

1961 - P
"Rite in the Rain."
WATERPROOF
LEVEL BOOK

FILLER No. 311

Bottom Fauna Book # I.

1961 Cruise

King Crab Investigation

MV PARAGON

a product of

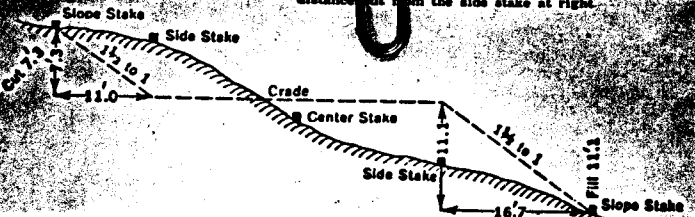
J. L. DARLING CORPORATION
BROWNS POINT TACOMA, WASHINGTON

Book 1 of 2

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width, Side Slopes 1 1/4 to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance cut from the side stake at left. Also, opposite .11 under "Cut or Fill" and under .1 read 16.7, the distance cut from the side stake at right.



Cut or Fill	Distance cut from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

See Log of '61 cruise for
Station 25.

Roller 104972 - 107645
711512 - 714186.

- Tanner 200
- Hairy crab 200
- Porole
- Flat head sole 300 about
- Turbot 50
- Bank heads 50
- Raja kissoilata 1
- Red sole 100
- Other Muschel 1
- No malinon or shrimp
- Rock sole 300

Sta - A6 - 7-8-61 -

Roller

109734

716275

Herring - 5

Hake 200

Pollock 300

Tuna cod 200

Heavy cutb. 10

Tanner 20

Bull head. 50.

Welp eel. 1 in bag K574 - catt-tag.

Yellow fin. 200

Rock sole 300 small, skiny.

Lemon sole - 150

Turbot - 160

No shrimp

Tag ^{bag} D 182 on ² halibut of full stomach
sample from this tow. for Ray.

B6 7-8-61

Roller - end start

113054 - 109734

719595 - 716275

Tanner - 200

Hake - 300

Pollock - 200

Turbot - 300

Pull head - 5

Hermit crab bagged. K573 catt-tag.

Herring - 10

lots of 99 King
crabs in this
haul.

B7 7-8-61
Roller - 115981
720000

Tarbot 500
various very few shrimp *P. brevis* (5) about 25
all crabs 25

Tannera 600

Bull Head large 50

Hairy crabs 100

eel points 50

fluke 200

Pollocks 200

Rock sole 100

Sand fish 2

Ray sole 50

Black cod 1

all Hermit crabs, sponges, starfish
in bags # K571 & K572

B8 7-9-61
Roller - 579778 - 422145

lamon sole - saved in bag - K567
about 100 in center

yellow fin - in 2 bags - K568 / K569

Star fish - 500 small - ave. 8-10"

Ray sole 25

Tannera 50

Bull head 5

Pollocks 50 small size

Tarbot 15

Hairy 5

Herring 5

invert - in bag K570

This haul mostly yellow fins -

Synpeltis Tag D 183 on bag w/ 1 habitat
from this haul in freezer

C-8- 7-9-61.

Roller 425252 - 582905

Turbot - 2000

Yellow fin - 1000

Bull head - 50

Tunnies - 2000

Hairy - 50 Eumacrus -

Lemon - 200

Herring - 10

Sponge - hermits - shells - starfishes -

all insects - in bags - w/ tags (cattle)

Hake - 100

K564

Pollock - 100

K565

Flat head sole - 50

K566

Sturgeon pouches - 100

Most of this catch were yellow fin, Turbot
and Tunnies.

Only one shrimp P. borealis found on
deck.

C-7 7-9-61.

Roller

427788 - 585459

Tunnies - 1000

Yellow fin - 2000

Turbot - 200

Eel points - 50

All hermits, sponges in bag -

cattle tag # K563

Pollock - 200

Bull head - 50

about 10 shrimps - all smacked -

P. borealis -

Ray sole - 50

Note:

Harry mentioned the roller reading have
not been very consistent.

C-6 7-10-61.

Roller- 587855 - 430169

all hermits & inverte in ⁽²⁾ bags. K561

Tanner - 200

Pollock - 5000

Turbot - 1000

Skate - Raja binoculata - 1.

