

GREENBERG

BELIZE

1984

7530-00-222-3521

FEDERAL SUPPLY SERVICE

(GPO)

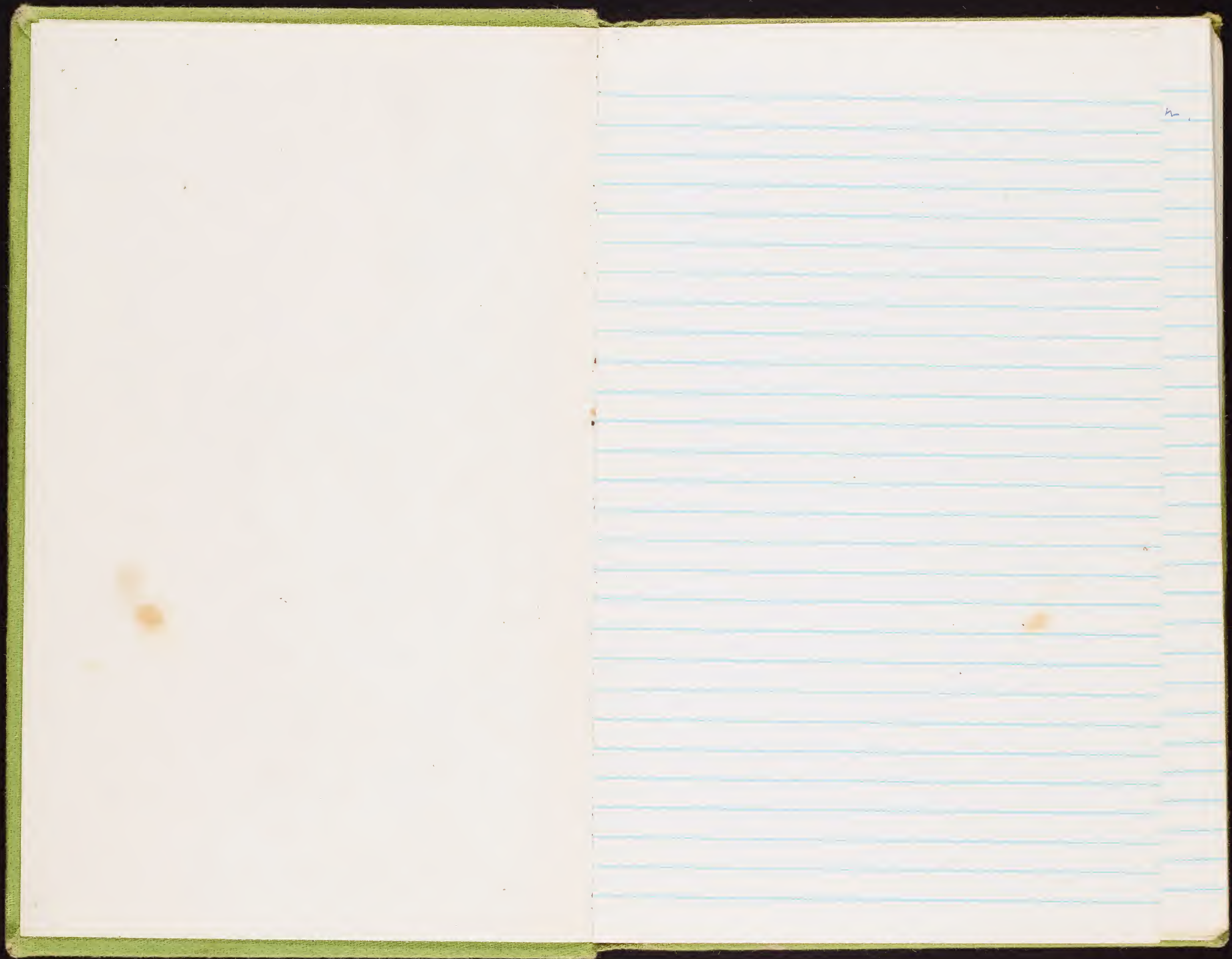
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February 11.

I arrived at Dora Wejers place \approx 1000 am.
After getting settled I headed towards
the Shibun River which lies \approx 1/2 mile
E. The habitat around her house
is "Pine Savannah" sparse pines with
gravelly soil & areas of dense scrub around
water. Apparently the Shibun River
has a gallery forest of lower herbaceous &
across the river are limestone
hills (small) covered with forest.
The weather was dreary - &
the word is that it has rained a
lot this "dry season" - I
saw ~~Orange~~ yellow-billed Orioles,
Tropical Mockers - had Yellowthroats
but saw little else. The trail I
took led to an Orange Grove & then
ended in swamp.

I went to mile 31 on the
Western Highway & took a road
west to the Shibun River. It
ended in Swamp & I looked S.
along the river through lowland
recently disturbed Riparian forest.

Cattle are being grazed & most
of the remaining riparian forest has
had its undergrowth removed. Still, I ^{and} ^{Crane} ^{Hawk}
saw quite a few birds: Ant Tanager, ^{Red} ^{Wing} ^{Black} ^{bird}
R. Flycatcher ~~the~~ ^{Spotted} ^{Flycatcher} (like a Parula
common - very noisy - like - rattling Antbirds
around dense vine-tangles. 1 Yellow-billed
cuckoo: ~~seen~~ 10+ American Redstarts &
6-7 Myrtle warblers + 2 ovenbirds
Comprised all the migrants

I checked a final road mile 33
E went back to where a creek crossed the
road that had a dense riparian forest with
bushy soil - As it was 3:00 - 5:00 it
was quite dark & I saw little. - I had
a water thrush & saw 1-2 Redstarts
Dry list:

Little Blue Heron
Little Egret
Turkey Vulture
W. Kite
Crane Hawk
Plain chachalaca
Bt. Bobwhites
Solitary Sandpiper
T. Kingbird
C. Kingbird
? woodpecker

^{Parula} Antbird
B. Antbird
G. Antbird
Brown Jay
B. G. ? bee-eater
B+W warbler (2)
Myrtle warbler 8
Yellowthroat 6+
Redstart 10-15
B. G. Tanager 4
T. W. Tanager 2
W. W. seedeater
~~D. W. Antbird~~ 1

February 12 - Belize

7:30-4:00 I spent in forest in
the first 5 miles of the hummingbird highway.
I took several trails into the
woods. The day started out Yucky-
Overcast - it drizzled a few minutes
about noon - mid-day was windy &
the afternoon was lovely.

~ Mile 3 I hiked N into
woods on what looked like an old
logging road - other trails were cut &
it might have been the nesting site
for Minamets. The forest was lower
dense & heavily dominated by palms
& I saw ~~several~~ Ant tanager
flocks & 3 had wormers - 1
may have - I couldn't follow it long.
I sat down on all 3 worms -
even in Tanager flocks they are
very skiddish & drop down or
hit & fly away. Other members
of Ant tanager flocks include:
T. C. Greenlet (in 2 flocks), B+W Warbler
(all 4 flocks), Hooded Warbler ♂
Redstarts, W. B. Woodcreeper
S. H. Woodcreeper, T. C. Manakin
M. rufus Warblers

Beathills, W. B. Woodcreepers
Also seen in this forest;

Y-O. Flycatcher

Manakins Orzopodole

L. B. Cuckoo (hd)

Brown Antbird (hd)

Dusky Antbird (hd)

Kentucky Warbler (several hd)

The next trail went from Mile 4 or 5
south up a pass between two
limestone hills. I saw 2
Ant tanager flocks - 1 had a wormer.
It also had a CSW immature ♀,
Y-T Vireo, B+W Warbler, T. C. Greenlet,
T. W. Woodcreeper Woodcreepers
On this trail I saw 2 Ocellated
Turkeys, 2 Green Jays, a Little Heron &
Lark & several more Kentucky Warblers
& 1 ♂ Hooded Warbler.

The final area was 6 miles - I
backtracked through a dense palm
forest to the top of a limestone
hill. Here the forest was

most mature - 60' f open below
(most of the rest has been >40'
& scrubby)

I ~~found~~ found two flocks - in one I
had warblers & the 2nd I
briefly saw a hawk, 7 dja
Saw T. W. woodpecker B. F
Ant thrush.

