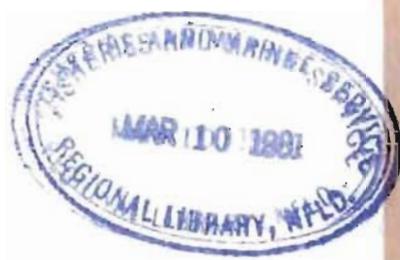


Data Record from a Study of Gonad Maturation of Pacific Herring Collected Throughout the Year from July 1974 to June 1975

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Canadian Data Report of Fisheries
and Aquatic Sciences No. 209

June 1980



DATA RECORD FROM A STUDY OF GONAD MATURATION
OF PACIFIC HERRING COLLECTED THROUGHOUT
THE YEAR FROM JULY 1974 TO JUNE 1975

by

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ABSTRACT

Hay, D. E., D. N. Outram, A. C. Shimozawa, and K. L. Stubbington. 1980.
Data record from a study of gonad maturation of Pacific herring
collected throughout the year from July 1974 to June 1975. Can. Data
Rep. Fish. Aquat. Sci. 209: 57 p.

Samples of herring were collected from July 1974 to June 1975, in
the vicinity of Porlier Pass, on the southeast coast of Vancouver Island and
analysed in the laboratory of the Pacific Biological Station. Measurements
and assessments of each fish included total length and weight, sex, age,
gonad lengths and weights and state of maturity. These data are listed in
summary tables which are presented according to date of capture.

RÉSUMÉ

Hay, D. E., D. N. Outram, A. C. Shimozawa, and K. L. Stubbington. 1980.
Data record from a study of gonad maturation of Pacific herring
collected throughout the year from July 1974 to June 1975. Can. Data
Rep. Fish. Aquat. Sci. 209: 57 p.

Des échantillons de hareng ont été recueillis, de juillet 1974 à
juin 1975, à proximité du passage Porlier, sur la côte sud-est de l'île
Vancouver, puis analysés au laboratoire de la Station de biologie du
Pacifique. Pour chaque poisson, on a évalué et mesuré la longueur totale et
le poids, le sexe, l'âge, la longueur et le poids des gonades et le degré de
maturité. Les données sont rassemblées en tableaux sommaires présentes
selon la date de capture.



INTRODUCTION

From July 1974 to June 1975 a series of herring samples were routinely collected to monitor and describe changes in the gonads during the early development, maturation, spawning and post-spawning or recovery stages. The purposes of the data collection were to assess the rate of gonad maturation and the temporal duration of the Hjort maturity stages (defined in Table 2), and to develop criteria, based on gonad size, that might permit macroscopic distinction between virgin fish and repeat spawners. Although the types of measurements taken in this study are similar to those taken routinely for analysis of samples from the fall food fisheries and winter-spring roe fisheries, these data are unique because they were taken throughout the entire year from a single, non-migratory stock of fish. In contrast, comparable data series from commercial fish samples are restricted to those times of the year when commercial fisheries occurred, and may consist of fish from several stocks.

The analysis of these data will be discussed in a future manuscript.

METHODS AND MATERIALS

Some of the samples used in this study were taken as incidental catches of concurrent investigations directed at other species and consequently several different types of collecting gear were used, including bottom and mid-water trawls, purse seines and jigs. The sampling dates and type of collecting gear used are shown in Table 1. After capture the fish were frozen and returned to the Pacific Biological Station for analysis which included the following:

1. body length (measured from the tip of the snout to the end of the guanine pigmentation on the caudal peduncle; this is approximately equal to the standard length);
2. total body weight, measured to the nearest 1.0 g;
3. length of each gonad (left and right separately) to the nearest mm;
4. weight of each gonad to the nearest 0.1 g;
5. gonad colour;
6. assessment of the maturity according to a modified Hjort maturity scale; the criteria for this scale is described in Table 2;
7. age, determined from scales;

Procedures for sample analysis are described by Hourston and Miller (1980).

EXPLANATION OF DATA RECORDS

All of the data from the samples are presented in chronological order in tables 3 to 27 (A for males and B for females). For each sex the tables list:

- (1) a fish no;
- (2) fish length in mm;
- (3) fish weight in gms;
- (4) fish age in years;
- (5) percent gonad wt. of total wt;
- (6) total gonad wt. in gms;
- (7) left gonad wt. in gms;
- (8) right gonad wt. in gms;
- (9) left gonad length in mm;
- (10) right gonad length in mm;
- (11) maturity assessment (Hjort) as defined in Table 2;
- (12) gonad colour.

Fish age, determined from scales, is shown when reliable estimates were possible.

Gonad colour was usually recorded for most samples. For brevity in the tables each main colour is abbreviated to letters as shown below:

RR = red
RG = reddish-grey
RW = reddish-white
RO = reddish-orange
RN = reddish-wine
RB = red-blood
BB = blood
WN = wine
PP = pink
OO = orange
OB = orange-blood
GO = gold
GW = gold-white
GR = gold-red
YY = yellow
YO = yellow-orange
YR = yellow-red
GG = grey
WH = white
WG = white-grey
WB = white-blood

REFERENCES

Hourston, A. S., and D. C. Miller. 1980. Procedures for sampling herring at the Pacific Biological Station. Can. MS Rep. Fish. Aquat. Sci. 1554: 23 p.

Table 1. Sample dates, locations, and types of gear used in the collection.

Sample No.	Date	Fishing gear	Sample No.	Date	Fishing gear
1	July 30, 1974	Jig	13	February 24a	Midwater trawl
2	August 15, 1974	Bottom trawl	14	February 24b	Midwater trawl
			15	February 25	Seine
3	August 29, 1974	Seine	16	February 26a	Midwater trawl
4	October 1, 1974		17	February 26b	Midwater trawl
5	October 3, 1974	Bottom trawl	18	February 27	Midwater trawl
6	October 29, 1974	Bottom trawl	19	February 28	Midwater trawl
7	November 19, 1974	Midwater trawl	20	March 7	Bottom trawl
8	December 12, 1974	Bottom trawl	21	March 13	Bottom trawl
9	January 17, 1975	Bottom trawl	22	April 29	Midwater trawl
10	January 27, 1975	Bottom trawl	23	April 30	Midwater trawl
11	February 4, 1975	Seine	24	May 27	Midwater trawl
12	February 7, 1975	Seine	25	May 28	Midwater trawl
			26	June 6	Bottom trawl
			27	June 18	Midwater trawl

Table 2. Maturity stages for Pacific herring sampled at the Pacific Biological Station. The descriptions of each stage are adapted from criteria developed for Atlantic herring (Bowers and Holliday 1961; Parrish and Saville 1965) and modified to suit the unique characteristics of Pacific herring which are exclusively winter-spring spawners.

Stage	Maturity	Gonad appearance	Description	Timing
I	Undeveloped	Thread-shaped	Virgin herring with small gonads, less than 2 mm broad. Accurate macroscopic determination of sex not usually possible.	Year-round for young herring, usually less than 150 mm in standard length.
II	Starting	Ribbon-shaped	Gonads increased in breadth to 3-5 mm. Sex determination possible. Testes reddish-grey coloured and knife-shaped; ovaries reddish-wine coloured and rounder. (The gonads of virgins and some repeat spawners cannot be distinguished macroscopically.)	Late spring and early summer.
III	Developing	Tube-like	Gonads thickened, increased in breadth (5-15 mm) and elongated, but not extending full length of body cavity. Ovaries red to reddish-orange with granular appearance; testes reddish-grey with smooth texture.	Late summer and early fall.
IV	Maturing	Prominent	Gonads extend full length of body cavity. Ovaries reddish-orange to yellow; eggs distinguishable, opaque, variable in size and separable. Testes mostly grey; and will ooze sperm if sliced with a knife. Blood vessels clearly visible in the ovary and testes walls.	Late fall and early winter (slightly earlier in males than females).

Table 2 (cont'd)

Stage	Maturity	Gonad appearance	Description	Timing
V	Mature	Bulging	No blood vessels visible in gonad walls. Ovaries gold-yellow; eggs mostly transparent and uniform in size. Eggs can be exuded from the ovary under pressure and are adhesive on contact. Testes milk-white; sperm will flow under pressure.	Early winter for males, late winter for females.
VI	Ripe	Running	Eggs transparent. Eggs and sperm flow easily without external pressure.	A few days prior to spawning (usually in late winter or early spring).
VII	Spent	Baggy	Gonads slack. Ovaries may contain a few residual eggs. Testes limp and bloodshot.	Early spring for the first few weeks following spawning.
VIII	Recovering	Compressed	Gonads wine-coloured and usually longer and thicker than in Stage II. Blood vessels prominent. (This stage passes into Stage III, but may resemble Stage II in the process.)	Late spring and early summer.

TABLE 3. HERRING GONAD SAMPLE TAKEN BY JIG,
IN THE VICINITY OF PURLIER PASS, JULY 30, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	179	74	-	0.9	0.70	0.40	0.30	42	38	2	RG
2	1	215	123	-	0.6	0.80	0.40	0.40	62	60	2	RG
3	1	209	143	-	0.6	0.80	0.40	0.40	56	55	2	RG
4	1	205	129	5	1.0	1.40	0.70	0.70	62	62	2	RG
5	1	240	202	-	0.7	1.40	0.70	0.70	65	68	2	RG
6	1	192	101	-	0.8	0.80	0.40	0.40	50	45	2	RG
7	1	208	121	4	0.3	0.40	0.20	0.20	54	55	2	RR
8	1	196	89	-	0.2	0.20	0.10	0.10	52	50	2	RR
9	1	194	103	3	0.4	0.40	0.20	0.20	45	40	2	-
10	1	211	141	-	0.2	0.40	0.20	0.20	53	33	2	RR
11	1	206	98	4	0.6	0.60	0.30	0.30	57	57	2	RR
12	1	207	119	4	0.3	0.40	0.20	0.20	54	55	2	RG
13	1	199	107	4	0.3	0.35	0.20	0.15	35	36	2	RG
14	1	206	128	5	0.3	0.40	0.20	0.20	57	50	2	RR
15	1	215	145	-	0.3	0.40	0.20	0.20	35	55	2	RG
16	1	234	170	6	0.3	0.60	0.30	0.30	59	63	2	-
17	1	215	155	5	0.4	0.60	0.30	0.30	45	65	2	RG
18	2	203	160	6	0.6	1.00	0.50	0.50	52	55	2	RG
19	2	202	104	5	0.9	1.00	0.50	0.50	65	50	2	RR
20	2	195	99	4	0.8	0.80	0.40	0.40	48	49	2	RG
21	2	187	76	4	0.5	0.40	0.20	0.20	60	56	2	RR
22	2	168	58	-	0.5	0.30	0.15	0.15	36	36	2	YY
23	2	187	72	-	0.6	0.40	0.20	0.20	55	55	2	RN
24	2	197	101	-	0.4	0.40	0.20	0.20	52	51	2	RG
25	2	239	175	-	0.6	1.00	0.50	0.50	88	66	2	RR
26	2	204	129	-	0.4	0.50	0.30	0.20	50	43	2	RR
27	2	197	89	-	0.7	0.60	0.30	0.30	58	62	2	RR
28	2	226	135	-	1.0	1.00	0.50	0.50	65	68	2	RR
29	2	200	111	-	0.5	0.60	0.30	0.30	57	57	2	RR
30	2	207	114	5	0.3	0.30	0.15	0.15	50	56	2	RG
31	2	217	149	4	0.2	0.30	0.15	0.15	65	64	2	RR

TABLE 3. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD	GONAD	GONAD	GONAD		
							WEIGHT	WEIGHT	LENGTH	LENGTH		
32	2	220	151	5	0.7	1.00	0.50	0.50	68	68	2	-
33	2	216	107	-	0.7	0.70	0.40	0.30	55	45	2	YY
34	2	209	123	-	0.6	0.70	0.35	0.35	60	60	2	RR
35	2	206	125	-	0.3	0.40	0.20	0.20	59	60	2	RR

TABLE 4. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, AUGUST 15, 1974

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT COLOR
1	1	180	87	3	0.6	0.45	0.20	0.25	55	50	2 RG
2	1	185	94	4	0.5	0.50	0.25	0.25	50	50	2 -
3	1	169	75	-	1.3	1.00	0.50	0.50	28	26	2 RG
4	1	183	89	4	0.4	0.40	0.20	0.20	42	45	2 -
5	1	181	93	4	0.2	0.20	0.10	0.10	36	40	2 RR
6	1	189	98	-	0.6	0.60	0.30	0.30	43	44	2 RR
7	1	167	72	3	0.3	0.20	0.10	0.10	29	28	2 RG
8	1	180	90	-	0.6	0.50	0.30	0.20	46	40	2 RG
9	1	167	69	4	0.3	0.20	0.10	0.10	30	28	2 RR
10	1	170	79	3	0.6	0.45	0.20	0.25	36	40	2 -
11	1	134	35	3	0.3	0.10	0.05	0.05	19	20	2 RR
12	1	178	82	4	0.4	0.30	0.15	0.15	55	55	2 -
13	1	176	79	-	0.1	0.10	0.05	0.05	35	35	2 -
14	1	185	98	3	0.3	0.30	0.15	0.15	45	44	2 RR
15	2	200	120	4	0.6	0.70	0.35	0.35	54	55	2 RN
16	2	164	65	4	0.5	0.30	0.15	0.15	32	42	2 RN
17	2	183	89	4	0.7	0.60	0.30	0.30	57	54	2 RN
18	2	185	92	3	0.8	0.75	0.40	0.35	55	54	2 -
19	2	148	44	2	0.5	0.20	0.10	0.10	38	33	2 -
20	2	168	78	4	0.8	0.60	0.30	0.30	54	54	2 -
21	2	141	36	-	0.6	0.20	0.10	0.10	35	35	2 -
22	2	144	40	3	0.8	0.30	0.15	0.15	35	30	2 -
23	2	189	104	4	0.6	0.60	0.30	0.30	56	54	2 -
24	2	166	66	3	0.5	0.30	0.15	0.15	42	38	2 -
25	2	181	89	-	1.0	0.90	0.45	0.45	63	56	2 RN
26	2	181	92	-	0.4	0.40	0.20	0.20	46	45	2 -
27	2	183	109	-	0.3	0.30	0.15	0.15	55	55	2 -
28	2	183	89	4	0.4	0.40	0.20	0.20	42	45	2 -
29	2	158	61	2	0.3	0.20	0.10	0.10	32	30	2 -
30	2	149	53	3	0.6	0.30	0.15	0.15	32	31	2 -
31	2	139	39	2	0.3	0.10	0.05	0.05	34	32	2 -

