

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_(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

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<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)

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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	(02-09-94 / 17-11-94)
JL_(1992 on)_11	11	(22-11-94 / 9-03-95)
JL_(1992 on)_12	12	<i>Jan '95 +</i> (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)

J. Lene

Nº 20

CALM

TSN 6280



NOTE BOOK

No. 561

March 97 → April 97

①

Tues 18 March 97

Recalibrated DO₂ + Salinity meter
(to 36 ppt)

Time	Depth	Sal	Temp °C	DO ₂
------	-------	-----	---------	-----------------

20 m downstream of Womsey
estuary floodgates.

0922 hr.	0.1	35.8	21.8	40.3
	0.2	35.8	21.8	39.5
	0.4	35.9	21.8	39.0
	0.6	35.9	21.9	40.9
0928	0.7	35.9	21.9	45.8

Heard little greenbird calling - ^{heard calling} first since summer.

(2)

Time	Depth	Sal	Temp	DO ₂
	100 m from bar ocean bar of Wonnep Inlet			

0941	0.1	35.8	21.6	26.9 %
	0.2	35.8	21.6	26.1 %
0942	<u>0.3</u>	35.8	21.6	25.7 %

150 m WHP
closed mouth
4 meters into the ocean
(i.e. on the ocean side of bar)
(Clear water)

0948	0.1	36.1	21.7	77.4 %
	0.4	36.0	21.8	76.4
	0.5	is bottom		

Bar is closed at 0950 hrs

Water lower on ocean side

Narrowest part of bar is 17 wide

Ocean would only need to rise

18/3/97 Contd

(3)

Time	Depth	Sal	Temp	DO ₂
------	-------	-----	------	-----------------

2. ~~From~~ ~~20-30~~ 20-30 cm
to connect with the Inlet.

Inlet would only need to rise 10 cm.

Tide at moment is mid-low

(check tables) Judging by
sound like the ocean would definitely
overtop the bar at high tide &
(today/yesterday).

Under the Legomen Road Luffie bridge

1002	0.1	36.1	22.5	60.4
	0.2	36.1	22.6	60.5
	0.4	36.1	22.6	57.7
	0.6	36.1	22.4	55.7
	0.8	36.1	22.4	56.1

(4)

18/3/97 Contd

Time	Depth	Salinity	Temp	DO ₂ (%)
	1.0	36.2	22.3	54.7
	1.2	36.3	22.3	52.6
	1.4	36.3	22.3	48.8
	1.6	36.4	22.3	46.2
	1.8	36.4	22.3	43.4
1010	2.0	36.4	22.3	44.6

25 m from Vase estuary floodgate

1014	0.1	36.1	22.2	69.2
	0.2	36.1	22.2	68.2
	0.4	36.1	22.1	65.9
	0.6	36.1	22.0	63.4
	0.8	36.1	22.0	62.0
	1.0	36.2	21.8	61.0
	1.2	36.3	21.6	62.4

Water is leaking past two flap valves
and into the estuary (as yesterday)

18/3/97 ^{contd.}

(5)

Time	Depth	Salinity	Temp	DO ₂
	1.4	36.3	21.5	59.0
	1.6	36.5	21.5	49.5
1022	1.7	36.5	21.5	47.5

Vespe estuary floodgate gauge
~~reads~~ reads $+0.095$ at 1024 hrs.
 (ie fractionally below $+0.10$ m)
 (by eye)

Worrum estuary floodgate gauge
 reads -0.185 m AHD at 1045 hrs
 - water leaking in past flap valves
 at a significant rate (past
 four bags (flap valves + stop boards))

⑥

Time	Depth	Salinity	Temp	DO ₂
1054	20 m upstream of Womung floodgates			

1054	0.1	36.1	22.9	49.8
	0.2	36.1	23.0	49.2
	0.4	36.1	22.9	50.9
	0.6	36.1	22.9	50.6

Water is strange grey/green colour.
Fish observed flipping out of water
(occasional)

Under the powerlines approx ¹⁵⁰⁻200 m from floodgates.

1100	0.1	35.8	22.8	86.4
	0.2	35.8	22.8	85.6
	0.4	35.8	22.8	85.2
	0.6	35.8	22.8	86.0

18/3/97 Cont'd (7)

Time	Depth	Sal	Temp	DO ₂ (%)
1102	0.7	35.8	22.7	91.1

Three dead pelicans - took photos. Two with one wing severed.

~~1127~~

1126	0.1	38.5	22.8	87.9
	0.2	38.5	22.8	87.8
	0.4	38.5	22.8	87.8
	0.6	38.5	22.8	86.8
1129	0.7	38.5	22.8	86.1

Many fish jumping in water.
Water colour is brown/grey.
One dead pelican on shore.

