NRA

National Rivers Authority
South Western Region

DEVON AREA REPORT

River Axe Fisheries Survey 1994

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CONTENTS

RIVER AXE FISHERIES SURVEY 1994

1) INTRODUCTION

A survey of the populations of freshwater fish at selected sites in the River Axe system was carried out in July and August 1994. The survey was undertaken as part of a triennial programme to monitor fish stocks in the River Axe. The aim of the survey was to assess the distribution and abundance of freshwater fish and to compare with results of previous surveys where possible.

Comprehensive surveys of the Axe system have been carried out in 1979 (Gibson), 1986 (FBA), 1990 and 1991. A limited survey of the River Yarty was carried out in 1972.

For a brief description of the catchment see Gibson (1979).

2) METHODS

A total of forty five sites were chosen throughout the catchment. Thirty nine sites were surveyed quantitatively, the remaining six, semi-quantitatively. Site selection was based upon physical accessibility, geographical distribution and habitat characteristics. Site distribution and locations are shown in Figure 1. Site details are given in Table 1.

2.1 Site Clustering

Since 1992, routine sampling has included single-run sites in addition to three-run sites. Sites are clustered on a ' target area ' basis - one three-run site is associated with up to four single-run sites. A typical ' cluster ' will consist of five sites. The three-run site should be fished first, and should be immediately followed by the single-run sites in that cluster. All sites in a cluster should be fished by the same team of people, with each person performing the same task.

2.2 Fieldwork

All sites were fished using a 240 Volt, 500 Watt generator producing pulsed direct current (PDC) via a control box. Fishing was carried out in an upstream direction, using a single anode.

a) Quantitative Surveys.

Quantitative surveys were carried out using a combination of triple and single shock sites. All sites were between 50 and 100 metres in length, isolated by stop nets. All salmonids were counted, measured (to the nearest mm) and identified by species. The numbers of other species were noted but not removed during the electric fishing process. A subjective assessment of numbers of each species was made using the following abundance indicator :-

Present	-	1-10
Common	-	11-100
Abundant	-	>100

b) Semi-quantitative Surveys.

Semi-quantitative sites were fished for a timed period of twenty minutes. Species were handled in the same way as for quantitative sites.

All fish were returned to the watercourse unharmed.

Population estimates for triple shock sites were obtained according to the methods described by Harding et al (1984). For single shock sites, population estimates were made using the multiplication factor (N/C1) - where C1= catch one and N = population estimate, derived from the appropriate triple shock site associated with that cluster.

3) RESULTS AND DISCUSSION

The results, given in the form of population densities (Numbers/100m^2) are shown in Table 2. Data for salmonid species are split into densities for fry (0+) and combined for age groups of older fish (1++).

Historic salmonid data is presented in Tables 3 and 4 to allow comparison with data collected in this survey. The presence or absence of non-salmonid species is recorded in Table 2.

3.1 Salmon (Salmo salar,L.)

Salmon fry and parr were absent from the whole of the Axe system with the exception of the River Yarty. Wild salmon fry were recorded at three sites on the River Yarty (sites 26, 27 and 28). Although the densities recorded were poor it is a significant improvement over previous years. The presence of fry at these sites may be attributable to one or more of the following factors :-

a) Gravel rehabilitation works that have been carried out in the Crawley Bridge and Hawley Bridge areas.

b) High flows during the winter of 1993 allowing greater adult penetration.

c) Improvements in water quality over the last few years.

Salmon parr were present at one location (site 28) in very low densities. Comparison with data collected in 1990 and 1991 is not possible as the Yarty was stocked with artificially reared parr in both years, prior to the 1994 survey.

It has not been possible to estimate the numbers of adult salmon returning to the river due to the lack of rod catch data.

3.2 Trout (Salmo trutta.L)

Both fry and parr were present throughout the catchment, with the exception of sites 1, 13 and 20 where fry were absent and site 18 where both fry and parr were absent. By comparing this years data with that collected in 1990 and 1991 it can be seen that densities were broadly consistent with past variations. Fry densities are slightly less than those recorded in 1991, but not alarmingly so. Parr densities are generally greater compared to 1990 and 1991 data. This may be a consequence of stocking that has taken place over the last several years.

There is every possibility that juvenile sea trout make a significant contribution to the trout populations at many sites. Sea trout were caught at seven sites on the Axe, Yarty and Coly. It is not possible to distinguish between juvenile sea trout and brown trout. Consequently it is impossible to quantify the contribution that sea trout make to the overall trout population.

3.3 Other Species

Bullhead and eels were recorded throughout the catchment (except site 24). Minnow and Stone loach were present at the majority of sites, with mullet and flounder present in the lower reaches of the main river. Rainbow trout were present at several sites, but not in numbers that would be detrimental to wild trout stocks. All rainbow trout caught were removed from the watercourse. There is no evidence to suggest that they might be recruiting naturally. The Axe system supports a significant and diverse population of non-salmonid species.

4) CONCLUSIONS

i) The presence of salmon fry in the middle reaches of the RiverYarty is encouraging.

ii) Salmon parr populations in the RiverYarty are very poor.

iii) The trout fry population has not varied to any significant level.

iv) The trout parr population has increased which may be attributed in part to stocking, although this has not been verified by rod returns of fin clipped fish.

5) RECOMMENDATIONS

i) Further surveys should be carried out on the RiverYarty on an annual basis to investigate the status of the juvenile salmon population.

ii) Adult surveys on the River Yarty would provide data on abundance and distribution of mature salmon.

iii) The stocking of artificially reared brown/sea trout appears to be beneficial and should be continued to supplement natural juvenile production.

