Appendices A- I

for

Baseline Study to Determine the Water Quality and the Primary and Secondary Producers of the Spokane River, Phase 1

Ecology Publication No. 84-e06app

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APPENDIX A

Physical and Chemical Characteristics of the Upper Spokane River

Table A-1. Spokane River Field Data. Units of measurements are as follows: TEMP (^{o}C), **DO and** CO_2 (mg/ℓ), $CO_3^{=}$ **and HCO;** (mg/ℓ **as** $CaCO_3$), **and COND** (μMHOS/cm)

STATIONS: ST=Stateline, HA=Harvard **I,** HB=Harvard **II,** BA=Barker, SU=Sullivan, EU=Euclid, PF= Plantes **Ferry,** UP=Upriver **Drive,** GR=Greene **Street,** GO=Gonzaga, HC=Hangman **Creek.**

DATE	STA	TEMP	PH	DO	C02	$CO_3^{=}$	HCO_3^{-}	COND
11/12/79	ST	7.5		11.1				
	HA	8.0		10.5				
	BA	8.2		11.1				
	SU	6.0		11.8				
	EU	7.0		11.4				
	PF	6.5		11.5				
	UP	6.5		11.5				
	GR	6.5		10.5				
	GO	6.0						
11/20/79	ST	6.0	6.6	11.3	2.0		22	70
	HA	6.2	6.5	11.3	2.0		21	60
	BA	6.0	6.4	12.1	1.0		21	65
	SU	6.0	6.4	11.8	2.0		21	60
	EU	6.0	6.8	11.5	1.0		33	90
	PF	6.0	7.1	12.0	2.5		44	100
	UP	6.0	6.4	11.5	2.5		35	100
	GR	6.5	6.8	11.2	2.5		48	115
	GO	6.2	7.1	11.8	0.5		49	115
	HC	5.5	7.7	13.9	0.5		49	120
12/04/79	ST	6.0	6.9	11.9	1.5		21	70
	HA	6.0	6.9	11.8	1.5		22	64
	BA	6.0	6.8	12.1	2.0		22	72
	SU	6.0	6.9	11.7	2.0		23	71
	EU	6.2	7.2	11.4	2.0		32	88
	PF	6.0	7.0	11.4	1.5		35	105
	UP	6.0	7.1	11.4	2.0		34	100
	GR	6.5	7.2	11.4	1.5		48	135
	GO	6.5	7.2	10.9	3.0		50	130
	HC	7.0	7.2	11.1	2.0		32	140

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
12/16/79	ST	2.0	6.7	12.1	2.0		20	65
	HA	2.0	6.9	12.0	1.0		20	70
	BA	2.5	6.7	12.6	1.0		21	70
	SU	2.5	7.0	12.6	1.5		19	75
	EU	4.0	7.2	12.2	2.0		30	100
	PF	3.5	7.2	12.3	1.5		34	105
	UP	3.5	6.9	11.9	1.0		32	105
	GR	4.0	7.2	11.1	1.5		49	140
	GO	4.5	6.9	11.2	1.0		49	140
	HC	4.5	6.8	11.6	1.0		50	140
01/04/78	ST	3.0	6.5	11.5	1.0		20	66
	HA	3.0	6.5	11.6	1.0		20	65
	BA	4.0	6.4	11.6	1.0		20	70
	SU	4.0	6.8	11.9	0.5		22	80
	EU	4.0	6.7	11.9	1.0		25	85
	PF	4.5	6.8	11.6	1.0		27	90
	UP	4.5	6.8	11.4	1.0		26	88
	GR	4.5	6.9	11.7	1.0		42	110
	GO	4.5	7.0	11.2	1.0		46	108
	HC	4.0	6.8	11.8	1.5		47	119
02/18/80	ST	3.0	7.2	12.5	1.0		19	56
	HA	3.0	7.2	12.5	1.0		18	55
	BA	3.5	7.1	12.7	1.0		19	54
	SU	4.0	7.0	12.2	1.0		22	58
	EU	4.5	7.0	12.0	1.0		31	77
	PF	4.2	7.2	11.9	1.0		29	78
	UP	4.0	7.1	11.9	1.0		30	82
	GR	4.0	7.1	11.7	1.0		39	98
	GO	3.5	7.1	11.8	1.0		43	101
	HC	2.8	7.1	11.8	1.0		45	98
03/05/80	ST	2.0	7.2	12.5	1.0		17	62
	HA	2.0	7.1	12.5	1.0		21	62
	BA	2.0	7.0	12.6	1.0		22	61
	SU	2.0	7.3	12.7	1.0		23	62
	EU	2.0	7.1	13.0	1.0		29	65
	PF	2.0	7.3	12.9	1.0		27	68
	UP	2.0	6.8	13.0	2.0		28	78
	GR	2.5	6.9	13.1	2.0		25	68
	GO	2.5	7.0	12.9	1.0		27	66
	HC	3.0	6.9	13.5	1.0		29	70

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
03/22/80	HA	4.5	6.3	11.9	1.0		22	61
	HB	4.5	6.6	11.6	1.0		22	60
	BA	4.5	7.1	11.7	1.0		27	62
	SU	4.5	6.7	11.7	1.0		25	60
	EU	4.5	6.7	11.6	1.0		29	71
	PF	4.5	7.1	11.4	2.0		30	70
	UP	4.5	7.2	11.2	1.0		28	63
	GR	4.5	7.1	12.5	1.0		31	72
	GO	4.0	7.1	11.6	1.0		29	78
	HC	4.0	7.1	13.2	1.0		29	72
04/04/80	HA	4.5	6.6	11.6	1.0		28	61
	HB	4.5	6.5	11.6	1.0		28	60
	BA	4.5	6.6	11.8	1.0		27	59
	SU	4.5	6.6	11.9	1.0		23	58
	EU	5.0	6.7	11.3	1.0		29	62
	PF	5.5	6.6	11.3	1.0		27	65
	UP	5.5	6.6	11.2	1.0		27	66
	GR	5.5	6.8	11.2	1.0		32	80
	GO	5.2	6.5	11.1	1.0		32	78
	HC	5.2	6.2	11.3	1.0		32	76
04/21/80	HA	6.0	7.0	12.7	1.0		24	58
	HB	6.0	7.1	12.9	1.0		22	58
	BA	6.0	7.0	12.3	1.0		23	59
	SU	6.0	6.9	12.7	1.0		23	54
	EU	6.5	7.1	12.5	1.0		24	55
	PF	6.0	7.0	12.4	1.0		24	59
	UP	6.0	6.9	12.2	1.0		23	58
	GR	6.5	6.9	12.1	1.0		24	58
	GO	6.5	6.9	12.0	1.0		24	63
	HC	7.0	6.8	13.2	1.0		25	62
05/14/80	HA	12.0	7.2	12.4	2.0		22	44
	HB	12.0	7.4	11.5	1.0		22	56
	BA	12.0	7.6	11.0	1.0		21	49
	SU	12.0	7.6	11.2	1.0		21	48
	EU	12.0	7.6	11.0	1.0		21	46
	PF	13.0	7.6	11.1	1.0		21	45
	UP	13.0	7.4	10.6	0.5		24	45
	GR	12.5	6.9	10.7	1.0		23	51
	GO	13.0	7.0	10.7	1.0		22	52
	HC	13.0	7.4	11.7	1.0		23	55

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	CO_3^-	HCO_3^-	COND
06/03/80	HA	12.5	6.3	10.4	1.0		21	44
	HB	12.5	6.5	10.6	1.0		22	44
	BA	12.0	6.5	10.2	1.0		23	44
	SU	12.0	6.3	10.5	1.0		22	43
	EU	12.0	6.2	10.3	1.0		21	43
	PF	12.0	6.2	10.4	1.0		22	44
	UP	12.0	6.3	10.4	1.0		24	42
	GR	12.0	6.1	10.3	1.0		24	45
	GO	12.0	6.2	10.2	1.0		23	40
	HC	12.0	6.5	12.1	1.0		24	47
06/18/80	HA	15.5	6.3	9.7	1.5		20	49
	HB	15.5	6.2	10.0	1.0		20	44
	BA	15.5	6.1	10.0	1.5		22	42
	SU	16.0	6.4	9.8	1.0		25	44
	EU	16.0	6.3	9.9	1.0		21	47
	PF	16.0	6.2	9.9	1.0		21	40
	UP	16.0	6.2	10.0	1.0		22	46
	GR	16.0	6.2	9.8	1.0		22	47
	GO	16.0	6.2	9.6	1.0		23	78
	HC	16.0	6.4	10.8	1.0		23	52
07/02/80	HA	19.0	6.1	8.9	1.0		22	48
	HB	19.0	6.1	8.8	1.0		22	47
	BA	19.0	6.3	8.9	1.0		21	81
	SU	19.0	6.1	8.8	1.0		23	55
	EU	18.0	6.2	8.8	1.5		30	69
	PF	18.0	6.6	8.9	1.0		32	69
	UP	18.0	6.2	9.0	1.0		31	70
	GR	18.0	6.0	9.0	0.5		40	75
	GO	18.0	6.4	9.2	0.5		42	75
	HC	18.0	6.3	9.5	1.0		42	95
07/16/80	HA	20.0	6.1	8.5	0.5		20	43
	HB	20.0	5.8	8.5	0.5		21	42
	BA	20.0	5.9	8.6	0.5		21	47
	SU	20.0	5.7	8.5	0.5		21	45
	EU	18.5	6.1	8.5	1.0		33	69
	PF							
	UP	18.0	5.9	8.4	1.0		30	64
	GR	18.0	6.0	8.0	0.5		39	84
	GO	18.0	6.2	8.1	1.0		38	88
	HC	18.0	5.6	8.5	1.0		38	92

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
07/29/80	HA	23.0	6.4	7.9	0.5		23	57
	HB	23.0	6.4	8.2	0.5		23	57
	BA	23.0	6.9	8.0	0.5		22	55
	SU	23.0	6.9	8.3	0.5		23	50
	EU	22.0	7.2	8.3	0.5		39	70
	PF	22.0	7.6	8.7	0.5		42	83
	UP	22.5	7.0	8.3	0.5		43	89
	GR	22.5	7.8	8.3	0.5		55	100
	GO	22.0	8.4	9.6		5.0	54	105
	HC	22.5	8.4	9.3		6.0	54	105
08/12/80	HA	23.0	6.9	8.6	1.0		21	47
	HB	23.0	6.9	8.7	1.0		25	49
	BA	23.0	6.9	8.6	1.0		23	51
	SU	22.0	7.2	8.8	1.0		29	47
	EU	18.0	6.6	8.9	1.0		62	119
	PF	18.0	6.8	8.8	1.0		58	116
	UP	19.0	6.9	8.7	1.0		65	117
	GR	16.5	6.7	8.6	1.0		87	163
	GO	16.0	6.9	8.2	1.0		89	166
	HC	16.0	7.5	8.9	1.0		85	163
08/26/80	HA	18.5	7.0	8.4	1.0		22	56
	HB	18.5	6.8	7.8	1.0		23	57
	BA	19.0	7.0	8.0	1.0		23	59
	SU	18.5	7.1	8.1	1.0		24	54
	EU	16.0	7.1	8.5	1.0		56	115
	PF	16.5	7.3	8.9	1.0		57	125
	UP	17.0	7.3	8.6	1.0		55	122
	GR	17.0	7.2	8.5	1.0		65	145
	GO	16.5	8.4	8.7		4.0	65	155
	HC	16.5	8.4	8.7		7.0	62	135
09/09/80	HA	18.5	6.2	8.8	0.5		21	49
	HB	18.5	6.0	9.2	1.0		24	49
	BA	18.0	6.2	9.1	1.0		24	49
	SU	17.5	6.3	8.9	1.0		23	52
	EU	15.0	5.6	9.3	1.0		34	74
	PF	16.0	6.3	9.6	0.5		35	80
	UP	16.5	6.2	8.2	1.0		31	79
	GR	16.5	6.3	9.4	1.0		49	102
	GO	15.5	6.1	8.6	1.0		49	109
	HC	15.5	5.4	8.6	1.0		51	120

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	CO_3^-	HCO_3^-	COND
09/24/80	HA	16.0	6.4	9.5	1.0		28	48
	HB	16.0	6.3	9.8	1.0		23	51
	BA	15.0	6.7	9.5	1.5		24	45
	SU	14.5	6.2	9.8	1.0		24	46
	EU	14.0	6.3	9.8	1.0		34	73
	PF	15.0	6.5	9.8	0.5		34	80
	UP	15.0	6.6	8.6	0.5		36	82
	GR	13.0	6.4	9.5	1.0		49	105
	GO	12.5	6.6	9.8	1.0		49	106
	HC	12.5	6.8	8.3	1.0		50	110
10/10/80	HA	11.0	5.5	8.3	1.0		23	55
	HB	11.5	5.6	9.1	0.5		19	52
	BA	13.0	5.9	9.3	1.0		20	55
	SU	12.5	5.5	9.3	1.5		17	52
	EU	12.5	6.0	9.5	1.0		31	78
	PF	13.0	6.0	10.2	1.0		36	79
	UP	13.0	6.2	9.6	1.0		36	79
	GR	12.5	6.2	9.5	0.5		49	105
	GO	12.5	6.2	9.8	1.0		47	107
	HC	12.5	6.2	10.2	1.0		48	106
11/14/80	HA	7.5	6.5	11.3	0.5		22	67
	HB	7.5	7.1	11.4	0.5		24	66
	BA	7.5	7.0	11.5	1.0		24	64
	SU	7.5	7.1	11.3	1.0		24	67
	EU	7.0	7.1	11.0	1.0		31	84
	PF	7.0	7.0	10.9	1.0		39	88
	UP	7.0	7.0	10.6	1.0		32	106
	GR	7.0	6.9	10.5	1.0		43	117
	GO	7.0	7.2	10.4	1.0		45	114
	HC	7.0	7.2	10.4	1.5		44	112
12/17/80	HA	5.0	6.0	11.1	1.5		22	63
	HB	5.0	6.0	11.0	1.5		22	61
	BA	5.0	6.0	11.2	1.0		23	61
	SU	5.0	6.0	11.6	1.0		24	66
	EU	5.0	6.0	11.4	1.0		27	79
	PF	5.0	6.0	11.4	1.0		30	82
	UP	5.0	6.1	11.0	1.0		30	78
	GR	5.0	6.1	10.8	1.0		34	101
	GO	5.0	6.1	10.8	1.0		39	105
	HC	5.0	6.1	11.4	1.0		42	101

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
01/20/81	HA	4.0	6.3	12.0	1.0		21	61
	HB	4.0	6.3	11.8	1.0		21	61
	BA	4.0	6.5	11.9	1.0		23	62
	SU	4.0	6.5	12.0	1.0		24	65
	EU	4.0	6.7	11.7	1.0		25	71
	PF	4.0	6.7	11.6	1.0		25	71
	UP	4.0	6.8	11.6	1.5		25	75
	GR	4.0	6.9	11.5	1.0		28	86
	GO	4.0	6.9	11.6	1.0		30	86
	HC	4.0	6.9	12.8	1.0		30	84
02/26/81	HA	4.0	6.2	13.1	2.0		27	63
	HB	4.0	6.3	13.1	1.5		22	64
	BA	4.0	6.3	12.9	1.5		21	59
	SU	4.0	6.4	13.1	1.5		23	63
	EU	4.0	6.2	13.0	1.5		23	65
	PF	4.0	6.3	12.9	1.5		22	60
	UP	4.0	6.3	13.0	1.5		22	55
	GR	4.0	6.4	13.0	1.0		22	62
	GO	4.0	6.2	13.0	1.0		23	60
	HC	4.0	6.4	13.0	1.0		23	61
03/27/81	HA	5.5	5.7	12.4	1.0		25	57
	HB	5.5	5.8	12.4	1.0		20	61
	BA	5.5	5.8	12.6	1.5		35	58
	SU	5.5	5.8	12.5	1.0		25	62
	EU	5.5	5.8	11.7	1.0		20	62
	PF	5.5	5.9	12.1	1.0		20	63
	UP	5.0	6.0	11.5	1.0		25	64
	GR	5.5	6.1	12.1	0.5		25	72
	GO	5.5	6.0	12.1	1.5		40	67
	HC	5.0	6.1	13.7	1.5		35	67
04/16/81	HA	6.0	6.4	12.0	1.0		35	61
	HB	6.0	6.4	12.4	0.5		35	61
	BA	6.0	6.4	12.0	1.0		25	55
	SU	6.5	6.4	12.1	1.0		30	60
	EU	6.5	6.4	12.0	1.0		25	61
	PF	6.0	6.4	12.5	1.0		25	68
	UP	6.0	6.4	12.3	1.0		25	60
	GR	6.5	6.4	12.0	1.0		30	62
	GO	6.0	6.4	12.0	1.0		30	71
	HC	6.0	6.4	13.5	1.0		25	71

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
04/30/81	HA	7.0	6.3	12.6	1.0		26	62
	HB	7.0	6.2	12.6	1.0		24	60
	BA	7.0	6.2	12.4	1.0		24	56
	SU	7.0	6.4	12.6	1.0		21	60
	EU	7.0	6.3	12.6	1.0		26	60
	PF	7.0	6.3	12.0	1.0		23	56
	UP	7.0	6.1	12.0	1.0		15	52
	GR	6.0	6.2	12.0	1.0		22	64
	GO	6.0	6.2	12.0	1.0		23	52
	HC	6.0	6.2	13.3	1.0		27	59
05/19/81	HA	11.0	6.6	10.5	1.5		19	70
	HB	11.0	6.5	10.8	1.0		21	67
	BA	11.0	6.3	11.0	1.0		20	53
	SU	11.0	6.4	10.5	1.0		21	53
	EU	11.0	6.3	10.8	1.0		22	53
	PF	11.0	6.3	10.9	1.0		22	55
	UP	11.5	6.4	10.7	1.0		25	57
	GR	10.5	6.3	10.7	1.0		26	77
	GO	11.0	6.3	10.8	1.0		26	65
	HC	10.5	6.9	12.0	1.0		32	68
06/05/81	HA	15.5	6.4	9.8	1.0		23	49
	HB	15.0	6.3	10.0	1.0		21	54
	BA	15.0	6.3	9.7	1.0		23	50
	SU	15.5	6.2	9.8	1.0		23	50
	EU	14.5	6.2	9.8	1.0		26	59
	PF	14.5	6.3	10.1	1.0		27	66
	UP	14.0	6.3	9.7	1.0		27	68
	GR	14.5	6.4	9.7	1.0		34	79
	GO	14.5	6.3	9.8	1.5		35	83
	HC	14.5	6.2	10.3	1.0		32	80
06/11/81	HA	13.5	6.4	10.1	1.5		24	47
	HB	13.0	6.5	10.4	1.5		21	50
	BA	13.0	6.5	9.9	1.5		19	51
	SU	13.5	6.6	10.1	1.5		24	53
	EU	13.5	6.4	10.6	1.5		26	56
	PF	13.5	6.5	10.1	1.0		22	55
	UP	13.5	6.5	10.5	1.0		23	56
	GR	14.0	6.5	10.3	1.0		24	60
	GO	14.0	6.5	10.5	1.0		24	56
	HC	13.5	6.5	11.3	1.5		24	63

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
06/25/81	HA	15.0	6.6	10.5	1.5		25	54
	HB	15.0	6.6	10.3	2.0		24	54
	BA	15.0	6.4	10.5	1.5		24	54
	SU	14.5	6.5	11.0	1.0		21	52
	EU	14.0	6.6	10.4	1.5		24	55
	PF	14.0	6.5	10.4	1.5		25	56
	UP	14.0	6.6	9.5	1.5		21	58
	GR	13.5	6.5	9.8	1.5		25	58
	GO	13.5	6.5	10.0	1.5		22	61
	HC	13.5	6.5	11.5	1.5		17	64
07/09/81	HA	17.0	6.8	9.0	1.5		26	56
	HB	17.0	6.9	8.8	1.5		26	56
	BA	17.0	6.9	9.0	2.0		26	57
	SU	17.0	6.8	8.8	1.5		26	55
	EU	16.5	6.9	8.7	2.0		39	97
	PF	16.5	6.9	9.2	2.0		32	70
	UP	16.0	6.9	9.3	1.5		29	64
	GR	16.5	7.0	9.2	1.0		35	84
	GO	16.5	7.0	9.6	1.5		37	83
	HC	16.5	6.8	9.7	0.6		39	82
07/24/81	HA	20.0	7.0	8.4	1.5		22	132
	HB	20.0	6.8	8.3	1.0		22	57
	BA	20.0	6.9	8.8	2.0		22	52
	SU	20.0	6.9	8.5	1.5		27	57
	EU	17.5	7.0	8.4	1.5		44	97
	PF	18.0	7.1	8.6	1.0		46	105
	UP	18.0	7.0	8.0	1.5		47	105
	GR	17.5	7.1	8.5	1.5		55	124
	GO	17.5	7.0	8.8	1.5		60	127
	HC	18.0	6.9	8.5	1.0		58	124
08/06/81	HA	22.0	7.7	7.7	1.5		26	57
	HB	21.5	7.7	8.5	1.5		27	56
	BA	22.0	7.8	8.1	1.5		26	60
	SU	22.0	7.9	8.6	1.5		29	59
	EU	20.0	8.1	8.2	1.5		45	85
	PF	20.0	8.2	9.0	1.5		45	98
	UP	20.0	7.9	8.1	1.0		44	100
	GR	20.0	8.3	8.4	1.0		65	120
	GO	19.0	8.5	9.5		1.5	60	120
	HC	19.0	8.5	9.4		1.5	70	128

Table A-1. Spokane River Field Data - continued

DATE	STA	TEMP	PH	DO	CO_2	$CO_3^{=}$	HCO_3^{-}	COND
08/25/81	HA	23.0	8.4	8.6		0.5	25	60
	HB	23.5	8.4	8.7		0.5	26	57
	BA	23.0	8.0	7.5	1.0		30	49
	SU	22.0	7.7	7.5	1.0		25	64
	EU	17.0	7.9	8.6	2.0		71	138
	PF	18.0	7.7	8.5	2.0		65	144
	UP	19.0	7.8	10.1	1.0		64	142
	GR	16.0	7.9	8.5	1.5		87	178
	GO	16.0	7.8	7.8	2.0		85	178
	HC	16.0	7.9	8.1	1.0		84	184
09/03/81	HA	19.0	7.2	8.7	1.5		23	60
	HB	18.5	7.2	8.4	1.5		21	62
	BA	19.0	7.1	8.8	1.5		25	58
	SU	19.0	7.0	8.5	1.0		25	60
	EU	16.0	7.3	8.7	1.5		66	130
	PF	17.5	7.8	9.3	1.0		68	139
	UP	18.5	7.6	8.7	0.5		65	138
	GR	15.0	7.5	8.8	0.5		94	180
	GO	16.0	7.7	9.5	1.0		89	179
	HC	16.0	8.4	8.5		1.0	88	166
09/24/81	HA	16.5	6.9	9.2	1.0		25	60
	HB	16.5	6.6	9.5	1.0		25	60
	BA	16.5	6.7	9.5	1.0		25	58
	SU	15.5	6.5	9.0	0.5		26	65
	EU	14.5	6.9	9.0	1.0		37	84
	PF	14.5	6.8	9.6	1.0		36	87
	UP	15.5	6.4	8.8	1.5		40	91
	GR	14.0	6.8	9.0	1.5		52	117
	GO	14.0	6.8	8.2	1.5		54	126
	HC	14.0	6.4	8.5	1.0		55	126
11/03/81	HA	9.5	6.7	9.7	1.0		20	59
	HB	9.5	6.7	10.2	2.2		24	52
	BA	9.5	6.7	10.2	1.0		21	66
	SU	10.0	6.4	10.5	1.5		23	54
	EU	9.5	6.5	10.3	1.5		30	72
	PF	10.0	6.6	10.3	1.5		28	83
	UP	10.0	6.5	10.3	1.5		35	53
	GR	10.0	6.6	10.0	1.5		41	94
	GO	10.0	6.7	10.5	1.5		50	107
	HC	9.5	6.7	10.5	1.5		46	134

Table A-2. Spokane River Chemistry Data. Units of measurements are mg/ℓ.

STATIONS: ST=Stateline, HA=Harvard I, HB=Harvard II, BA=Barker, SU=Sullivan, EU=Euclid, PF=Plantes Ferry, UP=Upriver Drive, GR=Greene Street, GO=Gonzaga, HC=Hangman Creek.

