Oryzoborus, ... = 1

began the WS sitting fairly erect, in more or less the posture shown on the preceding page, with head pretty much resting on shoulder. Then as soon as the WS was well begun, he would stretch his neck quite far upward, raise his crest a little, and remain with the neck stretched up and the CR for the rest of the performance.



tail this shape



Singing Posture

Perhaps some slight fluffing of the chestnut belly feathers

I noticed today that the bill of this species is quite thick, almost as much so as the Oryzoborus with which I am familiar in Panama.

This ♂ was followed, more or less closely, by a ♀ or juvenile. A dull, relatively grayish, brown more or less all over, with blackish bill. Uttered quite a lot of CR's as it moved around. Usually or always doublets or triplets: "Dah-dit" or "Dah dah dah". Quite loud, and slightly metallic & nasal. Just slightly reminiscent of the Cyanocoryps on BCI.

This ♂ usually gives his song from much the same places as a Sporophila. Fairly well exposed, on more or less bare twigs, near the top of small trees or large bushes. Not as high up

Oryzoborus, Dec: 17, 1958, III

(6)

as the ♂ Red & Gray feed sites

I have seen many more of these birds in another spot, about 1/2 a mile down the road from where I made my earlier observations. I think that the bird I described as "gray" above was probably a juvenile. I have seen more birds like it. They are not really gray — just pale, but quite reddish in tone. It is these birds which utter all the CN's. And it is obvious now that the doublet type of CN, "Tah-dit", — —, is the usual type. What I take to be adult ♀'s are much darker brown (although still quite reddish), now including a capture of Oryzoborus in Panama. So far, I have not heard either adult ♂'s or adult ♀'s utter anything in the way of a call note!

This species does not form mixed flocks either, although it may happen to move into trees or bushes where other species may also happen to be. All such "associations" seem to be purely "coincidental".

Oryzoborus, I

December 18, 1958

Iquitos.

Watching more of the Black & Browns across the Nancy River from Iquitos. Several apparently single ♂'s, giving WS's. Going the rounds of the high perches or stations in their territories.

Not all WS's contain R. There may be some quite long WS phrases without any trace of R. Does this suggest that the R is either more or less aggressive than the rest of the WS ???

A very interesting incident just occurred. So fast that I could

didn't follow it all. A small bird, presumably a Spizella, flew by and started to land in a tree on the territory of a Brown & Black ♂ I had been watching for some time. The owner ♂ was in a tree some distance away, but he immediately flew to the intruder, uttering rapid hoarse whirred notes, presumably a form of HAC, as he did so. The intruder flew away in a hurry, and the owner ♂ landed immediately and uttered an abbreviated burst of WS phrases, without R! Shows that the WS of this species is hostile, like the WS's of (other) Spizella.

The adults of this species seem to be very sparing of their CN's. I don't think I have heard one yet.

Now I have heard the ♂ utter what I think are CN's. A few soft, pleasant, rather melodious, single notes, at intervals of several seconds, after a burst of WS. This might be transcribed as "Tut", but this hardly conveys their quality. There is no doubt but that this species gives far fewer CN's than any (other) species of Spizella with which I am familiar. This comparative rarity of CN's is probably correlated with the fact that the species is not gregarious at all.

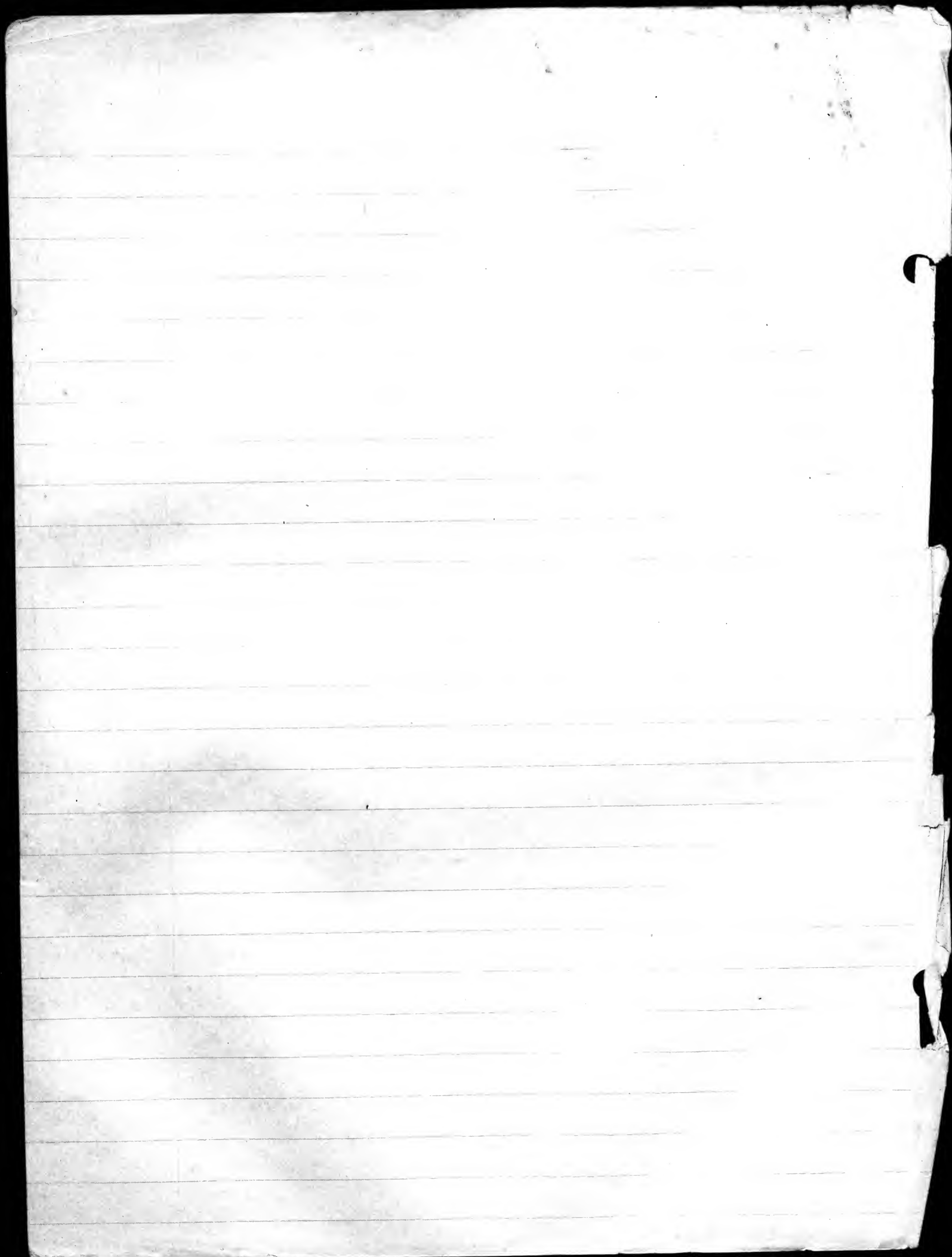
August 15, 1958  
Cerro Campana

There are quite a number of these birds around here, from about half way up the mountain to the top. Apparently single or in pairs.

One solitary bird (♂?) gave an interesting vocal performance. Sitting on a twig a little ways off the ground. Posture apparently unutilized. Giving "Tuck tuck tuu-tooo" tone & again. Found 2 notes particularly loud & ringing. Occasionally the preliminary notes omitted, but this was relatively rare. The most interesting aspect of this performance was its resemblance, in general sound effect, to the trill of Blue-black Grassquits.

The bird did a lot of preening in association with this. Down on breast, or over shoulders to scapular or back feathers. Usually one preen between each vocal phrase. Quite regular but otherwise didn't seem to be utilized.

I think I shall call this vocal phrase "II".





November 1, 1958

Brown Zoo

Yellow-throated Tanager

This is a single bird of this species here in a small cage with a wife Metaller Green Callite and a male ~~Callite~~. I have been watching it quite a bit, but it hasn't done very much.

It looks very much like a large, rather large-headed, Tanager, and it also moves about like one. Very active. Lots of WF's and TF's quite like those of the callites, except that the TF's seem to be almost completely lateral, with little or no vertical component (and if there is any trace of verticality, it is quite as likely to be D-V as V-D). Lots of very extreme stretch postures before flying up.

I have yet to hear it definitely utter a single CN of any sort. I think it may be uttering quite a lot of notes from time to time, but if so, they must be very soft. (I can hear the Metaller Green Callite in the same cage utter its CN's very clearly). The Yellow-throat does open & close its bill quite a lot, but most of these movements are probably OCB.

This bird does a lot of OCB, and other "comfort" movements (including bill-wiping, general shakes, stretching of one or both wings, pecking at feet, etc.) when it seems to be alarmed or disturbed by my presence. It certainly does much more of this behavior in such circumstances than any other species of tanager I have ever watched.

Indisomnis

November 1, 1962  
Barro Colorado  
Panama Canal

7:30 a.m. Patch low-cut forest. Come across a pair of Yellow-throats. ~~Both~~ ~~about~~ ~~one~~ ~~male~~ ~~female~~ ~~divided~~ ~~by~~ ~~me~~. Utter lots of loud "Tees", both male & female. These "Tees" become particularly loud when plane flies overhead. Utter lots of long, plaintive "seeeeeeet" Notes. Presumably PN's. ~~Provids~~ ~~apparently~~ ~~alone~~.

Indisomnis

November 3, 1962  
Barro Colorado

For notes on referred ~~referred~~ see accounts of mixed flocks both today and in September near Bogota.

Indisomnis

November 6, 1962  
Marces

Yellow-throats - see today's notes on mixed flocks

Couldn't get any good view of the birds, but I did establish the following. Males had yellow or orange yellow-bills, legs, & feet, head gray with black facial mask, chin, throat, and upper breast gray, sharply marked off from white of lower breast and belly. Under tail coverts probably not rufous. Back gray or grayish - couldn't tell if streaked or not. Wings gray or blackish. Unfortunately couldn't see tail pattern. Females were given a bill brownish with some streaking. Bills of both sexes quite long & thin. One more of the Lark-like sparrows near Quito.

Several ♂'s had individual stations (one ♂ had at least 2) stations of different ♂'s at least 100 yards apart, usually more. The two stations of the ♂ who was known to have more than one were perhaps 30 ft apart. All stations on edge of terraces, on rocks standing up a little above the general surface or in low bushes (perhaps 1 ft above ground).

The ♂'s sang on their stations. Apparently always when separated from ♀'s. All songs very uniform. Double phrases. "Ta-a-zeeee-ta-a-zeeee" Repeated at regular intervals. Sometimes males answered one another. All or most of the "zeeee" notes had some rattle undertone. Very occasionally, a ♂ would utter a song of 3 identical phrases, or a song of only one phrase.

I didn't pay much attention to the ♀'s, but they seemed to be scattered about, feeding on ground.

At least one male uttered one typical double phrase song in flight, flying from one station to another, but the flight itself did not appear to be ritualized.

