

**Hylebos Waterway Fish Injury Studies  
Individual Data and Quality Assurance Results  
CASE NARRATIVE**

**Reproductive Injury in Flatfish  
Somatic Indices**

*Calibrations*

Prior to initiation of the study, balances were calibrated to insure their accuracy. Balances were re-zeroed between weight determinations.

*Data Validation*

Data on length, total weight, gutted weight, gonad weight, and liver weight were initially recorded in field records by necropsiers, and subsequently entered into the database. Fish length was determined to the nearest mm, total weight and gutted weight to the nearest g, and gonad weight and liver weight to the nearest 0.5 g. Database entries were then compared with values recorded in field data notebooks and any errors or discrepancies were corrected. If recorded values were illegible, obviously in error (e.g., gutted body weight greater than total body weight), or specified as guesses or estimates in the field notebooks, data were not used.

*Calculation of Somatic Indices*

As described in the Sampling and Analysis Plan, somatic indices were calculated according to the following formulas, using an EXCEL spreadsheet:

$$\text{Gonadosomatic index (GSI)} = (\text{ovary weight (g)}/\text{gutted body weight (g)}) \times 100$$

$$\text{Hepatosomatic index (HSI)} = (\text{liver weight (g)}/\text{gutted body weight (g)}) \times 100$$

$$\text{Condition factor} = \text{gutted body weight (g)}/\text{length}^3 \text{ (cm)}$$

Distributions of calculated values were plotting using Statview to check for outliers. In cases where outliers were noted, data (e.g., lengths, organ weights) were re-checked and any errors corrected.

*Commentary on Missing Data*

Specimens 943311,943312,943719. Liver weights and HSI are missing because necropsiers either forgot to weigh livers or to record organ weights:

Specimens 943515,943592,943764. Gutted weights are missing, as well as all other indices (GSI, HSI, and condition factor) whose calculation is based on gutted weight, because necropsiers either forgot to weigh carcasses or to record carcass weights.

Specimens 943387 and 943469. Liver weights could not be accurately determined due to rough weather and recorded values were noted as estimates. Consequently these liver weight values were not entered into the database, and HSI was not calculated.

Specimen 943544. The field-recorded value for gutted weight was greater than the value for total weight, so neither was entered into the database, and GSI, HSI, and condition factor were not calculated

Sequential gaps in the specimen numbers do not represent missing fish. Specimen number listed in Table 1 are female English sole reported in the Reproductive Injury study. Specimen number not listed were either reported in the Toxicopathic Injury study, or assigned to other projects.  
Additional Changes Since the Previous Case Narrative

Revisions 2/24/97

Specimen 943305. The field recorded value for gutted weight for this specimen was 194 g, which was anomalously low for its total weight of 353 g, as its combined gonad and liver weights were only 12 g. The 194 g value was probably a recording error, and should have been 294 mm. Because of the uncertainty of this measurement, gutted weight for this specimen was omitted from the data set, and GSI, HSL and condition factor were not calculated.

Specimen 943369. The field. recorded value for gutted weight for this specimen was 144 g which was anomalously low for its total weight of 510 g, as its combined gonad and liver weights were only 12 g. The 144 g value was probably a recording error. Because of the uncertainty of this measurement, gutted weight for this specimen was omitted from the data set, and GSI, HSI, and condition factor were not calculated.

Specimen 943652. The field-recorded value for length for this specimen was 226 mm, which was anomalously low for its weight of 335 m, and resulted in a condition factor an order of magnitude greater than the values computed for other specimen. The 226 mm value was probably a recording error, and should have been 326 mm. Because of the uncertainty of this measurement, length for this specimen was omitted from the data set, and GSI, HSI, and condition factor were not calculated.

Specimen 943655. The field recorded value for gutted weight for this specimen was 364 g, which was anomalously high for its total weight of 385 g, as its combined gonad and liver weights were 34 g. Simply subtracting the weight of these organs, without even considering the weight of the other internal organs and any food in the animal's digestive tract, the gutted weight should have been 351 g. The 364 g value was probably a recording error. Because of the uncertainty of this measurement, gutted weight for this specimen was omitted from the data set, and GSI, HSI, and condition factor were not calculated.