REFERENCES

HARDING, A.W; HEATHWOOD, R.G HUNT and K.L.Q READ, 1984. The Estimation of Animal Population Size by the Removal Method. The Journal of the Royal Statistical Society Series C (Applied Statistics). Volume 33, No2, 1984.

GIBSON, M.T; 1979. Fisheries Survey of the River Axe.

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APPENDIX A.

TABLE 1 - SITE DETAIL SHEET

TABLE 2 - SUMMARY SHEET

TABLE 3 - ALL SURVEYS 1972-1994 SALMON DENSITIES

TABLE 4 - ALL SURVEYS 1972-1994 TROUT DENSITIES

TABLE 5 - SEMI-QUANTITATIVE RESULTS

FIGURE 1 - SITE DISTRIBUTION MAP

TABLE 1

RIVER AXE SITE DETAIL SHEET 1994

WATERCOURSE	SITE No	SITE NAME	NGR	CLUSTER	LENGTH	MEAN WIDTH
AXE	1	Mosterton	ST 464 048	a	78	2.32
	2	Seaborough	ST 433 058	a	78	3.90
	3	Clapton	ST 413 064	A	89	5.26
	4	Bere Chapel	ST 392 058	a	82	5.76
	5	Forde Abbey	ST 363 054	B	70	8.42
	6	Broom	ST 326 025	b	70	9.61
	7	Weycroft	ST 312 004	*	-	-
	8	Axminster(Town Weir)	SY 295 988	*	-	-
	9	Axe-Yarty	SY 286 977	*	-	-
	10	Slymlake	SY 280 967	*	-	-
	11	Nunford Dairy	SY 263 948	*	-	-
	12	A3052	SY 259 927	*	-	-
TEMPLE BROOK	13	Greenham	ST 410 048	b	85	3.01
RIVER SYNDERFORD	14	Synderford	ST 383 037	C	63	2.52
	15	Maudlin Cross	ST 377 053	c	65	2.59
WHATLEY STREAM	16	D/s Wildlife Park	ST 372 074	c	75	2.47
	17	Ammerham	ST 365 059	c	78	4.35
FORTON STREAM	18	U/s Forton Bridge	ST 341 073	e	55	2.53
BLACKWATER RIVER	19	Beerhall Farm	ST 359 009	E	95	4.33
	20	Buddlewall	ST 331 020	e	80	4.26
KITBROOK	21	Narford	ST 297 063	d	47	3.83
	22	Kitbrridge	ST 308 039	D	60	2.98
	23	Axe farm	ST 319 017	d	65	5.77
BLINDMOOR STREAM	24	Buckland Bridge	ST 263 135	h	87	2.46
RIVER YARTY	25	Waterhayes	ST 239 142	F	79	2.73
	26	Bishopswood	ST 261 126	f	78	4.19
	27	Marsh Lane	ST 254 045	f	100	6.25
	28	Crawley Bridge	ST 256 082	f	67	4.86
	29	Long Bridge	ST 254 045	g	114	5.82
	30	Yarty Farm	ST 262 026	G	60	4.55
	31	Higher Westwater	SY 276 998	g	80	8.99
	32	Gammons Hill	SY 282 982	g	94	6.53
CORRY BROOK	33	Millhayes	ST 237 034	h	70	3.79
	34	D/s Dalwood	ST 249 005	H	80	3.39
	35	Old Coryton	SY 273 991	h	71	5.38
RIVER COLY	36	Woodbridge	SY 189 054	j	70	2.73
	37	Heathayne	SY 235 943	J	88	6.68
	38	U/s Colyford	SY 253 929	i	110	8.38
UMBORNE BROOK	39	Court Place	ST 212 020	I	72	3.02
	40	Wilmington	ST 218 000	i	85	3.94
	41	Umborne	SY 236 972	j	90	5.41
	42	Colcombe	SY 246 946	j	74	3.67
OFFWELL BROOK	43	Smallicombe	SY 205 978	k	53	2.45
	44	Tricombe	SY 213 963	K	66	3.14
SOUTHLEIGH STREAM	45	Bonehayne	SY 214 946	k	84	2.44

* = DIP SITE

TABLE 2

RIVER AXE SUMMARY SHEET 1994

WATERCOURSE		SITE NAME	NGR	DATE	AREA (m2)
AXE	1	Mosterton	ST 464 048	04.08.94	180.96
	2	Seaborough	ST 433 058	15.08.94	304.2
	3	Clapton	ST 413 064	10.08.94	468.14
	4	Bere Chapel	ST 392 058	09.08.94	472.32
	5	Forde Abbey	ST 363 054	01.08.94	589.4
	6	Broom	ST 326 025	03.08.94	672.7
	*7	Weycroft	ST 312 004	15.08.94	-
	*8	Axminster(Town Weir)	SY 295 988	15.08.94	-
	*9	Axe-Yarty	SY 286 977	08.08.94	-
	*10	Slymlake	SY 280 967	09.08.94	-
	*11	Nunford Dairy	SY 263 948	15.08.94	-
	*12	A3052	SY 259 927	09.08.94	-
TEMPLE BROOK	13	Greenham	ST 410 048	10.10.94	255.85
RIVER SYNDERFORD	14	Synderford	ST 383 037	28.07.94	158.76
	15	Maudlin Cross	ST 377 053	28.07.94	168.35
WHATLEY STREAM	16	D/s Wildlife Park	ST 372 074	02.08.94	185.25
	17	Ammerham	ST 365 059	02.08.94	339.3
FORTON STREAM	18	U/s Forton Bridge	ST 341 073	14.07.94	139.15
BLACKWATER RIVER	19	Beerhall Farm	ST 359 009	15.07.94	411.35
	20	Buddlewall	ST 331 020	14.07.94	340.8
KITBROOK	21	Narford	ST 297 063	19.07.94	180.07
	22	Kitbridge	ST 308 039	18.07.94	178.78
	23	Axe farm	ST 319 017	19.07.94	375.05
BLINDMOOR STREAM	24	Buckland Bridge	ST 263 135	05.08.94	214.02
RIVER YARTY	25	Waterhayes	ST 239 142	20.07.94	215.67
	26	Bishopswood	ST 261 126	22.07.94	326.82
	27	Marsh Lane	ST 254 045	21.07.94	625.00
	28	Crawley Bridge	ST 256 082	21.07.94	325.62
	29	Long Bridge	ST 254 045	22.07.94	663.48
	30	Yarty Farm	ST 262 026	25.07.94	273.00
	31	Higher Westwater	SY 276 998	26.07.94	719.20
	32	Gammons Hill	SY 282 982	27.07.94	613.82