When the songs were uttered by perched males, they were not accompanied by any special ritualized postures or movements.

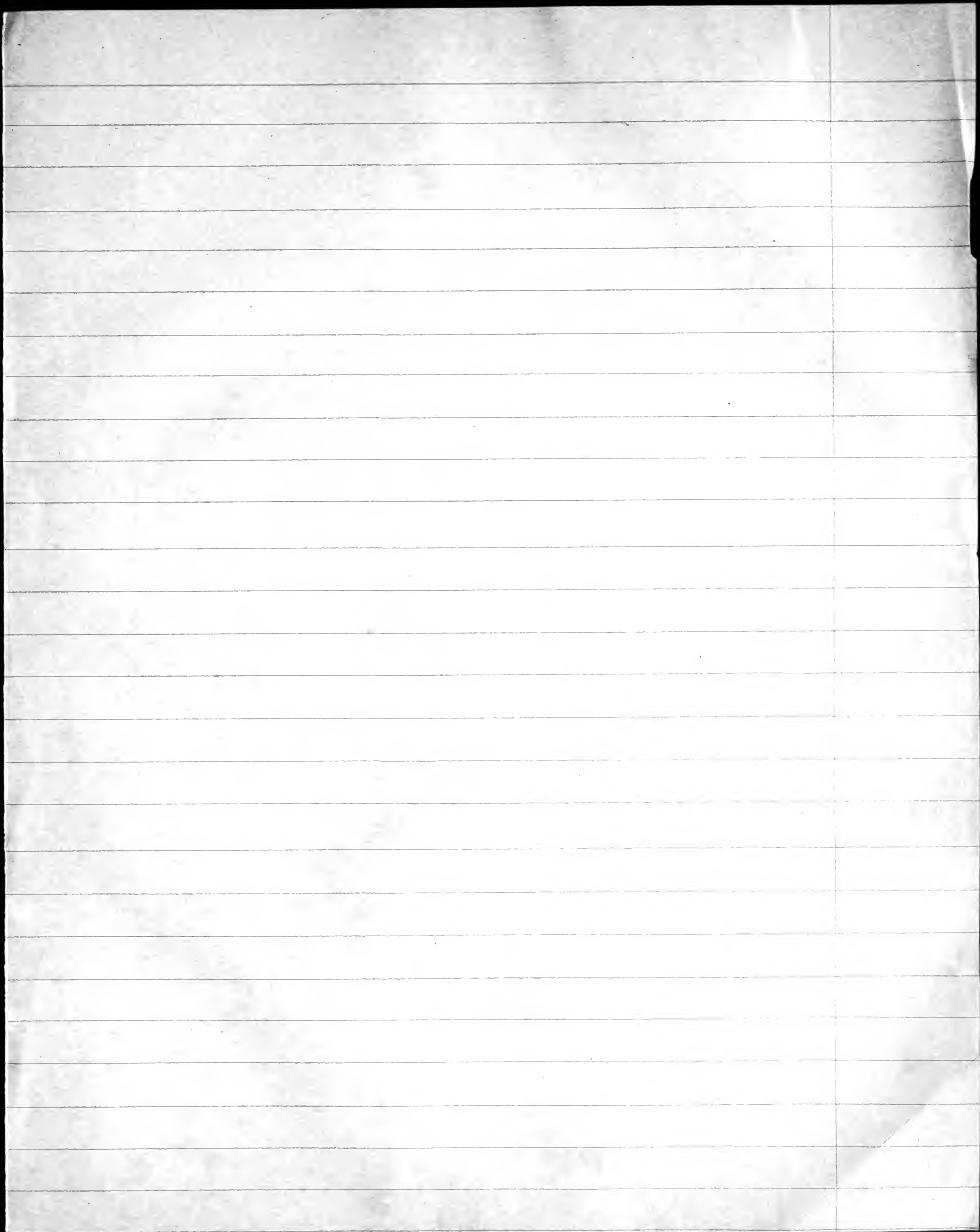
All this is very reminiscent of the Quito birds.



Poecilottus, I

February 26, 1964  
Mr. Anderson

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS



Atlapetes Feb. 4, 1964, II

(105)

bird, but the bird was not close and the rain made it difficult to use my glasses). Song was heard in small tree, approx. 8 ft above ground. Song quite variable, apparently 3 main types

- (1). "Wheeeet wheeeet"
- (2). "Wheeeet wheeeet whaha"

- (3). "Wheeeet ta-ta-ta"

(The last 3 notes of this third type might equally well be transcribed as "wha-wha-wha".)

Some additional variation was due to the occasional interjection of an extra note, either an additional high-pitched whistle-like note and/or an additional short low-pitched note.

All quite reminiscent of rufinucha. Also probably identical with A. s. tanyanowskii songs heard during previous trip.

While singing, the bird stood in a more or less erect posture, apparently unritualized in form except that it was always accompanied by pronounced CR like that of rufinucha in similar circumstances.

A few minutes later, the bird stopped singing and started to hop through and along a hedge. This movement was accompanied by lots of high, thin "seeet" notes (thinner than song whistle notes) and short "Tuk" or "Tut" notes. The former may have been PN's, the latter CN's or ALCN's (or SHN's?).

Atlapetes, I

February 5, 1964  
Cerro Pelica

Working this morning up in Part area SEE TODAY'S  
NOTES ON GENERAL MIXED FLOCKS

Heard quite a lot of songs by 2 schisticeps shortly after lunch.  
All the same as those heard yesterday

Got a good view of 3 birds moving around together. I finally  
A. s. tanguensis

These birds uttered a lot of "CN"s, "alCN"s, or SHN's while  
near to me. All such notes should be transcribed as "Trit".

~~COMMENT:~~ COMMENT: The "CN"s of the birds here are very reminiscent  
of the thinnest and highest-pitched whistle-like notes of Chiriqui Bush-  
finches. A nice connecting link between the Central and South American  
can species of the genus.



Chrysomitris, I

January 29, 1963

Work on Chrysomitris bands. Came across three different bands of Chrysomitris (Olive-backed ~~Warbler~~) on top mountain.

Band I seen 11:50 a.m. and 2:15 p.m. Band II seen 1:00 p.m. Band III seen 2:30 p.m. Different bands at least several hundred yards apart. Band I appeared to have moved approximately 200 ft. between observations (but probably moved considerably more and I was only able to see the second time).

Band I included at least twenty birds!!! Bands II and III included over ten birds each (probably as many as Band I).

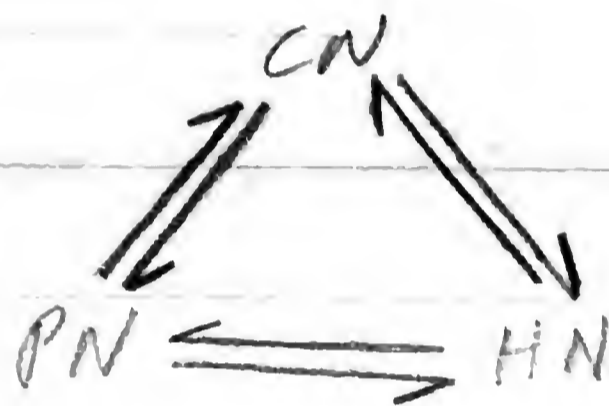
All bands seen moving along forest edge, usually along road, and a few dozen feet within light montane forest. Usually quite low in shrubbery (2 to 20 ft. above ground). Some birds of Band I also hopped on ground occasionally. Some birds of same band also went at least 30 ft. up in trees.

Bands always moving rapidly. Well coordinated. Birds usually or always close to one another. Sometimes within a foot of one another.

All birds noisy. Uttering great variety of notes. Probably 3 main types: "Tseeeet" notes. Sometimes plaintive, then, & clear. Sometimes single. Sometimes in series 2 or 3. Presumably PN's. Sometimes slightly hoarse. Series of notes more often hoarse than single notes. "Zee zee zee" or "Zheee zheee zheee" such hoarse notes probably transitional to CN's or HN's (see below). Typical CN's were "Chuk" notes. Probably homologous with R's of such

species as Ant-tanagers but usually softer (although degree of softness quite variable). Apparently always uttered in series. Usually long series. Indeterminate in length. Series usually undertaken in flight. HN's possibly the most variable of all - at least in tone. Sometimes very nasal & harsh, sometimes less so (the latter may be partly intermediate between typical HN's & "Zee" type notes). Apparently usually 2-4 notes.

General relationships between vocal patterns might be summarized comme ça:



Bands II and III, and Band I when seen the first time, were apparently unaccompanied by birds of other species. Apparently Tumariidae - Dendrocolaptidae. Band I was certainly not accompanied by other species when seen the second time.

What I would like to know is why these birds are nuclear in mixed flocks and Mitrospingus is not (See also fluid's paper.) Various possibilities occur to me:

(1). This species shows a greater degree of intra-specific gregariousness than Mitrospingus.

(2). This species moves through a greater vertical range of vegetation. ????? (If so, this species would encounter more birds of other species. Also, it would be less disadvantageous for birds of other species to become associated with this species.)

(3). This species has typical dull neutral plumage; while the physical appearance of Mitrospingus is slightly more distinctive.

Chlorothraupis, Jan. 29, 1963, III,

(3)

(4). Chlorothraupis may have the equivalent of dull neutral plumage in its vocal repertoire. It is very vocal, but its vocal patterns are not necessarily stereotyped. Its vocal patterns are repeated ad infinitum.

Chlorothraupis, I March 11, 1963  
Cerro Azul

Arrive one of the areas where their birds were seen before  
6:10 am Still not there.

No trace of a Chlorothraupis by 8:35!!!

Then go look at another place where flock was in January  
Nothing there either.



Gray + Yellow

April 7, 1963  
Near Jarwa.

3:30 pm. Below Jarwa 9000 ft. See a single Gray + Yellow  
in Jarwa (XXXX) ~~XXXX~~ =

Sings in low bush, in open area. Perches about 3 ft above  
ground. Apparently single. In unritualized, very ordinary perching pos-  
ture. Utters several bursts of loud clear song. Always "Keeyoo-  
kew keeyoo kew keeyoo kew..." Bursts of indeterminate length,  
but usually quite brief. Then bird flies off without doing anything  
more

I think this song is what I thought might be Laf song yesterday.

I am sure that I have been confusing this species with dull plum-  
aged Thraupis bonariensis.

5:30 pm. Near Palca 8540 ft. Hear similar bursts of song,  
without seeing singer. Apparently coming from Eucalypt.

This song is really quite remarkable, as it seems to be absolutely  
typical DC in form! Very primitive ???

April 9, 1963  
Near Jarwa

Walking along river below Palca this morning, ca 8200 ft.

Rainy

7:15. Near bottom Ravine A. See 2 Gray + Yellows, Not together  
One just sits on perch 4 ft above ground. Utters repeated song phrases. All

Gray + Yellow, Apr 9, 1963, II

(2)

~~|||||~~ "chewit chew chewit chew chewit chew..." In ordinary preening posture. Song phrases never very long. Probably semi-deterministic. Not continuous like DC other species. Notes uttered moderately rapidly.