TABLE 4. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	193	109	3	0.8	0.90	0.45	0.45	60	58	2	-
33	2	162	68	4	0.6	0.40	0.20	0.20	36	36	2	-
34	2	137	35	2	0.6	0.20	0.10	0.10	36	35	2	RO
35	2	164	64	4	0.6	0.40	0.20	0.20	45	40	2	-
36	2	193	108	4	0.7	0.80	0.40	0.40	60	60	2	-
37	2	131	30	3	0.7	0.20	0.10	0.10	35	34	2	-
38	2	171	76	-	0.5	0.40	0.20	0.20	50	50	2	RR
39	2	199	126	4	0.7	0.90	0.40	0.50	55	57	2	RR
40	2	188	109	-	0.4	0.40	0.20	0.20	55	60	2	RR
41	2	143	42	-	0.5	0.20	0.10	0.10	35	35	2	RO
42	2	146	48	3	0.2	0.10	0.05	0.05	25	25	2	RR

TABLE 5. HERRING GONAD MATURATION SAMPLE TAKEN BY PURSE SEINE,
IN THE VICINITY OF PURLIER PASS, AUGUST 29, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD LENGTH	GONAD WEIGHT	GONAD LENGTH		
1	1	231	213	8	0.5	1.00	0.50	0.50	60	68	2	RR
2	1	177	89	4	0.6	0.50	0.25	0.25	38	39	2	RG
3	1	222	204	6	0.9	1.90	0.90	1.00	75	80	2	RG
4	1	209	164	6	1.8	3.00	1.50	1.50	75	75	2	RR
5	1	219	197	5	7.2	14.10	7.30	6.80	100	98	3	-
6	1	221	191	5	0.3	0.50	0.10	0.40	35	60	2	RG
7	1	188	110	5	0.8	0.90	0.40	0.50	50	54	2	RG
8	1	203	130	-	0.2	0.30	0.10	0.20	40	65	2	RG
9	1	219	183	6	2.7	4.90	2.40	2.50	95	93	3	RG
10	1	217	157	-	0.5	0.75	0.40	0.35	55	56	3	-
11	1	223	175	5	0.6	1.00	0.50	0.50	60	62	3	RR
12	1	160	73	3	0.3	0.20	0.10	0.10	30	28	2	-
13	1	200	138	4	0.4	0.60	0.30	0.30	56	58	3	RG
14	1	197	121	3	0.3	0.40	0.20	0.20	45	45	3	RG
15	1	173	87	4	0.7	0.60	0.30	0.30	42	48	3	RG
16	1	239	199	6	0.5	1.00	0.50	0.50	68	70	2	R
17	1	205	135	5	1.0	1.40	0.70	0.70	75	76	2	RG
18	1	194	111	-	0.6	0.65	0.30	0.35	42	45	2	RG
19	1	222	170	4	1.2	3.40	1.70	1.70	85	85	3	-
20	1	219	164	5	2.6	4.20	2.10	2.10	86	90	3	WH
21	1	208	139	-	1.7	2.30	1.50	0.80	72	60	3	RR
22	1	184	94	3	0.4	0.40	0.20	0.20	46	45	2	RG
23	1	185	97	-	0.8	0.75	0.35	0.40	50	53	2	RG
24	1	167	84	3	1.1	0.90	0.50	0.40	42	40	2	RG
25	1	183	101	3	0.8	0.80	0.40	0.40	55	52	0	RG
26	1	208	133	5	0.3	0.40	0.20	0.20	55	50	0	RG
27	1	219	180	6	3.4	6.20	3.20	3.00	98	102	0	RG
28	1	206	155	4	1.7	2.60	1.20	1.40	73	75	0	RG
29	1	222	84	-	1.4	1.20	0.60	0.60	58	58	2	RG
30	1	203	130	-	1.6	2.10	1.10	1.00	56	56	0	-
31	1	197	129	3	0.8	1.00	0.50	0.50	48	49	2	RG

TABLE 5. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	1	217	172	4	0.4	0.70	0.30	0.40	49	59	2	RR
33	1	237	214	6	0.7	1.40	0.70	0.70	65	63	3	RR
34	1	202	129	5	0.7	0.90	0.50	0.40	70	65	0	RG
35	1	195	111	4	0.6	0.70	0.30	0.40	56	55	0	RR
36	1	209	145	4	1.2	1.80	1.00	0.80	60	71	0	RG
37	1	219	179	6	1.3	2.50	1.25	1.25	86	88	0	RG
38	1	150	58	5	0.8	0.45	0.20	0.25	35	35	0	RR
39	1	186	99	5	1.0	1.00	0.50	0.50	50	56	0	RR
40	1	229	194	5	6.9	13.30	6.80	6.50	126	125	3	RR
41	1	191	106	3	0.4	0.40	0.20	0.20	35	40	0	RR
42	1	185	97	3	0.6	0.60	0.30	0.30	50	52	0	RR
43	1	222	203	4	3.8	7.80	4.10	3.70	102	101	2	00
44	2	192	111	4	0.5	0.60	0.30	0.30	58	58	2	00
45	2	194	114	4	1.1	1.20	0.60	0.60	62	62	2	00
46	2	159	64	3	0.8	0.50	0.25	0.25	40	40	2	RR
47	2	196	135	4	1.8	1.80	1.00	0.80	75	50	3	RR
48	2	235	220	8	1.0	2.20	1.10	1.10	80	78	3	OO
49	2	159	57	4	0.4	0.20	0.10	0.10	44	38	2	RO
50	2	210	144	6	1.4	2.00	1.00	1.00	75	75	3	RN
51	2	210	149	5	1.4	2.15	1.15	1.00	75	70	3	RO
52	2	182	102	4	1.4	1.45	0.75	0.70	60	55	3	RN
53	2	174	83	3	0.5	0.45	0.20	0.25	40	52	3	RO
54	2	206	169	4	0.7	1.10	0.60	0.50	70	60	3	00
55	2	219	175	4	1.1	1.90	1.00	0.90	71	72	2	RN
56	2	221	182	6	1.8	3.30	1.60	1.70	88	90	2	RO
57	2	155	57	4	0.7	0.40	0.20	0.20	42	46	2	RO
58	2	210	155	4	1.6	2.50	1.30	1.20	86	85	3	RO
59	2	200	124	4	0.6	0.80	0.40	0.40	72	62	3	RN
60	2	188	114	3	1.1	1.20	0.60	0.60	52	51	3	RN
61	2	155	59	3	0.8	0.50	0.20	0.30	50	48	2	YY
62	2	214	144	3	0.8	1.10	0.60	0.50	70	70	3	RR

TABLE 5. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
63	2	190	96	4	0.6	0.60	0.30	0.30	62	62	2	RO
64	2	210	146	4	0.8	1.20	0.60	0.60	68	68	2	RO
65	2	162	66	-	0.6	0.40	0.20	0.20	35	37	2	RO
66	2	209	143	4	1.0	1.40	0.70	0.70	65	63	2	RO
67	2	237	225	-	1.2	2.60	1.30	1.30	85	83	3	RO
68	2	210	151	5	0.9	1.30	0.70	0.60	67	65	2	RO
69	2	211	152	5	1.6	2.40	1.20	1.20	85	84	3	RO
70	2	221	178	-	1.2	2.20	1.20	1.00	80	78	3	RO
71	2	138	39	2	1.0	0.40	0.20	0.20	39	35	0	RO
72	2	183	100	3	1.4	1.40	0.70	0.70	58	56	0	-
73	2	185	91	4	0.7	0.60	0.30	0.30	54	55	0	RO
74	2	214	146	8	1.5	2.20	1.20	1.00	76	74	0	-
75	2	206	136	5	1.0	1.35	0.70	0.65	76	75	3	RO
76	2	211	149	5	0.9	1.40	0.70	0.70	61	60	0	RO
77	2	214	154	5	0.8	1.25	0.65	0.60	66	64	0	RO
78	2	201	142	5	1.3	1.80	1.00	0.80	72	72	0	RO
79	2	179	88	4	3.2	2.80	1.40	1.40	45	45	0	RO
80	2	167	74	3	1.0	0.75	0.40	0.35	40	40	0	-
81	2	202	137	4	1.3	1.80	1.00	0.80	69	68	0	-
82	2	217	175	5	1.8	3.20	1.60	1.60	82	83	0	RO
83	2	182	84	3	1.0	0.80	0.40	0.40	62	60	0	RO
84	2	180	90	3	0.8	0.70	0.35	0.35	40	40	0	RO
85	2	203	126	4	0.8	1.00	0.50	0.50	62	62	0	RO

TABLE 6. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, OCTOBER 1, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD	GONAD	GONAD	GONAD	WEIGHT	LENGTH
1	1	200	127	4	9.2	11.70	5.50	6.20	108	110	3	GG
2	1	188	103	5	6.6	6.80	3.70	3.10	97	95	3	RG
3	1	206	159	4	5.7	9.10	4.80	4.30	92	94	3	RG
4	1	199	139	5	4.7	6.40	3.20	3.20	100	100	3	RG
5	1	198	123	-	8.5	10.50	4.40	6.10	108	104	3	RG
6	1	204	117	5	0.5	0.60	0.30	0.30	66	66	2	RW
7	1	208	142	4	3.0	4.40	2.30	2.10	90	91	3	RG
8	1	225	208	6	10.5	22.00	10.50	11.50	124	130	3	RG
9	1	216	173	7	0.5	1.00	0.50	0.50	67	76	3	RW
10	1	202	178	6	2.5	3.30	1.70	1.60	90	87	3	RG
11	1	200	108	6	5.3	5.80	2.80	3.00	94	96	3	GG
12	1	203	124	5	0.8	1.10	0.50	0.60	50	55	2	RW
13	1	233	192	5	2.5	4.80	2.50	2.30	95	101	3	GG
14	1	183	107	4	2.0	2.20	1.20	1.00	76	84	3	WG
15	1	192	103	3	1.0	1.10	0.50	0.60	62	67	3	WG
16	1	238	186	9	2.8	5.30	2.70	2.60	90	104	3	RG
17	1	179	92	6	5.2	4.80	2.40	2.40	92	92	3	RG
18	1	205	119	4	2.6	3.10	1.60	1.50	85	75	3	RG
19	2	225	165	5	1.3	2.30	1.20	1.10	90	89	3	RW
20	2	195	121	8	3.8	4.70	2.30	2.40	86	93	3	RW
21	2	225	198	7	7.7	15.30	6.70	8.60	117	128	3	RR
22	2	166	69	3	1.1	0.80	0.40	0.40	59	58	3	RN
23	2	179	77	5	3.3	2.60	1.40	1.20	67	69	3	RN
24	2	206	245	8	1.8	4.60	1.90	2.70	86	87	3	RN
25	2	184	87	4	0.5	0.50	0.30	0.20	64	54	3	RN
26	2	170	77	-	2.3	1.80	0.90	0.90	66	68	3	RN
27	2	181	86	4	3.1	2.70	1.40	1.30	68	68	3	RN
28	2	204	118	4	2.2	2.60	1.30	1.30	91	85	3	RN
29	2	227	173	7	1.3	2.40	1.30	1.10	85	76	3	RN
30	2	172	76	4	1.8	1.40	0.70	0.70	56	56	3	OO
31	2	206	130	-	2.9	3.80	1.90	1.90	86	93	3	RN