SALMON DENSITY (100m2)		TROUT DENSITY (100m2)		OTHER SPECIES
FRY	PARR(1++)	FRY	PARR(1++)	
0.00	0.00	0.00	4.97	B.E.SL.
0.00	0.00	0.33	15.38	B.E.M.SL.
0.00	0.00	0.21	5.77	B.E.M.SL.
0.00	0.00	0.42	3.81	B.E.SL.
0.00	0.00	0.17	6.10	B.E.SL.
0.00	0.00	0.00	3.68	B.E.M.SL.ST.
@	@	#	#	B.E.M.SL.
@	@	@	#	B.E.M.SL.
@	@	#	#	B.E.M.SL.ST.
@	@	#	#	B.E.M.SL.ST.
@	@	@	#	B.E.M.SL.
@	@	@	#	B.E.F.M.Mu.SL.ST.
0.00	0.00	0.00	8.79	B.E.M.SL.
0.00	0.00	5.04	1.89	B.E.M.SL.
0.00	0.00	8.91	8.91	B.E.M.SL.
0.00	0.00	8.10	14.57	B.E.RT.SL.
0.00	0.00	5.75	5.75	B.E.SL.
0.00	0.00	0.00	0.00	B.E.RT.
0.00	0.00	0.97	6.81	B.E.M.SL.
0.00	0.00	0.00	4.68	B.E.SL.
0.00	0.00	26.25	30.33	B.E.
0.00	0.00	31.32	46.98	B.E.
0.00	0.00	13.06	4.16	B.E.SL.
0.00	0.00	36.16	10.69	B.
0.00	0.00	55.18	26.89	B.E.
1.10	0.00	7.16	19.83	B.E.
3.16	0.22	7.20	4.32	B.E.
0.55	0.00	2.76	6.22	B.E.
0.00	0.00	2.44	4.07	B.E.M.SL.
0.00	0.00	10.26	3.30	B.E.M.SL.
0.00	0.00	1.11	1.67	B.D.E.M.SL.ST.
0.00	0.00	0.78	3.26	B.E.M.SL.ST.

TABLE 2 Cont'd

WATERCOURSE		SITE NAME	NGR	DATE	AREA (m2)
CORRY BROOK	33	Millhayes	ST 237 034	04.08.94	265.3
	34	D/s Dalwood	ST 249 005	28.07.94	269.6
	35	Old Coryton	SY 273 991	04.08.94	381.98
RIVER COLY	36	Woodbridge	SY 189 054	25.07.94	191.10
	37	Heathayne	SY 235 943	21.07.94	587.84
	38	U/s Colyford	SY 253 929	02.08.94	921.8
UMBORNE BROOK	39	Court Place	ST 212 020	02.08.94	221.04
	40	Wilmington	ST 218 000	01.08.94	334.9
	41	Umborne	SY 236 972	22.07.94	486.9
	42	Colcombe	SY 246 946	22.07.94	271.95
OFFWELL BROOK	43	Smallicombe	SY 205 978	27.07.94	128.63
	44	Tricombe	SY 213 963	25.07.94	207.24
SOUTHLEIGH STREAM	45	Bonehayne	SY 214 946	26.07.94	204.96

* = DIP SITE

KEY

#-Species present
@-Species absent
B-Bullhead
D-Dace
E-Eel
F-Flounder
M-Minnow
Mu-Mullet
S-Stickleback
RT-Rainbow Trout
SL-Stone Loach
ST-Sea Trout

SALMON DENSITY (100m2)		TROUT DENSITY (100m2)		OTHER SPI
FRY	PARR(1++)	FRY	PARR(1++)	
0.00	0.00	9.50	25.87	B.E.M.SL.
0.00	0.00	6.68	10.01	B.E.M.SL.
0.00	0.00	3.30	6.53	B.E.M.SL.
0.00	0.00	4.19	18.77	B.E.SL.
0.00	0.00	0.34	3.23	B.E.M.SL.S
0.00	0.00	0.62	4.76	B.E.F.M.SL.
0.00	0.00	6.51	24.07	B.E.SL
0.00	0.00	3.88	34.04	B.E.RT.SL.
0.00	0.00	11.09	22.10	B.E.SL.
0.00	0.00	8.83	16.29	B.E.M.SL.
0.00	0.00	6.47	16.26	B.E.
0.00	0.00	13.03	17.85	B.E.SL.
0.00	0.00	8.12	6.60	B.E.SL.