~~SS~~

This is an area of dense cut low scrub.

*Sporophila* ?

①

April 4, 1963

Mr. Tama Peru

Working down near Yauyayo, 8000 to 8500 ft, approximately. Region of crop fields and lots of hedge-like scrub of cañales.

There are lots and lots of distinctive "red eaters" around here. No XXXII on list. Males are like light phase Variable Seedeaters, with white bills like Variable Seedeaters. ♀'s are dull brown with light bills. Birds certainly look like typical *Sporophila*.

All birds in flight were seen near some flocks up to 25 birds in a flock.

I first noticed their display behavior this afternoon.

Ca. 4:15, an apparently single ♂, perched on top of edge, right above, about 15 ft above the ground, began to sing. A large variety of phrases. Including "Tut" notes, nasal "Tsauh" Notes, high pitched "Wheezet" or "Wheezet" Notes, and moderate-pitched Rattles. There seemed to be two main types of "complete" phrases.

(1) "Tut"s plus R's. For example "Tut tut tut tut trrrrrrrrr" and "Tut trrrrrrr tut". (2) A few "Tut"s, followed by a few "Tsauh"s (all more or less at the same pitch), followed by a "Wheezet", followed by a descending "Tsauh" Notes. Commonly

"Tut tut tut tsauh tsauh wheezet tsauh tsauh"

I shall call the first type of phrase "RS", and the second type

(2)

"FS".

In addition to these phrases, the bird uttered many others which seemed to be abbreviations, or slight variants, or (possibly) combinations of the two.

All the song phrases were comparatively low. Ten words might in effect than the songs of the other *Sporophila* and *Coryphospiza* spp. with which I am familiar. General effect quite *Zonotrichia* like. Especially the nasal "Trah" notes. All or almost all phrases began with one or more "Trit" notes. Series of "Trit" notes always the most rapid parts of the phrases in which they occurred.

It is possible that these songs are really strictly homologous with the songs of other seed eaters I know — only slowed down.

The bird sat in a perfectly ordinary, unobtrusive sitting posture throughout all the phrases. Then flew away without doing anything more.

4:45 pm Some distance further on, see a large flock of these birds feeding in a wheat field. Perched on stalks, feeding on seed. They were uttering lots of "Trit trit trah trah ...." phrases. Also lots of complete FS's.

There was at least one *C. homodroma-munier* feeding with these birds — feeding in the same way. But no Andean Sparrows or Goldfinches. (Both the latter species were in the neighborhood at the time — but they were in maize fields.)

5:30 pm. Heard a ♂ of this species utter 1 complete RS, and several single R's (without "Trit" Notes) as it moved, low, through a hedge-like patch of scrub.



Gawwipes, May 15, 1963, II

(114)

After all the observations - (but without looking over earlier notes in detail), I would suggest that the motivation of all the display patterns of Y is as follows:

- PN's = Frustrated pursuing drive.  
BW = (Only by ♂'s?) Frustrated cop. drive.  
St = Hostile.  
ESt = " with relatively strong retreat component.  
FSt = " with relatively strong advance component.  
R = Copulatory tendency, uttered at least fairly high intensity.  
Buzz = Hostile, moderately high intensity. Probably only uttered with St ???  
SR = High intensity, hostile & sexual.  
Q = High intensity. Hostile. Only combined with St when R and/or Buzz also uttered ???  
BL = (Only by ♀'s?). High intensity. Hostile. Only combined with St when Q & Buzz also performed ???  
BF = Indication of copulatory motivation.  
TV (♂ form) = Indication of copulatory tendency, (but probably when this tendency is at least relatively weaker than when BF without TV is performed ??????????)

Gauwipes, I

May 16, 1963  
Palm Springs

Going back to watch Pair II. Arrive 5:53 a.m. Still too dark to see much.

Birds waking up. ♂ & ♀ with St & B. Too dark for us to see. Not copulating.

♂ & ♀ still sitting more or less quietly. ♂ flight from perch to perch. ♀ stretches & preens.

6:10. ♂ flies to ♀ lands beside her. Feeds her. No pre or post feeding display by either bird. Then ♂ quit into beside ♀. Once both birds so brief St, one or both utter Buzz; but otherwise no display. Both just sit quietly. Still 6:13. Both, especially male, fluffed all over.

Both start to move around. ♂ flight with St & Buzz whenever the two come close together.

Back to sitting close together again. ♂ again very fluffed all over ("submissive"?). ♀ much less so.

Down to feed together 6:30. No display. Then up again. One or both bird(s) utter brief Buzz (with St?) when ♀ lands beside ♂. Then sit together as usual. About 4 inches apart. ♂ generally fluffed all over.



♂ general fluff

♀ preens.

Cyanocypres, May 16, 1963 II

(116)

The birds are so completely relaxed, sluggish, & friendly today  
— I wonder if they had some population this morning before it was  
left up to them

They are still the same as before. The male fluff becoming  
more intense. Frequently "looks down" to ground



But then the 2 birds start to fly around again. ♂ does St with  
BF & Buzz when landing near ♀. Again

When the ♂ moves, he seems perfectly fine. So all this general fluff  
ing may be prece display. Looking down may be rit. mov. of BW.

Birds down to feed, then back up to rit as before. Then fly about  
a little. ♂ does St with BF & Buzz whenever he is close to ♀.

♀ is definitely dominant over male. He retreats whenever she adv  
ances toward him. Some of these retreats are performed while the ♂ is  
still in St & BF.

Wintering wild ♂ back 17:04. It's rush to recall him. With  
St, Buzzes, & R. And then they suddenly start to peck one another!!!  
Female the aggressor. While winter is only a few inches away. This fight  
between II ♂ & ♀ is obviously redirection

Winter leaves. Then ♂ II starts to move around ♀ with St,  
BF & Buzz. She turns to him and does SR in H. He stops display

Cyanopes, May 16, 1952

(117)

Both birds sit & Buzz toward an Anole in their cage

Both back to sitting as before 7:12

Both down to feed. Back again ♂ stands near ♀ in cage. BF & Buzz. Also performs 6 or 7 definite regular Bellowing movements. Quite mechanical looking. Feeds quite near ♀ & flies away, ♂ stops displaying

♂ appears to be very strong. Occasional cooing to today

Leaving myself 7:25 a.m. Birds back to sitting as before

I have had a single ♂ Red-leg alone in an outside cage by itself near the II Yellow-legs, for some months. Yesterday, when I began to watch the latter, I noticed that the Red-leg (whom I shall call "A") was uttering long series of high-pitched, moderately loud, "Iseeet" or "seeet" notes. While sitting still. After some minutes, it began to intersperse HCN's with the "seeet" notes, and eventually stopped the latter, continuing to utter HCN's alone.

This series of "seeet" notes was certainly very reminiscent of the DC of some tanagers and finches. But since I was sitting quite close to the bird while it was uttering the notes, I couldn't be sure that they were not purely or primarily hostile.

This morning I tried to find out.

Begin observations 5:53. Still dark. Standing farther away from the cage than yesterday.

Bird is already uttering "Iseeet" or "seeet" notes. Interspersed with occasional "fit" or "sit". Series quite irregular, with rather long pauses. More irregular than most DC performances of tanagers and finches.



Cyanerpes, May 14, 1963, V

(19)

♂♂ yours with the "PN"s of Yellow-legs.

I am sure that such "freet" notes are among the notes that I called "CN"s earlier. See especially the behavior of ♂ described on June 12, 1961, page 98. But now I think that the "real" CN's of the species are shorter "Trit"s. The "Trit"s uttered during the DC this morning may have been typical CN's. But they were quite loud & sharp (perhaps louder than the "freet"s). They may, conceivably, have been some form of SHN !! I must check on this further.

The mate of this ♂ has been kept in a cage in the animal house (with another ♀ Red-leg) for some months. I am going to see what happens when I put her back with him.

Putting ♀ in 8:22 a.m.

♂ perches near her. Utters Wh Notes in upright posture with CR and Whiff. Then stands silent. Then goes lower with more CR and Whiff. Then stands silent with CR and Whiff. Utters a few soft muffled "freet" notes & just clings, evaded to side of cage. ♂ now has CR but no Whiff (Whiff must be relatively very high intensity). ♂ now, 8:26, flying about with muffled "freet"s. (These notes may be intermediate between typical DC or PN notes and typical Wh Notes.)

♂ suddenly goes into H-TV with CR and Wh Notes when landing near ♀. But stops immediately. Back to flying with muffled "freet"s. ♀ sitting in weak H or semi-H.

♂ stands with CR and Whiff uttering muffled "freet"s. Then back to flying as before 8:30 a.m. Retreats when female moves. Then both back as before.

Cyanocorpes, May 10, 1963, VI

(120)

♂ again retreats on line of advance.

♂ now uttering "muffed" "preeet" in a regular but long intervals. Both now flying over the line. These "muffed" "preeets" are not so much softer than the notes as they are slower and slightly hoarse.

♀ seems to have been silent throughout, so far as I know. Now she is preening.

8:36. ♂ still flying about, uttering "muffed preeet"s (I shall call these "MPN" for "muffed note"). A little of just utters quietly.

♂ utters one Wh Note, flies away, when ♀ flies to him.

♂ lands near ♀, utters Wh Notes in weak St with extreme CR and Mflg. Then retreats when ♀ advances toward him. Again ♂ utters brief series Wh Notes ("hee-zlee") when landing near ♀ then flies off again.

Incidentally, the vocalizations which I called "HAC" or "GHAC" in my earlier notes were certainly Wh Notes.

♀ is now quite fluffed, all over body, while she sits 8:44. ♂ still flying about with MPN's. Still utters brief Wh Notes when landing near ♀. Also a few longer 3 or 4 Note Wh series occasionally in same circumstances. These are quite warbling in effect ♀ doesn't respond, or just looks down at the ground. CORRECTION. I don't think that she looks down, she just turns her head to look at him. Head usually lowered somewhat at same time (but bill remains more or less horizontal). This is obviously partly homologous with SR pattern of ♀ Yellow-legs, but I have yet to hear this ♀ utter notes in such circumstances.

Agawopes, May 16, 1963 VIII

(151)

Birds still behaving as before 8:57 a.m.

♀ is certainly dominant. ♂ retreats whenever she approaches and him.

9:05 Moving away a little, in case birds are disturbed by my presence.

9:11. ♂ still flying about MPN's as usual, locally as over. Still no change 9:23. ♂ is flying about as far away from the ♀ as he can get. Almost all his MPN's are "single" gls. Only very occasionally does he utter a doublet — — He hasn't approached the ♀ with Wh Notes for a long time now. It is beginning to look as if she isn't in reproductive mood.

I wonder if ♀'s of this genus look a little "reluctant" pattern? Speak of the devil. The ♂ does approach the ♀ with Wh Notes, 9:31, but she turns her head and jabs at him. Her head was lowered, but the bill kept horizontal as usual during this jab. Apparently quite silent. ♂ retreats immediately. Starts to fly about with MPN's again.