DATE	ST	TP	TSP	SRP	NH3-N	N03-N	NO2-N	TKN	CL	COD	BOD	TSS	VSS
11/06/79	ST	.021	.007	.007	<0.01	<0.02	<0.01	0.12	0.4	4.0		4.0	1.2
	HA	.022	.007	.007	<0.01	<0.02	<0.01	0.14	0.4	4.2		7.1	1.8
	BA	.010	.009	.008	<0.01	<0.02	<0.01	0.11	0.4	4.5		3.1	2.4
	SU	.018	.006	.006	<0.01	<0.02	<0.01	0.11	0.4	4.3		4.0	1.2
	EU												
	PF	.020	.011	.009	<0.01	0.060	<0.01	0.13	0.7	4.0		2.9	1.0
	UP	.018	.006	.004	<0.01	0.085	<0.01	0.18	0.8	4.3		5.5	1.2
	GR	.018	.006	.006	<0.01	0.120	<0.01	0.10	0.8	3.2		4.8	1.7
	GO	.017	.011	.008	<0.01	0.120	<0.01	0.10	0.8	3.2		4.3	1.2
	HC												
11/12/79	ST	.019	.017	.001	<0.01	<0.02	<0.01	0.12	0.4	3.8		2.9	0.7
	HA	.022	.021	.002	<0.01	<0.02	<0.01	0.11	0.4	4.0		5.4	2.0
	BA	.019	.017	.006	<0.01	<0.02	<0.01	0.14	0.4	4.0		5.4	2.7
	SU	.018	.017	.002	<0.01	<0.02	<0.01	0.11	0.4	4.0		5.4	1.8
	EU	.018	.016	.001	<0.01	0.090	<0.01	0.12	0.6	3.5		5.4	1.8
	PF	.018	.017	.007	<0.01	0.140	<0.01	0.12	0.7	4.0		5.7	2.1
	UP	.013	.012	.006	<0.01	0.100	<0.01	0.12	0.6	4.2		5.7	2.1
	GR	.017	.012	.006	<0.01	0.230	<0.01	0.18	0.8	3.8		6.8	3.6
	GO	.014	.012	.007	<0.01	0.240	<0.01	0.17	0.8	3.8		5.9	1.6
	HC												
11/20/79	ST	.017	.003	.002	<0.01	<0.02	<0.01	0.13	0.4	4.8	0.9	2.6	2.1
	HA	.022	.004	.004	<0.01	<0.02	<0.01	0.11	0.4	4.3	1.1	2.1	1.6
	BA	.017	.007	.002	<0.01	0.034	<0.01	0.13	0.4	4.5	1.3	1.6	1.4
	SU	.016	.004	<.001	<0.01	0.024	<0.01	0.11	0.4	4.3	1.0	2.1	1.3
	EU	.021	.008	<.001	<0.01	0.11	<0.01	0.13	0.7	4.0	2.5	2.1	1.3
	PF	.019	.008	.003	<0.01	0.20	<0.01	0.14	0.8	4.2	3.1	3.0	2.5
	UP	.016	.008	.004	<0.01	0.13	<0.01	0.12	0.7	4.2	2.9	1.0	0.4
	GR	.036	.012	.001	<0.01	0.35	<0.01	0.15	0.9	3.7	1.9	0.9	0.4
	GO	.024	.016	.010	<0.01	0.31	<0.01	0.13	0.9	3.5	1.4	1.1	1.0
	HC	.024	.017	.012	<0.01	1.76	<0.01	0.11	1.0	4.2	2.4	2.5	2.0
12/04/79	ST	.023	.009	.009	<0.01	0.069	<0.01	0.11	0.5	5.3	1.1	2.7	1.4
	HA				<0.01	0.039	<0.01	0.11	0.5	5.4	1.3	2.7	1.8
	BA	.025	.008	.007	<0.01	0.062	<0.01	0.11	0.6	6.1	1.3	2.7	1.3
	SU	.052	.020	.007	<0.01	0.23	<0.01	0.12	0.5	5.6	0.9	3.6	0.9
	EU	.018	.008	.008	<0.01	0.19	<0.01	0.10	0.7	4.5	1.0	2.7	1.8
	PF	.025	.009	.009	<0.01	0.16	<0.01	0.12	0.9	4.6	1.5	2.5	2.1
	UP	.019	.008	.008	<0.01	0.30	<0.01	0.11	0.8	5.4	1.3	2.9	0.7
	GR	.020	.008	.008	<0.01	0.62	<0.01	0.09	0.9	4.6	1.6	1.4	1.3
	GO	.018	.006	.005	<0.01	0.30	<0.01	0.11	1.0	4.6	1.7	3.6	1.3
	HC	.033	.013	.012	0.026	0.32	<0.01	0.16	1.2	4.7	1.3	2.4	2.3

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	NO3-N	NO2-N	TKN	CL	COD	BOD	TSS	VSS
12/16/79	ST	.015	.012	.010	0.014	0.059	<0.01	0.14	0.4	4.1	0.6	3.1	0.7
	HA	.017	.013	.011	0.011	0.058	<0.01	0.13	0.4	4.0	1.3	2.1	0.2
	BA	.014	.013	.010	0.010	0.052	<0.01	0.11	0.4	3.8	1.4	2.6	1.3
	SU	.016	.015	.009	<0.01	0.053	<0.01	0.16	0.4	3.8	1.5	4.8	4.3
	EU	.014	.014	.011	<0.01	0.14	<0.01	0.16	0.7	3.3	0.5	2.1	0.2
	PF	.018	.016	.015	0.010	0.18	<0.01	0.15	0.8	3.8	0.9	1.5	0.6
	UP	.014	.013	.010	<0.01	0.16	<0.01	0.15	0.8	2.9	1.4	4.8	0.2
	GR	.013	.012	.011	<0.01	0.29	<0.01	0.15	0.9	3.0	0.9	1.2	0.2
	GO	.013	.012	.010	<0.01	0.30	<0.01	0.15	0.9	2.2	0.4	2.9	1.1
	HC	.014	.012	.011	<0.01	0.29	<0.01	0.17	0.9	2.2	0.9	5.5	1.2
01/04/80	ST	.011	.010	.005	0.010	0.17	<0.01	0.10	0.7	3.0	1.4	1.8	1.6
	HA	.018	.010	.004	0.010	0.078	<0.01	0.11	0.5	3.0	1.2	3.8	1.9
	BA	.023	.008	.006	<0.01	0.070	<0.01	0.11	0.4	3.4	0.6	3.3	2.2
	SU	.018	.009	.006	<0.01	0.062	<0.01	0.13	2.4	4.0	0.9	2.9	1.7
	EU	.011	.010	.007	<0.01	0.14	<0.01	0.12	1.1	4.6	0.9	4.1	1.7
	PF	.013	.012	.008	<0.01	0.12	<0.01	0.14	0.5	4.3	0.4	2.9	2.6
	UP	.048	.021	.003	<0.01	0.50	<0.01	0.12	0.7	4.5	1.6	4.0	2.9
	GR	.011	.010	.002	<0.01	0.24	<0.01	0.14	0.9	4.5	1.1	2.9	2.7
	GO	.011	.010	.003	<0.01	0.37	<0.01	0.15	0.8	3.8	0.7	2.7	2.3
	HC	.011	.010	.005	<0.01	0.36	<0.01	0.10	0.6	3.3	1.0	6.1	2.9
02/18/80	ST	.015	.009	.007	<0.01	0.12	<0.01	0.11	0.4	4.1	0.7	0.9	0.4
	HA	.018	.017	.009	<0.01	0.10	<0.01	0.09	0.4	6.4	0.5	1.2	0.5
	BA	.025	.012	.009	<0.01	0.10	<0.01	0.11	0.4	3.8	0.7	0.5	0.4
	SU	.018	.012	.009	<0.01	0.12	<0.01	0.10	0.4	3.8	0.4	2.4	1.0
	EU	.017	.012	.009	0.016	0.12	<0.01	0.17	0.7	4.0	0.8	1.1	0.7
	PF	.023	.017	.013	<0.01	0.21	<0.01	0.10	0.8	4.1	0.3	1.3	0.9
	UP	.017	.009	.008	<0.01	0.21	<0.01	0.13	0.8	4.8	2.3	0.5	0.4
	GR	.023	.013	.009	<0.01	0.26	<0.01	0.11	0.9	4.6	0.8	0.7	0.5
	GO	.015	.010	.004	<0.01	0.28	<0.01	0.08	0.9	3.8	0.6	2.4	1.0
	HC	.021	.011	.008	<0.01	0.27	<0.01	0.10	0.9	4.0	0.5	0.5	0.2
03/05 80	ST	.018	.004	<.001	<0.01	0.090	<0.01	0.10	0.4	4.6	0.9	3.3	1.6
	HA	.017	.003	<.001	<0.01	0.11	<0.01	0.10	0.4	4.5	1.0	2.9	1.2
	BA	.017	.004	<.001	<0.01	0.11	<0.01	0.10	0.5	4.6	0.7	0.5	0.2
	SU	.021	.004	<.001	<0.01	0.20	<0.01	0.11	0.5	4.3	1.3	3.6	1.2
	EU	.017	.013	<.001	<0.01	0.090	<0.01	0.09	0.5	4.0	1.5	0.5	0.2
	PF	.020	.005	<.001	<0.01	0.15	0.016	0.09	0.5	4.6	1.2	2.4	0.7
	UP	.022	.006	.002	<0.01	0.092	<0.01	0.10	0.5	3.7	1.9	0.5	0.2
	GR	.019	.006	.002	<0.01	0.12	<0.01	0.13	1.0	4.5	1.7	2.4	1.2
	GO	.021	.004	.001	<0.01	0.12	<0.01	0.10	0.7	4.1	1.3	2.7	1.1
	HC	.037	.006	.001	<0.01	0.13	<0.01	0.13	0.6	4.0	2.0	0.5	0.2
03/22/80	HA	.033	.008	.002	<0.01	0.076	<0.01	0.14	0.5	4.8	0.3	2.9	1.9
	HB	.014	.013	.002	<0.01	0.071	<0.01	0.11	0.5	4.3	0.1	1.9	1.8
	BA	.016	.006	.003	<0.01	0.077	<0.01	0.12	0.5	4.6	0.1	1.4	1.2
	SU	.017	.008	<.001	<0.01	0.063	<0.01	0.12	0.5	4.8	0.1	2.7	1.1
	EU	.014	.008	.001	<0.01	0.13	<0.01	0.12	0.5	4.3	0.1	4.6	3.6
	PF	.023	.005	<.001	<0.01	0.11	<0.01	0.13	1.4	4.5	0.0	2.5	1.2
	UP	.023	.006	.001	<0.01	0.089	<0.01	0.13	0.5	4.5	0.6	2.2	2.3
	GR	.016	.005	<.001	<0.01	0.42	<0.01	0.13	0.6	4.3	1.1	3.9	2.0
	GO	.017	.009	.002	<0.01	0.19	<0.01	0.13	0.6	4.3	0.1	1.7	1.5
	HC	.017	.005	.002	<0.01	0.14	<0.01	0.13	0.6	4.1	1.5	6.0	3.7

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	NO3-N	NO2-N	TKN	CL	COD	BOD	TSS	VSS
04/04/80	HA	.019	.002	.001	<0.01	0.093	<0.01	0.13	0.4	4.1	0.4	0.0	0.0
	HB	.020	.002	.001	<0.01	0.091	<0.01	0.17	0.4	4.5	0.3	1.0	0.4
	BA	.016	.003	.001	<0.01	0.10	<0.01	0.14	0.4	4.3	0.5	1.0	0.7
	SU	.021	.003	.002	<0.01	0.089	<0.01	0.15	0.4	4.5	0.8	1.4	0.3
	EU	.022	.004	.003	<0.01	0.12	<0.01	0.14	0.5	4.5	0.3	1.5	0.1
	PF	.020	.003	.001	<0.01	0.12	<0.01	0.14	0.6	4.6	0.5	0.3	0.1
	UP	.018	.001	.001	<0.01	0.12	<0.01	0.14	0.5	4.6	0.9	0.9	0.8
	GR	.017	.003	001	<0.01	0.16	<0.01	0.13	0.6	5.0	0.2	0.7	0.2
	GO	.018	.002	.001	<0.01	0.16	<0.01	0.19	0.6	5.0	0.6	0.4	0.2
	HC	.017	.001	.001	<0.01	0.17	<0.01	0.14	0.6	5.1	0.0	1.6	0.6
04/21/80	HA	.042	.001	.001	<0.01	0.063	<0.01	0.19	0.4	5.3	1.5	4.4	1.2
	HB	.029	.002	.001	<0.01	0.055	<0.01	0.20	0.4	5.6	1.4	4.7	3.0
	BA	.043	.002	.001	0.015	0.037	<0.01	0.20	0.4	4.8	0.7	7.8	2.5
	SU	.036	.001	.001	<0.01	0.058	<0.01	0.20	0.4	4.8	1.3	6.5	1.7
	EU	.033	.003	.003	<0.01	0.070	<0.01	0.19	0.4	5.3	1.1	6.5	2.0
	PF	.028	.002	.001	<0.01	0.230	<0.01	0.19	0.4	5.3	1.2	4.8	1.2
	UP	.032	.004	.001	<0.01	0.630	<0.01	0.19	0.4	4.8	1.1	3.4	1.4
	GR	.032	.001	.001	<0.01	0.060	<0.01	0.18	0.4	5.1	1.2	6.5	2.8
	GO	.038	.003	.001	<0.01	0.062	<0.01	0.18	0.4	5.3	1.1	5.2	2.4
	HC	.038	.001	.001	<0.01	0.082	<0.01	0.21	0.4	4.6	1.8	6.9	2.3
05/14 80	HA	.022	.002	.001	<0.01	<0.02	<0.01	0.09	0.3	4.3	3.1	3.7	1.0
	HB	.019	<.001	<.001	<0.01	<0.02	<0.01	0.13	0.3	4.8	2.1	2.0	0.5
	BA	.021	<.001	<.001	<0.01	<0.02	<0.01	0.12	0.3	4.3	1.2	3.2	1.4
	SU	.018	<.001	<.001	<0.01	0.027	<0.01	0.13	0.3	4.6	1.6	2.1	1.6
	EU	.017	.008	.001	<0.01	<0.02	<0.01	0.12	0.3	4.5	1.6	2.6	1.7
	PF	.021	<.001	<.001	<0.01	<0.02	<0.01	0.10	0.4	4.3	1.5	3.4	1.4
	UP	.020	.003	<.001	<0.01	<0.02	<0.01	0.11	0.4	4.1	1.4	0.0	0.0
	GR	.021	<.001	<.001	<0.01	<0.02	<0.01	0.10	0.4	3.7	1.5	5.1	1.8
	GO	.017	<.001	<.001	<0.01	0.230	<0.01	0.13	0.4	3.7	1.4	2.6	2.1
	HC	.021	<.001	<.001	<0.01	0.036	<0.01	0.14	0.4	4.0	1.5	3.6	0.2
06/03/80	HA	.025	.006	<.001	<0.01	<0.02	<0.01	0.08	0.5	2.9	0.6	9.3	3.6
	HB	.026	.009	.001	<0.01	0.027	<0.01	0.11	0.5	4.8	0.8	4.4	0.9
	BA	.016	.001	<.001	<0.01	<0.02	<0.01	0.09	0.7	4.5	0.4	5.1	1.7
	SU	.017	.003	<.001	<0.01	<0.02	<0.01	0.09	0.7	4.5	0.9	8.4	1.6
	EU	.017	.004	<.001	<0.01	<0.02	<0.01	0.10	0.7	3.2	0.7	6.6	1.4
	PF	.023	.003	<.001	<0.01	<0.02	<0.01	0.09	0.8	7.0	0.5	5.6	1.0
	UP	.017	.007	<.001	<0.01	<0.02	<0.01	0.09	1.0	5.1	0.8	4.2	3.8
	GR	.033	.003	.001	<0.01	0.022	<0.01	0.10	0.9	4.3	0.7	17.2	2.1
	GO	.021	.002	<.001	<0.01	<0.02	<0.01	0.09	0.8	4.3	0.7	6.5	2.2
	HC	.018	.002	<.001	<0.01	<0.02	<0.01	0.09	3.0	4.5	1.3	10.6	2.0
06/18/80	HA	.020	.007	<.001	<0.01	<0.02	<0.01	0.10	0.5	3.3	0.4	2.2	1.7
	HB	.023	.011	.001	<0.01	<0.02	<0.01	0.10	0.5	2.5	0.8		
	BA	.020	.008	.001	<0.01	0.03	<0.01	0.11	0.6	2.4	1.2		
	SU	.015	.010	.001	<0.01	<0.02	<0.01	0.11	0.6	2.1	0.8		
	EU		.010	<.001	<0.01	0.02	<0.01	0.11	0.6	1.1	1.0		
	PF	.018	.006	.001	<0.01	0.02	<0.01	0.10	0.6	1.1	0.7		
	UP	.020	.009	.001	<0.01	0.021	<0.01	0.11	0.6	1.2	1.2		
	GR	.022	.009	.001	<0.01	0.030	<0.01	0.10	0.6	1.9	1.0	6.7	2.2
	GO	.016	.006	<.001	<0.01	0.033	<0.01	0.10	0.6	1.9	1.1		
	HC	.020	.009	.001	<0.01	0.026	<0.01	0.12	0.7	2.4	1.0		

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	N03-N	N02-N	TKN	CL	COD	BOD	TSS	VSS
07/02/80	HA	.024	.003	.001	<0.01	<0.02	<0.01	0.11	0.7	2.5	0.6	2.0	0.6
	HB	.018	.008	.001	<0.01	0.29	<0.01	0.11	0.7	2.7	0.5	2.0	0.1
	BA	.033	.005	<.001	<0.01	0.020	<0.01	0.12	0.7	3.2	0.6	4.0	1.0
	SU	.040	.010	.001	<0.01	0.021	<0.01	0.12	0.7	3.3	0.4	3.6	1.0
	EU	.020	.007	.001	<0.01	0.26	<0.01	0.14	0.9	3.2	0.7	1.9	0.7
	PF	.024	.020	.001	<0.01	0.13	<0.01	0.13	1.0	3.3	0.8	2.5	1.4
	UP		.009	.001	<0.01	1.25	<0.01	0.14	1.0	3.7	1.2	2.0	
	GR	.018	.006	.001	<0.01	0.15	<0.01	0.12	1.0	3.7	1.0	1.5	1.5
	GO	.015	.005	<.001	<0.01	0.12	<0.01	0.19	1.0	3.7	0.9	3.4	0.9
	HC	.026	.007	<.001	<0.01	0.27	<0.01	0.16	1.0	3.7	0.9	2.7	1.1
07/16/80	HA	.041	.010	.004	<0.01	<0.02	<0.01	0.11	0.7	5.3	0.7	2.7	1.3
	HB	.036	.010	.007	<0.01	<0.02	<0.01	0.12	0.7	4.5	0.5	2.1	0.9
	BA	.017	.005	.001	<0.01	<0.02	<0.01	0.11	0.7	4.8	0.6	3.7	0.0
	SU	.051	.019	.002	<0.01	<0.02	<0.01	0.10	0.7	4.5	0.9	3.7	1.3
	EU	.017	.005	.002	<0.01	0.084	<0.01	0.10	1.0	4.0	0.4	2.5	1.6
	PF												
	UP	.019	.005	.001	<0.01	0.078	<0.01	0.11	1.0	4.1	0.6	1.4	0.5
	GR	.022	.005	.002	<0.01	0.15	<0.01	0.11	1.0	3.7	1.0	2.8	1.3
	GO	.020	.005	.003	<0.01	0.16	<0.01	0.09	1.1	4.5	0.8	4.0	2.0
	HC	.016	.005	.002	<0.01	0.16	<0.01	0.10	1.6	4.8	0.4	3.0	1.3
07/29/80	HA	.020	.006	<.001	<0.01	<0.02	<0.01	0.14	0.7	5.1	0.3	1.9	0.8
	HB	.021	.006	<.001	<0.01	<0.02	<0.01	0.16	0.7	5.1	1.0	1.9	0.6
	BA	.022	.006	<.001	<0.01	0.020	<0.01	0.15	0.7	10.4	0.4	2.6	
	SU	.031	.006	<.001	<0.01	<0.02	<0.01	0.16	0.7	5.0	0.6	1.8	0.9
	EU	.013	.007	.004	<0.01	0.13	<0.01	0.17	1.2	5.0	0.4	2.1	1.2
	PF	.014	.013		<0.01	0.14	<0.01	0.15	1.3	4.6	1.0	1.1	0.3
	UP	.018	.008	.001	<0.01	0.13	<0.01	0.19	1.3	4.6	0.8	1.0	0.7
	GR	.026	.008	.001	<0.01	0.29	<0.01	0.15	1.3	3.0	0.6	1.9	1.0
	GO	.026	.010	<.001	<0.01	0.28	<0.01	0.16	1.4	3.0	1.2		
	HC	.026	.007	<.001	<0.01	0.26	<0.01	0.17	1.4	3.2	1.1	1.5	1.5
08/12/80	HA	.026	.020	.015	<0.01	<0.02	<0.01	0.17	0.8	4.3	0.6	0.9	0.1
	HB	.024	.019	.013	<0.01	0.078	0.02	0.20	1.4	5.3	0.3	0.7	0.4
	BA	.022	.018	.014	<0.01	<0.02	<0.01	0.17	0.8	6.2	1.0	3.0	1.0
	SU	.021	.016	.011	<0.01	<0.02	<0.01	0.17	0.8	6.1	1.3	1.1	0.2
	EU	.020	.015	.011	<0.01	0.25	<0.01	0.15	1.6	5.4	0.7	0.9	0.2
	PF	.029	.024		<0.01	0.26	<0.01	0.15	1.8	5.0	0.4	1.7	1.1
	UP	.028	.018	.015	<0.01	0.28	<0.01	0.18	2.6	5.8	0.7	0.2	0.2
	GR	.018	.016	.010	<0.01	0.47	<0.01	0.14	1.7	4.3	0.8	1.4	
	GO	.016	.012	.007	<0.01	0.49	<0.01	0.14	1.7	4.0	0.6	1.9	0.6
	HC	.014	.010	.004	<0.01	0.47	<0.01	0.15	1.8	3.8	1.4	0.7	0.3
08/26/80	HA	.015	.008	.005	<0.01	<0.02	<0.01	0.14	0.7	5.3	2.3	0.3	0.3
	HB	.017	.010	.006	<0.01	<0.02	<0.01	0.15	0.7	5.4	0.2	1.8	1.1
	BA	.015	.008	.005	<0.01	<0.02	<0.01	0.13	0.7	5.6	0.0	1.0	0.2
	SU	.017	.010	.006	<0.01	<0.02	<0.01	0.14	0.7	4.8	0.0	1.1	0.2
	EU	.013	.011	.009	<0.01	0.52	<0.01	0.17	1.5	3.7	0.2	1.0	0.7
	PF	.022	.015	.013	<0.01	0.58	<0.01	0.12	1.7	3.8	0.6	1.2	0.4
	UP	.035	.029	.026	<0.01	0.53	<0.01	0.18	1.7	4.8	0.5	0.3	0.1
	GR	.017	.012	.011	<0.01	0.82	<0.01	0.12	1.5	3.3	0.5	0.6	0.2
	GO	.017	.011	.009	<0.01	0.88	<0.01	0.14	1.5	3.0	0.6	1.4	0.6
	HC	.014	.010	.007	0.01	0.75	<0.01	0.13	1.4	4.0	0.5		

Table A-2. Spokane Kiver Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	NO3-N	N02-N	TKN	CL	COD	BOD	TSS	VSS
09/09/80	HA	.014	.014	.006	<0.01	<0.02	<0.01	0.13	0.8	4.6	1.7		
	HB	.015	.014	.006	<0.01	<0.02	<0.01	0.13	0.7	4.6	0.6		
	BA	.012	.012	.006	<0.01	<0.02	<0.01	0.15	0.8	4.5	0.5		
	SU	.013	.011	.005	<0.01	<0.02	<0.01	0.15	0.7	9.3	0.6		
	EU	.015	.012	.006	<0.01	0.082	<0.01	0.14		5.0	0.8		
	PF	.017	.013	.007	<0.01	0.097	<0.01	0.21	1.1	4.3	0.7		
	UP	.016	.014	.008	<0.01	0.100	<0.01	0.19	1.1	5.0	0.6	1.1	0.4
	GR	.015	.012	.006	<0.01	0.21	<0.01	0.18	1.1	4.0	1.1	3.2	2.0
	GO	.014	.008	.004	<0.01	0.20	<0.01	0.19	1.1	4.2	0.8		
	HC	.015	.008	.003	<0.01	0.20	<0.01	0.18	1.1	4.0	0.5		
09/24/80	HA	.015	.011	.005	<0.01	<0.02	<0.01	0.12	0.8	4.8	0.5	0.8	0.6
	HB	.016	.010	.007	<0.01	<0.02	<0.01	0.16	0.8	5.1	0.6	2.2	0.5
	BA	.017	.012	.008	<0.01	<0.02	<0.01	0.15	0.8	4.8	1.0	1.5	0.6
	SU	.017	.013	.005	<0.01	<0.02	<0.01	0.14	0.7	4.6	0.6		
	EU	.016	.009	.006	<0.01	0.087	<0.01	0.12	1.0	4.0	0.7	1.5	0.9
	PF	.016	.011	.008	<0.01	0.11	<0.01	0.12	1.1	4.2	0.3		
	UP	.017	.007	.007	<0.01	0.10	<0.01	0.13	1.1	4.6	0.7	1.2	0.4
	GR	.016	.009	.005	<0.01	0.20	<0.01	0.12	1.2	4.3	0.4	1.1	0.7
	GO	.015	.009	.004	<0.01	0.22	<0.01	0.13	1.2	4.3	0.2	1.0	0.5
	HC	.015	.007	.005	<0.01	0.23	<0.01	0.12	1.3	5.6	0.7	0.6	0.2
10/10/80	HA	.012	.008	.008	<0.01	<0.02	<0.01	0.12	0.8	3.5	0.3		
	HB	.024	.008	.006	<0.01	<0.02	<0.01	0.10	0.8	4.3	0.6	1.1	0.3
	BA	.012	.008	.008	<0.01	<0.02	<0.01	0.11	0.8	3.7	1.0	0.5	0.2
	SU	.012	.007	.007	<0.01	<0.02	<0.01	0.10	0.8	3.7	1.0	1.2	0.7
	EU	.014	.007	.007	<0.01	0.13	<0.01	0.12	1.0	3.3	1.0	1.5	0.2
	PF	.015	.009	.009	<0.01	0.18	<0.01	0.13	1.0	4.0	1.4		
	UP	.014	.007	.006	<0.01	0.16	<0.01	0.14	1.0	4.2	1.1	0.9	0.2
	GR	.014	.007	.007	<0.01	0.33	<0.01	0.13	1.1	3.7	1.1		
	GO	.011	.007	.007	<0.01	0.32	<0.01	0.11	1.1	4.3	0.2		
	tic	.009	.004	.004	<0.01	0.30	<0.01	0.10	1.1	3.7	0.8	0.2	0.0
11/14/80	HA	.007	.006	.006	<0.01	<0.02	<0.01	0.11	5.5	6.9	1.9		
	HB	.010	.004	.004	<0.01	<0.02	<0.01	0.11	3.1	4.0	0.2		
	BA	.014	.001	.001	<0.01	<0.02	<0.01	0.12	0.7	4.5	0.0		
	SU	.010	.003	.003	<0.01	<0.02	<0.01	0.26	0.7	5.4	0.0		
	EU	.010	.004	.004	<0.01	0.072	<0.01	0.23	0.8	5.4	0.8	10.0	3.5
	PF	.011	.003	.003	<0.01	0.092	<0.01	0.25	0.9	5.4	0.4		
	UP	.006	.003	.003	<0.01	0.10	<0.01	0.11	0.8	5.4	1.3		
	GR	.007	.004	.004	<0.01	0.21	<0.01	0.18	1.0	4.5	1.3		
	GO	.009	.004	.004	<0.01	0.21	<0.01	0.22	1.0	4.0	1.4		
	HC	.022	.005	.005	<0.01	0.21	<0.01	0.17	1.0	3.8	1.1		
12/17/80	HA	.009	.007	.007	<0.01	<0.02	<0.01	0.14	0.7	4.0	1.4	2.4	1.8
	HB	.023	.012	.006	<0.01	<0.02	<0.01	0.14	0.7	3.8	0.9	3.7	1.7
	BA	.016	.005	.005	<0.01	<0.02	<0.01	0.18	0.7	3.7	0.5	2.9	2.1
	SU	.009	.008	.008	<0.01	<0.02	0.01	0.16	0.7	3.7	0.7	2.4	1.7
	EU	.012	.006	.006	<0.01	0.072	<0.01	0.15	0.7	2.9	0.7	3.3	1.9
	PF	.012	.007	.007	<0.01	0.092	0.01	0.17	0.8	3.0	0.4	2.6	1.9
	UP	.012	.009	.007	<0.01	0.10	<0.01	0.18	0.8	3.5	0.8	2.0	0.8
	GR	.010	.008	.003	<0.01	0.21	0.015	0.15	0.8	3.0	0.5	1.2	0.8
	GO	.010	.005	.005	<0.01	0.21	<0.01	0.12	0.8	3.2	0.4	1.8	1.0
	HC	.012	.005	.005	<0.01	0.21	<0.01	0.11	0.8	3.0	1.0	2.2	1.3

