

J. F. Lynch
1980

15 March

TRIP TO SAN SALVADOR, BAHAMAS

Left BWI at 0855 on flight to Ft. Lauderdale, accompanied by Margaret McWetky. I had arranged to spend a week on San Salvador through the good offices of Dr. Don Gerace, head of the field station on San Salvador operated by Ringier Hobbes Colleges. Our purpose was to combine a vacation with a quantitative sampling of the local ant fauna, and, conditions permitting, a short-term study of the relation between food and perch parameters in A. sagrei. We are also on the lookout for possible fossil localities (caves, sinkholes, etc.) for Steve Olson at NMNH. He also put in a request for skeletal specimens of the local endemic race of the Red-bellied Woodpecker.

Arrived at Fort Lauderdale about 11:30, but our 12:30 flight to San Salvador via Columbus Landings Airways was delayed for an hour when another passenger's baggage failed to show up. Finally took off in a slow but steady DC-3 whose main claim to fame was a female co-pilot. Flight took over two hours. Conditions cloudy and gusty.

Don Gerace not at the airport, but he showed up a while later following a call by one of the guys at the airport.

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Sau Salvador, Bahamas - cont'd

15 March

Island is maybe 12 miles long by 3-4 miles wide, covered with low scrubby vegetation. No real forest visible anywhere. Main thing that surprised me about Sau Salvador is that approximately 40-50% of the island's interior is covered by a complex series of inland lakes or lagoons, most with no overt connection with the ocean. Lakes are not continuous, but are separated by numerous skinny isthmuses, mostly trending N-S, which apparently represent lithified calcareous dune deposits. A road runs around the perimeter of the island, but most of the interior is accessible only by foot.

Airport is near Cockburntown on the western side of Sau Salvador. Biology station is at the far northern end on ~~at~~ the site of a former navy tracking station.

Only two species of ants seen after our arrival were Paratrechina longicornis (common on sandy soil at airport) and Tapinoma melanocephala (scooting around on the walls of our room). Found a living, but very desiccated Hyla septentrionalis on the floor in the corner of the bathroom. A couple of hours sitting in a pool of water did wonders for him.

Summary of Ant sampling on
San Salvador Is., Bahamas

Site Descript.	Location	terrest. bait	Sweep	litter	twig
1. Palmetto Playa	S. Graham's Harbour	(18 ^X March)	(16 ^X March)	(16 ^X March)	(18 ^X March)
2. Coastal Strand	Fernandez Bay	(17 ^X March)	(21 ^X March)	(21 ^X March)	(21 ^X March)
3. Low scrub	Bonefish Bay	(17 ^X March)	(21 ^X March)	(21 ^X March)	(21 ^X March)
4. High Coppice	S. Graham's Harbour	(19 ^X March)	(19 ^X March)	(19 ^X March)	(19 ^X March)
5. Mangrove	Little Lake	—	(19 ^X March)	—	(19 ^X March)

16 March

N. end San Salvador Is, Bahamas

Up at 0730. After a quick breakfast we packed up our collecting gear and walked out to the beach fronting the station and worked our way around to the east to the point extending N. from the NE corner of San Salvador. Weather overcast, cool, and very windy from the ENE. Vegetation is low "beach scrub" with no real trees. Ants proved to be common amongst the bushes, down to the beach. Two species accounted for ~99% of what we saw: Trachymyrmex jamaicensis, a large, red-brown, slow moving ant seen foraging individually; often carrying curled-up bits of dead leaf. Conomyrma insularis - by far the commonest ant; mid-sized, black-brown, long-legged, fast. These were foraging right down into the intertidal zone. Colonies up among vegetation in loose, sandy soil - small hole, sometimes surrounded by low crater. Several Pseudomyrmex pallidus colonies in grass culms. We walked to the end of the point, then back, and continued around toward the LORAN station operated jointly by the US Coast Guard and the Bahamians. Passed a small area with Mangrove growing (though no water visible) and broke off a number of twigs. Found a colony of Paracryptocerus varians in a dead mangrove twig ~ 5' off ground. Very polymorphic, which I hadn't known before. More P. pallidus colonies in stems of bushes

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San Salvador, Bahamas - cont'd

16 March
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and weeds. One foraging Ps. elongatus (looks like brunneus to me) in same area). Turned some flat limestone slabs along the side of the road in an area with a lot of leaf litter & collected a good series of Campoplex ^{inequalis} ~~sp.~~ - a pale yellow-brown sp. - very aggressive. Also picked up a good colony series of Pentapleura ^{longicornis} ~~sp.~~, also under a rock.

Only other sp. of ant seen was a very small brown, robust formicine (I think!) which may be Brachymyrmex Heeri. Also possible that it is a dolichoderine (maybe Tapinoma littorale?), but without a scope I can't tell. Foragers of this sp. were in sandy areas with litter under bushes, just up from beach.

Terrestrial birds scarce - a couple of Bahamian Mockingbirds, a Kestrel, an an unidentified northern Dendroica were about it, though I did hear several other birds scuttling through the thick brush. Shore birds included 2 American Oystercatchers, a semipalmated plover, and a black-bellied plover. Only herp seen was Anolis sagei, which was present, but not awfully common, both on the ground and in the bushes in the more heavily vegetated areas. I saw perhaps 6 of these lizards all morning. Back to the station at noon.

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San Salvador, Bahamas - cont'd

16 March

After lunch we walked along the road a few hundred yds. w. of the station, then out s. (inland) along an old trail into the scrub. Took sweep samples (500) and litter samples. Ants not nearly as evident as down near the beach. "New" spp up here were Solenopsis geminata (locally common in areas of moist soil), Odentomachus insularis (a few were seen in one area - under log and in litter), and (in litter samples) a couple of spp. of m., pale myrmecines - one a Pheidole, other probably a Monomorium. Habitat pretty scruffy - area is flat and evidently holds water some of the time - some muddy areas and a small Juncus meadow in one section. Fairly large Palmettos in playa. Planting area with small trees and scrub, sometimes forming a canopy, but few trees w. dbh > 4". Hard to get good sweep samples, esp. with the somewhat flimsy collapsible net I was using. Litter very dry and inhospitable looking for ants. Most leaves small and curled up - like live oak litter in appearance. Saw two Eleutherodactylus planirostris, both under cover objects on muddy soil in the playa area. Woodpecker notes in several dead palm trunks - one being used by

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San Salvador - cont'd

16 March
(cont'd)

a Kestrel, but I saw no woodpeckers. Only other bird of interest - a Banavaquit - first I've seen on the island.

When we later sorted the sweep samples and litter samples, we found very few ants. Five of the 10 0.1m² litter samples were MT; others contained 1-6 ants apiece of the following species: Monomorium (minimum-like black sp), Odontomachus insularis (1), Paratrechina longicornis (4 in one sample); Pheidole? or other sm. yellowish myrmecine - one in each of 3 samples. Seven of the 10 50-sweep subsamples had ants - Pseudomyrmex pallidus in 3; black Monomorium in 5; P. longicornis in 1; S. geminata in 1; Conomyrma in 1; Tapinoma melanocephalum in 1; yellowish (Monomorium?) in one. (See catalogue for details).

While ants were not common in either set of samples, they were definitely more diverse in the sweep samples.

Sorted samples back at the station later in the evening.

Time: baited 10:30-12:00 noon Baiting transect
temp (noon) - 28.4 C.

Rel. humid. = 58%

17 March

Site II, Columbus landing monument,
9.5 km (air line) S. Cockburn town,
San Salvador, Bahamas
Sugar Syrup towers

Sta. No.

Sta. No.	Species	Count
1	○	coll. { 6 <u>S. geminata</u> 3 <u>Conomyrma</u> 3 <u>Monomorium</u> (yellow)
2	3 <u>Conomyrma</u>	15 <u>Conomyrma</u> , 5 <u>Monomorium</u> (yell)
3	○	9 <u>Conomyrma</u> ~ 200 more under disc
4	2 ○ <u>Conomyrma</u>	75 <u>S. geminata</u> ↓
5	○	1 <u>S. geminata</u> , 1 <u>Conomyrma</u> , 20 <u>Brachymyrmex</u> (coll)
6	3 <u>Conomyrma</u>	12 <u>Conomyrma</u>
7	1 <u>S. geminata</u>	25 <u>S. geminata</u> , 2 <u>Conomyrma</u>
8	2 <u>Conomyrma</u>	35 <u>Conomyrma</u>
9	4 <u>Conomyrma</u>	coll → ~400 <u>Conomyrma</u> (2 entrances 3m apart, no fighting)
10	1 <u>Conomyrma</u>	50 <u>Conomyrma</u>
11	1 <u>Conomyrma</u>	6 <u>Conomyrma</u>
12	3 <u>Conomyrma</u>	40 <u>Conomyrma</u>
13	6 <u>Conomyrma</u>	250 <u>Conomyrma</u> (15m to main colony)
14	2 <u>Conomyrma</u>	70 <u>Conomyrma</u>
15	3 <u>Conomyrma</u>	80 <u>Conomyrma</u>
16	1 <u>Conomyrma</u> , 3 <u>Brachymyrmex</u> (?)	60 <u>Brachymyrmex</u>
17	5 <u>S. geminata</u> , 1 <u>Monomorium</u> (yell.)	120 <u>S. geminata</u>
18	6 <u>S. geminata</u>	125 <u>S. geminata</u>
19	○	20 <u>Conomyrma</u>
20	2 <u>Monomorium</u> (yell. sp.), 2 <u>Conomyrma</u>	120 <u>Conomyrma</u>

Totals: 36/40 baits occupied

sp. occurrences: Conomyrma - 28; S. geminata - 9;

Monomorium (yellow sp.) - 3; Brachymyrmex - 3

ΣΣ = 43 occurrences

only other sp. seen was a single Pseudomyrmex pallidus dislodged from a shrub as it passed.

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17 March

collecting along W. side of San Salvador, Bahamas

Drove down W. side of island past the main settlement, Cockburn town (pronounced "Coe-burn-town") to the SW corner of the San Salvador, Frenchman's Bay. Very windy, so water rough & murky & we didn't stay long. Vegetation at S. end is pretty monotonous "coppice", i.e. low sclerophyll scrub up to maybe 3 or 4 m high.

We stopped near the monument commemorating Columbus' landing (yes, Virginia, in 1492) and ran a baiting transect in the low coastal scrub just above the beach. Sandy soil with well-spaced bushes and vines to about 1.5 m high, mostly lower. Ant activity high, but diversity pretty low. Main ants were Conomyrma & S. geminata, with a smattering of Monomorium (Floridaeva?) [yellowish sp.] and a tiny brown formicine in calling Brachymyrmex. See facing page for details. Individual Conomyrma colonies forage over a very wide radius - we found one bait that had a recruitment trail slightly more than 15 m long. In one area Conomyrma from 2 nest entrances separated by 3 m were coming to the same bait without fighting. I assume they were from the same (large) colony, but maybe they are simply unusually tolerant of non-colony mates.

Ate lunch at Riding Rock (bad food - corned beef and cabbage). After lunch drove N. past Cockburn town to Bonefish Bay and ran

Site III - Bonfish Bay, San Salvador, Bahamas

Sta. #	Syrup	Tuwa
1	100 <u>Brachymyrmex</u> (?)	~200 <u>Brachymyrmex</u>
2	0	4 <u>Conomyrma</u> (bait gone)
3	0	2 <u>Conomyrma</u> (bait gone)
4	1 <u>Conomyrma</u>	2 <u>Conomyrma</u> (most bait gone)
5	0	6 <u>Conomyrma</u>
6	0	8 <u>Conomyrma</u>
7	0	50 <u>Conomyrma</u>
8	4 <u>Conomyrma</u>	4 <u>Conomyrma</u>
9	0	~200 <u>Brachymyrmex</u>
10	1 <u>Conomyrma</u>	10 <u>Conomyrma</u> (most bait gone)
11	0	10 <u>Conomyrma</u>
12	2 <u>Paratrechina longicornis</u>	5 <u>P. longicornis</u>
13	0	3 <u>Conomyrma</u>
14	0	2 <u>Conomyrma</u>
15	0	4 <u>Conomyrma</u> (mainly gone nearby)
16	25 <u>Brachymyrmex</u> (100-200 nearby)	30 <u>Brachymyrmex</u> (100-200 nearby)
17	2 <u>Conomyrma</u>	30 <u>Conomyrma</u>
18	0	10 <u>Conomyrma</u>
19	20 <u>Conomyrma</u>	10 <u>Conomyrma</u>
20	1 <u>P. longicornis</u> , 1 <u>Conomyrma</u>	8 <u>Brachymyrmex</u>

Totals: 29/40 baits occupied

Species occurrences: Conomyrma - 21; Brachymyrmex - 6;

P. longicornis - 3

$\Sigma \Sigma = 30$ occurrences

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San Salvador, Bahamas - cont'd

17 March
(cont'd)

another baiting transect. We picked this one up a little ahead of time due to impending rain, but I think the results are representative. Vegetation here is a chaparral-like 'hard' scrub about 1-1.5 m high, much denser than the Columbus landing site. Substrate is dry limestone rock, rather than sand. Site is about 100-200 m inland from beach. In general, ants less abundant here, though species composition similar. Main difference was that P. longicornis was present here, but S. geminata absent. See facing page for details.

18 March

Return trip to Palmetto Playa, S. Graham's Harbour

Up at 0730. Walked back to Palmetto area (Site I) visited 2 days ago and ran a baiting transect and a twig survey. Baits dominated by P. longicornis and Monomorium (black sp.). Only other species seen were S. geminata (2 baits) and Tapinoma melanocephalum (2 baits). One interesting observation - a large mobilization of P. longicornis (Sta. 125) had a de-alate queen foraging on the bait with the workers. See next page for details re. baiting results.

Broke 100 twigs for a twig-nesting survey. Saw only 2 nests. One was Pseudomyrmex pallidus, but the other was Camponotus (Colobopsis) culmicola, the first record seen so far of this species.

Site I: Palmetto Plage, S. Graham's Harbour,
Med San Salvador, Bahamas

Site #	Symp	Tower
1	6 <u>Monomorium</u> (bl.) - coll	30-40 <u>P. longicornis</u> - coll
2	1 <u>Monomorium</u> , 1 <u>Ceromyrum</u> - coll	20 <u>Monomorium</u>
3	1 <u>Monomorium</u>	75 <u>Monomorium</u> , 1 <u>Paratrechina long.</u>
4	2 <u>Monomorium</u> , 1 <u>Paratrechina</u>	30 <u>Monomorium</u> , 2 <u>P. longicornis</u>
5	6 <u>Monomorium</u> , 2 <u>P. longicornis</u>	30 <u>Monomorium</u>
6	0	1 <u>P. longicornis</u>
7	60 <u>P. longicornis</u>	200 <u>P. longicornis</u>
8	25 <u>Monomorium</u> , 2 <u>P. longicornis</u>	50 <u>Monomorium</u>
9	1 <u>P. longicornis</u>	40 <u>P. longicornis</u>
10	10 <u>P. longicornis</u>	20 <u>P. longicornis</u>
11	0	3 <u>Monomorium</u> , 1 <u>P. longicornis</u>
12	30 <u>P. longicornis</u> ^{coll:} (incl. queen)	150 <u>P. longicornis</u>
13	6 <u>P. longicornis</u>	20 <u>P. longicornis</u>
14	25 <u>P. longicornis</u>	35 <u>P. longicornis</u>
15	0	0
16	10 <u>P. longicornis</u> , 3 <u>Monomorium</u>	5 <u>Tapinoma melanocephalum</u> , 10 <u>Mono.</u> , 1 <u>P. longic.</u>
17	6 <u>S. geminata</u>	50 <u>S. geminata</u>
18	0	0
19	0	6 <u>T. melanocephalum</u>
20	0	0

totals: 31/40 nests occupied

sp. occurrences: P. longicornis - 21; Monomorium sp. (black) - 12;

Tapinoma melanocephalum - 2; S. geminata - 2; Ceromyrum - 1

ΣΣ = 38 occurrences

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San Salvador, Bahamas - cont'd

18 March

Finally saw the local endemic race of the Red-bellied Woodpecker - pair hanging around a dead palm trunk with a woodpecker note ~ 2m up trunk - Sure looked like a nesting pair. Other interesting sighting - 3 Common Snipe in wet Juncus meadow in playa area. First record for this species on San Salvador, according to R. Miller's checklist. Smooth-billed Ani seen in small flock nr. hdqtrs (also seen S. of Cockburntown yesterday). Sparrow Hawks, Mocking birds common.

Took it easy in the afternoon and checked out a coral rubble reef just W. of the station - lots of sea fans, sea whips, sponges, etc. living on reef, but not much live coral. Saw Bluetang, Four-eye Damselfish, Blue wrasse, Sergeant Major, Barracuda, etc. A neat place, and one only has to go into about 3-5 ft. of water to see it. Weather greatly improved - still windy, but lots of sun, temp in upper 70's.

18 March TWIG Survey - Palmetto Playa
 Size (mm) Area

1-2		
3-4	### ### ### ### ###	① - <u>Ps. pallidus</u>
5-6	### ### ### ### ### ### ### ###	① - <u>Ps. elongatus</u>
7-8	### ### ### 1	
9-10	### ###	
11-12	###	
13-14	11	
15-16		

5/8/05
 1/4/05

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19 March

San Salvador, Bahamas - cont'd

Up at 0700. After breakfast we took a van a couple of miles west of the field station along the N. shore of the island. Parked near a small spur side road that goes to a house N. of the road, and walked south on a dirt track into the bush. Our goal this morning was to sample ants in the tall stature scrub forest known locally as "high coppice". This is a somewhat unprepossessing woodland composed of broadleaf sclerophyll trees and shrubs with a quite depauperate understory. Some of the dominant woody plants have small ovate leathery leaves that are reminiscent of boxwood shrubbery that hedges are made from. Canopy height in the area we visited, about a km south of the highway, was 3-4 m high, and most 'trunks' were less than 10 or 15 cm diameter. As I found out later when my hands began breaking out in blisters, Poisonwood is common. Palmetto scattered about, sometimes forming the dominant tree. Patches of mangrove flanked the area we collected, although there was no standing water at this time. On the whole, I would say this area is a natural extension of the palmetto plain edge we sampled a couple of days ago - shadier, taller trees, more and moister litter, but basically the same species of plants present (but in differing relative proportions).

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High Coppice area, San Salvador, Bahamian - cont'd

19 March
(Cont'd)

We took four kinds of samples - 1) baiting transect (20 pairs of baits at 10m intervals); 2) Sweep samples (10 sets of 50 sweeps); 3) litter samples (10 0.1m² samples), and 4) twig survey (search 100 "suitable" twigs for nests).

Results of the baiting transect were a little surprising - despite what appeared to be favorable habitat and physical conditions, ants were relatively scarce. It would appear that "disturbed" coastal scrub habitats are favored over "natural" woodlands by most species. Here, results as follows:

Time: 0940 clear, breezy T=27.5°C RH=65%

Sta.	Sugar	Tuna
1	10 <u>Tapinoma melanocephalum</u>	60 <u>T. melanoceph.</u>
2	0	0
3	0	0
4	0	0
5	0	0
6	0	2 sm br <u>Brachymyrmex</u> (?)
7	0	0
8	0	0
9	0	1 <u>Odontomachus insularis</u>
10	0	0
11	0	0
12	0	2 <u>Odontomachus insularis</u>
13	0	0
14	60 <u>T. melanocephalum</u>	80-100 <u>T. melanocephalum</u>

High Coppice Twig Sample

(9 March 1980)

size (diam, mm) f

0-2	
2-3	12
4-5	35
6-7	15
8-9	14
10-11	10
12-13	9
14-15	2
16-17	1
18-19	

1 Pz. elong

1 Pseud. pallidus, 1 Monomorium

1 sp. , 1 Monomorium

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High Coppice-baiting transect (cont'd)

19 March
(cont'd)

Sta. #	Sugar	Tuna
15.	0	0
16.	0	0
17.	35 <u>T. melanocephalum</u>	68 <u>T. melanocephalum</u>
18.	0	20 <u>Paratrechina longicornis</u>
19.	60 <u>T. melanocephalum</u>	50 <u>T. melanocephalum</u>
20.	6 <u>P. longicornis</u>	20 <u>P. longicornis</u>

totals: 4 species; 14 occurrences.

Note: O. insularis reasonably common here; I saw several in the course of flipping ~ 20 rocks)

...

Sweep samples similarly depauperate:

- a. 0 b. 1 T. melanocephalum c. 0 d. 0
e. 2 Ps. elongatus f. 1 Ps. elongatus g. 0
h. 0 i. 0 j. 0

...

litter samples produced a good series of a small yellow Pheidole, nesting in a small bit of rotted wood:

- a. 7 T. melanocephalum b. 0 c. 0 d. 0
e. ~100 Pheidole sp. (sm. yellow - only ~25 collected) flavens
f. also Hypoponera or Ponera sp. (= Hypoponera opaciceps)
g. 0 h. 1 P. longicornis
i. 4 sm. yell. Pheidole (same as in "e") j. 0

...

Twig survey produced 5 colonies - 1 Ps. elongatus
1 Ps. pallidus, 2 Monomorium (floricola?), 1 Xenomyrmex flavescens, 1 unknown.
twig data on opposite page.

Mangrove Twig Samples

<u>Size (cm)</u>	<u>f</u>
0-2	
2-4	1
4-6	13
6-8	17 (+1 sm. yell. ^{formicae} myrmicae) <u>Brachymyrmex minutus</u>)
8-10	12
10-12	4
12-14	1
14-16	3

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Little Lake - Mangrove area - cont'd

19 March
(cont'd)

After ~~lunch~~ lunch we drove down W. side of island to Cockburntown, then east to an inland brackish lake known as Little Lake to sample mangroves there. Shoreline of this shallow, clear body of water is piled high with tiny marine shells, very fresh-looking. Lake fringed by mangroves - mostly Black Mangrove, but a good number of Red Mangrove too. Ground in mangrove area muddy and spiced with air-seeking 'knees' of black mangrove. Saw a few P. longicornis on ground, but didn't run baits or sample litter (there wasn't a continuous litter layer). Arboreal ant fauna here was surprisingly sparse. Margaret broke open 50 twigs, and I looked in about 25 more. All we found was a single colony of a small lt. brown ^{formicine} ~~Myrmica~~ - probably ~~Myrmica~~ - Brachymyrmex minutus.

Sweep samples were even more disappointing - 500 sweeps in the mangroves produced exactly one (1) ant - a P. longicornis. The little patch of mangroves near the field station was much more productive, though I can't imagine why that should be. Took some pictures and headed back to the station.

20 March

Took the day off - walked around the NE corner of the island to the old kerosene-powered lighthouse operated by the "Royal Light House Service"; then cut out to the shore and made our

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1980

SAN SALVADOR

20 March
(cont'd)

way back to the station via the shore line. Lots of scrambling over rocks, but fun - and not a single person seen the whole way (~ 4 Km). In the afternoon we walked west of the station about a Km to the shelf reef locally called "Dump Reef" - good place to snorkel - 3-6' water, with fantastic sea fans, sea whips, etc. and fair number of fish. Virtually no writhers ^(Diadema) around here, which is a pleasant contrast to other places I've seen in the Caribbean.