⑥

Time	Depth	Salinity	Temp	DO ₂
1053	20 m upstream of Womung floodgates			
1054	0.1	36.1	22.9	49.8
	0.2	36.1	23.0	49.2
	0.4	36.1	22.9	50.9
	0.6	36.1	22.9	50.6

Water is orange grey/green colour.
Fish observed flipping out of water
(occasional)

Under the powerlines approx 200 m from floodgates.

1100	0.1	35.8	22.8	86.4
	0.2	35.8	22.8	85.6
	0.4	35.8	22.8	85.2
	0.6	35.8	22.8	86.0

18/3/97 Contd. (7)

Time	Depth	Sal	Temp	DO ₂ (%)
1102	0.7	35.8	22.7	91.1

Three dead pelicans - took
photos. Two with one
long scarred.

1127

1126	0.1	38.5	22.8	87.9
	0.2	38.5	22.8	87.8
	0.4	38.5	22.8	87.8
	0.6	38.5	22.8	86.8
1129	0.7	38.5	22.8	86.1

Many fish jumping in water:
Water colour is brown/grey.
One dead pelican on shore.

(8)

After Clarke (^{surf ski} in case) kept
hitting tops of Lake Woom
islands with bottom of
surf ski between last two stops.

Time	Depth	Sal	Temp	DO ₂
East end of first large scumpline island.				
1135	0.1	39.2	22.8	106.7
	0.2	39.3	22.8	106.2
	0.3	39.3	22.8	103.2

Water colour ~~white~~ brown/grey

~~Water~~ Fish jumping

Pelicans roosting nearby.

Calm water level logger (plate
needs X.25 m

1140	0.1	39.7	22.8	142.8 142.2
	0.2	39.7	22.8	142.2

(m) (ppt) Time 18/3/97 Grid (9)

Time	Depth	Sal	Temp (°C)	DO ₂ (%)
1140	0.4	39.7	22.8	141.9
1141	0.6	39.6	22.8	140.7

Water is grey/brown.

Fish jumping.

Gauge on logger reads $X = 25$ m
This location is where channel
widens dramatically (in winter)

Where there is old fence post
on each side of (summer) channel.
(c 40 m E of small over nesting island)

1145	0.1	39.9	23.4	106.0
	0.2	39.9	23.5	113.5
		39.9		
	0.4	39.9	23.5	114.0
	0.5	39.9	23.5	79.0

Water colour grey/brown (some green algae
at edge). Fish jumping.

(10)

	(m)	(ppt)	(°C)	(%)
Time	Depth	Sal	Temp	DO ₂

Frontline at end of this property
(c100 m West of point on Nth side)

1154	0.1	40.2	24.6	96.7
------	-----	------	------	------

	0.2	40.6	24.8	95.4
--	-----	------	------	------

1156	0.4	41.4	24.7	68.0
------	-----	------	------	------

Fish very active / jumping

Most yellow green filamentous algae

on either side of clear water

channel only 4 m wide (grey/green)

Off the ~~the~~ point (end in the) referred to above
c1205 pm

0.1	42.0	24.8	144.0
-----	------	------	-------

0.2	42.0	24.7	147.5
-----	------	------	-------

Yellow/green filamentous algae on either

side of clear water channel.

Tues 18/3/97 Contd (11)

Time	Depth	Sal	Temp	DO ₂ %
Eighteen fence posts north of Womwong data logger (house stand bay).				

1344	0.1	27.1	26.0	240.0
	0.2	33.1	24.7	231.5
	0.3	32.9	24.5	172.4

Water is full of yellow/green
filamentous algae, ("Wool Chubbed")

At the Womwong data
logger (CAUW - depth) (house
stand bay)

1354	0.1	26.7	24.9	203.7
	0.2	33.2	24.7	191.1
	0.3	34.1	24.4	183.1

(12)

This location (in fact whole of bay) is covered with green/yellow filamentous algae.

Monrovia (east) estuary
Census gauge (on fence line
down from "barnet house")
reads $+0.04$ m at
1426 hrs. Light N
Wind blowing.

Fence post short & sharp (115 m (pice) from gauge)

Time	Depth	Sal	Temp	DO ₂
1430 hr	0.1	24.5	26.8	210.3
	0.2	24.7	27.1	207.4

Algae same as in previous bay

(13)
Tues 18/3/97 Control

Time	Depth	Sal	Temp	DO ₂ (%)
Shore (broken end) post (c110 metres (paved) from previous post)				
Algal same as in previous bay.				
1436	0.1	25.1	26.6	217.5
	0.2	25.6 25.6	26.7	304.1
1438	0.3	26.6	25.7	off scale

It was 120 in (paved) from C402
gauge back to end in fence,
which is where the thick grass line
is reached

1510 hrs.