Rox sole - 10

Bull head - 5

Eel pout - 5

Yellow fin - 50

Herring - 5

K562

D 6 - - 7 - 10 - 61

Roller - 433089 - 590760

Basket Stars - in bag. K558

Cod - 100.

Turbot - 200

Bull head - 100.

Tanner - 200

Pollock - 300

Rox sole - 200.

Yellow fin - 500

Lemon sole - in bag - K-557

Shrimps - 100 - all small.

Octopus - 1 - K556

all inverte in bag - K560

K559

DE 605 7-10-61

Roller -

435978- 593649

eel pout - 10-

Tanner - 20

Cod - 10-

Lemon sole - 50

Turbot - 100

yellow fin - 300

Bull head -

Bucket star - 50-

Shrimps - 50 all smashed. P. borealis.

Flat head sole.

all shells & inverte in bag -

K-575

D7 7-11-61

Roller - 438465 / 596135

Tanner - 100-

eel pout - 50-

Bucket star - 50-

Bull head - 10

Turbot - 500

Pollack - 200

yellow fin - 100

Cod - 3

Regia vivoculata - 1

Shrimps 200-

Sturgeon pouches 10

all inverte in bag - K555

K554

DE 7.5 7-11-61

Roller - 441304 - 599055

K551 - Rock sole.

K552 - K553 invest. in bags

yellow fin - 200

Gamon - 100

Tannera - 50 (80)

Pollock - 100

Cod - 10

eel pout - 50

shrimps - 50 mounted.

Sturgeon powder - 10

Rex - 50

Flat head - 50

D8 - 7-11-61

Edler - 4440-9 / 599996

Tannera - 200

Hairy - 1

Pollock - 500

Tanlot - 500

yellow fin - 800

flat head - 300

Bull head - 5

Cod - 5

Raja - 1

Tannera (2) & invest in bag - K526

Investe in bags - K527

K528

K529

E 8

7-12-61

Tannera - 50
 Lemon sole - 200 in bag K-530 / K531
 Cod - 50
 yellow fin - 200
 Rock sole - 200
 Pollock - 200
 Turbot - 100
 Bull head - 30
 all inverts in bag K-532 / K533
 basket stars - 10

Roller 729000 - 118795

E7-7.5

7-12-61

Roller - 720000 / 122153

Lemon - 200
 Cod - 100
 yellow fin - 100
 Pollock - 1000
 Turbot - 100
 Bull head - 60
 Tannera - 50
 all inverts - 50
 all inverts - in bags K-534
K-535
K-536

E7.

7-12-61

Roller 722546 — 124986

Lemon sole - 75

Cod - 10

Pollock - 20

Bull head - 50

Basket star - 50

Yellow fin sole - 100

Turbot - 100

Rock sole - 10

Brittle star - 50

all inverts in bag w/ tag K-537

shrimps *P. borealis* all mounted -

about 50

EF 6.5

7-13-61

Roller 127863 - 725424
124986
2877
722546
2878

Eel parts - 10

Tanner - 50

Cod - 20

Basket star - 25

Pollock - 500

Bull head - 50

Yellow fin - 300

Turbot - 100

Flat head -

Rock sole -

shrimps - 5 all mounted.

all inverts in bag -

K-538, K-539 - K-540

E6

7-13-61

Roller - 727992 - 130432

$$\begin{array}{r} 727992 \\ \underline{5866} \\ 725424 \\ \underline{566} \\ 725888 \end{array}$$

$$\begin{array}{r} 130432 \\ \underline{863} \\ 127869 \\ \underline{2561} \\ 125308 \end{array}$$

Eel points - 50

Pollock - 1000

Basket stars - 50

Turbot - 100

Lemon sole - 200

Bull head - 25

Cod - 50

Raja - 3

Tannera - 50

Rock sole - 100

Flat head - 100

all inverte in bags - K541, K542
K543

Rock sole in bag K544

(F6)

F6

7-13-61

Roller 733581 - 729999

$$\begin{array}{r} 733581 \\ \underline{3045} \\ 727992 \\ \underline{2179} \\ 725813 \end{array}$$

$$\begin{array}{r} 729999 \\ \underline{7007} \\ 727992 \\ \underline{7007} \\ 727291 \end{array}$$