TABLE 3

RIVER AXE - ALL SURVEYS 1972 - 1994 SALMON DENSITIES (100M2)

WATERCOURSE	SITE NAME	SALMON FRY (0+)						
		1972	1979	1988	1990	1991	1994	1972
AXE	Mosterton	-	0.00	0.00	0.00	-	0.00	-
	Seaborough	-	-	-	0.00	-	0.00	-
	Clapton	-	-	-	-	-	0.00	-
	Oathill	-	-	0.00	-	-	-	-
	Bere Chapel	-	-	-	0.00	-	0.00	-
	Forde Abbey	-	0.00	0.00	0.00	-	0.00	-
	Broom	-	0.00	0.00	0.00	-	@	-
	Weycroft	-	@	-	0.47	@	@	-
	Axminster(Town Weir)	-	-	-	@	-	-	-
	Axminster	-	-	@	-	-	@	-
	Axe-Yarty	-	-	@	-	-	@	-
	Slymlake	-	@	-	@	-	@	-
	Nunford Dairy	-	@	-	@	-	@	-
	A3052	-	-	@	-	-	@	-
RIVER COLY	Woodbridge	-	-	-	0.00	-	0.00	-
	Bonehayne	-	-	0.00	-	-	-	-
	Heathayne	-	0.00	0.00	0.00	-	0.00	-
	Coles Weir	-	#	-	-	-	-	-
	U/s Colyford	-	-	-	1.95	0.00	0.00	-
SOUTHLEIGH STREAM	Bonehayne	-	-	-	-	-	0.00	-
UMBORNE BROOK	Court Place	-	-	-	-	0.00	0.00	-
	Wilmington	-	-	-	0.00	0.00	0.00	-
	Umborne	-	0.00	0.00	0.00	-	0.00	-
	Colcombe	-	-	-	0.27	-	0.00	-
OFFWELL BROOK	Smallcombe	-	-	-	-	-	0.00	-
	Tricombe	-	-	-	0.00	-	0.00	-
RIVER YARTY	Fyfett Head	0.00	-	-	-	-	-	19.20
	Waterhayes	0.00	-	-	0.00	0.00	0.00	5.50
	Bishopswood	-	@	-	0.00	0.00	1.10	-
	Marsh Lane	0.00	-	-	0.00	0.00	3.16	1.10
	Crawley Bridge	0.00	0.00	0.00	0.00	-	0.55	1.50
	Long Bridge	0.00	-	-	0.00	-	0.00	3.30
	Yarty Farm	0.00	0.00	0.00	0.00	#	0.00	0.70
	Beckford Bridge	0.00	@	-	-	-	-	3.10
	Higher Westwater	0.00	@	-	0.00	@	0.00	8.90
	Gammons Hill	0.00	0.00	0.00	0.33	@	0.00	2.40
BLINDMOOR STREAM	Buckland Bridge	-	-	-	-	-	0.00	-
CORRY BROOK	Milthayes	-	-	-	-	-	0.00	-
	Lower Corry Ford	-	-	-	0.00	-	-	-
	D/s Dalwood	-	-	-	0.00	-	0.00	-
	Old Coryton	-	0.00	0.00	0.00	-	0.00	-
BLACKWATER RIVER	Beerhall Farm	-	-	-	0.00	-	0.00	-
	Buddlewall	-	-	-	0.00	-	0.00	-
KITBROOK	Axe Farm	-	-	-	-	-	0.00	-
	Narford	-	-	-	0.00	-	0.00	-
	Kitbridge	-	0.00	0.00	0.00	-	0.00	-
WHATLEY STREAM	D/s Wildlife Park	-	-	-	@	-	0.00	-
	Ammerham	-	-	-	@	-	0.00	-
FORTON STREAM	U/s Forton Bridge	-	-	-	-	-	0.00	-
RIVER SYNDERFORD	Synderford	-	0.00	0.00	0.00	0.00	0.00	-
	Maudlin Cross	-	-	-	0.00	0.00	0.00	-
TEMPLE BROOK	Greenham	-	-	-	0.00	-	0.00	-

SEMI-QUANTITATIVE DATA : # = SPECIES PRESENT @ = SPECIES ABSENT

SALMON PARR (1+) AND OLDER

1979	1988	1990	1991	1994
0.00	0.00	0.00	-	0.00
-	-	0.00	-	0.00
-	-	-	-	0.00
-	0.00	-	-	-
-	-	0.00	-	0.00
0.00	0.00	0.17	-	0.00
0.00	0.00	0.00	-	0.00
@	-	0.00	#	@
-	-	@	-	@
-	@	-	-	-
-	@	-	-	@
#	-	@	-	@
@	-	@	-	@
-	@	-	-	@
-	-	0.00	-	0.00
-	0.00	-	-	-
0.00	0.00	0.00	-	0.00
@	-	-	-	-
-	-	0.00	0.16	0.00
-	-	-	-	0.00
-	-	-	45.27	0.00
-	-	0.00	0.00	0.00
0.00	0.00	0.00	-	0.00
-	-	0.00	-	0.00
-	-	-	-	0.00
-	-	0.00	-	0.00
-	-	-	-	-
-	-	4.02	15.72	0.00
@	-	6.20	15.48	0.00
-	-	0.00	1.72	0.22
0.00	0.00	0.00	-	0.00
-	-	0.00	-	0.00
0.00	0.00	0.00	@	0.00
#	-	-	-	-
@	-	0.00	@	0.00
1.40	0.20	0.00	@	0.00
-	-	-	-	0.00
-	-	-	-	0.00
-	-	0.00	-	-
-	-	0.00	-	0.00
0.00	0.00	0.00	-	0.00
-	-	0.00	-	0.00
-	-	0.00	-	0.00
-	-	-	-	0.00
-	-	5.49	-	0.00
0.00	0.00	0.71	-	0.00
-	-	@	-	0.00
-	-	@	-	0.00
-	-	-	-	0.00
0.00	0.00	0.00	2.21	0.00
-	-	0.00	0.00	0.00
-	-	0.00	-	0.00

TABLE 4

RIVER AXE - ALL SURVEYS 1972 -1994 TROUT DENSITIES (100M2)

