

Jim Lane's Field Notebooks Index Contd.

(Revised Index of 11/5/2014)

<u>PDF Name</u>	<u>Book Label</u>	<u>Approx. Span of Dates</u>
JL_(1970-84)_17A	1980-81	(01-12-80 / 15-11-81)
JL_(1970-84)_18	1982-83	(13-03-82 / 18-03-83)
JL_(1970-84)_19	1984	(15-03-84 / 16-03-84)
JL_(1970-84)_20	1984	(20-09-84 / 10-10-84)
JL_(1992 on)_1	1	(03-11-92 / 03-08-93)
JL_(1992 on)_2	2	(04-08-93 / 18-09-93)
JL_(1992 on)_3	3	(18-09-93 / 26-10-93)
JL_(1992 on)_4	4	(27-10-93 / Dec-93)
JL_(1992 on)_5	5	(14-12-93 / 22-12-93)
JL_(1992 on)_6	6	(23-12-93 / 06-01-94)
JL_(1992 on)_7	7	(18-01-94 / 18-03-94)
JL_(1992 on)_8	8	(21-05-94 / 08-07-94)
JL_(1992 on)_9	9	⁰⁸ (03-07-94 / 02-09-94)
JL_(1992 on)_10	10	10/11/94 + (02-09-94 / 17-11-94)
JL_(1992 on)_11	11	(22-11-94 / 9-03-95)
JL_(1992 on)_12	12	(15-03-95 / 01-04-95)
JL_(1992 on)_13	13	(02-04-95 / 07-04-95)
JL_(1992 on)_14	14	(07-04-95 / 29-04-95)

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JL_(1992 on)_15	15	(29-04-95 / 17-05-95)
JL_(1992 on)_16	16	(18-05-95 / 18-12-95)
JL_(1992 on)_16A	16A	(08-11-95 / 11-11-95)
JL_(1992 on)_17	17	(21-12-95 / 19-06-96)
JL_(1992 on)_18	18	(19-06-96 / 03-08-96)
JL_(1992 on)_19	19	(23-09-96 / Mar 97)
JL_(1992 on)_20	20	(Mar 97 / Apr 97)
JL_(1992 on)_21	21	(16-04-97 / 12-06-97)
JL_(1992 on)_22	22	(12-06-97 / Oct 97)
JL_(1992 on)_23	23	(Oct 97 / Dec 97)
JL_(1992 on)_24	24	(Dec 97 / Jan 98)
JL_(1992 on)_25	25	(10-01-98 / 22-01-98)
JL_(1992 on)_26	26	(22-01-98 / 13-02-98)

TO BE CONTINUED

Jim Lane's Field Notebooks Index

(Revised Index of 11/5/2014)

<u>PDF Name</u>	<u>Book Label</u>	<u>Approx. Span of Dates</u>
JL_(1969-70)_1	'1969-70'	(Nov 70 / Jan 70)
JL_(1970-84)_1	1970-71	(6-12-70 / 17-2-71)
JL_(1970-84)_2	1971	(08-03-71 / 21/01/72)
JL_(1970-84)_3	1972/73	(24-01-72 / 15-02-73)
JL_(1970-84)_4	1973	(05-03-73 / 15-11-73)
JL_(1970-84)_5	1973-74	(12-04-73 / 11-06-74)
JL_(1970-84)_6	1973-74	(03-12-73 / 28-03-74)
JL_(1970-84)_7	1974-76	(03-05-74 / 24-10-75)
JL_(1970-84)_8	1974	(26-05-74 / 18-11-74)
JL_(1970-84)_9	1974-76	(28-08-74 / 02-10-76)
JL_(1970-84)_10	1974-76	(21-12-74 / 25-01-75)
JL_(1970-84)_11	1976	(25-10-76 / 27-11-76)
JL_(1970-84)_12	1977-78	(16-10-77 / 21-03-78)
JL_(1970-84)_13	1977-78	(24-10-77 / 19-04-78)
JL_(1970-84)_14	Oct 78-Apr 79	(06-10-78 / 14-04-79)
JL_(1970-84)_15	1979 (Apr-Sep)	(16-04-79 / 19-09-79)
JL_(1970-84)_16	1979-80	(26-09-79 / 23-05-80)
JL_(1970-84)_17	1980	(14-05-80 / 07-11-80)

NP 10

\$ 75



NOTE BOOK

No. 561

incl. fmg course 15/10/94

2/9/94 → 17/11/94

(17)

J. Lene

405 5100 (W)

0905 - - 0.11 m AHD

1026 hrs - 4 Lf eggs at 1.8 m.

1119 hrs - 1.16 m from top of square post
to water surface.

part of data from 17/11/94
- see last page (cover)

24 mwd 3803255 (2)

22 SEP 94

Grant picked me up in FJSD
at 7:35 hrs

Island Pt gauge read
— 0.15 m AHD at 0920 hrs.

Known Salinity bridge read
35.3 ppt when tested against
35.3 ppt "standard" at 0950
— c 300 m N of Island

Station	Time	Depth	Sal	Temp
0 →	0956	0.1	16.6	17.9
		0.2	20.7	18.3
		0.4	23.8	18.4
		0.6	24.2	18.5

③ 22 SEP 94 Cont'd

Harvey Estuary

Station	Time	Depth	Sal	Temp
\	>	0.8	25.2	18.9
		1.0	25.7	19.0
↓	↓	1.2	25.9	19.0
		1.4	25.9	19.0
1	1007	0.1 0.1	16.5 17.0	19.5
1	1009	0.2	23.0	20.5
2	1030	0.1	14.7	17.4
		0.2	14.7	17.5
		0.4	15.3	17.7
3	1037	0.1	16.1	17.6
↓	↓	0.2	16.1	17.6
		0.4	16.1	17.6
		0.6	16.3	17.5
		0.8	17.4	17.7
		1.0	20.4	18.4
		1.2		

22 SEP 94 Cont'd

Henry Estuary (4)

Sta	Time	Depth	Sal	Temp
4	1043	0.1	16.4	18.0
		0.2	16.4	17.9
		0.4	16.4	17.9
		0.6	16.4	17.8
		0.8	17.3	17.8
		1.0	21.8	18.6
4	1045	1.2	22.4	18.7
5	1049	0.1	16.3	18.2
		0.2	16.3	18.2
		0.4	16.3	18.2
		0.6	16.8	17.9
		0.8	22.3	18.7
5	1051	1.0	23.0	18.9
6	1055	0.1	17.0	19.5
		0.2	17.3	19.4
		0.4	17.0	19.4
6	1057	0.6	19.0	19.3

5

22/9/94 contd

Harvey Estuary
and River

Station	Time	Depth	Sal	Temp.
7	1101	0.1	16.4	20.6
↓	↓	0.2	16.4	20.6
7	1102	0.4	17.4	20.4

- Water flowing out of river
- 4 little by net at
delta going in stations channel

0.05	1116	0.1	0.6	18.9
	↓	0.2	0.6	18.9
	↓	0.4	0.6	18.9
	↓	0.5	0.6	18.9
	1117	0.5	0.6	18.9

