Printed 16/6/2014.

Alan Clarke's Field Notebooks

(INDEX)

(Only pages with notes are numbered)

None of these have been scanned. Get

23. 2002-2003 (11-11-2002/19-09-2003)

24. 2002-2004 (14-10-03/27-11-03) + (09-03-04/17-06-2004)

25. 2004 (03-08-2004/29-09-2004)

26. 2004-2006 (08-11-2004/19-11-2004) +
(13-03-2006/09-11-2006)

27. 2005-2006 (05-07-2005/10-02-06)

28. 2006-2007 (14-11-2006/07-11-2007)

29. 2008 (05-03-2008/09-11-2008)

30. 2009 (11-03-2009/04-08-2009)

*Alan to worked out the pages' order.

(0)

FRI 6.00 - 8.00

SAT 10.00
SUN 10-00-12.00
relax

MON 6.30 - 8.15
WED

$8 casual

$70 for 10 classes FRE

$80 for month 3397434

KALE

3 MOVAT

Jirestation 2 hr nto
2nd floor

(1)

341 5049
MICK SMITH

DATE	PLACE	TIME
	English name	weather
	scientific name	
	No.	
	characteristics	
	habitat	
	activity	

12/7/92 ALFRED COVE 1.00

cool
overcast

white ibis

black head
back tail feathers, white body
1 pair
feeding on damp lawn
1.15 one white ibis feeding on
salt marsh shore line.

Australian shield duck
black head and body, brown
breast white ring on neck
1 standing on control lawns
1 feeding near bay in salt marsh.

little black cormorant
drying wings on a stump
body all black No.=1

little Pied cormorant
No.=9 roosting [several groups
yellow beak small white
under body remainder black.

Pelican 3 groups of 3
swimming

Sea Gull (grey) only a few.
groups of 3-4.
- 1 black Swan

Pied Stilt

No. 5 feeding in salt marsh ponds

1 has black markings on back of neck others have parted to no colouring. cream greyish

feeding in a group. pink legs

---

satin or restless fly catcher

all black

1 pair running around bobby wearing rem stop rem.

white faced heron

No. 1. feeding in salt marsh.

orange-yellow legs

grey body white face

quite darting run and movements.

---

shoveler teal

white neck brown body

green head

---

black ducks in pairs feeding in salt marsh ponds

also saw stilts again in other area.

red coloured lorikeet
1 pair at hollow in tree
blue head green at back
yellow orange on neck
green on back and tail
breast blue.

Port ~~Kin~~ lincoln Parrot
1 black head yellow neck
band green neck blue
tail feathers
roosting in Eucalypt

magpie larks feeding on grass
only 1

14/7/92 LAKE JOONDALUP 17-30

1 male musk duck feeding on bread handouts diving to bottom.

12 coot
feeding in shallows
white fore head

1 Swamphen immature
brand red beak
white tail
purple to black long
red leg, tall bird.

6/8/92

MCCARLES LAKE (SOUTH BUNBURY)
AFTERNOON - STRONG SW WIND
RAINY PERIODS
STRAW NECK IBIS x 800-1000
BLACK SWAN x 1
MALE MUSK DUCK x 2
FEMALE " " x 6
SPOONBILL (YELLOW BILLED) x 4
SWAMPHARRIER WHITE (BIT)

8.15 WOODVALE 9.00 leave
10.00 pick up Karen.
1.30 AMC (south bunbury)
1.45 arrive at lake set up fencing
set up hide
leave

7/8/92

McCarles Lake

8.00 → 2.00

conditions: CALM, COOL, OVERCAST

BIRDS - OSPREY × 1

SWAMP HEN × 1

M/F BLUE BILLED DUCK × 12

M/F MUSK DUCK × 8

SPOONBILL × 6

STRAWNECK IBIS × 1000 (nesting)

on side of road back to Perth.

mounted duck × 4 pairs

white ibis × 20

16/8/92 SUN. PRIVATE 3.30

LAKE SOONDALUP SOUTH

WINDY (SW) PARTLY OVERCAST

Grey teal × 1

Dusky moorhen × 1: red face head small yellow tipped beak

coot × many.

NOTE: constantly disturbed by a dog, walk across ocean reef road to southern end of Lake Soondalup North.

4.30pm

mask duck 1 male 2 females

blue billed duck 4 males 4 females

coot approx. 8

Great Crested Grebe 1 pair.

PTO

16/8/92 (CONT.)
moved to Edgewater drive viewing area.
5.00
Maned duck × 1 male
Purple Swamp hen × 4
Coot = many.
Black Swan × 4
Musk duck (male) × 1
Black duck × 6

2/9/92 WED WORK
McLarties lake
11.30 - 2.30pm
- Sea eagle × 1 in flight under wing front white, back was black.
- Raptor unidentified, smaller possible swamp harrier.
- purple swamp hen × 2
- blue billed duck male × 5 female × 4
- hardhead, female ID = SH
- Coot × 4 1 nest 10 eggs 4cm long eggs cream with black specs.
- Rufous night heron × 1 ID = GP
- Sacred ibis × 4, 2 nests each three chicks black head white bodies.
- Yellow billed spoonbill × 6
- Straw necked ibis (breeding colony)

2/9/92 (cont.)
12 chicks were tagged using
11 and 12 size bands on 2-4 week
old chicks. They were all weighed
and sexed.
33 eggs were collected.
approx. 10 chicks were taken and
put down for analysis of giardia
and other infections.