WATERCOURSE	SITE NAME	TROUT FRY (0+)					
		1972	1979	1988	1990	1991	1994
AXE	Mosterton	-	6.20	0.00	0.00	-	0.00
	Seaborough	-	-	-	0.00	-	0.33
	Clapton	-	-	-	-	-	6.41
	Oathill	-	-	7.50	-	-	-
	Bere Chapel	-	-	-	2.49	-	0.42
	Forde Abbey	-	0.60	1.00	1.03	-	0.17
	Broom	-	0.00	0.10	0.00	-	0.00
	Weycroft	-	#	-	0.32	#	#
	Axminster(Town Weir)	-	0.40	-	@	-	@
	Axminster	-	-	#	-	-	-
	Axe-Yarty	-	-	#	-	-	#
	Slymlake	-	@	-	@	-	#
	Nunford Dairy	-	#	#	@	-	@
	A3052	-	-	#	-	-	@
RIVER COLY	Woodbridge	-	-	-	0.91	-	4.19
	Bonehayne	-	-	0.00	-	-	-
	Heathayne	-	0.30	-	0.16	-	0.34
	Coles Weir	-	#	-	-	-	-
	U/s Colyford	-	-	-	0.16	0.00	0.62
SOUTHLEIGH STREAM	Bonehayne	-	-	-	-	-	8.12
UMBORNE BROOK	Court Place	-	-	-	-	13.46	6.51
	Wilmington	-	-	-	5.48	11.20	3.88
	Umborne	-	7.20	0.60	0.60	-	11.09
	Colcombe	-	-	-	1.62	2.04	8.83
OFFWELL BROOK	Smallicombe	-	-	-	-	-	6.47
	Tricombe	-	-	-	0.00	-	13.03
RIVER YARTY	Fyffett Head	0.00	-	-	-	-	-
	Waterhayes	0.00	91.90	-	11.16	86.89	55.16
	Bishopswood	-	#	-	3.65	14.26	7.16
	Marsh Lane	0.00	-	-	1.18	26.00	7.20
	Crawley Bridge	0.00	58.80	0.00	0.00	-	2.76
	Long Bridge	0.00	-	-	2.08	-	2.44
	Yarty Farm	0.00	0.40	0.00	0.00	#	10.26
	Beckford Bridge	0.00	#	-	-	-	-
	Higher Westwater	0.00	#	-	0.00	#	1.11
	Gammons Hill	0.00	0.00	0.40	0.00	#	0.78
BLIMDMOOR STREAM	Buckland Bridge	-	-	-	-	-	36.16
CORRY BROOK	Millhayes	-	-	-	-	-	9.50
	Lower Corry Ford	-	-	-	16.67	-	-
	D/s Dalwood	-	-	-	2.53	-	6.68
	Old Coryton	-	1.30	0.00	0.00	-	3.30
BLACKWATER RIVER	Beerhall Farm	-	-	29.10	1.54	-	0.97
	Buddlewall	-	-	-	0.00	-	0.00
KITBROOK	Axe Farm	-	#	-	-	-	13.06
	Narford	-	-	66.10	23.91	-	26.25
	Kitbridge	-	41.70	43.80	17.86	-	31.32
WHATLEY STREAM	D/s Wildlife Park	-	-	-	@	-	8.10
	Ammerham	-	-	3.60	#	-	5.75
FORTON STREAM	U/s Forton Bridge	-	-	-	-	-	0.00
RIVER SYNDERFORD	Synderford	-	51.80	9.20	1.82	10.48	5.04
	Maudlin Cross	-	-	-	7.73	7.36	8.91
TEMPLE BROOK	Greenham	-	-	0.00	0.00	-	0.00

SEMI-QUANTITATIVE DATA : # = SPECIES PRESENT @ = SPECIES ABSENT

TROUT PARR (1+) AND OLDER

1972	1979	1986	1990	1991	1994
-	3.20	3.90	6.94	-	4.97
-	-	-	14.17	-	15.38
-	-	-	-	-	5.77
-	-	6.40	-	-	-
-	-	-	7.47	-	3.81
-	10.00	4.20	3.95	-	6.10
-	4.20	2.30	4.57	-	3.68
-	#	-	6.47	#	#
-	5.30	-	@	-	#
-	-	#	-	-	-
-	-	#	-	-	#
-	@	-	@	-	#
-	#	#	@	-	#
-	-	#	-	-	#
-	-	-	7.27	-	18.77
-	-	8.10	-	-	-
-	13.00	-	4.00	-	3.23
-	#	-	-	-	-
-	-	-	2.00	4.28	4.76
-	-	-	-	-	6.60
-	-	-	-	6.73	24.07
-	-	-	14.83	20.28	34.04
-	17.80	13.50	4.23	-	22.10
-	-	-	1.62	2.04	16.29
-	-	-	-	-	16.26
-	-	-	#	-	17.85
19.20	-	-	-	-	-
182.00	28.40	-	11.61	9.59	26.89
-	#	-	6.57	12.45	19.83
23.70	-	-	12.35	11.75	4.32
14.20	15.30	26.70	5.94	-	6.22
8.00	-	-	4.55	-	4.07
15.70	4.50	13.50	6.41	#	3.30
15.20	#	-	-	-	-
1.90	#	-	1.09	#	1.67
11.60	2.00	0.80	4.32	#	3.26
-	-	-	-	-	10.69
-	-	-	-	-	25.87
-	-	-	8.59	-	-
-	-	-	2.95	-	10.01
-	7.80	0.00	0.45	-	6.53
-	-	30.40	7.36	-	6.81
-	-	-	9.05	-	4.68
-	#	-	-	-	4.16
-	-	54.30	40.22	-	30.33
-	37.80	34.50	25.00	-	46.98
-	-	-	#	-	14.57
-	-	5.60	#	-	5.75
-	-	-	-	-	0.00
-	8.40	6.70	4.24	4.41	1.89
-	-	-	2.90	12.76	8.91
-	-	1.90	1.64	-	8.79