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	N03-N	N02-N	TKN	CL	COD	BOD	TSS	VSS
01/20/81	HA	.024	.005	.005	<0.01	0.066	<0.01	0.08	0.6	4.0	1.3	3.2	1.4
	HB	.018	.010	.003	<0.01	0.063	<0.01	0.09	0.7	3.8	0.7	3.5	0.9
	BA	.018	.012	.002	<0.01	0.062	<0.01	0.08	0.7	3.3	0.4	2.9	0.7
	SU	.028	.009	.004	<0.01	0.065	<0.01	0.09	0.6	4.1	0.8	1.2	0.7
	EU	.016	.006	.003	<0.01	0.088	<0.01	0.08	0.7	3.5	0.7	2.7	1.2
	PF	.016	.005	.003	<0.01	0.10	<0.01	0.09	0.7	3.8	0.9	2.6	0.5
	UP	.027	.004	.004	<0.01	0.10	<0.01	0.08	0.7	3.8	1.1	7.9	1.9
	GR	.017	.018	.004	<0.01	0.16	<0.01	0.09	0.7	3.3	0.6	1.3	0.6
	GO	.017	.013	.003	<0.01	0.16	<0.01	0.11	0.8	3.3	1.1	2.0	0.5
	HC	.014	.007	.005	<0.01	0.16	<0.01	0.08	0.8	3.2	2.5	2.8	1.1
02/26/81	HA	.013	.009	.003	<0.01	0.088	<0.01	0.11	0.8	3.8	2.2	5.3	2.2
	HB	.021	.006	.004	<0.01	0.088	<0.01	0.12	0.8	4.5	2.2	2.9	1.5
	BA	.013	.012	.010	<0.01	0.086	<0.01	0.10	0.8	4.6	1.8	3.0	2.4
	SU	.022	.016	.004	<0.01	0.085	<0.01	0.10	3.3	4.6	2.1	3.1	3.7
	EU	.016	.008	.005	<0.01	0.088	<0.01	0.10	1.1	4.1	2.8	2.5	2.4
	PF	.020	.012	.006	<0.01	0.090	<0.01	0.09	0.9	3.8	1.7	2.8	1.0
	UP	.015	.015	.004	<0.01	0.090	<0.01	0.10	0.8	3.8	2.7	1.4	3.5
	GR	.015	.010	.006	<0.01	0.10	<0.01	0.10	0.9	4.1	2.9	3.4	2.6
	GO	.008	.008	.005	<0.01	0.10	<0.01	0.12	13.7	4.6	1.8	5.1	2.7
	HC	.005	.005	.003	<0.01	0.11	<0.01	0.11	0.9	3.8		3.0	1.8
03/27/81	HA	.013	.008	.004	<0.01	0.079	<0.01	0.16	6.0	5.1	4.8	2.5	1.2
	HB	.012	.008	.004	<0.01	0.077	<0.01	0.16	0.9	4.1	1.5	3.1	1.2
	BA	.012	.011	.004	<0.01	0.078	<0.01	0.16	0.8	5.8	1.7	3.6	2.4
	SU	.032	.008	.002	<0.01	0.079	<0.01	0.15	0.8	5.9	1.3	6.2	3.0
	EU	.012	.010	.005	<0.01	0.090	<0.01	0.16	0.8	6.2	2.4	3.7	2.1
	PF	.013	.008	.005	<0.01	0.098	<0.01	0.15	0.8	5.6	1.0	4.2	2.4
	UP	.012	.009	.005	<0.01	0.10	<0.01	0.17	0.8	5.6	1.0	10.2	2.6
	GR	.013	.007	.004	<0.01	0.12	<0.01	0.16	3.0	5.8	1.1	2.6	1.4
	GO	.013	.008	.004	<0.01	0.12	<0.01	0.17	0.9	5.4	1.2	1.9	0.1
	HC	.013	.008	.004	<0.01	0.13	<0.01	0.13	0.8	5.3	2.3	3.8	0.2
04/16/81	HA	.015	.013	.002	<0.01	0.033	<0.01	0.16	0.9	3.8	1.3	2.9	1.0
	HB	.015	.004	.002	<0.01	0.040	<0.01	0.16	0.9	4.5	1.8	1.2	0.4
	BA	.011	.005	.001	<0.01	0.043	<0.01	0.15	5.6	5.9	3.7	19.5	10.0
	SU	.013	.004	.001	<0.01	0.038	<0.01	0.16	3.1	4.8	0.9	5.2	1.5
	EU	.008	.004	.001	<0.01	0.053	<0.01	0.16	7.6	5.4	1.5	2.7	2.6
	PF	.015	.004	.001	<0.01	0.053	<0.01	0.16	1.0	4.8	2.0	1.1	1.0
	UP	.012	.004	.001	<0.01	0.053	<0.01	0.17	1.6	5.4	1.4	4.0	2.6
	GR	.019	.004	.001	<0.01				1.3	5.3	1.8	2.5	1.6
	GO	.015	.004	.001	<0.01	0.081	<0.01	0.18	1.3	5.1	1.6	1.9	1.9
	HC	.009	.003	.001	<0.01	0.074	<0.01	0.18	1.0	5.1	2.6	3.7	3.0
04/30/81	HA	.016	.002	.002	<0.01	0.54	<0.01	0.19	0.9	4.9	2.8	3.5	2.0
	HB	.007	.001	.001	<0.01	<0.02	<0.01	0.17	0.9	5.4	2.0	3.6	1.7
	BA	.016	.002	.002	<0.01	<0.02	<0.01	0.17	0.9	5.3	1.4	3.5	1.6
	SU	.012	.001	.001	<0.01	<0.02	<0.01	0.17	0.9	5.3	3.2	3.4	0.7
	EU	.007	.001	.001	<0.01	0.022	<0.01	0.19	0.9	5.3	2.5	4.0	1.6
	PF	.010	.011	.002	<0.01	0.032	<0.01	0.17	0.9	5.6	3.3	3.0	1.2
	UP	.016	.007	.001	<0.01	<0.02	<0.01	0.17	0.9	5.6	1.5	3.2	2.0
	GR	.014	.001	.001	<0.01	0.020	<0.01	0.17	0.9	5.6	1.6	4.0	1.9
	GO	.020	.015	.001	0.010	0.032	<0.01	0.20	0.9	5.6	1.4	3.1	1.7
	HC	.014	.004	.001	<0.01	0.034	<0.01	0.17	0.9	5.4	1.7	3.0	1.5

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	NO3-N	NO2-N	TKN	CL	COD	BOD	TSS	VSS
05/19/81	HA	.007	.006	<.001	<0.01	<0.02	<0.01	0.13	0.8	5.4	1.9	3.6	1.2
	HB	.020	.006	.001	<0.01	<0.02	<0.01	0.13	0.8	5.1	1.6	3.4	1.1
	BA	.018	.003	.001	<0.01	<0.02	<0.01	0.14	0.8	5.0	1.8	3.8	1.0
	SU	.012	.002	<.001	<0.01	<0.02	<0.01	0.15	0.8	5.6	1.3	3.5	1.5
	EU	.013	.001	<.001	<0.01	<0.02	<0.01	0.14	0.8	5.3	2.7	3.7	1.3
	PF	.013	.002	.001	<0.01	0.020	<0.01	0.14	0.8	5.3	2.8	4.5	2.5
	UP	.013	.003	.001	<0.01	0.049	<0.01	0.12	0.9	5.4	2.7	3.0	1.2
	GR	.012	.002	<.001	<0.01	0.058	<0.01	0.14	1.0	5.1	1.4	3.3	1.7
	GO	.047	.002	<.001	<0.01	0.072	<0.01	0.16	1.0	4.8	1.3	3.0	1.5
	HC	.026	.003	<.001	<0.01	0.087	<0.01	0.15	1.0	4.5	1.0	5.2	1.2
06/05/81	HA	.003	.002	<.001	<0.01	<0.02	<0.01	0.13	0.7	5.0	2.3	2.3	1.0
	HB	.003	.002	<.001	<0.01	<0.02	<0.01	0.13	0.7	4.6	2.6	2.8	1.0
	BA	.003	.003	.001	<0.01	<0.02	<0.01	0.13	0.7	4.8	1.9	1.2	0.5
	SU	.004	.002	<.001	<0.01	<0.02	<0.01	0.12	1.0	5.3	1.9	2.3	0.7
	EU	.008	.002	<.001	<0.01	0.045	<0.01	0.12	0.8	5.3	1.6	2.7	1.1
	PF	.007	.002	<.001	<0.01	0.062	<0.01	0.12	0.8	5.4	1.6	2.5	1.2
	UP	.011	.003	<.001	<0.01	0.054	<0.01	0.12	0.8	5.6	1.5	2.3	0.8
	GR	.003	.003	<.001	<0.01	0.120	<0.01	0.11	0.9	4.5	1.3	2.1	1.0
	GO	.003	.002	<.001	<0.01	0.130	<0.01	0.13	0.9	5.0	1.3	2.5	1.3
	HC	.013	.002	.001	<0.01	0.120	<0.01	0.13	0.9	4.6	1.2	1.1	0.6
06/11/81	HA	.010		.003	<0.01	<0.02	<0.01	0.11	0.6	4.6	1.5	2.5	0.7
	HB	.007		.004	<0.01	<0.02	<0.01	0.12	0.6	4.5	1.4	6.7	1.0
	BA	.007		.003	<0.01	<0.02	<0.01	0.12	0.6	4.5	0.9	2.8	1.2
	SU	.007		.004	<0.01	<0.02	<0.01	0.13	0.6	4.6	1.1	3.7	0.3
	EU	.007		.001	<0.01	<0.02	<0.01	0.12	0.6	4.6	1.5	1.7	0.5
	PF	.012		.002	<0.01	<0.02	<0.01	0.13	0.7	4.5	1.1	2.5	0.7
	UP	.011		.001					0.7	4.6	1.5	6.2	1.3
	GR	.008		.002	<0.01	0.030	<0.01	0.14	0.7	4.8	1.5	3.0	0.8
	GO	.045		.004	<0.01	0.031	<0.01	0.13	0.7	4.8	1.7	2.3	0.7
	HC	.010		.003	<0.01	0.025	<0.01	0.13	0.7	5.8	1.9	2.5	1.0
06/25/81	HA	.012	.003	.001	<0.01	<0.02	<0.01	0.13	0.6	4.3	1.2	5.0	1.7
	HB	.013	.003	<.001	<0.01	<0.02	<0.01	0.12	0.6	4.5	1.1	5.3	1.8
	BA	.011	.003	.001	<0.01	<0.02	<0.01	0.11	0.7	3.7	1.2	3.5	1.7
	SU	.013	.013	.001	<0.01	<0.02	<0.01	0.11	0.7	4.2	2.2	1.8	1.5
	EU	.015	.003	.001	<0.01	<0.02	<0.01	0.12	0.7	4.0	1.2	6.2	4.0
	PF	.016	.004	.001	<0.01	<0.02	<0.01	0.08	0.7	4.5	1.2	2.3	1.7
	UP	.012	.002	.001	<0.01	<0.02	<0.01	0.12	0.7	4.6	0.2	3.0	1.7
	GR	.012	.002	<.001	<0.01	0.032	<0.01	0.11	0.7	4.3	0.3	3.3	0.0
	GO	.013	.003	<.001	<0.01	0.035	<0.01	0.12	0.7	4.3	1.2	3.0	0.8
	HC	.012	.002	.001	<0.01	0.031	<0.01	0.14	0.7	3.8	1.4	3.5	1.0
07/09/81	HA	.011	.004	.001	<0.01	<0.02	<0.01	0.10	0.6	3.8	1.1	4.0	1.3
	HB	.015	<.002	.001	<0.01	<0.02	<0.01	0.11	0.6	3.3	0.4	4.2	1.5
	BA	.013	<.002	.001	<0.01	0.19	<0.01	0.14	0.6	3.5	0.3	3.7	1.0
	SU	.015	.006	<.001	<0.01	0.078	<0.01	0.11	0.6	3.7	0.6	4.2	1.3
	EU	.008	<.002	.001	<0.01	0.043	<0.01	0.12	1.5	2.7	1.5	3.7	1.2
	PF	.015	<.002	.002	<0.01	0.11	<0.01	0.13	1.0	3.5	1.0	2.7	0.8
	UP	.015	<.002	.001	<0.01	0.13	<0.01	0.13	0.8	3.8	0.7	4.0	1.3
	GR	.013	<.002	<.001	<0.01	0.11	<0.01	0.12	0.9	2.9	1.3	6.0	2.0
	GO	.013	<.002	.002	<0.01	<0.02	<0.01	0.12	0.9	2.9	0.8	7.0	2.3
	HC	.022	<.002	.001	<0.01	<0.02	<0.01	0.14	0.9	2.9	0.7	5.3	1.8

Table A-2. Spokane River Chemistry Data - continued

DATE	ST	TP	TSP	SRP	NH3-N	N03-N	N02-N	TKN	CL	COD	BOD	TSS	VSS
07/24/81	HA	.047	.009	.007	<0.01	<0.02	<0.01	0.13	0.7	3.3	0.5		
	HB	.047	.007	.005	<0.01	<0.02	<0.01	0.14	0.7	3.3	0.2	13.7	0.3
	BA	.025	.011	.006	<0.01	<0.02	<0.01	0.13	0.7	3.7	1.1	2.0	0.7
	SU	.040	.009	.005	<0.01	<0.02	<0.01	0.13	0.7	4.0	1.5	6.8	1.0
	EU	.064	.016	.005	<0.01	0.18	<0.01	0.13	1.5	3.5	3.0	5.2	1.0
	PF	.020	.014	.004	<0.01	0.20	<0.01	0.12	1.6	3.2	0.6	2.2	1.0
	UP	.018	.014	.002	<0.01	0.20	<0.01	0.13	1.7	3.7	0.9	2.3	0.2
	GR	.018	.005	.003	<0.01	0.29	<0.01	0.11	1.4	3.2	1.0	5.7	0.8
	GO	.033	.022	.002	<0.01	0.32	<0.01	0.14	1.3	3.0	0.7	1.5	0.2
	HC	.011	.002	.001	<0.01	0.33	<0.01	0.11	1.4	2.9	1.0	2.8	0.6
08/06/81	HA	.022	.011	.006	<0.01	<0.02	<0.01	.13	11.2	5.8	1.2	1.5	0.8
	HB	.019	.009	.006	<0.01	<0.02	<0.01	0.12	0.9	4.2	1.2	2.5	1.3
	BA	.019	.011	.005	<0.01	<0.02	<0.01	0.12	2.6	5.3	1.0	1.8	0.8
	SU	.019	.008	.005	<0.01	<0.02	<0.01	0.13	0.7	4.3	1.3	4.0	2.0
	EU	.021	.007	.005	<0.01	0.15	<0.01	0.16	1.6	3.7	0.6	4.8	0.8
	PF	.015	.013	.006	<0.01	0.16	<0.01	0.18	1.6	4.0	0.5	2.3	2.0
	UP	.026	.009	.005	<0.01	0.16	<0.01	0.18	1.5	4.2	0.5	2.8	0.7
	GR	.017	.007	.004	<0.01	0.33	<0.01	0.14	1.6	3.3	0.8	3.0	1.5
	GO	.017	.008	.003	<0.01	0.28	<0.01	0.17	1.5	3.3	1.3	3.0	0.3
	HC	.019	.003	.002	<0.01	0.29	<0.01	0.15	2.0	3.7	0.6	2.8	1.5
08/25/81	HA	.029	.013	.007	<0.01	<0.02	<0.01	0.15	0.7	4.0	1.7	2.7	0.5
	HB	.035	.011	.008	<0.01	<0.02	<0.01	0.14	0.7	4.1	0.2	4.0	2.0
	BA	.022	.011	.003	<0.01	<0.02	<0.01	0.17	0.8	4.0	1.1	2.5	0.3
	SU	.022	.009	.006	<0.01	0.055	<0.01	0.16	0.8	4.1	1.3	3.7	0.8
	EU	.018	.009	.006	<0.01	0.33	<0.01	0.11	2.0	3.2	0.8	3.7	1.2
	PF	.018	.009	.006	<0.01	0.35	<0.01	0.12	2.3	3.2	0.5	1.7	0.5
	UP	.022	.005	.003	<0.01	0.33	<0.01	0.12	2.3	3.5	0.6	1.8	0.2
	GR	.013	.002	.002	<0.01	0.56	<0.01	0.10	2.0	2.2	0.7	2.8	0.2
	GO	.013	.002	<.001	<0.01	0.55	<0.01	0.10	2.0	2.7	0.6	4.2	1.3
	HC	.015	.005	<.001	<0.01	0.55	<0.01	0.12	2.0	2.5	1.0	3.0	1.8
09/03/81	HA	.028	.019	.005	<0.01	<0.02	<0.01	0.16	0.8	4.3	2.2	1.0	0.5
	HB	.034	.033	.006	<0.01	<0.02	<0.01	0.14	0.8	4.3	1.6	1.5	1.0
	BA	.023	.012	.005	<0.01	<0.02	<0.01	0.16	0.8	4.6	1.0	1.7	0.5
	SU	.035	.022	.004	<0.01	<0.02	<0.01	0.15	0.8	4.5	1.0	2.3	1.5
	EU	.022	.012	.005	<0.01	<0.02	<0.01	0.14	1.8	3.2	1.0		
	PF	.018	.007	.005	<0.01	0.30	<0.01	0.14	2.2	3.3	0.5	2.2	1.0
	UP	.021	.011	.004	<0.01	0.32	<0.01	0.24	2.1	4.5	1.1	3.0	2.5
	GR	.009	.007	.002	<0.01			0.18	1.9	2.7	1.0	2.8	1.7
	GO	.007	.006	.002	<0.01	0.54	<0.01	0.14	1.9	3.0	1.7	2.7	0.8
	HC	.008	.008	.001	<0.01	0.53	<0.01	0.17	2.0	3.0	0.0	2.2	0.7
09/24/81	HA	.009	.013	.008	<0.01	<0.02	<0.01	0.15	0.8	4.0	0.7	3.2	1.2
	HB	.012	.016	.011	<0.01	<0.02	<0.01	0.14	0.7	4.3	0.9	2.7	0.5
	BA	.009	.012	.007	<0.01	<0.02	<0.01	0.13	0.7	4.0	0.4	0.6	0.5
	SU	.010	.018	.008	<0.01	<0.02	<0.01	0.13	0.6	4.1	1.0	2.7	1.8
	EU	.008	.018	.008	<0.01	<0.02	<0.01	0.12	0.9	3.7	0.4	2.0	0.7
	PF	.012	.012	.009	<0.01	0.12	<0.01	0.14	1.0	3.8	0.8	6.2	0.7
	UP	.010	.015	.009	<0.01	0.12	<0.01	0.15	1.1	4.5	1.1	5.2	0.8
	GR	.008	.010	.007	<0.01	0.25	<0.01	0.13	1.2	4.6	1.7	2.3	0.3
	GO	.004	.009	.005	<0.01	0.25	<0.01	0.12	1.2	5.1	0.6	3.7	0.5
	HC	.004	.011	.004	<0.01	0.25	<0.01	0.12	1.2	4.3	0.4	1.8	0.8

Table A-2. Spokane River **Chemistry Data - continued**

DATE	ST	TP	TSP	SRP	NH3-N	NO3-N	NO2-N	TKN	CL	COD	BOD	TSS	VSS
11/03/81	HA	.025	.004	.003	<0.01	<0.02	<0.01	0.16	0.7	3.8	0.4		
	HB	.021	.005	.003	<0.01	<0.02	<0.01	0.12	0.7	3.3	1.0		
	BA	.018	.008	.004	<0.01	<0.02	<0.01	0.13	0.6	2.9	0.6		
	SU	.022	.011	.003	<0.01	<0.02	<0.01	0.16	0.7	3.0	0.8		
	EU	.012	.006	.004	<0.01	0.08	<0.01	0.22	0.7	3.5	1.4		
	PF	.014	.008	.007	<0.01	0.09	<0.01	0.12	0.8	3.3	0.6		
	UP	.022	.010	.006	<0.01	0.09	<0.01	0.13	0.8	3.5	1.4		
	GR	.019	.006	.005	<0.01	0.21	<0.01	0.13	0.9	2.9	1.1		
	GO	.024	.007	.005	<0.01	0.25	<0.01	0.24	1.0	3.2	1.7		
	HC	.012	.007	.006	<0.01	0.21	<0.01	0.12	1.0	3.0	1.7		

Table A-3. Spokane River Metals Data (Copper, Lead, Zinc, Mercury). Expressed in µg/ℓ. T=Total, S=Filterable (through 0.45µm Filter)

STATIONS: ST=Stateline, HA=Harvard I, HB=Harvard II, BA=Barker, SU=Sullivan, EU=Euclid, PF=Plantes Ferry, UP=Upriver Drive, GR=Greene Street, GO=Gonzaga, HC=Hangman Creek.

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
11/20/79	ST	<1.0		<1.0		85		0.6
	HA	<1.0		<1.0		85		1.2
	BA	<1.0		<1.0		90		<0.5
	SU	<1.0		<1.0		80		<0.5
	EU	<1.0		<1.0		85		<0.5
	PF	<1.0		<1.0		70		<0.5
	UP	<1.0		<1.0		75		<0.5
	GR	<1.0		1.4		50		<0.5
	GO	<1.0		1.6		25		16.0
	HC	<1.0		<1.0		50		21.0
12/04/79	ST	<1.0	<1.0	<1.0	<1.0	100	95	<0.5
	HA	<1.0	<1.0	<1.0	<1.0	100	95	<0.5
	BA	<1.0	<1.0	1.4	<1.0	115	85	0.5
	SU	<1.0	<1.0	<1.0	<1.0	115	90	0.5
	EU	<1.0	<1.0	1.1	<1.0	100	90	<0.5
	PF	<1.0	<1.0	<1.0	<1.0	115	100	<0.5
	UP	<1.0	<1.0	1.1	<1.0	90	85	<0.5
	GR	<1.0	<1.0	8.0	1.2	75	55	<0.5
	GO	<1.0	<1.0	2.3	<1.0	90	70	<0.5
	HC	1.7	<1.0	3.6	<1.0	115	85	<0.5
12/16/79	ST	<1.0	<1.0	1.4	<1.0	135	100	<0.5
	HA	<1.0	<1.0	1.8	<1.0	128	100	1.7
	BA	<1.0	<1.0	1.4	<1.0	118	93	<0.5
	SU	<1.0	<1.0	2.4	<1.0	100	95	<0.5
	EU	<1.0	<1.0	1.0	<1.0	110	93	24
	PF	<1.0	<1.0	1.6	<1.0	100	84	<0.5
	UP	<1.0	<1.0	<1.0	<1.0	110	92	<0.5
	GR	<1.0	<1.0	1.4	<1.0	84	58	<0.5
	GO	<1.0	<1.0	1.6	<1.0	75	57	0.5
	HC	<1.0	<1.0	1.4	<1.0	94	58	<0.5

Table A-3. Spokane River Metals Data - **continued**

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
01/04/80	ST	2.5	1.9	<1.0	<1.0	117	111	0.6
	HA	4.2	2.4	<1.0	<1.0	118	110	1.2
	BA	8.1	<1.0	<1.0	<1.0	118	110	<0.5
	SU	3.8	<1.0	<1.0	<1.0	115	100	<0.5
	EU	3.9	3.6	<1.0	<1.0	117	102	<0.5
	PF	1.6	1.0	<1.0	<1.0	110	93	<0.5
	UP	3.7	2.5	3.6	<1.0	155	100	<0.5
	GR	3.7	1.3	1.3	1.0	115	110	<0.5
	GO	2.4	1.4	1.4	<1.0	116	108	16
	HC	<1.0	<1.0	4.2	<1.0	137	103	21
02/18/80	ST	3.5		1.1	<0.5	145	127	<0.5
	HA	1.3		0.6	<0.5	127	110	<0.5
	BA	1.5		<0.5	<0.5	93	75	<0.5
	SU	1.4		<0.5	<0.5	110	83	<0.5
	EU	1.9		<0.5	<0.5	110	93	<0.5
	PF	1.4		<0.5	<0.5	110	93	<0.5
	UP	4.0		<0.5	<0.5	127	110	<0.5
	GR	3.5		<0.5	<0.5	93	75	<0.5
	GO	2.0		<0.5	<0.5	95	90	<0.5
	HC	1.5		<0.5	<0.5	100	83	<0.5
03/05/80	ST	1.6		<0.5	<0.5	135	127	<0.5
	HA	1.3		<0.5	<0.5	135	110	<0.5
	BA	1.4		<0.5	<0.5	136	117	<0.5
	SU	2.0		<0.5	<0.5	127	123	<0.5
	EU	1.1		0.8	0.6	128	110	<0.5
	PF	1.6		<0.5	<0.5	117	100	1.5
	UP	1.3		<0.5	<0.5	125	110	<0.5
	GR	1.4		<0.5	<0.5	128	110	<0.5
	GO	1.5		<0.5	<0.5	127	110	<0.5
	HC	1.4		0.6	<0.5	134	117	0.9
03/22/80	HA	1.2		2.2	<0.5	135	118	<0.5
	HB	1.5		1.1	<0.5	134	110	<0.5
	BA	1.2		1.9	<0.5	128	111	<0.5
	SU	1.2		0.8	<0.5	129	112	<0.5
	EU	1.8		1.1	1.0	128	114	<0.5
	PF	1.5		1.1	1.0	127	109	<0.5
	UP	1.5		0.6	<0.5	130	127	<0.5
	GR	1.8		0.6	<0.5	134	119	<0.5
	GO	2.1		1.1	<0.5	142	128	<0.5
	HC	2.7		<0.5	<0.5	140	128	<0.5

Table A-3. Spokane River **Metals** Data - continued

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
04/04/80	HA	1.5		<0.5	<0.5	155	136	<0.5
	HB	1.5		<0.5	<0.5	143	129	<0.5
	BA	1.2		<0.5	<0.5	135	128	<0.5
	SU	2.7		<0.5	<0.5	136	129	<0.5
	EU	2.4		<0.5	<0.5	135	108	<0.5
	PF	1.5		<0.5	<0.5	128	107	<0.5
	UP	1.5		<0.5	<0.5	135	118	<0.5
	GR	2.1		<0.5	<0.5	134	116	<0.5
	GO	2.1		<0.5	<0.5	136	128	<0.5
	HC	1.8		<0.5	<0.5	134	126	<0.5
04/21/80	HA	1.8		2.4	1.6	205	135	<0.5
	HB	2.1		3.0	2.7	200	175	<0.5
	BA	2.1		2.7	<0.5	200	145	<0.5
	SU	2.7		3.0	<0.5	195	160	<0.5
	EU	2.1		2.4	<0.5	187	160	<0.5
	PF	2.1		1.9	<0.5	185	135	<0.5
	UP	2.1		1.2	<0.5	185	143	<0.5
	GR	2.4		1.9	<0.5	185	155	<0.5
	GO	2.4		1.9	<0.5	180	160	<0.5
	HC	3.0		2.2	<0.5	180	158	<0.5
05/14/80	HA	2.7		2.4	<0.5	135	114	1.7
	HB	2.1		2.4	<0.5	137	100	<0.5
	BA	2.1		2.4	<0.5	125	100	<0.5
	SU	2.1		2.7	<0.5	128	114	<0.5
	EU	2.1		2.4	<0.5	125	100	<0.5
	PF	7.7		2.0	<0.5	125	80	<0.5
	UP	2.4		2.4	<0.5	135	114	<0.5
	GR	2.4		2.7	<0.5	128	100	<0.5
	GO	2.4		2.4	<0.5	114	80	<0.5
	HC	2.7		2.4	<0.5	125	100	0.6
06/03/80	HA	2.4		0.9	<0.5	114	80	<0.5
	HB	3.3		1.5	<0.5	125	80	<0.5
	BA	2.4		1.0	<0.5	100	80	<0.5
	SU	2.4		1.5	<0.5	114	100	<0.5
	EU	3.0		1.0	<0.5	114	80	<0.5
	PF	3.3		2.0	<0.5	114	80	<0.5
	UP	2.4		1.0	<0.5	114	80	0.5
	GR	3.3		1.0	<0.5	100	95	<0.5
	GO	2.4		0.6	<0.5	125	80	<0.5
	HC	2.4		1.5	0.6	80	75	<0.5