Table 1. Somatic Indices for Reproductive Injury in Flatfish. Individual data.												
Specimen #	Date captured	Site Name	Species	Sex	length (mm)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac	
943271	9/20/94	Hylebos Waterway	English sole	2	342	387	284	13	10	4.58	3.52	0.0071
943273	9/20/94	Hylebos Waterway	English sole	2	285	212	189	4	3	2.12	1.59	0.0082
943276	9/20/94	Hylebos Waterway	English sole	2	287	199	169	4	2	2.37	1.18	0.0071
943281	9/21/94	Hylebos Waterway	English sole	2	332	326	163	12	8	7.36	4.91	0.0045
943283	9/21/94	Hylebos Waterway	English sole	2	340	330	309	7	4	2.27	1.29	0.0079
943284	9/21/94	Hylebos Waterway	English sole	2	266	162	129	2	1	1.55	0.78	0.0069
943287	9/21/94	Hylebos Waterway	English sole	2	290	233	200	7	3	3.5	1.5	0.0082
943288	9/21/94	Hylebos Waterway	English sole	2	314	298	215	6	3	2.79	1.4	0.0069
943289	9/21/94	Hylebos Waterway	English sole	2	288	227	188	6	4	3.19	2.13	0.0079
943290	9/21/94	Hylebos Waterway	English sole	2	348	355	273	7	4	2.56	1.47	0.0065
943291	9/21/94	Hylebos Waterway	English sole	2	305	225	216	4	4	1.85	1.85	0.0076
943292	9/21/94	Hylebos Waterway	English sole	2	332	260	269	5	4	1.86	1.49	0.0074
943293	9/21/94	Hylebos Waterway	English sole	2	299	218	212	5	5	2.36	2.36	0.0079
943294	9/21/94	Hylebos Waterway	English sole	2	323	361	305	4	4	1.31	1.31	0.0091
943295	9/21/94	Hylebos Waterway	English sole	2	290	225	185	4	2	2.16	1.08	0.0076
943296	9/21/94	Hylebos Waterway	English sole	2	280	188	158	4	1	2.53	0.63	0.0072
943297	9/21/94	Hylebos Waterway	English sole	2	225	247	215	3	2	1.4	0.93	0.0189
943298	9/21/94	Hylebos Waterway	English sole	2	325	290	247	3	2	1.21	0.81	0.0072
943299	9/21/94	Hylebos Waterway	English sole	2	290	215	178	4	2	2.25	1.12	0.0073
943300	9/21/94	Hylebos Waterway	English sole	2	236	255	215	6	4	2.79	1.86	0.0164
943301	9/21/94	Hylebos Waterway	English sole	2	308	269	225	6	3	2.67	1.33	0.0077
943302	9/21/94	Hylebos Waterway	English sole	2	311	334	284	8	7	2.82	2.46	0.0094
943303	9/21/94	Hylebos Waterway	English sole	2	289	249	204	5	2	2.45	0.98	0.0085
943304	9/21/94	Hylebos Waterway	English sole	2	307	277	240	5	3	2.08	1.25	0.0083
943305	9/21/94	Hylebos Waterway	English sole	2	327	353		9	3			
943306	9/21/94	Hylebos Waterway	English sole	2	296	262	220	5	4	2.27	1.82	0.0094
943307	9/21/94	Hylebos Waterway	English sole	2	279	189	158	3	2	1.9	1.27	0.0073
943308	9/21/94	Hylebos Waterway	English sole	2	303	236	196	5	3	2.55	1.53	0.0070
943309	9/21/94	Hylebos Waterway	English sole	2	268	179	143	3	1	2.1	0.7	0.0074
943310	9/21/94	Hylebos Waterway	English sole	2	276	196	165	3	1	1.82	0.61	0.0078
943311	9/22/94	Covos Passage	English sole	2	360	424	362		4		1.1	0.0078
943312	9/22/94	Covos Passage	English sole	2	359	377	324		4		1.23	0.0070
943313	9/22/94	Covos Passage	English sole	2	322	288	248	3	4	1.21	1.61	0.0074
943314	9/22/94	Covos Passage	English sole	2	320	268	231	3	2	1.3	0.87	0.0070
943315	9/22/94	Covos Passage	English sole	2	351	372	326	5	5	1.53	1.53	0.0075
943316	9/22/94	Covos Passage	English sole	2	300	237	200	3	2	1.5	1	0.0074
943317	9/22/94	Covos Passage	English sole	2	288	206	176	2	2	1.14	1.14	0.0074
943318	9/22/94	Covos Passage	English sole	2	280	189	162	2	1	1.23	0.62	0.0074
943319	9/22/94	Covos Passage	English sole	2	283	184	162	2	2	1.23	1.23	0.0071

