

1960 #1
WATERPROOF
LEVEL BOOK

FILLER
FORM No. 311

STATION PATERU

1960

STATIONS: Z5, A5, A6,

B7, B8, C8, C9, D9, D10,

E11, F11, F10, F9, E9,

E8, D8, D7, C7, C6, C5, B5,

A4, B4, C4, D4, D5, D6, E6, E7

* E7, E8, G8, G9, G10, G11, G12, F12,

E12, F13, F14, G13, H13, H14, I14

BOOK No. 1

2 AUGUST - 21 AUGUST

Waterproof
WATERPROOF

A Product of

L. DARLING CORP.
BROWNE POINT, TACOMA, WASH. U. S. A.

Station	1 ST	2 ND	3 RD
Wire	15' 10"	15' 10"	15' 10"
	16' 3"	16' 3 1/2"	16' 3"
Meters	29255	91796	
	30214	84278	
	959	2482	
26 Emerus			
355 collected <i>collected</i> <i>collected</i>			
no medusae or starfish.			
5 halibut			
no dredge sample - lowered twice, no go.			
no bottom sample, sampler lost (last years rope)			
mostly flat fish.			

Haul 1

A-5

Wire	1 st	2 nd	3 rd
	15' 9 1/2"	15' 9 1/2"	15' 10"
	16' 2 1/2"	16' 2"	16' 2"
Meters	30215	94378	Deck meters - 278 ^o 378
	31804	97528	
	1689	3150	
no bottom sample as is; taken from dredge			
1 Eumacrus			
32 C. ocellis			
Bucket stars present - ext. 50			
3 hermit crabs. frozen AN 998 with			
1 hermit. 10 hermit			
Bucket stars & sea pens frozen - AN 999 pm.			
Dredge sample taken - frozen			
mostly fish & mainly small fish.			
1 making out, small.			

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.Waterproof
WATERPROOF

A-6

Wire	1 st	2 nd	3 rd
	15' 10 1/2"	15' 10 1/2"	15' 11"
	16' 5 1/2"	16' 5"	16' 5"
Meters	31904	97828	
	33633	100090	
	1729	2562	
29 C. ocellis			
1 Eumacrus			
1 making crab			
1/2 no sp. put in AN 997 mollusk			
Sample 1 1/2" long			
Many Col and hermit, some small fish.			
Rocks on bottom 3" diameter, many in net.			
Sample AN 997			
Fish for fish in AN-996			
Saw 2 brittle stars, but lost in shuffle, doubt if there were any more.			
Bottom sample lost in rocks. all gone!			

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

BG

Wire	1 st	2 nd	3 rd
	15'11"	15'9 1/2"	15'10"
	16'2 1/2"	16'1 1/2"	16'2"

Pollen		
33633	100090	
33760	102460	
127	2370	

121 *C. ophio* - all large

~~Bracket stars from AN 995~~
 Bracket stars frozen AN 995 Dr. Olg.
 Mollusks frozen AN 950

The bracket stars are possibly
 from the A5 station and were
 retained in the net.

High Seas

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.Return to Owner
WATERPROOF

BT

Wire	1 st	2 nd	3 rd
	15'10 1/2"	16'0"	16'1 1/2"
	16'6"	16'6"	16'6"

Pollen		
33760	102460	
34867	105192	
1107	2732	

112 *C. ophio*

44 asteroids, probably 20 in net.
 2 *Erinacrus*
 3 *habulid*

Hermit crab sample AN-994

High Seas

BB

Wire.	1 st	2 nd	3 rd
	15' 11"	16' 0"	15' 11"
	16' 6 1/2"	16' 7"	16' 6 1/2"

Roller.		
	34867	105192
	34924	108831
	47	3639

90 asterias + about 20 in net.
 5 erimacrus
 3 c. optulis.

Sample AN 993 many hermit crabs
 in sponge - all in bag.
 few gastropods.

Sample of asterias in bag.

Highest Seas.

No large Barnacles for Dr. Henry as
 of today

J. W. DARLING CORP.
 TACOMA, WASH. U.S.A.

08

Return to Rain
 WATERPROOF

Wire.	1 st	2 nd	3 rd
	15' 10"	15' 10"	15' 10"
	16' 3 1/2"	16' 2"	16' 4"

Roller.		
	34924	108831
	34999	111604
	75	2773

Highest Seas.

51 c. optulis.
 28 asterias
 4 Erimacrus

sponge & hermit crabs.
 few gastropods.

Sample AN-992 brown bag.

Dr. Henry Sample of coral & Tunicate AN-991
 white bag.

1 cancer argus.

All except for very small amount, of the
 sponge is in the bag AN-992.

BOOK-NO. 310 FILLER-NO. 311 LOOSE LEAF-NO. 311
 No SHRIMP TO DATE, FEW CRABS SP. RECOVERED

C9

Wire	1 st	2 nd	3 rd
	15'10 ¹ / ₄ "	15'10 ¹ / ₂ "	15'11"
	16'5 ¹ / ₂ "	16'5"	16'3 ¹ / ₂ "
Rolls	34989	111604	
	35295	114133	
	296	2529	

58. Asterias

39. C. ophio

Basket stars present, maybe 15 all large

12. Spongiacrus

4 Holoth.

AN-980 & AN-989 are samples brought

Head to Amaka Island.

High Seas. Rough.