Broadcast in afternoon
straw neck ibis x8
inspected 8 nests most had
2-3 white eggs. many sea gulls
in the area probably predating
on the chicks.
silver gulls x 100 approx.

2/9/92 (cont.)
pink eared duck x3 10 SH
weath deteriorated throughout the
day heavy rain 20-30 ~~nat~~ wind SW

12-13/9/92
Northern Deptt guage run with two Indonesian Park managers and Jim lane.
Visited 8 lakes - Joondalup, Chandala, Guraga, Crackers, Bambun, Logue, Eganu, Warrand.
SAT. Pacific heron, grey teal - white bend on top of wing. sore on ecidna. stayed at Jurien shacks sat. night.
Sun - sheep dog trials at Eneabba. Butcha bird, wildflower farm.

MON TUE (18)

16+17

HARVEY 6.30

BLENGER

HARVEY HOTEL
WAGON WHEELS

TOYOTA

LIFT FOR VOLUNTEERS

CHEAP ACCOM. AT HARVEY
No.5 ROGER
Rough No.

TENTIVE BOOKING
FURTHER BOOKINGS

HARVEY CALM FOR HOTEL $

10^{-4} g/cm³ 22.7

#1 0.091 × 10^{-4} g/cm³ = 0.0091

#2 0.159 × 10^{-4} g/cm³ = 0.0159

#3 0.160 × 10^{-4} g/cm³ = 0.0160

SALINITY

#1 5.55

#2 5.40

#3 5.19

pH

#2 4.50

#1 [redacted] 380

#3 4.50 ppm

SOLO.

TWIN SWAMPS 26/11/92

(19)

NEW BUFFERS : 1 = 4.97

BUFFER

#1 METHYL 1 mg/mL : 7.0 mg/mL = 3.97

#2 METHYL 10 mg/mL : 9.98 mg/mL = 7.18

PH TEST

FOR #2 METHYL

15/12/42 SANDBAR LAKE

5 SCARED IBIS
1 LITTLE RED CORMORANT
1 BLACK SWAN

45-08

LITTLE BITTERN in flight CONSTANT CALLING

2x female mallard

Coot or red coll, white tails
SWAMP HARRIER

Big Bittern in flight

20/4/93 ESPERANCE CBG

LIFT OFF	9.32	PERTH
DOWN	11.24	LAKE GRACE
LIFT OF	11.40	"
DOWN	11.48	"
START UP	12.49	"
down	2.58	ESPERANCE

21/4/93 ESPERANCE
MULLET LAKE NR
9.00

13 swans
4 white face terns
20 hoary headed grebe
4 Great crested grebe
1 yellow billed spoon bill
60 coot
2 great egrets
12 shoveler
1 chestnut teal dark teal
white side petites teal + teal
63 pied cormorant mostly
little black x fewer

19 spoon bill
40 swans
14 white face terns
20 shell duck
20 shovelers

START 2ND run.

22/4/93 fix wing

up 8.17

east to israhite bay
along coast.

turned inland 10.00 to run
along ~~coast~~ lakes and first
paddocks

down 11.30

23/4/93 [illegible] to cape [illegible]

START UP	7.45	LESP
DOWN	8.25	CAPE ARID
START	3.30	CAPE ARID
DOWN	5.19	LESP.

24/4/93

START UP 9.00 ESP
DOWN 9.20 CULL

START UP 11.35 CULL
DOWN 12.04 ESP

26/4/93

START UP 8.16 ESP
SHOAL CAPE STOKES * MP
SURF DIVING
Right lander

ROCKS	ST	FUR S.	SHAL.	CPG
	2	5	2+1	–
		1	4	
			1	

WEST IS.

*DOWN 9.52 HOPETOWN

UP START 2.42 HOPETOWN
DOWN 4.44 ALBANY

29

27/4/93

START 8.08 ALBANY
DOWN 8.51 BALD IS.

START 1.10 BALD IS.
DOWN 1.42 ALBANY

START 2.09 ALBANY
DOWN 4.22 PERTH

30

invertebrate Taxonomy

Royal society of west. Aust.

Journal of Aust. entomology

Aust journal of marine and freshwater research.

598.

12/5/73 LAKE McDOOGALE
Black Duck nasal saddle
11062002
11062100
11062003

ROTTO 31/7/93

OSPREY x 3
1 on nest West of Salmon bay
2 on nest Salmon point

2x PIED OYSTER CATCHER
SHEL DUCK many
6x Pied cormorant
1x little black cormorant
ring neck pheasant

11/8/93

PERTH 9.00 am

MANILYA 11.00 pm

to 7.30 pm

ANNIE PLAINS 9.00 pm finish

7.00 am leave

arrive Broom 10.00 am

shopping

airport

check in

swim at Cable Beach.

finish 5.00

MANGROVE HOTEL

depart 8.30 am

KIMBERLEY HOTEL 5.00 pm

depart 8.00 am

arrive Lake Gregory 4.00

take photo of fitzroy river

set up camp

quite run (reconnoiter of creek channel) up salt pan creek

discovery of little black cormorant colony.

finish 6.00 pm

SUN 15TH

rise 6.00

6.30 breakfast

begin 7.00

run up creek with three boats

bird recording

grant [illegible] left (south)
I was in [illegible] with steam
and 5 VOL'S
~~[illegible]~~ reduced in 12 point with
4 VOLS until night not
begin counts.
afternoon beach walk with
Richard and grant along
track to [illegible] lake.
finish 6.00 pm

MON 16TH
rise 6.00
breakfast 6.30
begin 7.00
main axial ~~[illegible]~~ in morning

with Richard Stuart and grant
9 Foot Mark (CPLM Kennedy)

grant went left (south)
I was in mirage with stuart
and 5 VOL's
~~[illegible]~~ rebord in 12 point wet
4 VOLS went right north
began counter.
afternoon brisk walk with
Richard and grant along
track to ~~[illegible]~~ lake.
finish 6.00 pm

MON 16TH

rise 6.00
breakfast 6.30
begin 7.00
main ~~stress~~ aid in morning

with Richard Stuart and grant
I took Mark (CPLM Kennaway)

cont 7/9/93
2 large eggs were found
9 cm by 5.5 cm roundish and
stained specks not brown
grey down surrounding eggs
not extensive. nest in old ibis
& spoonbills. nest 4 ft from
water.