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Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac	
943320	9/22/94	Colvos Passage	English sole	2	286	197	171	2	2	1	1.17	0.58	0.0073
943321	9/22/94	Colvos Passage	English sole	2	282	158	132	2	2	2	1.52	1.52	0.0059
943322	9/22/94	Colvos Passage	English sole	2	278	196	169	2	2	1	1.18	0.59	0.0079
943323	9/22/94	Colvos Passage	English sole	2	277	179	152	2	2	2	1.32	1.32	0.0072
943332	9/23/94	Colvos Passage	English sole	2	259	124	109	1	2	2	0.92	1.83	0.0063
943333	9/23/94	Colvos Passage	English sole	2	265	155	130	2	2	2	1.54	1.54	0.0070
943335	9/23/94	Colvos Passage	English sole	2	260	136	115	1.5	2	2	1.3	1.74	0.0065
943336	9/23/94	Colvos Passage	English sole	2	295	215	170	3	5	5	1.76	2.94	0.0066
943337	9/23/94	Colvos Passage	English sole	2	310	265	244	4	4	4	1.64	1.64	0.0082
943340	9/23/94	Colvos Passage	English sole	2	274	146	94	1	2	2	1.06	2.13	0.0046
943341	9/23/94	Colvos Passage	English sole	2	265	155	120	1	4	4	0.83	3.33	0.0064
943345	9/23/94	Colvos Passage	English sole	2	224	90	80	1	1	1	1.25	1.25	0.0071
943347	9/23/94	Colvos Passage	English sole	2	267	165	142	2	2	2	1.41	1.41	0.0075
943348	9/23/94	Colvos Passage	English sole	2	261	151	130	2	2	2	1.54	1.54	0.0073
943350	9/23/94	Colvos Passage	English sole	2	230	109	97	1	1	1	1.03	1.03	0.0080
943352	9/23/94	Colvos Passage	English sole	2	248	124	106	2	2	1	1.89	0.94	0.0069
943355	9/23/94	Colvos Passage	English sole	2	318	229	195	3	2	2	1.54	1.03	0.0061
943358	9/23/94	Colvos Passage	English sole	2	249	127	114	1	1	1	0.88	0.88	0.0074
943359	9/23/94	Colvos Passage	English sole	2	230	114	102	2	2	2	1.96	1.96	0.0084
943360	9/23/94	Colvos Passage	English sole	2	220	89	81	1	1	1	1.23	1.23	0.0076
943361	9/23/94	Colvos Passage	English sole	2	218	96	82	1	1	1	1.22	1.22	0.0079
943362	9/23/94	Colvos Passage	English sole	2	208	74	64	1	0.5	0.5	1.56	0.78	0.0071
943363	9/23/94	Colvos Passage	English sole	2	222	92	78	1	1	1	1.28	0.64	0.0071
943365	10/17/94	Hylebos Waterway	English sole	2	307	296	250	9	9	10	3.6	4	0.0086
943366	10/17/94	Hylebos Waterway	English sole	2	345	396	341	9	6	6	2.64	1.76	0.0083
943368	10/17/94	Hylebos Waterway	English sole	2	268	180	149	4	4	3	2.68	2.01	0.0077
943369	10/17/94	Hylebos Waterway	English sole	2	397	510		6	6				
943370	10/17/94	Hylebos Waterway	English sole	2	265	170	143	4	4	1	2.8	0.7	0.0077
943372	10/17/94	Hylebos Waterway	English sole	2	288	245	208	5	6	6	2.4	2.88	0.0087
943374	10/17/94	Hylebos Waterway	English sole	2	268	156	128	3	2	2	2.34	1.56	0.0066
943376	10/17/94	Hylebos Waterway	English sole	2	252	125	105	2	2	1	1.9	0.95	0.0066
943377	10/17/94	Hylebos Waterway	English sole	2	255	172	148	3	2	2	2.03	1.35	0.0089
943378	10/17/94	Hylebos Waterway	English sole	2	318	303	258	7	4	4	2.71	1.55	0.0080
943380	10/17/94	Hylebos Waterway	English sole	2	279	196	168	4	2	2	2.38	1.19	0.0077
943381	10/17/94	Hylebos Waterway	English sole	2	239	120	106	1	1	1	0.94	0.94	0.0078
943383	10/18/94	Hylebos Waterway	English sole	2	252	180	160	4	4	4	2.5	2.5	0.0100
943384	10/18/94	Hylebos Waterway	English sole	2	248	147	129	1.5	1	1	1.16	0.78	0.0085
943385	10/18/94	Hylebos Waterway	English sole	2	287	264	220	4	4	4	1.82	1.82	0.0093
943386	10/18/94	Hylebos Waterway	English sole	2	273	187	162	2	2	2	1.23	1.23	0.0080