Water extended to eastern end
of Womnang Lagoon, just covering

Time 12/3/97

Holbe River where track goes close near to mouth (15m from fence)

Time	Depth	Sal inity	Temp	DO ₂
1530	0.1	19.0	25.7	50.3
	0.2	21.2	25.9	51.0
	0.4	28.9	25.8	26.2
	0.6	31.9	25.2	4.4
	0.8	32.7	24.3	-1.4
	0.9	32.9	24.1	-1.9

0.0 km
anobiontic

18/3/97 (15) L.H.H.

Time	Depth	Sal (ppt)	Temp	DO ₂ %
------	-------	-----------	------	-------------------

Pool (3m wide) in Abbe River
 (odometer reading = 0.4 km)
 water is flowing gently downstream

1544	0.1	2.1	22.9	120.7
	0.2	1.63	23.0	121.8

gentle - like fish. "Beetles"
 (partly covered)

Requiem does almost to river
 canal are dead. (also upstream
 + downstream)

no flow observable
 Abbe River (under railway bridge)

1557	0.1	1.83	22.2	72.8
	0.2	1.54	21.9	78.0
	0.4	1.46	20.1	50.2

(16)

Time 18/3/97 Lurid

Time	Depth	Sal	Temp	DO ₂
	0.6	1.43	19.5	37.9
1603	<u>0.1</u>	1.46		

probe sitting in sea water
salinity between tests.

20 m further upstream the flow
is detectable (but slight) -

The bed of the river rises,
the vegetation (incl. *E. rostris*
& salt peppercorns) looks healthy.

" EPA. This gyngit is
measuring velocity as part of an
environmental monitoring etc.
has "219" handwritten on it.

under bridge

18/3/97 Contd. (17)

⑩

Time	Depth	Sal.	Temp	DO ₂ (%)
1618	0.1	30.0	26.4	211.4
	0.2	29.5	26.9	211.1
		(ppt)		

(18)

Wed 19 March 97

Vespe Estuary (West end, north shore)

51 → 60 Best

One with yellow fly on left leg
above tibia and bend on right
leg above tibia. Fully developed,
rich dark brown / chestnut
breast band.

Very poor: 45⁻⁵⁰ with bands,
15-20 well developed, remainder
at varying stages.
5-10 with no band.

4.20 → 4.50 pm
Telesign @ 300 m!
brouns.

19/3/97 ⁽¹⁹⁾ contd

The Best were with cc 100 Red-n
Avocet — mixed together.

Bright sunshine behind us.

Very easy to see.

~~He~~ I was with Jeff & Jo
Taylor of Bsn.

(22)

Stent Fri 21/3/97

Wilmoth property - east end

Transect 1

~~82 ft~~ Hole 1 ~ 1030 hrs.

Sedge + grass (Buffels) + occasional
dark forming over surface (100%
cover).

Approx 1 cm of organic matter
on surface of soil. Discarded

Soil - dark grey sand at top
to mid grey sand at 25 cm. Then
strong & (~2 cm) change to white
"cracked limestone" sand. ~~Then~~
~~at 48 cm~~ and "cracked

limestone". "CL" continues < 55 cm.

~~But note~~ Some soil moisture. Less
than hole 2

21/3/97 Contd

23

Hole 2

On "upslope" side of port head
along *M. interlens* (5m tall)
in dense tall (1m) sedge.
~~Photo~~ Root mat (thick) of c 4 cm
Short purple very dark grey
sand (much organic matter) to
4 cm, grades to brown
sand ~~at 24 cm~~ to
24 cm. Gets lighter
brown with depth. Light
brown sand at 50 cm.

Soil is moist for whole profile
Photos (first) of top 30 cm
and then bottom sample (down
to 55 cm). Hole was 1m
from drill

(24)

Hole 3

30 cm on

"downslope" side of M. Estabrook
(greatly dead dying) Buffalo grass
forming thick second base of
tree (in shade). Couch
grass outside this

grayish brown sand with
grass root matter to 10 cm.

Flora looking to brown
sand by 15 cm. Grass
roots abundant to 20 cm.

Soil dry to c 40 cm then
becomes slightly damp.

Core photos 3+4.

for Photos of area

End of 64 ASA Kodachrome.

(25)
Fri 21/3/97 Contd.