TABLE 6. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	2	214	152	8	1.5	2.40	1.20	1.20	84	85	3	RR
33	2	226	194	7	2.6	5.20	2.70	2.50	101	105	3	RN
34	2	207	124	5	3.1	3.90	2.00	1.90	0	0	3	RN
35	2	181	78	4	1.7	1.40	0.80	0.60	67	64	3	RN
36	2	203	148	-	3.2	4.80	2.40	2.40	86	87	3	RN
37	2	236	201	8	1.2	2.60	1.40	1.20	87	86	3	RN
38	2	183	88	5	1.7	1.50	0.80	0.70	70	60	3	RN
39	2	233	209	5	3.2	6.40	3.40	3.00	95	94	3	RN
40	2	216	153	6	1.1	1.80	0.90	0.90	83	80	3	RN
41	2	216	158	6	3.8	6.10	3.20	2.90	95	95	3	RN
42	2	238	186	6	4.0	7.50	3.90	3.60	114	114	3	RN
43	2	190	106	5	1.6	1.80	0.90	0.90	69	70	3	RN
44	2	237	198	6	1.5	3.10	1.60	1.50	81	76	3	RN
45	2	241	230	7	3.1	7.30	4.00	3.30	106	108	3	RN
46	2	234	177	6	1.5	2.80	1.50	1.30	83	84	3	RN
47	2	200	124	6	2.5	3.10	1.60	1.50	87	77	3	RO
48	2	208	125	5	3.4	4.30	2.30	2.00	84	82	3	RN
49	2	207	149	5	2.2	3.40	1.70	1.70	80	80	3	RN
50	2	183	88	-	2.9	2.60	1.30	1.30	75	73	3	RN

TABLE 7. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PURLIER PASS, OCTOBER 3, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD LENGTH	GONAD WEIGHT	GONAD LENGTH		
1	1	200	103	5	5.5	5.90	3.00	2.90	94	84	3	RR
2	1	165	49	4	0.4	0.20	0.10	0.10	31	30	2	RR
3	1	150	48	-	0.7	0.35	0.15	0.20	44	46	2	PP
4	1	179	81	-	0.5	0.40	0.20	0.20	44	42	2	RR
5	1	176	91	4	3.0	2.70	1.40	1.30	70	70	3	RR
6	1	156	60	3	6.0	3.60	1.80	1.80	76	77	3	RG
7	2	191	108	5	0.3	0.40	0.20	0.20	74	70	3	RR
8	2	154	56	5	1.4	0.80	0.40	0.40	47	55	2	RR
9	2	134	27	2	0.7	0.20	0.10	0.10	34	36	2	OO
10	2	156	53	3	0.4	0.20	0.10	0.10	32	32	2	RR
11	2	156	56	3	0.7	0.40	0.20	0.20	46	43	2	RR
12	2	179	79	-	2.3	1.80	0.90	0.90	62	62	2	RR
13	2	176	75	4	1.2	0.90	0.40	0.50	53	50	2	RR
14	2	140	40	2	0.3	0.10	0.05	0.05	32	32	2	PP
15	2	174	82	-	1.5	1.20	0.60	0.60	60	50	2	RR
16	2	150	43	-	0.5	0.20	0.10	0.10	40	40	2	RR
17	2	139	33	-	0.6	0.20	0.10	0.10	42	37	2	RR
18	2	141	39	2	0.3	0.10	0.05	0.05	44	37	2	RR
19	2	149	46	4	0.4	0.20	0.10	0.10	44	44	2	RR
20	2	202	172	5	1.4	1.70	0.90	0.80	71	71	3	RR

TABLE 8. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, OCTOBER 29, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT	COLOR
1	1	205	143	5	11.6	16.60	8.40	8.20	101	109	3	-
2	1	191	120	5	12.7	15.20	7.00	8.20	90	105	3	GG
3	1	149	49	2	1.2	0.60	0.30	0.30	42	46	0	-
4	1	161	64	3	4.0	2.60	1.10	1.50	64	71	0	-
5	1	184	91	4	3.4	3.10	1.80	1.30	82	77	0	-
6	1	199	123	6	4.6	5.60	2.80	2.80	94	99	0	-
7	1	170	70	-	2.4	1.70	0.80	0.90	62	59	0	-
8	1	219	131	5	5.2	6.80	3.00	3.80	117	124	0	-
9	1	172	81	-	9.1	7.40	3.80	3.60	99	94	0	-
10	1	182	109	4	13.9	14.80	8.40	6.40	95	106	0	-
11	1	196	131	3	12.1	15.90	8.00	7.90	106	109	0	-
12	1	173	86	3	2.7	2.40	1.30	1.10	64	63	0	-
13	1	142	46	2	8.5	3.90	1.90	2.00	68	70	3	RG
14	1	169	78	3	9.7	7.60	3.80	3.80	90	90	3	RG
15	1	165	73	3	5.1	3.70	1.90	1.80	78	80	3	-
16	1	183	105	-	9.9	10.40	5.40	5.00	90	95	0	-
17	2	168	78	4	2.9	2.30	1.10	1.20	56	65	3	RR
18	2	172	79	3	3.9	3.10	1.70	1.40	70	69	3	RR
19	2	159	63	-	0.3	0.20	0.10	0.10	30	31	2	-
20	2	182	87	3	2.6	2.30	1.10	1.20	70	72	3	-
21	2	169	69	3	2.6	1.80	0.90	0.90	68	68	0	RO
22	2	158	59	3	4.1	2.40	1.20	1.20	65	66	0	RR
23	2	163	71	3	4.2	3.00	1.50	1.50	70	70	0	RR
24	2	156	64	3	3.1	2.00	1.00	1.00	82	60	2	-
25	2	156	64	4	3.9	2.50	1.30	1.20	70	64	0	-
26	2	158	67	-	4.8	3.20	1.60	1.60	68	66	0	-
27	2	181	90	4	3.6	3.20	1.60	1.60	60	60	0	-
28	2	161	72	4	3.9	2.80	1.40	1.40	74	72	4	-
29	2	171	71	5	3.7	2.60	1.20	1.40	70	71	0	RR
30	2	176	86	3	3.5	3.40	1.70	1.70	70	68	0	-
31	2	208	131	7	4.4	5.80	3.00	2.80	86	99	0	-

TABLE 9. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, NOVEMBER 19, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT NO.	COLOR
1	1	203	151	4	10.9	16.50	8.00	8.50	105	120	4	WH
2	1	253	273	7	5.1	14.00	7.70	6.30	130	132	4	RW
3	1	199	134	4	8.9	11.90	6.00	5.90	102	109	4	WH
4	1	228	220	6	4.0	8.70	4.60	4.10	99	96	3	RW
5	1	174	76	3	9.0	6.90	3.10	3.80	74	90	4	-
6	1	233	212	5	3.8	8.00	4.40	3.60	98	102	3	RW
7	1	236	239	-	15.2	36.40	18.70	17.70	140	137	4	WH
8	1	233	196	-	1.1	2.20	1.10	1.10	68	70	3	-
9	1	231	241	-	14.4	34.70	18.00	16.70	140	135	4	WH
10	1	195	112	4	10.3	11.50	6.10	5.40	110	110	4	RW
11	1	209	159	-	14.2	22.50	10.80	11.70	118	120	4	RW
12	1	232	181	6	2.2	3.90	2.20	1.70	90	90	3	RW
13	1	191	114	5	9.9	11.30	5.10	6.20	20	102	4	-
14	2	253	226	8	1.0	2.30	1.20	1.10	120	110	3	RN
15	2	239	195	6	4.8	9.40	5.10	4.30	110	111	3	RN
16	2	228	206	7	3.1	6.40	3.10	3.30	90	105	3	RN
17	2	153	48	3	0.4	0.20	0.10	0.10	38	40	2	RR
18	2	217	176	-	5.9	10.40	5.40	5.00	105	120	3	RO
19	2	203	124	-	5.1	6.30	3.20	3.10	102	105	3	-
20	2	224	176	4	7.7	13.60	6.70	6.90	98	100	3	YO
21	2	233	237	8	8.3	19.70	10.70	9.00	120	120	3	-
22	2	211	149	5	5.0	7.40	3.80	3.60	95	92	3	RO
23	2	225	199	5	7.5	15.00	7.70	7.30	100	110	3	-
24	2	211	144	4	4.4	6.40	3.20	3.20	95	100	3	-
25	2	200	123	-	4.5	5.50	3.00	2.50	90	81	3	-
26	2	208	147	4	4.4	6.40	3.30	3.10	95	89	3	-
27	2	229	196	-	1.0	2.00	1.00	1.00	68	68	3	-
28	2	237	232	6	7.3	17.00	8.60	8.40	116	110	4	RO
29	2	251	243	-	2.7	6.60	3.30	3.30	101	116	3	RN
30	2	215	146	-	1.7	2.50	1.60	0.90	80	60	3	-
31	2	200	143	-	5.2	7.50	3.80	3.70	92	90	3	-

TABLE 9. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD	GONAD	GONAD	GONAD		
							WEIGHT	WEIGHT	LENGTH	LENGTH		
32	2	135	161	-	1.4	2.20	1.00	1.20	94	92	3	RO
33	2	230	211	7	6.6	14.00	7.80	6.20	102	112	4	RO
34	2	223	182	6	6.8	12.30	6.00	6.30	103	105	4	RN
35	2	195	121	-	5.5	6.70	3.60	3.10	86	92	3	RN
36	2	206	137	-	6.1	8.40	4.40	4.00	92	90	3	-
37	2	229	190	6	4.0	7.70	4.10	3.60	90	91	3	RR
38	2	219	149	5	1.7	2.50	1.30	1.20	92	80	3	RN

TABLE 10. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, DECEMBER 12, 1974.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT NO.	COLOR
1	1	193	104	4	14.4	15.00	7.90	7.10	105	106	4	RW
2	1	191	88	-	12.5	11.00	5.30	5.70	105	102	4	-
3	1	184	90	3	15.7	14.10	6.50	7.60	100	102	4	WH
4	1	198	116	3	13.6	15.70	7.20	8.50	104	106	4	WH
5	1	210	129	3	17.8	23.00	11.20	11.80	96	116	4	-
6	1	211	145	3	17.2	24.90	12.10	12.80	115	120	4	WH
7	1	184	91	4	9.0	8.20	4.00	4.20	90	96	4	-
8	1	203	128	4	18.4	23.50	11.70	11.80	105	112	4	RW
9	1	196	102	4	11.5	11.70	5.70	6.00	103	105	4	RN
10	1	195	103	4	12.0	12.40	6.00	6.40	89	105	4	-
11	1	186	115	3	16.5	19.00	9.50	9.50	102	108	4	-
12	1	183	88	4	11.0	9.70	4.90	4.80	95	96	3	RN
13	1	193	105	4	11.5	12.10	5.80	6.30	104	106	3	-
14	1	177	76	3	10.1	7.70	4.00	3.70	85	90	3	-
15	2	208	170	6	11.8	20.00	11.40	8.60	105	123	4	RO
16	2	193	104	-	6.0	6.20	3.10	3.10	89	86	3	-
17	2	168	68	3	7.6	5.20	2.70	2.50	90	84	3	RO
18	2	213	134	5	9.4	12.60	6.30	6.30	100	98	3	-
19	2	239	212	-	8.2	17.50	9.50	8.00	130	127	3	-
20	2	200	138	-	11.3	15.60	7.80	7.80	110	110	3	RR
21	2	186	93	-	8.3	7.70	3.90	3.80	95	95	3	-
22	2	188	81	3	6.8	5.50	2.90	2.60	89	92	3	RO
23	2	169	71	-	6.0	4.30	2.10	2.20	82	83	3	-
24	2	201	117	-	6.8	8.00	4.00	4.00	94	97	3	-
25	2	200	119	3	8.3	9.90	4.40	5.50	105	108	3	-
26	2	191	102	-	6.1	6.20	3.00	3.20	85	88	3	RO
27	2	186	96	3	9.6	9.20	4.80	4.40	100	106	3	RO
28	2	195	101	3	9.6	9.70	4.90	4.80	106	105	3	RO
29	2	185	93	-	7.3	6.80	3.40	3.40	100	95	3	-
30	2	199	110	-	6.5	7.20	3.60	3.60	92	91	3	-
31	2	195	101	4	6.4	6.50	3.50	3.00	90	88	3	-

TABLE 10. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
						WEIGHT	GONAD	GONAD	GONAD	GONAD	LENGTH	LENGTH
32	2	215	163	-	8.7	14.20	8.10	6.10	106	95	3	RO
33	2	177	98	-	7.7	7.00	3.50	3.50	91	91	3	-
34	2	206	125	4	5.1	6.40	3.30	3.10	90	90	3	-
35	2	199	119	-	12.3	14.60	8.00	6.60	105	107	3	-
36	2	195	107	5	7.1	7.60	3.80	3.80	90	90	3	RR
37	2	205	137	3	8.6	11.80	6.10	5.70	116	116	3	-
38	2	193	107	3	7.1	7.10	3.50	3.60	98	95	3	RO
39	2	200	112	3	9.1	10.20	5.20	5.00	110	102	3	-