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Specimen #	Date captured	Site Name	Species	Sex	length	weight	Gutted wt	liver wt	gonad wt	HSI	GSI	Cond Fac	
943387	10/18/94	Hylebos Waterway	English sole	2	271	168	140		2		1.43	0.0070	
943389	10/18/94	Hylebos Waterway	English sole	2	340	388	325	12	13	3.69	4	0.0083	
943391	10/18/94	Hylebos Waterway	English sole	2	277	211	183	6	4	3.28	2.19	0.0086	
943392	10/18/94	Hylebos Waterway	English sole	2	261	183	154	3	6	1.95	3.9	0.0087	
943393	10/18/94	Hylebos Waterway	English sole	2	272	181	152	5	2	3.29	1.32	0.0076	
943398	10/18/94	Hylebos Waterway	English sole	2	282	214	185	3	2	1.62	1.08	0.0082	
943400	10/18/94	Hylebos Waterway	English sole	2	237	138	116	2	4	1.72	3.45	0.0087	
943401	10/19/94	Hylebos Waterway	English sole	2	302	235	204	3	2	1.47	0.98	0.0074	
943402	10/19/94	Colvos Passage	English sole	2	326	300	266	3	3	5	1.13	1.88	0.0077
943403	10/19/94	Colvos Passage	English sole	2	264	152	132	3	2	2.27	1.52	0.0072	
943404	10/19/94	Colvos Passage	English sole	2	312	270	236	2	2.5	0.85	1.06	0.0078	
943405	10/19/94	Colvos Passage	English sole	2	293	203	180	2	3	1.11	1.67	0.0072	
943407	10/19/94	Colvos Passage	English sole	2	264	152	129	1.5	1.5	1.16	1.16	0.0070	
943408	10/19/94	Colvos Passage	English sole	2	338	358	302	5	6	1.66	1.99	0.0078	
943410	10/19/94	Colvos Passage	English sole	2	265	142	127	1.5	1	1.18	0.79	0.0068	
943411	10/19/94	Colvos Passage	English sole	2	348	359	305	3	4	0.98	1.31	0.0072	
943412	10/19/94	Colvos Passage	English sole	2	299	243	216	3	3	1.39	1.39	0.0081	
943413	10/19/94	Colvos Passage	English sole	2	340	334	295	3	4	1.02	1.36	0.0075	
943414	10/19/94	Colvos Passage	English sole	2	350	350	305	5	7	1.64	2.3	0.0071	
943415	10/19/94	Colvos Passage	English sole	2	294	235	200	3	3	1.5	3	0.0079	
943466	10/20/94	Colvos Passage	English sole	2	352	364	305	6	12	1.97	3.93	0.0070	
943467	10/20/94	Colvos Passage	English sole	2	337	305	267	5	8	1.87	3	0.0070	
943468	10/20/94	Colvos Passage	English sole	2	351	378	327	6	10	1.83	3.06	0.0076	
943469	10/20/94	Colvos Passage	English sole	2	318	292	258		2		0.78	0.0080	
943493	10/25/94	Colvos Passage	English sole	2	354	419	370	7	6	1.89	1.62	0.0083	
943494	10/25/94	Colvos Passage	English sole	2	298	216	194	2	2	1.03	1.03	0.0073	
943496	10/25/94	Colvos Passage	English sole	2	309	262	230	3.5	6	1.52	2.61	0.0078	
943497	10/25/94	Colvos Passage	English sole	2	335	310	269	4	5	1.49	1.86	0.0072	
943498	10/25/94	Colvos Passage	English sole	2	308	257	220	4	3	1.82	1.36	0.0075	
943499	10/25/94	Colvos Passage	English sole	2	289	200	179	3	3	1.68	1.68	0.0074	
943500	10/25/94	Colvos Passage	English sole	2	278	194	167	2	7	1.2	4.19	0.0078	
943501	10/25/94	Colvos Passage	English sole	2	274	190	164	2	1	1.22	0.61	0.0080	
943502	10/25/94	Colvos Passage	English sole	2	282	180	158	1.5	1.5	0.95	0.95	0.0070	
943503	10/25/94	Colvos Passage	English sole	2	298	234	194	3.5	3	1.8	1.55	0.0073	
943504	10/25/94	Colvos Passage	English sole	2	291	206	184	2	1	1.09	0.54	0.0075	
943514	12/2/94	Colvos Passage	English sole	2	255	144	112	2	2	1.79	1.79	0.0068	
943515	12/2/94	Colvos Passage	English sole	2	310	245		2	5				
943516	12/2/94	Colvos Passage	English sole	2	320	281	215	2	3	0.93	1.4	0.0066	
943518	12/2/94	Colvos Passage	English sole	2	300	242	205	2	15	0.98	7.32	0.0076	