21 March

Up at 0700. Caught a ride with a group of geology students from U. of Kentucky, and had them drop us off at the Bonefish Bay site, where we'd done a baiting transect a few days ago. This time we took sweep samples & twig samples, and were surprisingly successful. This is basically a medium high (1-2m) scrub area with dry, exposed rocky substrate; the place looks relatively inhospitable, compared (say) to the high Coppice area, but the ants don't appear to see it that way. All ten sweep samples contained multiple ants, the best yield so far. Pseudomyrmex elongatus occurred in the most samples (6) of any of the species encountered; the Black Monomorium ^{flavipes} was also common, and we got the small yellow Crematogaster (C. sternbelli) in a couple of samples.

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1980

CATALOGUE

16 March

Grahami's Harbour, San Salvador, Bahamas (~sea level)

OK - RES
✓ L80-1

a. Trachymyrmex jamaicensis ~ 20 foragers

b. Conomyrma insana - a few foragers

✓ L80-2

Brachymyrmex? - ^{de-ale? obscurior} sm., brown formicine - in litter

✓ L80-3

Pseudomyrmex pallidus - colony in culm of dead sea oat

OK - RES
✓ L80-4

"

" de-aleate ♀♀, males and workers. (larvae in nest)

OK - RES
✓ L80-5

= Zacryptocerus
Paracryptocerus varians - colony in dead mangrove twig

✓ L80-6

1 Pseudomyrmex elongatus - solitary forager nr. mangroves

OK - RES
✓ L80-7

Campyrotus ^(iniquus?) sp. = C. ramulorum colony under rock in leaf litter.

OK - RES
✓ L80-8

~~Conomyrma~~ Paratrechina longicornis naked pupae
- 14-16 long w. ~~larvae~~ under rock in litter

16 March

Freshwater dry playa border area, 0.5 km S. Graham's

"Site 1"

Harbour, San Salvador Bahamas (elev. ~10m)

Litter Samples (each represents contents of 0.1 m²)

✓ L80-9

sample B - 2 Monomorium ^{floricola} (ebinum?)

✓ L80-10

sample C - 1 Monomorium ^{floricola} (ebinum?)

✓ L80-11

sample D - 1 ~~Phidole~~ Cipomyrma vimosus

✓ L80-12

sample H - 1 Phidole major (small, or-br; huge head)

✓ L80-13

sample I - 1 Odontomachus insularis

~~sample~~

4 Paratrechina longicornis

1 Phidole? minor - maybe same sp. L80-12

(Other 5 samples MT)

Sweep Samples (each represents results of 50 sweeps)

Sample A
✓ L80-14

a. 4 Pseudomyrmex pallidus b. 3 Monomorium ^{ebinum} (black)

Sample B
✓ L80-15

1 Ps. pallidus ✓

Sample D
✓ L80-16

3 Ps. pallidus ✓, 2 Bl. Monomorium ^(ebinum?), 4 P. longicornis

Sample F
✓ L80-17

4 black Monomorium (ebinum?)

~~Sample G~~
✓ L80-18A

a. 1 S. geminata b. 2 Conomyrma insana

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1980

San Salvador, Bahamas - cont'd

16 March
(cont'd)

sweep samples from freshwater playa border, N. end

San Salvador, 0.5 km S. Graham's Harbour, Bahamas

✓ Sample i
L80-18b

a. 2 S. geminata ✓ b. 7 Monomorium (~~ebinum?~~)

Sample j
L80-19

c. 2 T. melanophallum ✓ d. 1 Paratrechina longicornis

a. 6 (black) Monomorium (ebinum?) b. 5 Cardicondyla emeryi

c. 1 Tapinoma melanoccephalum
~~1 Tapinoma emeryi~~ d. 1 P. longicornis

(Other 4 sweep samples MT)

Site II
17 March

W. side San Salvador, 4.5 km (airline) S. Cockburn
Town, Bahamas (elev. m. sea level)

Vouchers from baiting transect

OK-RRS ✓ Sta. 16T
L80-20

su. brown formicid - Brachymyrmex obscurior

✓ Sta. 5T
L80-21

" " " " " "

✓ Sta. 1T
L80-22

a. 1 Solenopsis geminata b. 2 Crematogaster insana ✓

OK-RRS

c. 2 tiny pale yell-brown and black myrmicine - Monomorium?
Cardicondyla emeryi

OK RRS ✓ Sta. 9T
L80-23

Crematogaster (insana?) unident. sp.

17 March

Bonefish Bay, W. San San Salvador, Bahamas

✓ Sta. 16S
L80-24

Brachymyrmex (P.?) obscurior?

✓ Sta. 15T
L80-25

Crematogaster (insana?)

18 March

Freshwater # Playa 0.5 km S. Graham's Harbour, San

Salvador, Bahamas (elev. ~ 20 m) - baiting transect

✓ Sta. 15
L80-26

Monomorium sp. (black) ebinum?

✓ Sta. 1T
L80-27

Paratrechina longicornis

} see field notes for details

✓ Sta. 2S
L80-28

Crematogaster (insana?)

✓ Sta. 12S
L80-29

P. longicornis (incl. ~~♀~~ de-alate queen feeding at bait)

TWIG SURVEY
✓ L80-30

Pseudomyrmex pallidus

} only 2 colonies

✓ L80-31

Pseudomyrmex elongatus (w/w + larvae)
~~Cardicondyla emeryi~~ Cardicondyla

} out of 100 twigs searched

J. F. Lynch
1980

21 March
TWIG SAMPLES

L80-32
SWEEP SAMPLES

sweep "a"

L80-32

sweep "b"

L80-33

sweep "c"

L80-34

sweep "d"

L80-35

sweep "e"

L80-36

sweep "f"

L80-37

sweep "g"

L80-38

sweep "h"

L80-39

sweep "i"

L80-40

sweep "j"

L80-41

19 March

LITTER SAMPLES

litter "a"

L80-42

OK RRS

litter "e"

L80-43

litter "f"

L80-44

litter "g"

L80-45

litter "j"

L80-46

SWEEP SAMPLES

sweep "b"

L80-47

sweep "e"

L80-48

sweep "f"

L80-49

[site III]

Bonfish Bay, San Salvador, Bahamas (elev. nr. sea level)

Pseudomyrmex pallidus - from twig sample

a. 1 Conomyrma insana b. 1 Pheidole sp. (lg. brown minor) c. 1 P. longicornis

a. 3 Ps. pallidus b. 1 Pheidole sp. (lg. brown) c. 4 Conomyrma insana

a. 4 Monomorium (ebininum?) b. 1 Paratrechina longicornis

a. 2 Monomorium (ebininum?) b. 3 Conomyrma insana c. 1 T. melanocephalum

(also, hemipteran ant-mimic [looks like Trachymyrmex] + tenebrionid)

a. 3 Ps. elongatus b. 4 Pheidole sp. (lg. br) c. 2 Conomyrma insana d. 3 T. melanocephalum

e. 1 P. longicornis (+ 3 tenebrionids)

a. 9 Monomorium (ebininum?) b. 1 Conomyrma insana d. 1 T. melanocephalum

e. 2 P. longicornis f. 1 Brachymyrmex (heeri?)

a. 4 Monomorium (ebininum?) b. 1 Cardisodonta emeryi c. 8 Brachymyrmex

(heeri?) (+ 2 ant-mimics: Thrips which strongly resemble Monomorium)

a. 2 Ps. elongatus b. 1 Pheidole sp. (lg. brown) c. 2 C. insana d. 1 P. longicornis

a. 1 Ps. elongatus b. 8 Monomorium (ebininum?) c. 3 C. insana d. 2 P. longicornis

(+ several "jumping" beetles - or. head + thorax, iridesc. green elytra)

a. 2 Ps. elongatus b. 10 Monomorium (ebininum?) c. 1 C. insana d. 3 Brachymyrmex (heeri?)

High coppice scrub, 2 km. SW Graham's Harbour, San Salvador,

Bahamas (elev. ~ 20m)

6 T. melanocephalum

a. 27 Pheidole sp. (5m, yell-orange) - ~50 more escaped; b. Hypoponera (opaciceps?)

1 Solenopsis (globularia?) - tiny, lt. yellow

1 P. longicornis

4 Pheidole sp. (minors - same as L80-43) (Other 5 litter samples yielded no ants)

1 T. melanocephalum

2 Ps. pallidus

1 Ps. pallidus

(Other 7 sweeps yielded no ants)

J.F. Lynch
1980

19 March
(cont'd)
TWIG SAMPLES
✓ OK RES L80-50

High Coppice 2 km SW Graham's Harbour, San Salvador, Bahamas ^{cont'd}

L80-51

4 Xenomyrmex floridanus - nest escaped

L80-52

1 Pseudomyrmex elongatus - nest escaped (twig included in tube)

L80-53

several Ps. pallidus - nest escaped (twig included in tube)

L80-54

many Xenomyrmex floridanus - nest escaped twig incl.

19 March
TWIG SAMPLES

Mangroves at W. border of little lake, San Salvador, Bahamas

✓ OK RES L80-55

~5 tiny, pale yellow callow ants - Formicines? Brachymyrmex?
in dead twig of red mangrove minutus?

Sweep sample
L80-56

1 P. longicornis [only ant in 10 sweeps of 50 each]

21 March
Sweep samples

Fernandez Bay, W. side San Salvador, Bahamas (nr. sea level)

L80-57

a. 1 Crematogaster sp. (sm., yellow) b. 2 Brachymyrmex (heeri?)

"B"

L80-58

a. 1 Ps. pallidus b. 1 Crematogaster sp. (like L80-57) c. 1 Pheidole (lg brown)

"C"

L80-59

d. 2 C. insana e. 1 Brachymyrmex (heeri?)

"D"

L80-60

2 Ps. pallidus

"E"

L80-61

a. 1 Ps. pallidus b. 1 Brachymyrmex (heeri?)

"F"

L80-62

a. 1 Cardicondyla eueyi b. 4 Brachymyrmex (heeri?)

"G"

L80-63

a. 1 Cardicondyla eueyi b. 1 T. melanocephalum

"H"

L80-64

1 Brachymyrmex (heeri?) obscurior?

"I"

L80-65

a. 1 Cardicondyla eueyi b. 1 C. insana

"J"

L80-66

(other 2 sweeps were without ants)

L80-67

Pseudomyrmex pallidus nest in sea oats culm

L80-68

" " " " " "

L80-69

" " " " " "

L80-70

" " " " " "

L80-71

Crematogaster sp. (steinheili sm. yellow, like L80-57, 58) - nest in sea oats culm

L80-72

" " " " " "

L80-73

" " " " " "

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1980

21 March

Fernandy Bay, San Salvador, Bahamas. (elev. nr. sea level)

✓ OR RRS L80-69

Pheidole sp. (^{megacephalum}lg., brown) - in bldg. mobilized on soda pop

✓ OR RRS L80-70

Monomorium (floricola?) - in bldg. mobilized on crumbs.

J. F. Lynch
1980

First cat #
JFL 9054

27 Oct

TRIP TO CUBA
0600 hrs.

Met Gene Morton at Davidsonville and to U.S. So; he and Lettie Morton drove me to National Airport, where Gene & I met Steve Olson and boarded AA flight to Toronto. Porter Kier of USNMNH also on the flight - he is on the way to Havana to work on fossil echinoderms. We stopped in NY, finally arriving in Toronto ca. 11:00.

Changed to an Air Canada flight bound for Havana, leaving ca. noon.

Plane loaded with Cubans and Russians, plus a few Americans.

My goal on this trip is to check out possibilities for ecological work with Cuban ants (particularly Macromischa) and Anolis. We will spend most of the coming 2 weeks in Oriente province, with Gene recording bird songs & Steve collecting Recent & fossil birds.

Arrived in Havana about 15:00, but had to wait over an hour for our bags to be moved into the terminal. The whole customs-immigration routine was much more intensive than is generally the case in Latin America. We were met by Fernando Gonzalez, Hraim Gonzalez, and Noel Gonzalez, the 3 Cuban scientists

J.F. Lynch
1980

Havana - cont'd

27 Oct
Cont'd

who had visited the U.S. last summer. Fernando is head of the Instituto de Zoología of the Cuban Academy of Sciences - trained in USSR, and sharp. Herván is in charge of ecology programs at the Instituto - he is an ornithologist & will be working w. Gene on the endemic Cuban finch Torreornis inexpectata.

Noel is in charge of collections at the Instituto, and is a mammalogist mainly interested in bats.

We checked into the guest residence used to house visiting scientists, located very near the national capital in downtown Havana. The building used to house the Cuban senate offices, we were told. It is very ornate, pseudo-classical structure, mainly constructed of marble, with massive wooden doors, stained-glass windows, 20' high ceilings, etc. It is somewhat shopworn at this point, but an impressive building nevertheless. We had dinner here, then got a moonlit tour of some historical sites in Havana (including the impressive Morro Castle), and ended up having drinks at a pleasant restaurant ("El Patio") located in the plaza next to a large colonial-era Cathedral built

J. F. Lynch
1980

Havana - cont'd

27 Oct.

Ca. 1550. Got to bed about 12:30 AM - much too late, considering I was up at 4:30 this morning.

28 Oct

Up at 0700. Had a light breakfast at the Guest House, then went over to the Instituto to be formally welcomed and given a tour of the place. In fact, The Instituto consists of a whole section of a neighborhood in the suburbs of Havana. Houses had been vacated by middle-class Cubans after the revolution and taken over by the Castro government. It is pretty strange to walk from yard to yard (mostly very weedy looking grounds) and go in what had been somebody's private home to find the insect collection in one block, the director's offices in another, etc.

Had lunch at a restaurant called "La Torre", some 35 stories atop a skyscraper overlooking Havana harbor. Spectacular setting, but again the place was run down and tastelessly decorated, somewhat ruining the effect. Food was OK.

J. F. Lynch

1980

28 Oct

(cont'd)

Havana - cont'd

Went back to the Instituto and met O. Garrido, a very energetic Jack-of-all-Trades naturalist who works with birds and reptiles, mostly. Looked at the insect collection, the Gundlach collection (which is housed separately), and a recent lot of fossil bird and mammal material that is being accessioned. Saw manuscripts of three generic accounts of Cuban lizards (Chameleolis, Cyclura, and Liocephalus) that Garrido is preparing for publication. These accounts include synonymies, descriptions, keys, range maps, and ecological profiles for all species, and will be very useful.

My general impression is a positive one re. the museum-oriented activities. People are sincere, motivated, and very conscientious in their curatorial practices. Even very old material (e.g., Gundlach's specimens) is well cared for, fumigated, and housed in air-conditioned rooms.

I looked around for ants in the yard of the Instituto, but saw only 1 form, a dark brown, small, highly domorphic Pheidole that was abundant on the ground-formed large mobilizations & columns (JFL 9054). Also a few millipedes on wet wall outside (JFL 9055).

J.F. Lynch
1980

28 Oct
(cont'd)

Three Anolis spp. present: ① Anolis
porcatus, a carolinensis-like form
with faint dark reticulation on legs
and sides (mannareus-like markings,
but fainter) ② A. sagrei - on ground
and fence posts - stockier, brown w.
white dorsal stripe; ③

Cape May Warbler in trees in
yard. Also Mockingbird, Dives ^{Cuban Blackbird} ~~atrioviolaceus~~,
House Sparrow, Turkey Vultures
soaring in groups over city. Rattus sp.
foraging in overgrown lawn area
behind Instituto.

29 Oct.

Spent morning being shown around Havana
by Fernando Gonzalez - visited mostly
post-revolutionary monuments & projects.
Got to see Gaudí again for a few minutes
before going to lunch. Got out ~~to~~ to the
airport at 3:00 PM for 4 PM flight to
Santiago de Cuba, but our passports were
not there. Had some tense moments
while a chauffeur was despatched back to
The Academy of Sciences ~~Idatrs.~~ where
the passports were being held. As it turned
out, we needn't have worried because
the plane was delayed several times, and
finally didn't leave until 7:15 P.M.

J. R. Lynch
1980

29 Oct

Camagüey,

Then a woman on the plane had ~~symptoms~~ symptoms of a heart attack, and the plane made an unscheduled landing at Camagüey, a city between Havana and Santiago de Cuba. In the process of landing, the plane blew a tire, and we ended up waiting over 2 hrs. in the airport before proceeding to Santiago de Cuba. Arrived about 11:45 PM, and were met by Hiram Gonzalez of a delegation of local officials, most of whose names & functions I didn't get. We were driven about 70 km W. of Santiago de Cuba by a local politician who is also a medical doctor. We stopped several times to be disinfected with formalin (including one shoes-on foot bath) - this is being done in the attempt to halt the spread of swine influenza or some such livestock disease that has broken out east of here.

We reached the new "resort" motel at Guama about 1 AM, and were met by Noel Gonzalez of yet another delegation of local Cubans who had been waiting for us all evening. I thought it was going to be a quick round of hellos, followed by bedtime for us, but instead we sat down to a full-fledged dinner (beefsteak, rice, beans, beer, fried bananas, etc.) and

didn't get to bed until about 2:30.

30 Oct

Trip west of Guana, Oriente, Cuba
We got up at about 0700, ate breakfast at the hotel, then headed west in a Convoy of 3 military Jeeps, accompanied by 3 drivers and Loc. Nicasio Viña, a geographer at the Institute in Santiago de Cuba. Very knowledgeable about local flora and fauna, and speaks very good English.

The hotel is built on a point of land fringed by red mangrove swamps (no beach, unfortunately) islands and promontories along coast in this area, with what looks like a coral reef just offshore. To the west, the mangroves give way to rocky beaches and cliffs. Road is blasted through very rugged coastal ledges - reminds me of parts of N. California or British Columbia in places. Rocks are dark volcanic and metavolcanic - superficially look like basalts. Some massive, some pillow lavas, other thin-bedded deposits. Series of river valleys extend down from the Sierra Maestre. When these meet the coast they are relatively broad, choked with boulder-sized debris, but have little or no water flow.

J. F. Lynch
1980

Oriente - cont'd

30 Oct
(cont'd)

Some outcrops along the road show similar boulders in a massive, unsorted matrix - look like mudflows. It would appear the local climate, which now is subhumid, must have been somewhat wetter at times in the past.

We stopped in the little town of Uvero, site of Castro's first military action in 1957 (attacked an army post, which is reproduced here in miniature).

Proceeded further west, finally entering an area of massive limestone outcrops some 40 km W. ^(near La Bruja) Guama. Acc. to Viña, these deposits are of Miocene age, and do not extend very far inland. Several large caves and grottos visible from the road, some with well-developed stalactites visible.

We proceeded westward, noting Cuban Crow common along the road. These birds are highly unusual - act and sound more like parrots than common crows. Bizarre squawking chatter that is totally un-crow-like. Other birds include Cattle Egret, Snowy Egret, Royal Tern, Turkey Vulture, Smooth-billed Ani, Mockingbird, American Kestrel. Observed a large Cyclura nubila along the side of the road in a dry, rocky area. This lizard looked much like a Ctenosaur.

J. F. Lynch
1980

Oriente - cont'd

30 Oct
(cont'd)

and took refuge in a crevice in a massive rock ledge.

Proceeded past Ocujae de Turquino, at the base of Cerro Turquino, highest mt. in Cuba (ca. 1950 m) and stopped in a very scrubby 2nd growth area some 10 km W. Ocujae. Looked for lizards for ~ 1/2 h. Fernando captured a couple of Liocephalus macropus, a smallish Sceloporus-like lizard w. fine scales. lizards among rocks in brushy areas.

Ants scarce here - I got one brown-colored Pseudomyrmex, and found a small colony of a medium sized brown Myrmecine (possibly S. geminata minor) under a rock. Weather clear and very warm (above 90°F. in areas protected from sea-breeze).

30 Oct

Coastal area 6 km (by rd) W. Ocujae de
Turquino, Oriente, Cuba (sea level)

1 <u>Pseudomyrmex</u> sp.	} (in same vial)	JFL	9056
3 <u>Myrmecine</u> sp.		JFL	9057


We ate lunch beside a small spring a km or so west of this spot. Bufo tadpoles abundant in the pool, but we saw no adults. Storr collected series of tadpoles for Museum. We also got an interesting

J. P. Lynch
1980

Oriente - cont'd

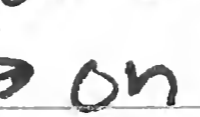
A. argentatus

30 Oct
(cont'd)

Anolis, ~~sp.~~ an elongate, mottled gray form w. very long legs and tail. This sp. lives on tree trunks, which it closely matches in color and pattern. Head has an unusual duck-like profile: . Leiocephalus macropus also present here - on ground.

We started back to the east, stopping for café at the house of a local farmer E.

Ocuja. He had a small patch of low trees without undergrowth where his figs ran free. Anolis and Leiocephalus common here - got 3 Anolis spp. ① A. equestris -

large  on a small tree trunk, ② A. argentatus - abundant on trunks & lg.

branches; ③ A. saepei - common on fences, trunks, etc. Two spp. of Leiocephalus -

L. macropus common, but also a few of the much larger L. carinatus. Both sp. tend to carry their tail curled back - very distinctive.

Also picked up a large marinus-like Bufo (another one seen dead & dried up). Storms catalogued all this material - will make skeletons. This spot is ~ 26 km W. Uvero.

At hotel, A. porcatus very common on walls outside bldgs; A. saepei on walls and low vegetation. I saw a Sphaerodactylus in the room, but didn't catch it.

J. F. Lynch

1980

30 Oct

Oriente - cont'd

We checked out a limestone cave near La Bruja - scared out a Barn Owl, but Storrs didn't find any pellets. I collected 2 Anolis jubar, a rather stocky, grayish species w. a large yellow-orange dewlap. Superficially similar to A. sagrei in general appearance. Male was resting on a horizontal pipe a cm or two above ground; female on tree trunk (ca. 6" diam), head-down, about 20 cm from ground. A. argentatus much commoner than A. jubar at this site. L. macropus also common.