Pollock - 500

Yellow fin - 100

Cod - 100

Flat head - 100

Turbot - 100

Raja binoculata - 2

Eel points 20

Bull head - 10

Tannera 10

Sturgeon parchment 20

Shrimps - 50 all smacked

all inverte in bags K545

Octopus - 1 K547

Halibut - Spag. tag 184

⑨

F7

7-14-61

Rollers

$$\begin{array}{r} 729599 - 136243 \\ \underline{729599} \quad \underline{136243} \\ 9600 \quad \checkmark 662 \end{array}$$

Pollock - 200

Tanner⁴ - 100

Starfish - Basket stars - 50 -

Horse sponges - 1

Turbot - 50

yellow fin - 300

Flat head sole - 100

Bull head - 10

Cod - 10.

All inverte in sacks - *548, *549

F8

7-14-61

$$\begin{array}{r} \text{Roller} - 729999 - 138949 \\ \underline{729999} \quad \underline{138949} \\ 7410 \quad \checkmark 706 \end{array}$$

Pollock - 3000 small.

yellow fin - 1000

Tanner

Cod - 10

Flat head - 50

Basket stars - 10

Bull head - 10

Inverte in bag - *550

G8 7-14-61

Rollers 733 077 - 142176
$$\begin{array}{r} 733077 \\ 138949 \\ \hline 3078 \end{array}$$
$$\begin{array}{r} 142176 \\ 3227 \\ \hline 138949 \end{array}$$

Basket stars - 10
Tanner - 10
Pollack - 300
Brittle stars - 50
Lepasterias - 5
Yellow fin sole - 200
Flathead sole - 100
Smelt - 1
Lemon sole - 100

Inverte in bag K501

G7 7-15-61

Rollers 735 755 - 144855
$$\begin{array}{r} 735755 \\ 130077 \\ \hline 2678 \end{array}$$
$$\begin{array}{r} 144855 \\ 142176 \\ \hline 2679 \end{array}$$

Lemon sole - 300
Yellow fin - 400
Pollack - 100
Bull head - 50
Tanner - 200
Flat head - 300
Cod fish - 10
Lump sucker - 1
Sturgeon rosettes - 50
* all inverte in bag - K502, K503
few shrimps P. borealis

This tow with many clam shells, cardium
mostly empty.

G-6-

7-15-61

Rollers 73897 - 148071
 $\begin{array}{r} 73897 \\ 135755 \\ \hline 3216 \end{array}$ $\begin{array}{r} 148071 \\ 144855 \\ \hline 3216 \end{array}$

Tannera - 200

Yellow fin - 2000

Black - 50

Flat head

Cod - 10

Bull head - 100

Lemon sole

Inverts in bag - K504 - K505

7-15-61

G-5

Rollers 151063 - 749990
 $\begin{array}{r} 151063 \\ 145071 \\ \hline 2992 \end{array}$ $\begin{array}{r} 749990 \\ 738791 \\ \hline 11199 \end{array}$

Tannera - 1000

Pillack - 500

Yellow fin - 200

Bull head - 50

Lemon sole - 30

Shrimps - 50 marked

Turbot - 10

Inverts - Japasteria, Basket stars

Lemlets, shells, macoma - cardium -

Cod - 1

K-506K507

F4

7-16-61

Rollers $\begin{array}{r} 742466 \\ 749490 \\ \hline 2476 \end{array} - \begin{array}{r} 153745 \\ 151063 \\ \hline 2682 \end{array}$

♀ in live tank molted last night.
length at capture - 117 Lt., 127 wd.
(sett) New shell = 120 Lt., 131 wd.

Turbot - 500

Yellow fin - 3000

Basket star - 50

Leptasterias - 100

Cod - 50

Bullhead - 100

Tannerd - 200

Hairy - 1

Pollock - 100

Eel pout - 10

Flat head

Invertebrates in bags - *508, *509

Pemon sole - 50

Hypopyretus - 2

Lt's of large new shell being creck this town.