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Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	CSI	Cond Fac
943520	12/2/94	Colvos Passage	English sole	2	300	216	189	5	2	2.65	1.06	0.0070
943521	12/2/94	Colvos Passage	English sole	2	374	536	458	10	18	2.18	3.93	0.0088
943523	12/2/94	Colvos Passage	English sole	2	300	239	214	3	4	1.4	1.87	0.0079
943524	12/2/94	Colvos Passage	English sole	2	297	214	192	2	2	1.04	1.04	0.0073
943525	12/2/94	Colvos Passage	English sole	2	352	353	315	5	4	1.59	1.27	0.0072
943526	12/2/94	Colvos Passage	English sole	2	271	173	153	2	1	1.31	0.65	0.0077
943527	12/2/94	Colvos Passage	English sole	2	295	262		5	16			
943529	12/2/94	Colvos Passage	English sole	2	340	380	334	6	10	1.8	2.99	0.0085
943530	12/2/94	Colvos Passage	English sole	2	280	199	178	2	2	1.12	1.12	0.0081
943531	12/2/94	Colvos Passage	English sole	2	300	242	210	3	2	1.43	0.95	0.0078
943532	12/2/94	Colvos Passage	English sole	2	286	195	171	2	2	1.17	1.17	0.0073
943533	12/2/94	Colvos Passage	English sole	2	351	416	358	6	15	1.68	4.19	0.0083
943534	12/2/94	Colvos Passage	English sole	2	306	254	218	4	12	1.83	5.5	0.0076
943535	12/2/94	Colvos Passage	English sole	2	279	188	164	1.5	1	0.91	0.61	0.0076
943536	12/2/94	Colvos Passage	English sole	2	295	242	213	3	2	1.41	0.94	0.0083
943537	12/2/94	Colvos Passage	English sole	2	301	236	199	3	8	1.51	4.02	0.0073
943538	12/2/94	Colvos Passage	English sole	2	294	236	204	2.5	7	1.23	3.43	0.0080
943539	12/2/94	Colvos Passage	English sole	2	277	180	147	1	1	0.68	0.68	0.0069
943540	12/2/94	Colvos Passage	English sole	2	295	216	169	3	8	1.78	4.73	0.0066
943541	12/2/94	Colvos Passage	English sole	2	301	219	178	2	1	1.12	0.56	0.0065
943542	12/2/94	Colvos Passage	English sole	2	283	188	163	1.5	1.5	0.92	0.92	0.0072
943543	12/2/94	Colvos Passage	English sole	2	290	192	185	2	1	1.08	0.54	0.0076
943544	12/2/94	Colvos Passage	English sole	2	285	172		2	2			
943546	12/5/94	Hylebos Waterway	English sole	2	355	433	362	10	14	2.76	3.87	0.0081
943548	12/5/94	Hylebos Waterway	English sole	2	305	250	212	6	6	2.83	2.83	0.0075
943550	12/5/94	Hylebos Waterway	English sole	2	265	174	153	5	6	3.27	3.92	0.0082
943552	12/5/94	Hylebos Waterway	English sole	2	305	249	218	7	9	3.21	4.13	0.0077
943554	12/5/94	Hylebos Waterway	English sole	2	342	348	304	5	4	1.64	1.32	0.0076
943558	12/5/94	Hylebos Waterway	English sole	2	310	301	253	6	14	2.37	5.53	0.0085
943560	12/5/94	Hylebos Waterway	English sole	2	400	514	455	8	12	1.76	2.64	0.0071
943562	12/5/94	Hylebos Waterway	English sole	2	356	401	334	7	4	2.1	1.2	0.0074
943564	12/5/94	Hylebos Waterway	English sole	2	330	338	278	7	10	2.52	3.6	0.0077
943565	12/5/94	Hylebos Waterway	English sole	2	382	569	490	15	29	3.06	5.92	0.0088
943566	12/5/94	Hylebos Waterway	English sole	2	289	217	189	4	4	2.12	2.12	0.0078
943567	12/5/94	Hylebos Waterway	English sole	2	289	228	190	7	13	3.68	6.84	0.0079
943568	12/5/94	Hylebos Waterway	English sole	2	252	152	131	3	5	2.29	3.82	0.0082
943569	12/5/94	Hylebos Waterway	English sole	2	328	325	275	6	12	2.18	4.36	0.0078
943572	12/6/94	Hylebos Waterway	English sole	2	274	167	129	2	2	1.55	1.55	0.0063
943574	12/6/94	Hylebos Waterway	English sole	2	304	270	233	5	9	2.15	3.86	0.0083

