

Jim Lane's Field Notebooks

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JL_(1992 on)_13	15	(29-04-95 / 17-05-95)

TO BE CONTINUED

3515 NOTEBOOK
FAINT

JAK LANE

ZOOLOGY DEPT

UNIVERSITY OF WA

1461

UNI

Prints (and other) logs are from
July 2002 search for field notes
to incorporate (as appropriate) in
report on 1976-77 Peel-Herby
underground surveys.

P 21/7/02

(1)

Must find preferred
biting length of Mosquitoes
Factors (University 290)

Experiments

- 1) What attracts animals?
- 2) " which biting response?

Food

Smell - is attractiveness of sweat, blood, CO₂ etc. + regulators.

Temp. - test with artificial arm

CO₂ - analyse capture according to part of body attacked.

exp? $\rightarrow$ must keep still throughout whole of collection time.

exp? $\rightarrow$ (full or late?)

(2)

Mon 8 MAR 71

pg 66 -

Dates Food Habits of Adult

Food - what do male and female eat on?

p. 67 - What is specific stimulus which leads mosquito to the host? - smell?

Smell - all agree that CO₂ is highly attractive. Experimenters cited (p. 25) Dates says ingested food also is attractive

Temp. - experiment shows things to be an alternative for biting

CO₂ sensor - attracts at less than 25 cm.

Color - pleasant darker animals preferred. Mosquitoes preferred to stay on me.

Other Factors: in nature it is generally those that mosquitoes bite only during their period of sexual activity.

3-4 days old Deles say's feed most.

1. mosquitoes generally don't feed.

Fertilized & more than unfertilized

Exp?

Host preference

- Prey-predator technique
problems associated with host reactivity
long-range & short-range host preference
is overall and strong.
Host preference may be debated preference
in reality.

Exp

Food of Males

(Synanthromorphs)
Obtained milk from cow blood.

Plant juices assumed to be food source
of males, & females which don't suck blood.

Special Food blood

feed on reptiles
amphibians, other insects, other organisms

Clements

Physiol. & Histology
p. 267 - Host Taking Behavior

Plumbeus? if Temp. were increased biting
in Dromic. Prasinus

Ulex agypti - biting preda. feeding
Geophila confinis - feeding biting

(5)

Exp

make b.ting morphologies to become
paper structure
cycle b.ting
age length

(6)

In short opinion there is a not between b.ting and b.ting.

B.ting is then entirely independent, whereas the influence of b.ting development is usually inhibited by b.ting.

Proposed de Nest - attracted by conversion constants, not inherent b.ting.

Longer's morphologies need to be given gradually in regard to b.ting development.

See P. 291 for drawing

Exp —

* New morphologies in more b.ting during period of b.ting stage in absence of b.ting is practically unknown

7

Exp: determine which sex range affects OS
also ♀ phys dom
also ♂

Exp- dust swarms with even powder

Exp- capture swarms to analyse for
i) ♂ + ♀ content
ii) diff. species content

Exp- how do they find water?

Exp- what physical & chemical factors
influence choice?

8



Reproductive Behaviour

No evidence suggests to exist whether or not
females are monogamous more than once
in lifetime.

Swarming - evidence factor for male swarming
is the swarming number

→ Combined, explained of swarms, swarming
reflects change of distribution in swarming
to light.

Copulation

♀ adult 2.1.16

Exp. - see box for magnetic fly

Exp - longevity - large within age.
or proven v. millyennia
or one bed around.

Fr. Beckwith

These words plus word needed for
vocabulary $\Rightarrow$ very important!!!

Bills: Income & Expenses

Books : Survival & Dispersal
Agreed the 1st the boundary file
P 34 longer the survival.

Los Clementes 120 - 127

only 22.9% available - Johnston 1954
and Gillies 1961

~~scribbled out text~~

WED 16 APR

1730 Trigo Island
Water 24.3

RH = 82

Wind = 20 mph

in lake = 0-5 mph

Air Temp inside = 24.4

Bottom Temp (Surface) 24.0
23.5

Air Temp above = 24.5

1800

RH = 82

Wind = 16 mph

in lake = 0-5 mph

Air Temp in lake = 24.5

Bottom Temp = 23.8

Surface = 23.3

13

1830 1900 1930 2000 2030

R.H.