EF 4x5

7-16-61

Rollers $\begin{array}{r} 745035 \\ 747466 \\ \hline 2569 \end{array} - \begin{array}{r} 156315 \\ 153745 \\ \hline 2570 \end{array}$

One dead lump sucker in bag K-510

Basket star - 1000 - all along wings -

Leptasterias -

clam (warona) shells

Flat head sole - 500

eel pout - 50

Yellow fin sole -

Cod - 100

Pemon sole - 50

Star Raja berrillata - 5

Tannerd - 100

Turbot - 100

Pollock - 800

Invertebrates in bag - K-511 K-512

F-5

7-16-61

Rollers 158934 - 747655
 158934
 747655
 2619

Shrimps - 10 smashed - P. borealis

Turbot - 200

Basket stars - 100 -

Leptasterias - 200

Brittle stars, on wings too - 100

Tunners - 100

Clam shells - many in bags -

yellow fin sole - 1000

Hypo dyratia - 10

Hermit in bags -

Lemon sole - 50

Cod - 25

Raja binoculata - 5

Dull head - 50

Flat head -

Pollack - 100

eel parts - 50

~~K-413~~ ~~K-414~~
 K-513 K-514

(EF)

EF 5.5

7-17-61

Rollers 1691001 - 750416
 158934
 2767
 747655
 2761

Tunners - 50

Flat head - 500

Crabs - 50 smashed

Leptasterias - 100

Sponges - like from slide bank stations -

Basket stars - 2000

(shells) chard - 500

Sturgeon powder - 50

Turbot - 100

Cod - 100

Pollack - 500

Lemon - 50

yellow fin sole - 1000

Hermit in bags K515, K516

E5

7-17-61

Rolls 753217 - 164563
 750416 161701
 2801 2862

Yellow fin sale - 1000

Lemon sale - 50

Turbot - 100

Flat head sale - 100

Basket sters - 50

Bulk heads - 20

lots of mud in the low.

Pollock - 200

Cod - 50

Tannera - 50

Shrimps - smoked - 50

Murets in bags - K517, K518Fish for School Fish. K519DE-5.5

7-17-61

Rolls - 167878 - 756592
 164563 753217
 3315 3375

Tannera - 50

Basket sters - 100

Turbot - 200

Flat head sale - 300

Clam shells - many - 50

Leptasterias - 50

Eel point - 50

Lemon sale - 100

Yellow fin - 2000

Pollock - 100

Bulk head - 50

Murets in bags K-520 K-521

DS

7-20-61

Rollers 170425-759141
167878 756502

Basket starts - lots on wings & bag 9,000
Sea pens - 500
Tannars - 100
Turbot - 100
Pollock - 50
Flat head - 100
eel points - 50
Bullhead - 5

No inverte taken this haul - only
basket starts so did not take.

DE 4x5 " " 7-20-61

Rollers - 173139 - 760000

Basket starts - lots on wings - could be
from previous haul - 8,000
Tannars - 150
~~Sea pens -~~
Turbot - 50
Flat head - 50
Bullhead - 75
Red sole - 10
few shrimp smashed - ? -
few snail shells - ?
Pollock - 50
Octopus - 1 in tank
Rock sole - 50

No inverte taken from this haul -
only basket starts so did not take.

E4

7-20-61

Rollers 175761 - 762622
 173139 760020
 2622 2622

Net loaded with basket stars again -
 several thousands.

Leptasterias - 50

Turbot - 100

Flat head sole - 100

Bull head - 50

Smelt - 10

Pollack - 50

Rock sole - 200

eel pout - 50

Smelt -

Tanner - 50 (80)

Skate - Raja rhina 1

Cod fish - 100

Inverte in bag # K522(F3)F3

7-21-61

Rollers 178180 - 765042
 175761 762622
 2419 2420

Bivalve - few

Turbot - 200

Leptasterias - 50

flat head sole - 200

eel pout - 100

yellow fin sole - 100

Lemon sole - 100

Bull head - 10

Pollack - 50

Tanner - 100

Smelt - 200

Rock sole - 100

Skate - 1

Inverte in bag # K523

F2

7-21-61

Rollers

767620-	180758
<u>765042</u>	<u>7570</u>
2578	2572

Turbot 100
 Flat head sole 200
 Tannery 75
 Leptocarpus 70
 Eelpouts 10
 Lemon sole 5
 Pollock 25
 Skates 2
 Cod 20
 Rock sole 200
 Atka mackerel -1
 Furth in bag K524.