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D9

Return to Owner
WATERPROOF

Wire	1 st	2 nd	3 rd
	15'9 ³ / ₄ "	15'9 ³ / ₄ "	15'9 ¹ / ₂ "
	16'2 ³ / ₄ "	16'2"	16'2"
Rolls	35305	114135	
	37397	116227	
	2092	2092	

112. C. ophio

5 Spongiacrus

Sample of
each in
bag

50 pounds of elephant sponge
10 pounds of spongy tube sponge
1 *Hyas lyata* in bag
Some *C. regalis*.

About 20 large starfish as in bag

1 Urin

Dr. Ollig AN-988

Mollusks of starfish AN-986

Sponge AN-984

Two Rough for total spread

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

8

9

D10

39114
37397
2602118830
116227
2603J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

E-10

Ketchikan
WATERPROOF

Win.

1st

15'9 3/4"

16'3"

Roller.

37397

116227

2602

39999

118830

2603

1st

2nd

Range

5°15'00" 5°12'40"

Distance

328

5 *C. ophitea*8 *Stomatopoda*

25 pounds of sponge AN 982 *

all rock crabs taken are in bag.

Some were large starfish, 6, as seen
on previous drag.

Some hermit crabs

* AN 983 discarded

Oh. The winches along, the hummers bang;

its start of another year.

While ringing through the rooms and halls,

and from tier to tier,

Comes the project leaders cry

: "They need me here".

Win.

1st

2nd

3rd

15'10 1/4"

15'10 1/4"

15'10 1/4"

16'4 1/2"

16'4 1/2"

16'3 3/4"

Roller.

39999

118830

43581

122412

3582

3582

Angle

Rough not set out

Distance

43581

39999

3582

122412

118830

3582

AN-981 - Sample w/ some shrimp for Dr. Illig.
AN-980 Dr. Illig's (bracket & football).Some were large starfish, only 3 or 4
all the Venus crabs found were in
sponge & were put in bag.50 pounds of sponge
10 *C. ophitea*'sAll brittle stars found were in sponge &
are in bag.

* Few scale worms in bag.

The sponges were all large & discarded &
very holed.

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

46222 125128
 43581 122412
 2641 2716

E II.

Wire. 1st 2nd 3rd
 15'10³/₄" 15'10¹/₂" 15'10"
 16'4" 16'4¹/₂" 16'3³/₄"

Roller. 43581 122412
 46222 125128
 2641 2716

Too Rough for door spread measurements.

1 Split lift

Fine sand bottom.

Dr. Alg. AN-978 in large hermit crab

Sample- AN-979

along with starfish, only one type caught, all of them large.

On AN-979 are all the types etc. types of crabs & shrimp taken. (no count). probably should double number in bag for true abundance.

80 pounds of sponge as in bag.

J. L. DARLING CORP.
 TACOMA, WASH. U. S. A.

F II

Waterproof

Wire. 1st 2nd 3rd
 15'10¹/₂" 15'10" 15'10"
 16'4¹/₂" 16'4" 16'3¹/₂"

Roller. 46222 125128
 2268 48490 127423 2295

Too Rough for door spread measurements.

1 Split

13 copilids

no starfish

no eunoids

2 hermit

20 pounds of sponge.

Sample AN-977.

all types of hermit crabs seen as in bag, difficult if mixed more than 2-3.

127423 48490
 125128 46222
 2295 2268

Booked Shingo Maru at 10:00 and
departed 13:30 after tow of ship.

Last indication of Russian craft
activity in Bering Sea was July 10.

Shingo Maru will be here until
25 August, then follow way back.

4 Kawasaki boats & 1 scow boat.
5 barges.

P.S.

While in Ditch on 10th of August,
Christine Force reported a mother
ship operation east of Pribilof Is. 2-3
days earlier.

J. L. DARLING CORP.
TACOMA, WASH. U.S.A.

F10

50466
48490
1976
Rite & Rain
WATERPROOF

129742

127423

2319

Wire

1st

2nd

3rd

15'34" 15'11" 15'10"

16'5" 16'5" 16'3"

Roller

48490 127423

50466 129742

1976

2319

1 split

10.8 C. of photo

2 cameras.

150 pounds of sponge.

AR-976 Sample

All types of jetties in bag. Probably
quite a few more in sponge & discarded,
estimate 3 miles on little stars &
2 times on lugs.

Too rough for son speed measurements

F 9

53686	132977
50466	129742
3190	3235

Wire	1 st	2 nd	3 rd
------	-----------------	-----------------	-----------------

15' 11"	15' 10 1/2"
16' 7"	16' 3 1/2"

Roller	50466	129742
	53656	132977
		3235

Too rough for ball spread measurements

AN-925

No brittle stars

100# sponge

Maybe 2 or 3 ~~many~~ many types as listed

Eg

Waterproof

Wire	1 st	2 nd	3 rd
------	-----------------	-----------------	-----------------

15' 10"	15' 10"	15' 10"
16' 4 1/2"	16' 4"	16' 4"

Roller	53656	132977
	55634	135718
		2742

Too rough for ball measurements

AN-924 Dr. Jelly. Brain & core

AN-923 Sample of cuts, chips, etc.

about 10# sponge

30 e. ophiuroids

All brittle stars of cuts seen are in box doubt if missed any more than 10 cuts.