Table 1. Somatic Indices for Reproductive Injury in Flatfish. Individual data.												
Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac
943575	12/6/94	Hylebos Waterway	English sole	2	365	406	344	9	10	2.62	2.91	0.0071
943576	12/6/94	Hylebos Waterway	English sole	2	285	203	164	4	6	2.44	3.66	0.0071
943577	12/6/94	Hylebos Waterway	English sole	2	297	258	217	5	10	2.3	4.61	0.0083
943578	12/6/94	Hylebos Waterway	English sole	2	247	131	140	1.5	1.5	1.32	1.32	0.0076
943581	12/6/94	Hylebos Waterway	English sole	2	328	302	240	5	7	2.08	2.92	0.0058
943586	12/6/94	Hylebos Waterway	English sole	2	380	481	410	7	11	1.71	2.68	0.0075
943587	12/6/94	Hylebos Waterway	English sole	2	325	292	247	2.5	3.5	1.01	1.42	0.0072
943588	12/6/94	Hylebos Waterway	English sole	2	348	375	316	6	8	1.9	2.53	0.0075
943589	12/6/94	Hylebos Waterway	English sole	2	257	153	129	2	1.5	1.55	1.16	0.0076
943590	12/6/94	Hylebos Waterway	English sole	2	268	170	144	3	7	2.08	4.86	0.0075
943591	12/6/94	Hylebos Waterway	English sole	2	378	545	468	28	12	5.98	2.56	0.0087
943592	12/6/94	Hylebos Waterway	English sole	2	282	208		3	6			
943594	12/6/94	Hylebos Waterway	English sole	2	312	218	187	2	4	1.07	2.14	0.0062
943595	1/4/95	Hylebos Waterway	English sole	2	270	210	166	5	18	3.01	10.8	0.0084
943596	1/4/95	Hylebos Waterway	English sole	2	299	280	229	4	10	1.75	4.37	0.0086
943598	1/4/95	Hylebos Waterway	English sole	2	330	322	282	5	5	1.77	0.71	0.0078
943600	1/4/95	Hylebos Waterway	English sole	2	352	347	297	5	5	1.68	1.68	0.0068
943602	1/4/95	Hylebos Waterway	English sole	2	324	301	247	4	6	1.62	2.43	0.0073
943603	1/4/95	Hylebos Waterway	English sole	2	270	190	157	4	2	2.55	1.27	0.0080
943604	1/4/95	Hylebos Waterway	English sole	2	288	232	198	4	3	2.02	1.52	0.0083
943605	1/4/95	Hylebos Waterway	English sole	2	272	179	139	1	2	0.72	1.44	0.0069
943607	1/4/95	Hylebos Waterway	English sole	2	258	163	126	3	19	2.38	15.1	0.0073
943615	1/4/95	Hylebos Waterway	English sole	2	316	300	245	4	24	1.63	9.8	0.0078
943616	1/4/95	Hylebos Waterway	English sole	2	335	390	312	4	35	1.28	11.2	0.0083
943617	1/4/95	Hylebos Waterway	English sole	2	311	302	249	6	23	2.41	9.24	0.0083
943618	1/4/95	Hylebos Waterway	English sole	2	300	212	180	2	1	1.11	0.56	0.0067
943628	1/5/95	Hylebos Waterway	English sole	2	360	481	372	7	45	1.88	12.1	0.0080
943629	1/5/95	Hylebos Waterway	English sole	2	340	381	317	5	13	1.58	4.1	0.0081
943630	1/5/95	Hylebos Waterway	English sole	2	329	304	250	4	12	1.6	4.8	0.0070
943631	1/5/95	Hylebos Waterway	English sole	2	297	220	190	3	1	1.58	0.53	0.0073
943632	1/5/95	Hylebos Waterway	English sole	2	338	252	211	3	3.5	1.42	1.66	0.0055
943633	1/5/95	Hylebos Waterway	English sole	2	290	243	201	2	4	1	1.99	0.0082
943634	1/5/95	Hylebos Waterway	English sole	2	285	206	173	3	2	1.73	1.16	0.0075
943635	1/5/95	Hylebos Waterway	English sole	2	415	625	550	4	7	0.73	1.27	0.0077
943636	1/5/95	Hylebos Waterway	English sole	2	360	438	361	8	19	2.22	5.26	0.0077
943637	1/5/95	Hylebos Waterway	English sole	2	365	382	342	5	3	1.46	0.88	0.0070
943639	1/5/95	Hylebos Waterway	English sole	2	345	359	307	3	1	0.98	0.33	0.0075
943644	1/5/95	Hylebos Waterway	English sole	2	330	271	239	2.5	2	1.05	0.84	0.0067
943645	1/5/95	Hylebos Waterway	English sole	2	320	306	246	6	16	2.44	6.5	0.0075