7/9/93
CHANDALA Depth Gauge 1.0m
no ibis breeding
no ibis seen

CRICKLERS
lots of old nests located
no activity. 30 ibis seen
in field near by.

Cerro
200 ibis in fields.
400 roosting in trees in swamp
2 nests high in trees had
2 ibis eggs each. no activity in
lower nests

CIRIA SWAMP 9-9-93

STRAW NECK 60

SACRED 50

approx. 20 nests

SPOONBILL 30

approx. 10 nests

1 swan nest 6 eggs

LITTLE PIED CORMORANTS

NESTS x 20

DARTER NESTS x 5

McCarlies 9/9/93 ISLAND 2

N	EGGS
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	3
	2
	2
17	2
	2
	3

17

CONT ISLAND 3

N	EGGS
	3
	2
	3
	3
	2
	1
	3
	2
	2
	2
	3
	2
	2
14	2

CONT

2 × swan nests each 6-7 eggs
2 night herons
10 spoonbills
1 large egret.
2 swans
2 + → musk ducks
20 blue billed ducks
10 black duck
10 grey teal
1 swamp harrier
grey butcher bird.
1134s × 4000

BIRD LIST LAKE GREGORY
AND BROOME INCLUDING TRAVEL
11/8/93 – 30/8/93. ☒ breeding

G LITTLE GREBES × 2
G Great crested grebe × 50
B Brown Boobies × 30
B lesser frigate bird × 2
GB darter 50 ☒
GB little black 3000 ☒
GB little pied 50
GB Pied cormorant ☒ 500
G Magpie goose 400 (☒ × 1)
GB Pelican × 1000
G Swan × 300 ☒ 25 nests
GB Jabiroo.
G Green Pigmy goose × 2

G Hardhead 5000
G Maned goose x 20
G Teal 3000 recently abandoned old nest found
G Pink eared duck 1000
G Freckled duck x 4 immature
G Black duck 1000
G Plumed Whistling duck 2000
G Rufus whistling duck 500
G/B Great egret x 100/10 breeding plumage
G/B little egret (just feeding) 5/5
T/G/■ white faced heron 20/50/
G/B Pacific heron 20/2?
T Wedge tail eagle x 4
T little eagle x 2
T Black breasted Kite x 2
T/B Sea eagle 1/2
G Night heron x 100

B Brahminy Kite x 4
B Forktailed Kite x 20
G/T Nankeen Kestral x 10
G Brown falcon x 1
Black falcon?
B Black shouldered Kite x 1
T/G Spotted Harrier x 20
T/G Whistling Kite x 50
G/B Silver gull 100/100 ☒ x 3 G. nests
G Caspian tern 200 ☒ 80 nests
G Gull-billed tern 20
G Whiskered tern 100 some breeding plumage
B Crested tern 50
B lesser crested tern 5 yellow legs.
B little tern?
G little Button Quail (spotted lighting

B Terek sandpiper 5
B Roebuck plains March sandpiper 5
B " wood sandpiper
B large sand plover 100
GB Red breed dotterel 10/20
GB Black fronted 10/20
B Ruddy turnstone 50
GB Marbled lapwing 50/20
T Banded lapwing.
G Aust. white 20
GB straw necked ibis 100/5
G Glossy ibis 30
G Royal spoon bill 5
GB Yellow Billed 20/10
GB Roebuck plains Brolga 60/30
T Aust. bustard. 10

G B Jabiru 1/1
BTG Diamond dove 500
BT Peaceful dove 100
T Spinifex pigeon 2
T GB Crested pigeon 50
T Galah 50
T G little corella
T White tail black cockatoo 10
T Port lincoln parrot 50
B Red winged parrot 10
GT Cockatiel 100
T G Budgerigar 3000
G Barn Owl ×1
B Night jar.
G Fairy Martin 20
G Tree Martin 50 ☒

G Red backed Kingfisher ×1
GB Rainbow bee eater 50
G Rufous whistler ×5
G Varegated Wren 3 → 6+
G White rumped minor ×2 ☒ ×1 4 young
GT Yellow tinted honey eater × 20
GT Brown honey eater 10
G Black honey eater → ×1
G Crimson chat ♂ → ♂ × 1/2
T/G Black faced cuckoo shrike 20/1
G Zebra finch × 500
G LONG TAILED FINCH 50

105 species

HERDSMAN 2/10/93

GREG 5
DUSKY MORCHEN 5
COOT 60
BLUE BILL ♂ 2 ♀ 1
LITTLE PIED 1
LITTLE BLACK 5
PELICAN 1
GREAT EGRET 1
BLACK DUCK 2
MUSK DUCK 20
CLAMOUROUS REED WARBLER (CALL) 2
SWAN 8
Great Cormorant 1 all black
TIGER SNAKE 1
BULL FROG LITORIA MOORIE 1
SACRED IBIS 1

X6 CT Y6

DG DR TRANSECT

X4 Z4
Z3
CS CH
CT CJ
X5 Y5
Z2 DZ
X6 CK
X7 CL
Z1 DY
X9 DX
Y9 CR
CD CO
CG CP
Y6

DN
FL
DR
FH
~~FL~~
FF
DS
FK
DK
FJ

PH
FF
DK
DR
DS
FL
DN
DL

HARVEY INLET

1 POINT NEAR BIG LAKE

TRANSECT SOUTH 2 MIN TOP SPEED
THEN MEASUREMENT AND SO ON
TO RAMP.