Day list

L. Egret

Roadside Hawk
Kestrel

Ocellated Turkey 2

Parake

W. C. Swift 6

L. Hermit 4 (1 ad)

V. Tanager 1

T. W. Woodpecker 6

W. B. Woodpecker 2 (part)

Brown Woodpecker 1

S. H. Woodpecker 2 (part)

R. B. sparrow 1

Plin King 1

B. Antbird 3

D. Antbird 1

D. W. Antbird (hd) ? group

B. F. Antbird 1

R. C. M. in several

W. C. M. in 19

Thrush & M. in 2

M. Tanager 1 imm.

~~Vermilion Flycatcher~~

F. T. Flycatcher

B. B. Flycatcher 1 ad

Social Flycatcher

O. C. Flycatcher 2 ad

Y. B. or Acacia Flycatcher 6

Least Flycatcher 3 ad

L. T. Sparrowbill 2 pr

Y. O. Flycatcher 1

M. Bentbill 8

Y. B. Tanager 1 ad?

G. B. Martin

Brown Jay

Green Jay 2

W. B. Woodpecker 20

Grey lit bird 2

Wood Thrush 2

L. B. Gnatcatcher? 1 ad

W. E. Vireo 1
 Y. T. Vireo 1
 T. C. Greenlet 8
 Lesser Greenlet 12
 Bananaquit 2
 B. L. Warbler 6
 Worm-eating Warbler 6
 BT Green Warbler 2 (♂ together)
 C. J. Warbler 1
 O. W. Bird 5
~~N. Warbler~~
 Kentucky Warbler 10
 Hooded Warbler 3 (♂)
 Redstart 8
 M. oropendola 2
 Grackle
 Blue Antbird 1 ♀
 R. C. Antbird 3 (♂ groups)
 R. T. Antbird
 B. Flycatcher 4
 Green-backed Sparrow 4
 B. B. Woodpecker 4

Foliage mist survey

~15 miles on Hummingbird Hwy
 2nd growth forest 40' - dense
 undergrowth

40

20

40

10

3 new species 1b

50

50

4 new species + 1 new 1b

40

50

30

50

3 new Green species 1b
4 new

50

50

50

50

50 1.5cm Katsjid (gr) 14
5mm bristly beetle lb

50 4mm spider (eggs)

50

50

100 4mm spider

80

50

50

50 3mm spider lb

50

100

50

50
50

50 3mm spider

50

50 2cm willow stick (green) 14?

50 - 1mm hump lb

50

140

50

50

50

50

50

170

50

50

50

50

100

200

2mm black eye beetle lb

11
21

February 13 Hummingbird Itinerary
Belize

8:00-400

I worked further out the
itinerary today - beginning ~~at~~ beyond
Branch 13 miles out.

Beyond this settlement is a
dense area of cacao plantations,
& also dense 2nd growth forest.

I began working in sunny
dense 2nd growth - I saw Ruby
Antbird, a large group of Ant tanager
(+ P. xerops) - but the ground was
too rough - so I climbed a hill
with more open forest across the
highway. The first flock

I ran into had: Ant tanager, Gnatcatcher
Y.B. Tanager, S.B. Wren, PNAW
Wood wren, M. Warbler, 'A
a WEW (got date). D. Antbird

I continued along hill &
saw BP between two Ant tanager groups
(One I just saw), P.

I then saw a large mix -
Ant tanager, T.C. Gnatcatcher, Spot-billed
Wren, Px, WBW, Ivory-billed
Woodcreeper, Dark Antbird, O.B. Euphonia
M.W., Redstart, Blue Warbler -
& of course WEW PNAW pr
Bentbill, Spirebill

I proceeded up road 2-2 m. W,
& entered some local forest
- very palmey understory &
contoured close to highway at
first hill. I saw one flock
as it was in dense vine tangle -
Ant tanager, T.C. Gnatcatcher, P. Antbird,
Shrike-tanager? WEW, Redstart
♂ Hooded Warbler, 'Yellow Warbler Gnatcatcher
S.B. Wren, P. Antbird.

I crossed live foliage on the
way to camp

I went 1 mi further &
descended in a deep &
mountain ridge - I encountered

a T.C. Cuckoo pr with
 B+W, Mynah, Redstart + Woodthrush +
 others (PR) but I couldn't
 follow it to be sure it
 didn't have a warmer - Later
 I saw a Ant-tanager group with
 a Summer Tanager (hd), Gnatcatcher -
 + Redstart - but no warmer.

I went back to a trail at
 Mile 5 which went up a small
 hill - I saw a Auck 40' in
 a very dense vine tangle with
 Gnatcatchers, WEW, & Bluebirds
 + Ant-tanagers in a few trees over -
 I got beaucoup of det on
 this very high warmer as it
 was most unskiddish compared
 to others I've seen here.

Day 10
 Great Tinamou (hd)
 T. Wulture
 Roadside Hawk
 WTKL
 Mealy Parrot
 Spurred Cuckoo
 Ani sp.
 T.W. Woodcreeper 1
 Olivaceous Woodcreeper 1?
 I.B. Woodcreeper 6
 W.B.W. 2
 Plain Kingfisher 1
 Dusky Antbird 4
 P.H.A.W. 2 pc
 Antbill 3-4
 Bristle-billed Flycatcher
 Least Flycatcher
 D.C. Flycatcher
 Brown Jay
 Spotted-breasted Wren
 Grosbeak
 Tropical Nighthawk
 L.B. Gnatcatcher
 Green Str. Warbler
 T.C. Cuckoo
 L. Greenlet +

WEW 4
 Mynah 4
 BTG 1 hd
 Oribird 1?
 Kinglet 8
 Hooded Warbler 8-10
 (2♂ + 1
 ♀
 seen
 ♀ w/ dull)
 Melvill's Bluebird
 O.B. Euphonia 2
 Summer Tanager
 O.B. Sparrows

Feb. 14

Flock L 2000 Ant-tanager
PX
? - couldn't find
10000 Warbler

3.10 1

Hum. ib 1111
Kestrel 1
B+W 11
Redstart 11
MW 11

Sh L Flock - 2000 Ant-tanager
P+W BB Woodchuck
T.C. Gnatcatcher Redstart
I.B. Woodpecker
S. B. Wren
W.B. Woodpecker
Px
Sp. Wren
Bentbill
W+W
MW
BTWW

February 14 - Hummingbird Holey -

I was very bad. I was tired
& I forgot to write field notes
for this part of day & I
only vaguely remember what
I did - Clearly parts of the
road - Important: 4 more ♂ Humblers
in forest + 1 ♀

Common in forest
growth

DLAW - common
& colls to each other

Olivaceous woodcreepers!

~~At~~ ~~with~~ Only one warmer.

Collected Dead Leaves

Day list (more or less)

Violaceous Tanager 1

Arrears

C. C. woodpecker

TL woodcreeper 1

Olivaceous woodcreeper 2

WBW

L B woodcreeper 8

Py

PWAW 3+pr

P Antbird 2

Oc fly

Empidonax sp

Spinebill 2

M. Buthill 4

B Jay

S. B. wren 6+pr

W. B. woodcreeper 6+pr

Citbird

G. J. vireo

T. C. Greenlet 4pr

L. Greenlet common

NW 8

Bthw 2

~~WBM~~ CW 1

KW 5

Hooded Warbler 8

Yellowthroat 2

W. ELW 1

Antbird sp

~~W. B. woodcreeper~~

Dead Leaves

5m: up stump of

Paritigley Belize
Overcast

Feb 14 pm
2nd search forest

6	6	10	
11/2	4	3	
3	4	3	insects
4	4	4	2 4 cm cricket
12	6	4	4mm scab
15	8	4	4mm sp
18	8	4	3mm cricket
21	8	4	1mm cricket
24	8	4	3mm cricket
27	8	4	1cm tick
30	8	2	8mm tick
33	8	2	2.5mm thin red-wild
36	8	3	3mm beetle
39	8	6	6mm spider-worm
42	8	3	could be scorpion
45	8	2	2mm spider
48	8	4	4mm weevil
51	8	3	8/10 beetle
54	8	3	8/4
57	8	3	
60	8	3	

Antenna 5'

Sample 2

size sample

8	5	2m spider
7	2	3mm spider
10	6	4mm spider
5	5	5-6 cm
5	4	W. light tick
5	5	8mm spider
5	5	3mm cricket
5	5	4mm weevil
5	5	7mm cricket
5	5	7mm cricket
5	5	4mm tick
5	5	3mm tick
5	5	6mm tick cricket
5	5	3mm tick ^{1.2cm}
5	5	4mm tick ^{tick}
5	5	3mm spider
5	5	7mm spider
5	5	4mm spider
5	5	4mm tick
5	5	5mm tick
5	5	3mm spider
5	5	5mm green grub

23/8

4mm scab 5mm cricket
4mm cricket

Feb 15

Flock #1 - ~~Ruby~~
L. Greenlet?
R.C. Ant tanager
B.T. Flycatcher
Ruddy Woodcreeper
Y.B. Ceryle
PX
Buttbill

Flock #2
R.C. Ant tanager
DWAR
PX
WBW
IB Woodcreeper
SR Flycatcher
Magnolia Warbler
W.P. Woodcreeper

Flock #3
2 Ant tanager
Pol. billed

Flock #4
2 Ant tanager MW
Y.B. Ceryle
S. B. Wren
T.C. Warbler
P.O. W?