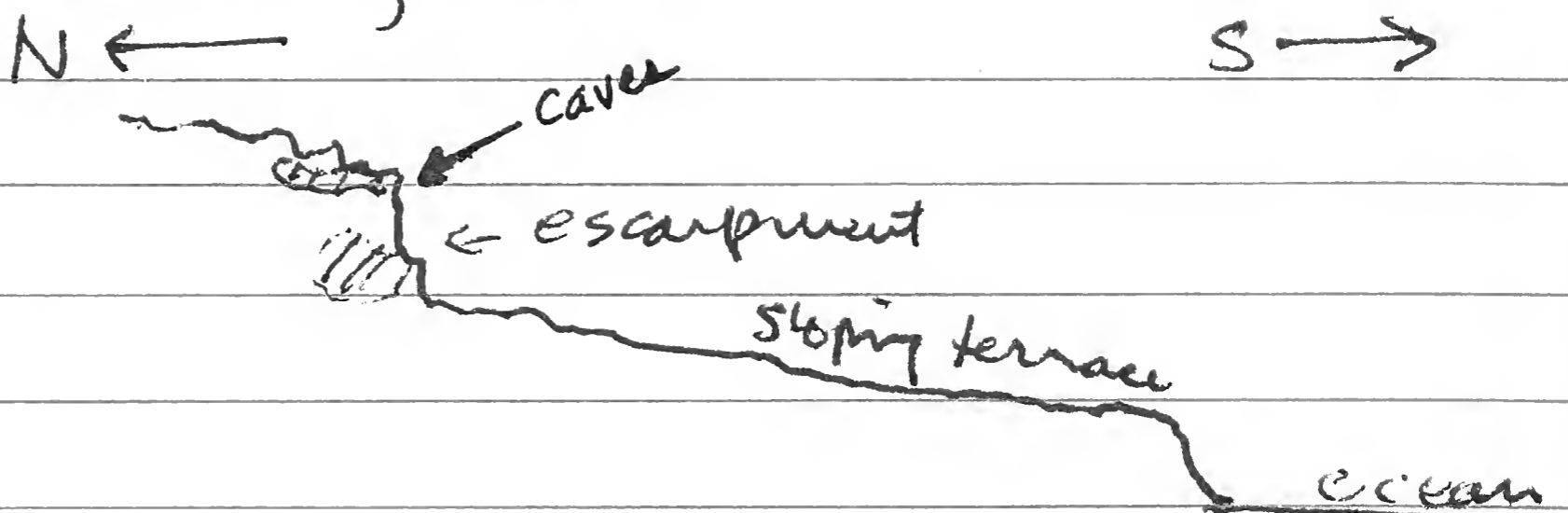
31 Oct

Returned to hotel, stopping briefly at Uvero for a glass of lemonade & some photos. Vicinity of Santiago de Cuba, Oriente, Cuba. Drove E. of Guama along coast ~ 50 km to Santiago de Cuba, a large port city with a beautiful harbor. Got a tour of Marti's tomb, the military barracks that was Castro's first object of attack July 26, 1953, and another "Morro" castle - this one on a spectacular point of land overlooking the entrance to the harbor. First part of tour was interesting - devoted to business, privateers, etc. Second part was mainly another tiresome example of anti-American propaganda (e.g., Yankees as "modern pirates of the Caribbean"). Checked into the very modern & comfortable Motel

J. K. Lynch
1980

31 Oct Versailles, a few km inland from the Morro.

After lunch, we drove E. of Santiago de Cuba about 25 km to the Daquiri caves, where Anthony collected vertebrate fossils in the 1930's. Storr wanted a sample of finely screened material to see what kind of micro- and small fossils might have been missed by Anthony. "Daquiri" no longer exists as such - it was never a real town, but was a depot where ore from local mines (iron?) was offloaded from R.R. to waiting ships. Now a few concrete piers are all that remains, and an army base has been built nearby. The caves are located along an escarpment of limestone that parallels the coast inland about 1/2 km from the shoreline. In cross section, the area looks something like this:



Limestone is weathered into very sharp, irregular relief, much like coral limestone on the Yucatan coast. Probably due to edaphic conditions, the vegetation has a distinctly arid aspect - low scrubby trees, many with

J. F. Lynch
1980

Daquiri Caves

31 Oct.

Thorns, Opuntia, columnar cactus etc. After looking in 2 caves on the lower portion of the escarpment, we finally found Anthony's cave, which required a steep climb up the escarpment through a spectacular stone archway. Cave itself was on a second level, perhaps 100-150' above the base of the escarpment, and was a single large "room" about 30' high and 30-50' deep. Dark red-brown dirt on floor of cave was loaded w. fossil material and in a couple of hrs. Steve sieved up remains of many vertebrates. Bats of Rattus rattus were most abundant, but he also found many remains of the extinct insectivore Nesophontus, as well as Solenodon, 2 spp of doves, Trogon, unidentified Passerines, and at least some lizard bones. Only live herps seen were A. argenteus.

Birds abundant in the scrub below the caves. These included several endemics: Cuban Grassquit (Tiaris canora), Cuban Warbler (Terrestris fornesi), Cuban Gnatcatcher (Polioptila leucopygia); also Red-legged Thrush (Mimocichlus plumbea), Mockingbird, Cape May Warbler, Parula Warbler, ~~Anthony's~~ ^{Cuban} ~~Warbler~~ (Chlorostilbon ricardii). Gene saw a Tody and Brian heard a Lizard Cuckoo.

J. F. Lynch
1980

1 Nov

En route Santiago de Cuba - Guantanamo
Up at 0645. Arremonops parvulus common
on hotel grounds (I collected ~~one~~, Storr got 2).
^{Black-capped Oriole}
Icterus deminencis, a small, mostly
black ~~bird~~ oriole, seen amongst a flock
of English sparrows in a palm tree.

One of our 2 Russian Jeeps needed
repair, and we didn't finally leave until
~10:30. Drove east to Guantanamo, arriving
there around noon. City is large & sprawling,
but not particularly scenic or impressive.
We went first to the local Popular Front
Adpts., where we were made welcome by Sr.
Aristides Samajo, Vice-President of the Province
of Guantanamo (note: Cuba has recently
subdivided its previous 6 provinces into 15;
what used to be Oriente is now 3 provinces:
Guantanamo, ~~of~~).

He put his good offices at our disposal,
saying that the central government had
informed him of the importance of our
visit. He offered to provide us with a
"professional hunter" to help Storr collect
birds, and gave us a Land Rover driver
to use this afternoon.

We checked into the Hotel Guantanamo,
another whitewashed, modern establish-
ment along the lines of the other hotels

J. F. Lynch
1980

1 Nov

Guantanamo area - cont'd
we've stayed in while in Oriente. This one had smaller rooms and lacked a refrigerator in each room, but did feature toilet seats and hot water. All in all, a net gain.

We drove 35 km east of Guantanamo past the U.S. Naval base to an area of sub-humid coastal scrub reminiscent of the Daiquiri area, but even more xeric and much more extensive. Here, a series of terraces have been cut into the same massive gray, rough-weathering Eocene limestone that exists at Daiquiri. The highest of these terraces is visible several km inland, and according to Dr. Viña is about 1600m in elevation. Much thorny brush (Acacias and other pruss), several species of Opuntia (both prickly pear type and Jumping Cholla type), barrel cacti, columnar cacti, aromatic sage-like bushes, etc. This is the type locality for the eastern population of the endemic Cuban finch ("Zapata Finch") Torreus impectata, and we observed this species, as well as many of the same birds seen yesterday at Daiquiri caves: Tiaris canora, Terristris fornsi, Poliophtila leucogaster, Mimus

"Inciensode
Costa"

Tournefortia
gnaphalodes
(Boraginaceae)

J. F. Lynch
1980

Ba. Tiquiri area - cont'd

1 Nov.

polyglottus, Chlorostilbon ricordii, Dendroica tigrina, Saurothera merlini. Herps scarce, though this may have been a reflection of the late hour (we didn't arrive at the site until about 1600h). Anolis argenteolus fairly common in area inland from the road near the base of steep cliffs, where large boulders had broken off. This sp. was both on rocks and on tree trunks. Some notes on microhabitats:

lizards:

- a. Anolis argenteolus - ♂ - ^{1.3m} up on 6" trunk
 - b. " " ♀ (same tree) 0.3m up
 - c. " " ad. on limestone outcrop
 - d. " " ad ♂ 1.3m up on 5cm trunk
 - e. " " ♂ 1.5m up on 5cm trunk
- left site at dusk & returned to Guatemala.

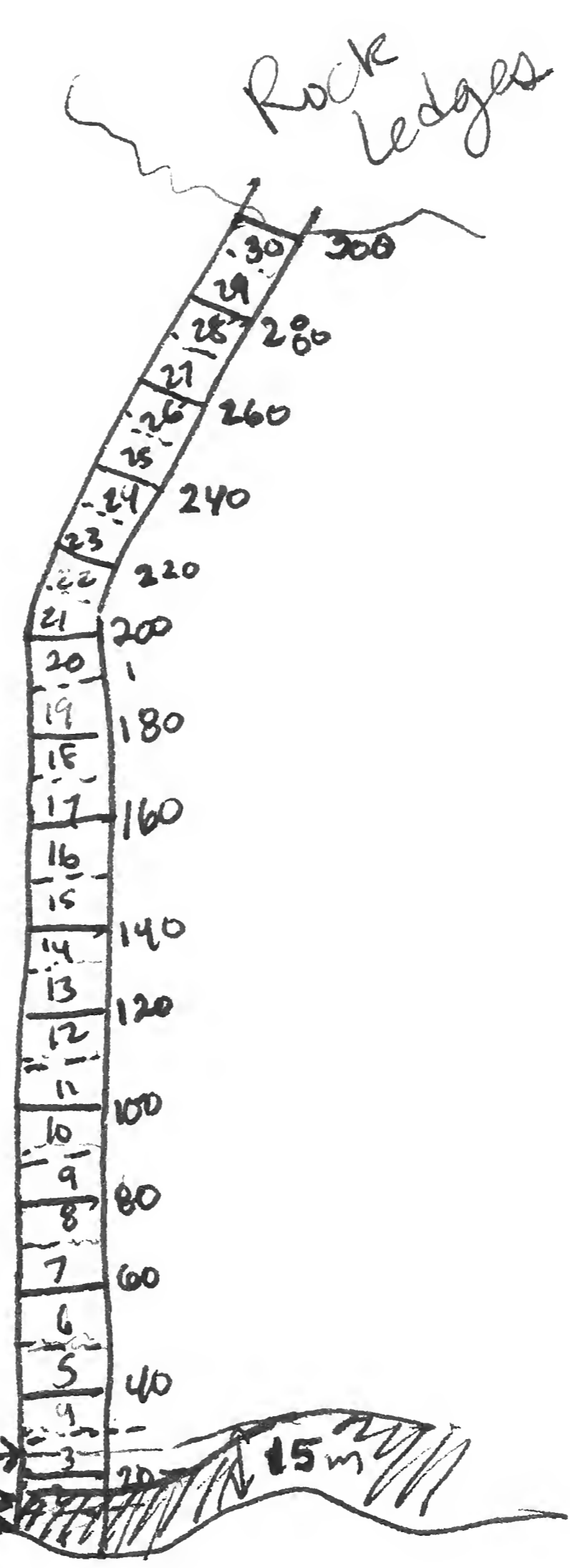
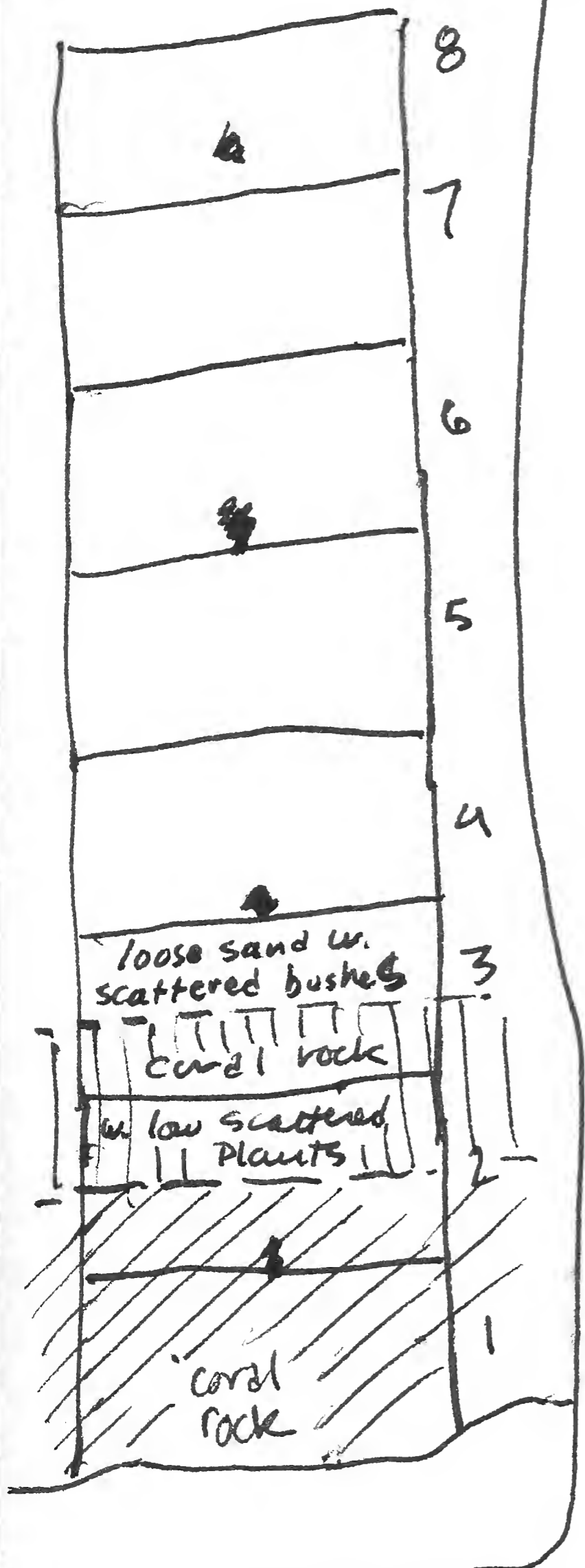
2 Nov.

Up at 0500. Planned to leave hotel at 0530, but our local driver & number were late. Steve, Jim, Fernando, & I finally went on ahead w. our driver (Orlando) and arrived at about 0700. Ate breakfast (sandwiches and juice) and began work. Fernando & I had decided to layout a transect to study habitat-microhabitat segregation in the local lizards. We looked around a while for a good spot near the shore, & finally found one. lizards first became evident at ~0800, as the temperature rapidly rose. First ones seen were juvenile Leiocephalus

TEMP RH TIME

31°C 57% 8:30

35°C 56% 9:30



Coral rock (no plants)

Ocean

JFly web
1980

Baitigiri area

2 Nov
(cont'd)

a pale-colored form about the size and shape of Sceloporus graciosus. I began seeing a few Anolis homolechus, a gray, camouflaged species that reminds me in its habits of Urosaurus gracilis - lives on the branches of open bushes (mainly Coccoloba). Amelia auberi also became active as the day warmed, mainly working the litter in the semi-shade of Coccoloba bushes.

The transect was laid out as shown on the opposite page, beginning at the edge of the precipitous coral cliff that forms the shore. Transect is 20m wide, and is divided into 10m segments; multiple flags (~~in 20~~) are put every 20m, w. orange flags half-way between. Thus: 2 flags at 40m, 1 flag at 50m, 3 flags at 60m, etc. General vegetation progression is as follows: barren, pock-marked coral for 1st 15m, followed by 10m of coral rock with scattered low succulent plants (3 spp.) [Took photo of Orlando here]. At 25m ground is covered w. coral sand w. scattered loose rocks, bits of shell, etc. Bushes here are scattered, but of higher stature than closer to sea (ht. to 1m) - mostly same spp as in last zone, however. A few sm. grass clumps. Photo. Zone #4 (30-40m) - similar to latter area, but

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Baitiquiri - cont'd

2 Nov

plants even more scattered. One Cocoloba in SE corner (1st in the transect zone).

Zone #5 (40-50m) - lower border corresponds almost exactly to beginning of Cocoloba zone.

Most of the latter are ~ 1.5 m high; some to 2m.

Sm. amt + prostrate succulents. ~ 40% exposed sand (photo here).

Zone #6 (50-60m) - Denser & higher Cocoloba on sandy substrate. Well-developed leaf-litter zone under plants. Estimate 80% coverage by living plant canopy. sm. amt's grass (photo)

Zone #7 (60-70m) Cocoloba 2-3 m., but area ~~is~~ otherwise like #5. One or two large lva-like shrubs at top (N.) end of zone. (last photo on this roll)

Zone #8 (70-80m) - Cocoloba to 3m.

"Iva" present, plus a few palmettos at N. end (top) of zone. Palms are 3-5m.

Zone #9 (80-90m) - Opuntia (Prickly Pear type) comes in almost precisely at the lower end of this zone. Cocoloba drops out; Palms are most abundant.

"Inciensa de Costa" =
Tournefortia gnaphalodes

Zone #10 (~~80-90m~~^{90-100m}) - Sm. to #9, but less exposed sand (ca. 10%) (1st photo new roll)

Zone #11 - beginning of rank growth of tall grass scattered clumps of a gray-green, long-leaved aromatic shrub locally called "Inciensa de Costa". No caetus, palms, or Cocoloba.

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Baitiquiri - cont'd

2/Nov

Zone #12, 13, 14, 15, 16, 17, similar to #11.

Zone #18 also sim., but dirt road cuts upper corner.

Notes on lizards:

- a. 2 Ameiva foraging in Cocoloba zone 0815-20.
- b. 1 Anolis homolechis ♀ - on Cocoloba trunk 1 m up on 4 cm diam. diagonal trunk.
- c. Sm. juve. Liocephalus raviceps on open sand at edge of Cocoloba litter patch
- d. A. homolechis - 1 m up in Cocoloba, 1 cm diam., 35 m from shore (i.e., zone #4).

~~Area~~

Birds:

Birds: Cathartes aura (many); Pandion haliaeetus (3); Falco sparverius (2); Buteo jamaicensis (2); ~~Elaenia~~
Myiarchus stolidus (2); Polioptila ~~frontalis~~ - common;
Vireo gundlachi - common; Terrestris forsteri - common;
Melospiza helvae - 1 or 2;
Columba passerina - 2; Chlorostilbon ricardi - several;
Zenaidura 1; Dives aphyroloaeus; Aegialius humeralis;
Dendroica striata (1); D. parula (1);
D. tigrina - common; D. palmarum - 1; Tyrus canorus - common; Mimus polyglottus (many); Sayornis merlini (several);

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3 NOV

Main cacti (names from Nicasio Viña)

Lemaireocereus histrix - "Cereus-type" columnar

Opuntia dillenii - prickly Pear type

Cylindropuntia tunicata - Cholla type

Baitiquirí Area

Up at 0500; left hotel in Guantánamo at 0530 and drove directly to Baitiquirí, arriving ~ 0645.

At 0700, temp. was 26.0°C, RH = 74%. Clear w. 50% thin hazy clouds. lt. breeze. At 0800, T = 28°C, RH = 69%. Clouds somewhat heavier.

We finished surveying transect - total of 30 'zones' 10m long x 30m wide. Ends at base of cliff in beginning of 4-5m tall sclerophyll woodland w. much cactus.

Vegetation Notes:

Zone # 30 - lower 2/3 is Opuntia grandis w. some small Baccharis-like shrubs and an abundant pea-like vine. All except cactus were collected. Upper 1/3 is woodland mentioned above. Cereus, Opuntia, trees.

Zone # 29 - sim. to lower end of # 30, but more bushes; also, a rocky outcrop on E. side of quadrat w. clumps of "Inciensa de Costa", a distinctive aromatic bush with elongate silvery-green leaves. Opuntia and other plants in addition to grasses. Cereus & barrel cactus on rock outcrop. Plants collected here. Chlorostilbon seen.

Zone # 28. Well defined depression runs N-S through center of quadrat. Bare dirt shows at

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0900

T = 31°C RH = 54%

90% Thin overcast; lt. breeze.

3 Nov
Cont'd

bottom. Plants much like those in #29, but v. little Opuntia at top of arroyo on both sides of the wash. Bare ground is ~5%, grass-dominated vegetation - 75%; bushes - 20%.

9:15

Began 15 min. observation periods in zone #6. This is Cocoloba - sand area w. scattered sm. tufts of grass. Sat quietly and waited for lizards to appear. No lizards, ¹⁵ ~~15~~ min. when I began, & none appeared in ~~10~~ ¹⁵ min. Nasutitermes nest here. Paratrechina borg:cornis the only ant seen.

9:30

Began sim. 15 min. observation post in Zone #7. Lg. sandy clearing in Coccoloba nr. SW corner of #7. Chlorostilbon novelty at Coccoloba. No lizards in 10 min.

9:40

Zone #4. (NE corner). Sub. L. raviceps at edge of Coccoloba litter in sand patch. Sits next like Callisaurus. After 13 min, lizard moved out into open sand, then climbed onto small coral boulder to bask.

10:00 AM T = 34° RH = 47%

10:00

juv L. rav. just E. Zone 4

10:04

ad L. rav. SW corner zone 5 under Coccoloba

10:05

Sub L. rav. SW corner zone 7 where I had

spent 15 min. observing earlier.

10:07

ad Ameiva in semi-shaded clearing center 7-8.

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3 Nov - cont'd

10:08

Barro Colorado - cont'd

Zone 9. 15 min. obs. period sitting at one spot. Lioccephalus carinatus heard. bobbing on large log nr. center of Zone 9 in semi-shaded area. No other lizards seen.

10:24

♀ Anolis homolechis on dead palm trunk 2.5 m above ground just E. Z-8.

10:26.

Small L. ^{raviceps} carinatus in sandy area at W. edge of zone #9. Lg ♂ A. homolechis on palm nearby, 0.5 m off ground, 8 cm diam.

10:32

Amelia foraging at edge of sandy clearing nr. top of zone 10. Polioptila singing here. Weather getting more overcast & breezy.

10:37

10:38

Juve. L. rav. at center-bottom of Z-10. Sand ad. L. rav. E. side zone 10 on edge of sandy clearing.

10:40

Amelia in thinly shaded sandy area E. side Z-9. sm. juve L. raviceps nearby.

10:46

ad. L. rav. on sand shaded by Coccoloba NW corner Z-6

10:50

ad Amelia in sand just outside Coccoloba canopy NE corner Z-4.

10:51

Subad. L. rav. on sand betw. Coccoloba & patch of succulent plant SW corner Z-5.

10:52

sm juve L. rav. on sand just outside E. edge of Z-4. Prob. same one seen at 10:00 AM.

11:00 AM T = 33°C RH = 63% (nr shore)

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3 NOV
(cont'd)

Baitiquiri - cont'd

11:05

walking parallel to coast E. from transect
in lower 10m of Cocaloba zone.

11:06

juve L. rav. in sand

ad L. rav. under Cocaloba canopy.

11:10

juve L. rav. in sand at edge of Cocaloba (ad.)

[took photo of sun. barrel cactus on
coral outcrop nr. beach.]

Ameiva - ad. under Cocaloba 5m fr. outermost
fringe of veg. ~~area~~ (i.e., 5m inside furthest point)

Ameiva - ad. in sun. microhabitat, but under
outermost Cocaloba on beach.

Ameiva - ditto

12:00

T = 32°C, RH = 53%. Thin haze, sl. breeze.

After lunch, begin series of standardized
10 min. searches of 10x20m quadrats.
Worked toward Coast from Zone #20.

Zone 20

Start 13:37. ad. Ameiva moving parallel to
dirt track in thinly vegetated & gravelly area
veg < 1 m high. $\Sigma = 1/10$ min.

Zone 19

NOTHING

$\Sigma = 0/10$ min

Zone 18

1.5m high Incienusa bushes and grass

14:04 A. homotechis on heavy branch of Incienusa
looks like ♀ (no crest) 2cm diam, 1m off ground

$\Sigma = 1/10$ min

Zone 17

like #18, but more bushes. NOTHING. $\Sigma = 0/10$ min

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Baitiquiri - cont'd

ZONE 16 Begin 14:21. Sim. to Z-17. NOTHING. $\Sigma = 0/10$ min

ZONE 15 Upper 1/3 like Z-16. lower 2/3 mostly dense grass. NOTHING. $\Sigma = 0/10$ min

ZONE 14 Upper 1/2 like Z-15. Lower 1/2 w. many low Thorny bushes mixed w. grasses. A couple of 2m high Inciensa bushes; rest of veg. 1-1.5m high Chlorostilbon here. NOTHING. $\Sigma = 0/10$ min

ZONE 13 Much more brush than #14. Many Inciensa & other bushes. One or 2 bushes are ~ 3m tall - rest are 1.5-2m. Native (?) wire grass common here, though rank introduced sp. predominates. A. Saepi head-down on 45° inclined Inciensa trunk - 2cm diam 1m above ground at NE corner. Ameiva nrby in area w. dirt showing through thin vegetation.