TABLE 11. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PURLIER PASS, JANUARY 17, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT	COLOR
1	1	193	91	4	7.9	7.20	5.20	4.00	95	101	4	
2	1	203	114	6	17.2	19.60	9.40	10.20	119	112	4	
3	1	174	63	3	11.4	7.20	3.60	3.60	90	85	4	
4	1	170	72	-	15.1	10.90	5.20	5.70	95	99	4	
5	1	191	97	4	11.2	10.90	4.90	6.00	99	114	4	
6	1	200	117	4	14.6	17.10	8.10	9.00	108	111	4	
7	1	198	118	4	14.2	16.80	8.10	8.70	105	114	4	
8	2	196	106	-	15.0	15.90	8.00	7.90	105	106	4	RO
9	2	182	78	5	13.2	9.10	4.80	4.30	101	90	4	
10	2	212	153	-	8.1	12.40	5.10	7.30	91	103	4	
11	2	212	139	5	12.7	17.60	8.80	8.80	117	112	4	RO
12	2	208	117	4	17.1	20.00	10.60	9.40	110	114	4	
13	2	177	74	3	9.1	6.70	3.30	3.40	91	91	4	
14	2	194	110	4	13.2	14.50	7.50	7.00	98	110	4	
15	2	182	80	-	12.0	9.60	4.90	4.70	100	84	4	
16	2	191	97	4	11.8	11.50	5.50	6.00	102	101	4	
17	2	193	104	-	18.5	16.10	8.50	7.60	114	99	4	
18	2	185	91	4	10.0	9.10	4.80	4.30	99	98	3	RO
19	2	198	124	-	12.3	15.30	8.40	6.90	100	101	4	
20	2	174	75	3	13.3	10.00	4.70	5.30	88	82	4	
21	2	198	99	-	10.6	10.50	5.50	5.00	94	94	4	
22	2	200	123	4	13.2	16.20	8.80	7.40	105	106	4	RO
23	2	205	115	5	12.5	14.40	7.80	6.60	120	112	3	
24	2	205	119	-	11.7	13.90	7.10	6.80	108	112	3	
25	2	169	62	-	5.0	3.10	1.60	1.50	69	73	3	
26	2	176	75	3	8.5	6.40	3.60	2.80	85	84	3	
27	2	162	54	3	8.5	4.60	2.20	2.30	75	78	3	
28	2	191	98	4	11.8	11.60	6.10	5.50	101	99	4	

TABLE 12. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, JANUARY 27, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	180	82	3	17.8	12.40	6.30	6.10	95	101	4	-
2	1	209	133	-	19.2	25.60	12.70	12.90	122	113	4	-
3	1	185	79	3	13.4	10.60	4.20	6.40	0	0	4	-
4	1	204	118	6	18.9	22.30	11.50	10.80	116	119	4	-
5	1	180	81	-	13.7	11.10	5.10	6.00	95	101	4	-
6	1	187	89	3	14.1	12.60	5.90	6.70	104	105	4	-
7	2	213	130	-	14.9	19.40	9.00	10.40	115	117	4	RO
8	2	184	84	3	13.2	11.10	5.70	5.40	101	99	4	-
9	2	239	194	-	12.6	24.40	14.10	10.30	129	128	4	-
10	2	221	163	6	20.4	33.30	17.90	15.40	108	100	4	-
11	2	181	81	2	11.2	9.10	4.60	4.50	101	97	4	-
12	2	195	101	-	11.3	11.40	5.40	6.00	102	108	4	-
13	2	221	167	6	16.4	27.40	14.30	13.10	125	126	4	-
14	2	208	124	4	12.5	15.50	7.90	7.60	116	111	4	-
15	2	187	95	4	13.6	12.90	7.00	5.90	104	109	4	-
16	2	164	62	-	11.0	6.80	3.50	3.30	82	86	4	-
17	2	208	108	-	9.6	10.40	5.50	4.90	0	0	4	-
18	2	207	143	-	21.0	30.10	15.40	14.70	111	124	5	-
19	2	210	141	5	16.9	23.80	12.50	11.30	114	120	4	-
20	2	188	96	-	11.8	11.30	6.00	5.30	99	107	4	-
21	2	189	85	-	8.7	7.40	4.10	3.30	94	96	4	-
22	2	197	115	4	15.9	18.30	9.00	9.30	111	113	4	-
23	2	187	88	4	8.4	7.40	3.40	4.00	87	92	3	-
24	2	195	109	4	7.7	8.40	4.20	4.20	98	101	4	-

TABLE 13. HERRING GONAD MATURATION SAMPLE TAKEN BY PURSE SEINE,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 4, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT COLOR
1	1	192	107	4	10.7	10.80	4.90	5.90	96	106	4 RW
2	1	176	70	-	10.7	7.50	3.80	3.70	101	104	4 RW
3	1	193	101	-	11.3	11.40	5.40	6.00	105	109	4 RW
4	1	205	117	-	20.0	23.40	11.50	11.90	125	116	4 WH
5	1	185	73	3	9.2	6.70	4.40	2.30	109	95	4 WH
6	1	197	108	4	13.2	14.30	6.70	7.60	105	115	4 RW
7	1	186	86	4	15.7	14.00	6.70	7.30	107	110	4 RW
8	1	197	105	5	15.2	16.00	8.20	7.80	115	105	4 WH
9	1	196	98	4	11.8	11.60	5.40	6.20	103	114	4 RW
10	1	191	101	-	16.1	16.30	8.30	8.00	111	106	4 RW
11	1	180	76	3	13.7	10.40	4.80	5.60	99	103	4 RW
12	1	197	106	-	15.0	15.90	7.90	8.00	116	117	4 RW
13	1	183	78	-	11.9	9.30	4.20	5.10	100	107	4 RW
14	1	192	94	4	14.2	13.30	6.60	6.70	106	111	4 RW
15	1	199	101	4	14.4	14.50	7.20	7.30	110	110	4 RW
16	1	186	85	-	12.7	10.80	5.30	5.50	99	103	4 RW
17	1	195	108	5	13.6	14.70	6.90	7.80	108	114	4 RW
18	1	205	118	4	14.0	16.50	8.40	8.10	114	119	4 RW
19	1	192	93	4	8.7	8.10	3.80	4.30	100	105	4 RW
21	2	200	113	-	12.6	14.20	7.20	7.00	105	105	4 GW
22	2	204	120	6	15.0	18.00	9.50	8.50	115	112	4 GW
23	2	192	95	4	9.0	8.60	4.70	3.90	87	87	4 RR
24	2	203	118	5	10.2	12.10	6.20	5.90	105	113	4 GR
25	2	201	109	4	16.3	17.80	9.30	8.50	117	115	4 GR
26	2	176	70	3	8.6	6.00	3.20	2.80	94	83	3 RR
27	2	188	75	4	9.1	6.80	3.30	3.50	100	93	4 RO
28	2	186	83	4	10.8	9.00	4.80	4.20	101	104	4 GR
29	2	190	91	4	8.8	8.00	4.20	3.80	99	95	4 GR
30	2	205	125	-	12.9	16.10	8.30	7.80	117	114	4 RR
31	2	200	113	-	13.5	15.30	8.00	7.30	105	110	4 GO
32	2	190	89	-	8.8	7.80	4.10	3.70	109	103	3 RR

TABLE 13. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
33	2	185	86	4	11.9	10.20	5.30	4.90	93	91	4	GR
34	2	205	116	4	15.2	17.60	9.60	8.00	104	106	4	GR
35	2	175	78	3	13.2	9.10	4.50	4.60	95	90	4	GR
36	2	208	116	5	11.1	12.90	6.90	6.00	107	107	4	GR
37	2	185	91	3	13.3	12.10	6.30	5.80	99	104	4	GR
38	2	191	90	3	13.1	11.80	6.50	5.30	103	107	4	GR
39	2	200	101	-	8.5	8.60	4.30	4.30	104	107	4	GR
40	2	205	138	5	15.5	21.40	11.20	10.20	121	129	4	OO
41	2	202	123	-	8.6	10.60	5.30	5.30	98	111	4	GR
42	2	176	62	-	3.7	2.30	1.20	1.10	67	71	3	GD
43	2	179	76	4	10.1	7.70	4.00	3.70	90	91	4	GR
44	2	191	92	5	13.2	12.10	6.40	5.70	111	113	4	GR
45	2	196	113	4	18.6	21.00	10.80	10.20	109	114	4	GR
46	2	202	117	5	13.4	15.70	7.80	7.90	107	113	4	GR
47	2	222	139	5	12.6	17.50	9.10	8.40	118	112	4	GR
48	2	212	117	5	10.5	12.30	6.60	5.70	114	105	4	GR
49	2	194	97	4	14.8	14.40	7.40	7.00	104	106	4	GR

TABLE 14. HERRING GONAD MATURATION SAMPLE TAKEN BY PURSE SEINE,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 7, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	206	121	-	16.3	19.80	9.70	10.10	110	104	5	WH
2	1	207	122	4	15.7	19.20	9.40	9.80	121	125	4	RO
3	1	215	153	5	17.9	27.40	14.60	12.80	124	123	4	-
4	1	205	136	6	15.4	20.90	11.00	9.90	121	120	4	-
5	1	216	151	-	17.9	27.10	13.80	13.30	121	128	4	-
6	1	186	93	3	13.9	12.90	6.00	6.90	99	104	5	-
7	1	216	158	5	17.3	27.40	13.50	13.90	134	130	5	-
8	1	199	120	5	16.8	20.10	9.70	10.40	118	116	4	-
9	1	175	93	-	17.2	16.00	7.30	8.70	102	119	4	-
10	1	200	110	4	15.4	16.90	8.20	8.70	123	116	5	-
11	1	219	119	7	20.8	40.60	19.70	20.90	141	144	5	-
12	1	201	135	5	16.7	22.50	11.10	11.40	121	124	5	-
13	1	198	120	-	17.0	20.40	9.70	10.70	102	106	5	-
14	1	185	92	4	16.8	15.50	7.60	7.90	109	108	5	-
15	1	207	133	4	16.1	21.40	10.60	10.80	115	115	5	-
16	1	177	82	-	14.8	12.10	5.60	6.50	102	106	5	-
17	1	212	150	-	17.3	26.00	12.00	14.00	122	132	4	-
18	1	195	98	4	16.0	15.70	7.30	8.40	111	116	5	-
19	1	200	108	4	15.9	17.20	8.60	8.60	117	119	5	-
20	1	187	89	4	14.5	12.90	6.40	6.50	106	110	5	-
21	1	208	143	5	19.4	27.70	13.10	14.60	131	127	5	-
22	1	234	187	-	18.0	33.70	18.20	15.50	135	139	5	-
23	1	197	109	-	13.6	14.80	7.40	7.40	121	125	5	-
24	1	210	156	6	18.1	28.30	14.30	14.00	130	125	5	-
25	1	204	129	-	15.1	19.30	9.80	9.50	122	116	5	-
26	1	199	121	5	15.3	18.50	8.50	10.00	119	122	5	-
27	2	198	119	-	18.9	22.50	11.50	11.00	109	102	4	OO
28	2	193	119	-	12.4	14.70	6.90	7.80	110	105	4	RR
29	2	189	98	3	14.7	14.40	7.80	6.60	104	106	4	OO
30	2	203	138	-	12.5	17.30	8.70	8.60	114	114	4	RR
31	2	204	123	5	14.5	17.80	9.50	8.30	105	116	4	-

TABLE 14. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT		RIGHT		LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	HJORT LENGTH	COLOR
							GONAD WEIGHT	LENGTH	GONAD WEIGHT	LENGTH				
32	2	164	68	3	12.8	8.70	4.50	4.20	90	90	4			
33	2	230	181	-	15.0	27.10	15.60	11.50	125	135	4			
34	2	188	104	4	11.5	12.00	6.20	5.80	103	105	4			
35	2	218	167	-	19.0	31.70	16.10	15.60	127	133	4			
36	2	207	136	5	16.3	22.20	11.20	11.00	116	125	4			
37	2	199	99	5	16.4	16.20	8.60	7.60	106	108	4			
38	2	223	180	5	16.7	30.00	15.50	14.50	122	134	5			
39	2	208	138	6	16.2	22.30	11.50	10.80	125	114	4			
40	2	225	178	6	19.4	34.60	17.60	17.00	131	114	5			
41	2	213	171	5	19.5	33.30	15.90	17.40	124	135	5			
42	2	236	206	7	20.7	42.70	24.80	17.90	138	142	5			
43	2	193	100	4	9.2	9.20	4.70	4.50	101	109	5			
44	2	196	116	-	17.2	19.90	11.40	8.50	111	105	5			
45	2	190	109	4	16.2	17.70	9.50	8.20	100	101	5			
46	2	214	151	6	16.8	25.40	12.90	12.50	124	127	5			
47	2	191	105	4	13.1	13.80	7.20	6.60	106	114	5			
48	2	202	123	-	17.7	21.80	12.30	9.50	0	0	5			
49	2	200	137	5	16.3	22.30	11.90	10.40	111	111	5			