TABLE 5

AXE FISH SURVEY 1994 SEMI- QUANTATATIVE RESULTS

WATERCOURSE	SITE NAME	N G R	SALMON 0+
AXE	D\s'Weycroft Weir	ST 312 - 004	0
AXE	Axminster (Town Weir	SY 295 - 988	0
AXE	Axe\Yarty confluence	SY 286 - 977	0
AXE	Slymlakes	SY 280 - 967	0
AXE	Nunford Dairy	SY 263 - 948	0
AXE	A3052	SY 259 - 927	0
AXE			

	TROUT		OTHER
1++	0+	1++	SPECIES
0	5	10	B,E,MW,SL
0	0	4	B,E,MW,SL
0	1	2	B,E,MW,SL,ST
0	1	3	B,E,MW,SL,ST
0	0	2	B,E,MW,SL,
0	0	1	B,E,FL,MW,SL,ST

KEY

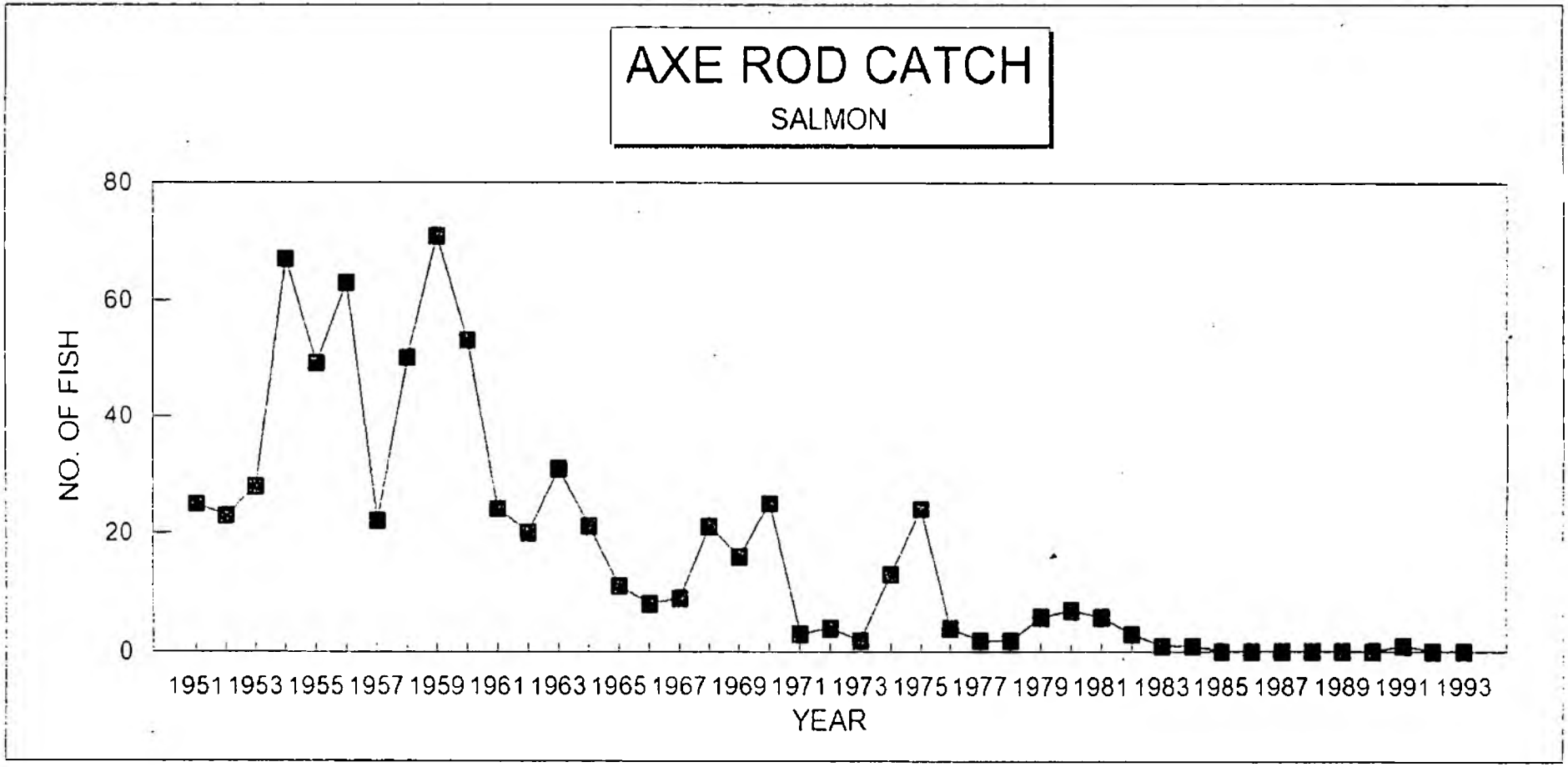
B = Bullhead
E = Eel
FL = Flounder
MW = Minnow
SL = Stoneloach
ST = Seatrout