1.0	1126	0.1	0.6	18.5
↓	↓	0.2	↓	↓
	1126	0.6	0.6	18.5

Harvey River

1st Class I PeODs during long run



Station	Time	Depth	Sal	Temp
0.5K	1129	0.1	0.6	18.9
↓	↓	↓	↓	↓
↓	1130	0.7	0.6	18.9
1.5K	1134	0.1	0.6	18.0 18.0
↓	↓	0.2	0.6	17.9
↓	↓	↓	↓	↓
1.5	1135	0.8	0.6	17.9
hole at 1.8K	1139	0.1	0.6	17.7
↓	↓	0.2	0.6	17.6
↓	↓	↓	↓	↓
↓	1140	1.7	0.6	17.6
2.0K	1142	0.1	0.6	17.7
↓	↓	0.2	0.6	17.6
↓	↓	0.4	0.6	17.5
↓	↓	↓	↓	↓
↓	1143	1.0	0.6	17.5

⑦

22/9/94 Contd

Harvey River

Site	Time	Depth	Feet	Temp
hole	1145	0.1	0.6	17.6
at		0.2		
2.1k		0.4		
		0.6		
		0.8		17.5
		1.0		
	1147	2.7	0.6	17.5
hole	1151	0.1	0.6	17.7
at		0.2	0.6	17.5
2.3k				
	1151	2.0	0.6	17.5
2.5k	1153	0.1	0.6	17.5
	1155	1.1	0.6	17.5
hole	1159	0.1	0.6	17.5
at				
2.8k		3.5	0.6	17.5

22/9/94 Contd

Harvey River

8

Stn	Time	Depth	Sal	Temp
3.0	1203	0.1	0.6	17.5
↓		0.2	↓	↓
	1204	0.9	0.6	17.5
hole	1209	0.1	0.6	17.6
at		0.2	0.6	17.5
3.3K		↓	↓	↓
	1210	2.3	0.6	17.5
4.0K	1217	0.1	0.6	18.2
↓	↓	↓	↓	↓
	1218	1.1	0.6	18.2
3.5K	1224	0.1	0.6	17.8
		↓	↓	↓
	1225	1.4	0.6	17.8
line tape	1236	0.1	0.6	17.6
at pos found		2.3	↓	↓
at 2.45 K	1237	1.6	0.6	17.6

⑨ 22/9/94 Contd

Harvey River

Station	Time	Depth	Sal	Temp
200 m South of Island Point	1316	0.1	18.2	22.5
		0.2	18.2	22.5

Island Pt gauge read — 0.17 m AHD
at 1332 hrs

Grant booked up to new
Mendham Traffic Barge and
picked me up (I drove).

We then went to Boundary
Island landing near jetty
at approx 2.40 pm.

22/9/94

Thurs 22 Sep 94 (10)
Cott.

Went to see of young

22/9/94

(well developed flight feathers,
many nearly to
flying stage)

Counted 22 (estimate c 35)

of small young (not closing
and in nest, some with
separators)

Some adults (10-20?) still
on eggs.

He walked back to boat
at 3pm.

[note there were many Silver Gulls in the
nesting area after food scraps]

NEW PAPER

Thurs 22 Sep 94 (10)
Carthage

Went back to goose of young
Cassins and observed

a group of ca 100 adult
geese with eggs and young.

= Counted ~~30~~³² large young
(well developed flight feathers,
many nearly to
flying stage)

= Counted 22 (estimate c 35)
of small young (most downy
and in nest, some with
feathers)

= Some adults (10-20?) still
on eggs.

We walked back to boat
at 3pm.

[note there were many Silver Gulls in the
nesting area after food scraps]

(11)

22/9/94 Contd

Grant dropped me at West end of
Creedy Valley at approx 3.10 pm and I
walked east.

in
extensive
marsh
area

[LiB, Pipit, WPC, Ch,]
[Willie Wagtail, Raven,

3.35 pm.

WPH - 2 + 2 + 2 (6)

Gr. Egret - 1 (1)

Sheld - 2 + 54 + 5 + 20 + 5 + 30 (116)

W. Sheld - 1 (1)

W. Peewee - 7 + ~~50~~ (54) + 2 + 40

Willow Swallow - tens

S. H. - 1 - (1)

(130) W. D. (some Peewee and ? some Gull?)

Total = 309 + birds -

total count of Creedy Lagoon.

- whole area only suitable deep
for ducks.

22/9/94
~~22/9/94~~
Contd.

(12)

(01/9)

Gauge read + 0.14 m AHD
at 4.10 pm — this water
must be trapped as estuary
level is definitely lower
(see Island Pt gauge readings
earlier in day)

(13)

Harvey Estuary

7/10/94

Grant & I stayed at Mendocino overnight
(up from Bsn). (6-7/10)

Island Pt gauge read -0.22 m
at 0910 hrs.

Took punt to south side of
island - then walked
to sampling stations Φ and Γ
on north side of island.

passed at 430 m N of island.

Station Φ : spore 0950 hrs

Took bottle samples at depths

10 cm, 30 cm and 50 cm.

10 cm — Salinity 23.2 ppt

30 cm — " 24.0 ppt

50 cm — 24.3 ppt

measured depth at this site was 54 cm.

(13) Harvey Estuary

7/10/94

Grant & I stayed at meadow overnight
(up from Bsn). (6-7/10)

Island Pt gravel road — 0.22 m
at 0910 hrs.

Took first to south side of
island — then walked
to sampling stations 0 and 1
on north side of island.

passed at 430 m N of island.
Station 0: approx 0950 hrs

Took bottle samples at depths
10 cm, 30 cm and 50 cm.

10 cm — Salinity 23.2 ppt

30 cm — " 24.0 ppt

50 cm — 24.3 ppt

↑
measured depth at this site was 54 cm.

Hervey Estuary Contd

7/10/96 ⁽¹⁴⁾ Contd

Station 2 — was along
R

ie depth = 0m

Station	Time	Depth	Sal	Temp
2	1013	0.10	13.6	16.9
2	1014	0.20	13.4	16.3
		0.3 0.4	14.2	16.5
3	1020	0.1	14.5	17.5
		0.2	14.4	16.5
		0.4	14.4	15.9
		0.6	14.4	15.6
		0.8	14.8	15.5
	1023	1.0	18.2	16.2
4	1027	0.1	14.3	17.8
		0.2	14.5	17.0

(15)

7/10/94 Contd.

Harvey Estuary Contd.

Stn	Time	Depth	Sal	Temp
3		0.4	14.7	16.4
		0.6	14.7	15.8
		0.8	15.7	16.1
4	1030	1.0	15.7	16.2
5	1034	0.1	14.1	18.2
		0.2	14.0	17.8
		0.4	15.4	16.7
		0.6	15.4	17.2
		0.8	16.0	17.2
5		0.9	16.0	17.3
6	1040	0.1	4.5	18.8
		0.2	15.5	18.5
		0.4	16.0	18.4
7	1048	0.1	4.4	20.8
	1049	0.2	11.0	20.2

7/10/94 contd

(16)

1 Immature Wb Sea Eagle on log

Stn	Time	Depth	Sal	Temp
0.0 k		0.1	0.6	17.7
		0.2	0.6	17.8
		0.4	0.6	17.5
	1103	0.6	0.6	17.1

1 pr Coyote with 4 class III
ducklings.