55634	135718
53656	132977
1978	2742

E8

1st	2nd	3rd
16'0"	15'10 1/4"	15'10"
16'5"	16'3 1/2"	16'3"
55634	135719	
58372	138602	
Too rough for door measurements		
41 a. ophids.		
2# sponge		
all hermit & shrimp in bag.		
few fish.		
58372	138602	
55634	135719	
2758	2883 ✓	

L. D. DRESSING CORP.
TACOMA, WASH., U.S.A.

D8

Ketchikan, Alaska
WATERPROOF

1st	2nd	3rd
15'10 1/2"	15'11 1/2"	15'10 3/4"
16'4"	16'4 1/2"	16'5"
58372	138602	
61319	141819	21311
Too rough for door measurements		
43 c. ophids.		
AN-921		
2# sponge		
few coral, forams, fish, small catch.		
Many, many, hermits, all in bag.		
61319	141819	
58372	138602	
2977	2817	
	3217	

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

D7

Wire	1st	2nd	3rd
	15'9 ³ / ₄ "	15'10"	15'10 ¹ / ₂ "
	16'2"	16'2 ³ / ₄ "	16'2"

Roller	61319	141819
	64445	144942

Too Rough for door spread measurements

15 basket stows, all large

AN-920 sample

64445	144942
61319	141819
3126	3123

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C7

Ketchikan
WATERPROOF

Wire	1st	2nd	3rd
	15'10 ¹ / ₂ "	15'10 ⁴ / ₄ "	15'9 ¹ / ₂ "
	16'3 ¹ / ₄ "	16'2 ³ / ₄ "	16'2 ³ / ₄ "

Roller	64445	144942
	66791	147394

50 fathoms depth - 60 fathoms wire - no go.

51 C - split

AN-919 sample

All berms, bank taken

All light at sawd.

Sight better habitat fishing than crab fishing

66791	147394
64445	144942
2346	2452

C6

Wing	1st	2nd	3rd
	15' 9 ³ / ₄ "	15' 9 ¹ / ₂ "	15' 9 ¹ / ₂ "
	16' 2"	16' 2 ¹ / ₄ "	16' 1 ³ / ₄ "

Roller	66791	147394
	69468	150073

Looks out but light too poor for measurements

57 Baskets

16 C. Ophids

10 Sclerites

1 skate & few egg cases

AN-918

69468	150073
66791	147394
2677	2679

J. L. DARLING CORP.
TACOMA, WASH. U. S. A.

C5

Return to Owner
WATERPROOF

Wing	1st	2nd	3rd
	15' 9 ³ / ₄ "	15' 10"	15' 10 ³ / ₄ "
	16' 2 ³ / ₄ "	16' 2 ³ / ₄ "	16' 2 ³ / ₄ "

Roller	69468	150073
	72321	152942

Too rough for down spread measurements.

73 C. ophids

no stuffish

1 odd skullhead in formation

Sclerites

AN-917 Sample

5 Seapens, all small 12-14"

Pouch, wet, cold; King Crab investigations inhumanity to man. (measurements himself).

72321	152942
69468	150073
2853	2869

B5

Wire	1st	2nd	3rd
	15' 9 1/2"	15' 9 1/2"	15' 10' 4"
	16' 2 1/2"	16' 2' 4"	16' 2' 4"

Roller	72321	152942
	73452	155632

Too much for long period measurements.

38 *C. ophidius*

AN-916 Sample

Many all points.
1 habitat.

Really must have done a heap of sinning.

Just plain miserable.

73452	155632
72321	152942
131	2690

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TACOMA, WASH., U. S. A.

A4

Rite in the Rain.
WATERPROOF

Wire	1st	2nd	3rd
	15' 9 3/4"	15' 11"	15' 11"
	16' 1 3/4"	16' 3 3/4"	16' 2 3/4"

Roller	73470	155650	← estimates.
	76819	158921	

Too far out for measurements.

AN-915 Sample

63 *C. ophidius*.

small of to catch.

Some large all points.

no stuff.

few shrimp - small

Added length of chain 5' long to center of foot rope after station B5.

76819	158921
73470	155650
5349	3271

B4

Wire. 1st. 2nd 3rd
 15' 9³/₄" 15' 9¹/₂" 15' 9³/₄"
 16' 1¹/₄" 16' 1³/₄" 16' 1³/₄"

Roller. 76819 158921
 79894 161995

Too deep for measurements.

AN-314

30 midbranches

67 c. ophiids

Few fish

All crabs (king) large, clean bag.

all shrimp in bags

• 2 odd bullheads

79854 161995

76819 158921

3075 3074

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

C4

Return to Rain
WATERPROOF

Wire. 1st 2nd 3rd
 15' 9¹/₂" 15' 10¹/₄" 15' 9¹/₄"
 16' 1" 16' 2" 16' 1"

Roller. 79894 161995
 82577 164678

Too deep for measurements.

AN-313 Sample

6 c. ophiids

All shrimp in bag.

only 1 starfish

all basket stars in the sea pens in bag.
may, 4 times as many sea pens

50 midbranches

many fish, 1 dogfish, 4 odd bullheads

1 Echinurus

82577

164678

79894

161995

2683

2683

DA

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

DS

Return to the
WATERPROOF

WIRE	1 ST	2 ND	3 RD
	15' 9 1/2"	15' 9 1/2"	15' 9 1/2"
	16' 2 1/2"	16' 2"	16' 2"

Roller.	82577	167478
	85374	167476

85374	167478
82577	167478
2807	2808
2797	2798

WIRE	1 ST	2 ND	3 RD
	15' 9 1/2"	15' 9 1/2"	15' 8 1/4"
	16' 2 1/2"	16' 2 1/2"	16' 3"

Roller	85374	167476
	88085	170188

AN-912 Dr. Slig.
AN-911 Sample

AN-909 & 910 sample

Hundreds of sea pens, 93% of which had basket stars attached.
Only 3-4 large basket stars, these not on sea pens.
3 *C. ophidion*.