Hummingbird Highway
830 - 445

I first went way out the
highway to mile 17 or so
A bushy area up a small
Kerit valley up a very scrubby
ridgetop - the valley slope had
relatively open forest. I felt
awful all day - it was overcast
& rained a bit in the morning
but cleared up by 1100

The flicks I saw are on the
previous page - ~~no~~ needles to say -
I saw no worms in them -
or at all today.

I went further out the road to
Hatch's Cecropia plantation & beyond,
but mostly it is cleared near
the road - I returned to mile
15 area to do alect census
& saw flock #4, as well.

I got more observations on
Spit-billed wrens - they
are very much like CTAW.

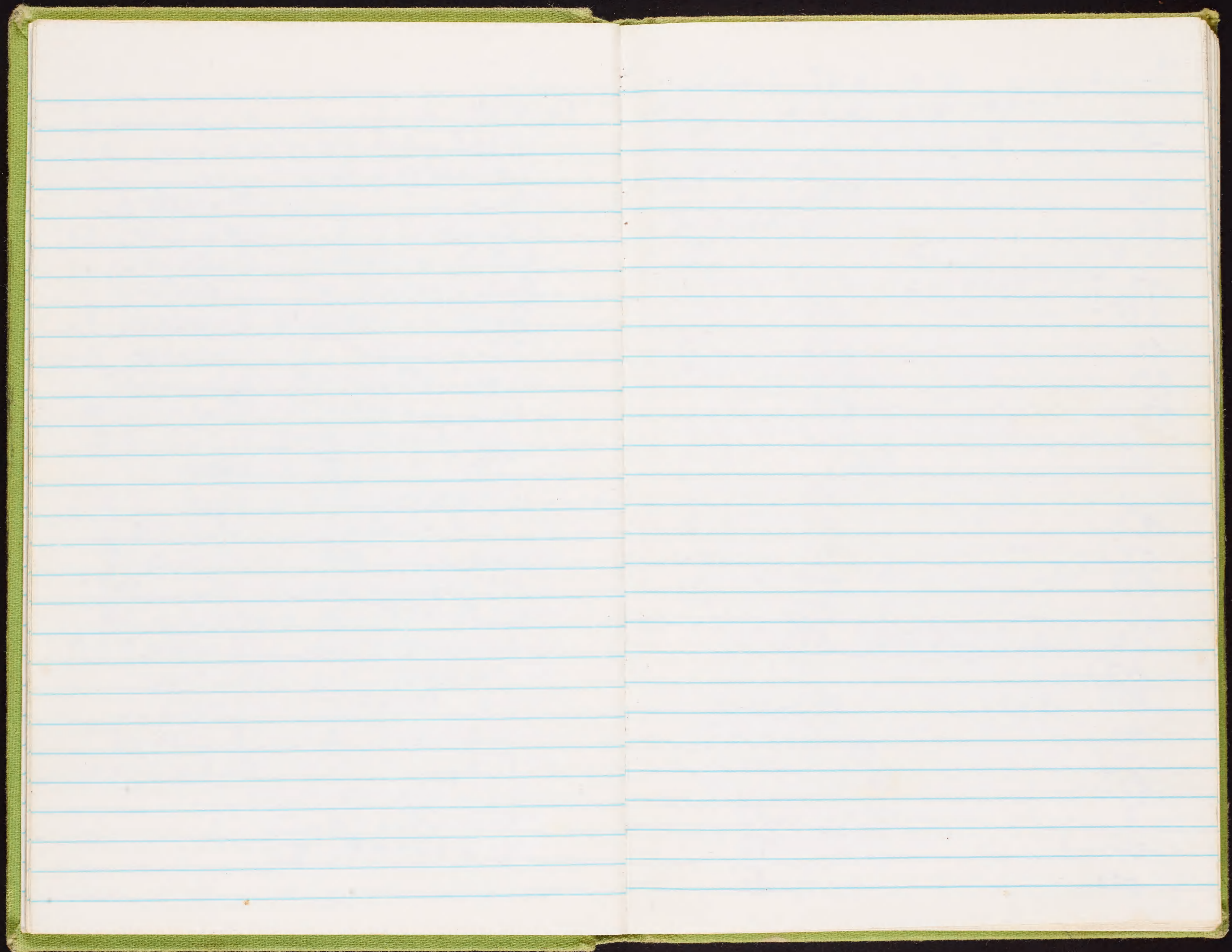
I went up a 2nd growth track
 (old jeep trail? - old logging road)
 for 1-2 mi - saw little bit
 was hot 2-400pm - but I
 saw a pair of Jacamars
 & an Atilla with a huge frog
 pecked it - frog was 1.5x
 head length of atilla & Round.

Atilla seemed a bit. Also Citoline
 Trogon lots of Cinnamon-tailed
 Hummer. A ♀ Howard Warbler
 2 Missives + Redstart

I stopped one final spot
 at Mile 3 on right - a track
 that ended quickly in a new clearing -
 I saw ~~two~~ flocks - one
 Ant tanager group alone (?) +
 A-tanager, T. Greenlet, I.B. Woodhewer.
 DAW (hd)

Day list:

W.C. Parrots	?	
S. Cuckoo	2	
Atilla		Gray Warbler
C. Trogon	1	LB Greenlet
S. T. Trogon (hd)	1	G. Shrike
R. T. Jacamar	pr	WEVCO
Ruddy Woodcreeper	1	T. Greenlet
T. W. Woodcreeper	1	L Greenlet
WB Woodcreeper	2	S. Flycatcher
I.B. Woodcreeper	4	MW
B. T. Flycatcher	2	BTG
Pf	2	BTG
B. Antbird	2hd	KW
Dark Antbird	1	HW
DWA	3pc	C. in scrub
BR Atilla	1	
BB Flycatcher	hd	YB Cuckoo
DC Flycatcher	hd	B. Oriole
Empidonax	3-4	Y. W. Tanager
S. R. Flycatcher	1	R. Antbird
N. Buntbill	2	R. Antbird
B. Jay		Oreohelminth Sparrow
Green Jay	3	
S. B. Wren	6@pr	
L. B. Woodwren	4pr	



Feb 16

Flock #1

PNAL

PX

RLAT

Russet Antbird

IC Greenlet

S. B. Wren

L. Greenlet

Z. B. Woodcreeper

WBW

Flock #2

Two Antbirds

Y. Blackcap

IC Greenlet

I. D. Woodcreeper

S. B. Wren

B+W

MW

WEW

Flock #3

2 Antbirds

Speckbill

I. D. Woodcreeper

S. B. Wren

WEW (ld)

Flock #4 - RTAT

Hooded Warbler

Whiskered

Z. B. Woodcreeper

Flock #5

2 Antbirds

S. B. Wren

Z. B. Wren

PNAL

R. Antbird

I. C. Greenlet

Blue-winged Warbler

B+W

(Hooded ♀) MW

February 16

I worked the early part of the Hummingbird Highway.

I saw 3 + hd & 4th were - all in mixed species flocks.

I got good data on the 3

The previous page has the composition of 5 well

observed mixed flocks - I

saw - only flock has the

Long-billed woodcreeper &

they appear to do a lot of Palm leaf foraging.

Dwarf + IC Greenlet & S. B. Wren are also real regulars.