Table A-3. Spokane River **Metals Data** - continued

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
06/18/80	HA	1.5	<1.0	<1.0	<1.0	95	65	<0.5
	HB	1.0	<1.0	<1.0	<1.0	95	65	<0.5
	BA	<1.0	<1.0	<1.0	<1.0	95	65	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	78	50	<0.5
	EU	1.8	<1.0	<1.0	<1.0	78	65	<0.5
	PF	<1.0	<1.0	<1.0	<1.0	78	65	<0.5
	UP	<1.0	<1.0	<1.0	<1.0	95	65	<0.5
	GR	1.0	<1.0	<1.0	<1.0	65	50	<0.5
	GO	1.0	<1.0	<1.0	<1.0	65	42	<0.5
	HC	1.2	<1.0	<1.0	<1.0	87	72	<0.5
07/02/80	HA	<1.0	<1.0	<1.0	<1.0	78	65	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	72	50	<0.5
	BA	<1.0	<1.0	<1.0	<1.0	65	50	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	78	75	0.5
	EU	1.0	<1.0	<1.0	<1.0	78	42	<0.5
	PF	1.0	<1.0	<1.0	<1.0	72	50	<0.5
	UP	1.0	<1.0	<1.0	<1.0	107	42	<0.5
	GR	4.0	<1.0	<1.0	<1.0	78	58	23.0
	GO	1.0	<1.0	1.8	<1.0	95	50	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	95	50	<0.5
07/16/80	HA	<1.0	<1.0	<1.0	<1.0	78	50	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	65	50	<0.5
	BA	<1.0	<1.0	<1.0	<1.0	50	33	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	65	42	<0.5
	EU	<1.0	<1.0	<1.0	<1.0	65	50	4.7
	PF							
	UP	<1.0	<1.0	<1.0	<1.0	95	78	<0.5
	GR	<1.0	<1.0	1.7	<1.0	65	42	<0.5
	GO	<1.0	<1.0	<1.0	<1.0	65	42	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	65	50	<0.5
07/29/80	HA	<1.0	<1.0	<1.0	<1.0	86	75	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	86	80	<0.5
	BA	2.0	1.8	<1.0	<1.0	81	64	<0.5
	SU	2.0	1.8	<1.0	<1.0	92	42	<0.5
	EU	2.8	2.4	<1.0	<1.0	81	21	<0.5
	PF	1.0	<1.0	<1.0	<1.0	75	26	<0.5
	UP	1.0	<1.0	<1.0	<1.0	64	31	<0.5
	GR	1.0	<1.0	<1.0	<1.0	42	21	<0.5
	GO	1.0	<1.0	1.2	<1.0	70	48	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	48	22	1.0

Table A-3. Spokane River Metals Data - continued

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
08/12/80	HA	<1.0	<1.0	<1.0	<1.0	75	26	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	64	40	<0.5
	BA	<1.0	<1.0	<1.0	<1.0	59	16	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	81	50	0.9
	EU	1.0	<1.0	<1.0	<1.0	64	55	<0.5
	PF	<1.0	<1.0	<1.0	<1.0	50	42	<0.5
	UP	1.0	<1.0	<1.0	<1.0	42	21	<0.5
	GR	<1.0	<1.0	<1.0	<1.0	40	26	<0.5
	GO	<1.0	<1.0	<1.0	<1.0	42	26	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	40	31	<0.5
08/26/80	HA	<1.0	<1.0	<1.0	<1.0	106	89	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	111	65	1.0
	BA	<1.0	<1.0	<1.0	<1.0	106	50	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	106	65	<0.5
	EU	2.0	1.7	<1.0	<1.0	65	40	<0.5
	PF	1.0	<1.0	<1.0	<1.0	71	45	<0.5
	UP	<1.0	<1.0	<1.0	<1.0	55	20	<0.5
	GR	<1.0	<1.0	<1.0	<1.0	35	25	<0.5
	GO	<1.0	<1.0	<1.0	<1.0	30	25	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	50	20	0.7
09/09/80	HA	<1.0	<1.0	<1.0	<1.0	60	53	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	60	42	2.4
	BA	<1.0	<1.0	<1.0	<1.0	65	59	<0.5
	SU	<1.0	<1.0	<1.0	<1.0	81	53	<0.5
	EU	<1.0	<1.0	<1.0	<1.0	87	75	<0.5
	PF	<1.0	<1.0	<1.0	<1.0	71	65	<0.5
	UP	<1.0	<1.0	<1.0	<1.0	76	70	<0.5
	GR	<1.0	<1.0	<1.0	<1.0	40	37	<0.5
	GO	<1.0	<1.0	<1.0	<1.0	60	56	<0.5
	HC	<1.0	<1.0	<1.0	<1.0	45	38	<0.5
09/24/80	HA	1.8	<1.0	<1.0	<1.0	75	30	1.4
	HB	<1.0	<1.0	<1.0	<1.0	60	38	8.4
	BA	1.4	<1.0	<1.0	<1.0	75	38	<0.5
	SU	1.8	<1.0	<1.0	<1.0	75	38	8.5
	EU	2.2	<1.0	<1.0	<1.0	75	47	1.0
	PF	1.0	<1.0	<1.0	<1.0	75	47	<0.5
	UP	1.4	1.0	<1.0	<1.0	68	30	28
	GR	2.7	1.0	<1.0	<1.0	47	8	<0.5
	GO	-1	<1.0	<1.0	<1.0	60	20	<0.5
	HC	3.8	<1.0	<1.0	<1.0	68	30	24

Table 6-3. Spokane River Metals Data - continued

Date	ST	T-Cu	S-Cu	T-Pb	S-Pb	T-Zn	S-Zn	T-Hg
10/10/80	HA	1.4	<1.0	<1.0	<1.0	83	75	5.6
	HB	1.4	<1.0	1.0	<1.0	92	68	29
	BA	3.3	1.8	<1.0	<1.0	75	60	18
	SU	<1.0	<1.0	<1.0	<1.0	68	47	64
	EU	1.4	<1.0	<1.0	<1.0	60	30	<0.5
	PF	4.4	2.2	<1.0	<1.0	55	38	0.8
	UP	1.4	<1.0	<1.0	<1.0	75	60	22
	GR	2.2	<1.0	<1.0	<1.0	47	5	60
	GO	1.8	<1.0	<1.0	<1.0	30	5	11
	HC	2.2	<1.0	<1.0	<1.0	30	20	8
11/14/80	HA	<1.0	<1.0	<1.0	<1.0	92	83	<0.5
	HB	<1.0	<1.0	<1.0	<1.0	92	60	<0.5
	BA	1.0	<1.0	<1.0	<1.0	83	75	0.6
	SU	1.8	<1.0	<1.0	<1.0	92	83	<0.5
	EU	3.3	<1.0	<1.0	<1.0	102	92	<0.5
	PF	<1.0	<1.0	<1.0	<1.0	120	110	0.6
	UP	2.2	<1.0	<1.0	<1.0	120	92	<0.5
	GR	1.8	<1.0	<1.0	<1.0	60	55	<0.5
	GO	1.0	<1.0	<1.0	<1.0	83	60	4.8
	HC	1.4	<1.0	<1.0	<1.0	75	60	70

Table A-3. Spokane River Metals Data - continued

(Copper, Lead, Zinc, Mercury, Cadmium, Nickel)
(Expressed in µg/ℓ).

STATIONS: ST=Stateline, HA=Harvard I, HB=Harvard II, BA=Barker, SU=Sullivan, EU=Euclid, PF=Plantes Ferry, UP=Upriver Drive, GR=Greene Street, GO=Gonzaga, HC=Hangman Creek. (T=Total, S=Filterable through 0.45µm Filter)

Date	STA	T-Cu	S-Cu	T=Pb	S=Pb	T-Zn	S-Zn	T-Hg	T-Cd	S-Cd	T-Ni	S-Ni
12/17/80	HA	<1.0	<1.0	<1.0	<1.0	155	140	<0.5	1.5	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	140	140	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	140	140	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	155	145	<0.5	<1.0	<1.0	5.0	<5.0
	EU	1.0	<1.0	1.2	<1.0	140	130	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	140	115	<0.5	<1.0	<1.0	8.0	<5.0
	UP	1.0	<1.0	<1.0	<1.0	150	140	<0.5	1.0	<1.0	<5.0	<5.0
	GR	2.5	<1.0	<1.0	<1.0	215	125	1.5	1.0	<1.0	<5.0	<5.0
	GO	4.3	<1.0	<1.0	<1.0	165	125	1.7	<1.0	<1.0	<5.0	<5.0
	HC	3.7	<1.0	<1.0	<1.0	150	125	0.5	<1.0	<1.0	<5.0	<5.0
01/20/81	HA	<1.0	<1.0	5.5		175	165	<0.5	1.5	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	5.5		235	165	<0.5	1.5	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	5.5		165	155	<0.5	1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	5.5		185	165	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	5.0		195	165	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	1.0	<1.0	5.5		195	165	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	7.0		195	165	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	4.5		195	165	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	5.5		195	155	<0.5	1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	4.5		195	165	<0.5	1.5	<1.0	<5.0	<5.0
02/26/81	HA	<1.0	<1.0	3.5	<1.0	165	155	<0.5	1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	3.5	<1.0	165	155	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	3.5	<1.0	155	125	<0.5	1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	4.0	<1.0	155	135	<0.5	1.5	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	4.0	<1.0	155	150	<0.5	1.5	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	4.0	<1.0	205		<0.5	1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	4.0	<1.0	200	165	0.5	1.5	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	4.0	<1.0	175	150	5.4	1.5	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	4.5	<1.0	175	150	1.1	1.5	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	4.0	<1.0	175	150	<0.5	1.5	<1.0	<5.0	<5.0
03/27/81	HA	2.0	<1.0	2.0	<1.0	165	110	<0.5	1.0	<1.0	10.0	7.5
	HB	<1.0	<1.0	2.0	<1.0	165	125	<0.5	1.0	<1.0	5.0	<5.0
	BA	1.5	<1.0	1.5	<1.0	165	110	0.9	1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	1.5	<1.0	140	130	0.5	1.0	<1.0	22.0	<5.0
	EU	<1.0	<1.0	3.5	<1.0	140	125	<0.5	1.2	<1.0	7.5	<5.0
	PF	1.0	<1.0	1.8	<1.0	155	125	<0.5	1.0	<1.0	10.0	<5.0
	UP	<1.0	<1.0	1.8	<1.0	165	140	<0.5	1.0	<1.0	5.0	<5.0
	GR	<1.0	<1.0	1.5	<1.0	155	140	<0.5	1.0	<1.0	<5.0	<5.0
	GO	1.5	<1.0	2.7	<1.0	155	140	<0.5	1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	2.7	<1.0	155	140	<0.5	1.0	<1.0	5.0	<5.0

Table A-3. Spokane River **Metals** Data - **continued**

Date	STA	T-Cu	S-Cu	T=Pb	S=Pb	T-Zn	S-Zn	T-Hg	T-Cd	S-Cd	T-Ni	S-Ni
04/16/81	HA	2.0	1.0	2.4	<1.0	165	125	<0.5	1.0	<1.0	<5.0	<5.0
	HB	1.0	<1.0	1.5	<1.0	155	150		1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	2.7	1.0	165	125		1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	2.4	<1.0	155	110		1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	4.7	1.0	140	125		<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	2.7	<1.0	140	110		1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	1.8	<1.0	140	125		<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	125	120		<1.0	<1.0	<5.0	<5.0
	GO	1.0	<1.0	2.0	<1.0	140	125		1.0	<1.0	5.0	<5.0
	HC	1.0	<1.0	1.8	<1.0	155	125		1.0	<1.0	5.0	<5.0
04/30/81	HA	<1.0	<1.0	2.0	<1.0	180	110	<0.5	1.5	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	2.4	<1.0	180	120	<0.5	1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	2.0	<1.0	180	120	<0.5	3.5	1.6	<5.0	<5.0
	SU	<1.0	<1.0	2.4	2.4	180	120	<0.5	1.6	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	2.4	<1.0	190	120	<0.5	1.6	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	2.0	<1.0	190	120	<0.5	1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	1.0	<1.0	190	120	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	195	130	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	195	130	<0.5	4.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	195	150	<0.5	3.0	<1.0	<5.0	<5.0
05/19/81	HA	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	130	80	<0.5	1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	95	95	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	1.0	<1.0	130	80	0.8	1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	130	50	0.8	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	1.0	<1.0	130	130	<0.5	<1.0	<1.0	<5.0	<5.0
06/05/81	HA	<1.0	<1.0	<1.0	<1.0	130	50	0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	1.0	<1.0	120	95	1.8	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	120	120	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	120	120	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	120	95	0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	95	95	0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	95	80	<0.5	2.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	95	95	0.7	<1.0	<1.0	<5.0	<5.0

Table A-3. Spokane River Metals Data - continued

Date	STA	T-Cu	S-Cu	T=Pb	S=Pb	T-Zn	S-Zn	T-Hg	T-Cd	S-Cd	T-Ni	S-Ni
06/11/81	HA	<1.0	<1.0	1.0	<1.0	130	120	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	130	95	0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	130	130	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	130	130	1.4	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	95	95	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	3.5	<1.0	<1.0	<1.0	130	95	<0.5	1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	1.0	<1.0	95	95	<0.5	<1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	1.0	<1.0	95	95	<0.5	<1.0	<1.0	<5.0	<5.0
06/25/81	HA	80.0	5.7	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	2.6	<1.0	<1.0	<1.0	120	120	0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	95	95	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	120	120	<0.5	1.0	<1.0	<5.0	<5.0
	EU	3.5	<1.0	<1.0	<1.0	120	95	2.4	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	130	95	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
07/09/81	HA	<1.0	<1.0	<1.0	<1.0	110	80	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	110	70	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	120	95	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	100	80	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	<1.0	<1.0	82	60	5.2	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	95	60	0.5	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	110	60	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	100	60	1.3	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	100	60	2.3	1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	110	60	<0.5	<1.0	<1.0	<5.0	<5.0
07/24/81	HA	<1.0	<1.0	<1.0	<1.0	110	25	4.8	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	95	25	2.6	<1.0	<1.0	8.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	85	25	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	2.0	<1.0	<1.0	<1.0	95	50	<0.5	<1.0	<1.0	5.0	<5.0
	EU	1.0	<1.0	<1.0	<1.0	120	40	0.5	<1.0	<1.0	<5.0	<5.0
	PF	15.0	<1.0	<1.0	<1.0	95	40	0.8	<1.0	<1.0	19.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	90	50	<0.5	6.8	<1.0	9.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	70	40	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	80	40	<0.5	<1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	80	40	<0.5	3.8	<1.0	<5.0	<5.0

Table A-3. Spokane River Metals Data - continued

Date	STA	T-Cu	S-Cu	T=Pb	S=Pb	T-Zn	S-Zn	T-Hg	T-Cd	S-Cd	T-Ni	S-Ni
08/06/81	HA	<1.0	<1.0	<1.0	<1.0	100	65	0.6	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	90	80	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	100	70	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0				<1.0	<1.0	5.0	<5.0
	EU	3.0	<1.0	<1.0	<1.0	90	50	6.7	<1.0	<1.0	<5.0	<5.0
	PF	5.0	<1.0	<1.0	<1.0	90	40	3.2	<1.0	<1.0	<5.0	<5.0
	UP	1.0	<1.0	<1.0	<1.0	80	30	0.6	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	30	10	4.1	<1.0	<1.0	<5.0	<5.0
	GO	11.0	<1.0	<1.0	<1.0				<1.0	<1.0	<5.0	<5.0
	HC	1.0	<1.0	<1.0	<1.0	50	30	<0.5	<1.0	<1.0	<5.0	<5.0
08/25/81	HA	<1.0	<1.0	<1.0	<1.0	40	10	0.8	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	40	10	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	15	15	2.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	20	5	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	2.0	<1.0	<1.0	<1.0	15	15	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	1.5	<1.0	<1.0	<1.0	10	10	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	1.0	<1.0	<1.0	<1.0	10	<5.0	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	15	<5.0	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	2.0	<1.0	<1.0	<1.0	5	<5.0	<0.5	<1.0	<1.0	13.0	<5.0
	HC	5.0	<1.0	<1.0	<1.0	15	<5.0	<0.5	<1.0	<1.0	<5.0	<5.0
09/03/81	HA	<1.0	<1.0	<1.0	<1.0	65	65	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	60	40	2.9	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	80	70	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	3.0	<1.0	<1.0	<1.0	90	40	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	5.0	<1.0	<1.0	<1.0	70	60	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	2.0	<1.0	<1.0	<1.0	30	10	<0.5	<1.0	<1.0	<5.0	<5.0
	UP			<1.0	<1.0				<1.0	<1.0	5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	25	<5.0	0.5	<1.0	<1.0	5.0	<5.0
	GO	<1.0	<1.0	<1.0	<1.0	30	20	<0.5	<1.0	<1.0	5.0	<5.0
	HC	1.0	<1.0	<1.0	<1.0	30	20	1.0	<1.0	<1.0	5.0	<5.0
09/24/81	HA	<1.0	<1.0	<1.0	<1.0	60	50	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	30	30	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	65	30	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0			<0.5	<1.0	<1.0	<5.0	<5.0
	EU	1.5	<1.0	<1.0	<1.0	50	50	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	1.0	<1.0	<1.0	<1.0	50	25	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	1.0	<1.0	<1.0	<1.0	30	30	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	1.0	<1.0	<1.0	<1.0	50	25	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	2.0	<1.0	<1.0	<1.0	60	60	<0.5	<1.0	<1.0	<5.0	<5.0
	HC	1.5	<1.0	<1.0	<1.0	30	20	<0.5	<1.0	<1.0	<5.0	<5.0

Table A-3. Spokane River Metals Data - continued

Date	STA	T-Cu	S-Cu	T=Pb	S=Pb	T-Zn	S-Zn	T-Hg	T-Cd	S-Cd	T-Ni	S-Ni
11/03/81	HA	20.0	13.0	<1.0	<1.0	70	55	<0.5	<1.0	<1.0	<5.0	<5.0
	HB	<1.0	<1.0	<1.0	<1.0	90	75	<0.5	<1.0	<1.0	<5.0	<5.0
	BA	<1.0	<1.0	<1.0	<1.0	40	25	<0.5	<1.0	<1.0	<5.0	<5.0
	SU	<1.0	<1.0	<1.0	<1.0	65	40	<0.5	<1.0	<1.0	<5.0	<5.0
	EU	<1.0	<1.0	<1.0	<1.0	70	40	<0.5	<1.0	<1.0	<5.0	<5.0
	PF	<1.0	<1.0	<1.0	<1.0	65	50	<0.5	<1.0	<1.0	<5.0	<5.0
	UP	<1.0	<1.0	<1.0	<1.0	65	50	<0.5	<1.0	<1.0	<5.0	<5.0
	GR	<1.0	<1.0	<1.0	<1.0	90	30	<0.5	<1.0	<1.0	<5.0	<5.0
	GO	1.0	<1.0	<1.0	<1.0			<0.5	<1.0	<1.0	<5.0	<5.0
	HC	<1.0	<1.0	<1.0	<1.0	30	30	<0.5	<1.0	<1.0	<5.0	<5.0

APPENDIX B

Fecal Coliform Data

of the Upper Spokane River

Table B-1. Spokane River Fecal Coliform Data. Expressed in Organisms/100mℓ. MF=Millipore Filter, MPN=Most Probable Number

STATIONS: ST=Stateline, HA=Harvard I, HB=Harvard II, BA=Barker, SU=Sullivan, EU=Euclid, PF=Plantes Ferry, UP=Upriver Drive, GR=Greene Street, GO=Gonzaga, HC=Hangman Creek.

DATE	ST	HA	BA	SU	EU	PF	UP	GR	GO	HC	
12/04/80	<1	<1	*2	<1	*2	<1	<1	*1	*2	*280	
12/16/80	*5	*1	*2	<1	*1	*1	<1	*26	*3	*5	
01/04/80	<1	<1	*1	<1	*2	<1	<1	*23	*2	*4	
02/18/80	<1	<1	<1	<1	<1	*1	*12	23	*18	49	
03/05/80	<1	<1	<1	<1	<1	<1	<1	30	*4	24	
	HA	HB	BA	SU	EU	PF	UP	GR	GO	HC	
03/22/80	*1	<1	<1	<1		<1	*3	*7	*17	*6	
04/04/80	<1	<1	<1	<1	<1	*1	50	*840	*300	*8	
04/21/80	*2	<1	*1	<1	<1	*3	*6	*16	*8	*2	
05/14/80	*3	60	<1	<1	*3	*4	*8	28	20	*12	
06/03/80	<1	*2	<1	*1	*1	<1	<1	142	*8	*1	
06/17/80	*1	*4	*1	<1	<1	*4	*2	<1	*10	*14	
07/02/80	*4	<1	*2	*1	*2	<1	*4	*14	*16	21	
07/17/80	*3	<1	*4	*2	*2		*3	*7	*6	*13	MF ↑
07/29/80	*3	*3	*3	*3	4	*3	4	43	15	7	MPN
08/12/80	<3	<3	<3	<3	*9	43	<3	*9	*15	150	
08/26/80	*4	*4	20	*4	*6	*10	*6	104	*14	114	
09/09/80	<3	43	*7	23	*9	23	43	43	93	460	
09/24/80	9	9	9	4	9	9	23	75	460	460	
10/10/80	23	23	4	15	15	7	43	15	43	23	
11/14/80	23	23	9	23	23	43	43	93	150	460	
12/17/80	15	<3	4	7	4	7	<3	4	43	39	
01/20/81	4	4	<3	<3	4	9	21	240	20	150	
02/26/81	<3	<3	4	<3	<3	<3	4	<3	4	<3	
03/27/81	<3	<3	4	<3	<3	<3	<3	4	<3	7	
04/16/81	4	<3	4	<3	<3	<3	4	<3	7	9	
04/30/81	7	9	9	<3	4	<3	<3	4	9	11	
05/19/81	11	43	39	43	150	75	15	93	93	460	
06/05/81	4	23	4	9	7	23	9	93	7	23	
06/11/81	15	9	15	93	21	9	28	43	28	150	
06/25/81	<3	<3	<3	<3	9	4	4	93	64	150	
07/09/81	9	<3	<3	4	7	3	7	7	4	75	

Table B-1. Spokane River Fecal Coliform Data - continued

DATE	ST	HA	BA	SU	EU	PF	UP	GR	GO	HC
07/24/81	4	<3	43	43	240	4	4	20	15	23
08/06/81	20	11	11	43	460	75	21	75	21	150
08/25/81	7	*	*	93	15	43	9	7	43	43
09/03/81	21	15	43	43	<3	<3	<3	9	9	93
09/24/81	<3	<3	4	<3	<3	23	4	4	150	43
11/03/81	9	<3	3	4	3	4	<3	<3	21	150

APPENDIX C

Periphyton Data

of the Upper Spokane River

Table C-1. Periphyton (#/mm^2)

STATION: Stateline	3-5-80 Rocks	4-21-80 Rocks	4-21-80 Glass	4-21-80 Rocks	4-21-80 Glass
Diatoms (Bacillariophyta)					
Achnanthes sp.	25				
Amphipleura sp.	25	16			
Amphora sp.	229	16			
Asterionella sp.	152		110	60	
Cyclotella sp.	25				
Cymbella sp.	127	47	110		22
Diatoma sp.	25	63	110		11
Diatomella sp.					
Epithemia sp.					
Eunotia sp.					
Fragilaria sp.	330	205	1427	91	22
Frustulia sp.					
Gomphonema sp.		47			
Gyrosigma sp.					
Hannaea sp.					
Melosira sp.	280	553	878	317	45
Meridion sp.					
Navicula sp.		142	220		11
Nitzschia sp.				15	
Opephora sp.					
Pinnularia sp.					
Stauroneis sp.					
Surirella sp.					
Synedra sp.	381	1027	2526	242	159
Tabellaria sp.	152		549	30	11
Greens (Chlorophyta)					
Actinastrum sp.			2196		
Ankistrodesmus sp.					
Characium sp.					
Cladophora sp.	585				
Cosmarium					
Echinosphaerella sp.					
Gonatozygon sp.	25		220		
Microspora sp.					
Rhizoclonium sp.					
Scenedesmus sp.					
Spirogyra sp.					
Staurastrum sp.					
Stigeoclonium sp.					
Tetradesmus sp.					
Ulothrix sp.					
Golden Browns (Chrysophyta)					
Dinobryon sp.					
Blue Greens (Cyanophyta)					
Anabaena sp.					
Chroococcus sp.					
Gloeotrichia sp.					
Lyngbya sp.		2290	878	227	136
Nostochopsis sp.					
Oscillatoria sp.					
Spirulina sp.				15	
Yellow Greens (Xanthophyta)					
Tribonema sp.	178				
TOTALS:	2539	4406	9224	997	417

Table C-1. Periphyton (#/mm^2) - continued

STATION: Harvard I	12-16-79 Rocks	2-18-80 Rocks	7-2-80 Rocks	7-2-80 Glass	10-10-80 Rocks	12-17-80 Glass	8-25-81 Glass	9-24-81 Rocks
Diatoms (Bacillariophyta)								
Achnanthes sp.			15				71	
Amphipleura sp.						23		
Amphora sp.		768			323	23		
Asterionella sp.				6	323	63		
Cyclotella sp.								
Cymbella sp.		128				28		
Diatoma sp.	3700		23		162	34		
Unidentified Diatom		128			323	6		
Diatomella sp.								
Epithemia sp.								
Eunotia sp.								
Fragilaria sp.	740	1664	130		2102	244	346	
Frustulia sp.								
Gomphonema sp.					162	11		
Gyrosigma sp.								
Hannaea sp.						6	12	
Melosira sp.	740				162	17	36	8
Meridion sp.								
Navicula sp.		1152	15		323	57		8
Nitschia sp.							12	
Opephora sp.								
Pinnularia sp.	370				323	11		
Stauroneis sp.								
Surirella sp.								
Synedra sp.	8510	3839	31	29	808	239		8
Tabellaria sp.	1850		31	17	2587	114	24	
Greens (Chlorophyta)								
Actinastrum sp.		512						
Ankistrodesmus sp.			8					
Characium sp.								
Cladophora sp.		1152						
Cosmarium								
Echinosphaerella sp.								
Gonatozygon sp.						17		
Microspora sp.	10361					205		
Rhizoclonium sp.						114		
Scenedesmus sp.								
Spirogyra sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Tetradesmus sp.								
Ulothrix sp.							83	
Golden Browns (Chrsophyta)								
Dinobryon sp.						6		
Blue Greens (Cyanophyta)								
Anabaena sp.								
Chroococcus sp.								
Gloeotrichia sp.							48	
Lyngbya sp.		3199	839	1548	1617	642		
Nostochopsis sp.								
Oscillatoria sp.					808			
Spirulina sp.								
Yellow Greens (Xanthophyta)								
Tribonema sp.	5550					17		
TOTALS:	31821	12542	1092	1600	10023	1877	644	24