Table 1. Somatic Indices for Reproductive Injury in Flatfish. Individual data.												
Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac
943647	1/5/95	Hylebos Waterway	English sole	2	275	205	173	3	5	1.73	2.89	0.0083
943648	1/5/95	Hylebos Waterway	English sole	2	260	142	126	1	2	0.79	1.59	0.0072
943649	1/5/95	Hylebos Waterway	English sole	2	250	115	99	1	1	1.01	1.01	0.0063
943650	1/6/95	Covos Passage	English sole	2	332	325	278	5	16	1.8	5.76	0.0076
943651	1/6/95	Covos Passage	English sole	2	320	235	207	2.5	2	1.21	0.97	0.0063
943652	1/6/95	Covos Passage	English sole	2		335	282	1	13	0.35	4.61	
943653	1/6/95	Covos Passage	English sole	2	343	329	283	6	19	2.12	6.71	0.0070
943654	1/6/95	Covos Passage	English sole	2	285	193	161	2.5	4	1.55	2.48	0.0070
943655	1/6/95	Covos Passage	English sole	2	358	385		8	26			
943656	1/6/95	Covos Passage	English sole	2	325	299	233	7	23	3	9.87	0.0068
943657	1/6/95	Covos Passage	English sole	2	310	252	198	3	4	1.52	2.02	0.0066
943658	1/6/95	Covos Passage	English sole	2	328	322	265	8	22	3.02	8.3	0.0075
943659	1/6/95	Covos Passage	English sole	2	340	368	285	6	26	2.11	9.12	0.0073
943660	1/6/95	Covos Passage	English sole	2	305	274	228	4	10	1.75	4.39	0.0080
943661	1/6/95	Covos Passage	English sole	2	328	283	240	2	5	0.83	2.08	0.0068
943662	1/6/95	Covos Passage	English sole	2	345	388	317	6	26	1.89	8.2	0.0077
943663	1/6/95	Covos Passage	English sole	2	308	243	210	3	9	1.43	4.29	0.0072
943664	1/6/95	Covos Passage	English sole	2	285	189	141	2	8	1.42	5.67	0.0061
943666	1/6/95	Covos Passage	English sole	2	297	208	180	1	2	0.56	1.11	0.0069
943667	1/6/95	Covos Passage	English sole	2	298	232	195	2	14	1.03	7.18	0.0074
943669	1/6/95	Covos Passage	English sole	2	295	229	191	3	11	1.57	5.76	0.0074
943670	1/6/95	Covos Passage	English sole	2	280	220	183	4	12	2.19	6.56	0.0083
943671	1/6/95	Covos Passage	English sole	2	280	168	146	1		0.68	0	0.0067
943672	1/6/95	Covos Passage	English sole	2	299	213	187	4	1	2.14	0.53	0.0070
943681	1/9/95	Covos Passage	English sole	2	295	238	197	5	20	2.54	10.2	0.0077
943682	1/9/95	Covos Passage	English sole	2	375	470	390	8	22	2.05	5.64	0.0074
943683	1/9/95	Covos Passage	English sole	2	350	360	313	4	18	1.28	5.75	0.0073
943684	1/9/95	Covos Passage	English sole	2	315	276	224	3	20	1.34	8.93	0.0072
943685	1/9/95	Covos Passage	English sole	2	310	220	196	1.5	1.5	0.77	0.77	0.0066
943687	1/9/95	Covos Passage	English sole	2	305	250	192	1.5	16	0.78	8.33	0.0068
943688	1/9/95	Covos Passage	English sole	2	320	305	234	4	16	1.71	6.84	0.0071
943689	1/9/95	Covos Passage	English sole	2	340	260	220	2	2	0.91	0.91	0.0056
943690	1/9/95	Covos Passage	English sole	2	265	145	127	2	2	1.57	1.57	0.0068
943716	2/7/95	Hylebos Waterway	English sole	2	291	192	166	3	1	1.81	0.6	0.0067
943717	2/7/95	Hylebos Waterway	English sole	2	328	373	274	9	51	3.28	18.6	0.0078
943719	2/7/95	Hylebos Waterway	English sole	2	347	338	293		4		1.37	0.0070
943720	2/7/95	Hylebos Waterway	English sole	2	346	354	297	6	2	2.02	0.67	0.0072
943722	2/7/95	Hylebos Waterway	English sole	2	342	374	292	12	35	4.11	12	0.0073
943724	2/7/95	Hylebos Waterway	English sole	2	341	286	250	3	2	1.2	0.8	0.0063