Hole 4

(Revised) Core of conch grass and dead
M. canaliculata (long dead)

Soil grey to 9 cm then
rapid change to light brown
($\rightarrow > 5.5$ cm). ~~the~~ 0.5 cm

organic material lying on top.

Roots of conch mainly in top

9 cm.

Dry sand at top
of core to slightly moist

~~with depth~~ as depth increased.

Photos 5-6 (of core samples)

(Shot on Ektar 100 ASA roll)

(26)

Hole 5

In middle of sedge bed (green & healthy.) *Simons kranzi* dominant.

Sticky peaty layer (5 cm) at top of profile. Grades

to a dark gray sand. Grades

~~gray~~ brownish gray to 45 cm. Abrupt transition

at 45 cm to medium gray

sandy clay with much shell

frag. This layer very wet.

Water rose to full hole

to 36 cm below soil surface.

Cone plots 7-8.

(27)
Fri 21/3/97 contd

Hole 6

In middle of bed of B. coldwellii
with scattered dead (a few live
30 m east) Helosarcis - (live)

Top 5 cm is organic + root matter.

Then dark brown sand to 130 cm,

~~then grey~~ (gradually changing to light
brown ~~for the next~~

and then greyish at 250 cm

to grey. At 350

changes to a grey silty clay.

At ^{50 cm} ~~450 cm~~ clay it has shell

grit in sand (brown/grey).

Soil must near/at surface

to damp/wet. Water

level rose to 26 cm

(from surface).

Plots 9-10 of core.

(28)

Still at Hole 6 There is
scattered live (young) *Halosera*
and *Serriocornia* brach *brach*
in the *B. caldwelli* m. Closest
is 0.7 m *Halosera* brach
1.8 m towards estuary from hole

Hole No 7

Top 4 cm has much organic
material in it. Then grey sand
to 19 cm. Then light grey
sand to 30 cm. Then

light ~~sandy~~ silty clay with
narrow layer of organic in it.

At 33 cm a shell layer

begins & goes to 45 cm.

(This layer was light grey ^{sandy} clay.)

Fri 21/3/97 Canal

(29)

and ≥ 55 cm
at 45 cm is silty clay,
with shells.

Water level rose to 18 cm from
surface (it may have risen further)

Hole is 9 m from edge
of ^{surface} water of estuary.

Hole is 0.5 m from ~~an~~ estuary
edge of B. caldwellii

Estuary water level is only
c. 50 cm lower than surface of
hole.

(30)

Tremoct 2

Hole 1

Top 5 ~~cm~~ cm is ~~sandy~~ with
much organic material and is black.
Then changes in 1 cm to a light
grey sand - this continues to
35 cm ~~40 cm~~ - then changes to
orange / grey sand -
continues to 55 cm. then grey
sand with much fine shell fragments.
In case of healthy growing
Mel. interlineis to 4 m.
Soil is damp, to moist at
35 cm.

band one tree wide.

Habrovia ~~M.H.~~ band is 2.5 m

31
Fri 21/3/97 Contd.

Insects extremely. B. abdullin

thru the Helosoma and under
the M. carolinensis

Cone photos (two)

46 cm down from surface to
water level in hole.

Hole 2

Top 4 cm is organic material
and silt. (dark brown/grey)

Then greyish brown sand to.

At 35 cm grades to reddish
brown sand. At 50 cm

changes to light grey sand with
small to big shell fragments.

Damp ~~at~~ at 2 cm and
progresses to very damp at 55 cm.

(32)

Melaleuca sp A. $\rightarrow$

This hole was at base of (80 cm

from) diameter of mostly dead,

but with top foliage of one

high branch still living.

Bank of dead trees of same

species extending ≈ 15 m

east and one dead of same

species 5 m West.

Heterocarpus + Stenocarpus and

conch growing at base. S.

catenellus on eastern side (+

syzygium). These trees to

3.5 m. One small M.

catenellus (1.9 m) growing 1 m

towards eastern.

33
Fri ~~22~~ 21/3/97 Contd

Hole 3

End 3pm

Top 4cm is black organic
silty layer. Changes to
greyish brown sand, gets lighter
as go deeper (and more
orange) ^A
Changes to lighter shelly (small
→ big) at 50 cm. Some
orange nodules.

Water in hole to 57 cm
from surface.

Core damp near surface to most
at 50 cm or so.

Vagr is dead Mel. sp A. to
4 metres. Fine sedge
beneath, plus some conch.

B. caldwelli and Helicovera +
Succinea on eastern side.

(34)

1715 hrs on Fri 21/3/97

Inspected pipe discharging from Port George
site into Vase Estuary (see previous notebook)

Flow from pipe was:

1.1 m wide

9, 12, 9, 3 cm ~~cm~~ deep (Section)

Average = 8.25 cm

5 m section of stream marked.