I suppose that the "MPN's" may well be the real "PN" pattern of the species (?).

9:35. I suddenly hear a huge long burst of urgent PN's from the Yellow-leg cage. Pair II. Rush over to find that the ♀ has somehow managed to get through the wire into the next cage!! PN's presumably uttered by one or both of the birds suddenly discovering that it had lost a mate. This is really conclusive proof that the PN's of the species are produced by frustration of pairing drive. (Neither of the birds had uttered a single PN during the previous 70 minutes I had been watching the A Red-legs.)

Incidentally, the sound of the Yellow-leg PN's caused the A ♂



Cyanerpes, May 16, 1953, VIII

(122)

Red-leg to perch, silent. Hanging on edge of cage  
Stopping observations 7:13 as birds are down making repairs

Cyanerpes

May 17, 1953

Barro Colorado

Going to look at the A Red-legs briefly this morning.  
Arrive 5:48 a.m. Still dark. A ♂ & ♀ both apparently  
silent. The two birds are not sitting together. Apparently have not  
slept together. POSSIBLE Mating? They are sitting close together  
fact. At least they are that close now 5:55 a.m.

♂ begins to utter DC "feeeet" Notes in this position 5:56.  
Facing the ♀, looking from side to side. Performs occasional pecking  
movement in air. Flight of notes slow but regular. Then  
♂ shuts up and starts to fly around 6:00 a.m.

♂ now apparently sitting quietly out of sight. Then ♀ wakes  
up, starts to fly about. One loud utterance heard of WH Notes. Can't  
see circumstances. Then ♂ back on perch, alone, uttering DC "feeeet"  
Notes as before. Then flies about some more. Utters one MPN in flight.  
Then back to DC as before. This DC has not included any "Pit"  
Notes so far 6:06.

♂ approaches ♀. Utters WH Notes as he does so. (With trace  
of H??). ♀ immediately flees at him, attacks him, drives him off.

Both birds fly about. ♂ utters occasional single MPN.  
So, I think, does the ♀. ♀ supplants ♂ twice 6:09. ♀ also utters  
single HCN's from time to time. ♂ seems to have stopped DC compl  
etc.

Cyanerpes, May 17, 1963, II

(123)

In case my notes earlier today are not complete, I should add that the ♂ was always some distance from ♀ when he was silent and/or she was not reacting to him overtly at the time.

♀ goes down to feed 6:14. ♂ remains above, at least. Utters 2 "seeeet" DC Notes after ♀ leaves him.

Both birds up. ♂ utters several MPN's in flight. Also one HCN. ♀ utters several WH notes during some of these supplants.

Then ♂ utters quietly while ♀ flies around. ♂ utters several utterances occasional single DC "seeeet", MPN, or HCN which ♀ is not close. Also twice utters single DC "seeeet", looking at ♀, when ♀ lands near him. The ♀ is probably extremely frustrated to him!

Then ♂ utters WH notes and retreats. ♀ is near him. No trace of ft with these notes. 6:25.

During all or most of this period, both when silent and when vocal, ♂ has CR. Also very slight trace Black flff.

♂ utters alone. ♀ lands about 6" away. ♂ nudges toward her, hops over her, starts to nudge toward her again. ♂ utters WH notes during these approaches. Also has CR. But no other display patterns. ♀ flies off. ♂ relaxes.

Some of the ♂'s WH notes may be very low intensity.

♀ is definitely uttering MPN's as she flies about. 6:30  
♀ lands near ♂. He hops toward her. Utters WH notes, with definite brief ft. She looks at him. He stops display. She flies away.

Leaving myself 6:35 am as it doesn't look as if anything interesting will happen.

Orange

May 18, 1963  
Barro Colorado

2 ~~3~~ ~~4~~ ~~5~~ ~~6~~ ~~7~~ ~~8~~ ~~9~~ ~~10~~ ~~11~~ ~~12~~ ~~13~~ ~~14~~ ~~15~~ ~~16~~ ~~17~~ ~~18~~ ~~19~~ ~~20~~ ~~21~~ ~~22~~ ~~23~~ ~~24~~ ~~25~~ ~~26~~ ~~27~~ ~~28~~ ~~29~~ ~~30~~ ~~31~~ ~~32~~ ~~33~~ ~~34~~ ~~35~~ ~~36~~ ~~37~~ ~~38~~ ~~39~~ ~~40~~ ~~41~~ ~~42~~ ~~43~~ ~~44~~ ~~45~~ ~~46~~ ~~47~~ ~~48~~ ~~49~~ ~~50~~ ~~51~~ ~~52~~ ~~53~~ ~~54~~ ~~55~~ ~~56~~ ~~57~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ ~~63~~ ~~64~~ ~~65~~ ~~66~~ ~~67~~ ~~68~~ ~~69~~ ~~70~~ ~~71~~ ~~72~~ ~~73~~ ~~74~~ ~~75~~ ~~76~~ ~~77~~ ~~78~~ ~~79~~ ~~80~~ ~~81~~ ~~82~~ ~~83~~ ~~84~~ ~~85~~ ~~86~~ ~~87~~ ~~88~~ ~~89~~ ~~90~~ ~~91~~ ~~92~~ ~~93~~ ~~94~~ ~~95~~ ~~96~~ ~~97~~ ~~98~~ ~~99~~ ~~100~~ ~~101~~ ~~102~~ ~~103~~ ~~104~~ ~~105~~ ~~106~~ ~~107~~ ~~108~~ ~~109~~ ~~110~~ ~~111~~ ~~112~~ ~~113~~ ~~114~~ ~~115~~ ~~116~~ ~~117~~ ~~118~~ ~~119~~ ~~120~~ ~~121~~ ~~122~~ ~~123~~ ~~124~~ ~~125~~ ~~126~~ ~~127~~ ~~128~~ ~~129~~ ~~130~~ ~~131~~ ~~132~~ ~~133~~ ~~134~~ ~~135~~ ~~136~~ ~~137~~ ~~138~~ ~~139~~ 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Cyanerpes, May 18, 1963, II

(25)

Notes!!! At irregular but lengthy intervals. (Intervals much longer than in DC of Red-leg) Notes also comparatively soft - softer than note of Red-leg. Pretty supersonic ????. Still pretty fluffed, but legs spread.

Have to leave myself ca. 14 - 15

Bl. & Or. Kingbirds

January 1, 1963  
Above Induavi

SEE ALL NOTES ON GENERAL MIXED FLOCKS  
THROUGHOUT THIS TRIP

Today, I saw a form of Bl. & Or. Kingbird "song" never observed before. Long series of harsh "Trit"s. All same pitch. Repeated rapidly, but with a very slight wobble. The bird uttered these notes from a variety of apparently unrelated standing postures, while moving them at a moderately low level.

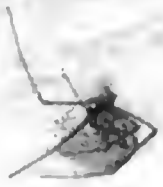
Also uttered brief R's. Some quite like R's heard at dawn in tone and loudness. Others soft and remarkably mechanical - round and humming-bird-like.

These R's seemed to be interspersed among the "Trit"s in a random manner.

I think that such series of harsh "Trit"s may be quite common among the birds here. I think that I have heard them before - probably many times. But unfortunately I always assumed that they were uttered by hummingbirds.

February 27, 1964  
Above Induavi

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS



April 26, 1963 II

(31)

the ground, not to fly

One bird utters "PN" while apparently alone  
at 5:45.

One bird utters "PN" by itself alone  
Prat. Utters other Wbl's without introduction

Neither bird has shown any sign of n.b. so far this morning.

One bird suddenly chases the other on ground. Both birds hopp  
ing. One bird utters long series of "PN" during chase! The other vocal  
izes by uttering "PN".

Continues to utter "PN"

Continues to utter "PN"

April 28, 1963  
Barro Colorado

Arrive Orange-bell cage 6:00 a.m.

Still dark. Birds moving about normally. One bird  
utters "PN" while alone. This flies about actively, uttering "Tut"  
notes. Then begins to utter Wbl's. Some Wbl's with "PN" with  
introduction. Uttered by bird while alone, i.e. far away from companion  
on, as usual.

Then an aerial chase. Accompanied by "Tut" - "Tuck"s  
Brief. Chased bird utters particularly hoarse "PN"  
"Inceaa", then Wbl's, immediately after end of chase.

Now, 6:08, birds just flying about normally. One bird  
utters quite a lot of Wbl's from time to time. Without introduction  
s. Usual postures

Memor, Apr. 22, 1963 II

32

Wbl's uttered both while perched and while standing or hopping on ground. Not uttered in flight.

The two birds are keeping as far apart as possible most of the time. Occasionally "supplanting" one another, but seldom coming very close in order to do so.

NOTE: I am a little confused about the "SN" patterns of this species. The notes I have been calling "PN" during the last two days of observations are almost certainly the same as the ones I called "Whe" during earlier observations. But I am not sure that they are exactly the same thing that I called "SN" earlier. Probably yes - but..... The "PN"s heard during the last 2 days have been slightly hoarse - at least most of the time. My notes would suggest that the "SN"s were not. Could the "PN"s heard during the last 2 days be intermediate between "real" PN's and HAC???? What has happened to the HAC patterns in the evolution of this species??? Is absence of HAC one of the characteristic features of the evolution of the Atlapetes - Pachyphaps group of bush-finchies???? If so, has this permitted the evolution of a hoarse quality in other non-homologous vocal patterns????



Thraupis, I

October 27, 1963

Below Huachuca

Jan. phase is yesterday morning

6:33. See single cyanocephala deep in very dense thicket. 5-10 ft above ground. Apparently alone. Utters persistent series of phrases like "Ja-zew-zew-zew-zew-zew"

6:40. Pair of cyanocephala in low thick scrub. One heard utter several "Ja-zew-zew-zew" phrases. I think it is some what repetitive.

One Thraupis is in scrubby area.