Zone 12 Start 14:50. $\Sigma = 2/10$ min.

Clumps of Inciensa w. high grove of "Acacia" 3+ m. tall on W. side. Wire grass common. 14:55 - L. macropus at SW corner in thin vegetation 1-1.5m tall. Exposed gravelly substrate.

15:00 estimate $T = 90^{\circ}\text{F}$; $\text{RH} = 62\%$

Zone 11 Start 15:10. Tall grass w. Thicket of 2.5-3.5m high woody vegetation (incl. "Acacia") at W. side.

ad on A. zomotechi on 1.5m diag.

Trunk of Inciensa 3m high. lizard 1.5m above ground. lower SW corner. $\Sigma = 1/10$ min

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3 NOV.

Zone 10

Baitipouri - cont'd

15:23

Beginning of Palm-Opuntia Zone.

A. sagrei ♂-5m above ground on palm
frond. NE corner.

Sm juv L. rav. in open sandy area SE corner

→ A. homolechis on 3 cm diam. trunk of
diagonal spiny Acacia-like bush. 0.75m
above ground ~ 1m from above sagrei.

Tail curls to the side.

ad L. rav in same SE corner where above have
seen. $\Sigma = 4/10$ min.

Zone 9

15:34

Ameiva - sandy area - base of Coccoloba

tiny juve A. sagrei (?) 0.1 m off ground on
1 cm Coccoloba branch

ad ♀ A. homolechis on 5 cm diam. horiz
Coccoloba trunk 0.5 m off ground
at center of E. edge.

Juve. A. Tom. on trunk of 4m palm; 1.5m
above ground, 6 cm diam.

Juve. L. ravigaps in sand at NE corner.
 $\Sigma = 5/10$ min.

~
lizard activity seemed to drop off
rapidly after this point. I saw one
Ameiva in Z-7, one ♀ A. homolechis
(1m off ground, 5 cm diam. in 3m Coccoloba)
in Zone 7. No Leiocephalus or Ameiva
seen active now (1600) x

4 NOV.

Baitiquiri

Up at 0500; left Guantaruas ~ 5:45
arrived at Baitiquiri ~ 6:50.

0700 - T = 30°C RH = 78%

Helped Storrs put up Mist net. Got
an Ovenbird almost immediately. let it go
Terntritz wby net, which is set at
edge of rock cliffs in brushy area. lots
of cacti.

0800 - T = 34°C RH = 77%

Standard 10 min censuses (15th few
done more quickly - no cover, no lizards)

ZONE 1

NOTHING

$\Sigma = 0/10 \text{ min}$

ZONE 2

8:27 ..

$\Sigma = 0/10 \text{ min}$

ZONE 3

8:17 ..

$\Sigma = 0/10 \text{ min}$

ZONE 4

8:07

ad L. ^{raviceps} ~~var.~~ next to outermost bush (succulent)

at NW corner; 8:10 ad. L. var. on
sand under lg. Coccoloba at NE corner.

$\Sigma = 2/10 \text{ min}$

ZONE 4

9:00 saw 2 L. var. seen $\Sigma = 2/10 \text{ min}$

ZONE 5

9:10. ad L. rav under Coccoloba on
litter

9:14 ad ano/3 - sm., grayish, w. white
develop, no crest. Upside down
on horizontal 2cm diam Coccoloba
branch 7m off ground

$\Sigma = 2/10 \text{ min}$

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4 NOV

CUBA

ZONE 6

9:20 juve L. rav. NW corner on Cocoloba
litter. Hd under leaves.

(note ad A. komolekii captured in
This zone 2 days ago)

juve L. rav. on rock in sandy area SE corner
A. saepei on 5cm Cocoloba trunk, 1.5m
off ground; 45° slanted 2.5m plant
nr. middle of E. edge of zone

$\Sigma = 3/10$ min.

ZONE 7

09:30. ad L. rav. Sand at E. edge

~~ad~~ Ameiva NW corner in litter

ad L. raviceps nr. middle of N. edge under bush

subad Ameiva in sandy clearing

$\Sigma = 4/10$ min.

ZONE 8

ad ♂ A. homo. head-down on 3m palm stub
1.5m off ground; diam = 10cm

ad ♀ A. saepei 1.5m up in lg Cocoloba (3m).
diam = 5cm.

ad ♂ A. komolekii w/lay; 0.5m off ground on
dead Cocoloba 10cm diam.

$\Sigma = 3/10$ min

ZONE 9

10:00 AM. 2 Ameiva NE corner

1 Ameiva halfway down E. side

♀ A. komolekii on tilted dead palm

10cm diam; 0.5m off ground

1 Ameiva on litter under bushes SW corner

ad ♂ A. homo. 2.5m above ground on
4m dead palm stub; 8cm diam.

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Bartiquiri

4 Nov,
(cont'd)

ad ♀ A. humboldtii on same stub 1.5m up
 $\Sigma = 7/10$ min.

RECENSUSED ZONES 1-3 AT 10:35 - NOTHING

ZONE 4 10:40. 1 L. rav. NE corner on sand nr
Cocoloba $\Sigma = 1/10$ min

ZONE 5 1 Ameiva on Cocoloba litter
1 L. rav. on sand SW corner $\Sigma = 2/10$ min

ZONE 6 Juv L. rav. - NW corner - sand
Juv L. rav. NE corner - sand
Juv Ameiva NW corner - sand nr bush
 $\Sigma = 3/10$ min

ZONE 7

11:02

A. porcatus - ad ♀ on horiz. branch 2 cm
diam, 0.2 m above ground, in shade
SE corner

1 Ameiva in shaded sand at edge of Cocoloba
 $\Sigma = 2/10$ min

note: Sun has come out during past hrs, &
sand is getting v. hot; Lizard activity seems
to be dying down.

~~11:15~~ 11:15. T = 35°C (95°F) RH = 60%

ZONE 8

11:25

L. carinatus semi-shaded sandy area SE
Anolis (sagrei?) - brown - 0.1 m off ground
on 1 cm horiz. dead branch, shade

$\Sigma = 2/10$ min

Zone 9

1 juv L. raviceps - sand

1 ad Ameiva SE corner on shaded sand

1 ad Ameiva in Cocoloba litter

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4 Nov
Cont'd

Zone 9 (Cont'd)

1 Anolis Sp. 0.2 m off ground on 5 cm trunk
of Cocoloba 3m tall; shaded

$\Sigma = 4 / 10$ min

ZONE 10

ad L. rav. in thin herbaceous vegetation on
sandy substrate

1 juve L. rav. on sand at edge of palmettes

$\Sigma = 2 / 10$ min.

5 Nov.

Note: Fernando got 2 A. argillaceus on shrubs on transect
also a large, orange developed sp around caves; prob. A. ~~timias~~ timias

Baitiquiri area, Oriente, Cuba

Up at 0500. Left Guantanamo ca. 0545 &
arrived at the Baitiquiri site ~ 0700. Gene Norton,
Hiram Gonzales, & I continued east through
Baitiquiri and Timias to an area where
they had found Toxeremis yesterday. We
stopped ~ 4 km E. Timias, and I searched
coastal area (Cocoloba zone, mainly), while
they looked for birds on the limestone terrace
above. Weather overcast & relatively cool,
so lizards were not very abundant. I saw
a few Ameiva and Leiocephalus, but
couldn't get any with the rubber band I
was using. Beach here is dark-colored
cobbles and pebbles, rather than coral sand.
I collected a few shells before giving up. We
drove back towards Timias ~ 1 km, then stopped
N. of the road at a small ranch where
Gene and Hiram had stopped yesterday.
Lands here pretty heavily disturbed in

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1980

5 NOV
(cont'd)

places - large areas of bare or semi-bare earth, ploughed up mounds of dirt, etc. They worked further inland, and again found a number of Torreornis. I worked closer to the highway and got 2 Leiocephalus (raviceps?) in area w. much bare dirt showing. No Ameiva or Anolis seen.

We drove back to the main study site w. of ~~Duro~~ Baitiquiri. Gene & Hiram turned off paved road when it reaches the coast, & followed dirt rd. E. along the coast for ~ 1.5 km to look for Torreornis. I got off at the point ~ 1.5 km down the coast from our transect study site and worked my way back to the west, collecting (or trying to) in the littoral zone mainly. Slight rain shower further reduced the temp. & lowered lizard activity below its previous low level. I got only 1 Ameiva in ~ 1 hr. Searching - saw several more Ameiva and a number of Leiocephalus raviceps. Also spotted a total of ~ 7 L. carinatus & Sceloporus magister-like lizards that occurred only on large rock outcrops. Very shy & almost impossible to approach, but Fernando later shot one with an air rifle.

Met the rest of the group back in our transect area. They had found a nest

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5 Nov.
(cont'd)

of Chlorostilbon w. 2 small young. Nest placed ~ 1.5m high in an Inciensa de Costa bush just to the side of the transect as it passes from the Cocaloba zone to the dirt road.

After lunch we continued trying to catch lizards, but with little success. Weather still overcast & relatively cool, so lizard activity low. Fernando y Nicasio did get a juvenile Tarentola. The animal was under the dried fronds of a standing dead palmetto in zone 8 or 9 of the transect.

I left in first jeep at ~ 1530h. Fernando, in the second jeep drove E. around the point where I had been dropped off, and continued on for another couple of km to an area which, he says, is completely undisturbed by burning, grazing, or other human-related activities. This might be a good site for a future study of the lizard community - here he found A. argillaceus in the Cocaloba zone.

6 Nov

Trip to Baracoa

Up at 0500. Left Buenavista at 0600 in a small 10-passenger Soviet bus that was provided for us, along with a chauffeur. Proceeded east beyond Baitiqueros and Imias, then cut north into the Sierra Maestra toward the north coastal town of Baracoa. The road through the mountains was

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Baracoa - cont'd

6 Nov
(cont'd)

completed only in the early 1960's - before that, Baracoa was accessible only by sea and a small airstrip. Core of mountain range consists of green-weathering rocks that are schistose in some places, but appear to be meta-basalts in others. According to Viña, these are known to be pre-Jurassic, but no exact age determinations have been made. Conditions much more humid N. of crest.

We arrived in Baracoa, a pleasant Spanish-style city, ~ 9:30 & checked in w. the local committee for briefing. Then retraced our route S. from the city for about 5 km, where we stopped at the home of Antilquino Suárez (known locally as "El Rubio", or "Juventud"), a 66 yr. old man who maintains an impressive private menagerie which includes not only local Cuban species (Tupias, white-headed Amazon parrots, Cuban Solitaires, etc.), but also monkeys and a large lion. Antilquino treated us royally, to the extent of making a lamb killed in our honor, and we spent a couple of hours collecting in his Cacao plantation while lunch was being prepared. Conditions here were much like those I've seen in Cacao & coffee plantations elsewhere in Middle America and the Caribbean - Large native trees left to shade the crop, leaf litter on the ground,

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Baracoa - cont'd

6 Nov

(cont'd)

and high humidity. We were especially interested to obtain Anolis antilogus, an endemic species described from this spot. I collected 2 animals I thought to be this species - very skinny, long-legged, long-tailed forms with red and yellow swell develops and reddish suffusion of color on the chest. However, Fernando thought my animals ~~was~~ were A. cyanopleurus, another local sp. in the same group as A. antilogus. Lizards were common in the capital, especially A. jubar, which seemed to be on every 2nd or 3rd tree. A few A. sagrei present, but these were more common around the house & adjacent barnyard area. In the latter area A. argillaceus was fairly common on fence posts, & we picked up a single subadult A. porcatus. Leiocephalus macropus fairly common in the cacao grove. Cuban solitariae present here also - first time we've seen this sp. on the trip. Spent an hour or so roughing out lizards for skeletal specimens, then sat down to a sumptuous feast that featured spiced lamb, rice & beans, breadfruit, a potato-like root tuber, and excellent coffee (the latter also grown by El Rubio). All in all, a very pleasant experience.

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1980

Baracoa - cont'd

6 NOV

In late afternoon we returned to Baracoa, and had a beer at the local tourist hotel, which is located on the site of an old Spanish fort atop a high hill. Beautiful view of the city and its harbor, with the impressive "Yunque" (=Anvil) mountain as a backdrop. We started back to Guantanamo at dark, and arrived there about 2130 hrs.

7 NOV

Guantanamo and Santiago de Cuba

Spent a couple of hrs. in the morning trapping specimens while the jeep was being fixed, then drove about 30 km N. of Guantanamo to a hilly cañeta where a local artisan had carved a menagerie of enormous animals out of the local soft brown rock. Impressive, in a way, but the main advantage of the trip was seeing a little more of the countryside. Two species of Anolis present in the cañeta - A. jubar was the commoner of the two - v. sim. to the form we got yesterday in Baracoa, and to the larger animals fernando got around caves of rock ledges at Baripour! - A light-to-dark brown, fairly robust species, w. a medium-sized orange dewlap. The second sp. was small, mottled brown, w. a ~~very~~ small,

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Guantanamo and Santiago de Cuba - cont'd

7 Nov

White decolaps. Don't know what this one is. Large, round flattened tree snails common on banana plants that shaded coffee plants. Our visit was cut short by a deluge, and we returned to the hotel.

Had lunch, another meeting with the local political jefe who greeted us the first day

and finally got on the road for Santiago and arrived about 1930 h. Checked into a different hotel this time - a little older, but comfortable enough, and a lot livelier (including a live trio of guitarists in the dining room).
Hotel Los Americanos.

8 Nov

Up at 0500. Got to the airport at ~0600, and caught 0730 flight to Havana. Arrived ca. 0945, and checked in to the Academy of Sciences residence again.

In mid-afternoon we drove with Fernando to an upland limestone area called the "~~Escaleras~~" "Escaleras de Jaruco" - a plateau region 200-300 m in elevation some 20 km ESE Havana.

Many caves, ledges, rock spires, etc. in this park, as well as remnants of forest (most of it fairly young second growth). Supposed to be a good area for several Audis spp. (incl. A. luciae) but

weather was cool and rainy during our visit, and we did no collecting.

9 Nov.

Trip to Sierra de Rosario, Pinar del Rio

At my request, Fernando arranged for us to visit a small mountainous area SW of Havana where he studied Amblyops vermiculatus some years ago. The latter is a very large species that lives along shady mountain streams. Males are said to perch on overhanging rocks and tree limbs, and to dive into the water not only to escape ~~the~~ predators, but also to feed! Fernando has analyzed lots of stomachs, and has found fish and small crustacea (shrimp?) to be the commonest prey. Some vegetable material taken as well (fruits).

We drove SW for about an hour on the new highway from Havana, passing the exit to Mariel, where last summer's Cuban refugees left for Florida. Turned off the highway onto a 2-lane paved road as the low bulk of the Sierra de Rosario became visible in the distance. Fernando's old study sites were all along small headwater streams with shaded, tree-lined canyons and clear, rocky beds. Fish abundant (guppy-like

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Sierra de Rosario - cont'd

2 9 Nov
(cont'd)

forms). Almost immediately, Fernando spotted a ♂ and ♀ A. vermiculatus lurking beneath an overhanging rock ledge. Both took refuge up under the ledge, but he managed to grab the male, a beautifully marked animal with black vermiculations on a green-brown background. Female, which escaped, was much smaller (ca. 80 mm SVL vs. 150 mm SVL for ♂) and had dark transverse bars on body, rather than distinct vermiculations.

As we worked our way upstream, another large male was seen to leap into the stream from a large overhanging limb, some 2.5 m above the water. Another female was wrily on lower section of a large tree trunk next to stream. This individual also jumped into the water and hid under the bank where the latter was undercut by the stream.

Eventually, we captured a ♀ inside a culvert where it crossed under the road, and got a male that had jumped into water from an overhanging branch and hid underwater among boulders.

We returned to the site of capture of the first lg. ♂, and got the ♀, which was hiding among the ledges in the original area.

9 Nov
(Cont'd)

I kept the largest ♂ alive & preserved an adult ♀. Storr's skeletonized the other ♂ and ♀. One had a stomach full of palm fruits - presumably taken as they drifted by in the stream, as no palms were seen in the immediate vicinity.

Two other Anolis species seen in this area - which is near a little community called "Las Terrazas" nr. the headwaters of the Rio San Juan, Pinar del Rio province. A. nonolechis fairly common on small trees away from the stream - male & 2 ♀♀ collected; A. allogus (reddish dorsal) seen in shady area near stream - ♂ & ♀ on same tree stump - both collected. I picked up a tiny leptodactylid near the stream (striped pattern) which Fernando thinks is Gunitillus.

Returned to Havana in steady dampness (Hurricane Jeanne is in the process of traversing Cuba).

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1980

CATALOGUE - CUBA

28 Oct
JFL cat #
✓ 9054
9055

Havana, Prov. La Habana, Cuba (elev. nr. sea level)
Pheidole sp. - small, dark brown sp. highly dimorphic
Millipede sp - on wet walls of bldg (outside)

30 Oct

6 km (by rd) W. Ocuja de Turquino, Prov. Santiago de Cuba (formerly Oriente), Cuba (elev. nr. 0)

✓ 9056

Pseudomyrmex sp.

✓ 9057

Myrmicine sp - Solenopsis geminata

~~9057~~

~~Pogonomyrmex~~

} ~~same~~ ^{same} trail

31 Oct

"El Morro" fortress, Santiago de Cuba, Prov. Santiago de Cuba (formerly Oriente), Cuba (elev. ca. 25 m)

9058

Anolis argenteolus

9059

" "

31 Oct

Cave at Daiquirí, ca. 25 km (airline) ESE Santiago de Cuba, Prov. Santiago de Cuba (formerly Oriente), Cuba (elev. ca. 50 m)

✓ 9060

Myrmicine sp (Solenopsis geminata) trail in cave

1 Nov.

Santiago de Cuba, Prov. Santiago de Cuba (formerly Oriente), Cuba (elev. ca. 20 m)

9061

Anolis porcatius

9062

" "

2 Nov.

3 km (by rd) SW Baitiquirí, Prov. Guantánamo (formerly Oriente), Cuba (elev. ca. 20 m)

9063

Anolis argenteolus

J.F. Lynch
1980

CATALOGUE - CUBA

2 NOV - cont'd

9064

Anolis argenteolus

9065

" "

9066

Anolis porcatus ♂

9067

Anolis homolechis ♂

9068

" " ♂

9069

Leiocephalus raviceps subadult

9070

" " - juvenile

3 NOV

3 Km (by rd) SW Baitiquiri, Prov. Guantánamo
(formerly Oriente), Cuba (elev. 10-20m)

9071

Leiocephalus raviceps - juve.

9072

" "

9073

h. macropus? - adult

4 NOV.

9074

" "

9075

Leiocephalus sp? - large ad - prob. raviceps

9076

Anolis homolechis ♂ ad.

9077

" " ♀ ad

4 NOV.

Road between Baitiquiri and Iruas, ^{Prov.} ~~Dist.~~
Guantánamo (formerly Oriente), Cuba (elev ca. 10m)

9078

Epicrates angulifer - D.O.R.

4 NOV

4 Km (by rd) E. Iruas, Prov. Guantánamo
(formerly Oriente), Cuba (elev. nr. sea level)

9079

Anreia amberi (S. Olson coll.)

5 NOV.

5 NOV.

3 Km (by rd) E. Inyas, Prov. Guantanamo
(formerly Oriente), Cuba (elev. ca. 10 m)

9080

Leiocephalus raviceps?

9081

"

"

5 NOV

3 Km (by rd) SW Beitiquiri, Prov.
Guantanamo (formerly Oriente), Cuba (elev. ~ sea level)

9082

Ameiva aureri - in coccoloba zone

9083

Tarentola americana - ^{under dead fronds of standing} palmetto ca. 100m from shore

9084

Leiocephalus raviceps

6 NOV

5 Km (by rd) S. Baracoa, Prov. Guantanamo
(formerly Oriente), Cuba (elev. ca. 50 m)

9085

Anolis argillaceus ♂ ad

9086

"

♂ ad

9087

Anolis sagrei ♂ ad

9088

Anolis sp - ♂ ad ^{extremely attenuate, long limbs} & tail; red & yellow streaked dewlap

9089

"

"

JUVE

9090

Anolis porcatus JUVE

9091

Anolis allogus ♂ ad

♂ ad

{ dewlap tomato red
proximally, lightening to
red-orange distally

9092

"

"

"

9093

"

"

"

9094

"

"

"

9095

"

"

"

9096

"

"

"

9097

"

"

"

9098

"

"

"

9099

"

"

"

6 Nov - cont'd

9100	<u>Anolis</u> <u>allogus</u>	♂ ad
9101	" "	"
9102	" "	"
9103	" "	"
9104	" "	♂ sub
9105	" "	♀ ad
9106	" "	"
9107	" "	"
9108	" "	"
9109	" "	juvenile
9110	<u>Leiocephalus</u> <u>macropus</u>	
9111	" "	"

3 Nov 3 km (by rd) SW Baitiquiri, Prov. Guantanamo
(formerly Oriente), Cuba (elev. ca. 20 m)

9112	ants collected under palm shelter
9113	<u>Brachymyrmex</u> - column foraging on coral sand
9114	<u>Monomorium</u> - visiting flowers in brushy area

5 Nov. 10 km (by rd) SW Baitiquiri, Prov. Guantanamo
(formerly Oriente), Cuba (elev. vs. sea level)

9115	<u>Polychoderus</u> sp. - columns foraging on trails on sand
------	--

6 Nov 5 km (by rd) S. Baracoa, Prov. Guantanamo
(formerly Oriente) Cuba (elev. ca. 50 m)

9116 a.	<u>Camponotus</u> sp - black w. golden hairs - on fence
b	<u>Paratrechina</u> - robbing nectar from <u>Acacia</u>
9117	ants mobilized on dead <u>Anolis</u>

J.F. Lynch
1980

CATALOGUE - CUBA

7 Nov ca. 5 km (by rd) N. Jamaica, Prov. Guantanamo
(formerly Oriente), Cuba (elev. ca. 300 m)

9118 Arolis allopus ♂ ad - large orange & yellow dewlap

9119 " species? ♂ sub maybe sagrei ^{small, rose red} dewlap

9120 " allopus? ♀

9121 " sagrei? ♀ (all 4 on banana plants in cafetal)

9 Nov Havana, Prov. La Habana, Cuba (elev. nr. sea level)

9122 Sphaerodactylus in building

9 Nov Headwaters of Rio San Juan, near Las Terrazas, Sierra de Rosario, Prov. Pinar del Rio, Cuba
(elev. ca. 250 m)

9123 Arolis homotechis ♂ ad white dewlap

9124 " " ♀ ad } venter iridescent

9125 " " ♀ ad }

9126 (missing)