18 sec	}	Three time trials for heaps of sand to sit to travel the 5 metres
17 sec		
17 sec		

$\Rightarrow \frac{17}{5} = 3.4$ seconds per metre

$$0.0825 \times 1.1 \times \frac{5}{17} \text{ m}^3/\text{sec}$$

$$= 0.027 \text{ m}^3/\text{sec} \quad \text{2300 m}^3/\text{day}$$

Plots taken - pipe, marsh.

(35)

Fr 21/3/97 Contd.

1740 hrs on Fr 21/3/97

Verse estuary floodgate gauge
reads + 0.125 (estimated)

Water flowing gently (slightly) out
from two bays. There have
no stop boards. * Stop boards
above water level in all other bays.

~~There~~

Medium - strong SW wind
blowing. Fine, some cloud.

~~2/100 m³/day~~ + 10% (side stream)

$\approx 0.027 \text{ m}^3/\text{sec} + 10\% \text{ (side stream)}$

$\approx 0.0297 \text{ m}^3/\text{sec}$

$\approx 0.03 \text{ m}^3/\text{sec}$

= same as on 17/3/97.

(36)

Mon 24/3/97

Vasee estuary floodgate gauge
reads +0.08 m

(estimated - by eye) at 1423 hrs.

Water bubbling in two bags

(those without stop boards) past

the closed floodgates.

Wind = light (direction?)

Fine morning.



Checked outflow pipe from
Port George development
site into Vasee Estuary
at approx

Thurs 25/3/97

Transect 2, Hole 4

Black organic material in sand
to 5 cm. Grey sand to
30 cm, ~~grey~~ changing to
orangeish sand, changed to
slightly natural at 48 cm.
with coarse sand. No water
in hole. From 0925'
Soil purple moist / damp.
Under drying (newly dead
Mel. lemniscata).

(38)

Trench 2, Hole 5

Finest at 0955 hrs

Top 4 cm with black organic
~~to~~ matter + silt. Then brown

sand to orange brown.

Changed to gray/shelly material
at 50 cm. Soil moist

3 photos (2nd a dud).
Under strand (belt) of healthy
M. cuticularis.

No water in hole.

(39)

Trench 2 Hole 6

Middle of band of dead Mel.
Laminosa

Top: 3 cm ~~to~~ much brown ^{blebs} organic matter,
grading after 3 cm. to brown
sand. Grading to orange
brown sand to 57 cm.
(Then changed to grey shell
material) Core damp.
No water in hole

(40)

Transsect 3 Hole 1 Fm 1124 km.

Layer of twigs/leaves decaying
to on top (approx 3 cm)

Top 9 cm of core has much
brown organic material in silt + sand (clasts + wood)

9-28 cm coarse grey sand.

29 changes to white shell material

28 cm to water table - see

photo. Took hand sample
at 50 cm.

Under rock drying Mel bommalase
near (5m) from edge of
estuary (6m from water)

(41)

Transect 3. hole 2

6 cm of brown ~~vegetable~~ organic material in sand + silt.

Then grey sand with some clay to 50 cm. Then slightly

loamy sand > 50 cm. Shell particles start at 50 cm

On upslope side of same stand of sick dying *Mel. lewisii* at edge of where sedge begins (again?)

Between two sick/dying *M. lewisii*.

3 cm of vegetable material lying on top (*Mel* twigs / leaves)

Cone was clamped.

Water level was 35 cm from surface (free water in hole)

(42)

Trench 3 hole 3

Upslope side of small rise
separating it from hole 2

Reasonably healthy *M. hamulosa*
on either side.

--- cm of vegetable material

lying on top

Brown/black organic material to 3 cm

3-15 is grey silty light-med clay

* 15-20 is coarse orange/brown sand

20 → light yellow coarse sand.

Water level in hole

is 46 cm from surface

Transect 3 Hole 4

0 - 1.5 is brown ^{+ silt} organic ^{loamy} layer

1.5 - 7 cm is grey clay

7 - 15 cm is clayey brown (brown) with orange mottles

15 - 19 cm coarse bright brown sand

19 - end light yellow sand with orange mottles
look shell particles.

Whole Core is very moist.

at 45 cm becomes grey sand

look a lot of shell material

Had to take soil sample at

50 cm by hand.

Water level in the hole is 51
cm from surface.

(45)

Transect 3 hole 5

This hole is 12 m east
(downstream) of holes 1-4
of this transect. It is
at base of (upstream side) of
healthy M. hemlock tree/shrub
of 3 m height. Silt hemlock
on east and north side of it.