Wind - hole

outside

Air T° - well exposed

surface

air in hole

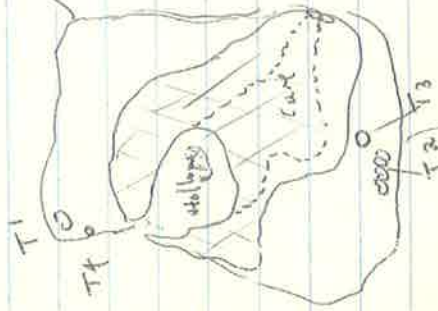
air

23.5

23.0

26

N



XXX = 10 ft

14

10/3/71

shelter hollow 30 yds NTh of

Trapp pool 2 x 3
1800 hrs

Wind - quite → 6 mph

Temp air 24.5

R.H. 80%

~~63~~ 1838

sun down

1 adult - at Trapp pool 1 (1800)

1 rather rather in cave (potential blood meal?)

- adults in dark rocks in cave
2 flying & venting (1830)

(15)

In the hollow

	1900	1930	2000
RH	87	86	
Wind	6-12 mph	6-12	
Air T°	24-5	23-8	

(16)

Robertson - Pick up
 from Airport
 on Friday

Equipment

mileage: \$12.00

mileage: \$2.50

mileage to site = 3 miles

81

NB Catch is for $\frac{1}{2}$ hour after ~~starting~~ fine

(19)

17 MAR 71

13.5 hrs

Near to Green Island

(1) 1 pool of 4th L. + Paper
12" x 6" x 4.5"

had stirred up egg & great shell,
would have been 24" x 12" x 2-4"
5' from water level

(2) pool 1' x 6' x 3'

mainly paper: 4th L
slat 1, 2, 3

3' from water

(20)

Frid 19 MAR 71

(21)

1982/2002 0930

Temp
L
Wind
1 can't
other

0539
50/50
120
0

0:3
81

Frid 19th MAR 71

Fladen Key

Set rest in pool in open
fing 10:15 -
Set out being observed
no change

Brigitte coming along
Mr. Kelly 8:15

Set rest in pool - cave before
0545 - 10:15
- no change.

♀

1038 1 arrived - pool 11
digging and pool deeper in open
1051 the first batch of water -
1st started coming

(22)

Fri 19 MAR 71

(21)

1971 2002 04:50

Temp

Hum

Wind

Clouds

Other

22.5

50

20

0

1

9.3

181

Fri 19 MAR 71

Radon Ref.

Put into in Brown Cave from

0545 - 1015

Let rest to point in open

from 1015 - 1030

As act of being observed

no bridge

Bridge among Bay

W. side 800

♀

1038 1 egg in pool

dying and 2 more eggs in air

1050 checked for 1 of water

into school sacra

1042 33 ad. ♀. not 1st pull out
of capsule, depth not exposed with
case

1055 pr. on head within 1/2
" longest 3" case later exposed
- all dead

1158 ~~1158~~ 1st pupa was on 2nd
addition

1044 when with 1 pupa
in 1st pupa

1159 1st pupa wings occasionally
exposed 1st pupa 1st pupa 1st pupa
1st pupa

Ad 3 was 1st pupa

(are pupa wings) until
fly off

1159 1st pupa wings occasionally
exposed 1st pupa 1st pupa 1st pupa
1st pupa

1055 pr. on head within 1/2
" longest 3" case later exposed
- all dead

1158 ~~1158~~ 1st pupa was on 2nd
addition

1044 when with 1 pupa
in 1st pupa

1159 1st pupa wings occasionally
exposed 1st pupa 1st pupa 1st pupa
1st pupa

Ad 3 was 1st pupa
(are pupa wings) until
fly off

(23)

1042 33 ad. ♀. no food pulled out
of pupal case, 1/2 inch and exposed inside
case.