Few starfish & 1 dog fish.
Few shrimp, all washed.

23 *C. ophidion*
maybe some basket stars, but probably left in net from last drag.
Many small shrimp.
" gastropods.
Few fish.
no starfish.
2 other crabs in bag.

Call out the project leaders and regional directors, to sail the Bering Sea.

Call out administrators and research coordinators
But for God's sake don't call me.

88085	170188
85374	167476
2811	2712

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

D6				E6			
Wine.	1st/	2ND/	3RD/	Wine.	1st/	2ND/	3RD/
	15' 9 ³ / ₄ "	15' 9 ³ / ₄ "	15' 9 ¹ / ₂ "		15' 11 ¹ / ₂ "	15' 10 ¹ / ₄ "	15' 10 ¹ / ₄ "
	16' 5 ¹ / ₂ "	16' 2 ³ / ₄ "	16' 3 ¹ / ₄ "		16' 4 ¹ / ₂ "	16' 4 ³ / ₄ "	16' 4 ¹ / ₂ "
Roller.	88085	170188		Roller.	91434	173536	
	91434	173536			94784	176887	
AN: 908 & 907	Samples			AN - 905 & 906	Samples,		
60 c. ophiu.				13 c. ophiu.			
Probably 100 "unarmed" brittle stars. Only				12 large basket stars.			
1 "armed" brittle star in side gastropod				Dredge full up to top, washed down			
shell.				Stomach samples taken			
Few large basket stars and 5.				all shrimp & crabs in bag.			
1 deep fish.				about 300 "unarmed" brittle stars.			
about 20 shrimp.				Bottom fine grey sand & mud.			
one or two crabs in bag.							
2 very small pieces of sponge 1" diameter.							
	91434	173536			94784	176887	
	88085	170188			91434	173536	
	3349	3348			3350	3351	
					AN-867	Dredge Samples	

E7			
	1st	2nd	3rd
Wire	15' 9 ³ / ₄ "	15' 9 ³ / ₄ "	15' 9 ³ / ₄ "
	16' 3"	16' 3 ¹ / ₄ "	16' 3"
Roller	94784	176887	
	97527	179631	
Angle	6° 6' 40"		
Distance	236 To	280 To	310 yds - all good
	16 C. <i>ophidius</i> .		not washed down.
	Dredge samples, all, including mud in cartons.		
	about 150 little stars, all unmarked except		
97527	one which is in bag.		
34784	Many few slugs, S,		
2743	1 other help crab in bag.		
179631			
17587	Barnacles for Dr. Hany in Bag.		
2744	25-30 basket stars, large.		
	small basket stars attached to which a ma-digger.		
	AN-868 sample		
	228 parts present in every dredge activity		

F7				
	1st	2nd	3rd	
Wire	15' 10'	15' 10 ¹ / ₄ "	15' 10 ¹ / ₄ "	
	16' 4 ¹ / ₄ "	16' 4"	16' 4 ³ / ₄ "	
Roller	97527	179631		
	100757	182861		
Angle	6° 40' 40"	6° 40' 40"	6° 32' 30"	6° 29' 33" 6° 35' 40"
Distance	272	288	372	342 - 355 341
	1st	2nd	3rd	4th 5th
	Dredge 1/2 full			washed down.
	120 F. of cable out + 60 feet of wire = 180 fathoms = 360 yds			
	if all out straight ∴ 340 yards above net to retrieval.			
	Other range fender for the birds. Calculated max			
	distance is 316 yards without warp.			
	Many little stars, maybe 200.			
	25-30 basket stars.			
	Almost all fish in catch were lemniscodes.			
	Sample AN-904 #903.			
	100757	182861		
	97527	179631		
	3730	3230		

F8			
Wire	1st	2nd	3rd
	15' 11"	15' 10 1/4"	15' 10 1/4"
	16' 5"	16' 5"	16' 4 1/2"
Roller	100757	182861	Fi = 1.1 (1.5)
	103895	185999	
	1st	2nd	3rd
Angle	5° 45' 40"	5° 48' 30"	
Distance	372	← Radial axis, Range fishes out of order?	
	Tried letting ball out on string to meet other, no go.		
	8 c. ophiurids.		
	Many lemon soles.		
	2 other starfish like large one in bag.		
	All other starfish in bag.		
	50-75 brittle stars all unpaired, except for one inside gastropod shell?!		
	103895	185999	
	100757	182861	
	3138	3138	
	Maybe 200 as many June shrimp in bag.		
	AN-902 Sample		
	Apparatus that covered brittle star sole a sheet while unpaired about in open.		

G8			
J. L. DARLING CORP. TACOMA, WASH., U.S.A.			
Return to Recipient WATERPROOF			
Wire	1st	2nd	3rd
	15' 10 5/8"	15' 10 1/2"	15' 10 1/2"
	16' 6 1/2"	16' 6"	16' 6 1/4"
Roller	103885	185999	
	106832	188936	
	1st	2nd	3rd
Angle	6° 52' 30"	6° 39' 10"	
Dist.	264	276	
	288 calculated maximum. [70-71° angle.]		
	90% yellowfish 8" average, 5% lemon		
	3-4 mud stars		
	Few brittle stars		
	muddy bottom.		
	All starfish saved (containers) AN-801		
	Sample of fish in bag.		
	Few say 10 pollock 10 cod.		
	About 50 brittle stars & 50 sea urchins.		
	Sample AN-901		
	Some mud star - 3-4		
	Fish sample AN-802		
	106832	188936	
	103885	185999	
	2937	2837	

FILLER-NO. 311

LOOSE LEAF-NO. 312

15 August. about 68, slightly ENE. 4 mi


21 druggers and 1 mother ship. (saw 14).