The last two flocks were in the Mile 3 area - where I went the first day - but I heard flocks - the big one was in young 2nd growth near the road.

Day list -

W.C. Parrot ?

L. H. Titmice

R. T. Hummer

C. trochiloides Tanager 2

T.W. woodpecker 1

Ruddy woodpecker 1 (contaminated)

2 B woodpecker 8-10

L.B.W. 1 pr

B. Antbird 2 hd

Russet Antbird

PhAW 1 pr

Daily Antbird 2 pr

W.C. Mocking 1 hd

M. T. Tyrannulet

B.O. Flycatcher

P.C. Flycatcher

Empidonax

Bin-bill 2-3

Spadebill 2-3

Brown Jay

Green Jay

L.B.W. Wren

White bellied wren 1 pr

Gray Gnatcatcher

S.B. Wren 4 pr

T. Gnatcatcher 5-6 hd

L.B. Gnatcatcher 1 pr

T.C. Gnatcatcher 4 pr

L. Gnatcatcher lots

B.W. Warbler 3

Bl.-eyed warbler 1

W.E.W. 4

Magnolia Warbler 10-15

T.W. 6-8

Hooded Warbler 4 more ♂ + 1 ♀

in forest in Sub

+ 4 hd

Redstart 6

Y. Bluebird 4

R.T. Antbird 7 groups

R.C. Antbird 6 groups

G.B. Sparrow 4

Dead Leaves Humbrol Abbey

3 Young oak south forest

2¹¹ 8 10 cc ✓

5¹¹ 3

5⁴ 7

8

3

2

2

8

10

10 cc ✓

2

10 cc ✓

2.5 mm 4 mm
interpillar

9 mm "bug"

6 mm cricket

4 mm cricket

5 mm roach

6 mm spider

1 cm black beetle

= 5/4

4 3

9 3

3 3

6 6

4 3

4 4

4 4

4 4

5 5

3 3

3 3

3 3

4 4

4 4

3 3

3 3

10 cc ✓

2.5 mm cricket

1 cm roach

1 mm roach

4 mm spider

5 mm spider

1 cm fat spider

2 mm king bug

3 mm spider

1.5 mm roach

1.2 cm roach

5 mm roach

3 mm spider

8 mm cricket

1 cm cricket

5 mm grasshopper

3 mm grasshopper

4 mm roach

1 cm high black roach

17/9

Feb 17

check Mile 3 area at Hummer

1230-1330

Saw the following flocks

RTAT

RTAT

TC Greenlet

IBW

WB Woodpecker

W. Wren Warbler

WEW

RTAT

Hooded Warbler ♀

~~RTAT~~

And in entrance,

T. W. Woodpecker

B. Woodpecker

GH Tanager

Catbird

RTA Tanager

IB Woodpecker

I stayed in glass second growth with
1/2 - 1/4 of road.

I also did insect census

No real point in making a day list

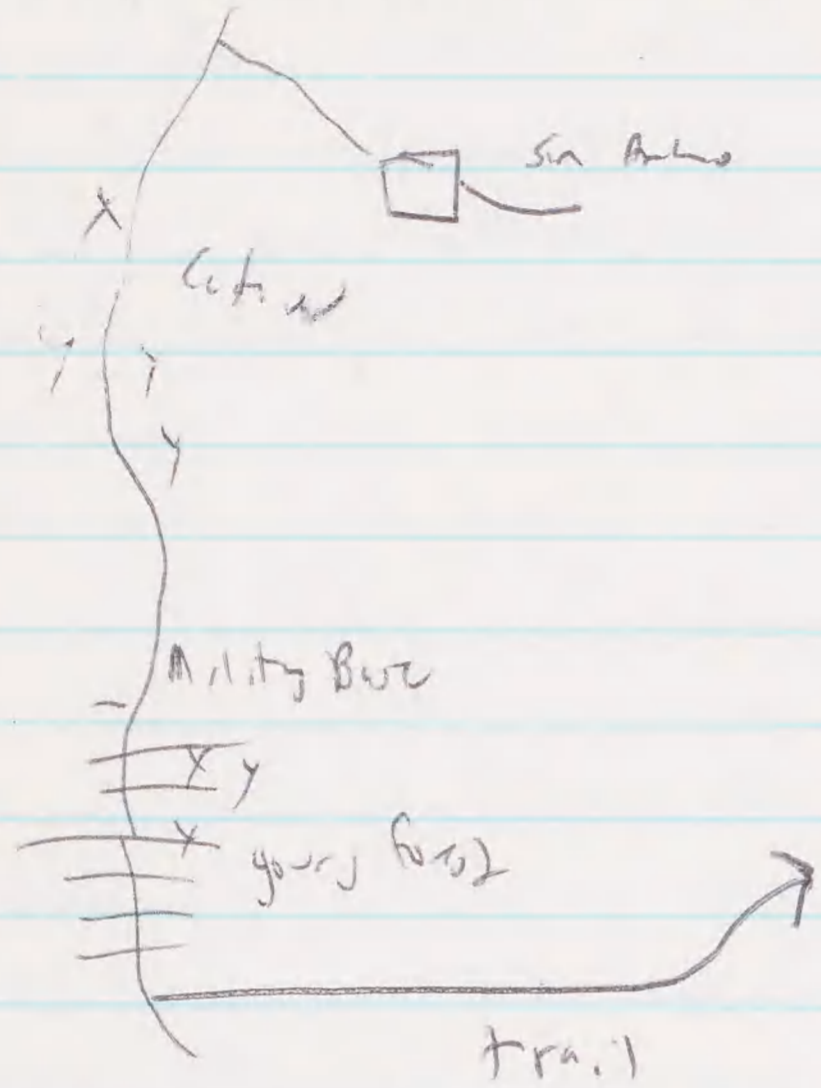
Feb 18 Belize

I drove down the Southern Highway - which is a dirt track through Pine forest most of the way. I went to Peter Gordo to find a guide. He said he could send me to forest around San Antonio. He suggested that first I go to Blue Creek which is 8 miles up a turnoff from the road to San Antonio. The creek around Blue Creek has some scrubby forest & lower timber has been left along the creek. I poked around some end growth near the village that was heavily infested with pig tracks (I even saw 2 pigs) - I saw little - one Anttiger - 7 C. breasted flock with 1 B. woodpecker, 1 B. H. Sittler, Redstart, ovenbird, M. Warbler in area. Lots of G. B. sparrows

I walked up Blue Creek a ways & through the forest was

beautiful along the river - I saw few birds (C. L. breasted) 7 Redstart & few Woodhoop - Redstart

Feb 19 San Antonio - Terrible



• bird. trees
rainy &
overcast

- Flock 1: 2 T Anttanager
 RC Anttanager
 TC Greenlet
 Sepia capped flycatcher
 TB Woodhewer (6 here at Dillat
 & vines)
- ← 1. per!
- Y Becardie
 BW Woodbler
 W Woodwren
 WRW

Flock 2: RC Anttanager
 W B Woodwren
 WBW

A 100 ~~Notes~~ 3-4 kW
 1-2 Hoopoe
 1 MW
 2-3 Redstarts
 10-15 Overbird

Today I took the ~~trail~~ road to
 San Jose in search for forest.
 The road winds through thickly settled
 country for several miles to
 a military base - suspect this was
 first where the old road was
 the road is I took a detour for
 a mile or so into it. (see above
 notes) It was very overcast.

I continued on the road
 for my miles & while I could
 see forest in the distance
 the road never got close.

I found a track that headed
 west? towards Union I was told.
 I hike for over an hr towards
 forested hills but it didn't look
 like the road got particularly
 close to forest. 300
 Acorn Woodpecker, BH Sittler, 300
 T.B. seed finch, W.C. seedeater,
 Indigo Buntings (many), J. Tanager, (2)
 Yellowthroat, MW (6-8' in scrubby veg),
 KW (1), Empidonax, Yellow Warbler
 Redstart (several)

I returned to area beyond the
 Military Camp & from 1200-400 I
 worked up a trail towards NE.
 + skirted woods for 1/2 m. then turned
 abruptly into forest. Practically
 the first bird I saw was
 a W.C. I saw 2 more on
 the hike. By now the
 sky was clearing.
 The trail starts out as a road
 + narrows - it goes through
 undisturbed forest. I think

except that it is along a
 ridge + has numerous blowdowns.