1055 pupa head within 1/2
inch of pupal case. 3" across when exposed
- still small.

1158 ~~1158~~ pupa very small, I moved
address.

1064 ad. ♂ ad. ♀. I brought
1159 pupa. wings overexposed.
Pupated. 1/2 inch long. 1/2 inch
across.

Ad 3 now safely
(one pupa wings) until
they are off.

(24)

~~1158~~ pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

1158 pupa. 1/2 inch long. 1/2 inch
across. 1/2 inch long. 1/2 inch
across.

Final - Set

19-20 MAR 71

Catch in low
water
Time

Biting Blighia Raden Reef (26)

(25)

1831	1901	1931	2001	2031	2101	2131	2201	2231	2301	2331	0001	0031	0101	0131	0201
1831	1901	1931	2001	2031	2101	2131	2201	2231	2301	2331	0001	0031	0101	0131	0201
7	7	7	7	8	7	7	6	5	4	3	4	0	0	0	0
5	5	5	5	6	5	5	4	3	2	1	2	1	1	1	1
228	229	227	225	224	223	221	220	219	217	216	215	214	213	212	211
92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1
0	3	6	0	0	0	1	4	5	?	6	7	6	8	8	8

2354

1000

Swat 1831

Monmouth 2242

Not finding dark till about 50 mms after sunset

* Need Strychnine to line length of biting
isole (do old moon is up)

2 for 2 mms

* Need down egg timer to keep awake

on

24

0231 0301 0331 0401 0431 0501 0531 0601 0631

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

2038

gutter

(potential host 1111)

* Next time bring spray jacket pants

2115

rest at gutter with gutter
covered pretty soon (eyes blurry)

0100 moon appeared

(27)

Mon	Time Sent	Time Final	Time Sent
1	14:22:30	17:30:00	
2	14:50:00		
3			
4			
5			
6			
7			
8			
9			
10			

(28)

Msg	Time Sent	Time Final	Time Spent Servicing	Time
	16:00	46:00	48:38	2:38
	16:50	47:03	49:10	2:10

6 years here
Texture + Cabbage

(29)

Thindan 1st in 44 gals

Zinc 16

Manganese 16

Diphosphorus for Urea

DDT - dust or spray with cabbage/opp

Dibolston 3/6

Cupron for tomato + DDD

Calcium for the grass +

Wright's around 2 years ago
- Ag sprayed next?

Coleman Ag. Dept.

A. Agullo

Reverte Thms 25 MAR

Chet de Llaneros in morning to
interview Jovana + Carlos Uch.

Blade opposite to A. Agullo - East side of
lake, been there 6 years

Uses DDT - Cattle + cabbage
(1 way 2 weeks)

35% imidacloprid (p9) Thindan

65% zinc (p5) Zincs

80% magnesium ethylene
b. sulfolobus (p3) Manganese

Dibolston

Cupron } Tomato
30% DDT (p5) DDD

62.5% trichlorfon (p8) Diphosphorus

1st - 44 gals

DDD 1 gal - 160 gals

DD Salt for Jovana

Term THIMET - lulls
(Reverte) 10 Tgs

(30)

other 44

6 years here
Lettuce & Cabbage

(29)

Thindan 1 pt in 4 legs

Zinc 16

Manganese 14

Diphosphoric for Urea

DDT - don't use any ^{anti} + cabbage / DDT

Dibolotan 360

Cupric for Amide
& DDD

Calcium for red spin &

Washable around 2 years ago
- Ag sprayed wet?

Coleman Ag, Dpt.

1 pt in 4 legs

(30)

DDD 1 gal in 160 gals

DD Soil fungicide

TERRA THIMET - 100 lbs
(Phosphate) 10 Tons

Phosphate

Thine 25' MAR

Let it be known in many to
interior garden & sides of path.