GYOKUEI MARU  Tokyo. (5000 tons)

2 Kawasaki type boats for unloading, standard procedure as in 1956.

Danish Sloop, with 2 boats, 300 yards apart
3-4 thousand pounds in baggon for mother ship.

16 August 4.5 mi WNW of 68. (6-7,000 tons)

RENSHIN MARU  TOKYO

21 druggers counted & specified.

TK 1331 Fish meat & freeze. little.

Go home at end of month - August. 6 mo out

Sole cod, herring, cod, pollock.

Saw Russian schooner 2 mo ago.

2 Kawasaki type boats for unloading.

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

68

Pat on the Rain.
WATERPROOF

Wire	1st	2nd	3rd
	15' 11"	16' 1/2"	16' 1"
	16' 7"	16' 7' 4"	16' 6' 1/2"
Roller	106832	188836	
	109724	191826	
Angle	7° 8' 11"	6° 51' 40"	
Distance	284	286	
	Wire angle 73°		

1 Eumacrus.

10-12 C. ophiu.

4 asteroids.

Very few gastropods or bivalves.

90% yellowfin, small, Remains,

lemon flunkhead, 2 large Cod, 3 halibut.

AN-806 sample

109724 191826

106832 188836

2892 2890

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

10

J. L. DARLING CORP.
TACOMA, WASH. U.S.A.

11

Pat. in the Rain
WATERPROOF

Wire. 1st 2nd 3rd
16' 3/4" 16' 3/4" 16' 3/4"
16' 9 1/2" 16' 9" 16' 8"

Roller. 109724 191826
113398 195501

Through for door measurements

Loadsp. 4" in bottom, washed down
1 *Erinnacrus*.

Slightly over 100 *Asterias* in catch.
about 15-20 c. *ophidia*.

90% yellowfin.

No *amids*.

12 col, 3 very large. *Tumonia* *Abos*
taken.

1# of sponge, sample in bag

Sample AN-805

AN-803 Dr. Dilly

113398 195501
109724 191826
3674 3675

Wire. 1st 2nd 3rd
15' 10 1/4" 15' 10 1/4" 15' 10 1/4"
16' 5" 16' 5" 16' 5"

Roller. 113398 195501
113400 195509

Angle. 6° 24' 20" 6° 22' 50" 5° 43' 30"

Dist. 316 317 316

many *truller*.

44 c. *ophidia*.

1 *Erinnacrus*

all *onura* in bag AN-807

few large col. 3-3.5'

all *hermits* in bag very few. AN-808
one "armed" brittle stain in shell w/ hermit
col. no "unarmed".

5 col, 2 with *herms*, one other 6th,

had *herms*, was about 15" (thrown overboard).
in length.

Some sponge 3-4", sample in bag

195509

195501

3068

1# of smooth type (orange)

Stud broke off as roller.

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

G12

Wire. 1st, 2nd, 3rd,

15' 10³/₄" 15' 10¹/₂" 15' 11"16' 5" 16' 3¹/₂" 16' 4¹/₄"

Roller. 113400

116495

Angle 6° 7' 10" & 6° 10' 50" 6° 8' 40"

Dist. 320 316

22 *Erismacrus*16 *c. aphidis*many *hellebals*Some *omnino*

60# sponge

All *colobacem* were saved. Actually

maybe twice the no. of each sp.

AN-809 & AN-810

116495

113400

2095

J. L. DARLING CORP.
WACOMA, WASH. U. S. A.

F12

Waterproof
WATERPROOF

Wire. 1st, 2nd, 3rd,

15' 10¹/₂" 15' 10¹/₂" 15' 10"16' 6" 16' 5¹/₄" 16' 2¹/₄"

Roller. 116495

118661

Too rough for deep spread measurements

Just plain miserable.

25 *c. aphidis*9 *Erismacrus*

200# sponge

Sand bottom.

AN-8109 sample

not sure if wires in bag were from this station or what remained in net after last drag.

118661

116495

2166

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

E12

Wno.	1st	2nd	3rd
	15' 11 1/4"	15' 11"	15' 11"
	16' 7 3/4"	16' 7 3/4"	16' 6 1/4"
Roller.	118661		

121562

Two rough for down spread measurements.

10 *Sinacrus*5 *c. ophioides*.

All hermit crabs in bag. except 1.

20" sponge as in bag. AN-870

50% of catch halibut.

no shrimp or other crabs.

AN-871 Dredge sample in bag + 3 crabs.

Dredge 6-7" of sand, washed down.

10-12 large 5 armed starfish (dark brown).

121562

118661

2901

J. L. DARLING CORP.
TACOMA, WASH. U. S. A.

F13

Ketchikan Rain
WATERPROOF

Wno.	1st	2nd	3rd
	15' 11"	15' 10 1/2"	15' 10 1/2"
	16' 7"	16' 6 1/2"	16' 6 1/2"
Roller.	121562		

24170

Smells too large for down spread measurements.