E3

7-21-61

Rollers

183186-	770049
<u>180758</u>	<u>767620</u>
2428	2429

Basket star fish - 5000 - all over net.
 Turbot 100
 Brittle stars 50
 Tannery 100
 Pollock 500
 Cod 100
 Flat head 250
 Smelt 200
 Bullheads 100
 Leptocarpus 150
 Bull kelp 2

Deck loaded up to rail with basket
 stars - about 30 king crabs
 Catch was so large with basket stars
 lucky to get back net.

Furth in bag K524

D4

7-22-61

Rollers 185776 - 772639
 183176 770049
 2500 2590

Turbots - 500
 Flat head sole - 500
 Tannera - 50
 Pollack - 50
 Cod - 80
 Bull head - 100
 Skate - 1
 eel pout - 10
 Goby - 1
 Inverts in bag - K577

Fish collection K578

C4

7-22-61

Rollers 188176 - 775039
 185776 772639
 2400 2400

Turbots - 100
 shrimp per all crabs
 Cod - 10
 Smelt - 50
 Pollack - 100
 Bull head - 10
 Black cod - 1
 Peach - 2 peds in bag K579
 eel pout - 5
 Goby - 1

Really blowing on this pick up -
 large amount of Smelt -

10 mm.
Grs.

SHELL TYPE

CRABS IN LIVE
TANK-

NEW

OLD-

100

110

120

130

140

150

160

170

180

190

200

~~II~~ II

~~II~~ II

~~II~~ II

~~III~~ III

~~II~~ II

II

III

II

II

C5

7-22-61

Rollers-

190624 - 777489
100 25
4448
27 50 29
4950

Turbat. 100

Tanner. 50

Smelt. 50

Flat head. 100

Cod. 5

Pilch. 100

black cod. 3

eel pout.

Halsbut in bag D198

C9

7-28-61

Rollers

780316 -

193502

777429

190624

2527

2878

Yellow fin sole - 1000

Leptasterias - 50

Pollack - 100

Basket stars - 10

Cod - 50

Sponge - 100

Ball head - 100

Tunners - 100

Sand fish - 10

Hairy - 5

Rock - 100

Lemon - 5

Flat head - 100

Turbot - 50

Habitat in sak - D 185 spec. tag

Inverte in K580

Fish very small.

No king crabs this haul.

D9

7-28-61

Rollers

195331 -

702143

193502

780316

1829

1827

Turbot - 50

H2S shine bed. phenol

Pollack - 100

Sponge - 500 lbs.

Yellow fin - 200

Tunners - 50

Ball head - 50

Leptasterias - 10

Lemon sole - 5

Hairly - 1

Flat head - 100

Shrimps - few small

Parchment - 100

Clams - 1

This tour full of stink sponge.

So did not take sack of inverts.

D10

7-28-61

Rollers

197740 - 784553

197740

2909

784553

2410

Cod - 10

Flat head sole -

Yellow fin sole -

Pollock - 100

Rock sole - 500

Turbot - 100

Ballhead - 10

K-581 - Invert bag

K582 small king crabs.

D186 - spec. tag on Halibut bag.

Leptasterias - 20

Basket Star - 3

Sponge - 300 lbs.

Tanner - 50

Hairy - 2

E9

7-29-61

Rollers

200564 - 787378

197740

2909

784553

2410

yellow fin sole - 500

Pollock - 100

Flat head sole - 200

Ballheads - 50

Cod - 25

Turbot -

Lemon sole - 10

Rock - 200

Ray sole - 10

Pomfret - 100 -

Invert in bag K583

Leptasterias - 5 -

Tanner - 100

Sponge - 500 lbs.

E-10

7-29-61

789115 (see bottom of page)

Rollers Roller must have hit snag - completely demasted - only handle bar and one meter left.