Blue OPPOSITE to A. Agallo - East side of
hole, here there 6 years

Urea DDT - ^{anti} + cabbage
(1 way & water)

35% induritan (p9) Thindan

65% Zinc (p5) Zinc

80% manganese ethylene
b. methicarbamate (p3) Manganese

Dibolotan

Cupric }
30% DDT (p5) DDD } Tomato

62.5% trichlorophen (p8) Diphosphoric

Calcine - red mist + molten

Haystack was sprayed for about 3 years ago.

2nd Blue

DD of soil fumigant - 100% chlorinated
C₃ hydrocarbons

10% phosole (p30) Terra-Thrust phosole

Bob : jet Terra-Thrust phosole

P-D

DDD

Red Pt.

WHS

Crow Teal
CWP

Crowed Tern

Crop

BTG

Black Swan

Red Capped Puffin

Little Black Tern

" Pink C

Silver Gull

WHS

(33)

RR Wayne

Cinlar sp

C.P.

little sand

Crested Tern

L.B.C.

Swat

Rehman

Bentley's Crow

Black Duck

R.A.V.

Coop. Tern

Common Sp

W.F.H.

Coat

Freeman

L.S.H.

C.P.

Crested T

Black Capped

(34)

Saturday

Herbano Lake

4 plastic Grey-lens
Buckets

Not a finish for work

Reg Windsor Theatre

Andrew 1100 a

(35)

Frid 16 - Sat 17 APR

Redem Reef

0345

To 15' oc

Wind 4-15 mph

No adults seen sand pools
on gas light or on sand from
1100h 2300 - 2400

or 0230
0330 - 0400

V. few larvae in pools

Reason for lack of adults

- 1) no adults and
- 2) wind + T. adverse

Practical looks - fresh Sargassum +
pellets from shit around rock
holes with larvae
- exoskeletons (Hydrozoans)
around holes.

(36)

38

Illegiond Cape

[illegible]

Frid 23rd April

1210 Found Lane as far as
Redgate - back
+ Greenway Bay
- 2 who

* Lane in creek at C.B.
Most prob come up on
Weg home.

Saw at C.B. this morning
1 W.F.H. - 2 Black Duck
3 red cap. W.
2 adult Hooded Merganser
Bird comm.

Crow.

Synall

Wren

Willie Wagtail.

Good Herring spot C's & after
leaves.

Find 23rd April

at: Unknown name

1810 - after sunset

swarm of moths not over water.
(to a height of about 2-2'6")

Heard still to see much

about function except that

it seemed loose & disorganized,
probably because of my head
back. I caught some moths.

On last evening I must go
to same place & see if
swarm is there & watch the
development. Most important
that I find if all find out
all I can from this one.

Then I must look in other
places as I can give an
account of where swarms are
formed. This swarm

was over ~~the~~ a quite region
of salt water, connected to
the sea. No larvae

in this area

Must get a bucket full of

purse from canal banks,

cover them over & store

for 1/2 mile & female

since light digging won't give

this estimate because of
different behavior of egg & larva
in swimming or seeking food.

Find 23rd APRIL

at - Uluru name

1810 - after sunset

swarm of moths 'not over water'
(50 x height of about 2-2'6")

Went still to see much

about function except that

it seemed loose & disorganized,

probably because of my head
touch. I caught some moths.

On Sat evening I must go
to same place & see if
swarm is there & watch its
development. Most important
that I find out if all find out
all I can from this one.

Then I must look in other
places so I can give an
account of where swarms we
formed. This swarm

was over ~~the~~ a quite region
of salt water, it seemed to
be over the sea. The larvae

in this area

Must get a bucket full of
Dung from sand beds,
cover them over & score
for % male & female
since light digging would give
this estimate because of
different behavior of ♂♂ & ♀♀
in digging or seeking food.

(43)

Sat 24th

look for swans at dawn?
check light trap

Morn: go to M.R. & get

milk: ice
water 2/3 am, sauce, grid for cooking.