4 *c. ophioides*.6 *Sinacrus*

All crabs in bag.

few otters - 2-4 groups in bag.

20-30 basket otters of a bright orange, coloration different from others. Maybe 1/5 had brood on them - in bag.

AN-804 Halibut.

124170

121562

2608

IFC-61449 Sample

Joy! the sun was out 2 hours today!

F14

Wire	1 st	2 nd	3 rd
	16' 1/2"	16' 0"	16' 1/4"
	17' 1"	16' 11 1/2"	16' 11"
Roller	124170		
	126467		
Walrus IFC-61448			
Sample IFC-61447			
3 Sponges			
90% patch corals 150-200 individuals			
all hermit crabs in bags			
126467			
124170			
2297			

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

G13

Klein & Co.
WATERPROOF

Wire	1 st	2 nd	3 rd
	15' 11"	15' 10 1/2"	16' 1/2"
	16' 5 1/4"	16' 5 1/2"	16' 6 3/4"
Roller	126467		
	129425		
Angle	6° 50' 30"	6° 9' 00"	6° 1' 00"
Dist.	296	280	295
6 Sponges			
2 c. opilio			
I.F.C. - 61446 Sample			
10 basket stars			
10-12 sponges			
2 foot balls			
all hermits & other crabs in bags			
5 [#] sponges as in bags			
129425			
126467			
2958			

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

43

A 13

Wire.	1st	2nd	3rd
	15' 10 ³ / ₄ "	15' 10 ³ / ₄ "	15' 10 ³ / ₄ "
	16' 6 ¹ / ₂ "	16' 6 ¹ / ₂ "	16' 5 ¹ / ₂ "
Rolls.	129425		
	132055		
Angle.	6° 8' 10"	6° 10' 50"	6° 6' 10"
Dist.	312, 306	311	318

1 *Simnacus*
 few onions, 80% in bag
 3 *astrias*

I.F.C. 61426 Sample,

50% of catch was habitat.

132055

129425

2630

S. J. L. DARLING CORP.
TACOMA, WASH. U. S. A.

A 14

Return to him.
WATERPROOF

Wire.	1st	2nd	3rd
	15' 11"	16' 1"	16' 0"
	16' 7 ¹ / ₄ "	16' 8"	16' 7 ¹ / ₄ "
Rolls.	132055		
	134679		
Angle.	6° 26' 10"	6° 18' 00"	6° 18' 10"
Dist.	285	288	290

2 *Simnacus*

Maybe some *brachidactylus*, but probably those from last bag as net, same w/ onions.

I.F.C. - 61427 Sample

134679

132055

2624

I 14

	1st	2nd	3rd
Wire.	16' 1/2"	16' 1/2"	16' 3/4"
	16' 9/2"	16' 9/4"	16' 8"

Roller. 134679
137204

Too rough for low speed, mammals.

1 erinacus
few mammals

I.F.C. - 6140 Sample
Probably few or more, rather than from
previous drags.

All ants in the bag

300 - large actinias, 8" diameter.

137204

134679

2525

1860 #2

Put in the Rain

WATERPROOF
LEVEL BOOK

FILLER
FORM No. 311

STATION PATTERN 1960

STATIONS: J14, J13, I13, H12, I12,
J12, J11, J10, I10, I11, H11, H10, H9,
I9, H8, G7, F6, E5, E4, E3,
D3, C3, B3, B4

Put in the Rain
WATERPROOF

A Product of
J. L. DARLING CORP.
BROWNS POINT, TACOMA, WASH. U. S. A.

Book No. 2

21 AUGUST - 30 AUGUST

Wire

1st

2nd

16' 0"

16' 0"

16' 10 1/4"

16' 9 3/4"

Notes

137204

40081

Too rough for down spread measurements

Few crinoids.

50-60 Asteroids.

I.F.C. 61402 Sample

Some for Dr. Sleg in box.

all crinoids in box.

~~40081~~

~~137204~~

~~2877~~

J/3.

WIRE	1st	2nd
	15' 11 1/2"	16' 3/4"
	16' 8 3/4"	16' 8 1/2"

COVER 140081
142261

two rough for spec moments

1 telmessus

all molusk shells & cuts in bag.

2 additional H. antecessus

Sample I.F.C. - 61403

Some for Pr. Sily in bag.

142261

140081

2180

J. L. DARLING CORP.
TACOMA, WASH., U.S.A.

I/3

Rite in the Rain
WATERPROOF

WIRE	1st	2nd	3rd
	15' 11"	15' 11"	16' 0"
	16' 7"	16' 6 1/2"	16' 7"

COVER 142261
145745

Angle 6° 51' 20" 6° 58' 40" 5° 52' 30"

Dist 284 280 283

1 Erimacrus

almost all mussel in bag.

2 additional bivalves referred: 400 & 600 mm lengths.

Sample I.F.C. 61405

Pr. Sily. I.F.C. 61404

All cuts in bag.

145745

142261

3484

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

A12

Wire.	1 st	2 nd	3 rd
	15' 11 ¹ / ₄ "	15' 10 ¹ / ₂ "	15' 10"
	16' 7 ³ / ₄ "	16' 6 ¹ / ₄ "	16' 5"
Power	145745		
	148362		
Angle	6°27'20"	6°28'30"	6°40'30"
Dist.	306	308	312

6 *Stomatopus*3 *e. opilio*.