0.5 k	1111	0.1	0.6	17.1
		0.2	0.6	17.1
		0.4	0.6	17.0
		0.6	0.6	16.9
	1113	0.8	0.6	16.8

1 pr Black Swan with 6 medium
downy cygnets

~~1 pr~~ Cattle drinking at river on West
bank at approx 0.8 k.

(17) 7/10/94 Condd

Harvey River condd

Stn	Time	Depth	Set	Temp
1.0 K	1119	0.1	0.6	16.5
		0.2	0.6	16.5
		0.4	↓	↓
		0.6	0.6	16.5
1.5 K	1123	0.1	0.6	15.9
		↓	↓	↓
	1124	0.8	0.6	15.9
1.5 K	1126	0.1	0.6	15.8
Hole at		0.2	0.6	15.8
1.8 K		0.4	0.6	15.7
		↓	↓	↓
	1127	1.6	0.6	15.7
2.0 K	1143	0.1	0.6	15.9
		0.2	0.6	15.9
		0.4	↓	15.7
		↓	↓	↓
	1144	0.8	0.6	15.7

Harvey River Cont'd - 7/10/99 Cont'd

(18)

Stn | Time | Depth | Sal | Temp

Hole 1147 0.1 0.6 15.9

at 2.1K 0.2 15.9

0.4 15.9

0.6 15.8

↓ ↓ ↓

1148 2.8 0.6 15.8

Hole 1152 0.1 0.6 15.8

at ↓ ↓ ↓

2.3K 1152 1.8 0.6 15.8

2.5K 1202 0.1 0.6 15.9

↓ ↓ ↓

1203 1.5 0.6 15.9

Hole 1209 0.1 0.5 16.0

at ↓ ↓ ↓

2.8K 1211 2.8 0.5 16.0

3.0K 1213 0.1 0.5 16.1

↓ ↓ ↓

1214 1.0 0.5 16.1

(19) 7/10/94 Contd - Harvey River contd

Sta	Time	Depth	Sal	Temp
3.3K	1220	0.1	0.5	16.3
Hole at		↓	↓	↓
3.3K	1222	2.1	0.5	16.3
3.5K	1229	0.1	0.5	16.1
		↓	↓	↓
	1229	1.4	0.5	16.1

hole
at
4.3K

4.4K → 1.075 m from top of skel
Picket at 1246 hrs

hole
at ——— needs a peg.
4.4K

Harvey River Contd

7/10/94 Contd

(20)

3.3 km

2.2 km - more has reflected

7/10/94

2.2 km - more has reflected

at 1333 hrs - empty

1.8 km

- more has reflected

at 1335 hrs - empty

1336 hrs

groups of cormorants heading
upstream

River flowing out

200 m south of Island Pt at

1414 hrs - 0.10 - 14.7 ppt - 22.5 °C

0.15 - ditto - ditto

Harvey River Contd

7/10/94 Contd

(20)

3.3 km
~~2.7 km~~ - morm traps rechecked
at 1318 hrs - empty

2.8 km - morm traps rechecked
at 1323 hrs - empty

2.3 km - morm traps rechecked
at 1339 hrs - empty

1.8 km - morm traps checked
at 1335 hrs - empty

1336 hrs
Jays of cormorants heading
upstream
River flowing out

200 m south of Island Pt at
1414 hrs - 0.10 - 14.7 ppt - 22.5 °C
0.15 - ditto - ditto
n

Harvey R. Condit 7/10/96 Condit.

(21)

Tested Hemon against
"standard" of 35.3 ppt
and it read 35.4 ppt

(it had to read 35.3 ppt when
tested at this morning at
beginning of run).

Island Pt gauge at
1437 hrs read — 0.22 mAH

Drove up to new Mendocino
Traffic Bridge and launched
12' pontoon gear



Creevy Lagoon

7/10/94 Contd

(22)

Creevy Lagoon

↓
Dropped off at west entrance
by Grant (he went on to
do Pelicans on Boundary I.)
at 1525 hrs.

Walked east along N shore
of Creevy Lagoon

- 1535 hrs - little greenbird
heard in scrubland on left
(towards Lesnec Island)

- 1539 hrs - 4 WPHs flushed
from lagoon (clamps inward) in
scrubland on left.

1550 hrs [Shel - 23 feeding near S shore in 2 cm water (wetting)
- 5 " closer to centre (swimming)
PcB - 1 " " " "
Gpt - 3+4 " " " "]

(23) Creery lagoon contd - 7/10/84 contd

~~4~~ 1615 hrs - gage at E end
of Creery Meads reads
+ 0.14 m AHD. This
is water dyed in sample
and comes from drain (flowing).
~~cont~~ This is not the
true estuary (or Creery lagoon)
water level today. Tide
is actually very low -
see Island Pt gage
readings this morning.

- ~~I~~ I walked across
Creery lagoon from W to
E this afternoon (see above)
Water depth varied 10-20 cm
over 90% of lagoon.
There is continuous, flowing

(24)

Cocoy Lagoon Cont'd 481-05 7/10/84 Cont'd

Ruppia (flowers reddish
paler) over almost entire
bed of lagoon. Growing
in this is much of greenish
yellow filamentous alga.

Where it is thickest it traps
the gas bubbles it produces (O_2)
and this causes it to
rise to the surface & to
form a thick layer of algae
- hence the greenish yellow
appearance of the entire lagoon.

Survey was thorough - used
telescope & dredge. Fine
sunny day ($21^\circ C$ in Pond).
Light sea breeze.

(25)

7/10/94 Lind

Goats' visit to Tomorrow Island

- all penguins & chicks had moved from resting site to waters edge on east side of island (a distance of 300-400 m).
- there were 17 large young (fully feathered), 15 medium sized young (well developed scapulars - developing wing feathers), 2 small young (some scapulars, no wing feathers) - (so small that undoubtedly they would still be at rest site).
- there were ³² ~~34~~ adults with the 34 chicks and 28 adults standing at edge of

7/10/94 Contd. JP/03/F

26

is back 30 m further north.

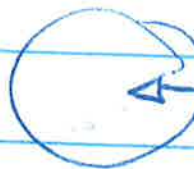
— The whole group of adults was originally sitting / standing between the water edge and the grassy / sedgey vegetation (i.e. on the beach). When Grent got within 600 m on foot (i.e. just got out of boat at landing site (jetty) and walked to top of rise) ~~at~~ the birds saw him and travelled 8-10 m to the water's edge. The smaller chicks sat down, some of the larger chicks stood flapping their wings. — Grent walked to resting site and inspected it —

(27)

7/10/94 (cont'd) YP/01/F

he found 2 ~~different~~ distinct
resting sites separated by
strip of 3-5 m width of bare ground

 13 rest scrapes

 43 rest
scrapes

⇒ estimate at least 56
resting attempts.

- area of 13 scrapes was
"older" and there were
no freshly dead carcasses (can't
recall any carcasses there).

- However, at site of 43 scrapes
there were 6 fresh (≤ 1 week)
dead carcasses all less than
3 weeks old (completely strong)

7/10/94 cont'd

HP/00/11

28

brk in & around the scyres
and just outside the scyres
area. Also one punctured
egg in scyres; one cracked
eggs

— no obvious people footprints
in nest area.