Pick up wood on road

Get ~~bag~~ from Canal Roto &
cover net

Afternoon

look for more swans tonight
ie see all swans that swim across
- typing them

Night

Afternoon
light trap?

set up campy area
have light sea

watch make swans + write down
everything + Will go around plus
in water

Night either continue looking at eggs
or do something with light trap

(44)

Sun 25th

Morn Canal Roto - Fish -
Bismarck
hutch
- 1/2

Wood

(43)

Sat 24th

look for swans at dawn?
check light trap

Morn: go to M.R. & get

milk ice
water, jam, sauce, & gail for eating
& lunch

Pick up work on road

Get ~~bag~~ from Canal Bank &
cover over

Afternoon
light trap?

set up campy area
have light tra

watch make swans & write down
everything is wild to brand plus
mistake

Night either continue looking at eggs
or do something with light trap
notes

(44)

Sun 25th

Morn Canal Bank - Fock - Bumble
hive

Wood

Afternoon

look for new swan nests
is see all swan when swan breed
- typing them

Night

Mon Bay \$1-99
to the Homestead -

Tues

Mon

Quinn Barber 1000 hrs

Nest tree

collect ~~some~~

at diff times

to do change in

abundance

- need many ~~several~~
insects.

(47)

Set 24 April

1744 early for swim
 of male mosquitoes but had night
 of rain. Tide is out further
 than last night so that all
 rain is not muddy water
 - where will they swim tonight?

by 10 breeze in area
 still very light at 1745 hrs in
 and still mosquitoes

1749 1750 ♀ landed on leg
 for blood meal - still light
 breeze < 2 mph

1802 - 2 wings in area plus
 1803 3 "
 1803 1/2 6

1804 1 swim of 3 also
 1' off water
 another of 10 also 2' feet off

6" over rocks (48)

↓ over water
 1' off water
 1806 12
 2" off water
 15

They fly out in a ball (usually)

Q are really biting

1807 20 20

large gnats looks like to look
 surface

two swarms are only 2' apart

1808 30 30

water pinned on my back
 as I stood up - 5 mph 3-4
 discharged swarms not close
 to me

1812 100 100

(49)

by 1815 there were
4 over each with
2' of each other

one behind my back
- that's approximately what
most have back as best
300 - in it

1821 still going
- getting dark

1825 1' back about
unintentionally collapsed
- in darkest part.

2' when collapsed
1828 - can see my body
over in front of me
dying right away

(50)

legs curved in body
folds white robes

orig. in front of me

1831 same now

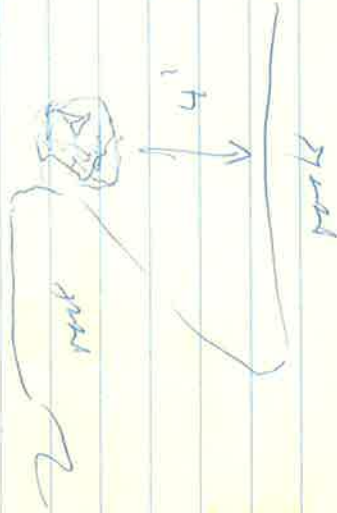
50

18 36 finished

(51)

Run 1812

Run shaft 28' above water level. Based around peak of rock



4 another on same
measuring 10' from water



(52)

4 another

20' from
water



(55)

Statistical Methods

George W. Snedecor

Iowa State College Press

31.29

23 JAN 71

Mud Sample

Start Mileage 2848
Finish 2889

(56)

59

60

Date	Destination	Start	Finish	Miles Traveled
11 NOV 71	Armed Row	05474		

61

(65)

Congress

Wild geese

Tide indicators

Tape Recorder

Map of each area with

zones numbered

look at telescopes

(66)

— fine overcast cloud
10 knot S.W. breeze

Wind Line 1120 1700/71

1. 9 Grey Tern - feeding & resting in
shallow

2 Greenish - ~~feeding~~ feeding in
shallow

32 Snow-bird - mostly & going in shallow
& on sand.

2 1 Red-tailed Tropicbird 1 Slaty

4

2 2 Green Plover 1 Red

2 2 Greenish Tropicbird

10 Red-tailed Tropicbird

1 Red-tailed Tropicbird

164 White-headed Tropicbird

15 Lesser Frigatebird

Some Scaevola

4 1070 10th July 1971

5 1 Pelican

8 Red-tailed Tropicbird

6 1 Snow

(65)

Congress

Wild Geese

Tide indicators

Page recorded

May at each corner with

zones numbered

look at telescopes

(66)

— fine overcast cloud
10 knot S. w. wind by breeze.