2

Harvey River
Eucalyptus rudis
flooded gum
= fresh water

before acacia only.

(56)

26/7/94

EAST SWAMP

Depth 0.8

water samples

#1 near gauge

#2 north end of track (separate water body)

#3 pool east of track

(57)

NW SWAMP

Depth 0.105

water samples

#1 near gauge

#2 east of gauge 30m

#3 track leading in to gauge, (west of gauge).

SW SWAMP
Depth 0.08 m
water samples
#1 at gauge
#2 SE of gauge 40 m
#3 NNE of gauge ~~[illegible]~~ 20 m

ELLEN BROOK
Depth 0.41
water samples
#1 gauge with wires
#3 20 m WSW of w. track entrance to swamp.
#2 south of islands 40 m SW of gauge with wires

16/8/94

Depart Woodvale 7·30
Arrive Carnarvon 5·30

Carnarvon Bacine Hotel 8·00am

#49 PH 8·16
P+N ~~[illegible]~~ UNFILTERED

#56 P+N unfiltered
PH. 8·52
DO S123 B119

#56A DO 100 5cm Deep
PH 7·35
P+N unfiltered
No Chlorophil
7·00pm MOTEL

18/8/94

Depart MOTEL 7.30 am

#73
Chlorophyll 150mm
PH 8.49
DO S 98 B 96

#54 no chlorophyll
DO S 96 B 94
P+N unfiltered
PH 8.15

#77 PH 7.86
DO S=150 B=140

76 PH 8.24
DO INSIDE S=153 B=142
OUTSIDE 147 147

twin tanks camp 8.15 pm

Depart 7.45 am

#62 DO S=89 B 78
pH 8.85

#75A DO S=115 B=105
pH 8.15
P+N chlorophyll filtered only.

#75B DO S=99 B=89
pH 7.49
P+N Chlorophyll filtered

Camp Mordallbrana 6.45

Depart Camp 7.45

#70A PH 7.83
DO S=106 B=94
P+N unfiltered

DYVERS PAN
#75A PH 7.24
Dep 0.68 DO S=105 B=103
P+N Chlorophyll filtered only

#68 PH 8.09
DO S=115 B=104
P+N Chlorophyll filtered only

Camp Watermelon spring
@ 7.30pm

21/8/93 depart camp 7.30

#67A Birdwarry spring
DO 68
PH 6.93

#67B scraped hole
DO 20m down from rock 149
30 up from rock S=115 B172
PH 8.22

#62A DO S=156 B=160
PH 8.75

Camp Mocha springs 7.30

Depart Camp 8.00 am

62 Moolra spring
DO S=72 B=75
PH 7.62

42 Gargoine
DO S=74 D=75
PH 8.57

38 Timba Timba
DO S=105 B=106
PH 8.20
p+N unfiltered
no Chlorophil

38A SALT GULLY
DO 114 B=116
PH 9.12

43 Clay pan
DO 95
PH 8.46
no Chlorophil
unfiltered p+N

CAMP JACOB CREEK 7.00

Depart Camp 7.45

#58B DO 101
PH 8.00
p+N unfiltered
no Chlorophil

58C PH 8.08
DO 95

44 Rocky Pool
DO 130
PH 8.64

58 E PH 8.15
DO 104
no chlorophyll
PHN unfiltered

58D DO 156
PH 9.32

Finish Carnarvon SAILS
6.06 + 6.00 to 7.15

Depart Ole Carnarvon 8.00

#34 MEEDO on Woorama
DO S=139 B=134
pH 9.32

PHN North 9Km of Woorama station 35A
DO 68
pH 7.75
No Chlorophyll
PHN not filtered

Finish 7.00 Carnarvon

Depart Carnarvon 8.30

#36 DO 88
pH 1.97
P+N in filtered
2x50m chlorophyll

#93
DO S=109 B=96
pH 8.00

93A
DO S=114 B=98
pH 7.66

FINISH BOOTHAMALLA POOL
7.00pm

Depart 7.45

93F Boothamalla pool
DO S85 B83
pH 8.35

93E Calah springs
DO 108 B+S
pH 8.42

93D DO S=140 B143
pH 8.73

93G DO S=155 B=178
pH 9.50

FINISH 6.45
START 7.30
#25 DO 83
NO pH
NO T/C
NO chlorophyll
NO P+N
ONLY IONIC + SALINITY

False entrance 7.30 pm 28/8/94
start 8.00 am
#15 DO S=86 B=84
pH = 8.03

#16 DO S=119 B8 pinkhole 3
pH 8.11

#9. DO 106 TOMBALA
pH 7.80

#9A DO S=126 B SINKHOLE 8
pH 8.64

THINGS TO DO
- aerial photos Carbola station over wetland?
- buy waders size 10
  buy boots size 10
  nally bins.