Conclusion: the colony has
been disturbed off the
nest site prematurely — some
of the chicks died others
have survived. All nesting
effort has now ceased.
There were no brightly coloured
adults evident.

W - School holidays started Thursday
29th Sept.

(29)

7/10/94 Center VP/05/5

- Just saw 1 boat with people at jetty when he arrived

- As he left, the first boat had gone but a second boat had arrived and 2 ♂ were wading to seaward edge of island towards the west end were 50 m from the jetty.

14/10/94

(30)

Island Pt gauge at 0900 hrs
on 14/10/94

read — 0.09 m AHD

(strong S wind)

Vosce Estuary floodgates at
1715 hrs on 14/10/94

read + 0.43 m AHD (± 1 cm)

Boats in

Water level higher (just) on
ocean side

Womney Estuary floodgates at
1720 hrs ~~on~~ on 14/10/94

read + 0.25 m AHD (± 1 cm)

Boats in

Water level significantly higher
on ocean side

95/10/94

32

Jan Bus to London "lecture
Theatre" (classroom)

- humorous cartoon
- " quote
- story of frog books from
kids books to France of Australia
- overheads for talk.
- Taxonomy - described evolution
of names for organisms
(Linnaeus 1758)
- binomial nomenclature
- hierarchical classification
- Darwin 1859
- evolv. from common ancestors.

Evolution

described origin of amphibians
frogs.

(33)

15/10/84 Contd.

frogs prepared 240 audio cassettes

overheads in handy plastic sleeves
for ease of handling

People asked meaning of terms
such as "Anura"

Stressed use of cello for
identification

Played cassette of frog calls

described the frog fauna of
WA and of SW (no. of
spp., genus, etc)

Slides of SW species

15/10/94 (34) contd.

Good photos well received
by audience.

— Grant said a bit about
leech — eg. cells, distribution,
status

→ Lunch + tea morning tea in
forest provided by Friends
of Insect Forest

set up 5 pit traps +
drift boxes in forest

← Start

1155 am

Another talk in
classroom by Grant Wessell-Johnson

— books to use

— Morphology of frogs and
how to identify them

(35)

15/10/94 Contd

- description of different reproductive modes (10) of Australian frogs.

Forest of Tuart Forest

David Rowe - retired forester
of 40 yrs experience

- Red, Grey, Shal and Mars
nest in tuart trees
- predated on ground by Ravens,
Silver Gulls (in forest!), Kookaburras
- nest in those areas of the
forest where there are suitable trees.
- early-mid September is best
time to see them dropping
out of trees.

O'heads also in
handout form

15/10/94

36

- seasonal nature of calling
(different frogs at different
times of year
and types of calls)

Tadpoles

- descriptive
morphology

- overheard

A Tadpole
A boy will be published very
soon

Finished at 1230 hrs. - 35 mins was
plenty

frog diet - depend a lot on
their eyesight.

lace talk with interesting
anecdotes

(37)

particularly burrowing frogs

Frogs are a major part of the diet of birds of prey



Mike Tyler has suggested that the wetting agent of "Roundup" has been responsible for decline of frog populations.



Question of diseases in frogs also raised from audience.



pesticide use & impact is controversial



(37)

particularly burrowing frogs

Frogs are a major part of the
diet of birds of prey



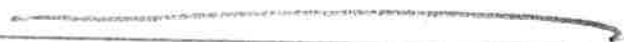
Mike Tyler has suggested that
the wetting agent of "Roundup"
has been responsible for decline
of frog populations.



Question of diseases in frogs
also raised from audience.



prohibited use & aspects is
controversial



38
Set 15/10/94 contd.

In creek at end of Bonice Rd (W off Vlam Rd) (this is the type locality of *Levinseni alba*) we heard *G. alba*

C. jayugensis, *C. glauca* and *L. edelensis*.

The *G. alba* & *C. glauca* were caught.

Finished at 8.15 pm.

Davis Rd (Widdeliffe Winding Point N° 4?) — heard *G. alba*, *C. glauca*, *C. jayugensis*, *L. edelensis*, *Hyasmodon domoalis*.

Finished 8.45 pm.

39

9

Grant, Jim + Craig

8

John + Domingo

6

Dennis + Sebastian

6

was Tom Tenetk Allen

7

Margaret, Jim, Ken

5/36

7.2

$\bar{x} = 7.3$ range = 6-9

(39)

9

Grant, Jim & Craig

8

John & Donny

6

Debbie & Sebastian

6

Miss Jane Terrell

7

Angela, Tim, Len

5/36

7.2

$\bar{x} = 7.3$ range = 6-9

43

Remove swan nest ^{in egg} for display
Tolson AWS

44

Tolent Pt gauge read
(estimated) — 0.15 m AHD
at 1620 hrs on 16/10/94

(45)

Harvey Estuary

Th
Start 3/11/94

Current pushed me up in E350 at 0730 hrs.

Island Pt gauge read — 0.13 m
AND at 0857 hrs on
3/11/94

(July '94 sample)

Standard confirmed to be
39.016 ppt by
WA Chemistry Centre.

May '94 sample (previously
considered to be 35.3 ppt)
read 35.8 ppt on Harmon

June '94 sample (WA Chem Centre
says is 39.016 ppt) read
35.7 ppt

We were unable to adjust to 39.016 ppt 46
 so instead adjusted to 35.3 ppt using the July 94 sample

Stn	Time	Depth	Sal	Temp
-----	------	-------	-----	------

June '94 sample was then
 used to recalibrate salinometer
 to ~~39.0~~ 35.3 ppt

1	1023	0.1	27.7	21.4
---	------	-----	------	------

↓	1024	0.2	27.7	21.4
---	------	-----	------	------

○	1029	0.1	28.0	20.8
---	------	-----	------	------

}	}	0.2	28.0	20.8
---	---	-----	------	------

}	}	0.4	28.0	20.8
---	---	-----	------	------

}	}	0.6	28.1	20.7
---	---	-----	------	------

2	1050	0.1	27.5	20.8
---	------	----------------	------	------

}	}	0.2	27.5	20.8
---	---	-----	------	------

}	}	0.4	27.5	20.8
---	---	-----	------	------

}	}	0.6	27.5	20.8
---	---	-----	------	------

(47)

3/16/94 Cont'd

Harvey Estuary

Sta	Time	Depth	Sal	Temp
3	1058	0.1	27.4	20.6
}	}	0.2	27.4	20.6
		0.4	27.4	20.6
		0.6	27.4	20.5
		0.8	27.6	20.5
3	1100	1.0	27.8	20.5
4	1104	0.1	27.5	20.7
}	}	0.2	}	20.7
		↓	↓	20.7
		1.0	27.5	20.5
4	1106	1.2	27.8	20.5
5	1110	0.1	26.2	20.6
}	}	0.2	26.2	20.6
		0.4	26.2	20.6
		0.6	26.2	20.6
		0.8	26.5	20.6
5	1112	1.0	27.2	20.8

3/11/94 Contd

Harvey Estuary
& Harvey River

(48)

Str	Time	Depth	Sal	Temp
6	1117	0.1 0.1	25.8	20.8
}	}	0.2	"	"
}	}	0.4	"	"
6	1119	0.6	"	21.5
7	1123	0.1	23.3	20.8
}	}	0.2	"	"
7		0.4	23.3	"
0.05K	1133	0.1	1.7	22.8
}	}	0.2	"	"
}	}	0.4	"	22.7
	1136	0.5	1.8	22.6
0.5K	1143	0.1	0.9	23.2
}	}	0.2	1.0	23.0
}	}	0.4	1.2	22.9
}	}	0.6	1.5-5 v	21.9 v
0.5K	1147	0.7 0.7	20.5 v	20.8 v

(49) 3/11/94 Contd

~~Harvey~~ Harvey River.