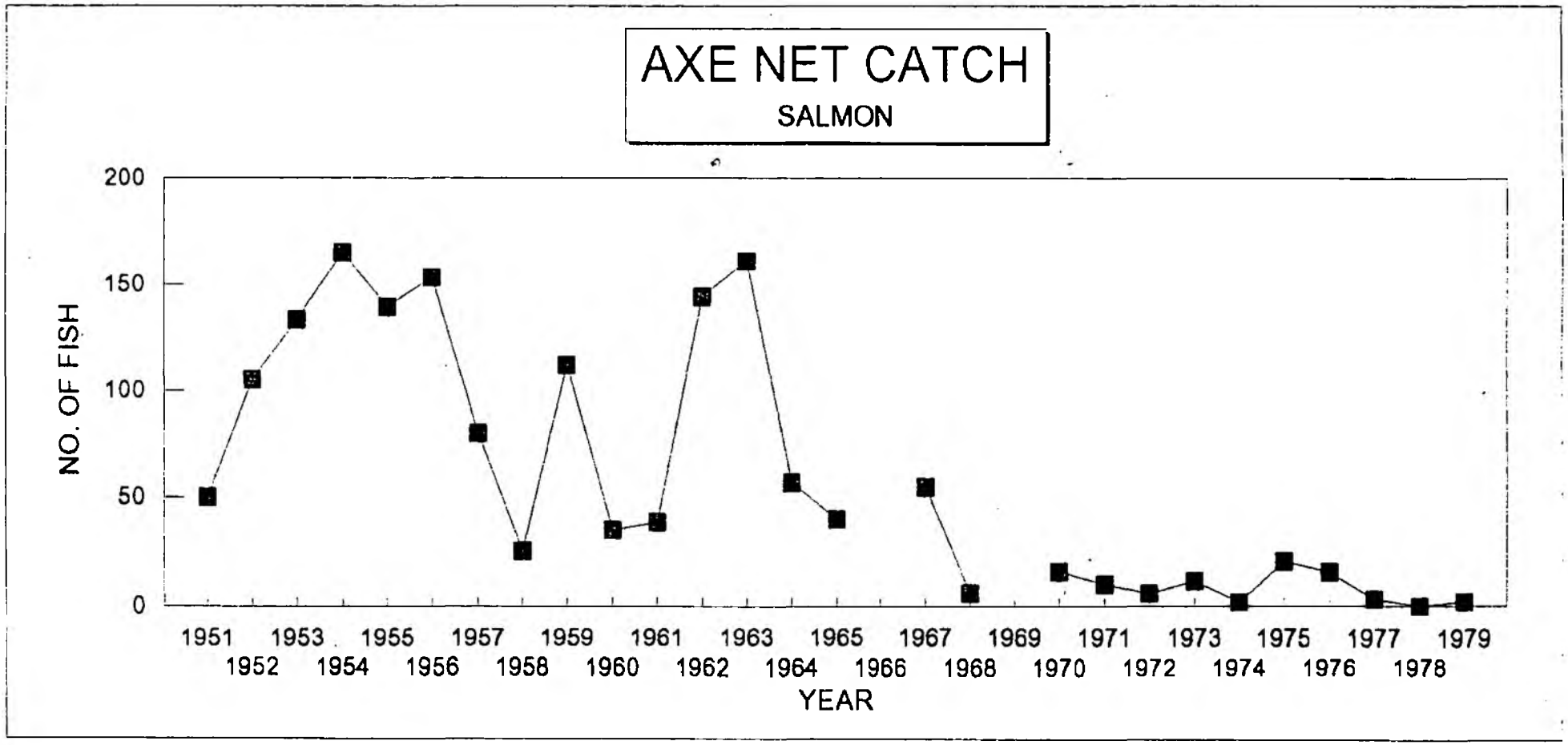
Figure 1

RIVER AXE SURVEY SITES 1994

APPENDIX B

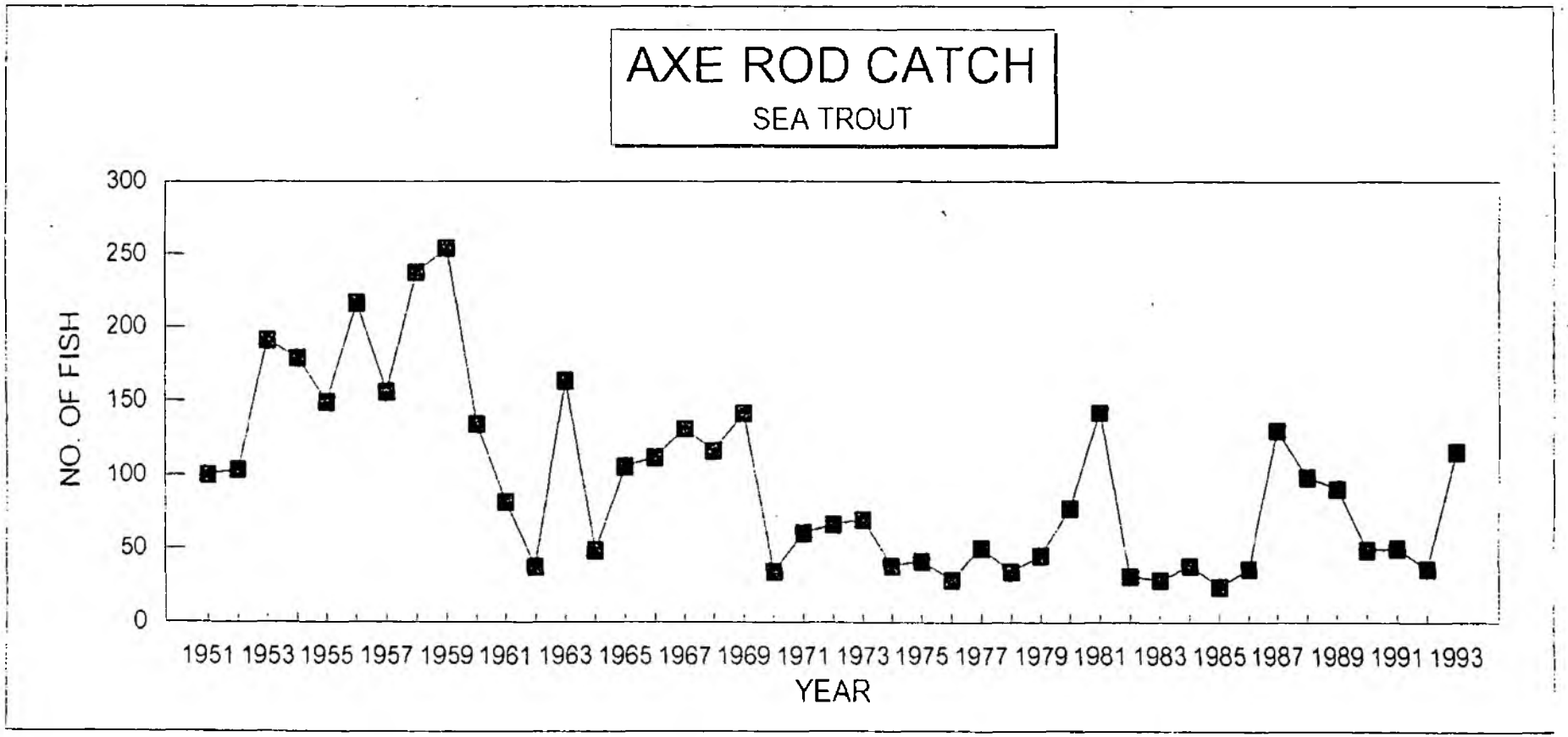
SALMON ROD AND NET CATCH DATA

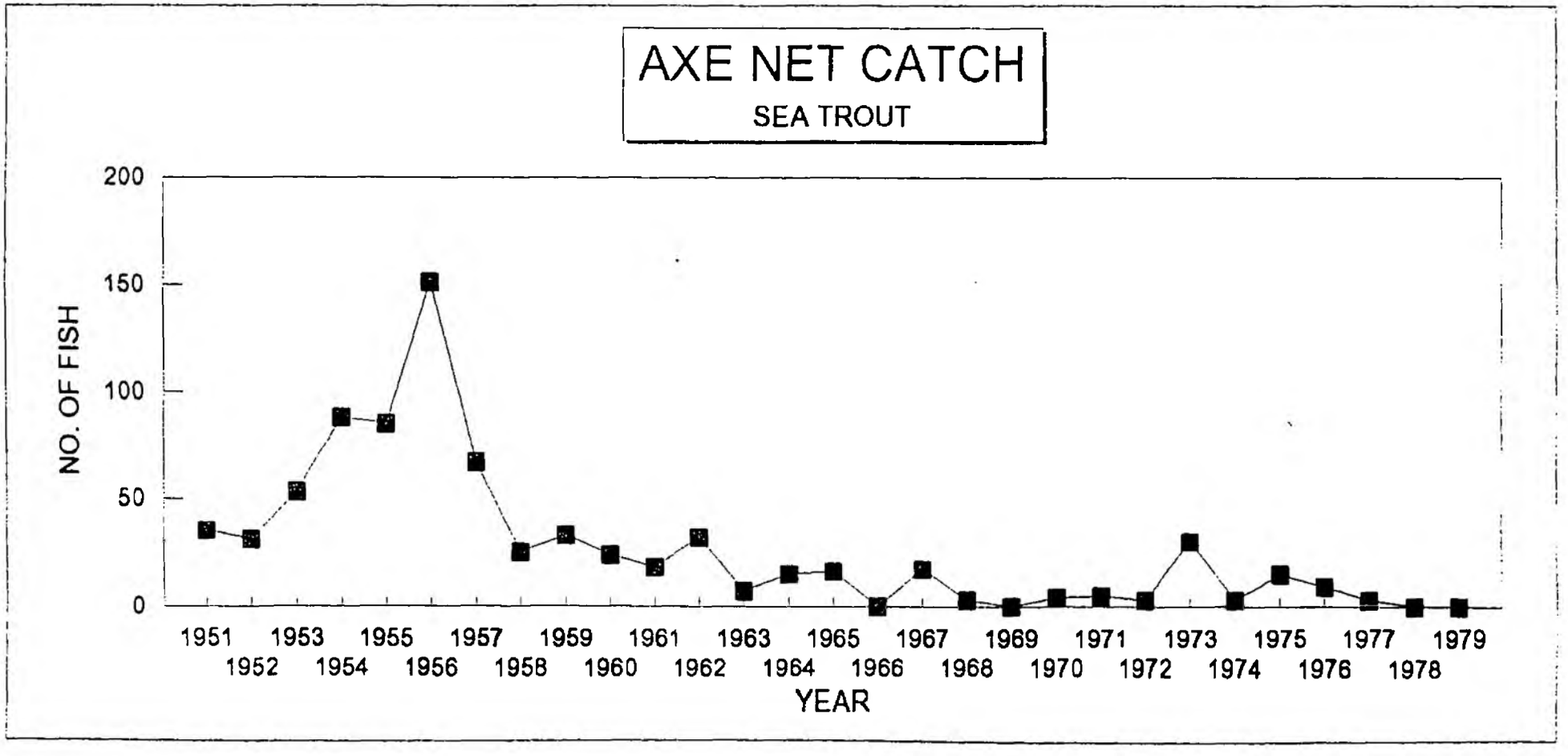

AXE ROD CATCH
SALMON
NO. OF FISH
80
60
40
20
0
1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993
YEAR


AXE NET CATCH
SALMON
NO. OF FISH
200
150
100
50
0
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
YEAR

APPENDIX C

SEA TROUT ROD AND NET CATCH


AXE ROD CATCH
SEA TROUT
NO. OF FISH
300
250
200
150
100
50
0
1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993
YEAR


AXE NET CATCH
SEA TROUT
NO. OF FISH
200
150
100
50
0
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
YEAR