Saw 1 "unnamed" brittle star.

paw. 4 *Alutaceus*

Few orions, all in bag.

Sample L.F.C. 61406

148362

145745

2617

Few chironomids by cuts brought up
in bag. None not molted shells.

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

I12

Return to the Rainier
WATERPROOF

Wire.	1 st	2 nd	3 rd
	15' 10 ¹ / ₄ "	16' 0"	15' 11 ¹ / ₄ "
	16' 6 ¹ / ₂ "	16' 7 ¹ / ₄ "	16' 6"
Power	148362		
	151102		
Angle	6°57'30"	6°12'30"	6°06'30"
Dist.	290	290	296

2 *Stomatopus*

Orions may have been from last drag, caught in net.

Sample L.F.C. 61407 - Partonimits sect.,
part orions.

151102

148362

2740

J12

Wree.	1st	2nd	3rd
	16' 1/2"	16' 3/4"	16' 1"
	16' 11"	16' 9 1/2"	16' 9 1/4"

Rever. 151102
154116

Flots disappeared in the fog. No by a measurement
was to be had.

Few (6) large starfish.

I.F.C. 61408 Sample

One oar in log, probably from past days.
Few shrimp, no crabs.

154116

151102

3014

J. L. DARLING CORP.
TACOMA, WASH. U.S.A.

J11

Klein & Rein's
WATERPROOF

Wree	1st	2nd	3rd
	15' 10 3/4"	15' 11 1/2"	15' 10 3/4"
	16' 8 3/4"	16' 9 1/2"	16' 8 1/2"

Rever. 154116
156920

Too foggy for low speed measurements.

I.F.C. 61409 Sample

I.F.C. 61410 Halibut

about 12 crabs.

No cucumbers.

156920

154116

2807

J10

L10.

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.Klein & Rein's
WATERPROOF

WIRE.	1 st ,	2 nd ,	3 rd ,
	15' 10 ³ / ₄ "	15' 11 ¹ / ₄ "	15' 11 ¹ / ₄ "
	16' 7 ¹ / ₂ "	16' 7 ¹ / ₄ "	16' 8"

Roller.	156920		
	159809		

Fog!

I.F.C. 61411 - Sample.

No. cucumbers.

1 Tridacna.

20 large starfish.

All sand shrimp seen are in log.

159809

156920

2889

WIRE.	1 st ,	2 nd ,	3 rd ,
	15' 11"	16' 3 ¹ / ₄ "	16' 11"
	16' 8 ¹ / ₂ "	16' 9 ¹ / ₂ "	16' 10"

Roller.	159809		
	162155		

Angle. 7° 16' 15" 6° 59' 50" 6° 27' 30"

Dist. 246 296

Approx. measurements for rough seas.

6 Tridacna

I.F.C. - 61412 Sample.

162155

159809

2346

On the past several stations there have been many sea urchins in the catch. maybe 1/10 of catch or more.

I II

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

H II

Ketchikan
WATERPROOF

WRE	1 st	2 nd	3 rd
	15' 10 ¹ / ₂ "	15' 10 ¹ / ₄ "	15' 10 ³ / ₄ "
	16' 7 ¹ / ₂ "	16' 6 ³ / ₄ "	16' 7"
Roller,	162155		
	164925		
Angle	6° 51' 35"	6° 41' 10"	7° 19' 40"
Distance	278	274	290

4 *Emmacerus*
 1 *C. ophio*
 20-25 *Arctostaphylos*

I.F.C. - 61413 - Sample.

164925
 162155
 2770

Saw only alutaceous on deck. None in
 bag.

WREB.	1 st	2 nd	3 rd
	15' 10 ¹ / ₂ "	15' 10 ¹ / ₂ "	15' 10 ¹ / ₂ "
	16' 7"	16' 6 ¹ / ₂ "	16' 5 ³ / ₄ "
Roller,	164925		
	167696		

Too foggy to range for long spread measurements

Arctostaphylos
 9 *ophio*
 15 *Emmacerus*

I.F.C. 61414 - Sample

167696
 164925
 2771

No leucis or succubus to date.

H10.

WRE	1st	2nd	3rd
	15' 10 ³ / ₄ "	15' 11"	15' 10 ³ / ₄ "
	16' 6 ¹ / ₂ "	16' 7"	16' 6 ³ / ₄ "

Roller, 167696
170785

Too foggy!

4 *Trinacrus*
1 *C.ophilis*

I.F.C. - 6145 - Sample:

All crabs in bag. Pick & catch carefully
went over. (Some during other deep samples)
Stomach sample.

3 Delays. First 2 blanks, 3rd w/out
any food or mud, just shells came up
after towing 2 minutes. Threw out one
bucket star a 5" diameter (eaten up, I.E.)

170795
167696
3089

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

H9

Return to Owner
WATERPROOF

WRE	1st	2nd	3rd
	15' 10 ³ / ₄ "	15' 10 ³ / ₄ "	15' 10 ³ / ₄ "
	16' 7 ¹ / ₄ "	16' 7 ¹ / ₄ "	16' 7 ¹ / ₂ "

Roller, 170785
173814

Too rough for deep seal measurements.

1 starfish only.

2 eod in found w/ tumors.
- 366 & 417 mm. Two large eod in
catch.

Sample I.F.C. 61416

173814

173814

170785

3029

A.A.

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

I9

WIRE,

1st

2nd

3rd

15' 11"

16' 0"

16' 9"

16' 10"

Roller.

173814

175437

Too rough for low speed measurements.