Stn	Time	Depth	Sal	Temp
1.0 Km	1153	0.1	0.7	22.8
}	}	0.2	"	"
		0.4	"	"
		0.5	"	"
↓	1154			

- *Heliconia* now flowering along banks

- We have been pushing 100-200 ducks (mainly Gyrls) in front of us for past 1.5 hours

1.5 K	1200	0.1	0.7	22.6
}	}	0.2	"	22.5
		0.4	"	"
		0.6	"	"
		0.8	"	"
↓	1201			

3/11/44 Could

Harvey ~~Bas~~ River

80

Stn	Time	Depth	Sal	Temp
Hole at 1.8 K.	1207	0.1	0.7	22.0
		0.2	"	"
		0.4	0.7	21.9
		0.6	"	"
		0.8	"	"
		1.0	"	21.8
		1.2	"	"
		1.4	"	21.7
	1209	1.5	"	"

Marks on bank indicate water level was 0.3m (30cm) higher than now at the last high tide (last night?)

2.0 K	1213	0.1	0.7	22.0
		0.2	"	"
		0.4	"	21.9

(51) 3/11/44 Contd.

Harvey River

Stn	Time	Depth	Sal	Temp
2.0 k	1214	0.6	0.7	21.9
		0.7	0.7	21.8
Hole at	1217	0.1	0.7	22.0
2.1 k		0.2	"	"
		0.4	"	21.9
		0.6	"	21.8
		0.8	"	"
		1.0	"	"
		1.2	"	21.7
		1.4	"	"
		1.6	"	"
		1.8	"	21.6
		2.0	"	"
		2.2	"	"
		2.4	"	"
▽	1220	2.6	"	"

3/11/94 Cont'd

Harvey River

52

Str	Time	Depth	Sal	Temp
Hole at 2.5K	1223	0.1	0.7	22.0
		0.2	0.7	22.4
		0.4	0.7	22.0
		0.6	"	"
		0.8	"	21.9
		1.0	"	"
		1.2	"	"
		1.4	"	21.8
		1.6	"	"
		1.8	"	21.6
	1225	2.0	"	"

2.5K	1228	0.1	0.7	21.8
		0.2	"	"
		0.4	"	21.7
		0.6	"	"
		0.8	"	"
		1.0	"	"

(53) 3/11/94

Harvey River

Sta	Time	Depth	Set	Temp
2.5K		1.2m	0.7	21.7
}		1.4	"	"
		1.5	"	"
	1230			
2.8K	1234	0.1	0.7	21.7
}		0.2	"	21.6
		0.4	"	"
		0.6	"	"
		0.8	"	21.5
		1.0	"	"
		1.2	"	"
		1.3	"	"
	1237	2.3	0.7	21.5
3.0K	1238	0.1	0.7	22.0
}		0.2	0.7	21.8
		0.4	"	21.5
		0.6	"	"
		0.8	"	"
		1.0	0.7	21.5
	1240			

3/4/94 contd

Harvey River

(54)

Stn	Time	Depth	Sal	Temp
Hole	1244	0.1	0.7	21.5
at		0.2	↓	↓
3.3 K		↓	↓	↓
		1.0	0.7	21.2
		1.2	"	21.1
		↓	↓	↓
		2.1	0.7	21.1
3.5 K	1249	0.1	0.7	21.5
		0.2	0.7	21.4
		0.4	"	21.3
		0.6	"	"
		0.8	"	"
		1.0	"	21.2
		1.2	"	"
	1251	1.3	"	"

(55) (55)

3/11/94 Contd

Harvey River

Stn	Time	Depth	Sal	Temp
4.0K	1259	0.1	0.7	21.7
		0.2	"	21.6
		0.4	"	21.5
		0.6		
		?		
		1.6		21.5
	1300	1.8	0.7	21.4

1182
~~1202~~ mm from top of
 square section post
 to water surface
 at 1306 hr

* Start return trip downstream *

1182
 1202
 4.0K



(in deep holes only) (56)
Did Dissolved O_2 readings on way downstream

At Hole at 4.34, ~~the~~
at the surface, the
Hemion Temp was $22.2^{\circ}C$
Hemion Salinity was $0.7 ppt$

3/11/94

Hemion Temp was $18.0^{\circ}C$
Hemion Salinity was $0.7 ppt$

Yerbel Temp was $18.0^{\circ}C$
D.O. was $10.9 mg/l$

NOTE: These were the first dissolved
readings taken in this study

(in deep holes only) (56)
Did Dissolved O_2 readings on way downstream

At Hole at 4.3K, ~~at~~
at the surface, the
Hemm Temp was $22.2^{\circ}C$
Hemm Salinity was 0.7 ppt
Yestel Model 609 Dissolved O_2 Meter
Temp was $18.0^{\circ}C$
D.O. was 10.9 mg/L

At depth of 1.5 m (bottom)
Hemm Temp was $22.2^{\circ}C$
Hemm Salinity was 0.7 ppt
Yestel Temp was $18.0^{\circ}C$
D.O. was 10.9 mg/L

NB: These were the first dissolved
readings taken in this study

(57) 3/11/94 Contd.

Harvey River

mg/L

D.O. meter

Stn	Time	Depth	D.O.	Temp
Hole	1355	2.5m	9.07	18.1 °C
at		1.2m	9.06	18.0
2.8 W		0.2m	9.13	18.1 °C

Stn	Time	Depth	D.O. mg/L	%	Temp
2.3 K	1415	1.8	9.20	98.3	18.4
Hole	↓	0.9	9.12	97.7	18.4
	1419	0.2	9.20	98.0	18.5
2.1 K	1423	2.7m	9.18	98.0	18.3
Hole	↓	1.35m	9.11	97.8	18.4
	1428	0.2	9.23	99.1	18.7
1.8 K	1433	1.6	9.28	99.2	18.3
Hole	↓	0.8	9.22	98.9	18.4
	1437	0.2	9.24	99.5	18.8

These are all bottom, mid
or top readings

Harvey Estuary

3/11/94 (58) Contd.

200 m Sth of Island Pt

Time	Depth	Sal	Temp
1540	0.1	25.1	26.4
1541	0.2	25.1	26.4

Hemmon temp

Hemmon retested against standard
and gave read 35.3 gk.

Gauge at Island Pt read — 0.18m
AOD at 3.51 pm on 3/11/94

Medium strength SW wind
blowing. Water still flowing
N past Island Pt.

3/11/94 Contd

Peel Inlet (Boundary I.)

(57) (59) Drove to new Mandurah Traffic bridge
and the re-lanched 12' punt. Then
Grant & I went to
Boundary Island

42 - 41
41
1705 hr - 58 young in

group on SE shoreline of
Boundary Island. They
started moving when we were
300 m from them.