Flat head sole - 500

Tanagers - 100

Yellow fin - 500

Leptasterias - 50

Cod - 50

Sponge - 200 lbs

Turbot - 100

Hairy crab - 3

Pollack - 100

Sea Pouches - 100

Inverte in bag K584

789115
787378
1737

only one meter reading
roller broke off

E-11

7-29-61

Rollers 790399
789115 -
124

790399 =
60725

could not make first reading on meter before net. glass too foggy.

Pollack - 50

Tanagers - 10

Yellow fin sole - 500

Sponge - 800 lbs

Flat head sole - 200

Bull head - 100

Sculpin - 8

Haul full of small king crabs.

~~K585~~ ~~K586~~ ~~K587~~ ~~K588~~ ~~K589~~
K590 - Misc. Invert.

Small king crabs for Doug in rats.

K585, K586, K587, K588, K589

1961 - P
"Rite in the Rain."
WATERPROOF
LEVEL BOOK

FILLER No. 311

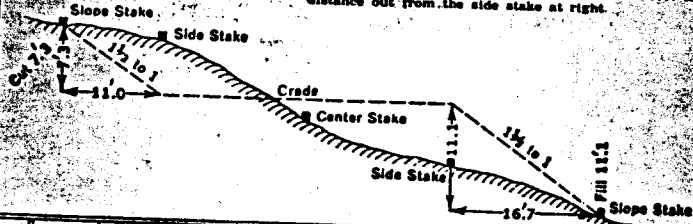
PARAGON 1961 CRUISE
KING CRAB INVESTIGATION
BOTTOM FAUNA Book # II

a product of
J. L. DARLING CORPORATION
BROWNS POINT TACOMA, WASHINGTON

Book 2 of 2

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
Roadway of any Width. Side Slopes 1 1/2 to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

Frozen Samples - Meat Content.
New Shell

Size	Live wt.	tag No.	Size	Live wt.	tag No.
110			150		
120			160		
130			170		
140			180		

F-11

7-30-61

<u>Roller</u>	602807-	792480
	601725	790389
	1082	2091

yellow fin sole - 1000	Tanner - 100
Flat head sole - 800	Lyphartins - 50
Lemon sole - 100	Hairy - 5
Cod - 50	George - 500 lbs
Pollock - 100	
Turbot - 200	
Herring - 2	
Pachara - 100	
Bull head - 50	
Rock sole - 200	

Inventory in K 591.

F10

7-30-61

Rollers $\frac{795078}{798410} - \frac{606509}{607807}$
 $\frac{2498}{2498}$

Yellow fin sole - 1000 Tannera - 50
 Flat head sole - 1000 Sponge - 5006 Use
 Trout - 500 Hairy - 10
 Lemon sole - 100 H. Hyacinth - 50
 Bullhead - 200
 Rockers - 200
 Pollack - 50
 Rock sole - 1000

Inverte in bag K592

Haul very heavy - bag straight down
 off side of boat.
 Net rigged along hanging from
 center to almost to extension
 of foot rope.

F9

7-30-61

Rollers $\frac{6095-1}{6065-9} - \frac{708057}{795078}$
 $\frac{2979}{2979}$

Yellow fin sole - 1000 Tannera - 100
 Pollack - 1000 Sponge - 5000 lb.
 Bullhead - 1000
 Rockers - 150
 Flat head sole - 200
 Cod - 10
 Skate - 1
K593 - Inverte in bag -

G97-31-61 Mon.Rollers 99909 - 611906798057
1822

yellowfin sole - 200	Leptasterias - 800
Turbot - 100	Tanner - 100
Flat head - 200	Hairy - 2
Pollock - 100	
Lemon sole - 100	
Bullhead - 100	
Poiskers -	

Invert in bag * 594W98-1-61 TueRollers 801821 - 614648799907
1912

yellowfin sole	Leptasterias -
Pollock	Burbot stars -
Turbot -	Tanner -
Flat head sole	Hairy -
Lemon sole	
Bullhead	

Invert in bag * 595

50

51

A8

8-1-61

Rollers 804668 - 616801
 80 4668
 2847
 61 6801
 2153

yellow fin - 1000	Smelts - 1000
Lemon sole - 100	Septentornis - 100
Flat head - 500	Tanner - 50
Pollack - 1000	Hairy - 2
Bull head - 100	Brittle star - 100

Inverts in bag K596

E2

8-2-61

Rollers 806324 - 619303
 80 6324
 1656
 61 9303
 2403

Flathead sole - 50	Sea Hens - 50
Turbot - 300	Few Basted stars -
Eel port - 50	Tanner - 200
Skate - 2	Smelts - 100
Cod - 4	
Smelt - 100	
Bull head - 50	

K597 - Invert in bag.

have Put third bag & Tag No.
 in another bag with no
 tag.