9127 Arolis allopus ♂ large dewlap; red proximally, becomes orange distally

9128 " " ♀

9129 Arolis vermiculatus - ♀ sub chin yellow - rest of venter dirty cream

9130 " " ♂ ad - kept alive

9131 Gerrhonotus ?

COMBINED DATA OF JPL AND Fernando

Zone

		28	1 Ameiva
1	0	29	1 A. arg.; 1 A. hom, 1 L. Car.
2	0	30	3 A. arg.; 3 A. hom
3	0		1 L. Car., 2 Ameiva
4			4 L. raviceps, 1 A. homolechis, 1 Ameiva
5			2 L. raviceps; 1 A. homolechis
6			3 L. raviceps, 1 A. homolechis, 1 A. sagrei
7			2 L. raviceps; 2 Ameiva; 1 A. porcatus
8			2 A. homolechis; 1 A. sagrei; 1 Ameiva
9			2 Ameiva, 3 L. raviceps, 2 A. hom, 1 L. carinatus
10			1 Ameiva, 3 L. rav, 2 A. hom, 1 A. sagrei, 1 A. porcatus, 1 rarentola
11			1 A. homolechis
12			1 L. macropus
13			1 A. sagrei
14			0
15			0
16			4 A. argillaceus (2 actually in quadrat)
17			0
18			1 A. homolechis
19			2 L. raviceps
20			1 Ameiva
21			2 Ameiva; 1 L. rav
22			0
23			1 Ameiva
24			1 A. argentatus, 1 A. homolechis
25			2 A. argentatus, 2 A. homolechis, 1 L. rav.
26			1 Ameiva
27			1 A. Sagrei

JFL data

Minimum # lizards on Transect
(i.e. no. of known different individuals)

1-3

0

Zone 4

ad L. rav-sand; A. hom - 1m up in Coccoloba (1cm) (2) Sub L. rav Sand;
Ameiva - sand nr. Coccoloba litter; Juv L. rav - Sand;
ad L. rav - sand

5

(2) ad L. rav - under Coccoloba on litter; Sub L. rav - sand; ad ♂
Anolis sp. - 1m up (2cm)

6

ad L. rav - shaded sand; (2) Juv L. rav - Coccoloba; A. sagrei - 1.5m
up (5cm); ad ♂ A. hom 1.5m up (5cm); (2) Juv L. rav - rock in
sand; Juv Ameiva - shaded sand

7

Sub L. rav - sand; (2) ad L. rav - sand; (2) ad Ameiva - litter;
Sub Ameiva - sand; ad A. porcatus ♀ - 0.2 m up (2 cm)

8

Ameiva - sand (semi shaded); ad ♂ A. hom - 1.5 m up (10 cm); ad ♀
A. sag. 1.5m up (5cm); ad ♂ A. hom - 0.5 up (10 cm)

9

ad ♀ A. hom - 1.5m up (8 cm)
L. guimatus - horiz. log; (2) Juv L. rav - sand; (4) Ameiva - shaded
sand; Juv L. rav - sand; Juv Anolis - 0.1 m up (1cm);
(2) ad ♀ A. hom 0.5m up (5cm); Ameiva - sand; ad ♂ A. hom 2.5m up
(8 cm)

10

~~Ameiva~~ Ameiva - sand; (2) Juv L. rav - sand; (3) - ad L. rav - sand;
A. sagrei - 0.5m up palm frond; A. hom ♂ 0.75m up (3cm)
~~A. hom~~

11

A. hom - 1.5m up (1.5cm)

12

L. macropus - gravelly soil - thin veg.

13

A. sagrei - 1m up (2 cm diam increase); Ameiva - Thinly shaded
dirt

14

0

15

0

16

0

17

0

18 A. hom - 1 m up (~~to~~ 2 cm incense)

19 ○

20 Aneiva ad - gravelly substrate, thin weeds

zone # 30 - *Anolis argenteolus* (3).
Anolis homolechis (3).
Leiocephalus carinatus (1).
Ameiva auberi (2).

zone # 29 - *Anolis argenteolus* (1).
Anolis homolechis (1).
Leiocephalus carinatus (1).

zone # 28 - *Ameiva auberi* (1).

open areas,
ground stratum

zone # 27 - ~~NO~~ NO -

zone # 26 - *Ameiva auberi* (1)

The rest
open areas

zone # 27 - *Anolis sagrei* (1) [in a shrub.]

open areas

zone # 26 - - NO -

zone # 25 - *Anolis argenteolus* (2) [in a shrub
incubus]
Anolis homolechis (2).
Leiocephalus raviceps (1) [incubus]

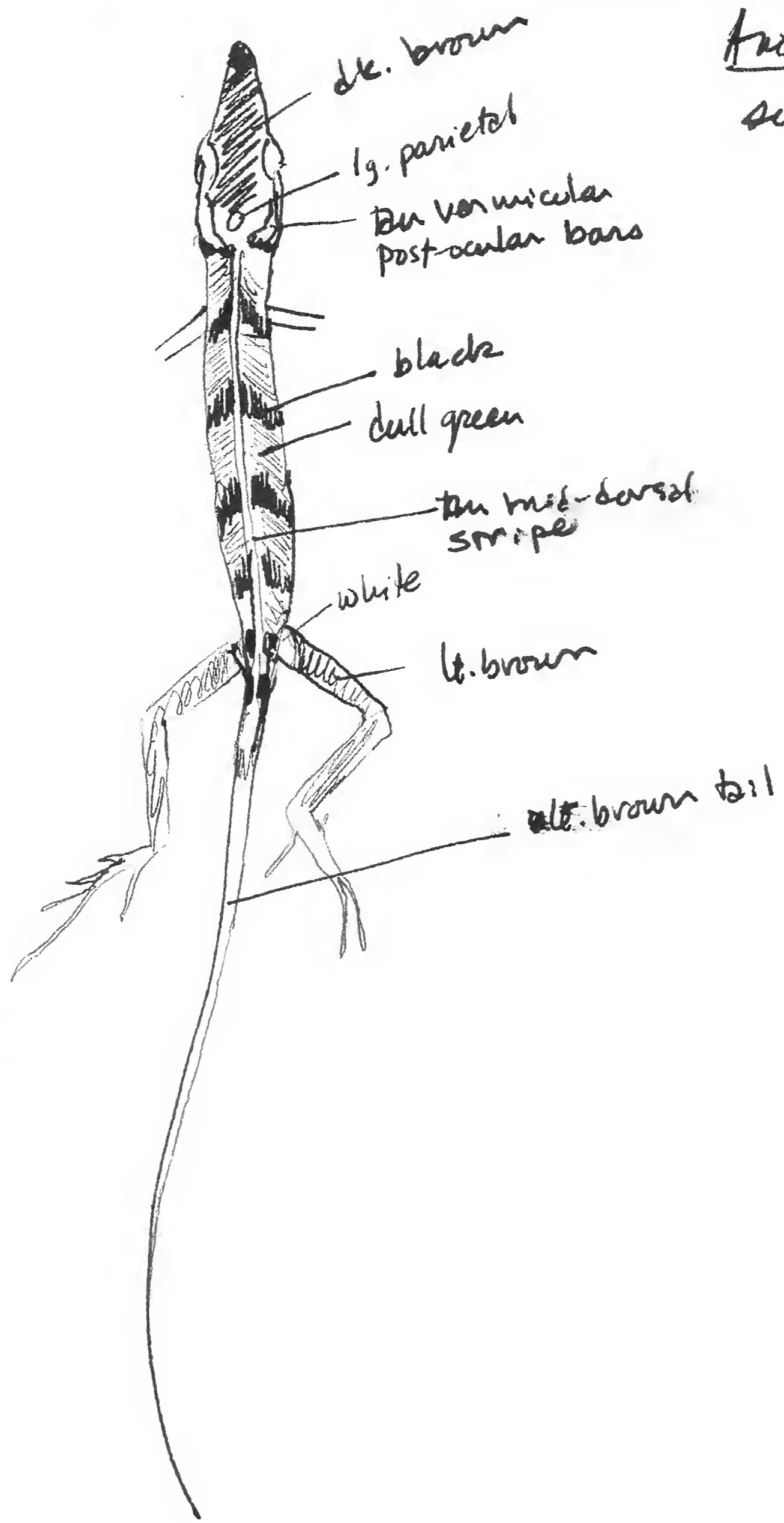
zone # 24 - *Anolis argenteolus* (1).
Anolis homolechis (1).

zone # 23 - *Ameiva auberi* (1).

Leiocephalus raviceps (1)

- zone # 22 — NO —
- zone # 21 — *Ameiva auberi* — (2).
Leiocephalus raviceps — (1)
- zone # 20 — NO —
- zone # 19 — *Leiocephalus raviceps* (2)
- zone # 18 — NO —
- zone # 17 — NO —
- zone # 16 — *Anolis argillaceus* (4)
- zone # 15 — NO —
- zone # 14 — NO —
- zone # 13 — NO —
- zone # 12 — NO —
- zone # 11 — NO —
- zone # 10 — *Leiocephalus ^{raviceps} ~~corinatus~~* (3)
Anolis homolechis (2)
Tarentola americana (1)
Anolis porcatus (1)
- zone # 9 — *Ameiva auberi* (2)
Leiocephalus ~~corinatus~~ ^{raviceps} (3)
Anolis homolechis (2)

Anolis vermiculatus
subadult



Stomach contents
Aug-75
Sub male
(Stamps)

dorsal

ventral

Leiocephalus raviceps

3 Km W. Bahiguiri, Ote, Cuba

extensive black 'smear' behind eye

fine black dashes

Low, but sharp, dorsal keel whole length of body

distinct dark gray asymptotic lineations on chin
off white pure white chest & arms

main belly color off-white (pale gray)

irreg rows of white scales

pure white pelvic area & thighs

tan undersurface of tail

Leiocephalus macropus

Baracoa

dark fleck on chin or hypurals

entire belly yellow-white

v. faint scattered wh. scales on off-white background

legs & pelvic area same color as belly

pale or-yellow

black

small irreg.

lt. fleckles

(size of scale) on dull brown background

lt. stripe sep. black brown

black "saddle" at hip & shoulder

complete black mask through eye area.



Stomach Contents
Bartiquiri

5 NOV 80

#1	<u>Anolis sagrei</u> ♂	47 mm SVL	R4 (#9)
#2	<u>Anolis thomobolus</u> ♂	60 mm SVL	L1 clipped (#11)
#3	" "	57 mm SVL	R5 clipped (#10)
#4	" "	57 mm SVL	L4 clipped (#4)
#5	" "	48 mm SVL	RT arm gone
#6	" "	♀ 43 mm SVL	L2 clipped (#2?)
#7	<u>Anolis argentatus</u> ♂?	34 mm SVL	R3 clipped (#8)
#8	<u>Leiocephalus varius</u> ♀	56 mm SVL	R2 (#7)
#9	<u>L. carinatus</u> ♀	74 mm SVL	L3 (#3)

Notes on lizards at Barro Colorado

Zone

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

ad L. var.

A. homolepis - 1m up in coccoloba, 1 cm diam. Sub L. var sand

A. aug. - sand on coccoloba litter; juve L. var sand; ad L. var - sand

(2) ad L. var on coccoloba on litter; sub ad. L. var - sand

ad Anolis sp 1m up (2 cm diam)

1.5m up (5cm)

ad L. var - shaded sand; juve L. var - coccoloba litter; A. saevi

ad A. Thom. - 1.5m up 5 cm diam; juve L. var - rock

Sub A. var. - sand; ad L. var - sand; A. Anolis - litter; sub A. Anolis - sand;

A. Anolis - semi shaded clear (sand); ad A. Thom. - 1.5 m up (10 cm diam); ad A. saevi - 1.5 m up (5 cm diam); ad A. Thom. 0.5 m up (10 cm diam)

L. var. - log (horiz.); juve L. var - sand; A. Anolis - shaded sand

juve L. var - sand; juve Anolis - shaded sand; ad A. Thom. - 1.5 m up (5 cm diam)

A. Anolis - edge of sandy clearing; juve L. var - sand; ad L. var - sand

A. saevi - 0.5 m off ground on palm frond; A. Thom. - 0.75 m up in A. Anolis (3 cm)

A. Thom. - 1.5 m up in 3 m Inciense bush (1.5 cm diam)

L. macropus - thin veg. on gravelly substrate

A. saevi - 1m off ground 2cm diam Inciense de Costa; A. Anolis - thin vegetated dirt

A. Thom. - 1m up in 1.5m Inciense de Costa (2 cm diam)

ad A. aug. - thin weeds on gravelly substrate

Other:

A. argenteolus - rocky area nr. palm thatch

shelter ♂ 1.3 m up on 6" tree trunk }
 ♀ 0.3 m up on 6" tree trunk } same tree

ad on limestone outcrop

ad 1.3 m up on 5 cm trunk

♂ 1.5 m up on 5 cm trunk

(over)

E. of transect, parallel to Zone 4-5

Jwe L. rav. - sand

ad L. rav. - ~~sand~~ Cecoloba canopy

Jwe L. rav. - in sand at edge of Cecoloba

ad Ameva - under Cecoloba

ad Ameva - " "

J. F. Lynch
1980

CATALOGUE

Sierra Rosario

9 Nov.

Rio San Juan near Las Terrazas, Pinar del Rio, Cuba

9123

Anolis homolechii ad ♂ - white dewlap

9124

" " ad ♀ iridescent venter

9125

" " ad ♀ " "

9127

Anolis allogus

dewlap red proximally, becomes
- orange distally; large dewlap

warm brown & gray mottled body color - like Cave
animals fr. Bachpurí, but smaller in size

9128

Anolis allogus

♀

(same sp as 9127)

9129

Anolis vermiculatus

- sub. ♀? ^{venter yellowish;} rest of venter off-white

9130

" "

practically no dewlap
- ad ♂ (kept alive)

9131

Smithillus?

J.F. Lynch
1980

CUBA

- 28 Oct Habana, Prov. de Habana, Cuba (elev. nr. sea level)
JFL 9054 Pheidole sp. - sm., dark-brown sp. w. v. dimorphic soldiers
9055 Millipede sp. - on outside wall of bldg. in wet area
- 30 Oct 6 km W. Ocuil de Turquino, Oriente, Cuba (~ sea level)
9056 Pseudomyrmex sp. } same viol
9057 myrmicine sp. }
9058 Paratrechina?
- 31 Oct "El Morro" (castle), Santiago de Cuba, Oriente, Cuba (sea level)
9058 Anolis argenteolus
9059 " "
- 31 Oct Cave at Daiquiri, ca. 25 km (by rd) E. Santiago de Cuba,
Oriente, Cuba (elev. ca. 100 m)
9060 Myrmicine (S. geminata?) - foraging trails into cave
- 1 Nov Santiago de Cuba, Oriente, Cuba (elev. ca. 20 m)
9061 Anolis porcatus
9062 " "
- 2 Nov. Baitiquiri, ca. 50 km (by rd) E. Guantanamo,
Oriente, Cuba (~ sea level)
9063 Anolis argenteolus
9064 " "
9065 " "
9066 Anolis porcatus ♂
9067 Anolis homolechis ♂
9068 Anolis homolechis ♂

J. F. Lynch
1980

2 Nov ³ Km (by rd) W.
Baitiquiri, approx. 50 km (by rd) E. Guantanamo,
Oriente, Cuba (elev. nr. sea level)

9069

Liocephalus raviceps - sub

9070

" " - juve.

3 Nov.

9071

" " - juve

9072

" " - ad.

9073

Liocephalus macropus - ad.

4 Nov

9074

Liocephalus macropus - ad

9075

Liocephalus cubaensis ad

9076

Anolis homolechis ♂ ad

9077

" " ♀ ad

~~2 Nov.~~
3 Nov.

³ Km W. Baitiquiri, approx 60 km (by rd) E.
Guantanamo, Oriente, Cuba (elev. nr. sea level)

9078

Epicratus angulifer D.O.R.

4 Nov.

4 Km. E. Inias (approx. 65 km

E. Guantanamo), Oriente, Cuba (elev. nr. sea level)

9079

Ameiva ~~ca~~ auberi (S. Olson coll.)

5 Nov.

3 km E. Inias (approx. 64 km E.

Guantanamo), Oriente, Cuba (elev. nr. sea level)

9080

Liocephalus raviceps?

9081

" "

5 Nov.

³ Km (by rd) W. Baitiquiri, approx. 50
Km (by rd) E. Guantanamo, Oriente, Cuba

9082

Ameiva auberi

9083

tarantola - under fronds of standing dead Palmetto

J.F. Lynch
1980

CATALOGUE

5 Nov

3 Km (by rd) W. Baitiquiri, approx. 50 km (by rd)
E. Guantanamo, Oriente, Cuba (nr. sea level)

9084

Leiocephalus raviceps

6 Nov.

5 km (by rd) S. Baracoa, Oriente, Cuba (elev. ca. 200m)

9085

Anolis argillaceus ♂ ad

9086

" " ♂ ad

9087

Anolis sagrei ♂ ad

9088

Anolis cyanopleurus ♂ ad small red & yellow streaked dewlap; red on chest too

9089

" " ? juve.

9090

Anolis porcatas juve

9091

Anolis ^{allogus} subar. ad ♂ dewlap tomato red proximally becoming orange distally; lg.

9092

" " "

9093

" " "

9094

" " "

9095

" " "

9096

" " "

9097

" " "

9098

" " "

9099

" " "

9100

" " "

9101

" " "

9102

" " "

9103

" " "

9104

" " subad ♀

9105

" " ad ♀

9106

" " "

9107

" " "

9108

" " "

J.F. Lynch
1980

CATALOGUE

6 Nov
(cont'd)
9109

5 km (by rd) S. Baracoa, Oriente, Cuba

Anolis ^{allogus} javan juve.

9110
9111

Leiocephalus macroptus
" "

3 Nov

3 km (by rd) W. Baitiquiri, Ote, Cuba (sea level)

9112

ants collected under palm shelter (S. geminata, etc.)

9113

Brachymyrmex on coral sand

9114

Monomorium visiting flowers

5 Nov

10 km (by rd) W. Baitiquiri, Ote., Cuba (sea level)

9115

Dolichoderine - forming extensive columns w. worn trails on open sand.

~~6 Nov~~

6 Nov.

5 km (by rd) S. Baracoa, Ote., Cuba

9116

a. Campylopus - on fence } collected around yard
b. Paratrechina - on flowers }

9117

ants

mobilizing on dead Anolis

7 Nov.

5 km (by rd) N. Jamaica, Oriente, Cuba (elev. ca. 300m)

9118

Anolis allogus

ad ♂ - large orange & yellow dewlap.

9119

"

"

sub? ♂ - small, rose-red dewlap

9120

"

"

♀ (prob. same sp. as 9118)

9121

"

"

♀ (prob same sp as 9119)

9 Nov.

Havana, Havana Province, Cuba

9122

Sphaerodactylus

3 km W. Baitiquiri
 MINIMUM NUMBER OF LIZARDS
 KNOWN TO BE PRESENT ON THE
 TRANSECT

J.F. LYNCH'S DATA
 NOV. 1980

ZONE ON
 TRANSECT

LIZARDS AND POSITION

CENSUSED 2-3 TIMES

CENSUSED ONCE

1	none	
2	none	
3	none	
4	<u>L. raviceps</u> ad - sand; <u>L. rav</u> - sub-sand (twice); <u>L. rav</u> - juve - sand; <u>L. raviceps</u> ad - sand twice <u>A. homoleckia</u> ad - 1m up (1cm diam) in Coccoloba; <u>A. auberi</u> - sub-sand irr Coccoloba. $\Sigma \Sigma = 4 \underline{L. rav.}, 1 \underline{A. hom.}, 1 \underline{A. aub.}$	
5	<u>L. rav</u> - ad - in litter under Coccoloba (twice); <u>L. rav</u> - sub-sand; <u>Anolis hom?</u> - ad - 1m up (2cm) Coccoloba. $\Sigma \Sigma = 2 \underline{L. rav.}, 1 \underline{A. hom.}$	
6	<u>L. rav</u> - ad - shaded sand; <u>L. rav</u> - juv. - under Coccoloba (twice); <u>L. rav</u> juv - on rock in sand; <u>A. sag</u> - 1.5m up (5cm); <u>A. hom</u> - ad σ^7 - 1.5m up (5cm); <u>A. aub</u> - juve - shaded sand. $\Sigma \Sigma = 3 \underline{L. rav.}, 1 \underline{A. hom.}, 1 \underline{A. sag.}$	
7	<u>L. rav</u> - sub-sand; <u>L. rav</u> - ad - sand (twice) } 1 <u>Ameiva</u> <u>Ameiva</u> - ad - litter under Coccoloba (twice); <u>Ameiva</u> - sub-sand; <u>A. porcatos</u> - ad ϕ - 0.2m up (2cm) $\Sigma \Sigma = 2 \underline{L. rav.}, 2 \underline{Ameiva.}, 1 \underline{A. porc.}$	
8	<u>Ameiva</u> - seaw shaded sand; <u>A. hom</u> - ad σ^7 - 1.5m up (10cm); <u>A. hom</u> - ad ϕ - 0.5m up (10cm); <u>A. sag</u> - ad ϕ - 1.5m up (5cm) $\Sigma \Sigma = 2 \underline{A. hom.}, 1 \underline{A. sag.}, 1 \underline{Ameiva}$	
9	<u>L. carinatus</u> - sub - on large log; <u>L. rav</u> - juve - sand (twice); <u>L. rav</u> - juve - sand; <u>A. hom</u> - ad ϕ - 1.5m up (8cm); <u>A. hom?</u> juve 0.1m up (1cm); <u>Ameiva</u> - shaded sand $\Sigma \Sigma = 2 \underline{L. rav.}, 1 \underline{L. car.}, 1 \underline{Ameiva.}, 1 \underline{A. hom.}$	
10	<u>L. rav</u> - juve - sand; <u>L. rav</u> - ad - sand (3 times). <u>Ameiva</u> - sand; <u>A. hom</u> - ad σ^7 - 0.75m up (3cm); <u>A. sag</u> - 0.5m up on palm frond $\Sigma \Sigma = 2 \underline{L. rav.}, 1 \underline{Ameiva.}, 1 \underline{A. hom.}, 1 \underline{A. sag.}$	
11	<u>A. hom</u> - 1.5m up (1.5cm) $\Sigma \Sigma = 1 \underline{A. hom}$	
12	<u>L. macropus</u> - on gravelly soil w. thin ground cover $\Sigma \Sigma = 1 \underline{L. mac}$	
13	<u>A. sag</u> - 1m up (2cm) Incienso; <u>Ameiva</u> - thinly shaded soil $\Sigma \Sigma = 1 \underline{A. sag.}, 1 \underline{Ameiva}$	
14	none	
15	none	
16	none	
17	none	
18	1 <u>A. hom</u> - 1m up (2cm) Incienso $\Sigma \Sigma = 1 \underline{A. hom}$	
19	none	
20	<u>Ameiva</u> - ad - on gravel w. thin shade $\Sigma \Sigma = 1 \underline{Ameiva}$	

Fernando's Data for transect

ZONE

Lizards

9	2 Ameiva auber, 3 L. carinatus ^{raviceps} , 2 A kom
10	3 L. var, 2 A kom., 1 Tarentola, 1 A. porcatius ♂
11	none
12	none
13	none
14	none
15	none
16	4 A. argillaceus
17	none
18	none
19	2 L. var
20	none
21	2 Ameiva, 1 L. raviceps
22	none
23	1 Ameiva
24	1 A. argenteolus, 1 A komo
25	2 A. argent., 2 A kom, 1 L. var
26	none in open area; 1 <u>Ameiva</u> elsewhere
27	1 <u>A. sagrei</u> .
28	1 <u>Ameiva</u>
29	1 A. argent; 1 A. komol; 1 L. carinatus
30	3 A argent, 3 A kom, 1 L. var, 2 Ameiva