J.F.C. 61417 - Sample.

100-125 Asterias

G. Simons

175437

173814

1623

- tracking into it for 1 hr.

J. L. DARLING CORP.
TACOMA, WASH., U.S.A.

H8

Return to Rain
WATERPROOF

WIRE

1st

2nd

3rd

15' 11"

15' 10³/₄"15' 10¹/₂"16' 5³/₄"16' 6¹/₂"

16' 6"

Roller.

175437

177937

Too rough for low speed measurements.

J.F.C. 61418 Sample.

only asterias in drag. 25-30.

177937

175437

2500

all hermits in drag.

G7

Wire, 1st, 2nd
 15' 10 1/2" 15' 10"
 16' 6 3/4" 16' 5 3/4"

Rope, 177957
 180998

Angle, 6° 6' 45"
 Dist. 290 ← approximate.

I.F.C. 61419-20-21-22 Sample

all starfish in bags.

12. ophiuroids,
 200-250. "unarmed" brittlestars.

all ovals of molluscs in bags.

Few shrimp - 10-12.

180998

177937

3061

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

F6

Ketchikan
WATERPROOF

Wire, 1st, 2nd, 3rd
 15' 10" 15' 10" 15' 10"
 16' 4 1/2" 16' 4 3/4" 16' 4 3/4"

Rope, 180998
 183877

wire frayed in 2 places. Rope on door broken.
 Next station too deep for accurate measurements.

I.F.C. - 61423 Sample

All starfish in bag.
All claws of hermit in bag.

No gastropod w/ mollusks,
 4 c. ophiuroids. one dead.
 50-60 "unarmed" brittlestars.

183877

180998

2879

BOOK-NO. 310

FILLER-NO. 311

LOOSE LEAF-NO. 312

E5

WIRE	1st	2nd	3rd
	15' 10 ¹ / ₂ "	15' 9 ³ / ₄ "	15' 9 ³ / ₄ "
	16' 3 ¹ / ₂ "	16' 3 ³ / ₄ "	16' 2 ³ / ₄ "
ROTOR	183877		
	186742		

P.F.C. 61424 - Sample

5 c. ophiu.

All crabs & mollusks in bag.1 basket star, maybe from ref, but doubtful.
Large mollusks.

186742

183877

2865

J. L. DARLING CORP.
TACOMA, WASH. U. S. A.

E4

Return to him
WATERPROOF

WIRE	1st	2nd	3rd
	15' 10"	15' 9 ³ / ₄ "	15' 9 ¹ / ₂ "
	16' 2 ³ / ₄ "	16' 2 ³ / ₄ "	16' 3"
ROTOR	186742		
	189858		

P.F.C. 61425 - Sample.

11 c. ophiu.

Basket stars - 5-10

All crabs in bag.

189858

186742

376

E3.

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

D8

Rite in the Rain
WATERPROOF

WIRES	1 ST	2 ND	3 RD
	15' 9 1/2"	15' 9 1/4"	15' 9 3/8"
	16' 2 1/2"	16' 1 3/4"	16' 1 3/4"

Roller, 189858
192396

I.F.C. 61428

100-120 basket stars.

Shrimp.

all crabs in bags

75. *sp. 100*.

lost few dozen many Yarrow.

192396

189858

2538

WIRES	1 ST	2 ND	3 RD
	15' 9"	15' 9 1/2"	15' 9 1/4"
	16' 2 1/2"	16' 2 1/4"	16' 2"

Roller, 192396
184987

I.F.C. 61429 Sample.

only small basket stars on sea pens.
3 additional starfish of type in bags
all crabs in bags

8 *C. opalis*1 *actinias*.

194987

192396

259

C3

WIRE	1 st	2 nd	3 rd
	15' 9 ¹ / ₄ "	15' 9 ¹ / ₂ "	15' 9 ³ / ₄ "
	16' 2 ¹ / ₂ "	16' 2 ³ / ₄ "	16' 2"

ROLLER. 194987
197436

multibranch.
10. c. ophiu.

J.F.C. - 61430

All mounts in bag.

197436
194987
2449

No brachidoteus
Many elyptoids
No stygian.

J. L. DARLING CORP.
TACOMA, WASH. U. S. A.

B3

Return to Rain's
WATERPROOF

WIRE	1 st	2 nd	3 rd
	15' 9 ¹ / ₄ "	15' 9 ¹ / ₄ "	15' 10"
	16' 2"	16' 2"	16' 2 ¹ / ₂ "

ROLLER. 197436
199900

Many. Multibranch.
46 c. ophiu.

J.F.C. 61431 - Sample.

All crabs in bag

199900
197436
2464

B1. Slouch Sample - 2 hour drag!

Wire	1st,	2nd,	3rd,
	15' 9 1/4"	15' 9 1/4"	15' 9"
	16' 1 1/4"	16' 1 1/2"	16' 2"

Roller	199900
	204192

83 c. ophiura
J.F.C. 61432 - Sample

All crabs in bag
Mainly turbot & flathead in way of fish.
Some tunicates - mainly big crabs.

Slouch samples

Last dredge all filled up to top
w/ mud. This dredge within 6 inches of
top.

204192
199900
4292

J. L. DARLING CORP.
TACOMA, WASH., U. S. A.

A.3.

Waterproof

Wire	1st,	2nd,	3rd,
------	------	------	------

Roller	204192
--------	--------

Wind. 45-50 knots
abandoned station & went into Unalakleet.

Pass!