~~Top~~ 0 - ~~3~~ ³ cm is ^{dark} brown organic ^{+ silt} material

3 - 8 cm (^{brown} ~~dark~~ loamy clay)

8 - 11 cm is clay sand (grey)

11 - 24 cm light grey / yellow coarse sand

> 24 is coarse sand

Took sample by hand at 50 cm

- grey coarse sand with
shell material

Water level was 50 cm

from surface.

Cone was very damp

~~Use estuary floodgate gauge~~
~~reads -0.01 m AHD at~~

~~1806 hrs on Tue 15/4/97.~~

~~Light N breeze. Fine.~~

~~Brown green algae (unicellular)~~

~~ventral up against floodgate~~

~~on upstream side end S end~~

~~Main area a triangle of 6m x~~

~~15m.~~

~~All flap valves closed.~~

~~Slight leak in.~~

~~One 5 cm fish struggling near~~

~~surface on upstream side.~~

(47)

Trench 4 Start at 1346 hrs
Lake 1

Melaleuca rhaphiophylla stands
(many dead, some green shoots)
[Elbe River area]

0-5 changing from
~~loamy clay~~ (organic matter)
~~dark grey~~ dark grey coarse sand
5-45 with dark brown mottles.
45 → lighter ^{brown} grey + has shell
particles thru it.

Cave sample was damp
Water level is ~~45~~ cm below
surface 47.

Transect 4 hole 2

Also under dead *M. rhizophylla*

0-4 silty
argill material

4-14 clayey loam

14-20 grey/yellow coarse sand

20 → 50 light yellow coarse sand with
orange mottles (→ bright)

50 → grey brown coarse sand with
dull brown mottles & some
shell particles.

Water level 53 cm below surface

(49)

Trench 4 hole 3

0-4	dark brown organic material
4-10	dark grey dark sandy loam
10-45	dark grey / brown loamy coral sand
45-*	light orange yellow coarse sand

Cone is moist.

No water in hole.

Transect 4 hole 4

0-5 cm dark brown loam

5-10 cm grey brown sandy loam

10 → grey loam
becomes sand with slight
orange mottling (coarse sand)
becomes lighter colored +
DSS mottles get brighter
cm

Cope sample is moist.

No water in hole.

(51)

Transect 4 hole 5

Arum lily germinating

0-3 organic material

3-6 coarse sandy loam

6-20 grey coarse sand

20 → light grey coarse sand

→ >55 cm gets slightly lighter
with depth.

Moisture = T at top, M at bottom
(T = dry-moist; M = moist)

No water in hole

Trench 4 hole 6

Green lily germinating

0-6 cm

orange mottled
(with root in it)

green
lily

6-15 cm

loamy coarse sand
(grey)

15 →

light grey brown coarse
sand.

changes to grey with
some dull orange / brown
mottling

Mosses - "T" all the way through.

the top 30 cm

Then "M" changes to "17"

around 45 cm

No water in hole.

(53)

Transect 5 = Abba River

Encyrtus rubis present

hole 1 Start 1548 hrs

Seed E. rubis

0 - 5 cm = coarse light yellow
sand

5 → ~~41 cm~~ = loamy light clay
41 cm grey brown with dark orange
mottles → seeds
sander

41 cm → clay to light grey very
coarse sand

Water level is 32 cm below
surface level -

Trench 5 hole 2

Deed E. mudis

0-10 cm : orange grey, clay loam

10 ~~to~~ 36 : grayed dark grey

↑ strong signs of
weathering

With dull orange mottles,
loamy light clay

36 ~~to~~ 55 brown very coarse sand

with white mottling.

Lower part of core was wet
Upper " " " moist

~~At~~ Water level was 30 cm
below surface.

(55)

Transect 5 Hole 3

1/2 dead
p
Sick
At enter (river), edge of live E. indio
with numerous part
~~dead~~ dead branches on them
Ground partly green grass ("conch")
partly bare + partly brown dry grass
Arrow lily's

0-5 brown grey clay loam
5-22 loamy clay (dark grey)
22 → 37 coarse grey sand
37 → 51 v. light grey v. coarse sand
51 → coarse loamy sand (grey)

~~What core is wet for~~

Core is moist → wet
Water level is 25 cm below
surface

Transect 5 hole 4

0-7 cm dark brown clay loam

7-45 cm v. dark grey loamy sand
with faint orange mottling.

Mottles increase with depth.

45" → light grey coarse sand
with orange mottles.

Moraine : most all the way.

No water in hole.

(57)

Transect 5 hole 5

drill hole

"T"	[	0-6 cm	brown dry sandy loam
		6-15 cm	grey loamy sand
		15-45	light grey coarse sand. with light brown mottles
monst	[	45-→	grey brown loamy coarse sand. Monst.