RELATIVE DENSITIES OF LIZARDS ON TRANSECT

<u>SPECIES</u>	<u>MINIMUM NO. PER 200 m²</u>	
Anolis argillaceus		2
A. argenteolus		7
A. homolechis		18
A. porcatus		2
A. sagrei		5
Ameiva auberi		15
Leiocephalus carinatus		3
L. macropus		
L. raviceps		21
Tarentola americana		1

TOTAL LIZARDS

1 2 3 4 5 6 4 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 $\Sigma = 274$ lizards

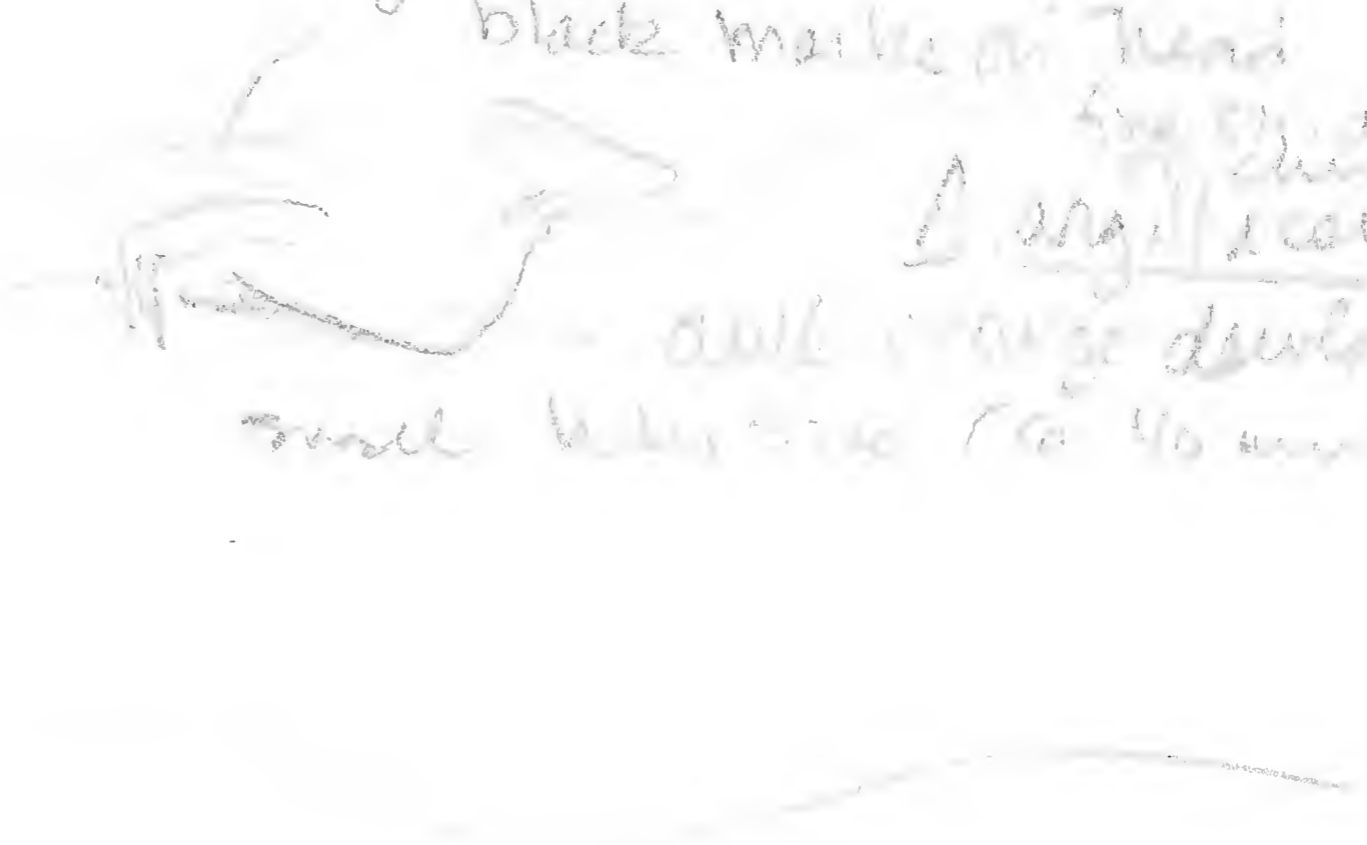
TOTALS/ZONE 0 0 0 6 3 5 2 3 9 8 3 3 1 0 0 2 0 1 2 1 3 0 1 2 5 1 1 1 3 9

VEGETATION:

300x20 = 6,000 m² = 0.6 ha

v. long tail

gray, mottled body w
black marks on head
long tail
small black spots (to 40 mm SVL)



J. H. Lynch
1980

TRIP TO MEXICO

20 NOV - 1 Dec vacation; 1 Dec - 21 Dec Salamander
collecting

20 NOV.

left BWI at 0800 with Margaret McWethy. Flew to Atlanta, where we changed planes for a flight to Mexico City. Arrived 12:30 PM Central Standard time. The car we'd reserved from Budget Rent-a-Car wasn't available at airport as promised, so we had to take a taxi van into Mexico City (av. Hamburgo in Zona Rosa) to main hdqtrs of Budget. It all worked out to our advantage, though - they ended up giving us a full-sized Valiant for the price of the VW bug we'd reserved. However, we lost a lot of time, and didn't get on the road for Acapulco until about 3:00 P.M. Arrived ~ 9:00 PM and checked into the Hotel Calata (we had reserved a room) a very nice high rise located on a peninsula at the W.-side of the city. Spectacular view from the balcony of our 9th floor room, and a bargain at \$26.00/day.

21 Nov.

Drove W. of Acapulco to beach area at Pie de la Cuesta (~10 km from Acapulco). Rented a chair & sat on the beach a while, had a beer, looked for shells, etc. Shell scene more too impressive. The kid who ran the beach chair concession told us to try Puerto Marques, the bay just E. of Acapulco, which we did. This is a pretty spot, very well protected, but is kind of

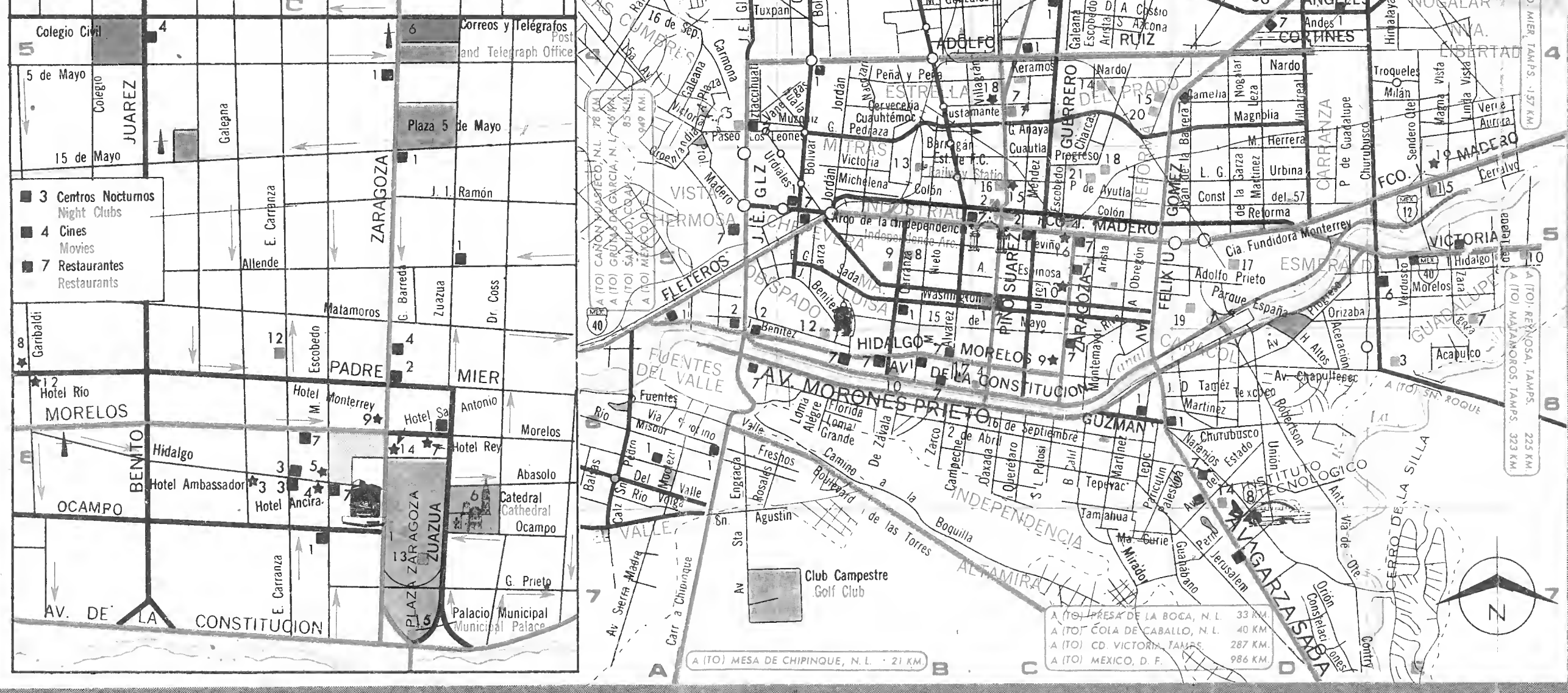


MAPA TURISTICO DE CARRETERAS

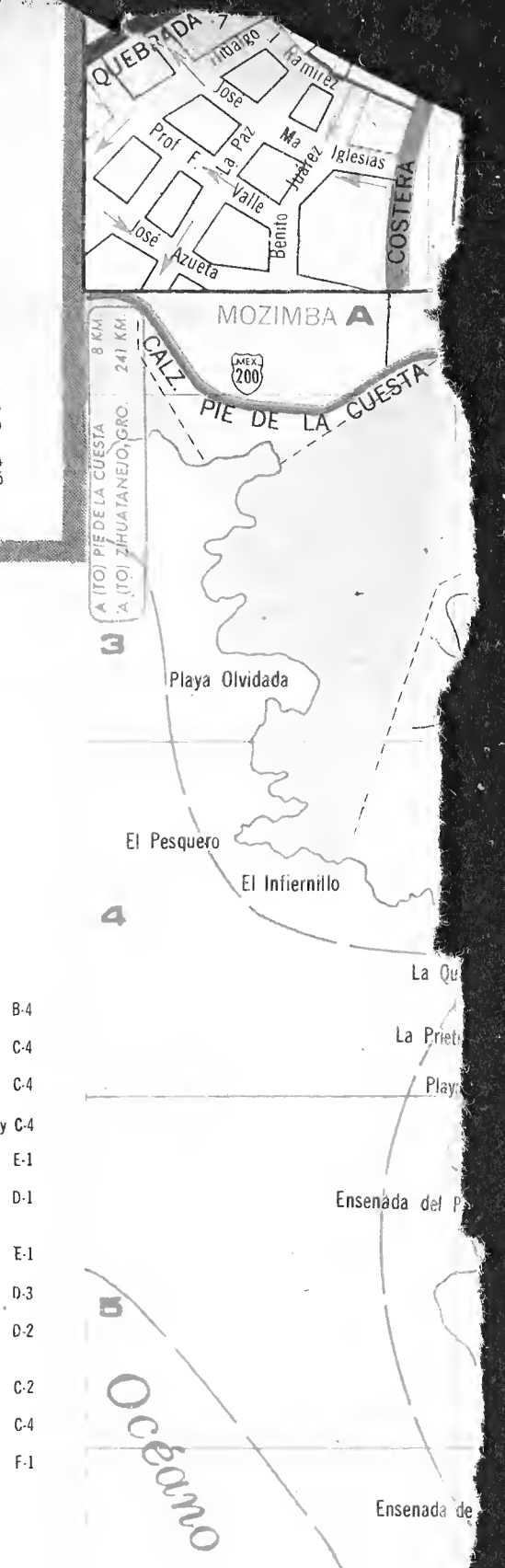
T O U R I S T R O A D M A P

Elaborado por la:
SECRETARIA DE ASENTAMIENTOS HUMANOS Y OBRAS PUBLICAS
 Con la colaboración de la:
SECRETARIA DE TURISMO Y PETROLEOS MEXICANOS

- INTERES**
- 1.-Alameda Central Park
 - 2.-Arco Independencia Independence Monument
 - 3.-Asociación de Charros de Monterrey Monterrey Charros Association
 - 4.-Casa de La Cultura Culture House
 - 5.-Casino Club de Leones Lions Club
 - 6.-Catedral Cathedral
 - 7.-Teatros Theaters
 - 8.-Teatros Theaters
 - 9.-Lineas Aéreas Air Lines Offices
 - 10.-Lineas Autobuses Foráneos Intercity Bus Station
 - 11.-Arenas Arenas
 - 12.-Templos Church



- HOTELES "AA" Y "A" HOTELS**
- 1.-Acapulco Continental
 - 2.-Acapulco Melbu
 - 3.-Acapulco Princess
 - 4.-Acapulco Princess Country
 - 5.-Boca Chica
 - 6.-Casa Blanca Tropical
 - 7.-Casino Hornos
 - 8.-Club de Pesca
 - 9.-Condessa del Mar
 - 10.-El Matador
 - 11.-El Mirador
 - 12.-El Presidente
 - 13.-El Cid
 - 14.-El Mirador
 - 15.-El Mirador
 - 16.-El Presidente
 - 17.-Fiesta Tortuga
 - 18.-Holiday Inn de Acapulco
 - 19.-Las Brisas
 - 20.-Las Varnacas
 - 21.-Majestic
 - 22.-Maraisa
 - 23.-Maris
 - 24.-Paraiso Marriott
 - 25.-Plaza Internacional
 - 26.-Posada del Sol
 - 27.-Ramada Inn de Acapulco
 - 28.-Ritz
 - 29.-Ritz Marriott
 - 30.-Romano Palace
 - 31.-Villa Vera
 - 32.-Villa Vera
- También cuenta con: 42 hoteles tipo "B" y 333 hoteles tipo "C" en servicio. Also the City has 42 hotels category "B" and 333 hotels category "C".
- * Estos hoteles se encuentran en Puerto Marqués. * You can find these hotels in Puerto Marqués.
- PUNTOS DE INTERES INTEREST POINTS**
- 1.-Centro Cultural y de Convenciones Cultural and Conventions Centes
 - 2.-Fuerte de San Diego San Diego Fort
 - 3.-La Quebrada
 - 4.-Mercado
 - 5.-Virgen Submarina Submarine Madonna
 - 6.-Centros Nocturnos Night Clubs
 - 7.-Cines
 - 8.-Plazas de Toros Bull Ring
 - 9.-Restaurantes Restaurants
 - 10.-Teatros Theaters
 - 11.-Lineas Aéreas Air Lines Offices
 - 12.-Lineas de Autobuses Foráneos Intercity Bus Station
 - 13.-Arenas Arenas
- EDIFICIOS PUBLICOS PUBLIC BUILDINGS**
- 1.-Palacio Municipal Municipal Palace
 - 2.-Palacio Federal Federal Palace
 - 3.-Correos y Telégrafos Post and Telegraph Office
 - 4.-Teléfonos de México Telephone Office
 - 5.-Cruz Roja Red Cross
 - 6.-Hospital General General Hospital
 - 7.-Hospital General General Hospital
 - 8.-Delegación Federal de Turismo Tourist Office
 - 9.-Centro S.O.P. S.O.P. Center
 - 10.-Delegación de Policía y Tránsito Local Police and Traffic Office
 - 11.-Policia Federal de Caminos Federal Road Police
 - 12.-Drección de Turismo del Estado State Tourist Office
- TEMPLOS CHURCHES**
- 1.-Catedral de Nuestra Sra. de la Salud (Catedral)
 - 2.-Parroquia del Sagrado Corazón de Jesús (Católica)
 - 3.-Holy Cross Church (Anglicana)
 - 4.-Iglesia Episcopal Holy Cross
 - 5.-Iglesia Presbiteriana "Mártires del 75"
 - 6.-Iglesia Presbiteriana
 - 7.-Capilla de La Paz
 - 8.-Iglesia Bautista
 - 9.-Interdenominacional
 - 10.-Iglesia Adventista
- VARIOS MISCELLANEOUS**
- 1.-Gasolineras Gas Station
 - 2.-Botiches Boating



PTO. VALLARTA, JAL.



POBLACION 1975 46313 HAB. ALTITUD 15m S.N.M. TEMPERATURA MEDIA ANUAL 26°C.
 POPULATION 1975 46313 ALTITUDE A.S.L. 49 FT. AVERAGE ANNUAL TEMP. 78 °F.

- HOTELES "AA" Y "A" HOTELS**
- 1.-Belmar
 - 2.-Camino Real
 - 3.-Delfin
 - 4.-El Dorado
 - 5.-El Mirador
 - 6.-Encino
 - 7.-Eloisa
 - 8.-Casa Blanca
 - 9.-Hda. del Lobo
 - 10.-Janine
 - 11.-La Fogata
 - 12.-La Fiesta
 - 13.-Las Brisas
 - 14.-Las Cabañas
 - 15.-Las Palomas
 - 16.-Los Arcos
 - 17.-Los Cuatro Vientos
 - 18.-Malecón
 - 19.-Marisol
 - 20.-Mesón de los Arcos
 - 21.-Océano
 - 22.-Paraiso
 - 23.-Playa de la Gloria
 - 24.-Playa de Oro
 - 25.-Río
 - 26.-Río Cuale
 - 27.-Rosita
 - 28.-Tropicana
 - 29.-Villa del Mar
- MOTEL**
- 30.-De Cortés
 - 31.-Fontana del Mar
 - 32.-Posada de la Selva
 - 33.-Posada Vallarta
- EST. PARA CASAS RODANTES TRAILERS CAMP**
- 34.-Tachó
 - 35.-Vallarta's
- EDIFICIOS PUBLICOS PUBLIC BUILDINGS**
- 1.-Aeropuerto Airport
 - 2.-Centro de Salud Hospital Hospital Center
 - 3.-Correos Post Office
 - 4.-Delegación de Tránsito Traffic Department
 - 5.-Oficina de Marina Marina Office
 - 6.-Oficina Federal de Hacienda Department of Public Finance
 - 7.-Presidencia Municipal Municipal Palace
 - 8.-Teléfonos L.D. Large Distance Telephone
 - 9.-Teléfonos de México L.D. Mexico Telephone Large Distance
 - 10.-Telégrafos Telegraph
 - 11.-Terminal del Transbordador Ferry Boats Station
- PUNTOS DE INTERES INTEREST POINTS**
- 1.-Alfareria Tlaquepaque Tlaquepaque Arts and Crafts
 - 2.-Buzos de México Mexico Diver's Club
 - 3.-Mercado Municipal Municipal Market
 - 4.-Palacio de las Artesanías Arts Palace
 - 5.-Vallarta Agua Sport
- VARIOS MISCELLANEOUS**
- 1.-Gasolineras Gas Station
 - 2.-Centros Nocturnos Night Clubs
 - 3.-Cines
 - 4.-Plaza de Toros Bull Ring
 - 5.-Restaurantes Restaurants
 - 6.-Teatros Theaters
 - 7.-Lineas Aéreas Air Lines
 - 8.-Lineas de Autobuses Foráneos Intercity Bus Station
 - 9.-Templos Churches

- EDIFICIOS PUBLICOS PUBLIC BUILDINGS**
- 3.-Cruz Roja Red Cross
 - 4.-Departamento de Turismo Tourist Department
 - 5.-Escuela de Medicina Medicine School
 - 6.-Escuela Normal Normal School
 - 7.-Estación de Pasajeros del F.C. Railway Station
 - 8.-Hospital Civil Civil Hospital
 - 9.-Instituto Tecnológico Technological Institute
 - 10.-Palacio de Gobierno Government Palace
 - 11.-Palacio de Justicia Justice Building
 - 12.-Palacio Municipal Municipal Palace
 - 13.-Teléfonos Telephone Office
 - 14.-Telégrafos Telegraph Office
 - 15.-Universidad de Guadalajara Guadalajara University
- POBLACION POPULATION**



QUINTANA ROO TURISTICO



- HOTELES "AA" Y "A" HOTELS**
- 1.-Barracuda
 - 2.-Cabañas del Caribe
 - 3.-Cantarel
 - 4.-Cuzumel Caribe
 - 5.-Cosumel Caribe
 - 6.-Isleño
 - 7.-Mambú
 - 8.-Mara
 - 9.-Playa Azul
- PUNTOS DE INTERES INTEREST POINTS**
- 1.-Capilla de Guadalupe Guadalupe Church
 - 2.-Centro Vacacional (C.F.E.) Resort Center
 - 3.-Parque de Béisbol Baseball Stadium
- EDIFICIOS PUBLICOS PUBLIC BUILDINGS**
- 1.-Aeropuerto Airport
 - 2.-Capitanía del Puerto Customs Office
 - 3.-Centro de Salud Health Center
 - 4.-Centro Tecnológico Technological Center
 - 5.-Correos y Telégrafos Post and Telegraph Office
 - 6.-Fuerza Aerea Mexicana Mexican Air Force
 - 7.-I.M.S.S. Mexico's Society Security Institute

J. R. Lynch

1980

tacky - wall to wall concession stands, cheap snack bars, etc. - almost 100% low-rent Mexicans at the main beach. We hired a guy to take us across the bay in a small sailboat to a beach next to a rocky area - he claimed it was "muy tranquilo" over there, but that was a crock. The crowd was somewhat less teeming, however, and definitely better healed. Several villas in the area, & some big yachts anchored near the beach. Shell scene not much good here either - bottom is coarse, light-colored gravel. Rocks are granitoid, smooth-weathering, with little encrusted marine life. Margaret got a small Conus of a fragment of a bigger one, plus a few odds & ends. Collected a lot of bivalves along beach S. of here. Ate dinner at the hotel.

22 Nov.

Took the 15 peso ferry to Isla Raquetta, just offshore from our hotel. This is a very popular bathing beach for local Mexicans - virtually no tourists. Sparkled amongst the rocks to the side of the beach & picked up a few shells, but nothing to write home about. We left the island in mid-afternoon - I've come down with a bad cold, and feel pretty lame. We hung around the hotel for a couple of hours, then went to dinner at a nice hotel on the Costera.

$$\begin{array}{r} 22 \overline{) 17,623} \\ \underline{176} \\ 23 \end{array}$$

$$\begin{array}{r} 800 \\ .40 \\ \hline \$ 320 \end{array}$$

23 Nov

En Route Acapulco to Zihuatenejo

We were trying to decide whether to head SE to the Oaxaca Coast (Pro. Escandido, Pto.) or NW to Zihuatenejo and possibly Manzanillo. Decided to go at least as far as Zihuatenejo (ca. 250 km from Oaxaca) and check things out. It is close enough that we could still backtrack to Acapulco of Oaxaca. Unfortunately, the road to Zihuatenejo is practically never within sight of the coast once you get beyond Piedra de Cuesta, ca. 10 km from Acapulco.

However, we did make a couple of stops - one down a dirt side road to the coast at a place called Cabañas. There, we were ferried across a stagnant-looking lagoon by a woman poling a dugout. She dropped us at a group of thatched huts (bars, restaurants, Cabañas, etc.) on an open exposed sand beach. We stayed long enough to pick up a few shells & drink a beer, then continued up the coast.

Stopped again at Papanoa, a small resort (Mexican locals only, as far as I could tell) where the road starts the coast. There were ~~an~~ some lava outcrops extending into the water beside the beach, and we got some limpets.