Flies AT

R. Warbler
 L. Warbler
 IBW
 E. R. Flycatcher
 G. W. Warbler
 L. W.
 Redstart
 H. Warbler
 B. W. Warbler
 L. W.
 O. Flycatcher
 P. F.

Business of trail is like the list
 the other
 after 300 is fungus
 P. W. list the business list
 with a new - B. W. Flycatcher
 other mentioned - B. W. Flycatcher

WE update (no tape available
 6/40 here on W. list 500 +
 hold on to it PCB
~~7/40~~
 5/40 in 3' on green + dead
 Palm trees (2-3)
 no ushers,
 for palm leaf pick + probing other
 fronds
 I pick at the vine

(another bird on tape)

Feb 20

Block 1	Ant tanager	IB Woodpecker	BT Flycatcher
	T. Flycatcher	SR Flycatcher	W. Woodpecker
	LBV	WEW	W. Woodpecker
	Py	GC Warbler	Redstart

Block 2
 { S. A. W. small
 G. C. Warbler
 T. Woodpecker }

3	CG Warbler	7-1120	W. Woodpecker
	BTW		KW = 5
	SR Flycatcher		HW = 3 (6)
	MW		Redstart = 8
	SBWRN		MW = 4
			BTW = 4
			Orange = 3
			WEW = 4
			Tanager = 1
			Count = 1

4 Ant tanager
 TW Woodpecker
 WEW
 WB Woodpecker
 TC Warbler
 Sep. Flycatcher
 SR Flycatcher
 AW

8
 DWAW
 P. Flycatcher
 Ant tanager
 BTFB
 W. Woodpecker
 WEW (had)
 C. Woodpecker

9
 RCAT
 TC Warbler
 Barred Woodpecker
 L. Woodpecker
 WBW
 SR Flycatcher
 RTB

10
 PLAVP
 LB Woodpecker

Live Police February 20

Trail up Mtn from Rd
to San Jose - Forest

Sunny + Warm

50 small (from Arumina spider)

50

50

50

3mm sp. herb
4mm retusoid

50

3mm sp. herb
4mm " " sp.

50

50

50

50

50

50

50

600

50

50 1mm terrestrial

50

50

50 1mm sp. herb

50 4mm sp. herb

50

50
1000

50

50

50

50

50

50 4mm sp. herb

1300

3300

50
50
50
50
50

50 4mm spider 1/2

50
50
50
50
50

5mm gr cricket 1/2

50
50
50
50
50

5mm spider 1/2

50
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50

50
50

50 5mm hairy spider 1/2

50 3mm long spider 1/2

50

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4300

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4700

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50

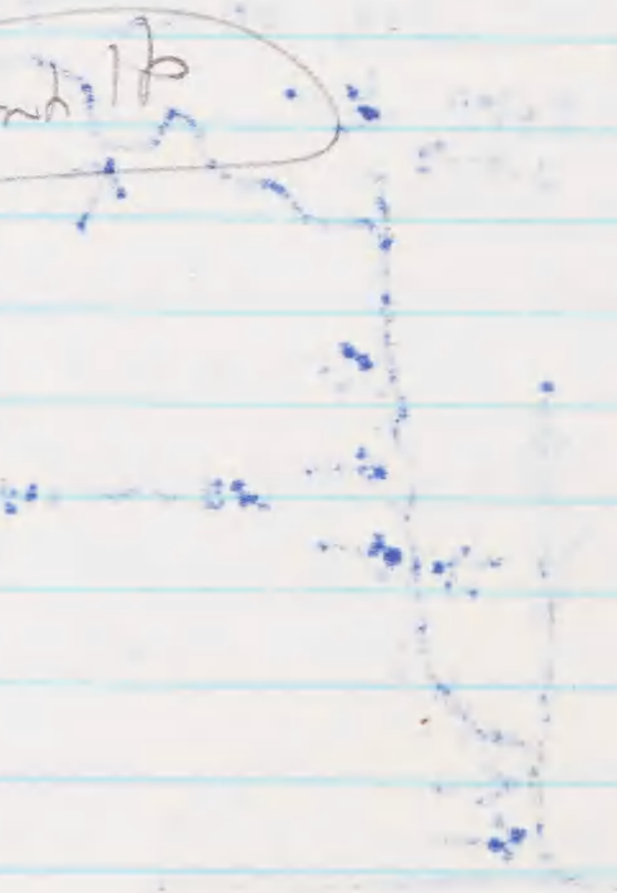
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50

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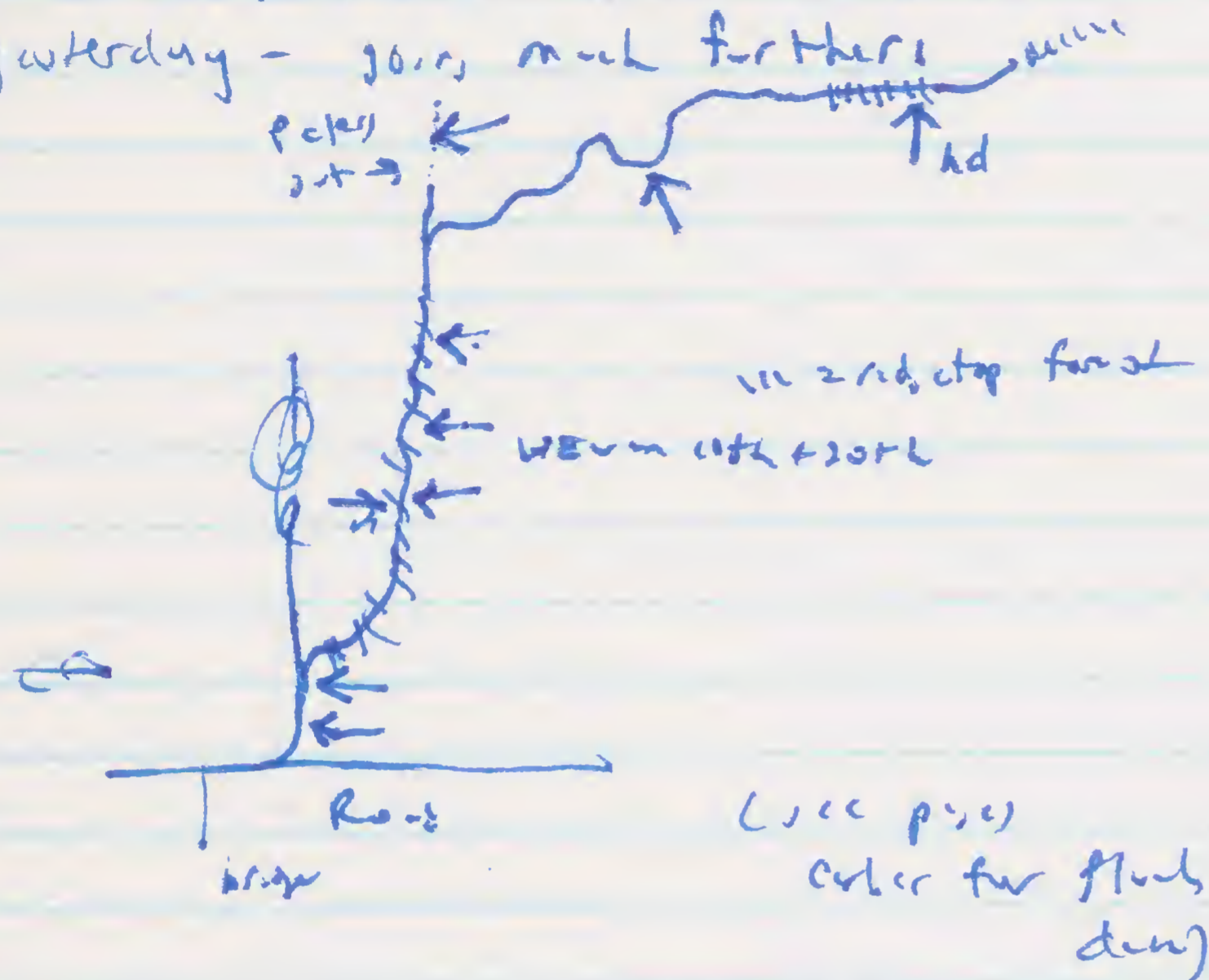
1.7cm Hetero 1/2

= 22/4



February 20 San Antonio Belize

I worked out some trail as yesterday - going much further



The trail descended from the ridge top into beautiful mature forest with patches of high palms? understory. There is a surface stream.