Denahan 5.45
start 7.30

#29A Deron peninsula
DO S=140 B=138
pH 8.63

#20 Hamlin pool
DO 167
pH 8.22

FINISH KALBARRI 7.15

STARTS 7.15

#4 DO S=101 B=104
pH 8.17

#5 DO S=113 B=107
pH 8.00

6B
DO = 108
pH 7.38
chlorophyll 2x100 ml filtered
part unfiltered

6A DO = 130
pH = 8.34

finish Denmark 10.00pm

TWIN SWAMPS SW
23/9/94

Depth at guage 0.0
water samples
#1 at gauge
#2 20m SE of gauge
#3 20m NE of guage

#1 pH 6.54
#2 pH 6.57
#3 pH 6.91

Macrophyte cover 60%
water temp
1 17.6
2 13.3
3 13.0

TWIN SWAMPS E
23/9/94
Depth 0.21
water samples
#1 at gauge
#2 west of guage 40m
#3 NE of gauge 30m

#1 pH 8.16
#2 pH 8.06
#3 pH 7.94

macrophyte cover 50%
water temp
1 19.1
2 20.2
3 19.4

TWIN SWAMPS NW
23/9/94

depth
water samples
1# at guage
#2 east of guage 30m
#3 west of guage 30m

#1 pH 7.49
#2 pH 8.74
#3 pH 8.09

NW 100% cover
water temp
3 25.1
2 19.2
1 24.4

BELLEN BROOK
23/9/94
depth 0.34
water samples
#1 deep guage
#2 SW 30m over island
#3 shallow guage.

#1 pH 7.63
#2 pH 8.26
#3 pH 8.35

macrophyte cover 50%

water temp
1 — 24.1
2 — 24.4
3 — 27

BROWNLE ST PAST CALM
OFFICES right into Forrest RD
1ST Black Rd is Arboretum RD
1ST House on left (green wood)
BYENUP KEY.

LAKE CLIFTON
water clear
temp 14.1
DO S 90.0 B 94.8
depth 10cm higher

3 10
10/~~8~~/94

MOSES ROCK POOL
2m+ depth
water clear
temp 22.0
Redox
Macrophyte 100%
algae floating weed.

3 10
DAVIS 10/~~8~~/94
10cm lower depth
4.5cm only Total P+N unfiltered

Yeagerup
depth lower 5cm
tannin lake
DO S 89.0 B = 88.2
Temp 15.8

MUIR 4/10/94
DO 72
Temp 11.2
depth 8cm

BYLDUP
depth
DO S=94.1 B93.1
Temp 13.2

Cranbrook
depth
DO 134.0
temp 17.1
Redox 110.3

WILLIAMS
DO B 91.4 S 92.0
TEMP 14.1
depth slightly lower

POWER
temp 16.6
DO S 114.9 B 113.9
redox 207.1

METTLER
temp 12.0
DS ~~[illegible]~~ B
S 47.8 47.3

WALUP
depth
DO 75.4
temp 14.0

coyotecup

temp 18.6
DO 150.0
depth 1.1 jusly 8cm deeper

DOTBODERRY
temp 24.5
DO 170

CRACKERS
depth 1.11
temp 22.7
redox ~~[illegible]~~ 171.6

MON 6.45 - 6.30
TUE 7.00 - 6.30
WED 6.45 - 7.30
THUR 7.00 - 8.00

THINGS TO DO

* BUY 50μm net material and make up × 2 nets

* radio and speakers for tarpata

* buy 40% ~~formalin~~ formaldehyde.

* organize more room in alcohol store

10/10/94 Carnarvon areal survey.

MON ~~8.45~~ 7.45 meadowdale
depart 8.45
Carnarvon 5.45 pm
start 7.45
Plain 8.15

DOWN ~~11~~ 10.28

finish 4 mile camp 6.30

start 7.00

(88)

184

223 MILE SLOPE
TV PROGRAMME

KYLIE
LEN PAGGI
MOBILE 018 930760
* gives it to tropic air
Jerlenis office
Home

later

(89)

12/10/84 Lake Meloud

site
red capped planner × 2 × 2 × 6
Green shrub × 42
boat

temp 27
DO 133
depth 9cm
pH 6.35

#79 temp 28.8
DO S 109 B = 102
pH 7.31

TWIN SWAMPS NW 31/10/94

SITE 1 road leading to pipe
DO 100%
Temp 20.6 pH 8.55

SITE 2 at gauge
DO 114
TEMP 17.4 pH 8.69

SITE 3 NE of gauge
DO 122.5
TEMP 23.6 pH 8.88

3/1/95
L. CLIFTON
DO S=84 B=87
Temp = 22.1
depth -30cm
Redox -77
pH 7.97

MOSES ROCK ROAD
DO =147 S&B
TEMP :B19 S=19.7
depth - 2 feet
redox 149.3
pH 8.23

DAVIES ✓

DO S162 B154
TEMP 26.0
depth -30cm
redox -35.9
pH 8.82
MACROPHYTES 60%

YLEBLERD ✓
DO S95 B=92
TEMP 25.2
pH 6.88
redox 113.2
mac same

(95) 7.00 4/1/95

MUIR

DO 230
TEMP 17.4
redox 92
depth 8cm
pH 7.26
sac 20%

BYLENUP

DO 109 B+S
Temp 22.0
depth 1.8m
pH 6.57
redox 59.1

(96)

WILLIAMS

DO S=93 B=90
TEMP 21.8
depth -10cm.
pH 5.00
redox 230

POWELL

DO 114
TEMP 20.8
depth -5cm
pH 8.99
redox 98.0

(97)

5/1/95

MOTTLUP

DO S=51 B=42

TEMP 15.1

depth 20cm

redox 164.1

pH 6.45

mox 100%

YAALUP

DO S=85 B=80

TEMP 18.9

depth 0.27 cm

pH 9.51

redox 141.1

mox nil

(98)

COYIRIECUP

DO 115

TEMP 22.1

depth 1.7 ≃

redox 75.0

mox 10%

pH 9.13

FLAGSTAFF

depth 2cm

DO 24.0

Temp 24.3

pH 6.98

5/1/95

Parlegenning

DO S = 32 B = 30

TEMP = 22.9

depth = 1.47

redox = 74.4

pH = 7.58

COOM

DO = 2.0

TEMP 24.5

depth 1.35

redox -162

pH 7.75

6/1/95.