Table C-1. Periphyton (#/mm^2) - continued

STATION: Harvard II	6-18-80 Rocks	6-18-80 Glass	7-2-80 Rocks	7-2-80 Glass	8-12-80 Rocks	8-12-80 Glass	10-10-80 Rocks	10-10-80 Glass	10-10-80 Glass	4-16-81 Rocks
Diatoms (Bacillariophyta)										
Achnanthes sp.	15	17	47			11				327
Amphipleura sp.										
Amphora sp.	3						38	71	138	76
Asterionella sp.			53	27		1	80	67		101
Cyclotella sp.									13	
Cymbella sp.							205	24		51
Diatoma sp.		11						261		1083
Unidentified Diatom							29	24	38	
Diatomella sp.										
Epithemia sp.										
Eunotia sp.										
Fragilaria sp.	23	40	284	975	1094	477	323	451	263	831
Frustulia sp.										
Gomphonema sp.		6	47	217	36	80	147	47		
Gyrosigma sp.										
Hannaea sp.										101
Melosira sp.			47				147		38	277
Meridion sp.							59			
Navicula sp.		6	16					47		25
Nitschia sp.										126
Opephora sp.										
Pinnularia sp.					36		176	95	25	
Stauroneis sp.										
Surirella sp.										
Synedra sp.	23	40	363	1083	766	114	529	689	213	25
Tabellaria sp.		17	16				411	143	188	
Greens (Chlorophyta)										
Actinastrum sp.										
Ankistrodesmus sp.										
Characium sp.				108	36			24		
Cladophora sp.										
Cosmarium							23			
Echinosphaerella sp.										
Gonatozygon sp.			32							
Microspora sp.							205	36	313	
Rhizoclonium sp.							38			
Scenedesmus sp.										
Spirogyra sp.										
Staurastrum sp.										
Stigeoclonium sp.										
Tetradesmus sp.										
Ulothrix sp.										
Golden Browns (Chrsophyta)										
Dinobryon sp.					36					
Blue Greens (Cyanophyta)										
Anabaena sp.				3681	219	250	176	1972	688	105
Chroococcus sp.										
Gloeotrichia sp.								428		
Lyngbya sp.	76	889	11530	15700	9922	2342	1409	8030	975	
Nostochopsis sp.										
Oscillatoria sp.			616			114	294	119		
Spirulina sp.										
Yellow Greens (Xanthophyta)										
Tribonema sp.								356		1335
TOTALS:	145	1026	13156	21981	12145	3399	4661	13564	2892	4463

Table C-1. Periphyton (#/mm^2) - continued

STATION: Barker	1-4-80 Rocks	3-22-80 Rocks	7-2-80 Rocks	7-2-80 Glass	7-2-80 Rocks	7-2-80 Glass	9-24-80 Rocks	9-24-80 Glass	9-24-80 Rocks	9-24-80 Glass	12-17-80 Rocks	12-17-80 Glass	3-27-81 Rocks	3-27-81 Glass	5-19-81 Rocks	5-19-81 Glass	6-25-81 Rocks
Diatoms (Bacillariophyta)																	
Achnanthes sp.							15	34		12			60	191		29	53
Amphipleura sp.		15		23								34					
Amphora sp.	195	31				6	15						23				
Asterionella sp.		61	46	86		6	30	34		36	76	11	38	48	23	86	31
Cyclotella sp.	389											11		12		5	
Cymbella sp.		46				6						11		48	8	9	8
Denticula sp.													8				8
Diatoma sp.		76	15	11				23			15	11	212	1060		71	
Unidentified Diatooa								11				11					
Diatowella sp.														12			
Epithemia sp.																	
Eunotia sp.																	8
Fragilaria sp.	6619	381	76	103			150	557	55	71	46	275	68	393	69	81	23
Frustulia sp.																	
Gomphonema sp.		31	61	23		11	30	23				23	8	48	8	9	15
Gyrosigma sp.													8				
Hannara sp.										12		11		12			
Helosira sp.	389	198		11	8						46		45	60	15	19	38
Meridion sp.			15														
Navicula sp.	584		15	11		11		11			15	34	113	83	31	14	23
Nitschia sp.				6										83		5	
Opephora sp.																	
Pinnularia sp.							15	34		12	15			12			
Stauroneis sp.																	
Surirella sp.																	
Synedra sp.	8371	976	275	120	61	17	106	296	91	119	198	803	121		92	5	8
Tabellaria sp.	1752			75		17		261	73	154	61	46	30	95	122	86	
Greens (Chlorophyta)																	
Actinastrum sp.	1947										122						
Ankistrodesmus sp.																	
Characium sp.																	
Cladophora sp.																	
Cosmarium																	
Echinosphaerella sp.																	
Gonatozygon sp.	389	92		6				11			31						
Microspora sp.	7982			11		17		114			31	126					
Rhizoclonium sp.											46						
Scenedesmus sp.											15		15				
Spirogyra sp.																	
Staurastrum sp.																	
Stigeoclonium sp.																	
Tetradesmus sp.										12			15		38		
Ulothrix sp.																	
Golden Browns (Chrsophyta)																	
Dinobryon sp.																	
Blue Greens (Cyanophyta)																	
Anabaena sp.				212			197	591	620	249			8				136
Chroococcus sp.																	
Gloeotrichia sp.							121	102		166							
Lyngbya sp.	7009	1983	10372	12033		373	1043	932	2408	463	2135	631					976
Nostochopsis sp.																	
Oscillatoria sp.				86					365								
Spirulina sp.																	
Yellow Greens (Xanthophyta)																	
Tribonema sp.	389			264			106		821	23	15						
'TOTALS:	36015	3890	10875	13081	69	482	1828	3034	4433	1429	2867	2038	772	2157	406	419	1327

Table C-1. Periphyton (#/mm^2) - continued

STATION: Sullivan	12-16-79 Rocks	2-18-80 Rocks	4-4-80 Rocks	7-8-80 Rocks	8-12-80 Rocks	8-12-80 Glass	6-5-81 Rocks	7-8-81 Rocks
Diatoms (Bacillariophyta)								
Achnanthes sp.	960		8	283		24	1383	16
Amphipleura sp.		292						
Amphora sp.		438				24		
Asterionella sp.				141		36	1132	79
Cyclotella sp.								
Cymbella sp.					15			24
Denticula sp.							126	8
Diatoma sp.	192		23			12	126	8
Unidentified Diatoma	192							
Diatomella sp.								
Epithemia sp.								
Eunotia sp.								
Fragilaria sp.		2044		283	272	1711	1887	32
Frustulia sp.								
Gomphonema sp.				141				47
Gyrosigma sp.								
Hannaea sp.							126	
Melosira sp.	1152	292		283			880	24
Meridion sp.								
Navicula sp.	1344	146	23			59	629	24
Nitschia sp.		146	8					
Opephora sp.								
Pinnularia sp.						12		
Stauroneis sp.								
Surirella sp.								
Synedra sp.	1152	10075	15	708	106	439	1760	95
Tabellaria sp.	1152							
Greens (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.						59	377	
Characium sp.								
Cladophora sp.								
Cosmarium						37		
Echinosphaerella sp.								
Gonatozygon sp.	192	146						
Microspora sp.	768	1752						103
Rhizoclonium sp.	2496				181	238		
Scenedesmus sp.								
Spirogyra sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Tetradesmus sp.	384						252	55
Ulothrix sp.								
Golden Browns (Chrsophyta)								
Dinobryon sp.								
Blue Greens (Cyanophyta)								
Anabaena sp.			45		1466	630	503	118
Chroococcus sp.								
Gloeotrichia sp.					431	24		
Lyngbya sp.	2496	8323	385	13160	333	3041	10816	3846
Nostochopsis sp.								
Oscillatoria sp.								
Spirulina sp.								
Yellow Greens (Xanthophyta)								
Tribonema sp.	1152			141				
TOTALS:	13632	23654	507	15140	2804	6346	19997	4479

Table C-1. Periphyton (#/mm^2) - continued

STATION: Euclid	3-5-80 Rocks	7-16-80 Rocks	7-16-80 Glass	7-16-80 Rocks	9-9-80 Rocks	9-9-80 Glass	11-14-80 Rocks	11-14-80 Glass	11-14-80 Rocks	11-14-80 Glass	4-30-81 Glass	4-30-81 Rocks
Diatoms (Bacillariophyta)												
Achnanthes sp.			273	389	92	77				1098	15	
Amphipleura sp.									zzz			
Amphora sp.			23					23	zzz			
Asterionella sp.		3147	773	130		18	35		zzz	329	45	38
Cyclotella sp.			23									
Cymbella sp.	15	450	91				35	6	zzz			
Denticula												8
Diatoma sp.			114	130		12		23		988	38	15
Unidentified Diatoma			23					11				
Diatomella sp.												
Epithemia sp.												
Eunotia sp.												
Fragilaria sp.	31	11241	4593	3374	793	641	35	212	4895		38	60
Frustulia sp.												
Gomphonema sp.		3597	182			18		17				15
Gyrosigma sp.												
Hannaea sp.				130		6		6				
Melosira sp.		1349		779			35		1335	988		
Meridion sp.						12						
Navicula sp.			296			6	35	17	667	659		30
Nitschia sp.												
Opephora sp.												
Pinnularia sp.			45				70	6				
Stauroneis sp.												
Surirella sp.												
Synedra sp.		6745	841	909	381	249	105	201	3782	1647	8	38
Tabellaria sp.					46	226	35	80	667	110		
Greens (Chlorophyta)												
Actinastrum sp.												
Ankistrodesmus sp.						12				110		
Characium sp.					71					110		
Cladophora sp.	23						70					
Cosmarium												
Echinosphaerella sp.												
Gonatozygon sp.			23					6				
Microspora sp.			227	779			175			439		
Rhizoclonium sp.												
Scenedesmus sp.		1799							1557		30	
Spirogyra sp.												
Staurastrum sp.												
Stigeoclonium sp.												
Tetradesmus sp.						59						
Ulothrix sp.												
Golden Browns (Chrsophyta)												
Dinobryon sp.												
Blue Greens (Cyanophyta)												
Anabaena sp.			796			172						
Chroococcus sp.										220		
Gloeotrichia sp.					76	24		17				
Lyngbya sp.		57553	4320	1298	534	137		344	8455	15514		
Nostochopsis sp.												
Oscillatoria sp.				1569				126				
Spirulina sp.												
Yellow Greens (Xanthophyta)												
Tribonema sp.		2248	159				35			329		
S:	69	88129	12802	9487	1993	1669	665	1095	22246	22541	174	204

Table C-1. Periphyton (#/mm^2) - continued

STATION: Plantes Ferry	12-16-79 Rocks
Diatoms (Bacillariophyta)	
Achnanthes sp.	
Amphipleura sp.	
Amphora sp.	
Asterionella sp.	
Cyclotella sp.	
Cymbella sp.	
Diatoma sp.	126
Diatomella sp.	
Epithemia sp.	
Eunotia sp.	
Fragilaria sp.	629
Frustulia sp.	
Gomphonema sp.	
Gyrosigma sp.	
Hannaea sp.	
Melosira sp.	126
Meridion sp.	
Navicula sp.	629
Nitschia sp.	
Opephora sp.	
Pinnularia sp.	
Stauroneis sp.	
Surirella sp.	
Synedra sp.	1509
Tabellaria sp.	
Greens (Chlorophyta)	
Actinastrum sp.	
Ankistrodesmus sp.	
Characium sp.	
Cladophora sp.	
Cosmarium	
Echinosphaerella sp.	
Gonatozygon sp.	
Yicrospora sp.	
Rhizoclonium sp.	
Scenedesmus sp.	
Spirogyra sp.	
Staurastrum sp.	
Stigeoclonium sp.	
Tetradesmus sp.	
Ulothrix sp.	
Golden Browns (Chrsophyta)	
Dinobryon sp.	
Blue Greens (Cyanophyta)	
Anabaena so.	
Chroococcus sp.	11823
Gloeotrichia sp.	
Lyngbya sp.	10691
Nostochopsis sp.	
Oscillatoria sp.	
Spirulina sp.	
Yellow Greens (Xanthophyta)	
Tribonema sp.	
TOTALS:	25533

Table C-1. Periphyton (#/mm^2)

STATION: Upriver	1-4-80 Rocks	3-22-80 Rocks	5-14-80 Rocks	5-14-80 Glass	5-14-80 Rocks	5-14-80 Glass	6-18-80 Rocks	6-18-80 Glass	6-18-80 Rocks	6-18-80 Glass	7-16-80 Rocks	7-16-80 Glass	7-16-80 Rocks	7-16-80 Glass	8-26-80 Rocks	8-26-80 Glass
Diatoms (Bacillariophyta)																
Achnanthes sp.				11	519			243			394	[illegible]		4[illegible]		
Amphipleura sp.						71	15	486						4[illegible]		
Amphora sp.	55	377		11	38[illegible]	48	15		528			28[illegible]	380	4[illegible]	70	
Asterionella sp.		377	31	307	26[illegible]	333	121	3162		24	10246	[illegible]77[illegible]	2660	[illegible]	176	
Cyclotella sp.				45	13[illegible]							28[illegible]				
Cymbella sp.		377												24		6
Diatoma sp.	73	566		68		380	15	243				577	1140			
Unidentified Diatoma	18					48	15	243							35	6
Diatomella sp.						95										
Epithemia sp.																
Eunotia sp.																
Fragilaria sp.	456	6226	152	182	1557	736	393	10703	7918		11034	15015	15581	2732	986	199
Frustulia sp.																
Gomphonema sp.											394	289	380	119	35	6
Gyrosigma sp.																
Hannaea sp.						48										6
Melosira sp.	18	943	46	45	2855	736	15	1946	792	48	1182	577	1520			28
Meridion sp.																
Navicula sp.	109	1132		11	260	48	15			12				24		6
Nitschia sp.																6
Opephora sp.																
Pinnularia sp.					130	24	15			24	394		380			
Stauroneis sp.																
Surirella sp.																
Synedra sp.	91	6[illegible]15	1[illegible]	375	[illegible]	188	[illegible]	[illegible]1	[illegible]	[illegible]	[illegible]3	641	520	[illegible]	3[illegible]	[illegible]
Tabellaria sp.	720	[illegible]3		[illegible]1		119	15		26[illegible]	19		577		[illegible]	[illegible]	6
Greens (Chlorophyta)																
Actinastrum sp.																
Ankistrodesmus sp.	18										394		380			
Characium sp.																11
Cladophora sp.		566														
Cosmarium																
Echinosphaerella sp.																
Gonatozygon sp.		943		11		48										
Microspora sp.		1698				48		486				3754			599	74
Rhizoclonium sp.																102
Scenedesmus sp.	73											1155				
Spirogyra sp.							15									
Staurastrum sp.																
Stigeoclonium sp.																
Tetradesmus sp.																11
Ulothrix sp.												1155				
Golden Browns (Chrsophyta)																
Dinobryon sp.																
Blue Greens (Cyanophyta)																
Anabaena sp.												866				57
Chroococcus sp.																
Gloeotrichia sp.																
Lyngbya sp.	5928	11320	763	716	1947	166[illegible]		34055	2639	1045	66955	11550	30401	380	3099	23
Nostochopsis sp.						1568[illegible]		11919								
Oscillatoria sp.		1887	183	227	1687	137[illegible]	454	36974			19704	4331	2280	2281		
Spirulina sp.																
Yellow Greens (Xanthophyta)																
Tribonema sp.							30									
TOTALS:	7559	33770	1343	2100	11421	22691	1284	108001	16628	1403	122520	53129	60422	7011	5387	632

Table C-1. Periphyton (#/mm^2) - continued

STATION: Upriver	8-26-80 Rocks	8-26-80 Glass	11-14-80 Rocks	11-14-80 Glass	11-14-80 Rocks	11-14-80 Glass	2-26-81 Rocks	2-26-81 Glass	4-30-81 Glass	6-11-81 Rocks	6-11-81 Glass	7-24-81 Rocks	7-24-81 Glass	9-3-81 Rocks	9-3-81 Glass
Diatoms (Bacillariophyta)															
Achranthes sp.	190						30	159	1206	32	284	113			
Amphipleura sp.		14						23	23						
Amphora sp.		14	47	40	35	13		23		47	284		6		
Asterionella sp.		28	142	11	209	7	15		138	521	16462	2716	132	32	11
Cyclotella sp.				6							284				
Cymbella sp.				11				45	115	47			6	16	
Denticula sp.							23							24	11
Diatoma sp.		28		6	35			364	367	47	568	113		16	
Unidentified Diatoma			16	120	70	13									
Diatomella sp.															
Epithemia sp.															
Eunotia sp.															
Fragilaria sp.	884	496	1074	321	1117	242	30	864	321	237	1135	3509	143	118	195
Frustulia sp.															
Gomphonema sp.		55		46	35	33		23		16	568			16	
Gyrosigma sp.															
Hannaea sp.		14		17		7			46	32		113			
Melosira sp.	600	41	32	17	209	78	15	227	92	158	2554	792	57	39	57
Meridion sp.						7									
Navicula sp.	16	14	63	23	35	33	15	23		95	3974	340	6	16	11
Nitschia sp.							15	68	92				6		11
Opephora sp.															
Pinnularia sp.				11						32				8	
Stauroneis sp.							8								
Surirella sp.															
Synedra sp.	4	138	174	224	314	91		45	23	379	1987	2716		63	46
Tabellaria sp.		28	742	86	768	39	8	205	92	474	568	340	17		
Greens (Chlorophyta)															
Actinastrum sp.								159							
Ankistrodesmus sp.				6		7						113	11		
Characium sp.															
Cladophora sp.					105										
Cosmarium															
Echinosphaerella sp.										16					
Gonatozygon sp.		14				13									
Microspora sp.	79	454		390		124				32		340	11		
Rhizoclonium sp.															
Scenedesmus sp.					279						1703				
Spirogyra sp.															
Staurastrum sp.						7									
Stigeoclonium sp.									1766						
Tetradesmus sp.						7				63					
Ulothrix sp.											2838				34
Golden Browns (Chrsophyta)															
Dinobryon sp.		28										340			
Blue Greens (Cyanophyta)															
Anabaena sp.				17											
Chroococcus sp.															
Gloeotrichia sp.															
Lyngbya sp.		1101	711	172		268					284	453			
Nostochopsis sp.					279										
Oscillatoria sp.	205	440		361		137						8149	52		
Spirulina sp.															
Yellow Greens (Xanthophyta)															
Tribonema sp.								23							
TOTALS:	1978	2907	3001	1885	3490	1126	159	2251	4281	2228	33493	20147	447	348	376

Table C-1. Periphyton (#/mm^2)

STATION: Greene	2-18-80 Rocks	4-4-80 Rocks	7-8-80 Rocks	7-8-80 Glass	7-8-80 Rocks	7-8-80 Glass	8-26-80 Rocks	8-26-80 Glass	10-10-80 Rocks	10-10-80 Glass	10-10-80 Rocks
Diatoms (Bacillariophyta)											
Achnanthes sp.	292		79	243	1797	993	32	34	503	439	
Amphipleura sp.	1168			243							
Amphora sp.	876	809	32	973	163	426		6	126	263	266
Asterionella sp.	584		16	4135	654	284		23			2926
Cyclotella sp.		162									
Cymbella sp.	292	323	32	243	163	142					
Diatoma sp.	1168	323	237	486	654	993	47	40	1635	158	
Unidentified Diatoma	292		32	243			16	34		439	266
Distomella sp.											
Epithemia sp.											
Eunotia sp.											
Fragilaria sp.	16353	5660	347	9973	11438	7379	316	392	1635	966	13567
Frustulia sp.											
Gomphonema sp.	292	162	16	486	980		32	40			
Gyrosigma sp.											
Hannaea sp.										88	
Helosira sp.	584	485	158	1216			47	34		263	1596
Meridion sp.						709					
Navicula sp.	4964	1294	237	973	490	284	95	62	755	1054	532
Nitschia sp.											
Opephora sp.											
Pinnularia sp.			32								
Stauroneis sp.											
Surirella sp.											
Synedra sp.	21318	6630	316	7541	3758	2696	237	233	252	966	9044
Tabellaria sp.	876	162	142		490	142	16	17			1892
Greens (Chlorophyta)											
hctinastrum sp.											
Ankistrodesmus sp.					327						
Characium sp.											
Cladophora sp.									1761		
Cosmarium						142		6			
Echinosphaerella sp.											
Conatozygon sp.						142					
Microspora sp.			2006	243			569	136	1006	615	1330
Rhizoclonium sp.			174								
Scenedesmus sp.								23			
Spirogyra sp.											
Strurnstrum sp.											
Stigeoclonium sp.											
Tetradesmus sp.				486							
Ulothrix sp.				2919							
Golden Browns (Chrsophyta)											
Dinobryon sp.										439	
Blue Greens (Cyanophyta)											
Anabaena sp.											
Chroococcus sp.											
Gloeotrichia sp.											
Lyngbya sp.		2426	2101	34785	3268	2980	1342	85	2264	5974	31921
Nostochopsis sp.											
Oscillatoria sp.			79								7980
Spirulina sp.											
Yellow Greens (Xanthophyta)											
Tribonema sp.				730							532
TOTALS:	49059	18436	9136	65918	24182	17312	2749	1165	9937	11664	71852

Table C-1. Periphyton (#/mm^2) - continued

STATION: Greene	10-10-80 Glass	4-16-81 Rocks	4-16-81 Glass	6-5-81 Rocks	6-5-81 Glass	7-8-81 Rocks	7-8-81 Glass	8-25-81 Rocks	8-25-81 Glass	11-3-81 Rocks	11-3-81 Glass
Diatoms (Bacillariophyta)											
Achnanthes sp.	57	987	1703		143		149	8	107	579	2725
Amphipleura sp.	11										
Amphora sp.	23	494	487		143		69			25	
Asterionella sp.		823		79		37	57	53	24	277	851
Cyclotella sp.									24		
Cymbella sp.	46	1152		8	262	5	69		12	30	
Denticula sp.				8					24	304	
Diatoma sp.	23	1152	5352		83		57		13	302	61
Unidentified Diatoma	115										
Diatomella sp.										25	
Epithemia sp.											
Eunotia sp.											
Fragilaria sp.	734	3291	3649	95	619		421	23	369	756	1362
Frustulia sp.											
Gomphonema sp.	34		487	8	12		149	8	71	25	
Gyrosigma sp.											
Hannaea sp.											170
Melosira sp.	103	329		55	12	5	57	15	24	277	3236
Meridion sp.											
Navicula sp.	172	1316	729	16		11	23	8	24	378	511
Nitschia sp.	23		487		12					151	
Opephora sp.											
Pinnularia sp.							11		12		25
Stauroneis sp.									25		
Surirella sp.											
Synedra sp.	401	3784		158	71			38	48	151	341
Tabellaria sp.	138	165		39	48		23			327	
Greens (Chlorophyta)											
Actinastrum sp.											
Ankistrodesmus sp.					107						
Characium sp.								8			
Cladophora sp.											
Cosmarium											
Echinosphaerella sp.											
Gonatozygon sp.	11										
Microspora sp.	1480							60	155	101	
Rhizoclonium sp.											
Scenedesmus sp.											
Spirogyra sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Tetradesmus sp.				63		32		15			
Ulothrix sp.											
Golden Browns (Chrsophyta)											
Dinobryon sp.	11										
Blue Greens (Cyanophyta)											
Anabaena sp.		16453		79				15			
Chroococcus sp.											
Gloeotrichia sp.	46										
Lyngbya sp.	2099					247		76		327	
Nostochopsis sp.											
Oscillatoria sp.	57									1058	
Spirulina sp.								8			
Yellow Greens (Xanthophyta)											
Tribonema sp.											
TOTALS:	5584	29946	12894	608	1512	337	1085	335	1062	5313	9902

Table C-1. Periphyton (#/mm^2)

STATION: Gonzaga	1-4-80 Rocks	4-4-80 Rocks	7-16-80 Rocks	7-16-80 Glass	8-26-80 Rocks	8-26-80 Glass	2-26-91 Rocks	2-26-81 Glass	4-30-81 Glass	6-11-81 Rocks	6-11-81 Glass	7-24-81 Rocks	7-24-81 Glass	9-3-81 Rocks	9-3-81 Glass
Diatoms (Bacillari phyta)															
Achnanthes sp.	31	389		34		148	79	71	217	166	227	23	4	23	28
Amphipleura sp.				11											
Amphora sp.	15	389				45	95		217	196	23	15	15		
Asterionella sp			70	126	18	45	126	24	433	695	932	45	23	23	11
Cyclotella sp.										15					
Cymbella sp.						34	63	24		151		8	8	23	
Denticula sp.							79			76					
Diatoma sp.	15	2920		69		68	79	83	1516	196	364	23	11	31	17
Unidentified Diatoma	31			23	15	68									
Diatomella sp.															
Epithemia sp.								71							
Eunotia sp.															
Fragilaria sp.	259	10902	122	241	197	1069	490	346	1516	499	773	23	19	8	182
Frustulia sp.								24							
Gomphonema sp.		195		11			47	12		45	227		4		12
Gyrosigma sp.															
Hannaea sp						23		12							
Melosira sp.	15	2142	26	34		182	95	226	866	227	227	15	19	46	34
Meridion sp.															
Navicula sp.	92	4672		23	30	80	79	36		257	23	15		38	
Nitschia sp.							47			30	91				11
Opephora sp.															
Pinnularia sp.				11			16	12							
Stauroneis sp.										15					
Surirella sp.															
Synedra sp	76	5646	9	206	76	466	301			423	68	38		31	6
Tabellaria sp.	122	584		92		171	237	179		60	318	8	11		
Greens (Chlorophyta)															
Ankistrastrum sp.															
Ankistrodesmus sp						23					45				
Characium sp.			9							136		8			
Cladophora sp.	122	3155													
Cosmarium															
Chlorosphaerella sp.															
Ophiocytium sp.															
Oocystis sp.				23	76	1660				574					74
Pediastrum sp.								48							
Scenedesmus sp.														31	
Spirogyra sp.															
Staurastrum sp.															
Stigeoclonium sp															
Stradesmus sp.										60					
Ulothrix sp.											227				
Golden Browns (Chrsophyta)															
Mallomonas sp.															
Blue Greens (Cyanophyta)															
Anabaena sp.										257	4025				
Chroococcus sp.															
Spectricha sp.				172					1083						
Oscillatoria sp		3894	175	516	302	364						121			
Stichococcus sp.															
Oscillatoria sp.		3115		401		114						23			
Spirulina sp.															
Yellow Greens (Xanthophyta)															
Tribonema sp.		779		23					19274						
TOTALS	778	38782	411	2016	714	4560	1833	1168	25122	4078	7570	365	114	254	375

Table C-1. Periphyton (#/mm^2)