TABLE 15. HERRING GONAD MATURATION SAMPLE 'A' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 24, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD WEIGHT	HJORT LENGTH	COLOR
1	1	246	228	-	12.8	29.20	14.60	14.60	147	148	4	WH
2	1	254	214	8	4.9	10.50	4.90	5.60	124	132	4	WH
3	1	221	148	6	14.4	21.30	11.20	10.10	129	133	4	+
4	1	226	180	7	15.9	28.60	13.10	15.50	139	141	4	+
5	1	221	164	7	8.9	14.60	7.50	7.10	125	135	4	+
6	1	213	145	7	12.3	17.90	10.00	7.90	130	120	4	+
7	1	226	180	8	8.0	14.40	7.10	7.30	112	130	4	+
8	1	236	213	-	11.9	25.40	12.70	12.70	139	146	4	+
9	1	194	115	5	13.8	15.90	7.70	8.20	106	111	5	+
10	1	192	90	-	15.7	14.10	7.50	6.60	112	108	4	+
11	1	229	183	8	10.3	18.90	10.10	8.80	133	134	5	+
12	1	212	127	7	13.6	17.30	9.60	7.70	124	122	5	+
13	1	234	187	7	13.1	24.50	13.40	11.10	144	145	5	+
14	1	231	193	7	15.7	30.30	15.20	15.10	130	132	5	+
15	1	196	114	4	15.9	18.10	8.60	9.50	117	119	5	+
16	1	222	164	5	14.1	23.10	11.00	12.10	128	130	4	+
17	1	211	132	5	9.4	12.40	6.10	6.30	105	116	4	+
18	2	207	144	4	12.3	17.70	9.70	8.00	120	118	4	YY
19	2	228	171	7	6.1	10.50	5.50	5.00	101	126	4	YY
20	2	238	177	8	4.6	8.10	4.50	3.60	110	100	4	+
21	2	231	200	7	7.0	14.00	7.90	6.10	121	115	4	+
22	2	227	161	6	4.3	9.70	5.60	4.10	130	115	4	+
23	2	245	231	8	5.2	12.10	6.50	5.60	124	122	3	+
24	2	216	153	-	5.4	8.30	4.60	3.70	108	109	3	+
25	2	241	220	7	6.5	14.30	7.50	6.80	134	125	4	+
26	2	245	230	-	8.7	20.10	11.30	8.80	114	104	3	+
27	2	204	124	4	4.8	5.90	3.10	2.80	91	104	3	+
28	2	214	139	5	7.8	10.80	5.60	5.20	104	110	3	+
29	2	218	146	6	11.9	17.40	9.20	8.20	111	113	5	+
30	2	229	155	7	11.1	17.20	9.40	7.80	104	110	4	+
31	2	203	129	-	19.5	25.20	13.80	11.40	102	114	4	+

TABLE 15. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	2	223	172	7	18.8	32.30	16.80	15.50	131	135	4	-
33	2	224	185	-	19.6	36.20	19.40	16.80	135	140	5	-
34	2	234	204	7	18.9	38.70	21.30	17.40	121	140	5	-

TABLE 16. HERRING GONAD MATURATION SAMPLE 'B' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PURLIER PASS, FEBRUARY 24, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	198	116	5	18.5	21.50	11.50	10.00	115	114	5	WH
2	1	217	155	7	13.2	20.40	10.40	10.00	130	131	5	PP
3	1	221	158	6	16.9	26.70	13.60	13.10	139	132	5	PP
4	1	238	207	-	19.2	39.70	21.70	18.00	135	143	5	PP
5	1	235	190	6	10.6	20.20	10.20	10.00	131	132	4	PP
6	1	250	234	7	8.8	20.70	10.40	10.30	140	129	4	PP
7	1	241	223	9	15.9	35.40	17.40	18.00	143	150	4	WH
8	1	219	175	7	16.7	29.20	13.50	15.70	135	136	5	WH
9	1	240	196	6	14.8	29.00	16.60	12.40	152	146	5	PP
10	1	241	235	8	9.9	23.30	12.20	11.10	140	134	4	PP
11	1	229	172	6	15.3	26.30	13.70	12.60	138	135	5	WH
12	1	225	180	6	15.8	28.50	13.50	15.00	132	133	5	PP
13	1	203	110	5	9.0	9.90	5.10	4.80	107	105	4	PP
14	1	223	158	6	11.0	17.40	8.60	8.80	132	142	4	PP
15	1	218	165	-	17.8	29.30	14.20	15.30	125	131	5	WH
16	1	240	179	-	3.9	6.90	3.60	3.30	98	100	4	RR
17	1	224	179	6	16.4	32.60	16.20	16.40	148	150	5	PP
18	1	227	186	8	14.4	26.70	13.50	13.20	137	144	5	PP
19	1	221	182	7	15.8	28.80	16.00	12.80	135	140	4	PP
20	1	228	173	6	12.1	20.90	11.40	9.50	140	135	4	PP
21	1	225	185	7	17.8	33.00	16.20	16.80	131	133	5	WH
22	1	206	124	6	10.2	12.70	6.30	6.40	111	115	4	PP
23	1	183	86	4	17.8	15.30	7.90	7.40	103	100	4	WH
24	1	236	178	7	9.0	17.50	9.30	8.20	105	103	4	RO
25	2	213	85	5	8.4	15.50	8.90	6.60	115	103	4	RO
26	2	223	171	6	8.5	14.50	7.90	6.60	125	115	4	OO
27	2	242	211	8	7.8	16.40	8.70	7.70	110	104	4	OO
28	2	220	149	5	4.4	6.50	3.50	3.00	120	103	4	OO
29	2	235	192	7	6.1	11.70	6.10	5.60	117	120	4	OO
30	2	241	197	8	6.3	12.40	7.00	5.40	122	120	4	RO
31	2	254	231	7	5.1	11.80	6.20	5.60	117	114	4	RO

TABLE 16. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	222	161	6	5.8	9.40	4.60	4.80	106	105	4	RO
33	2	232	186	-	6.7	12.40	6.40	6.00	116	117	4	RO
34	2	221	182	-	5.7	10.40	5.20	5.20	116	115	4	RO
35	2	225	175	7	7.9	13.90	7.30	6.60	117	103	4	RO
36	2	230	196	7	7.9	15.60	8.20	7.40	130	130	4	RO
37	2	250	254	8	8.2	20.90	11.60	9.30	136	136	4	OO
38	2	239	204	-	7.9	16.10	9.00	7.10	131	124	4	RO
39	2	216	148	6	8.0	11.90	6.00	5.90	105	102	4	RR
40	2	196	125	4	15.7	19.60	10.30	9.30	105	104	5	YO
41	2	195	115	4	16.4	18.90	9.70	9.20	112	120	5	YO
42	2	216	166	6	17.3	28.80	14.50	14.30	135	132	5	YY
43	2	229	206	6	20.9	43.10	22.50	20.60	131	141	5	YY
44	2	220	177	6	21.8	38.50	20.10	18.40	118	125	5	YO
45	2	190	102	4	19.2	19.60	10.10	9.50	109	114	5	OO
46	2	234	207	-	16.5	34.20	17.70	16.50	122	130	5	OO
47	2	210	130	5	20.4	26.60	14.10	12.50	116	127	5	OO
48	2	215	150	-	17.1	25.60	12.70	12.90	124	133	5	OO

TABLE 17. HERRING GONAD MATURATION SAMPLE TAKEN BY PURSE SEINE,
IN THE VICINITY OF PURLIER PASS, FEBRUARY 25, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	HJORT LENGTH	COLOR
1	1	194	111	5	17.7	19.60	9.80	9.80	106	110	5	WH
2	1	248	230	8	11.4	26.20	12.00	14.20	110	150	4	WH
3	1	197	109	4	18.2	19.80	9.20	10.60	114	114	5	WH
4	1	253	280	-	15.9	44.40	24.10	20.30	150	150	5	WH
5	1	243	219	-	11.4	25.00	12.00	13.00	130	138	4	WH
6	1	243	222	-	16.4	36.30	18.80	17.50	150	145	4	WH
7	1	218	161	5	15.9	25.60	14.10	11.50	134	141	5	WH
8	1	242	229	7	15.9	36.30	20.30	16.00	142	141	5	WH
9	1	224	190	8	14.1	26.70	13.10	13.60	134	134	4	WH
10	1	235	201	7	13.1	26.40	14.10	12.30	144	145	5	WH
11	1	240	219	7	12.1	26.40	14.60	11.80	145	150	4	PP
12	1	232	219	-	16.3	35.70	18.20	17.50	143	144	5	WH
13	1	200	124	6	16.9	21.00	10.80	10.20	119	125	5	WH
14	1	222	161	7	10.4	16.80	7.60	9.20	125	124	4	PP
15	1	208	138	-	17.2	23.70	10.70	13.00	116	117	5	WH
16	1	238	190	7	12.4	23.50	13.00	10.50	143	138	4	PP
17	1	233	206	8	14.7	30.30	15.40	14.90	132	128	5	PP
18	1	208	127	5	9.8	12.50	5.90	6.60	116	122	4	PP
19	2	241	208	7	5.6	11.60	6.60	5.00	106	107	4	RO
20	2	235	189	7	6.1	11.60	6.60	5.00	115	119	4	RO
21	2	250	227	8	7.4	16.80	8.60	8.20	121	135	4	RO
22	2	243	207	6	6.7	13.80	6.80	7.00	121	125	4	RO
23	2	253	270	9	8.9	24.00	12.50	11.50	127	138	4	RO
24	2	242	236	7	5.3	12.50	7.20	5.30	100	70	4	RO
25	2	255	271	9	7.9	21.60	11.40	10.20	130	130	4	RO
26	2	212	144	6	6.3	9.10	4.70	4.40	104	110	4	RO
27	2	235	197	6	7.0	13.80	7.00	6.80	123	110	4	RO
28	2	235	179	7	6.7	12.10	6.00	6.10	117	135	4	RO
29	2	253	249	8	7.8	19.40	10.30	9.10	140	124	4	RO
30	2	233	181	-	8.2	14.90	8.00	6.90	124	127	4	RO
31	2	212	145	6	5.7	8.30	4.50	3.80	111	111	3	RO

TABLE 17. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT	COLOR
32	2	253	241	8	5.8	14.00	7.30	6.70	114	110	4	RO
33	2	230	189	7	6.2	11.80	6.20	5.60	109	109	4	RO
34	2	237	204	-	7.8	15.90	8.30	7.60	133	123	4	RO
35	2	219	158	6	7.5	11.80	6.00	5.80	114	110	4	RO
36	2	245	247	7	6.4	15.90	8.20	7.70	117	117	4	OO
37	2	214	151	5	9.3	14.00	8.00	6.00	116	114	4	OO
38	2	232	220	7	8.7	19.20	10.50	8.70	120	119	4	RO
39	2	240	213	7	18.4	39.10	21.00	18.10	135	138	5	RO
40	2	216	142	5	20.5	29.10	15.80	13.30	131	133	5	YO
41	2	220	171	5	16.3	27.80	14.80	13.00	127	116	5	OO
42	2	225	179	6	17.5	31.30	16.60	14.70	123	125	5	OO
43	2	236	194	5	15.2	29.50	15.50	14.00	126	124	5	OO
44	2	182	80	-	19.3	15.40	8.00	7.40	99	99	5	OO
45	2	202	112	-	17.2	19.30	9.90	9.40	108	116	5	OO
46	2	214	146	5	13.7	20.00	10.10	9.90	114	115	5	YO

TABLE 18. HERRING GONAD MATURATION SAMPLE 'A' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PURLIER PASS, FEBRUARY 26, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT NO.	COLOR
1	1	234	178	7	13.3	23.70	10.70	13.00	122	135	5	RW
2	1	217	146	5	8.6	12.50	6.60	5.90	115	115	5	PP
3	1	232	203	7	15.2	30.90	16.00	14.90	136	139	5	PP
4	1	223	151	7	11.1	16.80	8.60	8.20	124	129	4	PP
5	1	188	94	4	4.0	7.60	3.70	3.90	97	110	4	RN
6	1	245	227	8	13.9	31.60	17.10	14.50	143	148	5	PP
7	1	245	216	-	12.2	26.40	14.30	12.10	150	150	5	PP
8	1	241	231	8	17.7	41.00	23.70	17.30	150	144	5	PP
9	1	239	205	-	14.7	30.10	16.60	13.50	142	140	5	PP
10	1	229	189	6	17.2	32.50	16.00	16.50	138	141	5	WN
11	1	210	137	4	16.9	23.10	10.60	12.50	132	132	5	-
12	1	216	153	6	16.6	25.40	12.80	12.60	129	132	5	PP
13	1	194	106	3	13.6	14.40	7.60	6.80	109	115	4	PP
14	1	249	233	8	13.3	30.90	16.00	14.90	142	147	4	PP
15	1	227	184	-	16.0	29.50	16.80	12.70	142	142	4	PP
16	1	232	195	7	12.7	24.80	11.90	12.90	139	138	5	PP
17	1	247	223	-	10.4	23.30	12.20	11.10	140	144	4	PP
18	2	219	160	8	8.7	13.90	7.30	6.60	110	111	4	OO
19	2	251	238	7	7.5	17.80	9.80	8.00	125	125	4	OO
20	2	242	223	8	6.7	14.90	7.90	7.00	115	112	4	RO
21	2	243	186	8	6.1	11.40	5.90	5.50	119	125	3	RR
22	2	230	172	7	10.3	17.80	9.20	8.60	125	123	4	OO
23	2	251	223	9	5.9	13.10	6.80	6.30	125	112	4	RO
24	2	229	175	-	6.1	10.70	5.60	5.10	116	114	4	RO
25	2	225	179	-	11.3	20.30	10.60	9.70	120	127	4	OO
26	2	239	204	6	5.7	11.60	6.10	5.50	126	125	4	RR
27	2	236	224	7	7.9	17.70	9.90	7.80	130	126	4	-
28	2	246	216	8	7.8	16.80	9.30	7.50	144	142	4	RO
29	2	249	236	9	5.8	13.60	7.20	6.40	119	119	3	RO
30	2	221	173	7	8.2	14.20	7.60	6.60	115	113	4	RO
31	2	224	162	7	5.2	8.50	4.80	3.70	105	107	4	RO