Table 1. Somatic Indices for Reproductive Injury in Flatfish. Individual data.												
Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac
943725	2/7/95	Hylebos Waterway	English sole	2	293	188	162	3	2	1.85	1.23	0.0064
943726	2/7/95	Hylebos Waterway	English sole	2	344	345	296	4	5	1.35	1.69	0.0073
943732	2/7/95	Hylebos Waterway	English sole	2	305	262	223	4	2	1.79	0.9	0.0079
943737	2/8/95	Hylebos Waterway	English sole	2	330	287	239	4	3	1.67	1.26	0.0067
943738	2/8/95	Hylebos Waterway	English sole	2	338	344	294	5	3	1.7	1.02	0.0076
943739	2/8/95	Hylebos Waterway	English sole	2	337	335	248	8	40	3.23	16.1	0.0065
943740	2/8/95	Hylebos Waterway	English sole	2	300	278	234	3	2	1.28	0.85	0.0087
943741	2/8/95	Hylebos Waterway	English sole	2	305	254	216	3	2	1.39	0.93	0.0076
943742	2/8/95	Hylebos Waterway	English sole	2	332	281	239	3	2.5	1.26	1.05	0.0065
943743	2/8/95	Hylebos Waterway	English sole	2	278	161	133	2	2	1.5	1.5	0.0062
943744	2/8/95	Hylebos Waterway	English sole	2	318	304	244	5	23	2.05	9.43	0.0076
943745	2/8/95	Hylebos Waterway	English sole	2	292	246	197	2	1.5	1.02	0.76	0.0079
943756	4/4/95	Hylebos Waterway	English sole	2	321	286	237	5	3	2.11	1.27	0.0072
943761	4/4/95	Hylebos Waterway	English sole	2	340	304	271	3	6	1.11	2.21	0.0069
943762	4/4/95	Hylebos Waterway	English sole	2	371	430	378	7	6	1.85	1.59	0.0074
943764	4/4/95	Hylebos Waterway	English sole	2	301	226		4	3			
943766	4/4/95	Hylebos Waterway	English sole	2	400	539	457	7	7	1.53	1.53	0.0071
943768	4/4/95	Hylebos Waterway	English sole	2	382	370	327	7	5	2.14	1.53	0.0059
943769	4/4/95	Hylebos Waterway	English sole	2	360	335	291	4	5	1.37	1.72	0.0062
943771	4/4/95	Hylebos Waterway	English sole	2	319	281	236	4	3	1.69	1.27	0.0073
943774	4/4/95	Hylebos Waterway	English sole	2	321	303	218	3	5	1.38	2.29	0.0066
943775	4/4/95	Hylebos Waterway	English sole	2	289	210	174	3	3	1.72	1.72	0.0072
943780	4/4/95	Hylebos Waterway	English sole	2	321	258	230	5	5	2.17	2.17	0.0070
943783	4/4/95	Hylebos Waterway	English sole	2	357	390	322	2	5	0.62	1.55	0.0071
943793	4/5/95	Hylebos Waterway	English sole	2	345	342	289	1.5	7	0.52	2.42	0.0070
943794	4/5/95	Hylebos Waterway	English sole	2	368	367	322	2	5	0.62	1.55	0.0065
943795	4/5/95	Hylebos Waterway	English sole	2	329	299	251	3.5	5	1.39	1.99	0.0070
943803	4/5/95	Hylebos Waterway	English sole	2	350	341	292	2.5	5	0.86	1.71	0.0068
943805	4/5/95	Hylebos Waterway	English sole	2	300	325	286	2	4	0.7	1.4	0.0106
943806	4/5/95	Hylebos Waterway	English sole	2	319	248	218	2.5	3	1.15	1.38	0.0067
943829	4/6/95	Covos Passage	English sole	2	345	320	278	2	4	0.72	1.44	0.0068
943830	4/6/95	Covos Passage	English sole	2	307	241	197	2	2	1.02	1.02	0.0068
943831	4/6/95	Covos Passage	English sole	2	344	331	293	2	4	0.68	1.37	0.0072
943832	4/6/95	Covos Passage	English sole	2	280	169	147	2	2	1.36	1.36	0.0067
943834	4/6/95	Covos Passage	English sole	2	277	169	140	1.5	1.5	1.07	1.07	0.0066
943835	4/6/95	Covos Passage	English sole	2	277	164	142	2	3	1.41	2.11	0.0067
943836	4/6/95	Covos Passage	English sole	2	265	136	118	1.5	2	1.27	1.69	0.0063
943838	4/6/95	Covos Passage	English sole	2	341	294	248	4	6	1.61	2.42	0.0063
943839	4/6/95	Covos Passage	English sole	2	362	378	336	4	4	1.19	1.19	0.0071

Table 1. Somatic Indices for Reproductive Injury in Flatfish. Individual data.												
Specimen #	Date captured	Site Name	Species	Sex	length (mm)	weight (g)	Gutted wt (g)	liver wt (g)	gonad wt (g)	HSI	GSI	Cond Fac
943840	4/6/95	Colvos Passage	English sole	2	292	195	161	2	4	1.24	2.48	0.0065
943841	4/6/95	Colvos Passage	English sole	2	335	311	261	4	4	1.53	1.53	0.0069
943842	4/6/95	Colvos Passage	English sole	2	290	190	165	3	2	1.82	1.21	0.0068
943843	4/6/95	Colvos Passage	English sole	2	365	345	302	3	3	0.99	0.99	0.0062
943844	4/6/95	Colvos Passage	English sole	2	307	212	185	2	3	1.08	1.62	0.0064
943845	4/6/95	Colvos Passage	English sole	2	304	233	200	2	2	1	1	0.0071
943846	4/6/95	Colvos Passage	English sole	2	376	437	381	3	6	0.79	1.57	0.0072
943847	4/6/95	Colvos Passage	English sole	2	284	181	142	2	2	1.41	1.41	0.0062
943848	4/6/95	Colvos Passage	English sole	2	291	197	160	2	5	1.25	3.13	0.0065
943855	4/6/95	Colvos Passage	English sole	2	250	117	97	1	1	1.03	1.03	0.0062
Abbreviations:												
length = total fish length (head to tail) measured in mm												
weight = whole body weight, measured in grams.												
gutted wt = weight in gm of body with internal organs removed												
liver wt = weight in gm of liver												
gonad wt = weight in gm of gonad												
HSI = Hepatosomatic Index												
GSI = Gonadosomatic Index												
Cond Fac = Condition Factor												