The ridge top forest has lots of PHAW, oronot, Anttars, TC Greenlet with a few ps of G.C. warblers Ruby Antbirds -

Common migrants include KW, HW B&W + Redstart L&W MW

with some BT6 (2), Wilson's (1), Humbird (3-4)

DN but 2 of the birds were clearly in MSF + one was very with B&W warbler + the one at trail bog was near some other migrants but not filling any flock.

Since we've seen few common migrants I am getting insect data (see p. 10 process for leaf beetles - census).

Trail apparently goes to Esperanza + is used heavily by hunters from San Antonio

Combined List

2/11 - 2/20

W/Track (hd)
 Plain chickadee hd.
 G. h. Dove 1
 R. Quail Dove 2
 S. B. P. (hd)
 W. C. P. 6
 S. C. W. 3-4
 L. T. Hermit 1
 L. H. Hermit 1
 W. B. Emerald 3-4
 P. C. Fairy 1
 R. T. Humbird 6
 S. T. Trogon 1
 B. C. Motmot 2
 R. T. Tanager 2
 W. P. L. P. bird 1
 W. B. Tanager 10
 B. C. Woodpecker 1
 T. W. Woodcreeper 6
 W. B. W. 6
 B. Woodcreeper 3-4
 I. B. W. 10
 B. Woodcreeper

YB (area) 2-3

D. W. A. W. 8-10 pr
 P. G. Antbird 10
 R. C. Manakin 10
 W. C. Manakin 10
 Thrush-like Manakin 3
 B. R. Attila 6+
 R. Mourner 2
 C. B. Ceard 1
 M. T. Tyr 1
 G. K. K. 2
 G. C. Flycatcher 2
 D. C. Flycatcher
 E. Flycatcher 4
 W. T. Flycatcher 3
 G. R. Flycatcher 3
 N. B. Flycatcher 6
 R. T. F. 3
 U. B. Flycatcher 5
 L. W. Flycatcher 2
 B. Jay
 B. B. Wren 4
 G. B. Wren 3
 W. B. Woodwren 8-10 pr
 G. C. Wren 2
 T. B. Wren 6
 W. B. Wren 3-4
 G. J. Wren 10
 Y. T. Vireo
 T. C. Greenlet
 L. Greenlet
 B. Tanager 10
 W. E. W. 10
 G. W. W. 1
 T. W. 1
 Y. W. 2
 M. W. 20
 B. T. G. 1
 C. W. 5
 W. T. Wren 1
 K. W. 1
 C. Y. Flycatcher 10 (3000)
 W. W. 3
 A. R. Wren 20
 G. C. Wren 6
 M. Wren
 B. T. Wren 1
 B. C. Oriole 2
 O. B. Euphonia 1
 S. R. Wren 5
 B. Wren

Flock 5
TC Greenie
PWA
WEW
IBWood
Px
SR Flycatcher

Flock 6
PWA
L Greenlet
CWA S.C. Flyc
BTB S.R. Flyc.
LB Gnatcatcher pr

Flock 7
DWA (only to first group)
L Greenlet
CWA (this one - p all 4-5
others have been 30-40'
in plain veg - 5-7"
leaf trees
with mud base
branches long for insects
south of BT

BTB wren
TC Greenlet Ad

BT DWA
Greenlet
S.R. Flyc.
RTA Flyc
TC Greenlet
WBW

DWA
L Greenlet
TC Greenlet
B+W Wren
S. B. Wren
S. B. Wren
P+

BTB
PWA
L Greenlet
TC Greenlet
RTA
B+W (2!)
Px
Sparrow
SR Flycatcher
SB Wren

Feb 21

730-430

I worked up the same trail
 to Esgranza - but I walked
 briskly on first part & worked slowly
 on the rest further in lowland areas.
 I saw or had 4 WEW. I
 must say I was sick today (stomach
 cramps) & from 200-430 I
 collected dead leaves. Pluck composition
 is on previous page. The total
 day list is as follows:

- Slaty-breasted Tinamou - a 1. per!
- Great Black Hawk ← Little Egret
- Aztec Parakeet
- W.C. Parrot
- W.B. Emerald
- P.C. Fairy
- R.T. Hummer
- LT Hermit
- Little Hermit
- S. + Trogon
- K.B. Tanager
- C. Acacia
- Smoky-brown Woodpecker
- The Woodcreeper
- Ruddy Woodcreeper

- | | |
|----------------------------|---------------------|
| W.B.W | B. Jay |
| Barr'd Woodcreeper | B-b. wren |
| T.B. Woodcreeper | S.B. wren |
| Plain Xenops | W.B. Woodwren |
| S.T. Leaf-blower | Goldfinch |
| B. Antbird | Great wren |
| Russet Antbird | Green Antbird |
| Pl. Antbird | T.C. Greater |
| Dot-winged Antbird | L. Wrenlet |
| D. Antbird | B.H. Warbler |
| B. Fantail | W. E.W. |
| R. Manakin | Blue-winged Warbler |
| W.C. Manakin | Pennsylv. Warbler |
| T-L Manakin | Yellow Warbler |
| B. R. Atilla | M.W. |
| M. Tityra | B.T.G. |
| Dusky-capped Flycatcher | C.W. |
| RTF | W. Warbler |
| S.R. Flycatcher | Orange-b. Warbler |
| W.T. Sparb. 11 | A. Warbler |
| E.L. Titbill | Y.B. Chat |
| N. Bentbill | A. Rabbit |
| Greenish Elaenia | G.L. Warbler |
| G.B. Flycatcher | C.H. Woodcreeper |
| S.R. Flycatcher | Great Warbler |
| O.B. Flycatcher | R.T. Antbird |

R.A. Hoyer
 Len 10
 B. H. J. H. H.
 B. F. G. G.
 B. b. G. G.

Dead Leaves collected on Esprize Trail

Especcs:
 2cm cricket lit only, usual
 1/2 inch moth
 small moth
 1/2 inch black beetle
 ?

Single	1	Rock
1cm cricket	3mm rock	6mm rock
1cm cricket	6mm katydid	3mm sp. r
3mm cricket	4mm longhorn beetle	3mm beetle
1.5cm flat Hemipteran	5mm spider	
lit on cricket	1cm katydid	1.2in rock
1.2mm katydid	1.2cm rock	1.2in rock
1cm Elaterid	4mm rock	4mm rock
3mm weevil	7mm beetle (blk)	5mm rock

6	6	8	8	4	10	6	5mm rock
6	6	8	9	3	8	2	10/
4	6	3	3	4	4		5mm rock
10	6	7	5	7	7		4mm rock
10	6	10	5	4	4		4mm rock
6	6	4	4	3	3		1cm rock
				3	0		

21/2

Sample 2 - Forest ^{low}

- 1mm weevil
- 2mm roach
- 1mm beetle
- 3mm weevil
- 2mm silver fish
- 1mm roach
- 2mm katydid
- 1.8mm roach
- 1mm katydid
- 1.5mm katydid
- 1mm katydid
- 6mm scarab
- 2.5mm katydid
- 2.5mm katydid
- 3mm spider
- 1.2mm katydid
- 2mm katydid
- ~~2.5mm katydid~~
- 4mm roach
- 6mm roach

18/13

8 8 5 6 8 5 12
 5 6 6 7 8 5 7
 8 5 8 8 6 4 8
 5 4 2 8 8 5 12
 20 6 8 5 8 5 3
 3 5 7

Low Bush

- 1mm roach
- 1mm orange beetle
- 1.2mm fat grasshopper
- 3mm spider
- 1mm scarab (beet)
- 2mm katydid
- 6mm cricket
- 1.2mm roach
- 1.2mm silver fish
- 1mm striped beetle
- 1mm roach
- 2mm yellow weevil
- 3mm roach
- 4mm weevil
- 1.2mm katydid
- 1mm th. - E. beetle
- 1mm katydid
- 3mm katydid
- 3mm roach
- 4mm weevil
- 1mm weevil
- 6mm orange beetle
- 3mm roach
- 1mm ant beetle
- 5mm weevil
- 3mm roach

6 6 8 5 6
 5 5 8 6 5
 4 4 10 8 8
 6 6 6 5 6
 5 5 8 5 5
 8 8 5 5

18/7

Esperanza-

Sample 5

ridge top possible loss

3m spider

1.5m ketjeda

6m screw hoppers

1.5m ketjeda (fat)

1.2m roach

1.5m roach

3cm black Pedatatum ed with red spots!