Also a group of ⁶ 40 young
with 13 "adults" on ESE
shoreline.

- No pelicans up on island
- No indication of nesting

All young were large and
had full cover of body &

3/11/94 Contd

Peel Inlet (60)
(Boundary Island)

flyed feathers.

Most had
bills $\frac{1}{2}$ - $\frac{3}{4}$ full size - some
close to full size, some
only $\frac{1}{3}$ size.

possible

Most No of young of the year
is ~~70~~ 70

More number is 45.

Most are flying

considered
probably
best
estimate

Back to boat at 1735 hrs.

Back at vessel & loaded boat
onto it at ... hrs.

Arrived back at Collesloe
at 7pm.



⑥ 3/11/94 Contd

$$1 \text{ litre} = 10 \text{ cm} \times 10 \text{ cm} \times 10 \text{ cm}$$

$$\Rightarrow 1 \text{ kilolitre} = 1 \text{ m}^3$$

~~to~~

$$\Rightarrow \frac{200,000}{20,000} \text{ kilolitres} = \frac{200,000}{20,000} \text{ m}^3$$

$$= (20 \times 1 \times \frac{10000}{1000}) \text{ m}^3$$

$$= (20 \times 0.4 \times \frac{25000}{1000}) \text{ m}^3$$

$$= 20 \text{ m} \times 0.4 \text{ m} \times \frac{25 \text{ km}}{1000 \text{ km}}$$

width of
river

depth of
lake
required

length
of river
required -
resulting

Refer to memorandum
of 4/11/94, page 7

At 1 km/hr it would take 25
hrs for the water to move there.

3/11/84 contd

(62)

At 0.1 km per hr it would
take 250 hrs (10 days 10 hrs)
for the water to move there

At 0.1 km per hr and
lenses of only 20 cm it
would take 500 hrs
(20 days 20 hrs) for the
water to move there.

Environmental Flows (Commonwealth)
funding?
WAWA funding?

↑

Calculations above relate to newspaper
article saying up to 300,000 kils
litres of water would be released
from Nth Dandenong dam over summer
to maintain flow in Harvey River.

(63)

7/11/94

SW Dept. page
Run

Left home at 0810 hrs to pick up
Dad. Used NMK's Toyota Landcruiser

Lake Davies (Hamilton Bay)

at 1600 hrs on Mon 7/11/94

- Couldn't filter water sample
due to yellow-green algal
bloom in water column

- Litoria mumei and
Litoria adalensis heard
calling along S. shore

- 1 PaBD, 1 Anst, 1 Coot seen

Lake Mangup

8/4/94

1455 hrs

15+ Coot

5+ Shelduck

6 PaBD

8/11/94

~~7/11/94~~ Contd

(64)

Leba Manging Const

13+ small grebe

1 Great Crested Grebe

1 ♂ Mute Duck

3 eggs in 50 cm of
water - collected - appear
to be duck eggs

The above bird const are a partial
const - from one point at water
edge (ie at gauge side) with 8x35
binoculars

Left at 1515 hrs (we were
there approx 20 mins)

8/16/94 Cont'd

(65)

also

1 flightless (moulting)

Longing Swamp - 1750 hrs.

Shelduck - 1 less, including
low less flightless (moulting)

Great Egret - 3

Pt BD - several seen

Little Cormorant - heard

Black-bellied Plover - 2

It took 21 mins to walk in
from near road.

Water edge marked by 4
sticks stuck in "beach" 112 paces
south along shoreline from stick
picket.

50 cm from top of stick picket
to ground level. Estimate that
water level is a further 8 cm lower

~~8/11/94~~ 8/11/94 Contd

depth dug by
predator to nest (66)

River was not flowing

Left ^{lake edge} at 1807 hrs.

Walked back along track to vehicle (near road).

~~Forwards~~ Checked out the three predicted tortoise nests I found along the track on the way in

(1) 286 m - 12 cm deep hole

(2) 403 m - 12 cm deep (x ca 10 cm wide at top)
35 x 23 mm

7 distinct eggs (remains)

(3) 941 m - 13 cm deep (x 15 cm wide at top)

more open on one side

7 distinct eggs (remains)

(32 x 23 mm, 34 x 21 mm)

inner
Paced distance from edge of
vign of Owingup
Swamp

Old Horse tracks along track into Owingup Swamp.

(67) 9/11/94

Lebe Powell - 8/11/94

at 0840 hrs - flock of
88 (counted) flightless (moulting)
Shelducks flushed from marsh
shore. Other ducks
scattered over lake

- there was a bloom
of green algal "pebbles"
through the water column.

Photos (64 ASA or 100 ASA?)

on road from Albion to Lower King
- at 0920 hrs - of cattle
in swamp with dead pygmybats

9/11/94 Contd

(68)

Lebe Pleasant View — 1050 hrs

Two ~~three~~ species of frogs heard

— *L. adalensis* numerous and

some calling from Lebe

— short, high pitched, repetitive
rate of
squeal (3 per 2 secs) or

↑ "per rattler" call.

Pseudophryne guentheri ??

Also heard *Swainsonia* calling from Lebe
and saw 2 beetles in water where
I sampled.

Mettler Lebe 1150 hrs.

L. adalensis heard in Lebe

Swainsonia " " "

Many orange & black beetles
descended on my hat (straw)

(69) 9/11/94 Contd

Yellowing Swamp - 1330 hrs.

3 Masked Duck seen.

Water level clear + brown. Green
algae growing on submerged
tree trunks (complete covering on
some trees at least)

Some *E. occidentalis* are dead.

The remainder show varying degrees
of unhealthiness. Only the
trees up above "HWM" are
really healthy. Canopy
of sick trees is very sparse.

on Chillingworth Rd, approx 5 km
E of Chester Pass Rd.
Plantegant N.R. ↑ 25386

c 1500 - 1515 hrs

82 BW Skit, 155' Rn Arrow

1 Shet, 1 Mask Duck,

9/11/84 Costa

(70)

9 unident. dnr, 12 Sharp-t Sandpiper
c 10 Banded Shllr

1 Green-backed

Large numbers of small (c 1 mm
long), red, "Gyrodactylus-like"
conspecifics in water column. Many
joined to similar sized brown
conspecifics, presumably mating.

~~Water~~ Pelton (1 m) is g below water
and on slight angle.

Agrees to have been much ^{recent} death of
Meteorus and scaphoid in
lower area of lake.

(71) 10/11/94

Lake Kinneret 0905 hrs.

- one flock of approx 2000
Bast took off and flew
around before settling again - fantastic!
- Gray Duck
- Swans - 93 counted.
- PeBd
- Shel
- Silb - 5 counted.

Overall - several thousand unidentified
ducks - a mix of GYL, PeBd
and Shel.

Depth 0.35 m at 0920 hrs.

Water sample contained large numbers of

41

72

small (≤ 1 mm), "Dychnia-like"
conspicuous, a small proportion
joined together in pairs (mating?)

Warming Swamp

Depth ~ 0.14 m at 1025 hrs.

A few ^{more} weeks of various types growing
on bed of lake along Kengaro
trails through fine sedge. Inspection
for buffer width & attributes & weed
invasion.