6-→ onwards monstrel is "T"

No water in hole

(58)

Vessel taking floodgate
gauge reads +0.09 (by eye)

(~~at~~ at 1745 hrs on Tues 25/3/87
- strong
Moderate SW wind blowing
^

flaming very gently
Water ~~leaking~~ out of estuary
(past the 2 flys of valves with
no stop boards)

(59)

26/3/97

Trench 6 hole 1

(Photo: 34)

Vene Estuary

("Pigeon Cove")

Healthy stand of mainly *M. hamulosa*
with some *M. canaliculata*. (see
photo)

0-2 cm - brown
loamy organic matter

2-6 cm - brown/grey/green
sandy loam (shony)

6-18 - coarse sand with shell

and limestone aggregations.

and small amount brown orange

mottling. Light grey/green.

(60)

18 $\rightarrow$ 22 cm - limestone, with
(~~18~~ ~~18~~) shells than it, also
some roots, slight brown
mottling -

22 cm was depth of core (rock
beneath)

Core was moist all the way

5 ~~cm~~ cm to rock (limestone
19 cm to water table)

bottom sample was 15 - 22 cm

(61)

Transect 6, hole 2 (Pluto: 35)

0-2 dark brown organic matter
2-14 green grey sandy loam
14-20 cm lighter yellow brown coarse
sand with orange brown mottling
20 → limestone (hard!) - (couldn't
sample)

bottom sample is therefore 15-20 cm
Water table depth is > 20 cm.
Whole core is moist ✓

(62)

Transect 6 hole 3 (start 1006 hrs)

(6 cm short of 30 cm)

(Photo: 36)

0-4 cm loamy organic matter

4-6 cm sandy loam (brown)

6-13 cm gray/green loamy coarse sand

13-15 cm light yellow coarse sand

15-~~24~~²⁴ cm weak limestone.

• hard limestone > 24 cm deep.

• Core was moist all the way

• water level is > 24 cm.

(63)

Transect 6, hole 4

(12 30:19.5 - 16.5 cm
deep core
sample

Core

0 - 1.5 cm is argente mella

1.5 - 4.5 cm is brown loam

4.5 - 12 cm : grey green coarse sand

12 - 16.5 : weak limestone

> 16.5 too hard to sample

(limestone)

Core all moist

Bottom sample is 15 - 16.5 cm.

dept 100 cm, 100 cm, 100 cm
y/b 100 cm, 100 cm, 100 cm

(64)

Transect 6, hole 5

$$30 - 4.5 = 25.5$$

- 0-2 cm (brown) loamy organic matter
- 2-4 cm loam (brown)
- 4-9 cm loamy sand (light brown)
- 9-19 cm coarse sand (brown yellow)
- 19-25.5 coarse sandy limestone
- > 25.5 hard limestone

Cone must all the way.

(65)

Trench 6 hole 6

0-3.5 loamy organic matter

3.5-8 cm coarse loamy sand (yellow brown)

8-24 cm light yellow coarse sand

~~24-32 cm~~

24 → ≥35 cm v. pale yellow coarse sand

with some limestone + some

gray matter

hard limestone at 32 cm.

Moist all the way.

No water in hole.

26/3/97 66 contd

Transect 6 hole 7

0-3 cm: organic matter

3-8 cm: ^{yellow brown} coarse loamy sand

8-30 cm: yellow coarse sand.

($\geq$)

→
Dry to 10 cm, "T" → 28 cm,
then moist from 28-30 cm.

8-55 cm -

moist continues to $\geq$ 55 cm

Almost "wet" at the bottom

No water in hole

Finish 1107 hrs.

(67)

27/3/97

Th 27/3/97

Waste estuary floodgate gang

1312 hrs near

approx - 0.08 m (by eye)

- flap valves closed water
backing in past flap valves
- Mallet trying to get out -

Thurs 10th April 1997

1715 hrs - one immature plumage

Wb Sea Eagle flew over bay

of estuary and landed in
tree at shoreline. I viewed
it from . . . Rd.

10/4/97

(68)

Vere Estuary floodgate gauge
board reads

- 0.01 m at ~~1726~~ 1726

1726 hrs on Thurs 10 April '97.

Light NNW blowing. Overcast.

Water level higher on ocean
side of gates. Water backing
in through most/all bays.

Stop boards are still in all
bays except Nos. 7+8 (from
southern end). Flap valves
all closed.

Worms Estuary floodgate gauge
board reads - 0.22 m at

1740 hrs on 10/4/97

All boards in - flap valves

(69)

closed. Water leaking in
past some boards at a
great rate.