J. R. Lynch
1980

nerites, etc. There, but not too much variety. No cones, cowries, or other desirables. I nearly got swept away by a fierce rip tide that was running from the sandy beach past the rocks.

Arrived at Zihuatenejo in mid-afternoon, and checked in at an excellent hotel called "Hoteles Sotavento y Catalina" in the southernmost of the two main beach areas - Playa La Popa. Hotel is about 6-tiered, and built right on the cliff face going down to the beach - no elevators so getting from the parking area to the beach is a real workout (actually, the other direction is the hard one). Very nice atmosphere - lots of trees and tropical plants. Each room has a balcony area - good restaurant, and a snack bar right on the beach. All for about \$16.00 / night. Very nice beach in front of the hotel, with a lava rock area immediately to the north. The latter site proved excellent for shells - an extensive shallow area with loose rocks and large submerged and partially submerged outcrops yielded numerous gastropods we hadn't seen before, including several Conus regius.

24 Nov

J. F. Lynch

and dozens of a small (ca. 2-3 cm) Cornu with red mantle and purplish color to vertex of shell. Several conures, a large striped snail w. an elongate tooth, and others that will have to await I.D.'s.

Stayed here 2 nights. Hemidactylus ^{Gehyra} abundant

25 Nov.

En Route Zihuatenejo - Coliwa

Based on a breakfast conversation with a Mexican couple at our hotel, we decided not to backtrack to Acapulco & Coxaca - Road from coast to City of Coxaca said to be impossible in normal passenger car. Based on glowing reports re. Manzanillo, we decided to go there instead, although it is a very long drive (The coast road has a 50 Km gap in it which means one must drive inland toward Guadalajara, then cut back to the coast at Manzanillo). We set out at 0800 followed coast road for about 30 Km, then started winding up into hills through Nueva Italia, Uruapan, Paracho, Zamora, Sahuayo, and finally ended up at Coliwa ~ 2100 hrs. A very long and grueling drive - mostly winding 2-lane roads with lots of truck traffic.

26 Nov

Colima - Manzanillo area

Up at 0730. Volcan de Colima v.s.ible from back window of our motel - a definite plume of smoke could be seen issuing from the peak. We drove S. from Colima to Manzanillo, a distance of ~ 100 km. Got bogged down in the middle of the city looking for the Tourist office. Finally found it & got info on hotels, maps, etc. The Manzanillo resort area occupies 2 separate bays that begin just NW of the city itself. Beach areas are separated by high rocky promontary, another of which is found at the N. end of the second bay. Nothing here really caught our fancy, so we continued driving NW on the "coast road" (which, as usual, was well inland from the coast for most of the way). We crossed into Jalisco at the town of Cihuatlán, and continued about 20 more km to Barra de Navidad, a little town that is apparently trying to become a resort. We first checked a very plush, brand new resort at the S. end of the bay, called Cabo Blanco but it was way inland from the

J. Filynsky
1980

North of Manzanillo - cont'd

beach, expensive, and very Miami Beach-ish. We continued around the bay to the north where a settlement called Melaque. Several hotels, restaurants, and a small town. We checked into a very nice hotel called the "Club Nautico", right on the beach, with a large thatched open-air restaurant & bar. The beach was barren of shells, but we picked up a few small Conus & cowries, plus miscellaneous snails & limpets, in rocky area to the N. of the beach. Water here noticeably colder than in Acapulco & Zihuatenejo. Checked out a couple of beaches ^{to the north - open, barren}

27 Nov

Started back to Manzanillo. Stopped at Playa del Oro, a long, exposed beach a few km into Colima at the end of a 7 km dirt road. Nothing much on the beach, except around a couple of large rock outcrops, where we picked up a fair number of Donax, keyhole limpets, etc.

Continued back to Manzanillo, and finally found a pretty good hotel (Santiago) on the rocky promontory separating the 2 main bays. Good sand beach for swimming and a sheltered rocky lagoon between the

J. F. Lynch

1980

Manguillo - cont'd

27 Nov

shore and a small "island" connected to the mainland by a causeway. Rough exposed rocky shore beyond this. The lagoon had abundant molluscs, but mostly stuff we'd seen further south (footed snails, small Conus, etc.). Cowries fairly common under rocks - 2 spp - a streaky patterned one (abund.) with narrow mantle, and a rare spotted sp. with a highly lizard-like fringed mantle. Most interesting find to me was a "new" Conus - 2 living specimens taken (1 under rock, one on rock wall) - grayish mottled shell with prominent spiny tubercles; Mantle gray w. very fine salt and pepper flecks of black & silver. Length about 4-5 cm.

Saw dolphins jumping in bay. Colony of Ctenosaurus living in holes in sheer cliff face behind hotel - area shaded all day.

Hauidactylus penatus common on walls at night.

28 Nov

Drove from Manguillo to Guadalajara in the afternoon. Not a bad drive - ~ 4 hrs. Stayed downtown at Hotel Roma (890 pesos).

en J

SAMPLING METHOD

Site	Litter	Ground Bait	Twig	Sweep	ARB Bait	Quadrat
1. Upper lawn	N/A	—	N/A	N/A	N/A	—
2. Lower lawn	N/A	—	N/A	✓	N/A	—
3. House field	N/A	—	N/A	N/A	N/A	—
4. Big Pine field	N/A	—	N/A	N/A	N/A	—
5. Atkinson Course	✓	✓	✓	✓	✓	—
6. Lake Shore	N/A	N/A	N/A	N/A	N/A	N/A
7. Sheep Is.	✓	✓	✓	✓	✓	—
8. Woodyard Hammock	✓	✓	✓	✓	✓	—
9. Anders Branch	✓	✓	✓	✓	✓	—
10. Komarek Farm	N/A	✓	—	✓	✓	—
11. Wade Tract	✓	—	—	✓	—	—
12. NB 66 Tract	—	—	✓	—	—	—

J. F. Lynch
CBCES

DATA SHEET FOR ANT BAITING TRANSECTS

DATE:
TRANSECT NO.:
LOCATION:

TIME BAITED:
TIME CHECKED:

WEATHER:

Ground Temp.
Cloud Cover-
Wind-

Air Temp.
Wet or Dry?

POSITION		BAIT TYPE	
Distance(m)	Station No.	Strup	Tuna
0	1		
10	2		
20	3		
30	4		
40	5		
50	6		
60	7		
70	8		
80	9		
90	10		
100	11		
110	12		
120	13		
130	14		
140	15		
150	16		
160	17		
170	18		
180	19		

Reithrotrichus

A ♂ argenteus on

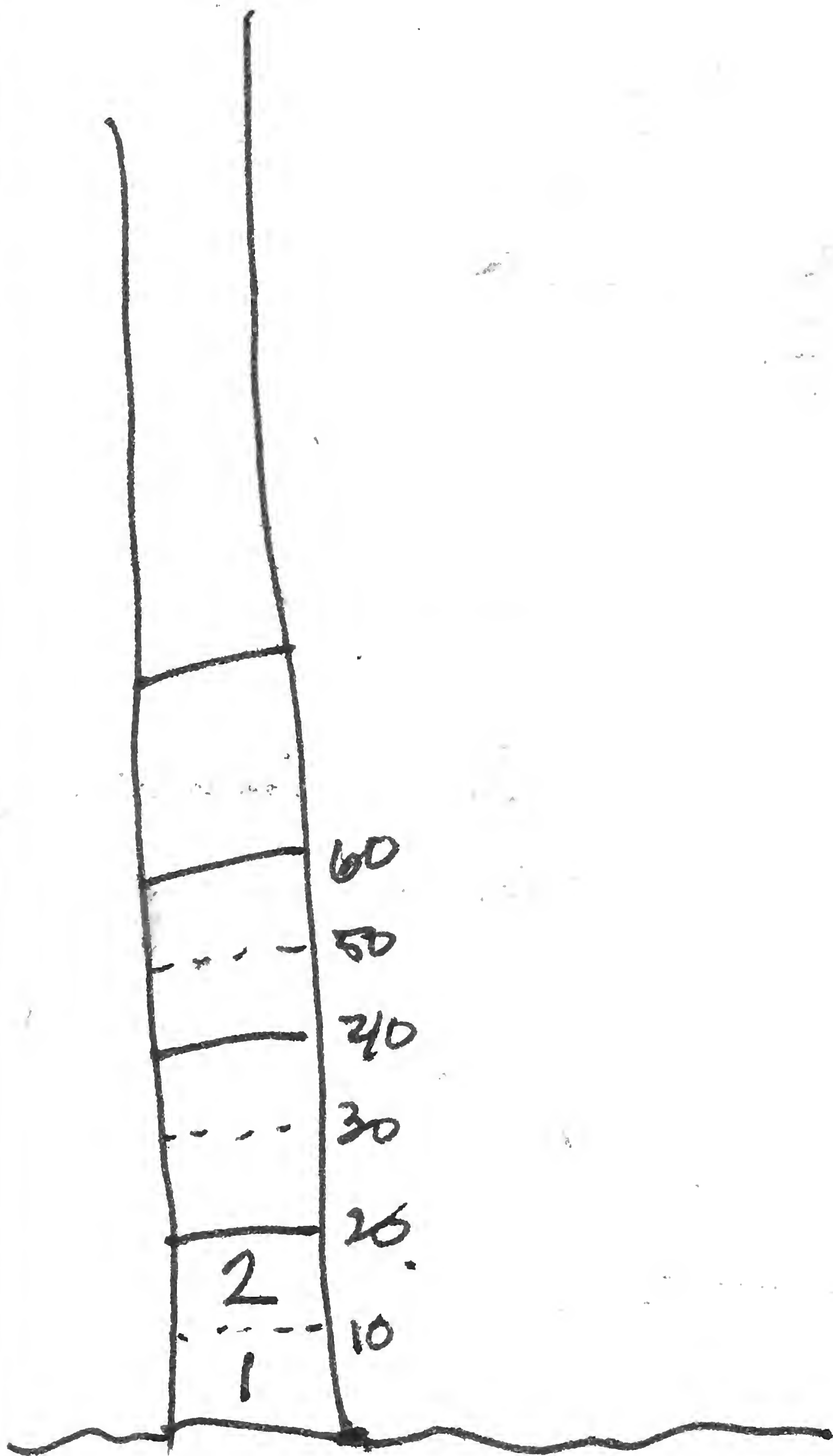
on 6" trunk 4' up
♀ on same tree 11' up - ran
to ground to capture food.

One on limestone air trap

one 4' up in 2" trunk
head down - camouflaged

♂ 5 1/2' up on 2" gray
trunk - head down

~~♂ 5 1/2' up on 2" gray trunk - head down~~



Ocean

Peltophryne peltoccephala

220597

CUBA: Oriente; Uvero, 18 km W of, La Mula

Olson, Storrs L. & Lynch, James F.

01

30 OCT 1980 CU-80-19

REMARKS: COMPLETE SKELETON. FEMALE SV Length:
119 mm.

Anolis allogus

220598-220609

CUBA: Oriente; Baracoa, hill across from
Anfiloquio Suarez "Zoo"

Olson, Storrs L. & Lynch, James F.

12

06 NOV 1980 CU-80-57 through CU-80-68

REMARKS: COMPLETE SKELETONS. MALES & FEMALES.
SV Lengths in Serial Catalog & Field Notes.

Anolis argenteolus

220611

CUBA: Oriente; Uvero, 18 km W of, La Mula

Olson, Storrs L. & Lynch, James F.

01

30 OCT 1980 CU-80-9

REMARKS: COMPLETE SKELETON. MALE. SV Length:
55 mm.

Anolis argenteolus

220610

CUBA: Oriente; Uvero, 26 km W of, Cuevas del
Turquino

Olson, Storrs L. & Lynch, James F.

01

30 OCT 1980 CU-80-4

REMARKS: COMPLETE SKELETON. MALE. SV Length:
55 mm.

Anolis argenteolus

220612-220613

CUBA: Oriente; Uvero, 18 km W of, La Mula

Olson, Storrs L. & Lynch, James F.

02

30 OCT 1980 CU-80-10 & 11

REMARKS: COMPLETE SKELETONS. SEXES UNKNOWN. SV
Length: 53 & 44 mm.

Anolis argenteolus

220614-220615

CUBA: Oriente; Uvero, 15 km W of, Cueva de
los Murcielagos de la Uvita

Olson, Storrs L. & Lynch, James F.

02

30 OCT 1980 CU-80-16 & 17

REMARKS: COMPLETE SKELETON. MALE & FEMALE. SV
Length: 50 & 44 mm.

Anolis argenteolus

220616

CUBA: Oriente; Santiago de Cuba, Motel
Versalles

Olson, Storrs L. & Lynch, James F.

01

31 OCT 1980 CU-80-24

REMARKS: COMPLETE SKELETON. MALE. SV Length:
55 mm.

Anolis argenteolus

220617

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 CU-80-30

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
44 mm. Shelled egg, 7 x 14 mm.

Anolis argenteolus

220618

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

04 NOV 1980 CU-80-43

01

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
45 mm. Large shelled egg.

Anolis argillaceus

220619-220620

CUBA: Oriente; Baracoa, hill across from
Anfiloquio Suarez "Zoo"

Olson, Storrs L. & Lynch, James F.

06 NOV 1980 CU-80-70 & 71

02

REMARKS: COMPLETE SKELETONS. MALE & FEMALE. SV
40 & 39 mm.

Anolis cyanopleurus

220621

CUBA: Oriente; Baracoa, hill across from
Anfiloquio Suarez "Zoo"

Olson, Storrs L. & Lynch, James F.

06 NOV 1980 CU-80-56

01

REMARKS: COMPLETE SKELETON. SEX UNKNOWN. SV
Length: 67 mm. Dewlap & belly a rusty "oxblood"
red.

Anolis

noblei galeifer

220622

CUBA: Oriente; Uvero, 13 km W of, La Mula

Olson, Storrs L. & Lynch, James F.

30 OCT 1980 CU-80-13

01

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
141 mm.

Anolis homolechis homolechis

220623

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 CU-80-28.

REMARKS: COMPLETE SKELETON. MALE. SV Length:
5 mm.

Anolis homolechis homolechis

220624-220627

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

04

04 NOV 1980 CU-80-33 through 36

REMARKS: COMPLETE SKELETONS. MALES & FEMALES.
SV Length: 61, 43, 45 & 60 mm.

Anolis homolechis homolechis

220628-220631

CUBA: Oriente; Baitiquiri, 3 km W of

Gonzalez, Fernando

04

05 NOV 1980 CU-80-49 through 52

REMARKS: COMPLETE SKELETON. MALES. SV Length:
59, 59, 58 & 53 mm.

Anolis homolechis homolechis

220632-220634

CUBA: Oriente; Jamaica, 10 km N of, Zoologico
de Piedras

Olson, Storrs L. & Lynch, James F.

03

07 NOV 1980 CU-80-72 through 34

REMARKS: COMPLETE SKELETONS. MALES. SV Length:
40, 43 & 39 mm. Banana plantation. Dewlap white.

Anolis jubar

220635-220636

CUBA: Oriente; Uvero, 15 km W of, Cueva de los
Murcielagos de la Uvita

Olson, Storrs L. & Lynch, James F.

02

30 OCT 1980 CU-80-14 & 15

REMARKS: COMPLETE SKELETONS. MALES. SV Length:
57 & 43 mm.

Anolis porcatus

220637

CUBA: Oriente; Chivirico, Hotel Guama

Olson, Storrs L. & Lynch, James F.

01

30 OCT 1980 CU-80-18

REMARKS: COMPLETE SKELETON. MALE. SV Length:
81 mm.

Anolis porcatus

220638-220640

CUBA: Oriente; Santiago de Cuba, Motel
Versalles

Olson, Storrs L. & Lynch, James F.

03

31 OCT 1980 CU-80-20 through 22

REMARKS: COMPLETE SKELETONS. MALES. SV Length:
78, 80 & 82 mm.

Anolis sagrei

220641

CUBA: Oriente; Uvero, 18 mi W of, La Mula

Olson, Storrs L. & Lynch, James F.

01

30 OCT 1980 CU-80-12

REMARKS: COMPLETE SKELETON. SEX UNKNOWN. SV
Length: 41 mm.

Anolis sagrei

220642

CUBA: Oriente; Guantanamo, ca. 35 km E of

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 CU-80-31

REMARKS: COMPLETE SKELETON. MALE. SV Length:
43 mm. In valley. Dewlap reddish.

Anolis sagrei

220643

CUBA: Oriente; Baracoa, hill across from
Anfiloquio Suarez "Zoo"

Olson, Storrs L. & Lynch, James F.

01

06 NOV 1980 CU-80-69

REMARKS: COMPLETE SKELETON. MALE. SV Length:
46 mm.

Anolis vermiculatus

220644-220645

CUBA: Pinar del Rio; Las Terrazas, near head
of Rio San Juan, Serrania del Rosario

Olson, Storrs L. & Lynch, James F.

02

09 NOV 1980 CU-80-75 & 76

REMARKS: COMPLETE SKELETONS. MALE & FEMALE. SV
Length: 95 & 92 mm. Additional data & color
notes in field notes.

Leiocephalus carinatus

220646

CUBA: Oriente; Baitiquiri, 3 km W of

Gonzalez, Fernando

01

05 NOV 1980 CU-80-47

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
8 mm.

Leiocephalus macropus immaculatus

220647-220649

CUBA: Oriente; Uvero, 26 km W of, Cuevas del Turquino

Olson, Storrs L. & Lynch, James F.

03

30 OCT 1980 CU-80-1, 2 & 3

REMARKS: COMPLETE SKELETONS. MALE & JUVENILES.
SV Length: 85, 37 & 31 mm.

Leiocephalus macropus immaculatus

220650-220652

CUBA: Oriente; Uvero, 18 km W of, La Mula

Olson, Storrs L. & Lynch, James F.

03

30 OCT 1980 CU-80-6, 7 & 8

REMARKS: COMPLETE SKELETON. MALE, FEMALE & SEX UNKNOWN. SV Length: 67, 61 & 48 mm.

Leiocephalus macropus macropus

220653

CUBA: Oriente; Imias, 4 km E of

Olson, Storrs L. & Lynch, James F.

01

04 NOV 1980 CU-80-45

REMARKS: COMPLETE SKELETON. MALE. SV Length: 80 mm. In Cocoloba beach habitat.

Leiocephalus macropus asbolomus

220654-220656

CUBA: Oriente; Baracoa, hill across from Anfiloquio Suarez "Zoo"

Olson, Storrs L. & Lynch, James F.

03

06 NOV 1980 CU-80-53, 54 & 55

REMARKS: COMPLETE SKELETONS. FEMALE & SEX UNKNOWN. SV Length: 54, 49 & 42 mm.

Leiocephalus raviceps

220657-220659

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

03

02 NOV 1980 CU-80-25 through 27

REMARKS: COMPLETE SKELETONS. FEMALES. SV Length:
56, 56 & 48 mm.

Leiocephalus raviceps

220660-220663

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

04

04 NOV 1980 CU-80-39 through 42

REMARKS: COMPLETE SKELETONS. SEXES UNKNOWN. SV
Length: 73, 69, 34 & 28 mm.

Leiocephalus raviceps

220664

CUBA: Oriente; Imias, 4 km E of

Olson, Storrs L. & Lynch, James F.

01

04 NOV 1980 CU-80-46

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
47 mm. In Cocoloba beach habitat.

Leiocephalus raviceps

220665

CUBA: Oriente; Baitiquiri, 3 km W of

Gonzalez, Fernando

01

05 NOV 1980 CU-80-48

REMARKS: COMPLETE SKELETON. FEMALE. SV Length:
55 mm.

Ameiva auberi sabulicolor

220666

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 CU-80-29

REMARKS: COMPLETE SKELETON. SEX UNKNOWN. SV Length: 39 mm.

Ameiva auberi sabulicolor

220667

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

01

04 NOV 1980 CU-80-32

REMARKS: COMPLETE SKELETON. FEMALE. SV Length: 62 mm. Unshelled eggs.

Ameiva auberi sabulicolor

220668-220669

CUBA: Oriente; Baitiquiri, 3 km W of

Olson, Storrs L. & Lynch, James F.

02

04 NOV 1980 CU-80-37 & 38

REMARKS: COMPLETE SKELETONS. MALE & SEX UNKNOWN. SV Length: 58 & 51 mm.

Ameiva auberi sabulicolor

220670

CUBA: Oriente; Imias, 4 km E of

Olson, Storrs L. & Lynch, James F.

01

04 NOV 1980 CU-80-44

REMARKS: COMPLETE SKELETON. MALE. SV Length: 62 mm. Additional data & color notes in field notes.

Eleutherodactylus planirostris

220671

CUBA: Pinar del Rio; Las Terrazas, near,
Rio San Juan, Sierra del Rosario

Olson, Storrs L. & Lynch, James F.

01

09 NOV 1980 JFL 9131

REMARKS:

Sphaerodactylus elegans

220672

CUBA: Habana; Havana

Olson, Storrs L. & Lynch, James F.

01

09 NOV 1980 JFL 9122

REMARKS:

Tarentola americana

220673

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of

Olson, Storrs L. & Lynch, James F.

01

05 NOV 1980 JFL 9083

REMARKS: Under fronds of standing dead palmetto.

Anolis allogus

220674-220692

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

19

06 NOV 1980 JFL 9091-9109

REMARKS: Dewlap large, tomato red proximally,
becoming orange distally for USNM 220674.

Anolis allogus

220693-220694

CUBA: Pinar del Rio; Las Terrazas, near,
Rio San Juan, Sierra del Rosario

Olson, Storrs L. & Lynch, James F.

02

09 NOV 1980 JFL 9127-28

REMARKS: Dewlap large; red proximally, becoming
orange distally for USNM 220693. Additional data
& color notes available in field notes.

Anolis argenteolus

220695-220696

CUBA: Oriente; Santiago de Cuba, El Morro
Caves, sea level

Olson, Storrs L. & Lynch, James F.

02

31 OCT 1980 JFL 9058-59

REMARKS:

Anolis argenteolus

220697-220699

CUBA: Oriente; Baitiquiri, ca. sea level

Olson, Storrs L. & Lynch, James F.

03

02 NOV 1980 JFL 9063-65

REMARKS:

Anolis argillaceus

220700-220701

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

02

06 NOV 1980 JFL 9085-86

REMARKS:

Anolis cyanopleurus

220702-220703

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

02

06 NOV 1980 JFL 9088-89

REMARKS: Small red & yellow streaked dewlap.
Red on chest too.

Anolis homolechis

220704-220705

CUBA: Oriente; Baitiquiri, ca. sea level

Olson, Storrs L. & Lynch, James F.

02

02 NOV 1980 JFL 9067-68

REMARKS:

Anolis homolechis

220706-220707

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of, near sea level

Olson, Storrs L. & Lynch, James F.

02

04 NOV 1980 JFL 9076-77

REMARKS:

Anolis homolechis

220708-220711

CUBA: Oriente; Jamaica, 5 km (by road) N of,
ca. 300 m

Olson, Storrs L. & Lynch, James F.

04

07 NOV 1980 JFL 9118-21

REMARKS: USNM 220708 has large orange & yellow
dewlap. USNM 220709 has small rose red dewlap.

Anolis homolechis

220712-220714

CUBA: Pinar del Rio; Las Terrazas, near,
Rio San Juan, Sierra del Rosario

Olson, Storrs L. & Lynch, James F.