Trees (*E. occidentalis*?) continuing
to establish on bed (outer) of
lake.

(73)

10/11/94 contd

Yarrow Swamp - 1135 hrs

- 2 frogs heard (L. moorei and L. eschschersii)

- Marsh Heron - 2 over swamp.

One came up from middle and met other then later landed in much same place

- ~~Chlorophanes~~ Reed Warbler

2 two heard

- Swan - one call heard

- Purple Swamphen - calls heard

- also heard low, explosive (from full cheeks) single calls reminiscent of imitations Roger Penock does. Was this a little Bittern??

(74)

1235 hrs -
Lebe Muri 1220 hrs

Many rafts of ducks scattered
across lake. The two
closest comprised 150 and
200 Shelduck respectively - quite
probably moulting.

- 45 swans in bay to north.
- 5 Swans counted + 21 to south
- One group of 13 stiff-necked ducks
seen.
- 5 WFTW flew past.
- much Ruppia pollen on shoreline.
- Depth gauge read 0.60m
at 1230 hrs.

- PATD - 2 definitely Identified

Water of lake beautifully clear with
continuous carpet of bright green
"Ruppia-like" and "Chara-like" plant growth.

(77)

10/11/94 Contd.

Lake Unnap : 1308 hrs - 1400 hrs

Great Egret - 1

Little Blue Cormorant - 3

Common Reed Warbler heard
in *Baccharis*

Silver Gull - 1

W P Heron - 1

Sterna - 4

Unidentified waterbirds on water - 7

" Lake Unnap Lake " (Byggnad Brook ↑ 18239)
1500 - 1515 hrs.

Vertical hole 7 m East of gage

is 85 cm deep and water table

is 40 cm deep (i.e. from lake bed)

It is approx 6 cm diameter

Vertical hole 1.3 m east of gage
is 1.00 m deep and water
level is 37 cm below bed
of lake (depressed water stage)
It is uniform 7 cm diameter

Shrub hole

is 0.85 m deep and 5 cm diameter
and water level is 40 cm below
surface.

There are many of these holes
in the lake bed. Also
found the remains of a Cherax.

(79)

Lake Towering 1530 hrs.
- 1615 hrs.

Gray Teal - 1 pair with 6 Class I
ducklings - hundreds plus

Coot - hundreds plus

Sabrewing - ten plus

Shelduck - some

Black Duck - some

3.07 m at 3.55 hrs.

Mixing themselves - Blue in
~~front~~ front, brown behind
Quite a few, but not
the huge numbers seen one
previous November.

15/11/94

(80)

Pool in channel of creek leading into Toobur
Grey Teal with 5 Class I (small)
ducklings.

Dalbinning Lake

1353 hrs — depth gauge
read 0.57 m

Walked entire perimeter in
clockwise direction. Saw

BE Native Hen — 2

Rufous Duck — c 12

Grey Teal — c 450

P. B. D. — low tens ??

~~Mane~~ Duck — " " ??

One large Grey Kangaroo in line
Casuarina at edge of lake

+ 1 WF Heron

83

Virtually all of the trees
of *Platanus* (*Casuarina*
+ *Macleodii*) are dead

Around the perimeter are
many ^{live} ~~live~~ *Casuarina*, most
are young.

Back at vehicle at 2.30 pm

Forrestdale Lake

from access site on WSW side
of lake - 5.30 → 5.40 pm

- thousands of waterfowl including
Grey Teal, *Pied Bill*, *Shelduck*, *Coot*, *Swan*,
Pied Shrike

- 1 LP Cormorant
- 1 Whistling Bitterhead.

15/11/94 84 Control

from access site on NNW side of
Lake - 5.40 -> 5.50 pm

- the thousands of waterfowl
also includes Shoveler, Pintail, Duck,
cygnets.

- also some small grebe
and 1 Purple Swamphen seen
running v. fast.

- from viewing point on N side
of lake - 5.50 - 5.55 pm

- 4 White-necked Herons

- seven nest around in dead
Typha.

85

Harvey Estuary

17/11/94

Left Collector 7.40 am with
GBP & Toby in F350

Island Pt. Gauge read — 0.09 m
AND at 0910 hrs.

Waded boat north from
Island Pt. — saw 3 Blue
Marine Crabs in shallows
incl. 1 ♂ and 1 ♀

Calibrated on July '94. Sample (Chen Culture
says is 39.016 ppt) to 35.3 ppt (see 3/11
for expln)

Stn	Time	Depth	Sal	Temp
0	0949	0.1	30.2	24.5
}	}	0.3	"	"
		0.4	"	24.4

17/11/94 contd

Harvey Estuary

86

Stn	Time	Depth	Sal	Temp
7	}	0.6	32.7	23.4
		0.8	32.9	"
		1.0	33.0	"
0	0952	1.1 1.1	33.0	23.5

1	0956	0.1	30.3	26.6
---	------	-----	------	------

1	0958	0.2	30.3	26.5
---	------	-----	------	------

Saw 4 more Blue Marine Crabs
in shallows as expected Station 0

2	}	0.1	31.1	25.3
		0.2	"	26.3
		0.4	"	"

Saw 1 crab between Ford and

Stn 2 and another between 2 and

Stn 3. Much filamentous algae

south of Ford. Green eel

blow in water column at Stn 3.

(87)

17/11/94 Contd

Harvey Estuary

Stn	Time	Depth	Sal	Temp
3	1017	0.1	30.0	24.1
		0.2	"	"
		0.4	30.1	"
		0.6	30.2	"
		0.8	31.1	24.2
		1.0	"	"
3	1018	1.1	"	"

Much filamentous algae on anchor
when pulled up at Stn 3

4	1023	0.1	29.1	24.2
		0.2	"	"
		0.4	"	"
		0.6	29.9	24.0
		0.8	32.0	24.2
		1.0	32.4	24.3
4	1025	1.2	32.4	24.3

~~17/11/94~~ 17/11/94 Contd

Herring Estuary

88

Stn	Time	Depth	Sal	Temp
5	1030	0.1	29.1	24.0
		0.2	"	"
		0.4	"	"
		0.6	30.2	24.2
		0.8	31.2	24.9
	1033	1.0	32.3	25.0
6	1037	0.1	28.4	24.6
		0.2	"	"
		0.4	"	"
6	1038	0.6	29.2	25.7

Saw 5 crabs between Stations
6 and 7. (most v. close
to Stn 7)

7	1044	0.1	27.5	25.6
		0.2	"	"
7	1045	0.4	27.6	25.9

(89)

17/11/94 Contd

Harvey River
~~Estuary~~

Stn	Time	Depth	Sal	Temp
0.0 K		0.1	1.8	26.6
		0.2	1.8	26.6
		0.4	2.3	"
	1058	0.6	18 ppt vv	25.6

1 Malta, 1 machine WbSE,
1 Whiskly kite

c 250 Grey Tied + c 20 PBSD

0.5 K	1105	0.1	1.0	27.1
		0.2	1.0	26.5 v
		0.4	"	26.5 v
		0.6	9.5 vv	25.5 v
		0.8	25.0	25.0
		0.9	26.2	24.9

1.0 K	1114	0.1	0.7	27.1
		0.2	0.7	27.0 v

17/11/94 Contd

Harvey River

(90)

Stn	Time	Depth	Sal	Temp
↓	↓	0.4	1.2 v	26.3 v
1.0K	1116	0.6	3.0 3.5 v	25.7 v

When reached 1.5K station there were c 400 Grey Tail, c 30 PeBD

2 Darter, some LPC and unidentified Cormorant.

Fish had been jumping in river behind (mullett?)