Fri 11 April 97

Ring closed on
0418 931 099

~~~~~~~~~  
Vance Estuary floodgate gauge  
reads +0.01 m AHD at  
1730 hrs on Fri 11/4/97.

Light W blowing.

No dead or sick fish at the  
floodgates or adjacent (northern) shoreline.  
~~for~~ Even the dead fish (one species -  
"whitebait" - mostly 5-8 cm long)  
of this morning had disappeared.

70

~~Today~~ One gate had been opened <sup>today</sup>  
for ~~the~~ <sup>the</sup> ~~the~~ <sup>the</sup> from ~~the~~ <sup>the</sup> am  
to approx 2:30 pm, and  
water had poured in and  
mullet had swum out. The  
taken at ~~the~~ <sup>the</sup> shortly after  
opening.

---

(71)

Notes made Fri 11/4/97 8.30 pm  
at home about first session  
of "Waterbird ID for Absolute Beginners"  
held today.

Species we ~~recorded~~ <sup>identified</sup> (there were  
others present) were

: Black Duck

: Coot

: Marsh Duck (♂ + ♀)

: Musk Duck.

First session took 1 1/2 hours,  
not the 1 hr originally planned.  
For second session I need  
to (inter alia):

- ~~provide~~ provide a list of field  
guides available.

- get everyone to start recording  
their observations.

- add note to Information sheet saying people who need reading glasses should bring them (for field guides)
- see if I can get more recent info on ~~the~~ binoculars (incl types + prices)
- have my 8 x 35 B binoculars for <sup>Marilyn</sup> A
- What does the B refer to?
- we use Cayley.

\* Place advert on Taco for Thurs paper suggesting people visit Estuary View Drive.

(73)

Sat 12 April 97

Verse estuary floodgate gauge reads  
0.00 m exactly at 0809 hrs.

No wind. There has been no wind  
or v. light wind all night. Overcast.

Some ~~small~~ fish flapping  
out of water on ocean side  
of floodgate.

Slip valves closed. Water  
level slightly higher on ocean  
side & water backing in.

Why don't WCC sweep out all  
the sludge next to the  
floodgates.

No dead fish visible on  
either side of floodgates.

Long fish at water edge on  
upstream side of gates.



(77)

Most of the above birds were  
resting on "islands" of duck worms.  
Some teal & most Phalaropes were  
swimming & feeding. All the  
grebes were swimming & feeding.  
Greenshanks feeding at edge of  
islands. Ibis was feeding.  
All worm-eaters were roosting.

Finish 0839 hrs.

Total Species = 16

Total birds =

---

Tues 15/4/97

Vespe Estuary opposite (from) Estuary View Drive  
(Same place) Start 1415 hrs.

Grey Teal - 363

Black Duck - counted 12 estimate c20.

Shelduck - 7

Black Swan - 46 (feeding)

H-h Grebe - c10 (fishing)

Little Pied Cormorant - 7

Darter - 2+1

Large Black Cormorant - 2

Large Pied Cormorant - 30

Little Black L. - ~~15~~ c70 (fishing)

Pelican - 2 (fishing)

~~Wb Sea Eagle~~

White Ibis - 2

White-f Heron - 1+1+2

Avocet - 1

Greenbank - 1+1+1 - (feeding from <sup>in</sup> islands)

Silver Gull - <sup>10</sup>~~14~~ (mostly on islands)

Swarphen - 1+1 - (in grass near shore)

Osprey - 1

Pied Stilt - 3+3

19 species

420 birds in total

(79)

Most birds roosting

Osprey ~~was~~ perching in big dead tree on west side of bay + trying (repeatedly) to catch fish in bay.

Fish flipping at far (S) side of bay.

From vehicle (at edge of long grass near shore at Estuary View Drive counted 152 large plants ( $>1m$ ) of tube worms

The Osprey caught a "Black Drum" looking fish at 2:14:48 hrs and took it to a leafy (concealed) position in a tree (tall *Agave flexuosa*) approx 6-8 m from ground.

(80)

Finished at 1500 hrs (15/4/97)

---

Vespe Estuary floodgate gauge  
reads - 0.01 m AHD at 1519 hrs  
on Tue 15/4/97. All

flaps closed. Slight leak in.

One 5 cm fish struggling on  
upstream side. Water murky  
brown (algal bloom?) ~~Brown~~

Faintest of brown scum on surface  
next to floodgates on upstream  
side. No dead fish.

Light N wind.

---

Water Corp (Bandung) <sup>918</sup>

910 400

31 Songkhar News

3.15 → 4pm