03

09 NOV 1980 JFL 9123-25

REMARKS: USNM 220712 has white dewlap &
iridescent venter.

Anolis porcatus

220715-220716

CUBA: Oriente; Santiago de Cuba, ca. 20 m

Olson, Storrs L. & Lynch, James F.

02

01 NOV 1980 JFL 9061-62

REMARKS:

Anolis porcatus

220717
CUBA: Oriente; Baitiquiri, ca. sea level

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 JFL 9066

REMARKS:

Anolis
220718 porcatus

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

01

06 NOV 1980 JFL 9090

REMARKS:

Anolis sagrei

220719

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

01

06 NOV 1980 JFL 9087

REMARKS:

Anolis vermiculatus

220720

CUBA: Pinar del Rio; Las Terrazas, near,
Rio San Juan, Sierra del Rosario

Olson, Storrs L. & Lynch, James F.

01

09 NOV 1980 JFL 9129

REMARKS: Chin yellowish, & rest of venter off
white.

Leiocephalus macropus macropus

220721

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of, near sea level

Olson, Storrs L. & Lynch, James F.

01

02 NOV 1980 JFL 9073

REMARKS:

Leiocephalus macropus asbolomus

220722-220723

CUBA: Oriente; Baracoa, 5 km (by road) S of,
ca. 200 m

Olson, Storrs L. & Lynch, James F.

06 NOV 1980 JFL 9110-11

02

REMARKS:

Leiocephalus raviceps

220724-220727

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of, near sea level

Olson, Storrs L. & Lynch, James F.

02 NOV 1980 JFL 9069-72

04

REMARKS:

Leiocephalus raviceps

220728-220729

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of, near sea level

Olson, Storrs L. & Lynch, James F.

04 NOV 1980 JFL 9074-75

02

REMARKS:

Leiocephalus raviceps

220730

CUBA: Oriente; Baitiquiri, 3 km (by road) W
of, near sea level

Olson, Storrs L. & Lynch, James F.

05 NOV 1980 JFL 9084

01

REMARKS:

Leiocephalus raviceps

220731-220732

CUBA: Oriente; Imias, 3 km E of, near sea level

Olson, Storrs L. & Lynch, James F.

05 NOV 1980 JFL 9080-81

02

REMARKS:

Ameiva auberi sabulicolor

220733

CUBA: Oriente; Imias, 4 km E of, near sea level

Olson, Storrs L.

04 NOV 1980 JFL 9079

01

REMARKS:

Ameiva auberi sabulicolor

220734

CUBA: Oriente; Baitiquiri, 3 km (by road) W of, near sea level

Olson, Storrs L. & Lynch, James F.

05 NOV 1980 JFL 9082

01

REMARKS:

Epicrates angulifer

220735

CUBA: Oriente; Baitiquiri, 3 km (by road) W of, near sea level

Olson, Storrs L. & Lynch, James F.

03 NOV 1980 JFL 9078

01

REMARKS: D. O. R.

Peltophryne peltcephala

220736

CUBA: Oriente; Uvero, 26 km W of, Cuevas
del Turquino

Olson, Storrs L. & Lynch, James F.

16

30 OCT 1980 CU-80-5

REMARKS: TADPOLES.

Amphisbaena ridleyi

220737-220746

BRAZIL: Arquipelago de Fernando de Noronha;
Ilha Fernando de Noronha, at S base of Morro
do Pico

Olson, Storrs L.

10

25 JUL 1973 FdN-Herp 3

REMARKS: 220737-38 = SKULL SEPARATE; BODY WET.
SEXES UNKNOWN. SV Length: 250 & 130 mm. Found
under rocks. 10 of 11 recatalogued from lot-
catalogued USNM 198145, 22 May 1981.

0800. Sun 7. V. W. W. W.
Liocephalus ruficeps

comm. among clump of beach
grape surrounded by coral sand
None seen on salt-bush covered
coral ledge area seaward of seagrape

8:15 - 8:30
08:15 2 Amara fragilis
further up beach in semi-
shade of coccoloba

8:30 T = 31°C RH = 57%

Fernando got 1 - L. ruficeps

8:45
Arhodes homolechis Complex sp.
on coccoloba trunk - 1 m
up on 4 cm diam. trunk

Sun Sun h.

mid-leaf letter

Arhodes homolechis → # 2

→
Coccoloba trunk 1 m
diam 35 mm. shore

9:30 mostly clear
51 ~~temp~~
35°C 56% RH

Bitiquivi
TRANSECT

from sea side inland
(photos)

#1 coral terrace shore

#2 Section A (20 x 20 m)
1st 5m - only bare
coral rock

2nd 10m - scattered

plants - 3 spp - all succulent

ht < 0.25 m. Most abund. sp.
is like Salicornia. Rock rock.

marked as holes & hollows.

(Photo. of Orlands in Zone #2)

#3. 1st half like zone #2

2nd half becomes sandy w.
many loose rocks and very

Plattered clumps of
vegetation. With
woody stems to 1m
high. Mostly same
sp. as in zone 2,
but individuals are
taller. Some grass among
shrubs. (photo taken)

Zone #4 (30-40m)
like 2nd half of #3 but
plants ever more
scattered. *Coccoloba* in

~~Zone #5 (40-50m)~~
~~along with to start of~~
~~*Coccoloba* zone. It mostly~~
~~1.5m, some to 2m~~
~~v. little amount grass~~
~~prostrate *Gnaphalium* (1m)~~
~~40% exposed sand~~

Zone #6 (50-60)
Denser and higher
Coccoloba on sand

1 Nov.

Guantanamo

met with

Aristides Camacho

Vice-President

Pop - Popular

Gov. Guantanamo

made us welcome

will extend all help

~~including providing~~ number

En Route ~~13~~ ~~Battagari~~

Tamarindo trees planted
along road in large #.

Date Palms

Casuarinas

Passed entrance to US

Name of base - visible

distance

1971-72
Herpetology of
US base by
R. Thomas?

Very high limestone
plateau (boom)
of Eocene vintage
vis. to the N.
as we proceed E
of US base -
completely unexplored
~ 60 sq km of
territory.

substrate. Estimate 80%
Coverage. Plants 1.5-2m high
Sm. aunts of grasses
Heavy litter under Coccoloba
(no photo)

Zone #7 (60-70m)
Coccoloba higher. 2-3m
But otherwise sim. to last
zone. One or two indiv. of
large Iva-like shrub at
top of this zone (last photo)

Zone #8 75-80m
3m high
Coccoloba w. "Iva". A few
palms at top of zone
~~at~~
ht. of palms 3-5m

Zone #9 8-90m

Opuntia starts almost
exactly at beginning
of this zone. Escalona
drops out here.

Palmers are most abundant.

90-100

Summit just zone
but ~~not~~ exposed some (10%)

Zone #10 90-100m

(plant in same

bag as #9)

(1st photo new roll)

Zone #11

beginning of tall grass

here. Scattered high

clumps of silver-leaved

aromat~~ic~~ shrub said to

be assoc. w. Ternstroemia

42 and at Bathouir

Anolis hom on bushes in shade

A. porcatus on palm

A. argenteolus on rock of bushes

Ameiva on ground in veg.

Liocephalus carinatus

L. on ground in open

Cyclura nubila on rock ledge

B. r. s.

Cathartes aux (many)

Buteo jauricensis (2)

Falco sparverius (2)

L. zana curviro (2 or 3)

Myiarchus solidus (2 or 3)

Poliophtila forrei common

~~Troglodytes~~ Vireo gularis - common

Troglodytes tristis common

Melospiza rebernae ↓

Rain - 2 1/2

Columbina passerina - 2

Chlorostilbon

Zenaidura Wh winged Dove

Dives aproviolaceus

Aegolius humeralis

Dendroica striata - 1

D. parula - 1

D. tigrina

D. palmarum - 1

Tiaris caeva - common

Mimus polyglottus

15:31

(1)

ad. L. var in same sandy
area at SE corner where
JUMP. seen (above)

$\Sigma = 4$ lizards / 10 min.

Zone 9. 15:34

Ameiva in sandy area at
base of Coccoloba

Tiny dwl. Sayre's? (brown w.
H. STR. PC)

0.1 m off ground on 1 cm
Coccoloba branch

ad. ♀? A. howe (no crest
on tail) on 5 cm horiz.
Coccoloba trunk 0.5 m off
ground. Center of E.
edge of zone 9.

Juv. A. Thom on
trunk of 4 m palm
1.5 m off ground
6 cm dia

1543

Juv. L. rav in
sandy area at NE
corner

$Z = 5.3/10 \text{ mm.}$

Zone #8 1545

Unknown (Aureva?)
under palm fronds

Pick palm fronds

Zone #28

(2)

well developed arroyo
down the center of this
zone w. bare dirt showing
at the bottom. Plants pretty
much like #29, but only
traces of Opuntia at top of
arroyo banks in rocky areas
(both sides). Cover in
this quadrat: bare ground - 5%;
grass - ~~60~~⁷⁵%; bushes - ~20%

0900 T = 31°C

RH = 54%

90% overcast, but sun
burning through; lt. breeze.

9:15 began 15
min obs. period in
zone # 6 (Cacaloba -
sand area w. few
tufts of grass). Molygus
activity noted when I entered
area. Nasutitermes seen in
rotted branch on the ground.

Ant craters comm. but little
P. longicornis seen;
or no ant activity at most.

pr. of Poliophtila feeding
in zone # 4.

09:30 - stop obs.

no lizards visible.

move to zone # 7

15:10

Zone # 11. Mostly

tall grass, w. 'hump' at
S. end. bushes at E.,

W., and S. side of zone

Thicket of ^(incl. Acacia) 2.5-3.5 m high
woody veg. at W. side.

ad. ♂ A. pomolechis

on diag. trunk (1.5 m)

1.5 m off ground on

multitrunked Inciensa

3m high. hind ears w.

tail curled to the side

lower left (SW) corner

$\Sigma = 1 \text{ (1.2) / 10 min.}$

15:23

Zone #10

beginning of palu-

opuntia zone

Sageci

Anolis ~~sp. (from [unclear])~~

0.5 m. above ground on

palu frond. Jumped

away. NE corner in

flag.

sun JUV. L. rav in open

sandy area at SE

corner.

♂ A. homolepis on 3 cm
diam log. Trunk of

Spring Acacia-like bush

0.75 m off ground at

NE corner

In A. Sageci (above)

Tail curled to side

n. center of Z-8

(9)

area of scattered palmettos,
Opuntia, & clumps of grass
of Trachypogon, w. Arundinaria here
and.

10:08. Begin 15 min obs.

10:12 - Lioccephalus head. ^{bobbing}
on large log n. center of Z ~~#8~~ #9
in semi-shaded area.

10:24 ♀? A. om. on
dead palm trunk 2.5
m. above ground just E.
Zone # 8

10:26 sm. L. bicar.? (dk
striped) in sandy area at
W side Zone #9. Nearby, a
lg. ♂ A. nom. on palm

Trunk 0.5 m. up
(8 cm diam).

10:32 Amivra humming

at edge of sand
clearing nr. top of Z-10

Polioptila singing
weather getting more
overcast & breezy.

10:37. J.V. L.R.? M
center - bottom of Z-10

10:38 at L.R E. Side
Zone 10 on
edge of sandy
clearing

10:40 Ameiva in thicket (5)

Shaded sandy area ~~the~~ E. side
~~middle~~ zone 9

Sm. juve. L. r. wrby

10:46 ad L. var in sand
shaded by Coccoloba NW corner
zone 6.

10:50

ad Ameiva in sand just
outside Coccoloba canopy
NE corner zone 4. Moved
into Coccoloba litter as I watched.

10:51

Subad L. var on sand
betw. Coccoloba patch and
succulent patch SW
corner zone - 5.

See JUV. L. rav
on sand just E.
middle of 2-4
(outside of 2-4)

Prob. same one seen earlier

11:00 AM R+H=
T = 33°C. 63%

11:05
Walking parallel to
Coast E. of transect
in 1st 10m of
Coccoloba zone

JUV L. rav in sand
at L. rav under awopy

11:10 Coll. JUV L. rav
from sand at edge of
Coccoloba clump

6

(Photo of barrel cactus
on level outcrop)

Aueira ad under Cocaloba
Sun from outmost &
thick of brush vegetation.

Aueira in sim situation, but
in outmost Cocaloba on
brush

another Aueira - same
situation

noon $T = 32^{\circ}\text{C}$

$\text{RH} = 53\%$

Thin haze, & breeze

Zone #7 1650

ad ♀ A non. on dead

Coccoloba 1m off ground

5m diam (trunk is

3m high) nr. territe

mound SW corner.

Lizard activity dropping
rapidly - no hioceph;
or Aureora out now.

Best not to count
Closures fr zones 7 and 8

(5)

Zona #7.

09:30, large sandy clearing in Coccoloba m.

SW corner of #7.

Chlorostilbon ~~feeding~~ ^{hovering} at Coccoloba. Also perching on top of tall dead Coccoloba.

9:40 Zona #8 (NE Quad)

subad. L. raviceps at edge of Coccoloba litter in sand patches.

Moved to small (~ 4" high) clump of veg, where it sat erect w. head almost vertical - jumped onto sand to sweep up a prey item. At 9:53, 1/2. hovered ~ 1 m out into open sand. Then climbed to top of sun. cord'l border to back.

10:00 AM

T = 34-35°C.

RH = 47%

10:00

Juv. L.r. just E. zone 4

10:04

ad L.r. SW corner

Zone 5 under

Coccoloba

10:05 sub L.r. SW

corner of Z-7 where

I had watched earlier -

on coral rock basket.

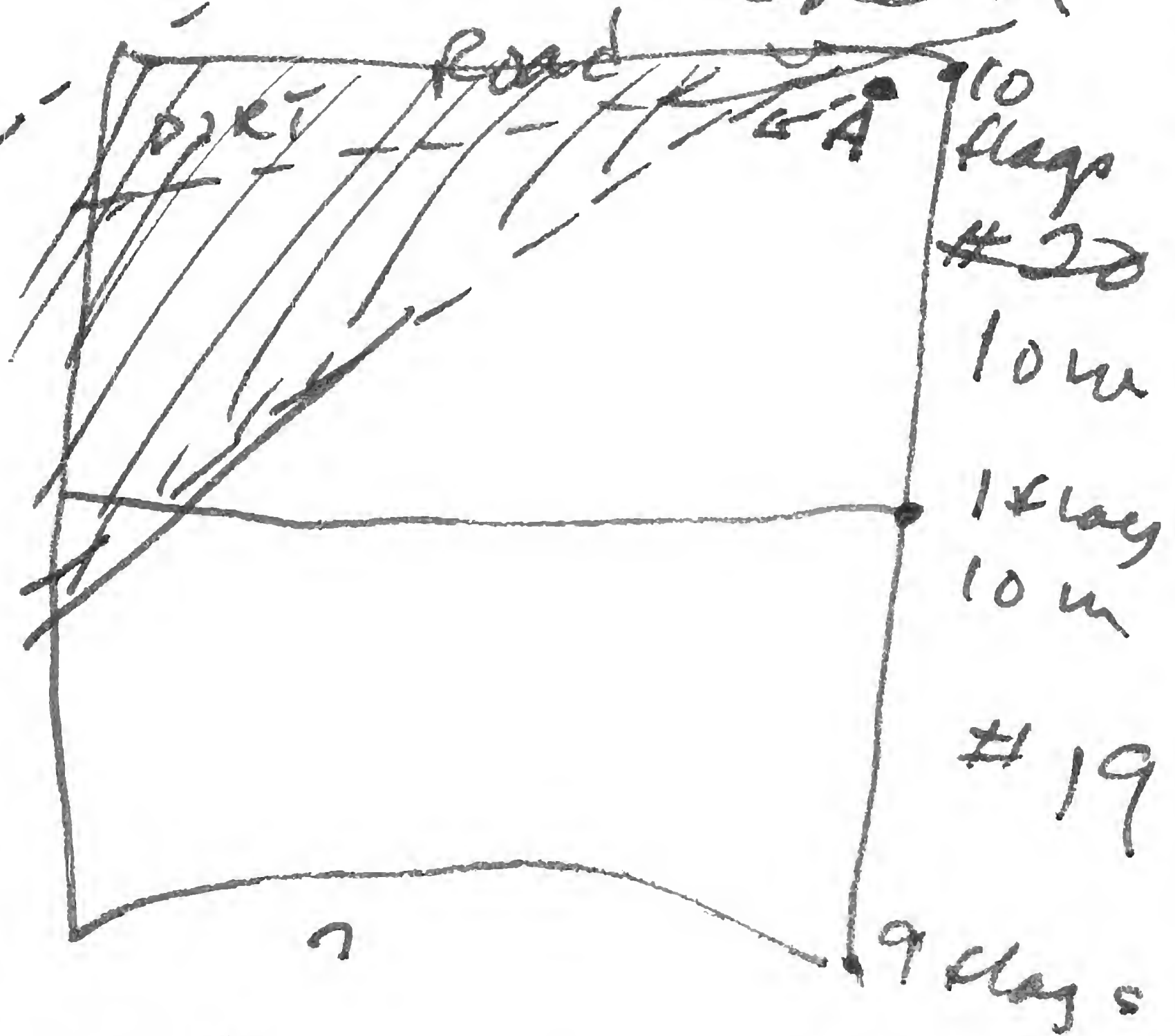
10:07 ad Amiva fungus in

Semi-shaded clearing

(2)

Standard 10 min.
Search of 10x20 m
Quadrat

13:37 - Zone 20
Zone 17



zone #20 13:44. ad Ameiva (A)
moving parallel to dr + rd. in
open gravelly area thinly shaded
by grasses & weeds less
than 1 m high.

begin zone #19

13:47

13:57 nothing

14:00 flump?

(reader not working)

62% RH

14:00 begin quadrant

#18. 1.5 m *Incensia*

de Costa bushes

and grass.

2 cm

diam

1 m off

ground

14:04 Avoliz

honeycreeper in

heavy branch of
Incensia-bush.

looks like ♀ (no

crest. NE corner

~~bottom center~~
pattern

total: 1 Aquila zone J

Zone #17. Begin 14:11
like #18, but more
Incisa bushes.

nothing

zone #16.

Begin 14:21 Nothing

like last quadrat, ~~but~~

A^{2/3} level, ~~but~~ mostly
#15 dense grass, but other-
wise like last #

nothing

#14 ~~#14~~
~~#14~~ Upper layer

like ~~the~~ #15;
Lower layer w. many low
Thorny bushes mixed
among grasses. A

Couple of Incisura
bushes ~ 2m high;
rest of veg. mostly

low - 1.5m.

Chlorostilbon tree

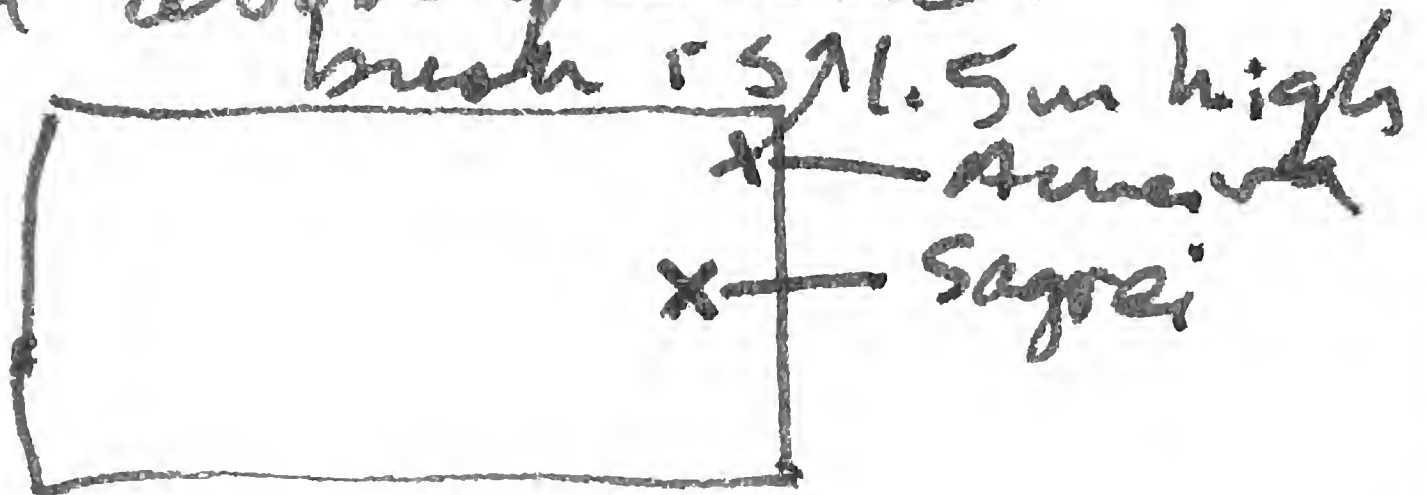
Nothing

#13. Much more
bush than #14
Many Incisura, plus
other types.

highest bushes (1 or 2) are ⑨
2.5-3m tall, most are
1.5-2m tall. Wire grass
abundant here.

~~Anything~~

A. Sagrai: head down
on 2cm Incisa trunk (45°
incl.)
1m above ground.



Amera at NE corner in
area w. bare dirt showing
Thrus.

$$\Sigma = 21.2 \text{ birds} / 10 \text{ min}$$

14:50

Zone #12

Clumps of Lucrensa

W. high grove of Acacia

like trees 3+ m tall at

W. Side. Wire grass

common, but other grass
dominates.

14:55 L. macropus

at SW corner in

thinly vegetated

area of 1-1.5m

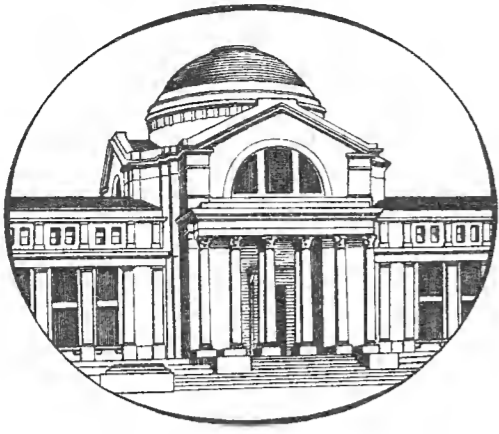
high brush w. exposed

gravelly substrate.

$\Sigma = 1$ lizard

1500. T estimated 86°F

humid - 62%



National Museum of Natural History • Smithsonian Institution

WASHINGTON, D.C. 20560 • TEL. 202-

9 June 1981

Dr. James F. Lynch
Chesapeake Bay Center for Environmental
Studies
Smithsonian Institution
P.O. Box 28
Edgewater, Maryland 21037

Dear Jim:

The herps you and Storrs collected in Cuba have been catalogued as USNM 220597-736; a printout is enclosed for your enlightenment. Greg Pregill verified most of the ID's but I did the eleuth & sphaero. We naturally appreciate your continuing contributions.

One puzzlement was the inclusion of two small, dessicated salamanders with the Cuban material. These had UC/MVZ tags on them (173296-97) and I'm confident that they weren't meant to be included. You were gadding around Europe when I called to find out what was awry but let me know what to do with the poor wrinkled little darlings.

Hope you had a good trip.

Best,

Ronald I. Crombie
Division of Reptiles
and Amphibians

Enclosures

RIC:sws

cc: Registrar