1.5K	1124	0.1	0.7	26.3
		0.2	"	26.0
		0.4	0.7	25.8
		0.6	1.6 v	25.6
	1127	0.8	13.8 v	25.2

17/11/94 Contd

Heavy River

(90)

Stn	Time	Depth	Sal	Temp
?	?	0.4	1.2 v	26.3 v
1.0K	1116	0.6	3.5 v	25.7 v
			3.0	

When reached 1.5K station there were c 400 Greyfish, c 30 PeBD

2 Darter, some LPC and unidentified Cormorant.

Fish had been jumping in river behind (mullet?)

1.5K	1124	0.1	0.7	26.3
		0.2	"	26.0
		0.4	0.7	25.8
		0.6	1.6 v	25.6
	1127	0.8	13.8 v	25.2

(91)

17/11/94 Contd

Harvey River

Stn	Time	Depth	Sal	Temp
Hole at 1.8 K	1132	0.1	0.6	25.4
		0.2	"	"
		0.4	"	"
		0.6	"	"
		0.8	"	"
		1.0	"	"
		1.2	"	25.3
		1.4	"	"
	1134	1.6	"	"
2.04	1137	0.1	0.6	25.3
		↓	↓	↓
	1138	0.7	0.6	25.3
2.14	1140	0.1	0.6	25.3
(Hole at)		0.2	"	"
		0.4	"	25.2
		↓	↓	↓
		1.8	0.6	25.2

17/11/94 Contd

Hemery River

(92)

Stn	Time	Depth	Sal	Temp
2.1K	1147	2.0	0.6	25.1 25.2
		2.2	0.7	"
		2.4	"	"
		2.6	10 ppt vv	24.1
2.1K	1147	2.8	19.1 v	23.7
Hole 25	1151	0.1	0.6	25.3
2.3K	1155	0.2	"	25.1
		0.8	0.6	25.1
2.5K	1157	0.1	0.6	25.0
2.8K	1205	0.6	0.6	25.0
		0.8	0.6	24.9
		1.0	0.6	24.9
		0.1	0.6	24.9
2.8K	1205	0.2	0.6	24.8

(93) 7/11/94 Contd

Henny River

Sta	Time	Depth	Sal	Temp
2.8 km (hole)	1209	0.6	0.6	24.7
		↓	↓	↓
		↓	↓	↓
		↓	↓	↓
		↓	↓	↓
3.0 km		0.1	2.0 0.6	24.9
↓	1213	0.2	"	24.8
		0.4	"	24.6
		↓	"	"
		↓	"	"
		1.0	"	"
3.3 km	1216	0.1	0.6	24.6
(hole)	↓	↓	↓	↓
		0.6	0.6	24.6
		0.8	"	24.6
		1.0	"	24.6
		1.2	"	24.6
		1.4	"	"
		1.6	"	24.3
		1.8	"	"

17/11/94 Contd

Herring River

(94)

Stn	Time	Depth	Sal	Temp
↓	↓	2.0	0.6	24.3
3.34	1219	2.1	0.6	24.3
3.54	1221	0.1	0.6	24.6
}	}	0.2	"	"
		0.4	"	24.5
		0.6	"	24.4
		0.8	"	24.3
		2.0	↓	↓
↓	1223	1.4	0.6	24.3
4.04	1231	0.1	0.6	24.8
}	}	0.2	↓	↓
		↓	↓	24.8
		1.6	0.6	24.7
↓	1232	1.8	0.6	24.7

Several Juncus + spurge 20 March
seen.

(95)

17/11/94 Contd

Harvey River

Synon post - top to
water surface = 1.130 m
at 1238 hrs.

WTW meter (Oxy 86)
Dissolved Oxygen readings

Stn	Time	Depth	DO		Temp
			mg/L	%	
Hill	1251	0.1	6.1	73	23.3
at					
3.3K	1253	1.0 m	5.9	69	23.0



Lathum moor in E. direction
overlying station 3.3K (from S bank)
It was 2.2 ~~4~~ m above water surface

2.8	1302	0.1	6.1	73	23.6
	1304	1.0 m	6.0	72	23.4

17/11/94 Contd

Harry River

96

Stn	Time	Depth	D.O.		Temp
			mg/l	%	
2.3 ^K	1309	0.1	6.7	80%	23.8
hole		1.0	6.6	77%	23.8
2.1 ^K	1314	0.1	6.8	82%	24.0
hole		1.0 m	6.8	82%	24.1

17/11/94

→ ~~14.5~~ 14.5 v temp 25.3°C

1.0 ^K	1332	0.1	8.0	104%	25.7
		0.2	7.3	89%	25.5
		0.53	7.4	91%	25.5

→ (sel 2.5 v Temp 26.3%)

17/11/94 Contd

Henry River

(96)

Stn	Time	Depth	D.O.		Temp
			mg/l	%	
2.3 ^K	1309	0.1	6.7	80%	23.8
hole		1.0	6.6	77%	23.8
2.1 ^K	1314	0.1	6.8	82%	24.0
hole		1.0 m	6.8	82%	24.1
1.8 ^K	1320	0.1	7.3	87%	24.3
hole		1.0 m	7.1	84%	24.1
(sel 0.7 ppt Temp 25.5°C)					
1.5 ^K	1326	0.1	7.7	94%	25.1
		0.8 m	5.2	63%	24.2
		1.0 m	4.8	60%	24.2
(sel 14.5 v Temp 25.3°C)					
1.0 ^K	1332	0.1	8.0	104%	25.7
		0.2	7.3	89%	25.5
		0.53	7.4	91%	25.5
(sel 2.5 ppt Temp 26.3°C)					

97

17/11/94 Contd

Henney River + Estuary

Spottles

Crab flees across river
to Melaleuca

	Time	Depth	D.O.		Temp
			mg/l	%	
0.5K	1402	0.1	8.1	102% 102%	26.9
		0.8	3.2	43%	23.9
		at 25.1 ppt			

0.0K	1411	0.1	8.0	103%	27.4
		0.8	9.5	132% 132%	27.3
		at 22 ppt			

200 m S of Island Pt					
2.38	0.1	Sal	28.8	Temp	26.8
pm	D.O. →	8.6	124%	25.6	
	0.2	Sal	28.8	Temp	26.8
	D.O. →	9.0	129%	25.6	

Crook Lagoon 17/11/94

Start: 5pm.

Black & Shlt - 470

Banded Shlt - c15

Greenbacks - c30

E. Gulls - 6

Total Ducks = 680

incl. Shelducks - 36

Black Duck - c20

Cong Duck - remainder.

Little Cormorant heard in sample.

Eggs

large scolopendras - c110 + c20
incl Ben + G

Gulls - c250

Pelicans - 1

Fin 5.35 pm

See inside of
front cover for
remainder of
Henry River &
Estuary data