STATION: Hangman	12-16-79 Rocks	2-18-80 Rocks	4-4-80 Rocks	7-8-80 Rocks	7-8-80 Glass	7-8-80 Rocks	7-8-80 Glass	8-12-80 Rocks	8-12-80 Glass	9-24-80 Rocks
Diatoms (Bacillariophyta)										
Achnanthes sp.			192	576	4427	292	681	493	2030	111
Amphipleura sp.										
Aaphora sp.	667	30	384			146		35	146	16
Asterionella sp.		15	192	1440	3065	584				
Cyclotella sp.										
Cyrbella sp.	167		384						293	
Diatoma sp.		136	1536	720	10557	876	2384	35	586	63
Unidentified Diatoma		45				146	170			16
Diatomella sp.										
Epithemia sp.										
Eunotia sp.										
Fragilaria sp.	16520	332	7870	10654	53466	7301	4427	669	4685	442
Frustulia sp.										
Gomphonema sp.					341	146			146	
Gyrosigma sp.										
Hannaea sp.										
Melosira sp.		16		144	2724		511		146	16
Meridion sp.										
Navicula sp.	2503	227	5567	1152	3065	730	851	881	439	237
Nitschia sp.										
Opephora sp.										
Pinnularia sp.										32
Stauroneis sp.										
Surirella sp.										
Synedra sp.	6174	151	5375	2448	11919	1898	1022	211	2196	316
Tabellaria sp.	1001	15	192	288	341		681	.	293	284
Greens (Chlorophyta)										
Actinastrum sp.										
Ankistrodesmus sp.								35		
Characium sp.			192							
Cladophora sp.						1898				
Cosmarium										
Echinosphaerella sp.										
Gonatozygon sp.										
Microspora sp.	4172	91			341				732	948
Rhizoclonium sp.										
Scenedesmus sp.										
Spirogyra sp.										
Staurastrum sp.		15								
Stigeoclonium sp.										
Tetradesmus sp.										
Ulothris sp.										
Golden Browns (Chrsophyta)										
Dinobryon sp.										
Blue Greens (Cyanophyta)										
Anabaena sp.							40696			
Chroococcus sp.										
Gloeotrichia sp.										
Lyngbya sp.	834	302	1536	16269	40866	19712	4257	1057	13324	474
kostochopsis sp.							33203			
Oscillatoria sp.	3838				29287	8031	2724			
Spirulina sp.				144						
Yellow Greens (Xanthophyta)										
Tribonema sp.										
TOTALS:	35876	1375	23420	33835	160399	41760	91607	3416	25016	2955

Table C-1. Periphyton (#/mm^2) - continued

STATION: Hangman	9-2-80 Glass	9-2-80 Rocks	9-2-80 Slides	1-20-81 Rocks	1-20-81 Glass	6-16-81 Rocks	6-16-81 Glass	6-18-81 Glass	7-8-81 Rocks	7-8-81 Slides
Diatoms (Bacillariophyta)										
Achnanthes sp.	95		48	8		973	2767	4393	1335	1490
Amphipleura sp.										
Amphora sp.				8	6		639	527	1669	2980
Asterionella sp.	83	8	36		17	389	213	2284	6007	5747
Cyclotella sp.										
Cymbella sp.						584	639	176	1[illegible]8	2554
Denticula						389			3[illegible]	
Diatoma sp.	12		48			779	9578	2635	[illegible]16	2341
Unidentified Diatoma	119		71		6					
Diatomella sp.										
Epithemia sp.										
Eunotia sp.										
Fragilaria sp.	855	60	440	31	17	2336	4895	2987	6841	6811
Frustulia sp.										
Gomphonema sp.			12				639	703	[illegible]00	639
Gyrosigma sp.							213		[illegible]	
Hannaea sp.						195				
Melosira sp.	154		226		11	779	426	[illegible]27	[illegible]	426
Meridion sp.										
Navicula sp.	143	8	202	8	17	2141	[illegible]26		1001	426
Nitschia sp.	12						[illegible]13	527		1064
Opephora sp.							[illegible]13			213
Pinnularia sp.			12							
Stauroneis sp.										
Surirella sp.										
Synedra sp.	368		249	68	52	195		351	3170	851
Tabellaria sp.	380	23	36	8	6			351		639
Greens (Chlorophyta)										
Actinastrum sp.										
Ankistrodesmus sp.										
Characium sp.	95									
Cladophora sp.										
Cosmarium										
Echinosphaerella sp.										
Gonatozygon sp.										
Microspora sp.	1199		24							
Rhizoclonium sp.										
Scenedesmus sp.										
Spirogyra sp.										
Staurastrum sp.										
Stigeoclonium sp.										
Tetradesmus sp.	48	23								
Ulothrix sp.	71									
Golden Browns (Chrsophyta)										
Dinobryon sp.										
Blue Greens (Cyanophyta)										
Anabaena sp.										
Chroococcus sp.										
Gloeotrichia sp.										
Lyngbya sp.	475		772	191					3337	
Nostochopsis sp.										
Oscillatoria sp.			238						1168	
Spirulina sp.										
Yellow Greens (Xanthophyta)										
Tribonema sp.							127706			
TOTALS:	4109	122	2414	322	132	8760	148567	15461	31368	26181

TABLE C-2. Spokane River Periphyton Data

Station: Stateline

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
1-4-80/ 3-5-80	60	B_1	R	0.79	0.45	-
3-5-80/ 4-21/80	47	B_1	R	1.85	0.55	-
			G	1.67	0.27	-
		B_2	R	0.35	0.69	-
			G	1.23	0.51	-

TABLE C-2. Spokane River Periphyton Data

Station: Harvard I

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-11-79/ 12-16-79	35	B_2	R	1.05	0.16	3.50
12-16-79/ 2-18-80	65	B_2	R	0.71	0.51	6.10
2-18-79/ 3-22-80	34	B_1	Vandalized	-	-	-
3-22-80/ 7-2-80	103	B_2	R	0.16	0.07	0.20
			G	0.09	0.03	0.03
7-2-80/ 8-12-80	42	B_1	Vandalized	-	-	-
8-12-80/ 9-24-80	44	B_1	*			
9-24-80/ 12-17-80	85	B_2	R	4.70	1.21	3.90
			G	1.28	0.53	0.90
12-17-80/ 3-27-81		B_1	Vandalized	-	-	-
3-27-81/ 5-19-81		B_1	*			
3-27-81/ 8-6-81			Vandalized	-	-	-
8-6-81/ 9-24-81	47	B_1	R	0.47	0.29	0.10
			G	0.55	0.39	0.16

*Baskets could not be retrieved because of flood conditions

TABLE C-2. Spokane River Periphyton Data

Station: Harvard II

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
3-22-80/ 6-18-80	89	B_1	R	0.52	0.050	0.20
			G	0.01	0.004	0.05
3-22-80 7-2-80	103	B_2	R	2.58	0.50	0.40
			G	0.77	0.20	0.30
7-2-80/ 8-12-80	42	B_1	R	10.54	2.15	4.20
			G	1.82	0.62	1.10
		B_2	Vandalized	-	-	-
8-12-80/ 10-10-80	60	B_1	R	8.46	1.89	8.20
			G	1.72	0.57	6.20
		B_2	R	7.83	1.72	2.30
			G	2.18	0.65	6.00
10-10-80/ 1-20-80	103	B_1	*			
1-20-81/ 4-16-81	86	B_1	R	5.68	1.52	1.82
			G	Glass Broken		1.75
4-16/81 5-19-81			Vandalized	-	-	-
5-19-81/ 8-6-81			Vandalized	-	-	-

* Baskets could not be retrieved because of flood conditions

TABLE C-2. Spokane River Periphyton Data

Station: Barker

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 1-4-80	54	B_1	R	3.47	0.98	1.80
1-4-80/ 3-22-80	79	B_1	R	0.52	0.25	0.60
3-22-80/ 7-2-80	103	B_1	R	0.92	0.30	0.30
			G	0.16	0.03	0.40
		B_2	R	0.11	0.04	0.10
			G	0.23	0.11	0.10
7-2-80/ 8-12-80	42	B_1	Vandalized	-	-	-
		B_2	Vandalized	-	-	-
8-12-80/ 9-24-80	44	B_1	R	1.05	0.35	1.70
			G	0.41	0.22	1.50
		B_2	R	2.17	0.78	1.10
			G	0.57	0.34	1.60
9-24-80/ 12-17-80	85	B_1	R	5.73	1.97	12.10
			G	1.14	0.37	3.60
12-17-80/ 3-27-81	100	B_1	R	1.67	0.50	0.97
			G	0.13	0.03	0.61
3-27-81/ 5-19-81	53	B_1	R	0.52	0.34	0.64
			G	0.21	0.16	0.09
5-19-81/ 6-25-81	37	B_1	R	0.10	0.13	0.64
			G	All glass broken		
6-25-81/ 8-6-81		B_1	Vandalized	-	-	-

TABLE C-2. Spokane River Periphyton Data

:ation: Sullivan

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 12-16-79	35	B_2	R	7.81	3.53	4.70
12-16-79/ 2-18-80	65	B_2	R	9.85	0.50	5.50
2-18-80/ 4-4-80	47	B_1	R	0.20	0.14	0.10
4-4-80/ 7-2-80	95	B_1	Set buried by sand			
		B_2	R	1.14	0.39	0.40
			G	-	-	-
7-8-80/ 8-12-80	36	B_1	R	1.74	0.58	1.00
			G	0.46	0.04	1.80
		B_2	Vandalized	-	-	-
8-12-80/ 10-10-80	60	B_1	*			
10-10-80/ 1-20-81	103	B_1	*			
1-20-81 4-16-81	86	B_1	R	2.71	0.89	7.28
			G	Glass Broken		3.13
4-16-81/ 6-5-81		B_1	Vandalized	-	-	-
6-5-81/ 7-9-81	34	B_1	R	0.68	0.49	0.16
			G	0.11	0.09	0.24

* Baskets could not be retrieved because of flood conditions

TABLE C-2. Spokane River Periphyton Data

Station: Euclid

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 1-4-80	54		Vandalized	-	-	-
1-4-80/ 3-5-80	62	B_2	R	0.20	0.12	1.40
3-22-80/ 7-16-80	117	B_1	R	29.56	4.20	5.70
			G	4.58	0.84	0.70
3-5-80 7-16-80	134	B_2	R	4.65	0.73	0.30
			G	Glass Broken	-	-
7-16-80/ 7-29-80		B_1	Vandalized	-	-	-
		B_2	Vandalized	-	-	-
7-29-80/ 9-9-80	43	B_1	R	1.32	0.70	2.30
		B_2	G	1.09	0.54	4.30
9-9-80/ 11-14-80	67	B_1	R	12.18	3.54	3.00
			G	0.13	0.08	1.30
		B_2	R	17.77	4.36	6.10
			G	3.62	1.25	1.10
11-14-81/ 2-26-81		B_1	*			
2-26-81/ 4-26-81	59	B_1	R	0.71	0.92	0.47
			G	0.04	0.04	0.14
4-26-81/ 6-11-81		B_1	Vandalized	-	-	-
6-11-81/ 7-24-81		B_1	Baskets exposed due to low flow.			

* Baskets could not be retrieved because of flood conditions

TABLE C-2. Spokane River Periphyton Data

Station: Plantes Ferry

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 12-16-79	35	B_1	R	3.42	0.70	3.80
12-16-79/ 3-5-80		B_1	Vandalized	-	-	-
3-5-80/ 4-21-80		B_1	Vandalized	-	-	-
4-21-80/ 6-18-80		B_1	Vandalized	-	-	-

TABLE C-2. Spokane River Periphyton Data

Station: Upriver

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 1-4-80	54	B_2	R	1.83	0.33	0.40
1-4-80/ 3-22-80	79	B_2	R	1.00	0.52	4.90
3-22-80/ 5-14-80	54	B_1	R	0.82	0.27	0.50
			G	0.61	0.16	0.30
		B_2	R	8.51	1.36	0.70
			G	4.22	0.71	0.70
5-14-80/ 6-18-80	36	B_1	R	27.85	0.71	2.60
			G	23.85	1.52	3.80
		B_2	R	323.68	3.54	1.00
			G	2.05	0.26	0.40
6-18-80/ 7-16-80	29	B_1	R	32.72	3.82	2.00
			G	13.05	8.32	1.10
		B_2	R	45.16	2.32	1.40
			G	5.78	0.01	0.40
7-16-80/ 8-26-80	42	B_1	R	3.80	0.04	2.30
			G	1.35	0.41	1.40
		B_2	R	1.97	0.11	0.80
			G	0.57	0.20	2.30
8-26-80/ 11-14-80	81	B_1	R	4.23	0.83	5.50
			G	1.41	0.38	3.80
		B_2	R	4.12	1.37	3.00
			G	0.42	0.18	0.30
11-14-80/ 2-26-81	104	B_1	R	1.21	0.15	8.95
			G	1.39	0.24	1.32

(continued)

TABLE C-2. Spokane River Periphyton Data - continued

Station: Upriver

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
2-26-81/ 4-30-81	63	B_1	R	Basket broken, rocks missing.		
			G	2.33	1.77	0.96
4-30-81/ 6-11-81	42	B_1	R	14.97	12.76	0.57
			G	19.04	15.86	0.57
6-11-81/ 7-24-81	43	B_1	R	0.22	0.16	6.66
			G	0.55	0.46	7.63
7-24-81/ 9-3-81	42	B_1	R	0.86	0.64	0.51
			G	0.17	0.09	0.55

TABLE C-2. Spokane River Periphyton Data

Station: Greene

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a ($\mu g/cm^2$)
11-12-79/ 12-16-79			Vandalized	-	-	-
12-16-79/ 2-18-80	65	B_2	R	15.18	1.75	10.40
2-18-80/ 4-4-80	47	B_2	R	6.73	0.98	2.90
4-4-80/ 7-8-80	95	B_1	R	3.84	1.29	7.90
			G	14.95	3.00	15.90
		B_2	R	6.78	1.26	5.80
			G	2.15	0.60	12.90
7-8-80/ 8-26-80	50	B_1	Vandalized	-	-	-
		B_2	R	3.75	0.20	2.70
			G	0.48	0.15	3.80
8-26-80/ 10-10-80	46	B_1	R	4.18	0.82	11.70
			G	3.88	0.84	14.20
		B_2	R	12.12	1.47	14.10
			G	3.43	1.00	17.40
10-10-80/ 1-20-81		B_1	Baskets Replaced			
1-20-81/ 4-17-81	87	B_1	R	7.40	0.64	17.28
			G	1.15	0.35	<0.20
4-17-81/ 6-5-81	49	B_1	R	1.03	0.72	2.76
			G	0.31	0.18	0.71

(continued)

TABLE C-2. Spokane River Periphyton Data - continued

Station: Greene

Colonization Period	Number of Days	Basket	Substrate (R=Rock)(G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll *a* ($\mu g/cm^2$)
6-5-81/ 7-9-81	34	B_1	R	0.73	0.45	3.45
			G	0.15	0.12	0.75
7-9-81/ 8-25-81	47	B_1	R	0.90	0.59	0.17
			G	0.12	0.08	1.56
8-25-81/ 11-3-81	68	B_1	R	7.86	6.35	9.46
			G	0.91	0.77	3.10

TABLE C-2. Spokane River Periphyton Data

Station: Gonzaga

Colonization Period	Number of Days	Basket	Substrate (R=Rock (G=Glass)	Dry Weight (mg/cm^2)	Ash Free Dry Weight (mg/cm^2)	Chlorophyll a (μg/cm^2)
11-12-79/ 1-4-80	54	B_2	R	1.70	0.46	0.20
1-4-80/ 2-18-80	43		Vandalized	-	-	-
2-18-80/ 4-4-80	47	B_2	R	16.58	4.08	31.80
4-4-80/ 7-16-80	104	B_1	Vandalized	-	-	-
		B_2	R	1.53	0.13	0.80
			G	0.95	0.13	1.90
7-16-80/ 8-26-80	42	B_1	Vandalized	-	-	-
		B_2	R	0.79	0.31	1.20
			G	2.42	0.23	1.10
8-26-80/ 11-14-80	81	B_1	Vandalized	-	-	-
		B_2	Vandalized	-	-	-
11-14-80/ 2-26-80	104	B_1	R	2.49	0.26	2.65
			G	0.21	0.07	3.09
2-26-81/ 4-30/81	63	B_1	R	3.25	2.98	1.62
			G	1.13	0.91	1.34
4-30-81/ 6-11-81	42	B_1	R	1.00	0.90	1.52
			G	1.50	1.50	5.54
6-11-81/ 7-24-81	43	B_1	R	6.91	6.40	1.50
			G	2.55	2.30	3.89
7-24-81/ 9-3-81	42	B_1	R	0.29	0.17	0.33
			G	0.36	0.16	1.32