D3

8-2-61

Rollers 808658 - 621619

$$\begin{array}{r} 808658 \\ - 621619 \\ \hline 187039 \end{array}$$

Turbot - 500

Flat head - 200

Eel points - 50

Perch Red - 1

Bull head - 200

Skate - 2

Smelt - 20

Perch in bag - K598

Invest in bag - K599

One dead per seal in tow -
 Stunk rotten -

C3

8-3-61

Rollers 810009 - 623149

$$\begin{array}{r} 810009 \\ - 623149 \\ \hline 186860 \end{array}$$

Flat head - 100

Turbot - 100

Perch - 2

Eel points - 10

Smelt - 10

Cod - 2

Pollack - 10

Invest in bag K600

Perch in bag - ~~K598~~ K401

Wing E extension low along foot rope -

B3

8-3-61.

Rollers: 620704 - 816160
 623149 810049
 7458 8111

Rock on wing - Net ripped in wing.
 Hung up on this Town

Turkey - 50

Tanner - 10

Bull head - 3

Mudbranch - 50

Flat head -

Pollack - 25

Inverts in bag - K402

Bull head in K403

Size	Shell -	New	Old -	
110				
120				
130				116 - 125
140				126 - 135
150				136 - 145
160				
170				
180				
190				
200				
<hr/>				
113-117				
118-122				
123-127				
128-132				
133-137				
138-142				
143-147				

B4

8-3-61

Rollers 810142 - 626282
 51616 - 62090
 5578

Turbot - 100 Turms - 20
 Flat head sole - 100 Keep -
 Eel pouts - 100
 Black Cod - 10
 Pollack - 25
 Bull heads - 10
 Rex - 5
 Smelt - 10

Insects in bag K-404

Set traps out but could not see them
this time.

	Taken		In Tank	
	New	Old	New	Old
105				
113-117				
118-122				
123-127				
128-132				
133-137				
138-142				
143-147				
148-152				
153-157				
158-162				
163-167				
168-172				
173-177				
178-182				
183-187				
188-192				
193-197				
198-202				

8-4-61

B5

Rollers 815681 - 608826
 $\begin{array}{r} 815681 \\ 810142 \\ \hline 85399 \end{array}$ $\begin{array}{r} 608826 \\ 606282 \\ \hline 254 \end{array}$

Flat head sole - 1,000 Kelp - 1
 Herring - 10 Tunnies - 10
 Turbot - 800 Jelly fish - 1
 Pollack - 2,000
 Bull head - 50
 Black Cod - 10
 Skate - 2

Male ♂ from K-405 to K409
 ♀ from K-410 to K411

No insects collected this tow.

5 male King crabs for museum specimens
 in bags: K405, K406, K407

K408 and K409.

7 King crabs in 2 bags K410 and K411.

8-4-61

A5

Rollers 818103 - 630206
 $\begin{array}{r} 818103 \\ 815681 \\ \hline 22422 \end{array}$ $\begin{array}{r} 630206 \\ 628826 \\ \hline 1380 \end{array}$

Turbot - 20 Leptasteria - 3
 Eel pouts - 10 Kelp - 5
 Rockfish - 50 Asterias - 2
 Rock sole - 15 Tunnies - 20
 Pollack - 10 Hairy - 10
 Hags - 1
 Insects in bag - K412

8-4-61

Z5

Rollers

820383-	634718
818102	630206
2221	4512

Turbot - 200

Black Cod - 1

Flat head - 100

Bullhead - 50

Rox sole - 25

Starfish - 1

Hairy crab - 20

K413 Inverte in bag.

2 halibut in sack D187 spec. tag.

END OF

Paragon 1961

Cruise.

This is Bottom Fauna
Book No. II.