WALBYRING

depth 0.30 m

redox 103.2

DO 48

TEMP 14.4

pH 8.55

MOLUMBER

depth 4cm

DO 19

TEMP 4.0

redox 10

pH. 7.38

(101)

CRABERLATS ✓
depth 0.55
DO S=129 B=210
TEMP S=29.8 B 25.4
redox 98.6
pH 9.25

(102)

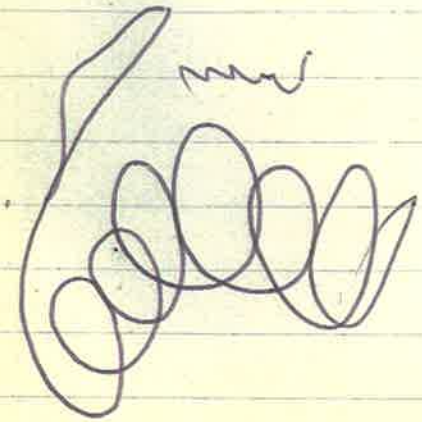
Dep: L'umeraig 7.45
HARVEY EST. 21/3/95
first stop site #7

15 30
1 3
1 4

27/3/95
Depart woodvale 1.00pm
Kalbarri 7.00pm
28/3/95
Depart Kalbarri ~~7.00~~ 8.00am

Murchison station 8.00pm
depart 8.00

Mooka springs
DO CH 98 T5
RF 103
MOC ~~105~~ 95
TDS 0.780 x 10^4
Temp 25.0
pH 7.64
250 183
125 –



WINIMIE POOL

pH 7.75
TDS 0.11×10^4
Temp 26.0
250
125
DO MIX 95 95
CH 99 98
prod 102 102

MANILYA

DO 84 83
TDS 0.176×10^3
Temp 25.5
pH 7.17
250 231
1.25 218

MANILYA
8.30 pm

0 apart Manilya 7.20
30/3/95

BLOND MILK Bread 3.20
Milk milk 1.30

CLM 40

pH 7.51
TDS 0.307 x10^4
Temp 25.5
DO CH 79 75
MBC 74 63
250 199
125 208

CLM 39
BLEWELL POOL
DO MBC 170 182
CH 135 124
pH 8.3
TDS 0.409 x10^4
Temp 27.0
250 218
125 -

M

EDISTHIONA POOL
pH 7.91
TDS 0.278×10⁴
Temp 23.0
DO CH 83 83
MDC 96 87
RF 90
CH BOTTOM 85 87
Flow 604 26.

Deep pool
CLM 42
TDS 0.568 ×10³
pH 8.90
DO [27] 120
Temp 24.5

250 201
1.25

CLM 46
pH 6.16
TDS 0.374×10^2
TEMP 23-0
DO 127 126
125 185
250 202

Bread
Biscuits 6.80

finish Meebarthanna
12.00 am

start 7.45
finish 9.15 pm MTS HOLLS

start 8.15

SHEILA'S CLM 50
SHILLERS BLEND
pH 7.16
TDS 0.396×10^3
TEMP 22.5
250 203

Finish 2/4/95 9.00 pm
start 3/4/95 8.00 am

CLM 49 GUM CRISLER
pH 7.51
TDS 0.961×10^3
Temp 23-0
DO MOE 71 57
CH 61 58
250 185
125 232

4/4/95
start YELLOWLONG
7.45

TLSN MILL POOL CLM
TDS 0.359×10^4
pH 8.02
Temp 23.5
DO CH 90 90
MOC 90 90
250 224
125 194

6/4/95
Island Point
9.23am depth guage 0.00 m

Harvey mouth 40 swans in mouth
120 swans either side predominantly west side
40 mountain duck
80 pelicans
10 cormorants
6 caspian terns
55 yellow billed spoonbill
1 Royal spoon bill
2 Coots
250 teal
1 Great white ibis
1 Great egret

river mouth

4 Dotter
10 coot
500 teal
200 black duck

first salinity measuring
at 3.30

pelican breeding Island
130 on east islet 30% young
50 adults on ridge were we saw
and observed last time 20 young
were with them
main breeding group had
moved up ridge towards the
west
Colony has increased in size

square post from top
to water 0.848

Grassy islands 6/4/94
5.40 pm

swans 62
pelicans 25
yellow spoonbills 20
great egret 2
shelduck 20
teal 50
marsh harrier 1
green island 5
black winged stilt 10
white faced heron
1 little egret black legs
black bill

Rangers lake 18/4/95

swans 20
yellow billed spoonbill 6
white ibis 4
mountain duck 8
coot 25
teal 20
black duck 50
little black cormorant 2
white faced heron 1
hoary headed grebe 8