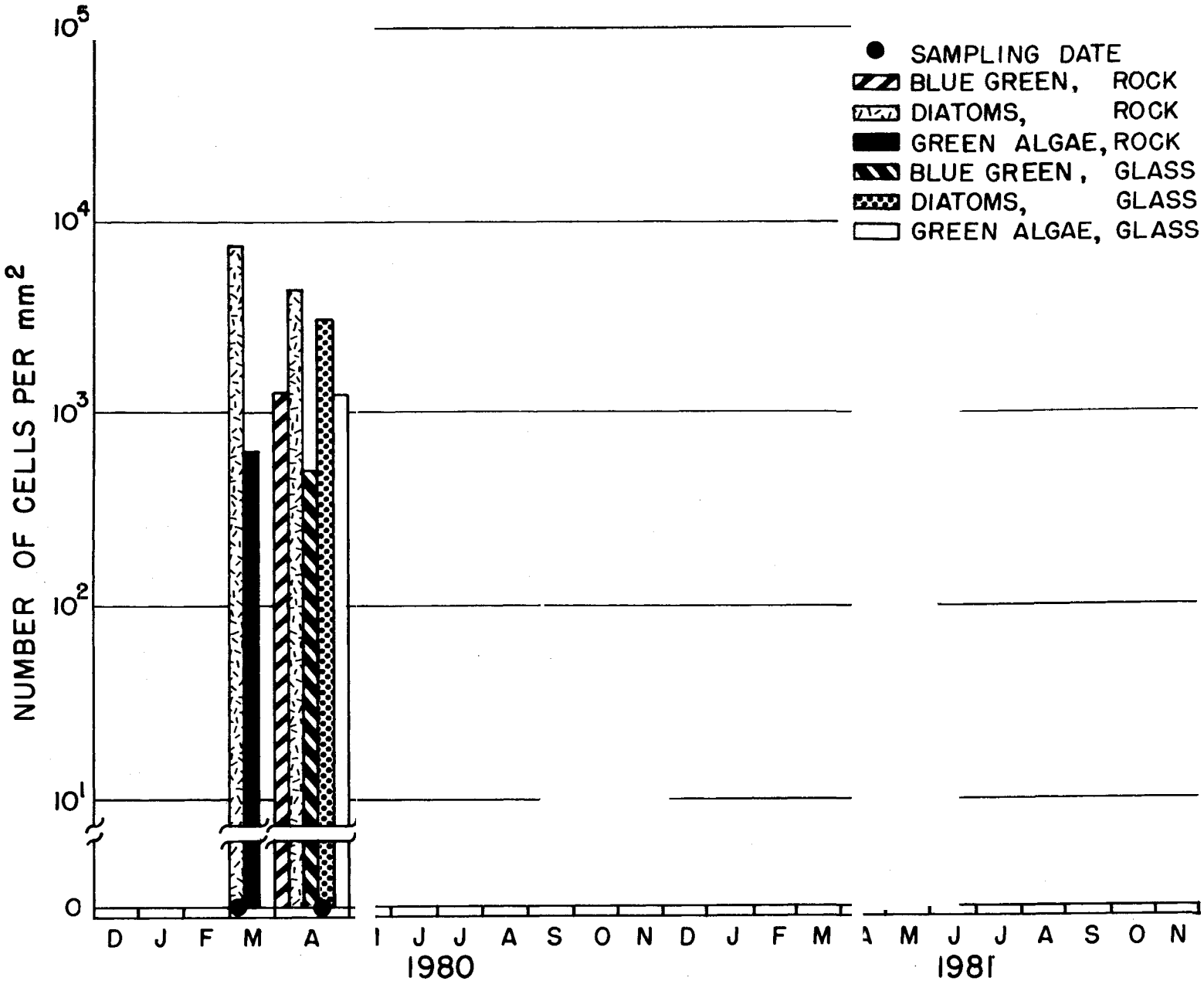

Figure C-1. Stateline station Spokane River periphyton enumeration

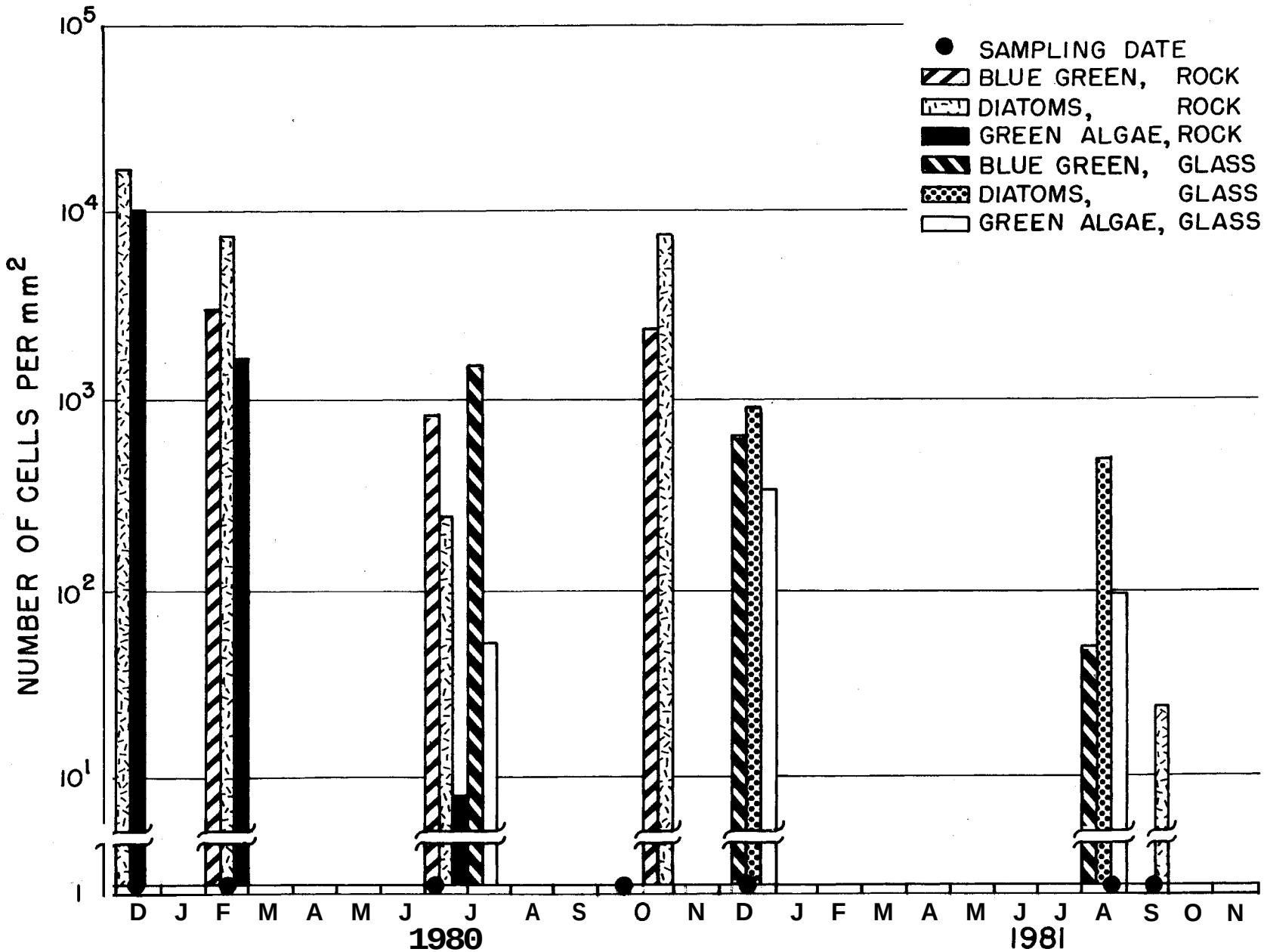

Figure C-2. Harvard I station Spokane River periphyton enumeration

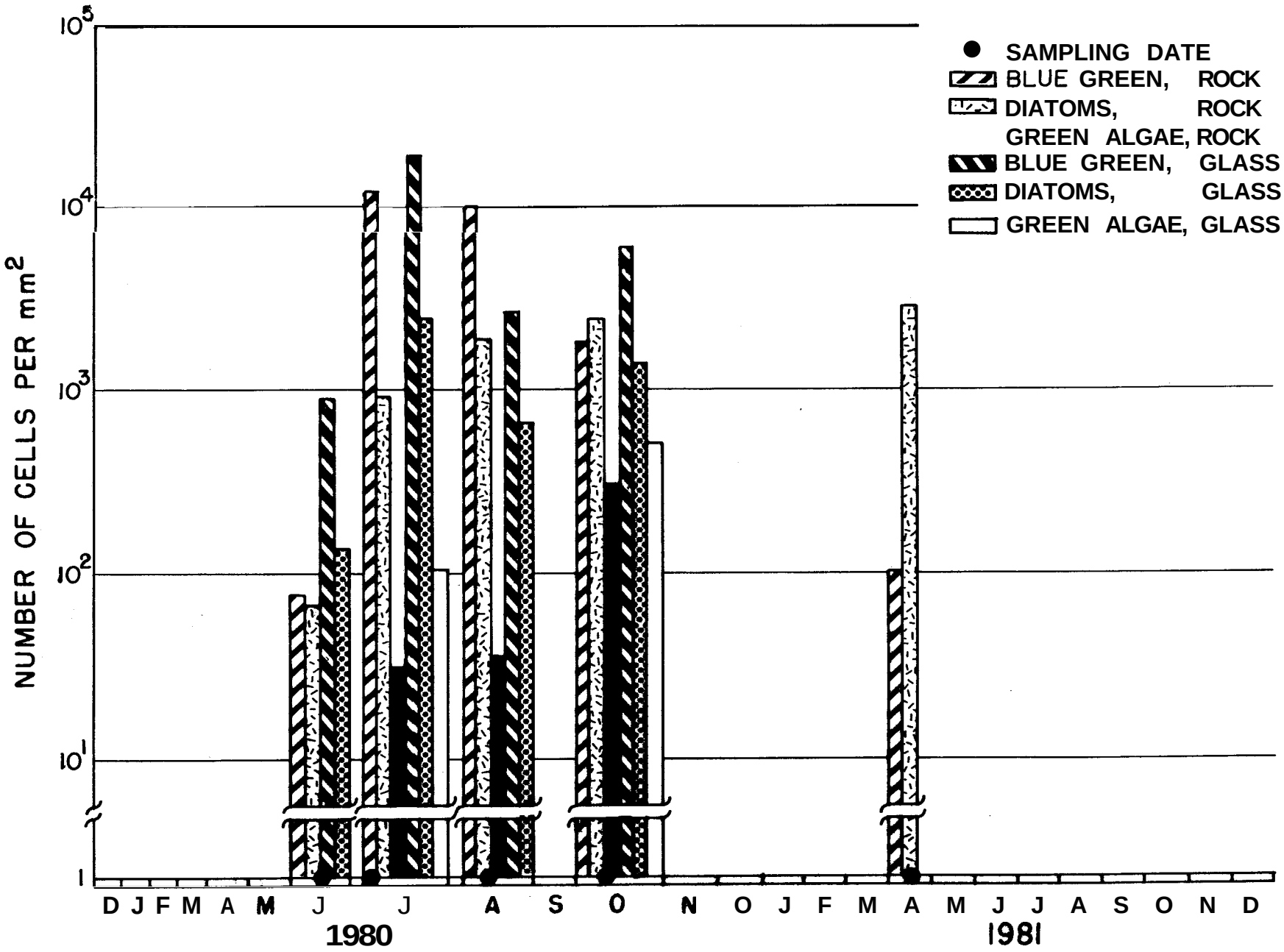

Figure C-3. Harvard II station Spokane River periphyton enumeration

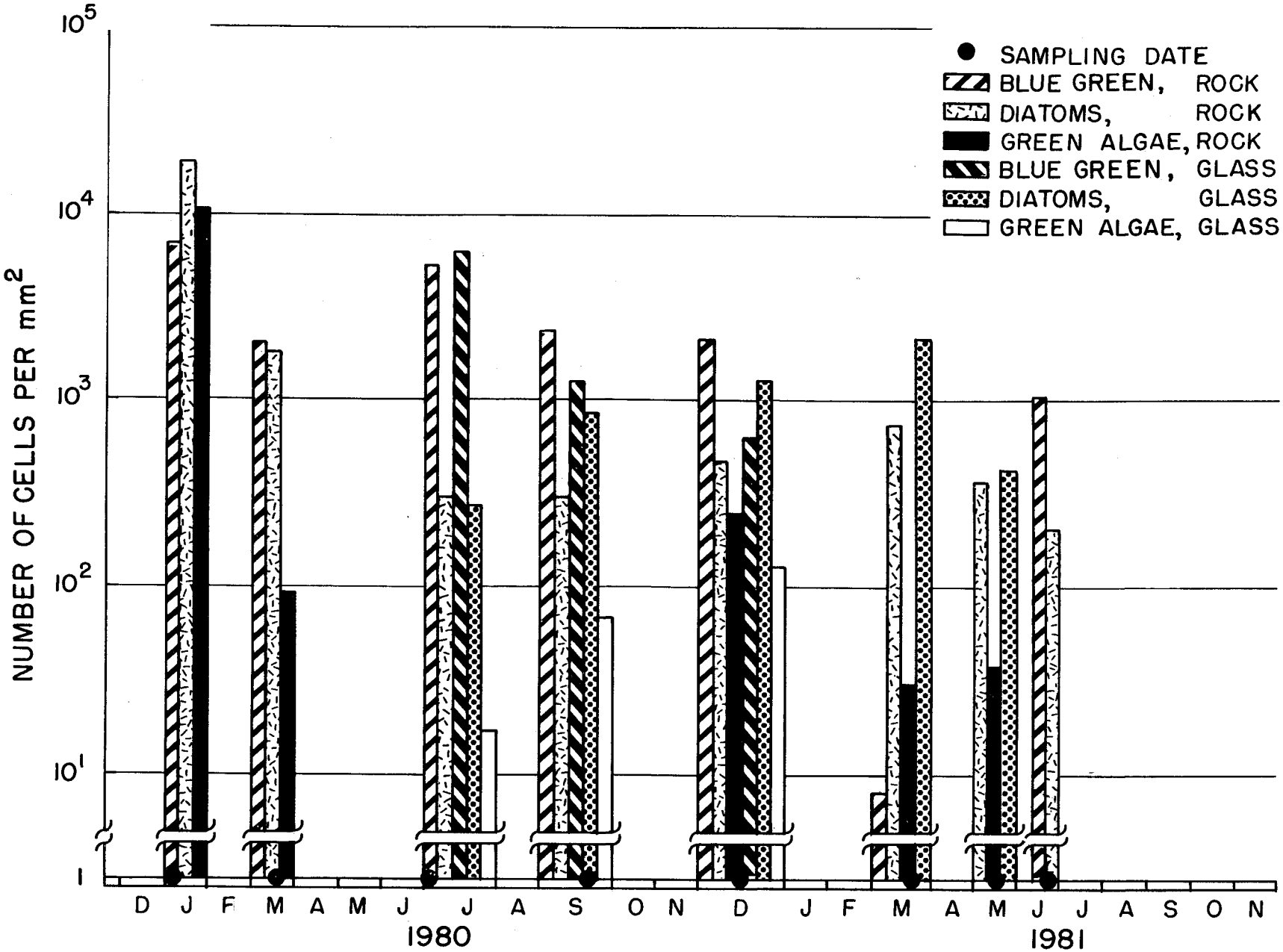

Figure C-4. Barker station Spokane River periphyton enumeration

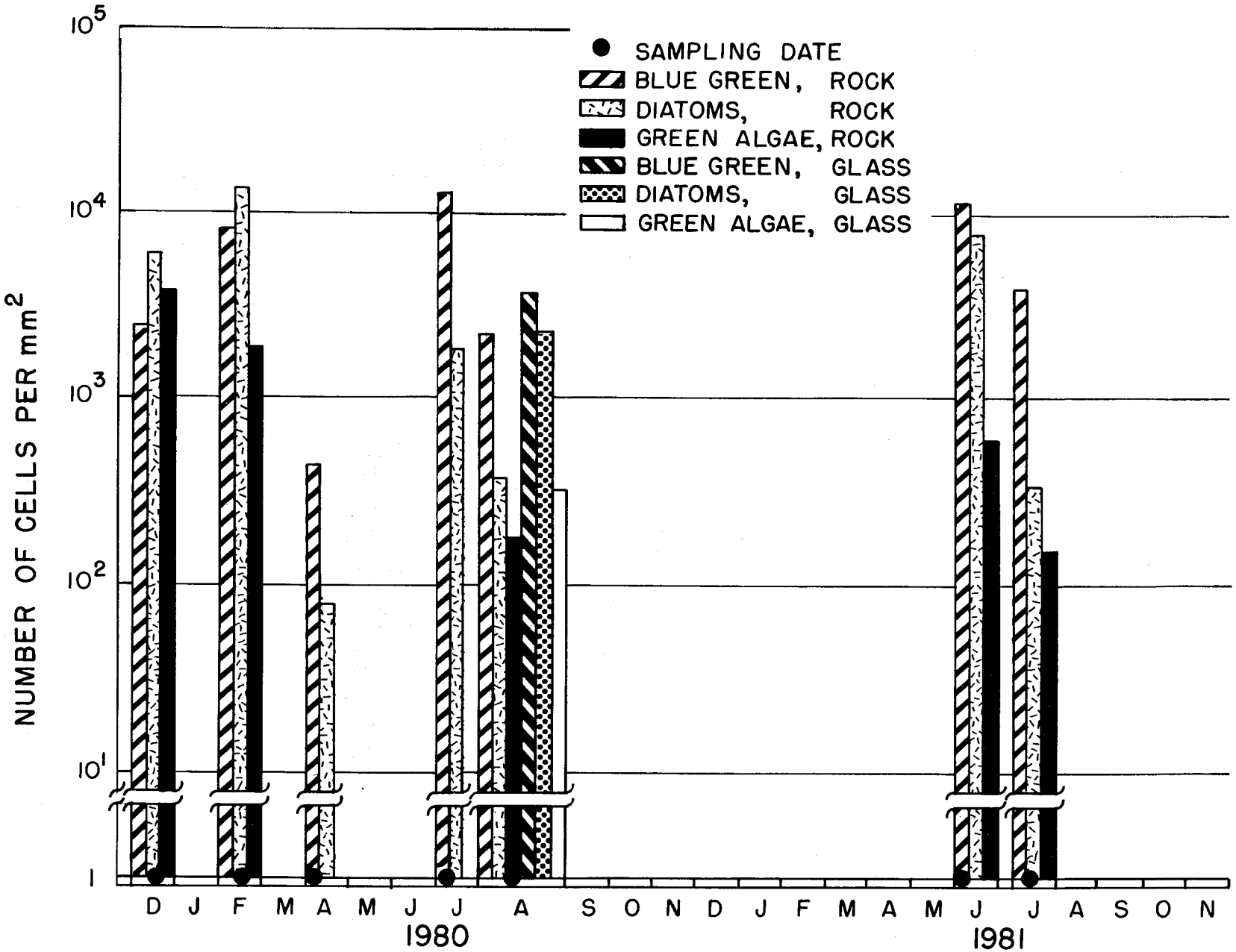

Figure C-5. Sullivan station Spokane River periphyton enumeration

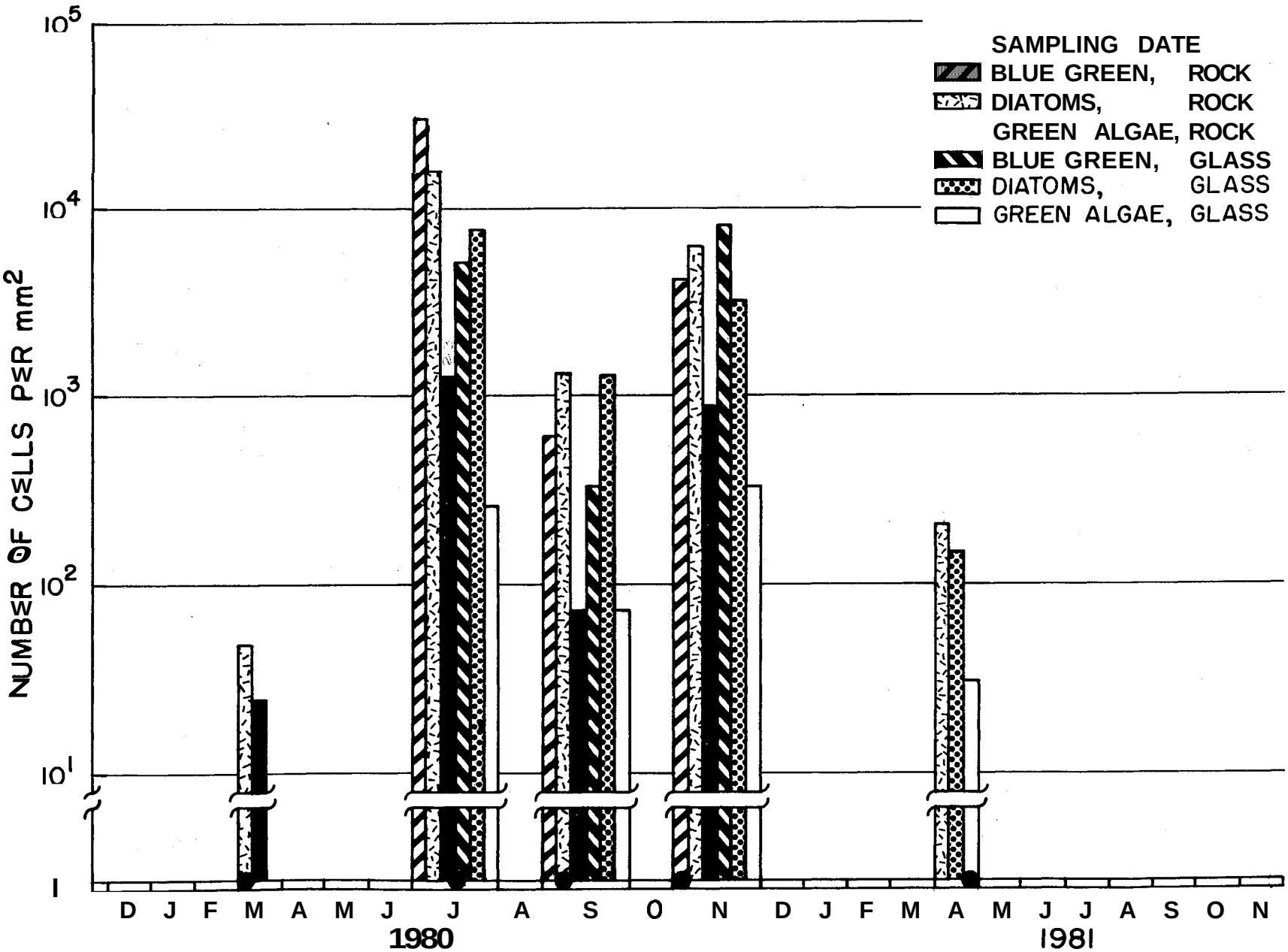

Figure C-6. Euclid station Spokane River periphyton enumeration

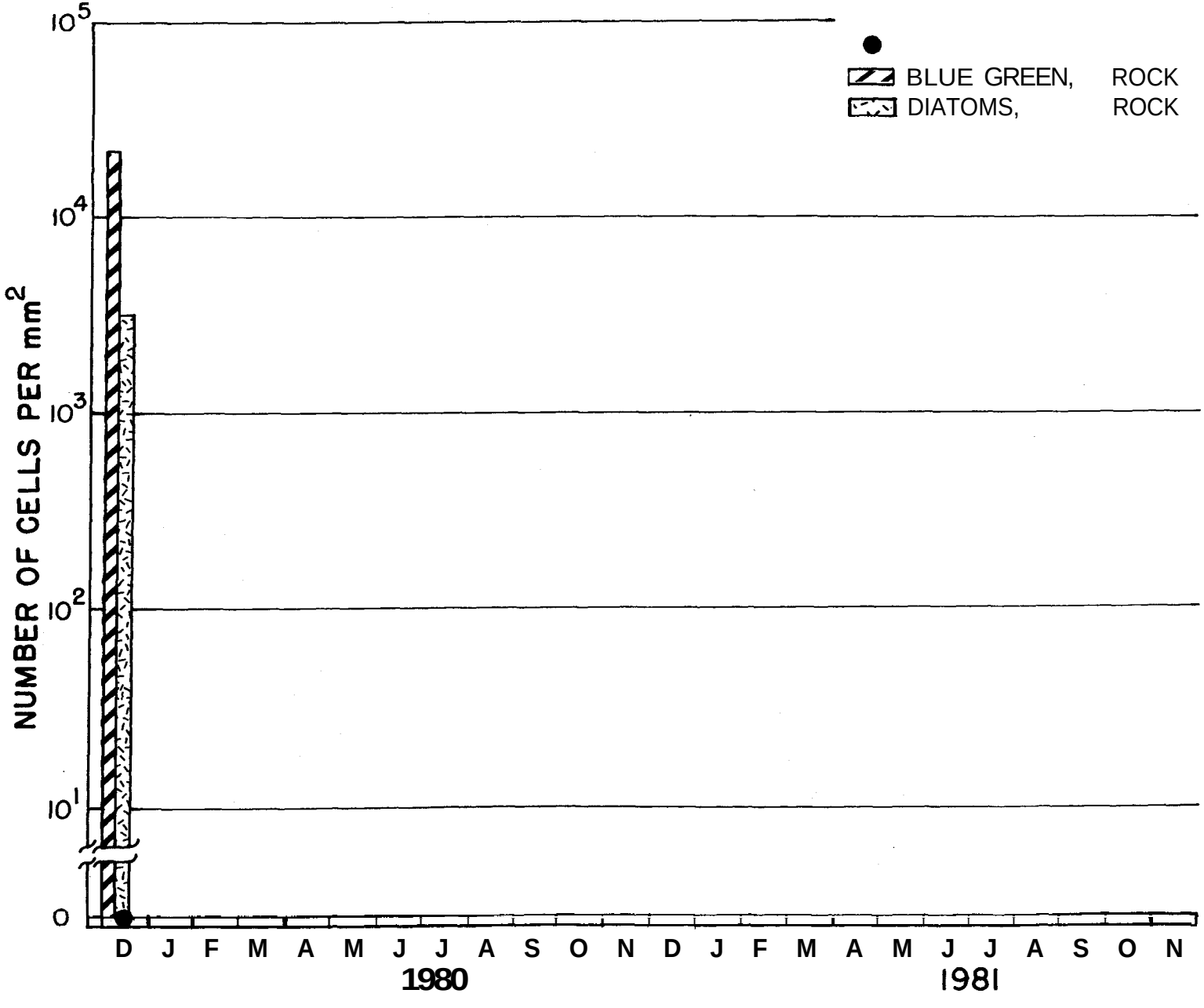

Figure C-7. Plantes Ferry station Spokane River periphyton enumeration

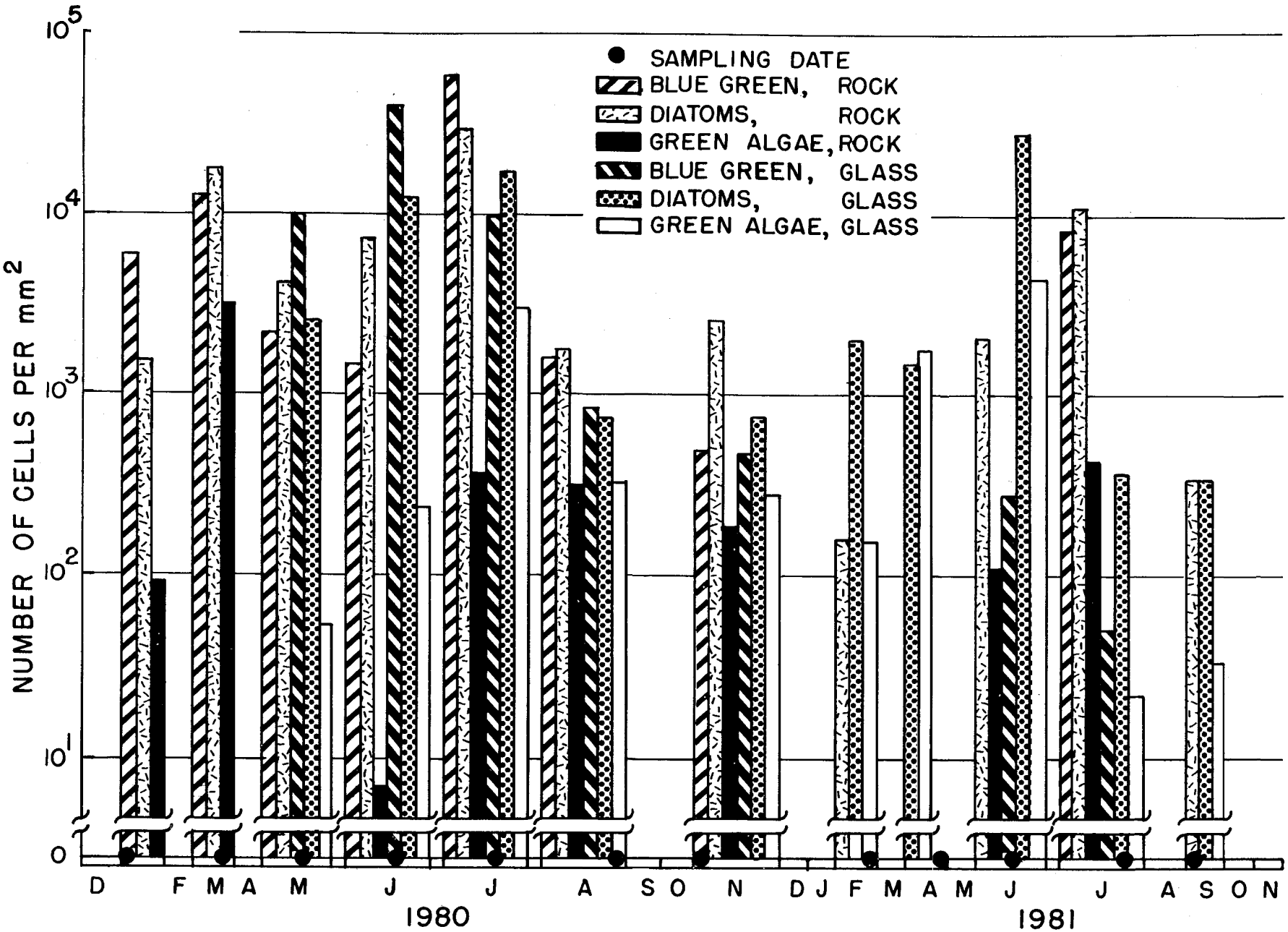

Figure C-8. Upriver station Spokane River periphyton enumeration

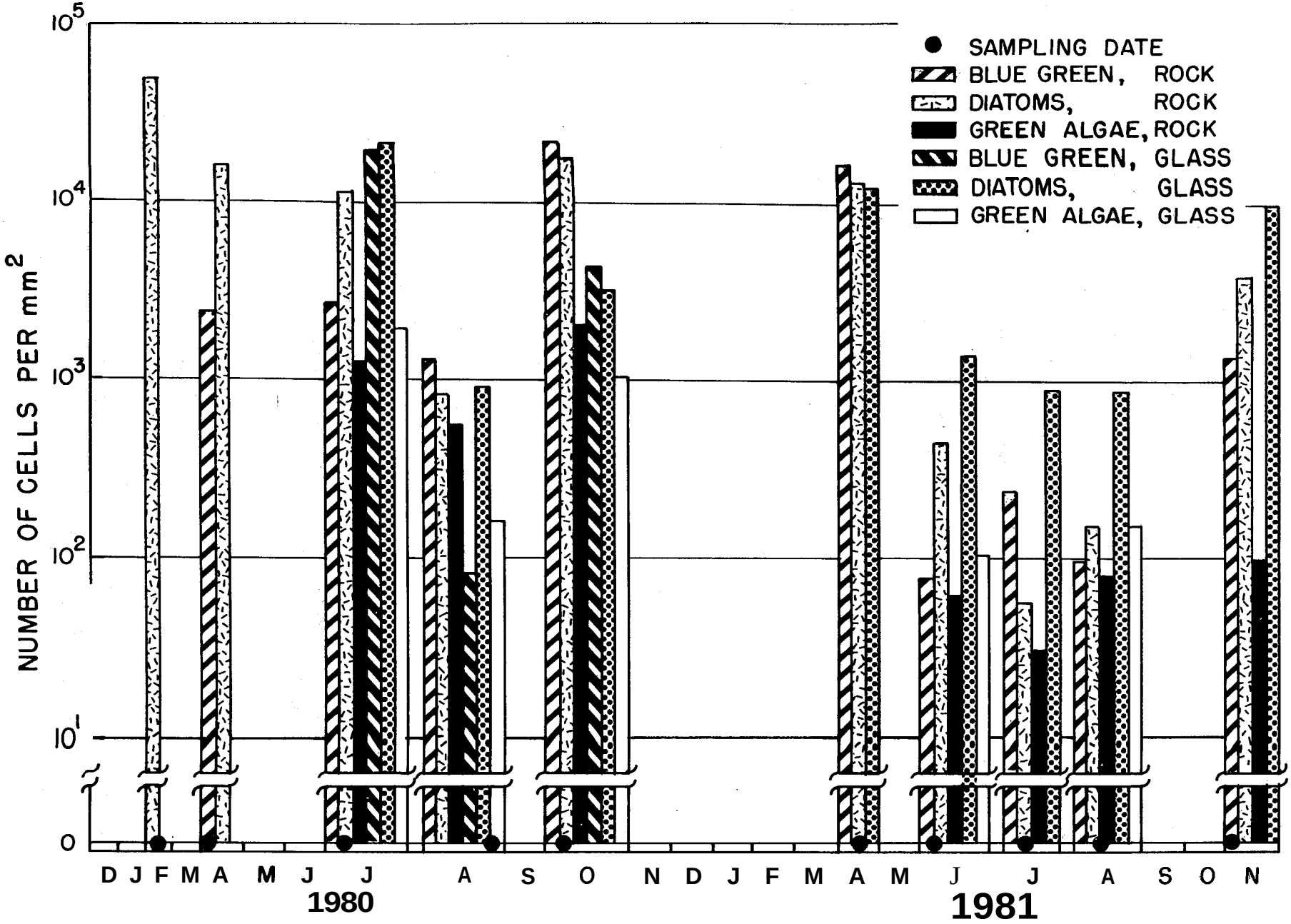

Figure C-9. Greene station Spokane River periphyton enumeration