8:15. cyanocephala hopping thru very low open scrub. About 1 ft above ground. Utters a song phrase. Each "Tu-uh-tzee-tzee"

7350 ft 8:40. Duplets among cyanocephala. Lots of twitter and "Zee-wee" phrases. These phrases slightly different from the ones heard yesterday. Zee wee zee wee zee wee

Thraupis, I

January 24, 1964

Hono

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS

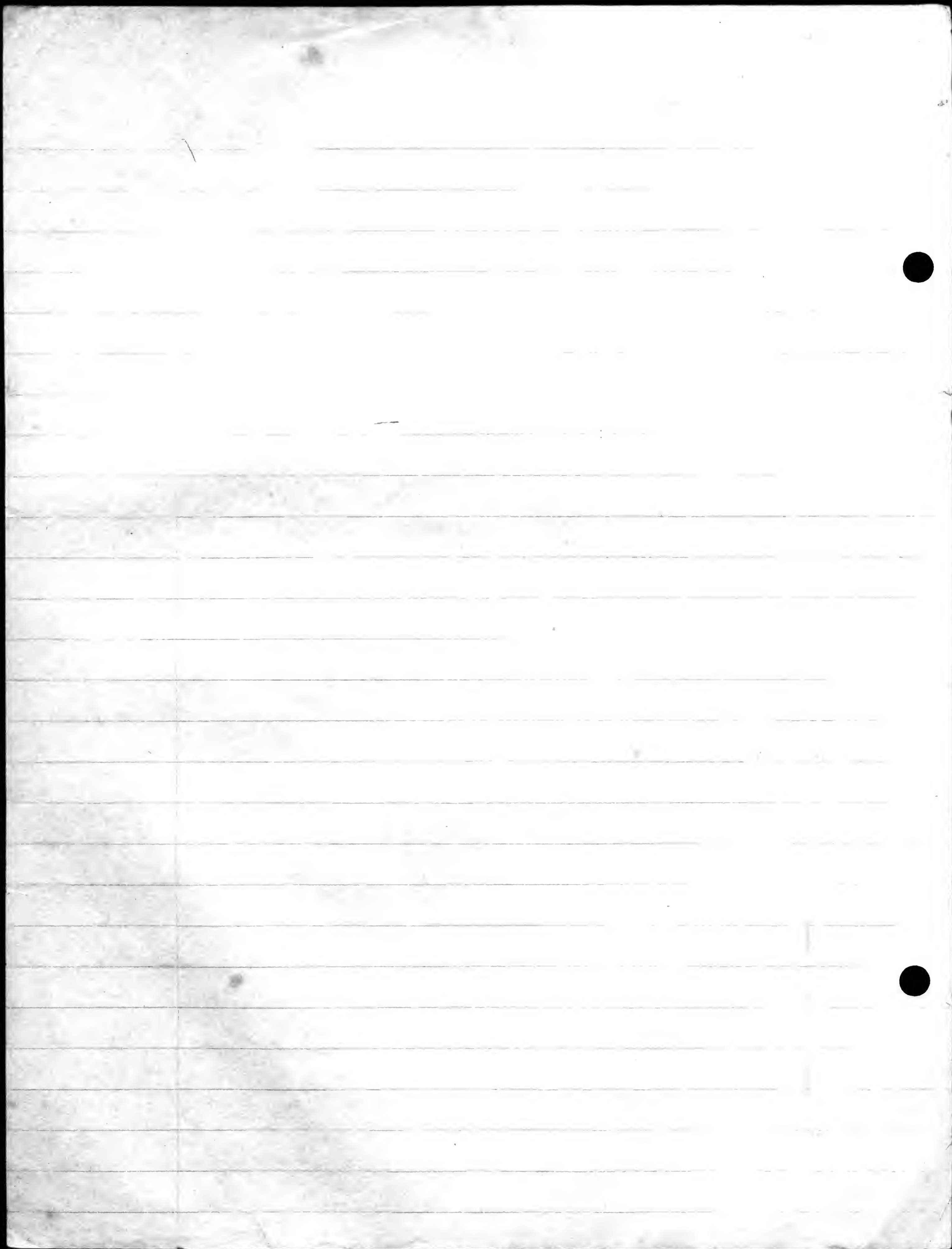
Thraupis, I

February 23, 1964

Mr. Cuzco

SEE TODAY'S NOTES ON MIXED DIGLOSSINI

Possible gregariousness among bonariensis





Head of crown rufous forehead black. White stripe on each side of black forehead

"me" is uttered "Tid" later, with "sonnet" ut. more, and also just trace "x" which in back near me

A few minutes later, I can hear Atlapetes like notes in neighborhood, without being able to see the birds. Very faint, thin, high-pitched "Ja-me-me see-see seeee seeee seeee" type phrases. Faint quality of calls quite reminiscent *Chrysomitris Atlapetes*.  
A few birds were singing quite close, not in mixed flocks

This will be no. XXXIV on list

Atlapetes I

April 8, 1963  
Mr. Sarma

Working on "tu" in this morning. A Pawi area, just below A Part. 6:06 am. Heard what is presumably local "P" song. "Kee-weet kee-weet" "weeet chuh-chuh"

kee-weet weeet chuh-chuh

kee-weet

kee-weet

kee-weet

weeet chuh-chuh

..... " Ad infinitum. Irregular mixture of syllabic whistles

Atlapetes, Apr. 8, 1963, II

(103)

with triplets of 3 descending notes. Intervals between notes in the triplets somewhat variable.

Bird uttering these notes seems to be sitting still without moving. Unfortunately can't see it. Bird hidden in bush, approx. 6 ft above ground.

This species presumably does not have DC pattern.

Song over 4:23, without my having gone to bush.

6:10 a.m. ~~Completely~~ further on heard another presumed "PL" uttering "Keeweeet keeyoo keeweeet keeyoo ... song, with occasional descending triplets inserted at irregular intervals. Again couldn't see bird.

NOTE: I might add that the general tone of all the notes heard this morning was apparently identical with that of the notes uttered by "PL"s actually being observed on previous occasions.

Atlapetes, I

October 24, 1963  
Bolivia

SEE ALL NOTES ON GENERAL MIXED FLOCKS THROUGH-  
OUT THIS TRIP

This morning I worked below Anduani, in the Yungas, ca 9000-9550 ft. Lots of what I suppose is a subspecies of rufi-  
nucha (XXXVIII) around. Usually in pairs. Probably breeding.

8:10 a.m. See one or (much more probably) two of these rufinucha a landing low in bush. Accompanied by "zee zee zee zee zee zee" type vocalization. Presumably "greeting" like that of Quito birds.

Atlapetes, I

October 25, 1963

Below Induani

Working this morning same place as yesterday morning.

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS

A few incidents were particularly noteworthy.

6:05 a.m. Hear a rufinucha singing. All phrases essentially identical: "Whee choo chew chew chew"



Sometimes an extra "chew" was added at the end.

No R component in this song.

Usually see the bird. In low branches of a tree 10 ft above ground. Also sings from other sites before and after.

The birds around here seem to be highly motivated in general. These song phrases may be the highest intensity songs of the local population.

Ca. 8:30. See a pair of rufinucha. One with something (n.m. ???) in bill. Found in bush, about 10 ft above ground.

After "quieting": "zee zee zee zee zee zee - R"

October 26, 1963

Atlapetes, I

Below Induani

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS



Atlapetes Oct 27, 1963, II

(103)

The "torquatus" song was to sing for some time. Their response is very similar to the "at" at least at times.

They do not "sing" together.

I believe also utter many of the number of "Tut" notes as Chlorophanes songs.

Why is the "song" of these birds so different from the "songs" of torquatus near Quito ???

These birds were found in very thick low scrub near the side of the road. A pair of local refinucha was also seen in the exact same same dump of scrub at just a short distance but they were neither an adult nor juvenile at the time that the "torquatus" were singing.

The local population of refinucha also vents lighter or sparser scrub than any I have seen "torquatus" in. Individual refinucha also go higher in trees than any "torquatus" I have seen. (As noted before, refinucha are almost bush-trowsers in their habitat.)

The fact that the refinucha did not sing at the same time as the "torquatus" is suggestive. Is there some type of mutual inhibition between these species, comparable to the mutual inhibition on between species of Diglossini in some areas? (If so, it might be further evidence that the Diglossini and the bulbifera are fairly closely related.)

SEE ALSO TODAY'S NOTES ON GENERAL MIXED FLOCKS

October 31, 1963, Mr. Anduani

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS

Atlapetes I

January 24, 1964  
Atlixo

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS

Atlapetes I

January 25, 1964  
Atlixo

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS (descriptions of rufinucha feeding on flowers by Diglossini methods)

Atlapetes I

January 29, 1964  
Atlixo

SEE TODAY'S NOTES ON GENERAL MIXED FLOCKS

It was my impression, this morning, that the songs of rufinucha seemed to be positively correlated with some of the whistles (presumably the "song" whistles) of torquatus. I.E. when one vocalized, the other tended to do so simultaneously. But I am not sure about this. And I have no idea which species was the actor and which the reactor.

Atlapetes I

February 4, 1964  
Below Palca.

Working low, ca. 8700 ft. Rainy.

6:50 a.m. See single Atlapetes. Alone. Obviously schistaceus. Presumably taczanowskii (I didn't notice black and white on the fore-



Cyclaris

April 16, 1962  
Cerro Punta

Puffin-browed Peppershrike = ~~XXXXX~~  
I suddenly became aware of one of these birds at 8:13 a.m., near the upper pasture. Singing. Loud in harsh-like phrases. At first, the phrases were rather long. More or less comme ça: "Sub whee ta-whee whee too-uh-wuh" Some variation. Gradually becoming shorter as morning wore on. By 8:50 a.m., the bird was uttering but ~~the phrases were~~ strictly homogeneous with the howlers of other species. Each phrase was always separated from preceding and succeeding phrases by a very definite pause. Intervals of silence probably always longer than the phrases themselves. Around 8:40, the bird was uttering approximately 5 phrases per minute, but I think that it was uttering phrases slightly more frequently earlier. When I first became aware of the bird, it was sitting, not exposed, in a moderately dense tangle, approximately 25 ft. above the ground. In more or less erect, apparently unritualized posture. Then it moved farther away and I never saw it again. Obviously singing from several different perches.

This bird was apparently alone throughout the performance. I think such songs are probably not hostile. Probably produced by the starting of some sexual drive(s).

Cyclaris, I

April 17, 1962  
Cerro Punta

Alone in upper pasture 6:05

Aydavis, Apr 7 1952

What is probably the local pepper-shrike song  
a m. A burst of about 10 phrases. Toughest phrases are  
less "Ja-hah-ta-weee-ya-weee-ya-weee-ya-weee-ya-weee"  
phrases shorter & softer, but apparently generally similar. The  
shuts up within a few minutes.

So this species is not a "Ja-hah-ta-weee-ya-weee-ya-weee-ya-weee"  
Hear a few phrases of Pepper-shrike song. Like the ph.  
and heard earlier this morning. In the ph. heard earlier this morning.

Working down on Lewis's place this afternoon.

4:20. Hear a few phrases of Pepper-shrike song, more  
less like song heard yesterday. "Ja-weee-ta-weee-yoo" or  
"Ja-weee-ta-ta-weee-yoo" Bird shuts up after a minute or so.

Then a couple of more phrases "Ja-hah-ta-weee-yoo"

This type of song is most easily distinguished from a true song  
by the fact that the individual phrases are always separated by distinct  
pauses.

Then a long "duet" between 2 birds. First I hear a lot of phras-  
es from one tree "Ja-hah-weeyoo" Relatively unvariable. Then one  
bird flies out of tree into a tree about 50 ft away. Apparently left at  
least one bird in old tree. Then the bird who flew out and the bird  
who remained behind do a duet. Sometimes alternating a single phras-  
e each quite nicely and regularly. Sometimes overlapping a bit,  
one starting a phrase immediately after the other has begun one.  
This continues for at least a minute. All phrases essentially identical  
like phrase described immediately above. After some time a 3rd bird  
also utters a few phrases in distance. Both "Ja-hah-weeyoo"s and  
"Ja-ha-weeyoo-weeyoo" Eventually bird who flew out of tree  
shuts up and disappears. 4:35 p.m.