1.2m roach

6m spider

1.5m spider

8mm ketjeda

5mm roach

1cm round black beetle

1mm spider

1mm roach

Big black beetle 2m

5mm spider

1.2m roach

4

4

3

2

3

3

3

6m spider

5m roach

1m large beetle

10

10

10

10

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10

Feb. 23

1:00

July

Hummingbird Hwy
Blue Hole Area
Insect circus

Handwritten notes on the left side of the page, including a vertical list of symbols and a boxed '1000' at the bottom.

4mm spur lb

6mm to be built

4mm spur lb

5mm 5. Spiker lb

Handwritten notes on the right side of the page, including a vertical list of symbols and time markers '1700' and '2000'.

3mm spur lb

~~3mm spur lb~~
Black head secondary spur lb

5mm spur lb

Sample 2

8	3	3	4 cm antipalis
10	4	3	6 mm spiders
6	4	4	4 mm spider
12	3	4	5 mm spider
12	3	4	6 mm rock
4	3	0	7 mm
4	4	4	4 mm moth
8	4	4	3 mm rock
6	6		3 mm beetle
6	4		3 mm spider
6	4		3 mm spider
4	4		
4	4		
10	10		10 th palm
6	8		
20	3		
8	3		
8	3		
12	2		
	4		

9/4

Det. J. C. M. L. L. L.

Feb 23 11-330

I worked the Blue Hole Region of the Hummingbird Highway. I did my first insect crosses + checked about 5 Antagoner flouls - of which 2 had WEW. on which I got ~~data~~.

February 24

I returned once again to the Hummer Highway - where I spent only a few hours. In general it was a gloriously clear day - ideal for one final day's field work. I saw or had 5 warblers today - on two locations. A trail ~ 5 mi up road to the "Firetree" trail about 5 miles up Rd.

The first two were having an aggressive interaction which was mediated through an intense version of the tooth-chip - I saw gaping + chasing as well. I got foraging data on one of the birds (both were in a Ant-tanager flock)

I saw a 3rd alone in palm forest (KW were around)

I had another in another section of palm forest.

Along the 2nd trail I saw WELW # 5 in Ant-tanager flock - I got data on it # 28 for Belize - I quit & took afternoon off

Bird List 23 + 24th.

Great Tanager by
Gray Hawk
T. Vulture
R. Queen Dove
Whipped Dove
Yellow-billed Parrot
Peregrine
R.T. Hummer
LT Hermit
Little Hermit
G.B. Mango
W.C. Swift
KB Tanager
Acacia Woodpecker
T.W. Woodpecker
O.W. Woodpecker
WBW
FBW

Px

DWAR

Wc Warbler

Cinnamon Becard Blue Hole

V. Flycatcher

FIT Flycatcher

TK

Scrub Wren } Roadside

G. Wren

Y. B. Flycatcher

W. T. Sparrow }
~~W. T. Sparrow~~

Y B Elaenia at House

Y B Tanager

R. W. Swallow

B. Jay

S. B. Wren

W. B. Woodpecker

C. Catbird

B. G. Flycatcher - at House

P. Flycatcher

L. A. Flycatcher 2

~~P. Flycatcher~~

T. C. Flycatcher

L. Greenlet

B. Flycatcher 1

KW 10

HW 10

B. W. Warbler 3

W. E. W 3 + 4

MW 10

C. Flycatcher

N. Warbler 1

C. Yellowthroat

A. Redstart 10

Y. Tanager

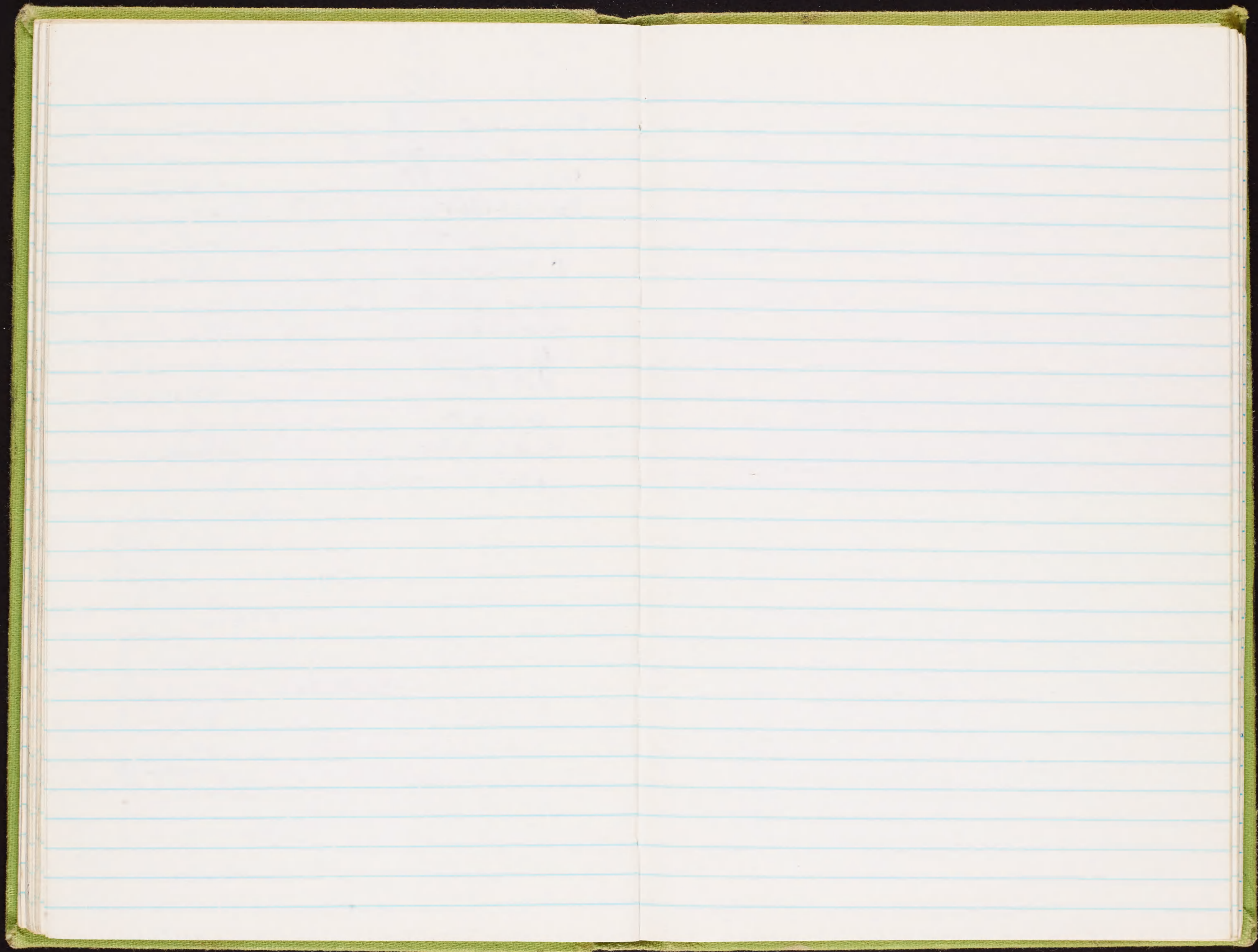
B. C. Oriole

R. T. AT

R. C. AT

B. H. Flycatcher

etc.



what I have receipts for:

Room + Board:

- Rockland
- Frosty Lakes
- Piney Bay
- Hotel Criventer
- Rio Limpio
- Dura Lager
- Hotel San Antonio
- Car rental Jamaica
- " Belize

what I don't have receipts for:

Gas ≈ \$300

Groceries

Restaurants (except Hotel Criventer)