18/4/95
Denmark 7.00 am
Manjimup 7.00 pm

19/4/95
Manjimup 7.15 am
Albany 4.45 pm

20/4/95
Albany 7.00 am
Denmark 6.45 pm

21/4/95
Denmark 7.30 am
Woodlake 1.15 pm

1. top & bottom salinity at star picket
2. T+P+N at top
3. pH star picket top temp top + bottom
4. 3×50m sweeps @ surface
5. depth

28/4/95 8.30

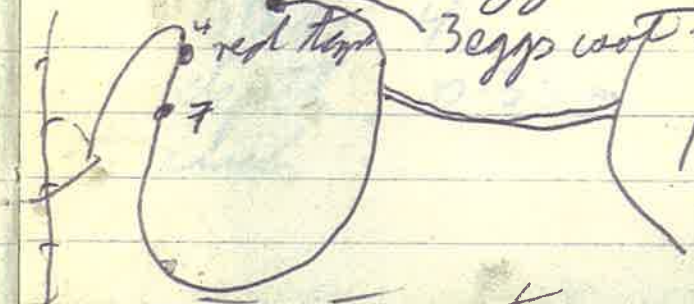
depth top → water 0.89m
bottom to top of water 0.54m

pH Top 7.89
Temp Top 19.0
Bottom 19.0

Calibration - Solution 7.01 read 6.95
Solution 10.01 read 9.78
Tried to calibrate, meter read E4

28/4/95 3.00
crossover lake
little Pied cormorant 1
coot 4 + 2 ~~brood~~ S1+ 6 + 1 S2
grey teal 6 + 2 + 2
coot 8

grey teal nest down (left)
coot nest + 5
{nest with 4 eggs black dots
{red tape (channel) coot nest
coot nest 7 eggs 50m along
3 eggs coot + 1 S1



Ballard

coot nest empty
teal 3+1

Female female mewh duck
seperate areas

2 crows

2/5/95
1ST Shoot 10.30am
1Km south of 2ND
island. depth 0.47m
adult No. 1
chicks No. 1 + 2

2/5/95
ADULT 2 11.45am
depth 0.48m
adult 2
chicks A+B+C

ADULT 3 12.10am
depth 0.49m
chicks

ADULT 4
depth 0.33m 1.50pm
chicks

2/5/95

ADULT 5
depth 0.31 2.20 pm

4/5/95
0.97 depth top of stick to water
0.44 depth from bottom to water level of stick

standardization
buffer 7.01 read 6.99
buffer 10.01 read 9.75
ph at surface 7.78
temp top 12.6 bottom 12.6

4/5/95
cross over lake
pH 7.59
temp 15.7
salinity top + bottom
total P+N top
depth 0.445 from top of star picket

26/4/95 Depart Woodside 13.45
arrive Kalgoorlie 22.15

27/4/95 0830
Ballard 22.00

28/4/95

(127)

pH Buffer test

17/5/95

calibrated with original solution buffers

3.94 7.01 10.01

Capsaicin buffers were

3.87 7.08 10.18

(128)

9/6/95 crossover lake
1:30pm
black duck 2
loon 2+1, JB, 6
male mink 2+1
whistler 1

lake Ballard
Camp island
9/6/95 2.45
depth 0.775 from top of stick
pH 8.67
temp not working

cross over lake
pH 8.76 4.31
Temp 12.0

lake Marmion 10/6/95
4.00pm
pH 7.39
Temp 12.0

x10
1x
44p long 8p wide

x50
ISLAND
WATER
Δ = 30p
8
grass area
139 paces long
36
50p
0x0

Start 10.45 Harvey River 15/8/95
on estuary 1.30 pm
stop 50 m north of island
finish 7.30 pm

HARVEY RIVER
30/8/95
WED 8.15 am
5.30 pm

Ring LEWISTOBBO
accom. about
Gerry and meal
check mounter Cards
take L.P.O.

Woodvale 7.30 11/9/95 8.45 pm
Thompsons lake
depth 0.97
temp 12.0 ≃
pH 7.8

Forrestdale 9.45
depth 0.505
temp ≃ 15.0
pH 9.85

GIBB RD 10.30
depth 24.575
temp 17.0
pH 7.58

NINE MILE LAKE
12.47 pm
depth 0.955
temp 20.5
pH 6.89

CLIFTON 1.30 pm
depth 4.26
temp 20.1
pH 7.83

HARVEY 2.20
depth 0.97
temp 17.2
pH 5.53

(138)

11/9/95

EGRIST 3.12 pm
depth 0.35
temp 17.1
pH 6.67

7.30 Burrelton 12/11/95

bangup 10.10 am
depth 0.105
temp 15.3
pH 7.58

TOWERINNING 11.26
depth 3.34
temp 17.4
pH 7.65

(139)

Beverley 2.30 pm
depth 0.86
temp 21.5
pH 8.14

DOIBBDERRY 3.50
depth 0.615 non-gauge
temp 17.2 not correct
pH 6.55 water 15 mm below
low mark

LARGE LOGUE 13/9/95

11.45

mud Duck 2 3 & 1 ♂

coot 2+3+6+5

teal 2+20+10+10

~~black duck 2~~

pink ears 2+1+1+4+2

silver gull 10

night heron

mountain ducks 2 + pairs

grey teal nest 5 eggs

white face heron 4

black duck 2+4

↓ moulting

GUDGE

pH 7.54

depth 1.18

Temp 12.4

invert sites 50m sweps

lake logue 50m

water to side of LL #2

pink ear 4+30

hoary headed grebe x 3+5+20

spoonbill 1 yellow B.