Sp. 177 Apr. 17, 1905, II.

The only bird in the vicinity that flew out of the tree. It flew over the tree and was attracted between the phrases. It flew in a considerable extent as each phrase was uttered. Probably, naturally, in a more or less horizontally horizontal

The whole performance was quite regular. A few seconds after duet has stopped, the remaining bird (the victor?) starts uttering "Ja-who-ta-ha-who" phrases. Usual rhythm. Continues for a few minutes and then moves off. I can still hear it still after

It is possible that all these phrases may be homologous with some small "Howlers" or "Day Song" of other species. I shall call the bird that remained in tree "A"

A still singing regularly in distance 4:52. Phrases now sound more like "Ja-ha-swee-yoo"

The variations in these phrases are particularly reminiscent of the variations in the Howlers of BCBT's

All birds completely silent by 4:56. Still silent 5:15. This may be further evidence that phrases were correlated with dispute. If they were attempts to attract mates, one would expect them to continue longer

Another burst of phrases 5:45. About 6. Probably by A. More or less "Ja-wa tee-ta-wa". Apparently alone feeding. Moves off. Gives a few very abbreviated phrases. No more than "Ja-wa" or "Tee-wa". Then back. Utters more "Ja-wa tee-ta-wa" phrases.

The general proportions of these birds are quite Alouatta-like. Also general tone coloration

Cyclaris, I

April 18, 1962  
Cerro Punta

Working in Lewis's place this afternoon.

Come across a Pepper-shrike at 2:30 p.m. Immediately begins to utter song phrases "Whee-~~to~~ whee-~~to~~ yoo" Unfortunately I can't see head & neck. I am standing in a grassy area. A few seconds after starting this phrase, another bird some distance away starts to answer by uttering similar phrases. Then my bird flies away, and both fall silent.

Come across another of the same bird 3:40 p.m. Utters "Whee whee to-whee-yoo" phrases. Hopping from tree to tree. Obviously reacting to me. (So these "Whee whee to-whee-yoo" phrases were almost certainly hostile, and may have been produced when escape was relatively strong.) Uttered phrases when neck was stretched up to an appreciable extent; but did not seem to raise neck higher during phrases than between phrases.

All the phrases uttered during this reaction were essentially identical. Once a bird of this species starts to utter a particular type of song phrase, it usually or always continues uttering same type of phrase for some time.

Are the different types of phrases really produced by different types of motivation ????

This bird also uttered little series of 2 or 3 short sharp notes between song phrases. Probably when hopping from perch to perch. Quite loud and harsh. Might be transcribed as "Chuck". Presumably CN's or (more probable) SHN's

4:35. Another Pepper-shrike begins to sing. This bird is a

Cyclarus, Apr. 18, 1962, II

(5)

most certainly not distinguished by me. All its phrases are more or less "Ja-swee-uh to swee-uh to-a-weeyoo" uttered about 10 phrases then flies away and shuts up. Then utters a few more abbreviated phrases. Then shuts up again.

This species is almost always very difficult to see. Usually stays near tree-tops, but just under or below top layer of leaves.

5:40 p.m. Now a bird is repeating "Whe-a-in in wheeoooo" phrases. Probably a reaction to my appearance. Bird eventually moves off. These songs must be hostile.

Cyclarus, I

April 19, 1962

Cerro Punta

Working just below upper pasture this morning

I did not hear a Pepper-shrike until 8:50 a.m. this morning! Then a bird began to utter relatively long phrases, more or less like the ones heard on April 16, 1962. Probably the same bird as the one heard on Apr. 16th.

All the songs I have heard so far would certainly seem to be "day songs".

Working along ravine just above upper edge lanes this afternoon 4:35 p.m. Suddenly find myself face to face with a Pepper-shrike in a nearby tree. Bird just looks at me. Then starts to hop away, pausing to look at me again from time to time. While paused, occasionally looks straight down, "Herabstauer", for a second or so. Once BW's "instead". Then, after it has moved approximately 10 ft away from me, utters 5 or 6 song phrases. Softer than usual, but otherwise indistinguishable. Moderately long. Ending in usual "weeyoo." Uttered from

Cyclaris, Apr. 17, 1962, II.

perfectly normal, rather upright, sitting posture. Feels not stretched or  
soured!

Cyclaris, I

April 20, 1962  
Luis Pente

Amir ... 5 ... still dark  
and Pepper ... heard 6:22 am. Bird after some  
Relatively long phrases uttered in usual rhythm. "When about to ...  
oo"s. All essentially identical.

Same bird still singing similar phrases 6:37. Some phrases  
more abbreviated than earlier. But not all. Bird tends to utter some  
slightly abbreviated phrases, then some longer phrases, etc.  
Bird finally shuts up 6:38 am.

Chlorospingus, I

April 17, 1962  
Cerro Punta

Working just below upper pasture again this morning.

4  
4  
4  
4  
In the morning I watched two incidents performed by the same bird or two different birds which I was sure, at the time, was (were) a Sooty-cap(s). But the light was very bad at the time, and I found a Brown-cap in the area later. So I can't be sure of the identity of the performing bird(s). Nevertheless, the incidents are described below.

? 6:20 a.m. Two birds apparently feeding in high vegetation. Then one (specific and generic identity unknown) flies away. The other, apparently a Sooty-cap, remains behind, perched on top of a high bare branch. Immediately begins to utter "Tut tut tut tut ...." With lots of fluffing moves, but no ♀. Continues almost 5 minutes. Then flies away.

? 6:40 a.m. A single Bush-tanager, apparently a Sooty cap, flies to a high exposed perch (about 30 ft from tree in which a bird uttered "Tut" notes earlier). Acts "watching" in usual Sooty cap fashion. Most of the time quite silent. But just after landing it uttered a "Tsecret" notes!

Chlorospingus, I

April 18, 1962  
Cerro Punta

4  
4  
4  
4  
Much to my surprise, I saw a Brown-cap attracted to a dispute among Yellow-throated Bush-finches this afternoon at Lewis's place (see today's notes on Atlapetes).

Chlorospingus —

September 6, 1962  
Teleferico #1

Will! Will! There are ~~is~~ a real form of the  
BCBT here.

Came across a pair of these birds at a 40 pm, below station.  
They may have been taken on ~~some~~ ~~part~~ of ~~the~~ ~~same~~ ~~day~~ ~~as~~ ~~the~~ ~~birds~~ ~~that~~  
included ~~of~~ ~~Albi~~ (see today's notes on ~~mixed~~ ~~Diglossini~~).

These birds look rather different from the ~~Chlorospingus~~ form.  
Caps are blackish. There is a white mark around eye, ~~more or less~~  
the same shape as the corresponding mark of the ~~Chlorospingus~~ birds. But  
these birds also have a separate white spot behind eye.

I shall mark notes on this form ~~with~~. Presumably the  
subspecies is

~~###~~ The birds utter lots of "Tid" and "Tsect" while sitting  
about in trees near me. Then disappear.

Interestingly enough, there was a squirrel in a tree about 20  
ft from them. Reddish brown body & head, bright rufous tail with  
black tip. Perhaps this species has a fatal attraction for squirrels?

Chlorospingus, I

September 17, 1962  
Teleferico #1

1:15 pm. Come across a large mixed flock, slightly above station  
(see today's notes on mixed ~~Diglossini~~). Including BCBT's

These birds did not have a second white spot behind eye.  
Was the second spot seen yesterday only individual variation? (I saw  
several birds today. All similar. No second spot. But they all had bl



Slightly brown caps (see today's birds)

These birds (see 2nd lot) rather soft glaucous "fack" or "fackat" notes. Nothing like anything I've seen - different from the BCBT's of Chiriqui?

These birds may have been acting as the "nuclear vanguard" of the flock but not as conspicuously so as is usually the case with the Chiriqui BCBT's.

Is this form less important than the Chiriqui BCBT as a genuine nuclear species simply because it is less noisy ???

Chlorospiza

September 22, 1952  
Road to La Aguaita

Common local BCBT's several times this morning.

7:10 a.m. 7600 ft. One bird with a mixed flock. Included some unidentified warblers (s) and flycatcher (s), as well as one bird that was probably a WM Atlapetes. BCBT not noisy; normally completely silent. Remained low in tree (about 10-15 ft. above ground, while the presumed Atlapetes went into shrubbery).

8:08 a.m. 7500 ft. See a single BCBT. In top of low second growth scrub, quite far from trees. Uttering soft "Tuck"s or "Tut"s. This bird may or may not be associated with a single Hirundo scapularis which turns up in the same area a few minutes later.

The local BCBT's seem to be remarkably quiet. Presumably correlated with their (apparently) minor importance in mixed flocks.

Both BCBT's seen today were lacking the "second" white spot on the sides of the head

Delonchura I

(72)  
October 25, 1962  
Ojai, California

The local subspecies of Delonchura here is flaviceps  
= ~~flaviceps~~

It seems to be an important part of a mixed flock  
(see today's notes on mixed flocks) and I have never seen more  
than 2 birds of the species together.

Two BCBT's seen in one mixed flock today at 10:50  
ft., may have been parent and young. One of the birds follow-  
ed the other, uttering "3 heeet 3 heeet 3 heeet 3 heeet  
3 heeet ...", and performing occasional Q (from apparently  
unintentional postures).

Other BCBT's seen in mixed flocks may have uttered  
lots of single "heeet" notes and/or long R's (without flourish-  
es).

I did not see any BCBT's today which I could definite-  
ly classify as being apart from mixed flocks.

Chlorophanes, Jun. 13, 1962, I

(27)

Listed below are comments on individual cop attempts.

1-3 Obviously unsuccessful

4. Obviously unsuccessful. The ♂ BV's repeatedly immediately after the attempt.

5. Obviously unsuccessful. ♂ utters brief R after attempt.

6. Obviously unsuccessful. The ♀ begins to peck and pull at plant fibers immediately after attempt. Apparently first sign of n b!

7 & 8. Obviously unsuccessful. ♂ utters brief R after one of the attempts.

9 & 10. ... ♂ utters brief R's both before and after both attempts. (These R's, and preceding ones, accompanied by moderate V-G-eff.)

11. 6:55 a.m. Possibly successful. For the first time, the ♀ remains in extreme BV-TV for several moments after ♂ dismounts.

12. 7:00 a.m. Probably successful. ♀ remains in BV-TV after ♂ dismounts. ♂ also goes into BV-TV immediately after dismounting! Posture like that of ♀. Extreme Wings spread horizontally, vibrating slightly but not too rapidly. No Waa. Both birds silent, stand wing side by side, only a few inches apart, facing in same direction. Then ♂ utters brief R, flies away ♀ relaxes. This was also very reminiscent of Rauphocelus!