TABLE 18. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	233	185	6	8.5	15.70	9.20	6.50	114	105	4	RR
33	2	236	196	4	6.5	12.70	6.60	6.10	119	125	4	RO
34	2	246	242	7	20.5	49.50	25.00	24.50	123	134	5	YO
35	2	239	222	7	16.4	36.30	18.00	18.30	132	137	5	YO
36	2	210	149	-	19.3	28.80	15.80	13.00	113	116	5	OO
37	2	239	214	8	17.9	38.30	21.00	17.30	135	145	5	OO
38	2	229	195	6	19.8	38.70	20.80	17.90	125	133	5	YO

TABLE 19. HERRING GONAD MATURATION SAMPLE 'B' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 26, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	232	189	7	16.9	31.90	17.50	14.40	139	144	5	PP
2	1	231	182	7	14.4	26.20	12.30	13.90	136	142	4	PP
3	1	231	183	7	11.7	21.50	10.50	11.00	127	139	4	PP
4	1	221	197	5	16.5	32.50	17.80	14.70	133	136	5	PP
5	1	229	197	7	17.3	34.00	16.70	17.30	141	144	4	WH
6	1	227	185	7	14.2	26.20	13.30	12.90	131	132	4	PP
7	1	215	149	6	15.0	22.40	11.10	11.30	130	132	5	PP
8	1	226	170	-	10.8	18.40	9.50	8.90	127	127	4	PP
9	1	219	172	7	12.6	21.70	11.80	9.90	140	136	4	PP
10	1	229	193	6	16.2	31.20	13.10	18.10	138	142	5	PP
11	1	233	191	8	14.6	27.80	14.30	13.50	137	142	4	PP
12	1	246	241	6	18.4	44.30	23.20	21.10	152	152	5	PP
13	1	225	180	7	15.1	27.20	14.60	12.60	142	136	4	PP
14	1	235	211	7	12.7	26.80	13.00	13.80	137	142	4	PP
15	1	209	141	-	13.0	18.40	9.20	9.20	119	125	4	PP
16	1	238	203	8	9.1	18.50	9.60	8.90	135	136	4	PP
17	1	249	221	8	8.9	19.70	10.50	9.20	140	145	4	PP
18	1	231	202	6	13.2	26.70	13.60	13.10	143	145	4	PP
19	1	232	194	-	14.8	28.70	14.80	13.90	141	146	4	PP
20	1	235	190	-	13.3	25.30	13.40	11.90	147	146	4	PP
21	1	216	166	-	15.1	25.10	12.40	12.70	120	120	4	PP
22	1	215	146	-	14.1	20.60	10.10	10.50	117	125	4	PP
23	2	253	237	8	4.1	9.80	5.40	4.40	112	110	4	OO
24	2	258	259	9	7.1	18.30	10.80	7.50	140	133	4	OO
25	2	245	232	8	5.6	12.90	6.60	6.30	130	120	4	RO
26	2	243	227	-	6.6	15.00	8.40	6.60	130	123	4	RO
27	2	233	198	-	5.6	11.10	5.70	5.40	109	115	3	RO
28	2	247	212	7	7.4	15.60	8.60	7.00	125	122	4	RO
29	2	237	205	7	10.7	22.00	12.20	9.80	123	123	4	OO
30	2	234	196	8	6.6	12.90	6.60	6.30	126	128	4	RO
31	2	248	237	7	9.7	23.00	11.70	11.30	129	133	4	RO

TABLE 19. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
						WEIGHT	GONAD	GONAD	GONAD	GONAD	LENGTH	LENGTH
32	2	245	225	9	6.4	14.30	7.60	6.70	116	123	4	RO
33	2	239	186	7	5.3	9.80	4.90	4.90	115	122	4	RO
34	2	245	233	-	8.0	18.70	9.90	8.80	135	145	4	YO
35	2	233	211	7	8.8	18.50	9.70	8.80	129	124	4	OO
36	2	209	137	5	7.4	10.20	5.20	5.00	107	108	4	RO
37	2	221	158	7	8.3	13.10	6.80	6.30	114	125	4	RR
38	2	228	158	-	17.0	26.90	14.10	12.80	135	133	5	YO
39	2	227	207	8	18.7	38.70	20.90	17.80	140	139	5	OO
40	2	215	167	-	17.5	29.30	14.80	14.50	120	130	5	OO
41	2	233	210	-	22.3	46.90	23.00	23.90	131	140	5	YO
42	2	196	125	-	14.6	18.20	9.50	8.70	113	116	4	RO
43	2	205	139	5	18.9	26.40	12.90	13.50	119	118	5	YO

TABLE 20. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 27, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	225	151	6	12.7	22.00	11.00	11.00	133	131	5	PP
2	1	214	144	-	9.2	13.20	6.30	6.90	117	125	4	PP
3	1	237	213	7	13.5	28.70	12.70	16.00	134	137	4	PP
4	1	257	247	9	9.1	22.50	11.60	10.90	135	146	4	PP
5	1	227	168	6	15.6	26.20	13.40	12.80	137	125	4	PP
6	1	238	219	8	14.0	30.60	12.20	18.40	131	150	5	PP
7	1	229	182	7	19.2	34.90	19.10	15.80	137	136	5	PP
8	1	237	214	7	12.1	26.00	12.60	13.40	150	151	4	PP
9	1	238	210	7	12.2	25.60	12.80	12.80	137	141	4	PP
10	1	233	197	7	15.2	30.00	16.80	13.20	139	138	5	WH
11	1	219	175	5	16.1	28.20	15.40	12.80	139	144	4	PP
12	1	226	186	6	12.5	23.20	12.30	10.90	130	128	4	PP
13	1	228	192	-	18.1	34.70	17.90	16.80	140	140	4	PP
14	1	231	196	7	14.4	28.20	14.00	14.20	142	142	5	PP
15	1	229	199	-	15.3	30.50	14.90	15.60	133	137	5	PP
16	1	238	224	-	14.5	32.40	15.60	16.80	148	150	5	PP
17	1	218	153	6	13.5	20.70	9.60	11.10	129	139	5	PP
18	1	210	150	-	15.5	23.30	11.50	11.80	124	127	4	PP
19	1	238	215	8	10.2	22.00	10.60	11.40	128	140	4	PP
20	1	211	143	6	15.3	21.90	11.20	10.70	123	129	5	PP
21	2	234	219	7	6.6	14.50	7.40	7.10	112	119	4	OO
22	2	241	225	-	7.5	16.90	9.00	7.90	120	122	4	YO
23	2	233	197	-	7.8	15.40	8.50	6.90	117	102	4	RO
24	2	237	207	7	8.9	18.50	9.50	9.00	126	137	4	OO
25	2	216	140	6	8.3	11.60	6.20	5.40	114	102	4	RR
26	2	231	194	7	7.7	14.90	8.50	6.40	127	128	4	RO
27	2	233	191	-	5.9	11.30	5.90	5.40	102	115	4	RO
28	2	239	203	8	8.8	17.80	9.40	8.40	129	122	4	OO
29	2	235	214	8	11.6	24.90	12.60	12.30	137	135	4	RO
30	2	231	186	7	6.0	11.10	6.00	5.10	118	120	4	RO
31	2	212	145	6	13.0	18.90	10.60	8.30	114	117	4	RO

TABLE 20. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	2	242	196	-	6.9	13.60	7.20	6.40	135	135	4	RO
33	2	213	151	6	7.2	10.80	5.90	4.90	119	107	4	RO
34	2	229	164	-	5.4	8.90	5.20	3.70	118	118	3	RO
35	2	233	193	6	9.1	17.60	9.20	8.40	120	123	4	RO
36	2	236	187	6	6.3	12.00	6.20	5.80	115	116	4	RO
37	2	203	133	5	16.2	21.50	11.00	10.50	116	118	5	OO
38	2	212	147	5	18.2	26.80	14.70	12.10	130	122	5	OO
39	2	226	184	-	20.8	38.20	19.10	19.10	135	136	5	YO
40	2	225	188	5	17.8	33.40	17.50	15.90	124	122	5	YY
41	2	240	247	8	22.3	55.20	32.50	22.70	145	145	5	RO
42	2	210	132	4	16.5	21.80	10.80	11.00	114	120	5	RO
43	2	238	201	8	18.3	36.70	19.60	17.10	144	139	5	OO

TABLE 21. HERRING GONAD MATURATION SAMPLE 'A' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 28, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
1	1	272	346	-	16.2	56.00	31.20	24.80	162	170	4	PP
2	1	228	188	6	15.2	28.60	15.90	12.70	140	140	4	RW
3	1	247	234	8	13.1	30.70	15.20	15.50	150	153	5	PP
4	1	227	174	7	14.3	24.80	12.60	12.20	135	141	4	PP
5	1	237	216	-	17.3	37.30	20.30	17.00	160	154	5	WH
6	1	228	172	5	8.8	15.10	7.20	7.90	125	130	4	PP
7	1	244	214	7	13.3	28.40	15.00	13.40	140	145	4	PP
8	1	217	165	7	17.6	29.10	15.20	13.90	126	128	5	PP
9	1	238	207	8	11.0	22.80	12.20	10.60	131	140	4	PP
10	1	204	122	5	15.2	18.60	9.00	9.60	118	114	5	PP
11	1	238	213	8	15.4	32.90	17.50	15.40	136	145	5	PP
12	1	235	196	-	13.5	26.50	13.00	13.50	141	149	5	WH
13	1	191	95	4	15.9	15.10	7.70	7.40	110	107	5	WH
14	1	240	197	-	12.0	23.70	12.30	11.40	137	140	4	PP
15	1	235	210	7	19.0	39.90	21.30	18.60	140	146	5	PP
16	2	245	228	8	6.0	13.70	7.60	6.10	133	129	3	RO
17	2	242	212	7	8.2	17.40	9.90	7.50	144	141	4	RO
18	2	241	208	-	7.9	16.50	9.00	7.50	127	125	4	RO
19	2	245	230	-	11.5	26.50	15.00	11.50	135	141	4	RO
20	2	215	157	6	9.9	15.50	7.50	8.00	120	110	4	RO
21	2	241	230	8	9.3	21.50	11.00	10.50	129	136	4	RO
22	2	222	171	6	7.7	13.20	6.70	6.50	115	119	4	RO
23	2	228	186	-	7.4	13.80	7.50	6.30	116	133	4	RO
24	2	239	228	-	7.3	16.60	8.90	7.70	130	134	4	RO
25	2	245	215	8	8.1	17.50	10.00	7.50	127	114	4	RO
26	2	245	241	9	10.8	26.00	13.50	12.50	136	145	4	RO
27	2	230	208	7	11.2	23.20	12.90	10.30	133	134	4	RO
28	2	242	224	-	7.6	17.10	9.40	7.70	132	127	4	RO
29	2	228	172	-	14.7	25.30	12.80	12.50	127	125	5	OO
30	2	220	177	-	19.0	33.70	17.90	15.80	120	130	5	YO
31	2	237	226	-	20.3	45.90	25.70	20.20	138	149	5	OO

TABLE 21. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD	GONAD	GONAD	GONAD	LENGTH	LENGTH
32	2	187	88	3	18.5	16.30	8.40	7.90	103	109	5	00
33	2	219	194	7	23.1	44.80	24.00	20.80	130	128	5	Y0
34	2	225	186	6	18.1	33.70	18.00	15.70	136	140	5	Y0
35	2	230	201	6	21.6	43.40	22.20	21.20	129	139	5	00
36	2	227	198	6	21.8	43.10	24.70	18.40	135	141	5	00
37	2	223	184	6	24.9	45.90	25.00	20.30	132	131	5	00
38	2	228	180	-	17.7	31.80	16.30	15.50	135	140	5	00
39	2	224	161	5	24.4	39.30	20.90	18.40	125	135	5	00
40	2	222	181	5	23.4	42.40	21.60	20.80	135	138	5	00
41	2	206	136	-	18.6	25.30	12.90	12.40	122	121	5	00
42	2	228	192	6	18.5	35.60	18.60	17.00	130	140	5	00
43	2	196	108	-	21.8	23.50	12.10	11.40	114	114	5	00
44	2	220	148	6	19.1	28.20	14.90	13.30	125	125	5	00

TABLE 22. HERRING GONAD MATURATION SAMPLE 'B' TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, FEBRUARY 28, 1975.