Wind Line 1120 1700/71

1. 9 Grey Tern - feeding - mostly in
shallow

2 Greenlets - ~~they~~ feeding in
shallow

32 Silver Gull - mostly & feeding in shallow
& on pond.

2. 1 Greenlet feeding in shallow

3. 2 Greenlets feeding

2 Greenlets feeding

10 Red-bellied Woodpecker

1 Red-bellied Woodpecker

164 unidentified birds

15 Lesser Frigatebird

See Seagulls

4 1000 with solid & other water

5 1 Pelican

8 White-crowned

1. 1 Sparrow

(67)

Heavy 1200 m
30 little S.S. I
2 Grey Phos

Near of Grange

(68)

Mr D. PERCY 30 NOV 71

Quarries - Big Ledge - Best bit is clay
base with next
coarser

Bottom fragments - anything - avoid
faint lumpy
clay so
avoid
anything.

Pitfalls - 10" deep 3" wide



Antichinus - no rest very popular,
plus one wants to keep
alone.

(67)

Heavy 1200 m
30 cello Sel
2 Grey Phoe

North of Gungahra

Mr D. D. PERCY 30/10/71

(68)

Quenda - Big cage - Best bit is deep
base with nest
crocked

Rattus fuscipes - anything - across
penet. heavily
clayso
Unusual bird
agilly.

Pitfalls - 10" deep 3" wide

← snare with honey
(S. mullerensis)
Antechinus } 95 for
week
honey in bait
honey + water

Antechinus - no nest very propable,
plus some nests to keep
alive.

(69)

Camping gear Required

21-JAN-71

Collapsible Chair
Shells Bases (metal) - Unders
Camp stove (with standard still) (gasolts)
Saw
Electric
5lb bottle

Udley up boat plus drying rack

Bath

Wash container

Serv. Capas

Collapsible table

Sand-pans more

Fridge

Water bottle

Dehydrat + Tea bowl

Tin opener

Pin scraper

Flint

batteries

Nolebooko

Camp stretcher

Saw + holder

(70)

(71)

Purple Mr. Peto

Large well used with note --- DDT Out

PTM --- also building ---

Concussion --- with John --- Diction

per Black Better --- --- Diction or action

Major prob all for use --- copies

McKenzie against aphids

Orchids --- note } damage to tree.
scale aphids (leafhoppers)

Perennial Plots of Apple --- can spring
during under infestation
and rejected

--- DDT + Diction used in orchard only
as probation very in under

Pond Plots Any --- know just after
has Red leaf hopper

Due in plot harvest --- May
Post get all very short

(72)

Even feeding in under field
Very Acute --- changes Yellow leaf hopper

S4D Roche --- constant opinion of
pesticide --- ET on May 1966

Water and grass --- growing around along
Eastbrook road --- ref ET

(233)

West Trip

Tent & pegs & ropes

camp stretcher
saddle & spade
inlet paper

(234)

235

I need

Wind gauge

3 Eminent Thermometers

Hygrometer.

Tube for sucking up Mosquitoes.

Barometer

paint + thin copper wire

bring fig. determination

rosin powder for dusting screens.

Tom Riggert

Quikka traps. (Stable traps)

wine + gauge

traps

200
Baker.

Torch

Saddles

Chem. glasses

food & drink

batteries + bulbs — electronic

light meter

236

parous :

Grandmorphs :

Anthracinus

Anisodactylus

Antilopha leus

engaged

Stenogrammus

gen. n. or position requires