Taxi

Airport taxes

Hotel El Centro - Belize City

~~6000 33000~~

120 days Per Diem

40
=

\$4800

900 car rental

\$5700

3800

~~2900~~
1900

2300

120 days

72

70
50
120

owed \$400 plane tickets

\$3400

1600

1900

2600

1041 in Belize

\$3010 in travel checks

700

3710

I have

\$740 left -

July 2nd \$150

\$900

+ \$200

reimbursed

from our
account

\$1100

~~500~~

50-p

3010

700

3710

³²
 \$595 - CR
 175 Don Weyer
 \$123.00 Gas
 51.00 Food
 51.00 Hotel
 5.00 Phone calls
 10.00 Taxi

~~~~~  
 1010.00

I will pay I have \$720.00

~  
~~10.00~~  
 4.00  
 7.00  
 10.00

\$31.00 more

~  
 \$1041.00 for trip to Belize

Car Rental = \$780 - 15%  
                   - 105  
                   \$595 -

700  
 315  
 105

I paid 575

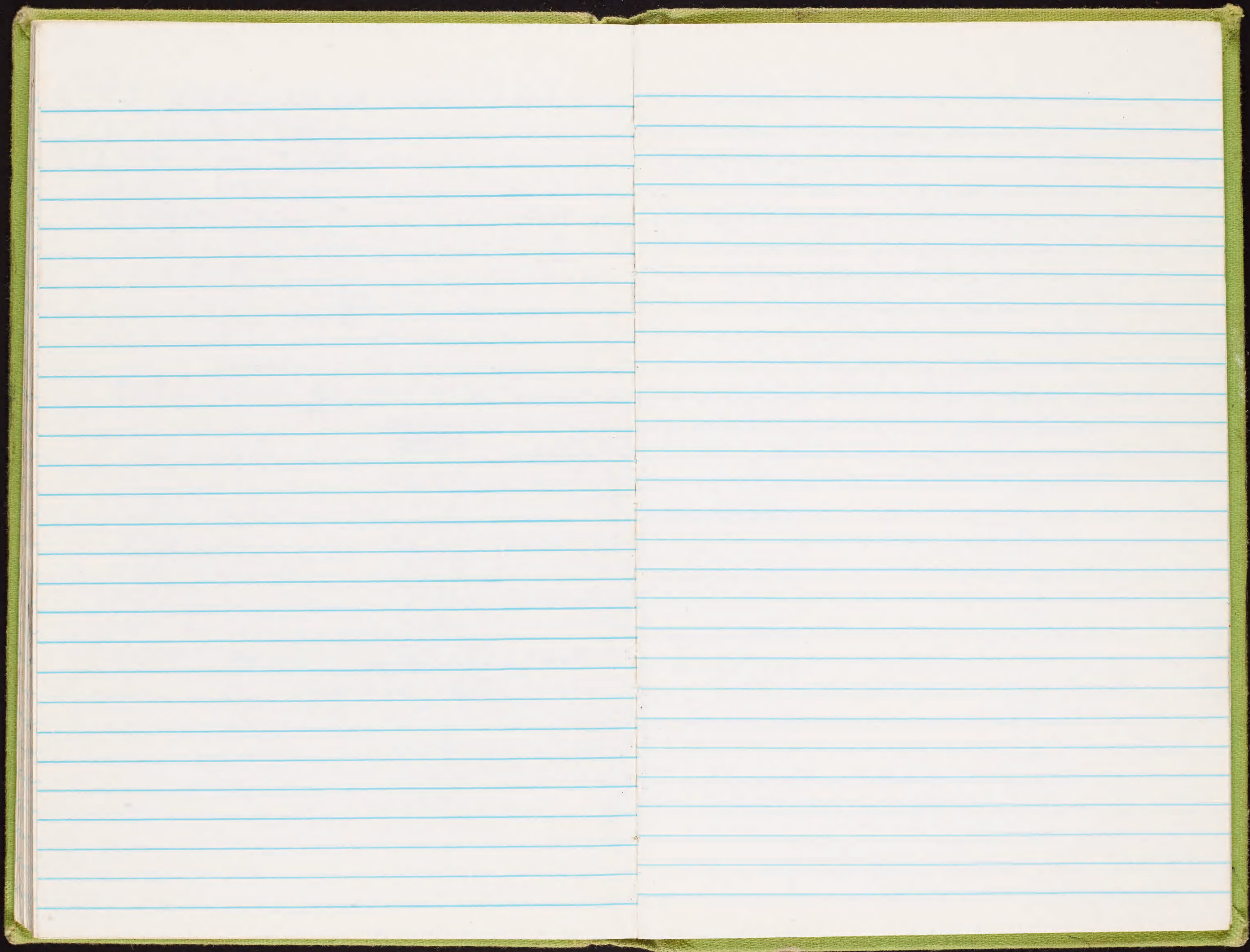
so I owe

\$25 US  
 I am refunded  
 37.00  
 18
 
 \$7.00

|    |                             |      |            |
|----|-----------------------------|------|------------|
| 60 | 15.00 -<br><del>19.00</del> | Food | 400        |
|    | 22.00                       |      | 300        |
|    | 20.00 -                     |      | 1.50       |
|    | 12.50 -                     |      | 6.00       |
|    | 16.00 -                     |      | 14.00      |
|    | 18.00 -                     |      | 20.00      |
|    | 20.00 -                     |      | \$2.50 sup |

Hotel: \$20 Belize      Taxi 10.00  
           \$30 San Antonio

Phone calls: 4.00  
                   1.00





Dead leaf foragers

Mayland - non-

Jamaica - moderate use: B.M. vireo  
A.H. Warbler

Belize - Moderate - Tawny-billed woodhewer (Palms)  
Y. B. vireo Palms & Palms  
Ant tanager? T (Greenlet  
w. B. wood wren (Palm)?)

Specialist Spot-breasted Wren  
B.T. foliage gleaner (rare)

←  
more common  
in wetter  
forest

More data?

Rank order H.b. to H.

Dead leaf abundance

1. limestone forest edge Jamaica - D.R.

Abundant

2. ~~Boothills forest Belize common~~  
BCI

3. Boothills forest Belize - but  
top of Palm

4. Oak forest - Md - mod. a  
uncolony

5. Montane forest Jamaica, P.R. -  
Rare

219<sup>4</sup> 64

Experiment  
live leaf = 22 Dead leaf <sup>N=</sup> 70

spiders 40% 15%

hymenoptera 27% ~~10~~

orthop 18% 7%

leaf beetles 0% 5%

Day composition - Humbird

live leaf N= 34

Dead leaf N= 84

spiders 75% 26%

Hemiptera 12 0

Orthopteran 3 60%

leaf beetle 1 5%

etc 10% 0

Bellevue Forest - 30 per

Spokane 19 2 =  
~~34~~ .02 /100

13 6 /100  
~~350:1~~  
 36:1 ↑ hr  
 night

5,000 → .44 .08 rate  
 38.1 120:1  
 100 lbs

itumbra Hiking 25 7 2

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 100

For trip south  
 Lunch Food - cheese

bread  
 Sides  
 oranges  
 Candy

Map

~~cash travel check Bank~~

~~Call Dennis Smith about car~~

Final receipts → \$6.00 food 2/22 North

\$1.25 oranges  
 \$4.75 bread  
 \$9.50 phone rental  
 \$50 Timale  
 \$17.50 gas road - Denver  
 \$8.00 dinner  
 \$16 gas  
 \$4 laundry  
 \$1.50 40 cokes

\$22 gas antip  
 \$2 food Bellevue  
 \$20 gas Belton  
 \$4 phone calls  
 \$31 hotel  
 San Antonio  
 \$12.50 gas  
 2/23  
 \$2.75 lunch  
 [\$10 - coral jewelry]

SMT Dec 1975  
 David Rucklun

350  
 20

Qu

17

X

1st

2nd

3rd

X

1st 2nd 3rd

WEL ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ 30

Line trees ~~||||~~ ~~||||~~ 10 + ~~||||~~

Prick line ~~||||~~ 10 ~~||||~~

550 t.c.

5214-581-024

8512-124-304



310

Check: Ta. 1 to Esperanza

Charles Wright - By Falls - Jude

Henry Flower - Forestry

Argentina

Michele forest station

(San Antonio)

Martin Meadows Hills Bank

Mep in Belmopan

to M. ...

Maphidi Mafidi:

turn Right towards

2  
84 510  
168 600

77  
74