FISH NU.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	HJORT	COLOR
1	1	246	254	-	20.6	52.30	22.30	30.00	160	162	5	1
2	1	225	180	6	15.2	27.30	13.80	13.50	135	131	5	1
3	1	223	170	5	18.1	30.80	16.20	14.60	133	126	5	1
4	1	227	197	-	15.7	31.00	16.40	14.60	140	146	5	1
5	1	239	196	-	12.2	24.00	11.40	12.60	131	150	5	1
6	1	220	172	6	14.9	25.60	12.60	13.00	127	139	4	1
7	1	247	234	9	11.1	26.00	13.20	12.80	152	152	5	1
8	1	225	181	6	16.4	29.60	15.60	14.00	133	136	5	1
9	1	231	187	7	15.3	28.60	14.90	13.70	140	139	4	1
10	1	237	186	7	4.6	8.50	4.50	4.00	102	109	4	1
11	1	198	126	5	16.3	20.50	10.90	9.60	117	112	5	1
12	1	239	224	7	15.0	33.60	15.60	18.00	139	147	4	1
13	1	225	192	6	13.5	26.00	12.60	13.40	127	141	4	1
14	1	224	183	7	15.2	27.80	13.50	14.30	129	140	5	1
15	2	249	222	9	11.0	24.50	13.00	11.50	132	144	5	1
16	2	240	220	7	12.9	28.30	13.90	14.40	130	140	5	1
17	2	219	157	5	8.9	13.90	4.50	6.40	116	114	4	1
18	2	241	212	8	7.5	15.80	8.10	7.70	122	124	4	1
19	2	235	206	6	7.4	15.30	7.80	7.50	130	126	4	1
20	2	260	269	-	6.5	17.50	9.40	8.10	130	132	4	1
21	2	234	202	7	7.3	14.80	7.40	7.40	136	135	4	1
22	2	240	222	-	7.6	16.80	8.30	8.50	133	138	4	1
23	2	249	243	8	8.5	20.70	11.10	9.60	141	131	4	1
24	2	246	202	8	5.9	12.10	6.30	5.80	119	119	3	1
25	2	230	167	6	4.9	8.20	4.20	4.00	102	115	3	1
26	2	246	201	-	8.1	16.20	8.90	7.30	129	125	4	1
27	2	224	187	-	20.7	38.70	20.00	18.70	125	135	5	1
28	2	234	198	6	18.1	35.80	19.60	16.20	147	140	5	1
29	2	213	130	5	20.7	26.90	15.00	11.90	125	125	5	1
30	2	192	99	4	21.0	20.80	10.80	10.00	110	119	5	1
31	2	231	196	6	23.5	46.10	23.10	23.00	134	141	5	1

TABLE 22. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	229	205	8	24.7	50.70	28.80	21.90	146	142	5	-
33	2	229	205	7	22.8	46.20	25.50	20.70	125	138	5	-
34	2	225	195	-	24.8	48.30	25.40	22.90	135	141	5	-
35	2	228	189	6	22.9	43.40	22.50	20.90	133	139	5	-
36	2	227	185	6	20.9	38.80	20.50	18.30	130	134	5	-
37	2	246	227	-	21.5	48.80	27.00	21.80	151	155	5	-
38	2	229	177	6	20.2	35.70	19.00	16.70	126	134	5	-
39	2	230	198	6	17.8	35.30	15.90	19.40	126	139	5	-
40	2	214	148	-	21.3	31.50	16.20	15.30	125	128	5	-

TABLE 23. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, MARCH 7, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	162	54	3	11.1	6.00	2.90	3.10	81	91	5	WH
2	1	206	113	4	22.7	25.70	13.20	12.50	106	110	5	WH
3	1	185	81	-	15.4	12.50	5.80	6.70	102	102	5	PP
4	1	180	77	4	15.3	11.80	5.40	6.40	91	93	5	WH
5	1	160	55	-	11.5	6.30	2.80	3.50	87	90	5	WH
6	1	139	37	2	14.3	5.30	2.70	2.60	79	75	5	WH
7	1	172	54	-	10.2	5.50	2.50	3.00	76	80	5	WH
8	1	172	69	-	2.2	1.50	0.80	0.70	61	58	8	RO
9	1	147	41	3	10.0	4.10	2.10	2.00	73	74	5	PP
10	1	192	83	4	1.0	0.80	0.40	0.40	55	55	3	RR
11	1	161	59	2	15.8	9.30	4.60	4.70	93	93	5	WH
12	1	200	86	4	1.3	1.10	0.60	0.50	72	61	8	RR
13	1	187	79	4	11.7	9.20	4.60	4.60	102	103	5	WH
14	1	182	73	3	2.1	1.50	0.70	0.80	50	64	7	RR
15	1	159	51	2	12.9	6.60	3.20	3.40	83	86	5	PP
16	2	163	58	3	12.9	7.50	4.00	3.50	94	90	5	RO
17	2	174	60	3	5.5	3.30	1.70	1.60	69	70	8	RO
18	2	170	55	3	1.8	1.00	0.50	0.50	58	55	8	RR
19	2	195	91	4	20.8	18.90	10.50	8.40	116	112	5	OO
20	2	160	59	3	11.4	6.70	3.70	3.00	91	91	5	OO
21	2	179	81	3	17.5	14.20	7.60	6.60	95	96	5	OO
22	2	206	91	-	8.8	8.00	4.60	3.40	104	104	5	RO
23	2	208	115	6	18.7	21.50	11.10	10.40	117	121	5	OO
24	2	180	68	3	12.8	8.70	4.90	3.80	94	96	5	RO
25	2	221	165	6	26.7	44.10	23.80	20.30	120	126	5	OO
26	2	160	48	-	1.0	0.50	0.30	0.20	53	38	8	RR
27	2	203	89	-	3.1	2.80	1.80	1.00	85	86	8	RR
28	2	189	92	-	20.0	18.40	9.40	9.00	100	100	5	OO
29	2	181	89	4	23.4	20.80	10.50	10.30	104	105	5	OO
30	2	159	56	3	13.6	7.60	3.80	3.80	93	90	5	OO
31	2	170	71	3	14.2	10.10	4.90	5.20	94	93	5	OO

TABLE 23. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD LENGTH	GONAD WEIGHT	GONAD LENGTH		
32	2	186	80	-	17.3	13.80	7.50	6.30	103	105	5	00
33	2	190	94	3	15.4	14.50	7.90	6.60	102	110	5	RR
34	2	165	61	2	15.7	9.60	5.40	4.20	100	89	5	00
35	2	193	114	-	26.8	30.50	15.20	15.30	105	107	5	YY
36	2	184	74	3	12.0	8.90	4.60	4.30	94	93	5	RR
37	2	189	68	-	1.8	1.20	0.60	0.60	69	62	7	RR
38	2	169	67	3	20.7	13.90	7.00	6.90	93	97	5	RO

TABLE 24. HERRING GONAD MATURATION SAMPLE TAKEN BY BOTTOM TRAWL,
IN THE VICINITY OF PORLIER PASS, MARCH 13, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD LENGTH	GONAD WEIGHT	GONAD LENGTH		
1	1	194	76	4	1.1	0.80	0.40	0.40	60	68	3	RO
2	1	174	71	-	21.7	15.40	7.40	8.00	96	102	5	WH
3	1	175	61	3	8.0	4.90	2.40	2.50	89	87	5	PP
4	1	185	83	3	17.7	14.70	7.80	6.90	100	105	5	WH
5	1	185	75	3	11.6	8.70	4.10	4.60	100	104	5	PP
6	1	149	42	2	11.9	5.00	2.40	2.60	71	74	5	PP
7	1	176	63	3	2.1	1.30	0.70	0.60	59	56	8	RR
8	1	185	81	3	23.0	18.60	8.50	10.10	99	109	6	WH
9	1	157	52	-	13.3	6.90	3.40	3.50	84	87	5	PP
10	1	153	46	2	13.0	6.00	3.00	3.00	78	84	5	-
11	1	140	38	3	16.1	6.10	3.10	3.00	83	83	5	PP
12	1	162	51	3	14.7	7.50	3.90	3.60	85	85	5	PP
13	1	154	46	2	8.5	3.90	1.90	2.00	76	87	4	PP
14	1	152	47	2	15.7	7.40	3.50	3.90	85	93	4	PP
15	2	192	94	2	30.9	29.00	15.00	14.00	107	109	5	YY
16	2	153	49	2	13.7	6.70	3.60	3.10	84	89	5	RO
17	2	196	91	5	2.1	1.90	1.00	0.90	80	82	3	RR
18	2	200	84	4	2.1	1.80	0.90	0.90	70	47	7	RR
19	2	178	70	-	22.4	15.70	8.60	7.10	107	95	6	OO
20	2	208	123	5	26.9	33.10	18.30	14.80	118	115	6	YY
21	2	195	90	4	24.2	21.80	11.40	10.40	105	104	6	YY
22	2	210	116	5	23.9	27.70	14.20	13.50	116	115	6	YO
23	2	204	125	4	28.0	35.00	18.80	16.20	106	107	5	YO
24	2	155	47	2	15.1	7.10	3.90	3.20	79	81	5	RO
25	2	142	34	2	8.2	2.80	1.60	1.20	68	68	4	RR
26	2	187	82	-	20.1	16.50	8.40	8.10	105	103	5	RO
27	2	162	58	2	16.7	9.70	5.20	4.50	86	87	4	RO
28	2	191	62	4	2.7	1.70	0.90	0.80	79	63	3	RO
29	2	164	58	3	17.4	10.10	5.30	4.80	92	95	5	RR
30	2	155	47	-	17.9	8.40	4.70	3.70	91	85	5	RR

TABLE 25. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, APRIL 29, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	211	142	8	1.1	1.50	0.70	0.80	100	98	8	OB
2	1	209	126	5	0.6	0.70	0.30	0.40	75	70	8	RB
3	1	235	197	6	14.3	28.20	12.40	15.80	135	142	5	PP
4	1	210	152	-	17.7	26.90	13.10	13.80	122	125	5	WH
5	1	214	136	4	0.5	0.70	0.30	0.40	62	75	8	RB
6	1	211	137	-	1.0	1.30	0.70	0.60	74	74	8	RB
7	1	200	109	-	0.6	0.70	0.30	0.40	75	74	8	RB
8	1	230	193	-	18.5	35.80	19.00	16.80	139	145	5	WH
9	1	212	121	5	1.0	1.20	0.60	0.60	95	96	8	OB
10	1	232	158	-	1.1	1.80	0.80	1.00	80	83	8	PP
11	1	212	157	-	16.2	25.50	12.90	12.60	134	136	5	PP
12	1	206	114	5	1.2	1.40	0.70	0.70	74	76	8	RB
13	1	209	150	6	17.5	26.30	14.30	12.00	119	120	5	PP
14	1	204	134	-	1.3	1.70	0.80	0.90	86	86	8	RR
15	1	222	149	6	1.3	1.90	0.90	1.00	75	81	8	PP
16	2	207	121	-	0.5	0.60	0.20	0.40	73	78	8	OB
17	2	231	173	6	0.8	1.30	0.60	0.70	94	97	8	OO
18	2	245	246	8	16.6	40.90	22.90	18.00	145	145	5	OO
19	2	249	207	7	1.0	2.10	1.00	1.10	104	98	8	OO
20	2	215	146	-	1.2	1.70	0.90	0.80	95	95	8	RR
21	2	224	214	7	23.0	49.30	28.10	21.20	130	136	5	YY
22	2	212	128	-	1.3	1.60	0.80	0.80	95	92	8	RO
23	2	218	139	-	1.0	1.40	0.70	0.70	96	80	8	OO
24	2	209	130	-	1.3	1.70	0.90	0.80	97	84	8	RB
25	2	212	140	-	9.3	1.30	0.70	0.60	104	81	8	RR
26	2	204	125	4	1.8	2.30	1.30	1.00	108	80	8	PP
27	2	221	156	5	1.2	1.80	0.80	1.00	75	125	8	PP
28	2	211	135	4	1.3	1.70	0.90	0.80	80	75	8	RO
29	2	224	151	6	1.4	2.20	1.10	1.10	100	70	8	RR
30	2	233	182	6	1.4	2.60	1.30	1.30	101	95	8	RO
31	2	214	145	5	1.1	1.60	0.80	0.80	75	74	8	RO

TABLE 25. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	2	225	167	7	1.4	2.40	1.40	1.00	106	110	8	RO
33	2	206	129	5	1.4	1.80	0.90	0.90	77	85	8	RO

TABLE 26. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, APRIL 30, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	180	74	4	0.8	0.60	0.30	0.30	55	55	8	00
2	1	233	162	-	1.0	1.60	0.80	0.80	83	92	8	00
3	1	195	85	-	1.2	1.00	0.50	0.50	68	65	3	RO
4	1	178	63	3	1.4	0.90	0.40	0.50	60	70	3	RO
5	1	174	67	4	2.2	1.50	1.00	0.50	65	55	7	WB
6	1	200	94	-	1.3	1.20	0.60	0.60	64	55	3	00
7	1	228	136	-	1.3	1.80	0.80	1.00	80	100	3	00
8	1	247	163	7	1.0	1.70	0.90	0.80	85	83	8	00
9	1	189	78	-	1.5	1.20	0.60	0.60	58	57	8	00
10	1	201	84	-	2.1	1.80	0.90	0.90	75	75	7	RR
11	1	186	73	3	1.1	0.80	0.40	0.40	57	55	7	RO
12	1	239	151	-	1.7	2.50	1.20	1.30	97	92	7	PP
13	1	191	73	3	1.1	0.80	0.40	0.40	55	51	8	PP
14	1	230	110	6	1.5	1.70	0.80	0.90	80	97	8	00
15	1	220	122	-	1.4	1.70	0.80	0.90	80	80	8	RO
16	1	180	63	3	2.1	1.30	0.60	0.70	66	80	8	00
17	1	220	119	6	1.3	1.50	0.70	0.80	82	80	3	PP
18	1	219	126	-	1.7	2.10	1.00	1.10	82	84	7	RO
19	1	203	106	6	1.3	1.40	0.70	0.70	65	69	8	PP
20	1	220	141	6	1.7	2.40	1.20	1.20	85	81	8	PP
21	2	245	169	7	1.1	1.90	1.00	0.90	110	105	8	00
22	2	249	192	-	0.9	1.80	1.00	0.80	100	101	8	00
23	2	203	96	-	1.6	1.50	0.80	0.70	75	79	8	RR
24	2	226	126	-	1.7	2.20	1.00	1.20	102	105	8	RO
25	2	201	100	-	1.8	1.80	0.90	0.90	80	75	8	RO
26	2	210	110	5	1.2	1.30	0.60	0.70	74	83	7	00
27	2	242	150	-	1.3	2.00	1.00	1.00	91	92	6	RO
28	2	209	93	-	1.8	1.70	0.80	0.90	85	75	7	RO
29	2	206	93	-	1.8	1.70	0.90	0.80	87	70	7	RO
30	2	213	123	5	1.1	1.40	0.80	0.60	100	100	7	RO
31	2	247	187	9	1.1	2.00	1.00	1.00	115	114	7	RO