coot 10

swan 2

coot 30

10 whiskered tern breeding plumage

3 eggs in nest
pacific heron x 2
grebe nest x 3 no eggs
pin ears 19
teal 10
grebe 20
spoonbill x 2 nest too high
grebe nest only
2 mountain duck brood 8
silver gulls 127
coot 200
Musk duck 50 ad
pink ear 200

13/9/95

lake Modoon 4.45
3 teal chicks stage 1-2, 2, 2+
6 silver gulls
Temp 17.5
pH 8.26

finish 6.00pm Eucalbra

start 6.30am 14/9/95
Eganu 8.45
depth 2.58
temp 16.7
pH 8.52

GERROBEL 12.40
depth 2.245
temp 20.4
pH. 8.01

CRACKERS 14/9/95
depth 1.75
temp 17.1
pH 7.75

WANNAMPIAR 4.00pm
depth 1.57
temp 19.4
pH 9.28

Bambun 5.00pm
depth 14/9/95
no gauges visible
measured from water to top
of star picket 39.0cm
at end of fallen tree
on fence line on holding
yards - temp 19.0
pH 9.51

CHANDALLA 5.45
depth 0.94
temp 17.8
pH 7.67

Joondalup 15/9/95
depth 17.22 9.42cm
temp 18.2
pH 7.78

JANDABUP 10.40
depth 44.99
temp 19.8
pH 5.09

CALLIBRATION 1·5 PPK ok

		246 PPM	
0·0	0·1	~~20·5~~	20·5
11·34	0·2	"	20·6
	·4	"	"
	·6	"	"
	·7	"	"
0·5	0·1	246	20·5
11·41	0·2	244	20·5
	·4	244	"
	·6	"	"
	·8	"	"
	1·0	"	"
1·0	·1	238	20·4
11·47	·2	"	"
	·4	240	20·3
	·6	239	"
	·7	"	"

1·5	·1	236	20·3
11·55	·2	"	"
		↓	↓
	1·2	"	"
2·0	·1	230	20·2
12·00	↓	↓	↓
	2·0	"	"
2·5	·1	338	20·5
12·05	·2	238	20·4
	1·1	238	20·4
2·1	·1	220	20·3
12·13	↓	↓	↓
	1·4	218	20·3
	2·0	220	20·3
	~~3·0~~ 2·2	228	"
	2·4	"	"
	2·6	"	"
	2·8	230	"

~~3.4~~	~~3.4~~	228	20.4
~~3.0~~ 2.5	.1	213	20.4
12.17	↓	↓	↓
	.8	"	"
~~3.5~~ 2.8			
12.23	.1	213	20.4
	↓	↓	
	3.4	213	20.3
3.0	.1	212	20.5
12.53	.4 ↓	213	~~20.5~~ "
	.8	"	"
3.5	.1	210	12.6
12.56	1.4	"	20.4
4.0	.1	208	20.5
1.00	1.4	"	"

4.5	0.1	208	20.7
1.06	1.4	"	"
POST	HEIGHT		0.74
	33.8	CALIBRATION	
Fish.	0.1	21.2	22.1
traps	.2	"	"

Creepy Island

2.45pm – 150 mountain duck
– 20 swans
– 60 ducks
– 50 shell duck

brown booby
australian bustard
whedge tail eagle
little eagle
~~[illegible]~~ sea eagle x 1
Black breasted Kite

freckled duck x 4
grey teal
black duck
pink ear duck
hard head
plumed whistling duck
Diving whistling duck
little grebe
hoo headed grebe
great crested grebe
Darter
little black cormorant
great "
pied "
little pied
Magpie goose
pelican
swan

maned geese x 10
green pigmy goose x 2
great egret 500
white faced egret 10
pacific heron 8
spotted harrier
little falcon
whistling Kite
forks tailed Kite
black falcon
whiskered tern 50
gull billed tern x 6
caspian tern x 200 80 nests
little button quaile
black tail native hen
coot
pied stilt

pratincole
red capped dotterel
red knee dotterel
masked lapwing
straw necked ibis x 100
glossy ibis x 60
Australite ibis x 10
Bridgen x 40
pearl fell dove
diamond dove
silver gull.
spinifex pigeon
crested pigeon
little corella
galah
1 cockatiel
~~Budgerigar~~
Budgerigar

Barn owl
variegated wren
yellow tinted honeyeater
fairy martin breeding
tree martin

155

Harvey Estuary 19/10/95
9.45 depth 0-15cm.
wind SE 25-30 nots

156

11.00

5	0.1	19.6	19.3
	.2	"	"
	.4	"	19.4
	.6	"	"
	.8	"	"
	1.0	"	"
6	.1	12.75	19.0
11.06	.2	12.65	"
	.4	12.80	"
	.5	15.1	"
7	.1	13.2	21.1
11.12	.2	13.1	"
	.4	14.4	21.0
8			

157

WARDARTA GAS
LEN
099 551106

CONSOLIDATED GAS 3804920

LAKE LOGUE
DAVID

WARDMAN
LEN

PARSON
Euston Northern
099 551106

WARDMAN

gas plant
oil rig

Nature Reserve sign

green infill

Drum

5-8

IN DOOR

IN

INDOOR

CONSOLIDATED GAS 3804920

LAKE LOGUE
DAVID

WARDMAN

LEN

PONTOON
Euston Northern
099 551106

WARDMAN

gas plant
oil rig

Nature Reserve sign

green infill

Drum — 5-8K — LENNARTSO

1K

INDOOR