13. Brief and obviously unsuccessful. No special post-cop. reactions.

14. A few minutes after 13, the ♀ begins to peck at n.w. (leaves) again. The ♂ flies to her immediately, behaving in usual pre-cop fashion. But ♀ does not display. ♂ does not try to mount, flies away immediately.

Chlorophanes, June 13, 1962 II

(28)

15 & 16. ♂ approaches as usual; ♀ displays but ♂ flies off without attempting to mount.

A few minutes later (7:05 a.m.), ♀ starts peeling at and picking up leaves energetically.

17. Like 15 & 16, except that the ♂ utters brief R's while approaching ♀.

18. 7:06 a.m. Like 15 & 16.

19. Like 15 & 16.

20. Like 15 & 16 again, but ♂ BW's afterwards, 7:08 a.m.

21. Like 20.

22. ♂ only starts to approach ♀, uttering a few "Tsee"s as he does so.

7:10 a.m. An appreciable pause in activity. Birds moving about silently. Completely relaxed. Then ♂ starts to preen. ♀ plays with leaves again. Drops each leaf picked up.

23. 7:17 a.m. ♂ approaches ♀. Uttering notes intermediate between typical "Tsee"s and typical "Tut"s. Not prolonged like typical "Tsee"s. ♀ does not display. ♂ flies away.

7:20 a.m. Leave myself.

Chlorophanes, I

June 14, 1962  
Barro Colorado

Arrive to watch birds approx. 5:30 a.m.

Still too dark to see much. Can hear 1 bird uttering occasional "Tsee" notes.

Then birds go back to sleep sitting approximately 1 ft apart. Then ♀ wakes up, flies off. ♂ stays behind.

♂ quit uttering notes from side to side. No trace of song or DC. Then sits on top of perch, uttering soft notes. "Tut" is?

♀ also utters occasional "Tut" (indicated from ♂)

♂ is sitting far apart from ♀ now. Small, silent. Apparently feeding. ♀ still uttering occasional single "Tut".

♀ advances toward ♂. ♂ retreats. ♀ flies away.

♂ and ♀ now in opposite corners cage. ♀ preening. ♀ still utters occasional "Tut" at irregular intervals. ♂ utters occasional

"Tut"s, "Tut"s, and (at times) its notes at regular intervals.

No trace of song or DC. ♂ sits in any way.

♂ sits in corner, looking outside cage, uttering very soft "Tut"s at rather regular intervals. A vestigial trace of DC ??? sitting more or less erect. Looking from side to side. Performing occasional fluffing movements. Feathers of head and neck arranged so that black is only relatively small facial mark.

Continue on



Then ♂ suddenly flies to ♀. Utters 3 or 4 "Tut" Notes in flight. ♀ does not display. Jabs at him. He flies away immediately. Back to corner behaving as before.

♀ suddenly supplants ♂. ♂ apparently utters 3 "Tut" Notes, in rapid series, as he flies off.

The ♀ would certainly seem to have become somewhat

Again ♀ supplants ♂. No display.

Both birds uttering occasional "Tset" notes as they fly about cage. Then ♀ supplants ♂ again. He flies off uttering "Tsee-tatsee-tsee-tsee". Apparently another series of "Tsee" notes.

It would seem that "Tsee" is in most contexts a hostile component. Another resemblance to "Tset" of other species.

Again ♀ supplants ♂. This time ♂ utters a "Tset" note as he flies away.

♀ now flying about, not particularly close to ♂, uttering lots of "Tset" notes. Not in rapid series.

Then ♀ supplants ♂ again. He flies off uttering short series of "Tsee" and/or "Tset" notes. Again ♀ supplants ♂. This time he flies off reluctantly. Again ♀ supplants ♂. This time he flies off, uttering "Tsee-ta-see" (I don't think that such series of notes, containing "ta" components, are really very different from series of pure "Tsee" notes).

Both birds still uttering "Tset" notes as they fly about. These notes almost appear to be CN's!!

The black of the ♂ of this species may be a hostile signal, but it does not seem to be an indication of alarm, like the black of the RLBH. At no time this morning has the ♂ depressed the green feathers of nape and neck in order to emphasize black, in spite of the fact that he is so obviously subordinate to the ♀.

The ♀ is now uttering many more "Tset"s than the ♂. 7:00 a.m. All "Tset"s loud. The ♂ has quite stopped his DC-like series soft "Tset"s (actually he stopped it a long time ago).

The ♀ has been seen only once before or collecting in the morning. All other behaviors observed are closely correlated in this species.

♂ 3014 "free" notes (unlike components) when flying by ♀.

♀ still supplanting ♂ frequently. Usually no display.

Once ♀ flies to ♂. She utters one long "Tseeeeee" note as she does so. ♂ retreats. But a few moments later he suddenly flies to her. Starts to mount. Utters "Tse" notes & brief R as he approaches. She flies away. ♂ mounts her and tries to cop. ♀ slips off. Utters R facing ♀, then flies away. (Both R's during this incident were accompanied by slight trace of V6-Hff.)

Then, during next 2 minutes, ♂ flies to ♀ twice. Utters "Tse" notes & R both times. Tries to mount both times, but ♀ flies away both times without display.

Then again. Just as before!

It looks very much as if this sudden outbreak of overt sex by the ♂ was released by the long "Tseeeeee" uttered by the ♀.

Now both birds quiet.

R may be considered a "usual" part of the pre-cop patterns of this ♂. But quite possibly not a usual part of the pre-cop patterns of ♂'s of well-mated, long-established pairs. Is this another resemblance to Ramphocelus??

Another thought has just occurred to me. Could the R-Rsp performances of this species be homologous with the PR-"seyah" patterns of the Yellow-rumped Tanager?

♂ suddenly approaches ♀ again. Utters some "Free" notes as he does so. ♀ doesn't respond in any way. So he flies off.

♂ catches insect. Mandibulates it. Then flies to ♀. Utters series "Free" notes in flight. Insects right beside ♀. Feeds directly in front of her and gives her the insect. She eats it happily. Both birds quite silent during ritual transfer of food. The ♀, in fact, did not display in any way at any time.

♂ again flies to ♀, uttering "Free" notes. ♀ does not respond in any way. So he flies away.

Again ♂ feeds ♀ just as before. ♂ uttering "Free" notes while approaching. No ♀ display of any sort.

♂ has never attempted to mount ♀, or shown any indication of desire to do so, immediately after feeding her.

Again ♂ approaches ♀ with "Free" notes. No insect. No response. ♂ flies off.

The ♂ has never BW'd after any of these unsuccessful approaches to the ♀.

Birds now back behaving as before. ♂ sitting quietly. ♀ flying back and forth uttering "Insect" notes. ♂ does not respond in any way when ♀ lands approx. 1 ft away from him.

Again ♂ flies to ♀. Utters "Free" notes, accelerating almost to R. This time ♂ feeds ♀ twice. (Regurgitating.) ♀ accepts food willingly, but does not display. ♂ flies off.

Back again almost immediately, as before. Again feeds ♀. Whole process exactly as before, except that the ♀ is only fed once.

Again! Just as before. This time ♀ fed twice again.

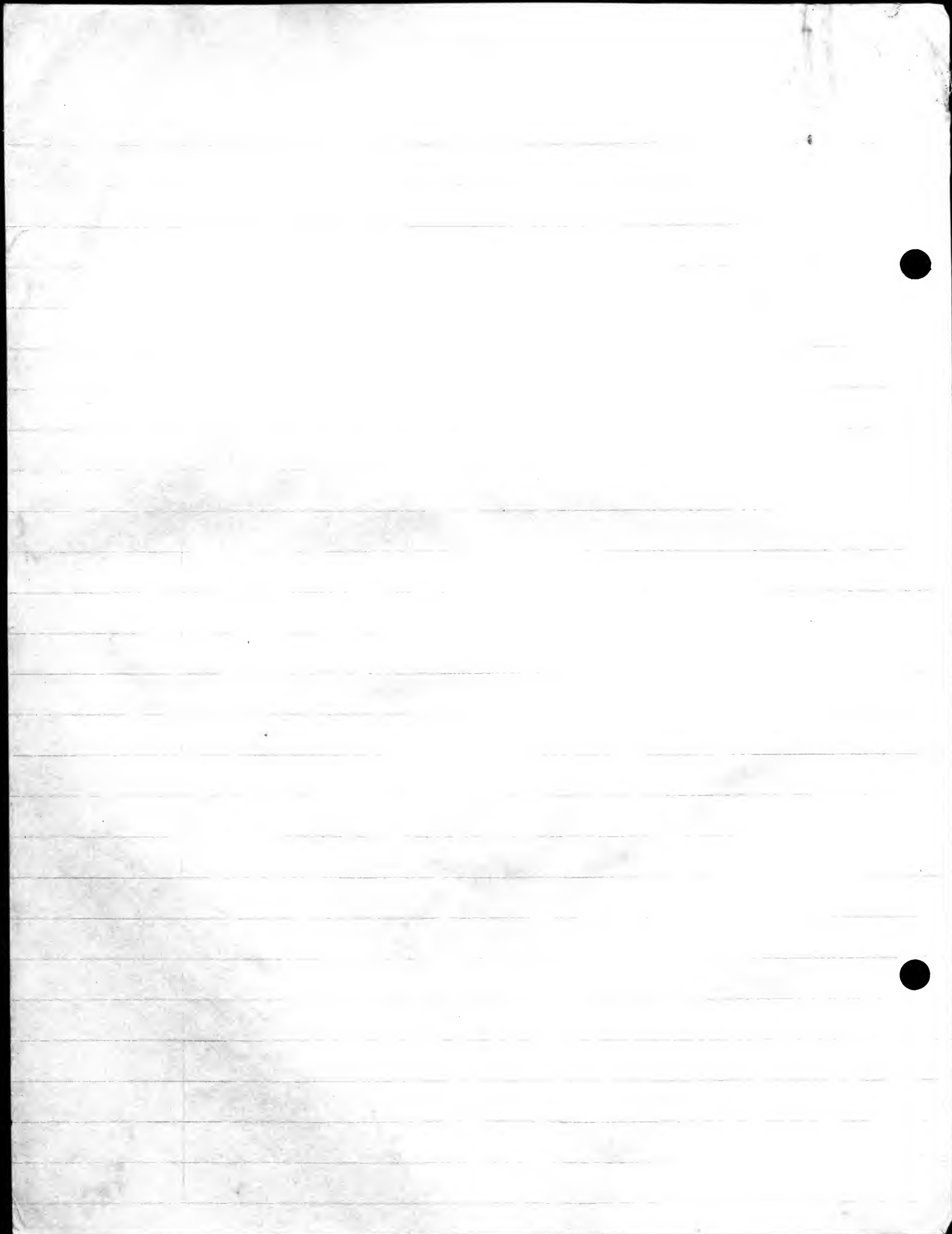
Twice ♂ approaches ♀ with pure R. No insect. No response.



Chlorophanes, Jun. 14, 1962, IV

(33)

Leave myself 8:10 a.m.