TABLE 26. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	205	110	6	1.2	1.30	0.60	0.70	75	73	7	RO
33	2	232	136	6	1.1	1.50	0.90	0.60	107	103	7	RO
34	2	212	115	5	1.5	1.70	0.80	0.90	110	110	8	OO
35	2	206	108	-	1.3	1.40	0.60	0.80	55	80	8	OO
36	2	185	56	-	4.6	2.60	1.10	1.50	65	73	7	OO
37	2	239	167	-	1.3	2.10	1.00	1.10	115	120	7	RR
38	2	206	111	5	1.4	1.50	0.70	0.80	86	100	7	RO
39	2	217	132	6	1.1	1.50	0.70	0.80	54	95	8	RO
40	2	237	149	6	1.2	1.80	0.90	0.90	129	104	7	RO
41	2	212	113	-	1.9	2.10	1.00	1.10	95	94	8	OO
42	2	210	106	-	2.0	2.10	1.00	1.10	95	95	8	OO

TABLE 27. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS MAY 27, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
1	1	192	101	-	1.1	1.00	0.50	0.50	68	63	3	RO
2	1	198	118	-	0.5	0.60	0.30	0.30	55	62	3	RO
3	1	211	143	6	1.0	1.50	0.70	0.80	82	61	8	RR
4	1	198	137	-	0.6	0.80	0.40	0.40	60	60	8	PP
5	1	205	154	5	0.7	1.10	0.50	0.60	65	60	8	PP
6	1	170	79	-	0.8	0.60	0.30	0.30	49	44	8	PP
7	1	206	108	-	0.9	1.00	0.50	0.50	70	60	8	PP
8	1	205	100	-	1.0	1.00	0.50	0.50	59	62	8	PP
9	1	221	121	-	0.8	1.00	0.50	0.50	69	77	8	PP
10	1	181	110	4	0.6	0.70	0.40	0.30	50	55	8	PP
11	1	184	89	-	1.1	1.00	0.50	0.50	65	65	8	PP
12	1	227	132	-	1.5	2.00	1.00	1.00	72	75	8	PP
13	1	220	136	-	1.1	1.50	0.80	0.70	92	99	8	RR
14	1	199	122	4	0.8	1.00	0.50	0.50	64	67	8	RR
15	2	207	104	5	0.8	0.80	0.40	0.40	80	79	3	RO
16	2	220	165	6	0.7	1.20	0.60	0.60	83	69	3	RO
17	2	211	121	4	0.9	1.10	0.60	0.50	85	82	3	OO
18	2	191	105	4	1.0	1.00	0.50	0.50	66	68	3	OO
19	2	210	132	4	0.8	1.10	0.60	0.50	77	71	3	OO
20	2	209	120	4	1.2	1.40	0.70	0.70	85	80	3	RO
21	2	161	69	3	1.2	0.80	0.40	0.40	48	45	2	RO
22	2	197	130	5	0.9	1.20	0.60	0.60	80	69	3	RO
23	2	163	72	3	0.8	0.60	0.30	0.30	40	40	2	RR
24	2	189	83	-	0.7	0.60	0.30	0.30	66	81	8	RO
25	2	183	88	-	0.7	0.60	0.30	0.30	57	67	3	RO
26	2	159	64	-	0.9	0.60	0.30	0.30	34	48	8	RR
27	2	168	75	3	0.8	0.60	0.30	0.30	54	45	2	RR
28	2	170	77	4	1.3	1.00	0.50	0.50	65	65	8	RR
29	2	193	107	4	0.9	1.00	0.50	0.50	67	70	8	RR
30	2	205	132	5	1.2	1.60	0.80	0.80	84	68	8	RR
31	2	192	115	4	1.0	1.20	0.60	0.60	65	60	8	PP

TABLE 27. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	192	135	-	1.0	1.40	0.70	0.70	91	85	3	PP
33	2	191	94	5	0.9	0.80	0.40	0.40	62	65	8	RR
34	2	200	107	-	0.9	1.00	0.50	0.50	60	69	8	RR

TABLE 28. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, MAY 28, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT	COLOR
1	1	210	122	-	0.5	0.60	0.30	0.30	66	67	3	RR
2	1	190	93	-	0.8	0.70	0.30	0.40	47	52	8	RO
3	1	205	118	-	0.7	0.80	0.40	0.40	60	59	8	PP
4	1	209	120	-	0.8	0.90	0.40	0.50	75	70	5	OO
5	1	186	98	3	1.0	1.00	0.50	0.50	65	56	8	RR
6	1	176	79	3	0.9	0.70	0.30	0.40	62	55	8	OO
7	1	180	79	-	0.9	0.70	0.30	0.40	60	60	3	OO
8	1	167	79	-	0.4	0.30	0.10	0.20	47	48	3	PP
9	1	198	91	4	0.7	0.60	0.30	0.30	57	55	3	RR
10	1	230	176	-	0.7	1.30	0.70	0.60	95	81	3	RR
11	1	167	67	3	0.7	0.50	0.20	0.30	59	60	3	OO
12	1	172	70	-	0.9	0.60	0.30	0.30	46	47	3	OO
13	1	208	109	-	0.9	1.00	0.50	0.50	70	64	3	RO
14	1	207	116	-	1.0	1.20	0.60	0.60	60	58	3	PP
15	1	202	119	5	1.2	1.40	0.70	0.70	59	60	3	PP
16	1	200	101	4	1.2	1.20	0.60	0.60	61	65	3	PP
17	2	185	94	-	0.6	0.60	0.30	0.30	68	67	3	OO
18	2	235	176	-	1.0	1.80	0.90	0.90	85	80	3	RO
19	2	205	125	5	0.8	1.00	0.50	0.50	75	75	8	RO
20	2	160	64	3	0.9	0.60	0.30	0.30	60	55	8	RO
21	2	195	99	4	0.8	0.80	0.40	0.40	73	77	8	OO
22	2	169	74	-	0.3	0.20	0.10	0.10	31	24	3	OO
23	2	175	87	3	0.7	0.60	0.30	0.30	57	40	3	RR
24	2	194	100	4	0.6	0.60	0.30	0.30	75	70	3	PP
25	2	171	84	3	0.5	0.40	0.20	0.20	52	44	3	RR
26	2	205	114	5	1.0	1.10	0.60	0.50	83	73	3	RR
27	2	193	95	4	0.8	0.80	0.40	0.40	69	71	3	RO
28	2	203	117	-	1.4	1.60	0.80	0.80	73	67	3	RO
29	2	193	93	-	0.9	0.80	0.40	0.40	70	61	3	RO
30	2	200	100	-	1.0	1.00	0.50	0.50	69	74	3	RO
31	2	187	96	4	0.5	0.50	0.20	0.30	55	64	3	RO

TABLE 28. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD LENGTH	GONAD LENGTH		
32	2	168	74	-	0.8	0.60	0.30	0.30	54	43	3	RO
33	2	209	109	5	1.3	1.40	0.70	0.70	80	88	3	RO

TABLE 29. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, JUNE 6, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
1	1	191	.96	4	0.6	0.60	0.30	0.30	56	52	3	-
2	1	159	65	-	0.1	0.20	0.10	0.10	42	45	3	-
3	1	195	96	-	0.5	0.50	0.20	0.30	55	56	3	-
4	1	176	75	3	0.3	0.20	0.10	0.10	52	52	3	-
5	1	186	89	3	0.7	0.60	0.30	0.30	50	50	3	-
6	1	205	72	4	0.8	0.60	0.30	0.30	65	62	3	-
7	2	171	73	3	0.7	0.50	0.20	0.30	60	58	3	-
8	2	208	121	-	0.7	0.80	0.40	0.40	85	82	3	-
9	2	162	62	4	0.6	0.40	0.20	0.20	50	50	3	-
10	2	207	113	5	0.8	0.90	0.40	0.50	64	65	3	-
11	2	200	100	-	0.9	0.90	0.50	0.40	55	55	3	-
12	2	155	48	-	0.8	0.40	0.20	0.20	45	43	3	-
13	2	177	61	4	1.1	0.70	0.30	0.40	55	55	3	-
14	2	179	83	-	1.1	0.90	0.40	0.50	50	50	3	-

TABLE 30. HERRING GONAD MATURATION SAMPLE TAKEN BY MIDWATER TRAWL,
IN THE VICINITY OF PORLIER PASS, JUNE 18, 1975.

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT GONAD WEIGHT	RIGHT GONAD WEIGHT	LEFT GONAD LENGTH	RIGHT GONAD LENGTH	HJORT	COLOR
1	1	200	118	-	0.7	0.80	0.40	0.40	53	54	3	-
2	1	179	74	3	1.1	0.80	0.40	0.40	46	46	3	YR
3	1	219	165	8	0.8	1.30	0.60	0.70	66	65	3	RR
4	1	193	126	4	1.0	1.20	0.60	0.60	60	55	3	-
5	1	157	72	-	0.5	0.40	0.20	0.20	46	65	3	WN
6	1	212	145	-	0.3	0.50	0.20	0.30	66	65	3	WN
7	1	183	104	4	0.6	0.60	0.30	0.30	45	45	3	WN
8	1	204	144	5	0.7	1.00	0.50	0.50	51	54	3	WN
9	1	184	111	4	0.4	0.40	0.20	0.20	50	50	3	WN
10	2	229	178	6	0.5	0.90	0.50	0.40	72	71	3	RR
11	2	207	126	-	0.6	0.70	0.30	0.40	62	65	3	RR
12	2	191	108	-	0.7	0.80	0.40	0.40	70	66	3	RR
13	2	207	154	6	0.8	1.30	0.60	0.70	60	65	3	RR
14	2	191	111	4	1.1	1.20	0.60	0.60	65	60	3	RR
15	2	209	173	5	0.5	0.80	0.40	0.40	85	90	3	RR
16	2	221	164	-	0.5	0.90	0.40	0.50	63	66	3	RR
17	2	211	150	-	0.5	0.80	0.40	0.40	75	77	3	RR
18	2	216	160	-	0.6	1.00	0.50	0.50	80	70	3	RR
19	2	211	141	-	0.5	0.70	0.40	0.30	72	72	3	RR
20	2	218	108	-	0.5	0.60	0.30	0.30	65	70	3	RR
21	2	211	121	-	0.7	0.90	0.40	0.50	75	75	8	RR
22	2	221	147	-	0.5	0.60	0.30	0.30	90	88	3	RR
23	2	179	84	4	0.2	0.20	0.10	0.10	55	55	3	RO
24	2	197	130	-	0.3	0.40	0.20	0.20	70	65	3	RW
25	2	225	186	5	0.5	0.90	0.40	0.50	90	95	3	RR
26	2	202	109	-	0.9	1.00	0.50	0.50	56	55	3	RW
27	2	197	123	5	0.6	0.70	0.30	0.40	85	79	3	-
28	2	225	155	5	0.7	1.10	0.60	0.50	65	65	3	RR
29	2	227	184	-	0.8	1.40	0.70	0.70	70	80	3	RN
30	2	184	105	-	1.1	1.10	0.50	0.60	45	60	3	RR
31	2	223	201	-	0.6	1.20	0.60	0.60	70	80	3	RN

TABLE 30. (CONT'D)

FISH NO.	SEX	LENGTH	WEIGHT	AGE	G.I.	GONAD WEIGHT	LEFT	RIGHT	LEFT	RIGHT	HJORT	COLOR
							GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	GONAD WEIGHT	LENGTH	LENGTH
32	2	222	156	-	0.8	1.20	0.60	0.60	65	65	3	WN
33	2	205	122	-	1.2	1.50	0.70	0.80	70	65	3	RR
34	2	217	127	5	0.9	1.20	0.60	0.60	85	75	3	RR
35	2	186	102	5	0.6	0.60	0.30	0.30	55	56	3	RR
36	2	209	118	-	0.8	1.00	0.50	0.50	80	70	3	OO
37	2	202	108	-	0.6	0.60	0.30	0.30	60	50	3	OO
38	2	230	203	5	0.5	1.00	0.50	0.50	75	80	3	RR
39	2	200	99	-	0.8	0.80	0.40	0.40	65	48	3	RR
40	2	219	187	-	0.5	1.00	0.50	0.50	78	75	3	OO
41	2	215	172	7	0.8	1.30	0.70	0.60	70	70	3	RR
42	2	201	108	-	0.7	0.80	0.40	0.40	70	60	3	RR
43	2	216	176	6	0.7	1.20	0.60	0.60	75	77	3	OO
44	2	197	129	4	0.6	0.80	0.50	0.30	70	66	8	RR
45	2	225	192	7	0.5	1.00	0.50	0.50	86	85	3	RO
46	2	198	127	5	0.4	0.50	0.30	0.20	75	65	3	RR