Butorampus, I

October 26, 1962  
La de Agua Bonita

4.40 am, 8350 ft. In second growth. Lots of scrub and scattered trees

Birds have black heads and throats. Otherwise gray blue above, yellow below (with stripe of gray blue extending from back to legs). Reddish eyes

Observed B. montana (possibly B. m. cucullata) = ~~XXXX~~

Characterized series of "Isit" notes in flight. Usually 4 or 5 in a series. Loud and "raucous." They also uttered similar notes while feeding on berries in tree, 20 ft. above ground. Also one "Isit" note.

?  
? ?  
? ?  
All morning I heard loud, rather melodious, snick-like songs in the neighborhood. "Duh duh-whuh duh-whence."

Probably uttered by same birds.

Butorampus, I

November 3, 1962  
Munclique  
Western Andes

Ca 8500 ft. this morning I saw two groups of birds which appeared to be B. montana. In adjacent areas, at different times. First group composed of 5 birds, second composed of 2. The

Buttercups, Nov. 3, 1957 II.

Latter had probably been part of the first group in ...

The 5 birds of the first group flew energetically from the top to tree-top. Apparently feeding. Apparently not disturbed by me. The trees they preferred were part of a rather open, scrub growth, grove by the road. 20-25 ft tall.

Some or all of the birds of this group were very noisy. Uttered a great variety of calls. Difficult to tell which calls were uttered by perched birds and which by birds in flight.

They uttered a number of series of notes like those described above p. 1. "Tseect tseect ...". Or, perhaps better, "seeee seeee seeee ...". One to 5 notes in series. Some of these series certainly uttered by flying birds.

They also uttered series of one to five different notes. Most typically "Zreeee-ueeee Zreeee-ueeee ...". Loud. Remarkably urgent-sounding.

These latter performances seemed to intergrade with "seeee seeee ..." performances. Intermediate notes such as "Zheeee-ueeee". Sometimes uttered in series of themselves alone; sometimes uttered, singly, in series of "Zreeee-ueeee's".

Once, a bird uttered a single loud harsh "Zmaaa" Note. This was probably uttered by a perched bird.

Once, a bird uttered a distinctive "Kha kha ba ba". Didn't see the circumstances of this performance.

The two birds of the second group were separated most of the time I saw them. One bird perched alone in tree. Probably uttered series "seeee" Notes as it came in to land. Then uttered "Zreeeeeee Zreeeeeee Zreeeeeee ...". Notes as well as "Zheeee-ueeee's".

Butorpus, Nov. 3, 1962, III

(3)

These flew off with water

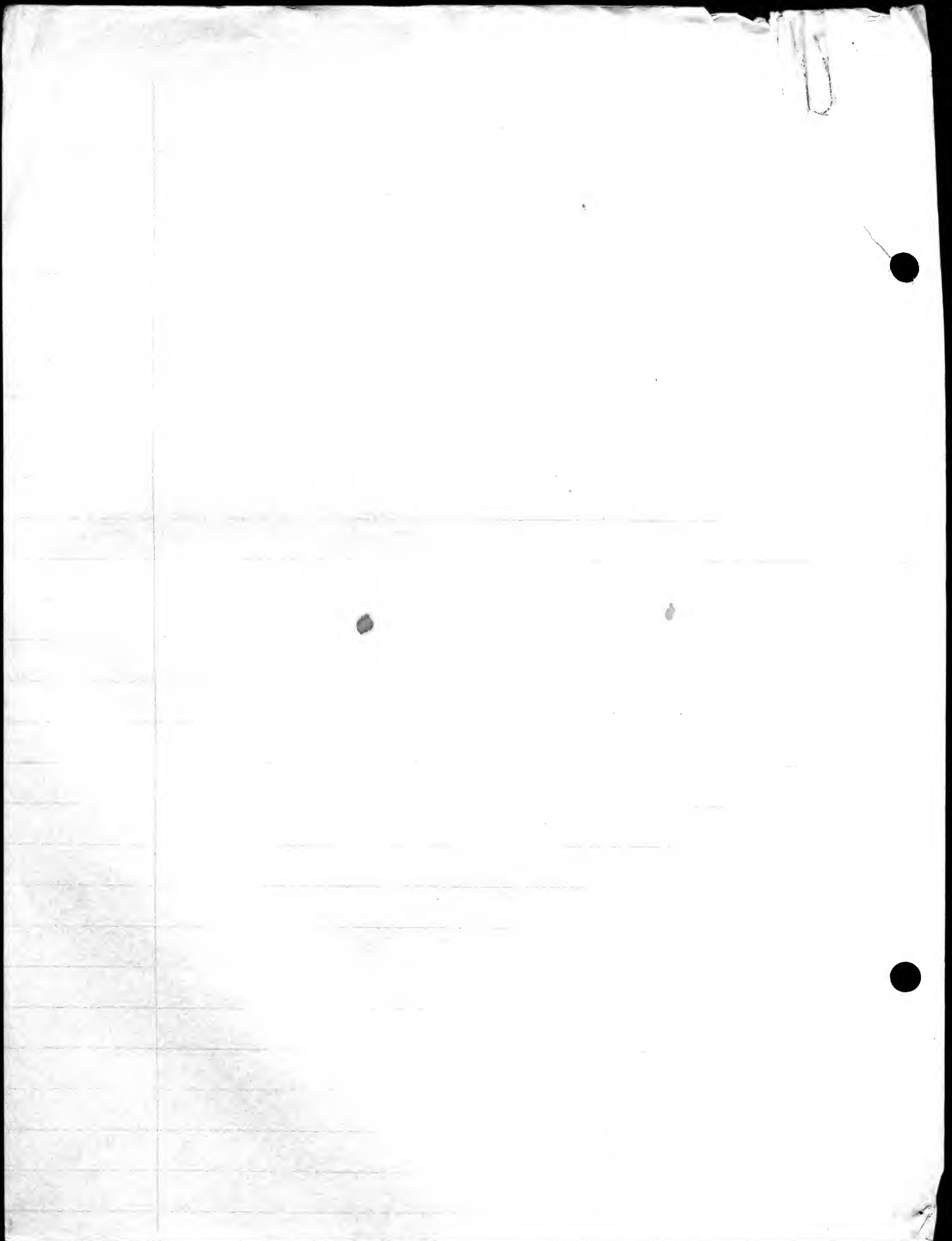
Some of the Butorpus seen today were associated with a  
display of Butorpus.

But the vocal repertoires of these species, Thraupis  
ujacensis, T. bonariensis, and Compsozoma flavinucha may  
all be very similar. Possibly also Poecilothraupis spp.

There must be considerable competition between the various  
species of "blue and yellow" tanagers in various parts of the Andes  
of South America. This may help to explain why none of them show  
as specialized inter-specific behavior as the presumably closely re-  
lated PT & BT. (Incidentally, how does Tangara fit into  
this group ????)

October 16, 1963  
Above Urdunavi,  
Bolivia

SEE TODAY'S NOTES ON MIXED FLOCKS!



Parus I

November 2, 1962  
Havas  
Western Andes

7:25 a.m. 6275 ft. Very wet, apparently mature forest  
One or (probably) two C. favinucha ("BYB") = ~~XXXXX~~  
feeding on tops of trees, about 30 ft above ground. Taking berries.  
Utters "Tsit"s, either single or in variable, short, not very accelerated,  
series while feeding. Then are then accelerated, into W-Till, in flight.  
I think that some of the birds also utter "see see see see see see see see see see" when moving up to land  
near partner.

There were a number of other tanagers in nearby trees when these  
birds were feeding, but the BYB's didn't appear to pay any attention  
to them - or vice versa. (One of the other species around was the Tangara  
XXVI.) Quite different from the BYB - Blue & Black etc. groups  
in Central Andes near Medellin.

7:27 a.m. A few feet further on, see a single BYB (the same?)  
feeding on berries top of tree. Utters a few single "Tsit"s, otherwise silent.  
Again alone.

7:30 a.m. A few feet still further on, see pair of BYB's (the  
same?) feeding on insects on leaves in top of tree. Quiet. There are lots  
of other birds in nearby trees. Not reacting with BYB's very obviously. It  
is difficult to tell if this is mixed flock or not. Certainly less cohesive than cen-  
tral part of flocks seen near Medellin yesterday.

7:50 a.m. Considerably further on. Pair of BYB's. (Almost cert-  
ainly different. Feeding on berries top of tree (From the leaves, this appears

Comptosoma I

to be a melostomus. "Berris" may actually be birds  
usual "Tut"s Birds more or less alone (Pair of birds  
about 30-40 ft away.)

Retracing my steps 8:30 am

8:45. See a single BYB feeding in top of tree, about 25 ft above  
ground. Utters single "Tut"s. Tree not very tall. Bird apparently pick-  
ing up insects off leaves.

8:46. Several birds feeding on one single tree (small). Other  
birds around, but not reacting with the BYB in any obvious manner.  
(Most of the other birds nearly seem to be unpaired Catherus. Many off  
in different direction from the BYB.)

8:55 Further on (again) see single BYB feeding top tree. There  
is one Catherus feeding in same tree about 25 ft away. It flies away a  
minute or so after BYB arrives. BYB stays behind.

All these notes would seem to suggest that BYB's are less often  
associated with other species here than further north in the Central Andes.

Comptosoma, I.

November 3, 1962  
Tamanique  
Western Andes

SEE TODAY'S NOTES ON MIXED FLOCKS

One or more of the bird(s) with the mixed flock today appeared to  
utter a series of notes which may have been homologous with the "see  
see see see..." series described above, p. 1, but slightly more elab-  
orate. Each note of series definitely at least slightly tri-syllabic



Each of these notes might possibly be transcribed by something like "Tut-tut-tut"

November 5, 1962  
Alaska

There is a small flock or family group BYB's here (no today's notes on mixed flocks) 6:10 a.m. One or more of the birds utter(s) rapid "zee zee zee zee" notes in flight. Notes much shorter, more rapid than those of the other species. Series of 4 or 5 notes. (The notes transcribed as "zee zee zee" here are certainly the same as the notes transcribed as "see see see" in my account of Comptosia on Nov. 3, above. "z" or "s" may be equally accurate as transcriptions.)

"CN"s of the birds here could be transcribed as either "Tut" and/or "Tub". Uttered singly or in little series of 2 or 3 notes.

6:50. Have seen same group again & again. Probably includes at least 5 birds.

Series "zee zee zee" Notes extremely variable. Sometimes short, sometimes very long. Sometimes, apparently, accelerated into trill. Usually or always uttered in flight or as landing call. Sometimes, perhaps usually, "greeting". Notes occasionally intergrade with "CN"s. Variants, in short series, might sometimes be transcribed as "Whit"s. Speed of series extremely variable. Longer series usually, but probably not always, more rapid than shorter series.

Comptosia, New York

(9)

S

This group seems to have quite limited home range

S

None of the birds are in conspicuously juvenile plumage

~~||||~~

I suppose this species is quite closely related to Butoropus montana

na.

~~||||~~

A common sequence of notes is a few "N"s, starting slow, and then accelerating into "zee zee zee..."