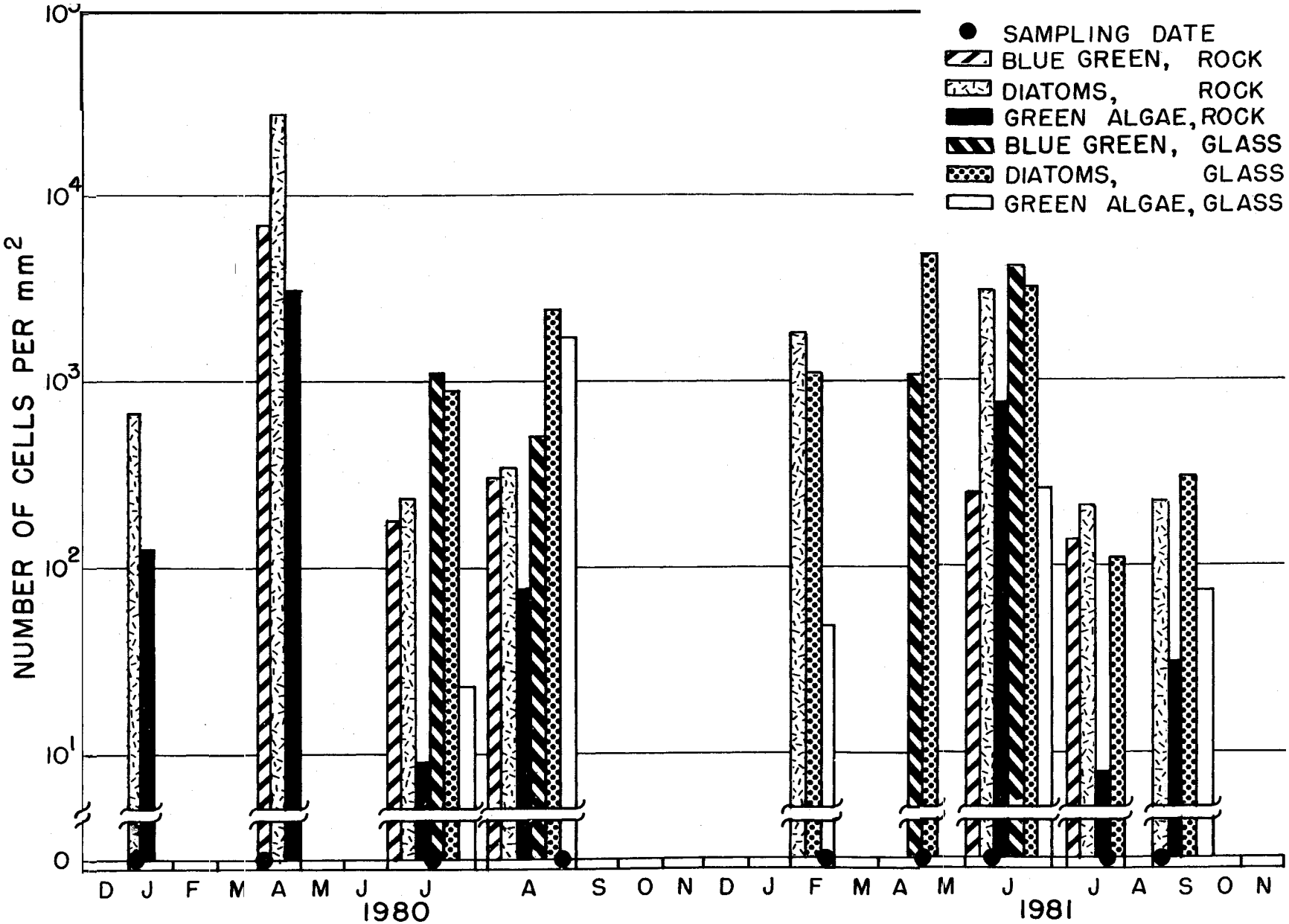

Figure C-10. Gonzaga station Spokane River periphyton enumeration

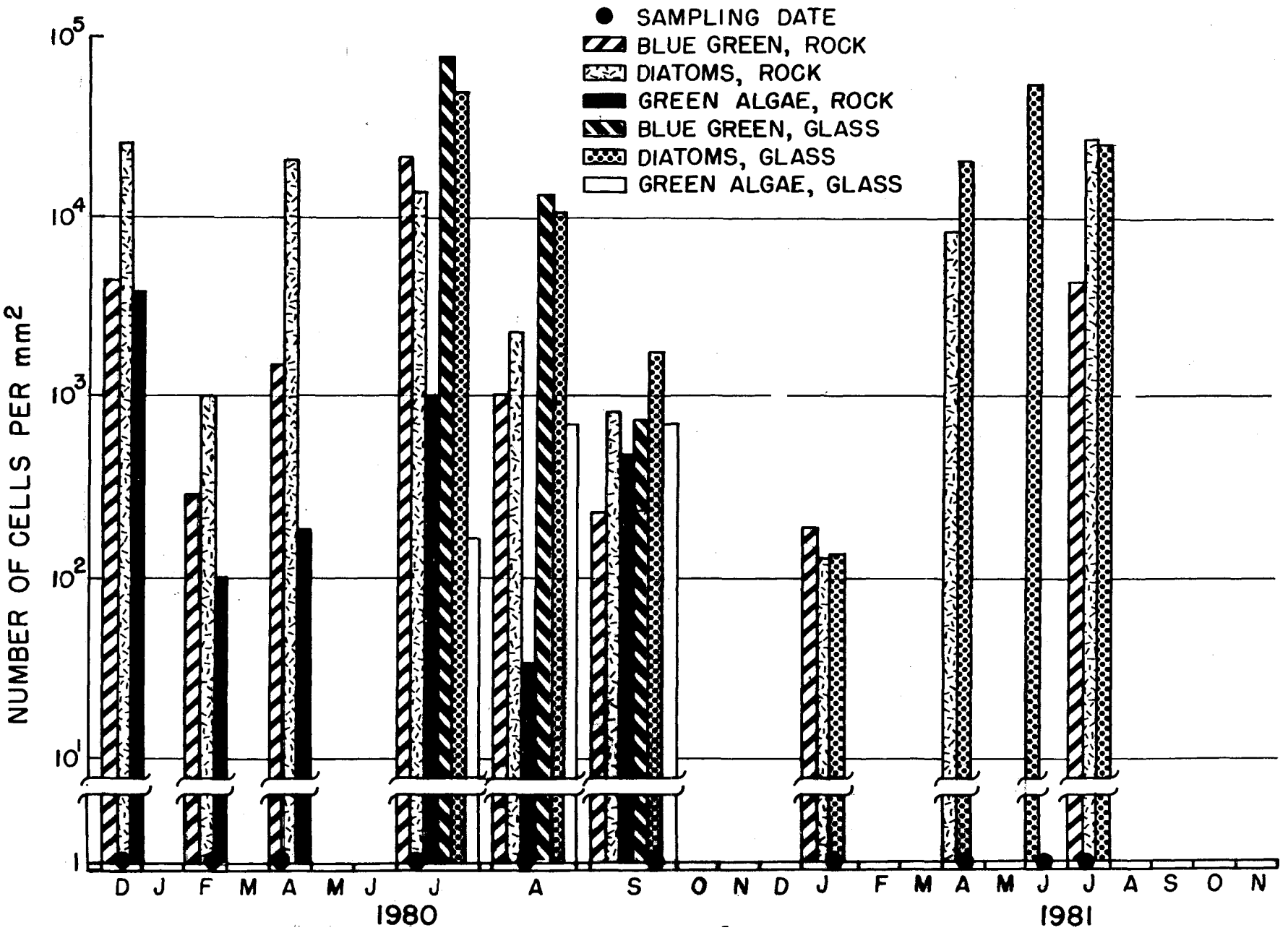

Figure C-11. Hangman station Spokane River periphyton enumeration

APPENDIX D

Periphyton Chlorophyll *a* Data

of the Upper Spokane River

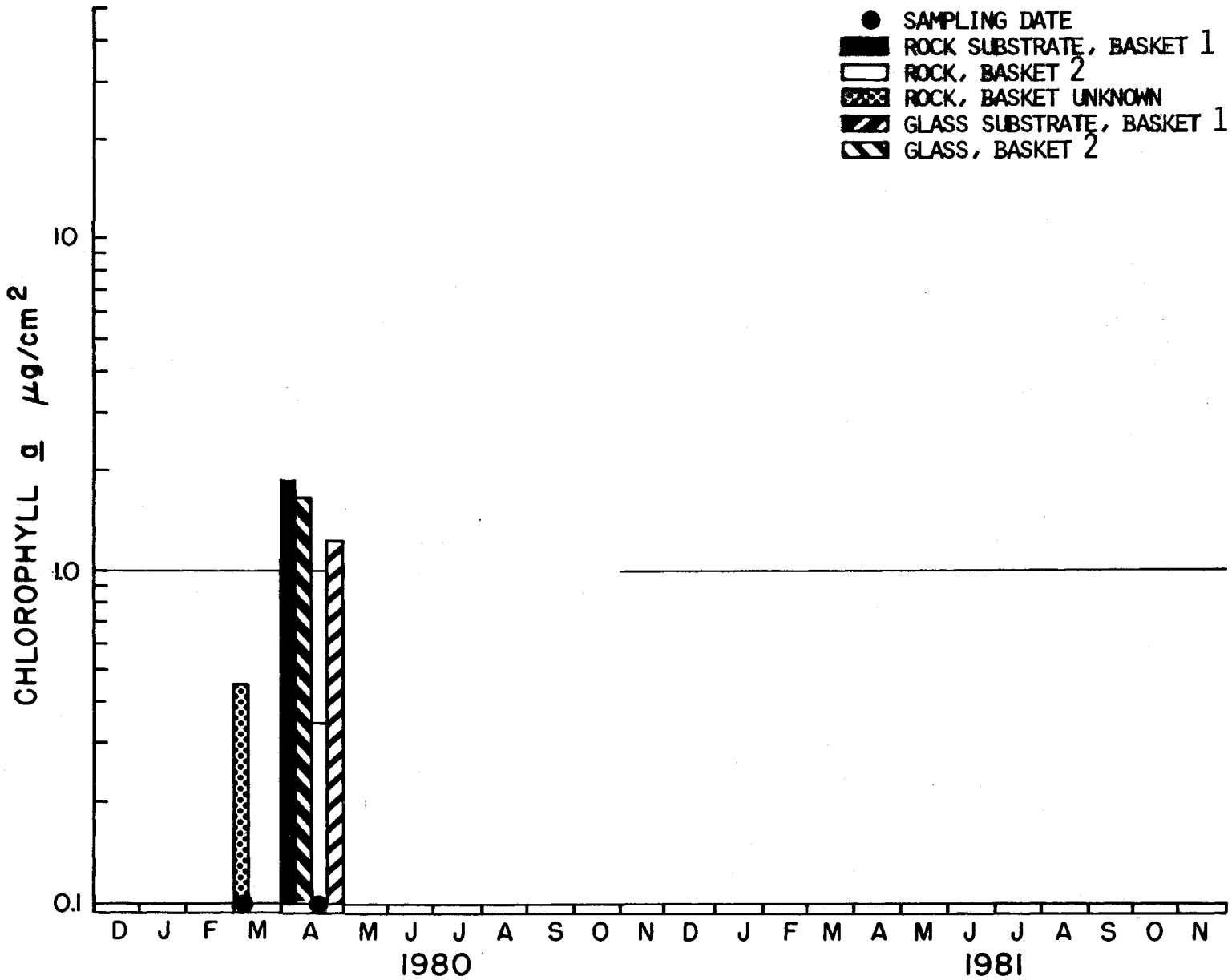

Figure D-1. Stateline station Spokane River periphyton chlorophyll a

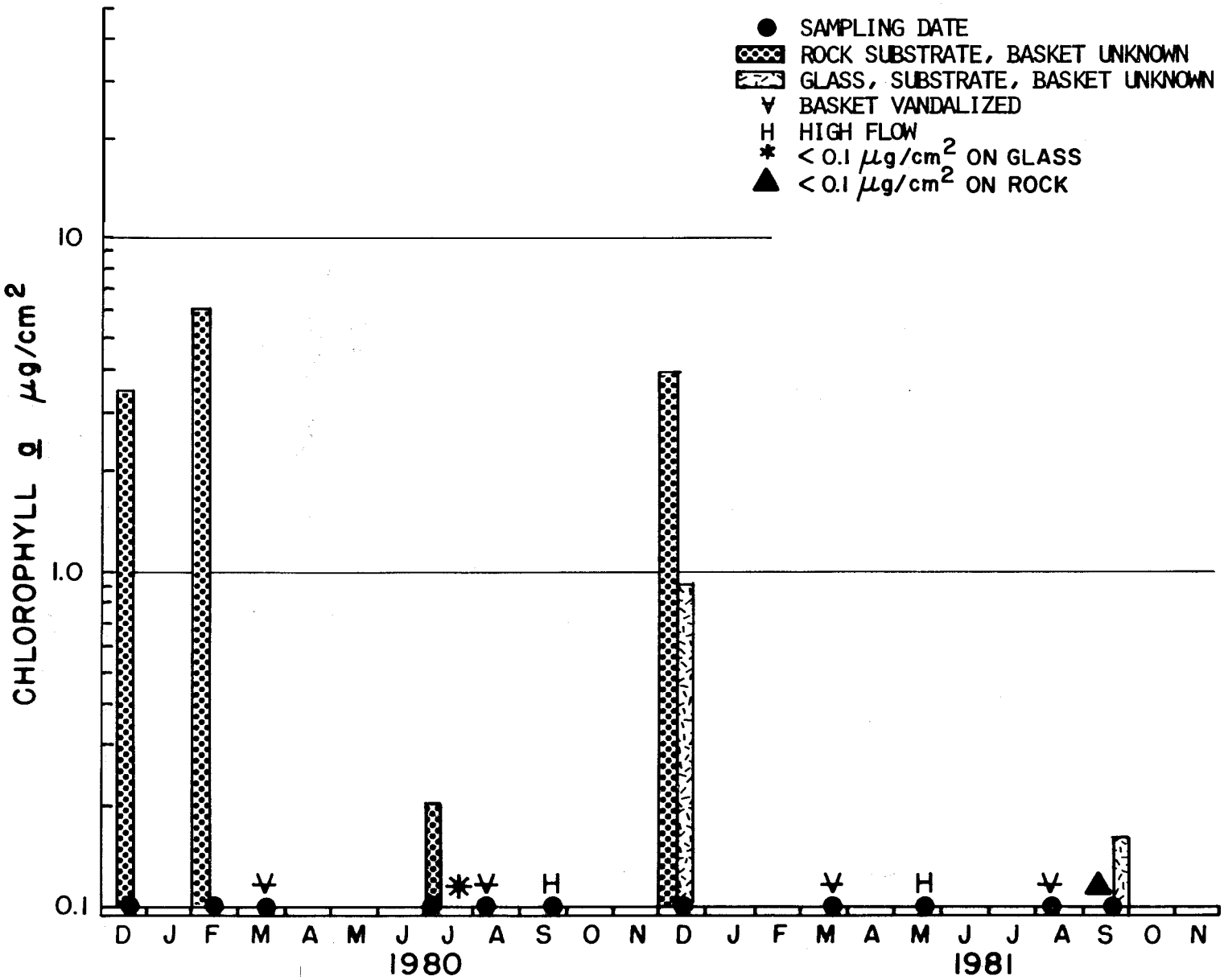

Figure D-2. Harvard I station Spokane River periphyton chlorophyll a

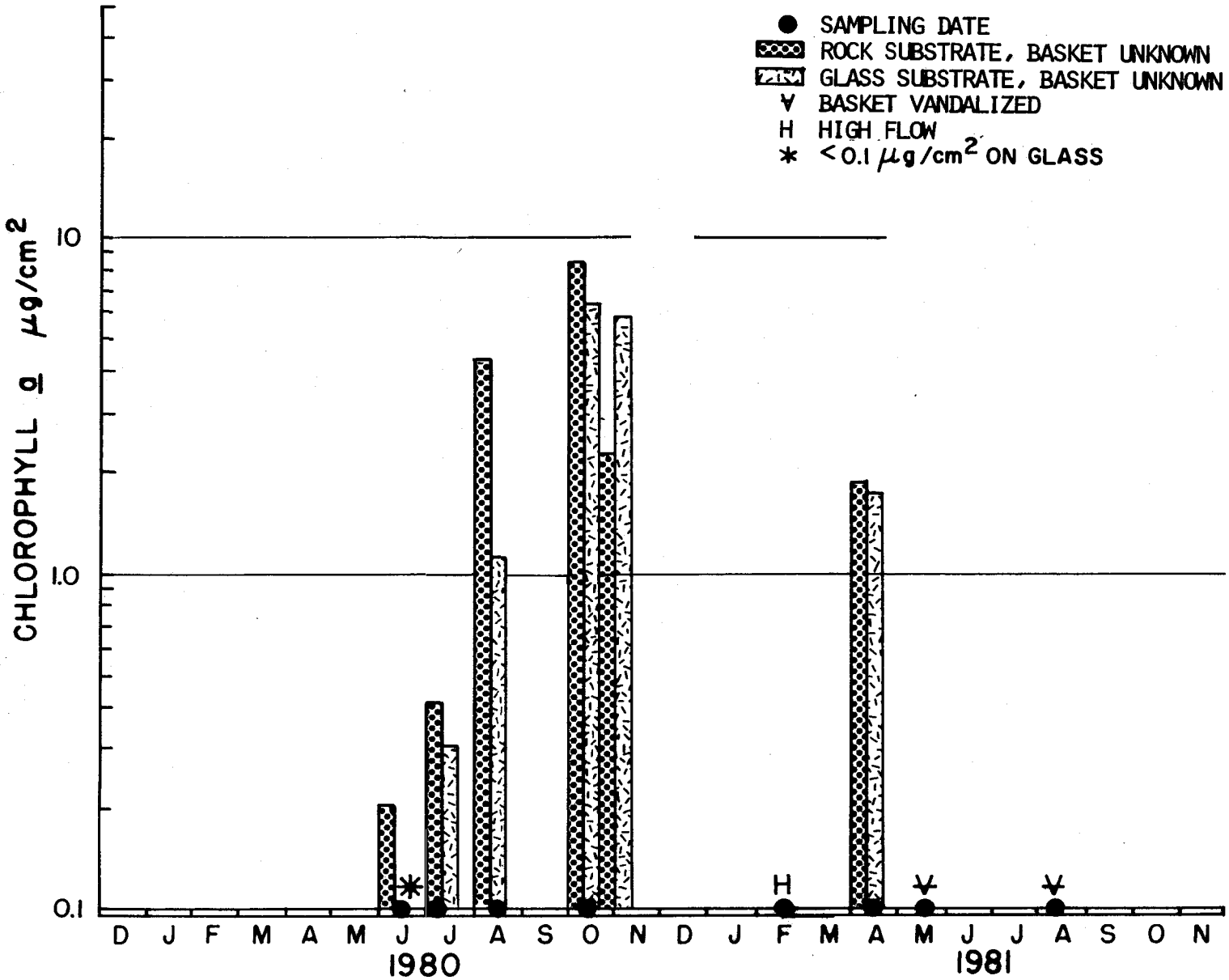

Figure D-3. Harvard II station Spokane River periphyton chlorophyll a

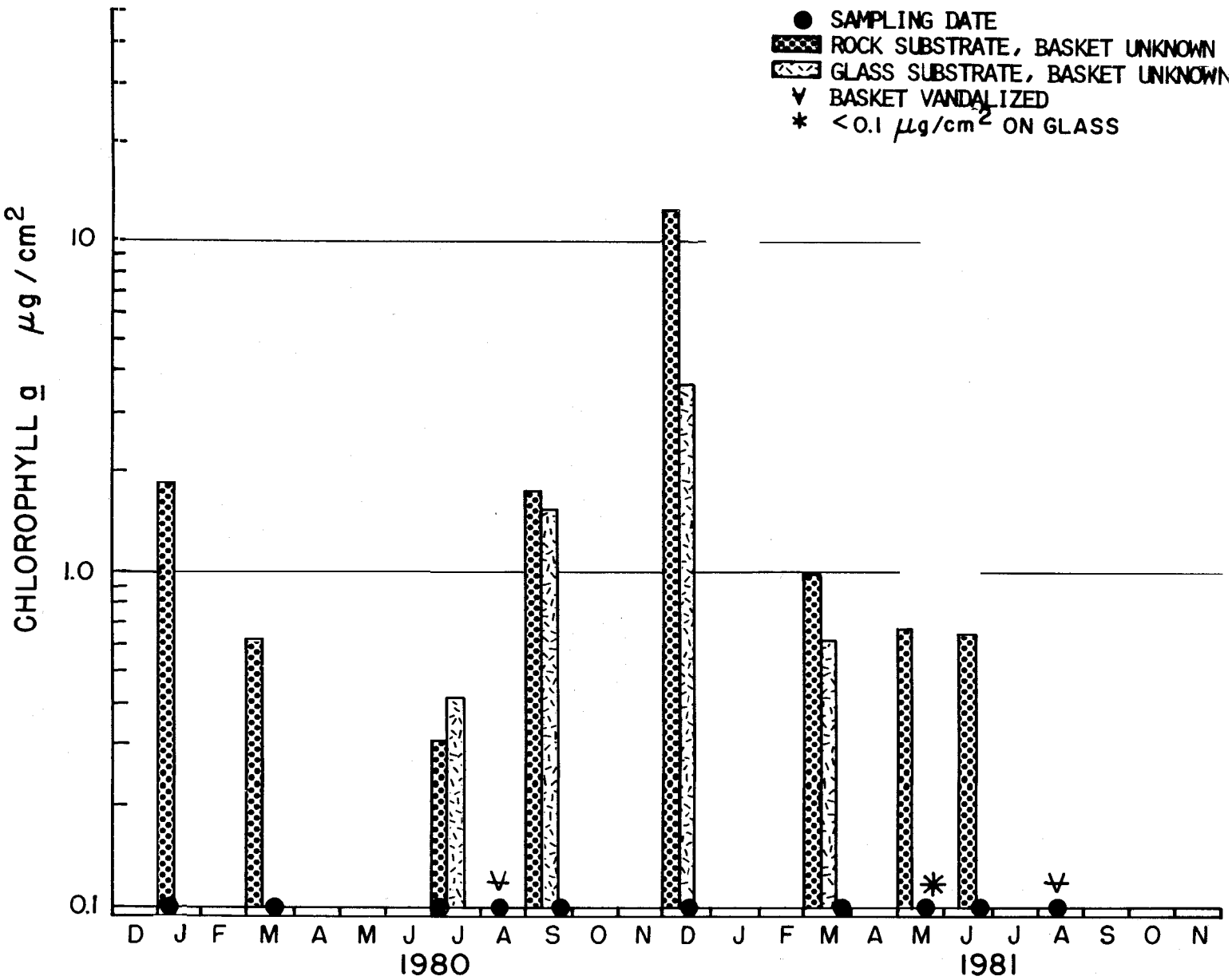

Figure D-4. Barker station Spokane River periphyton chlorophyll a

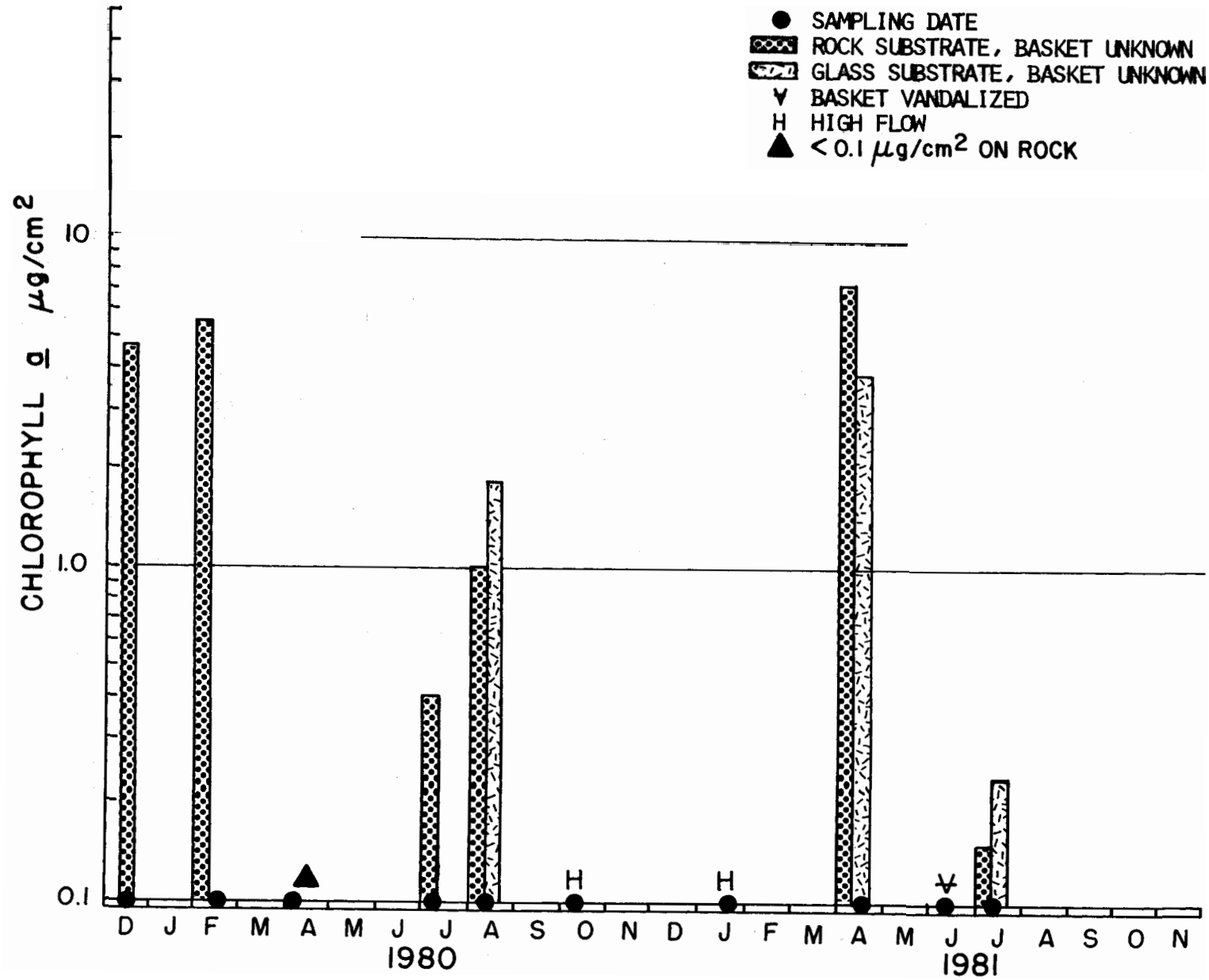

Figure D-5. Sullivan station Spokane River periphyton chlorophyll a

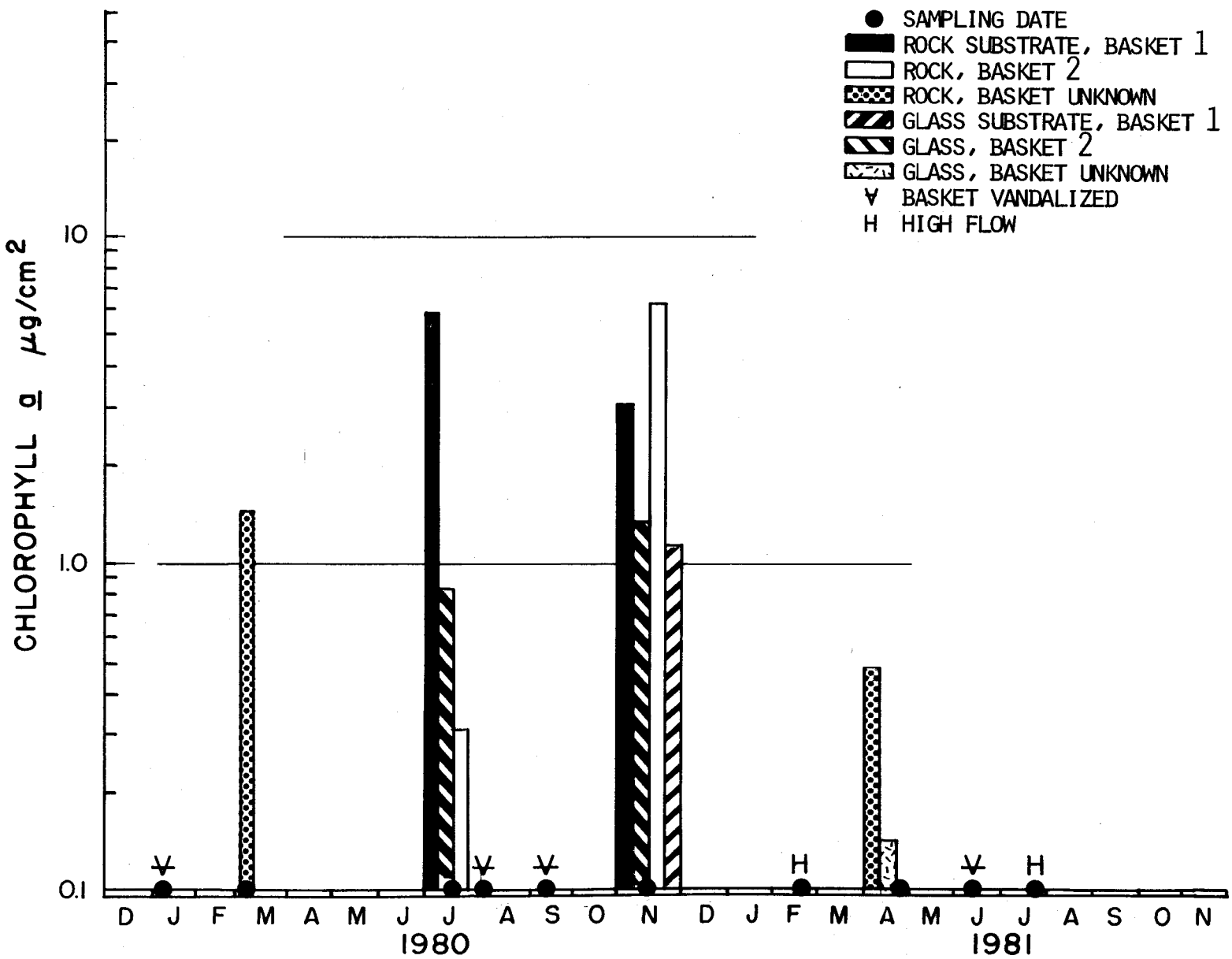

Figure D-6. Euclid station Spokane River periphyton chlorophyll a

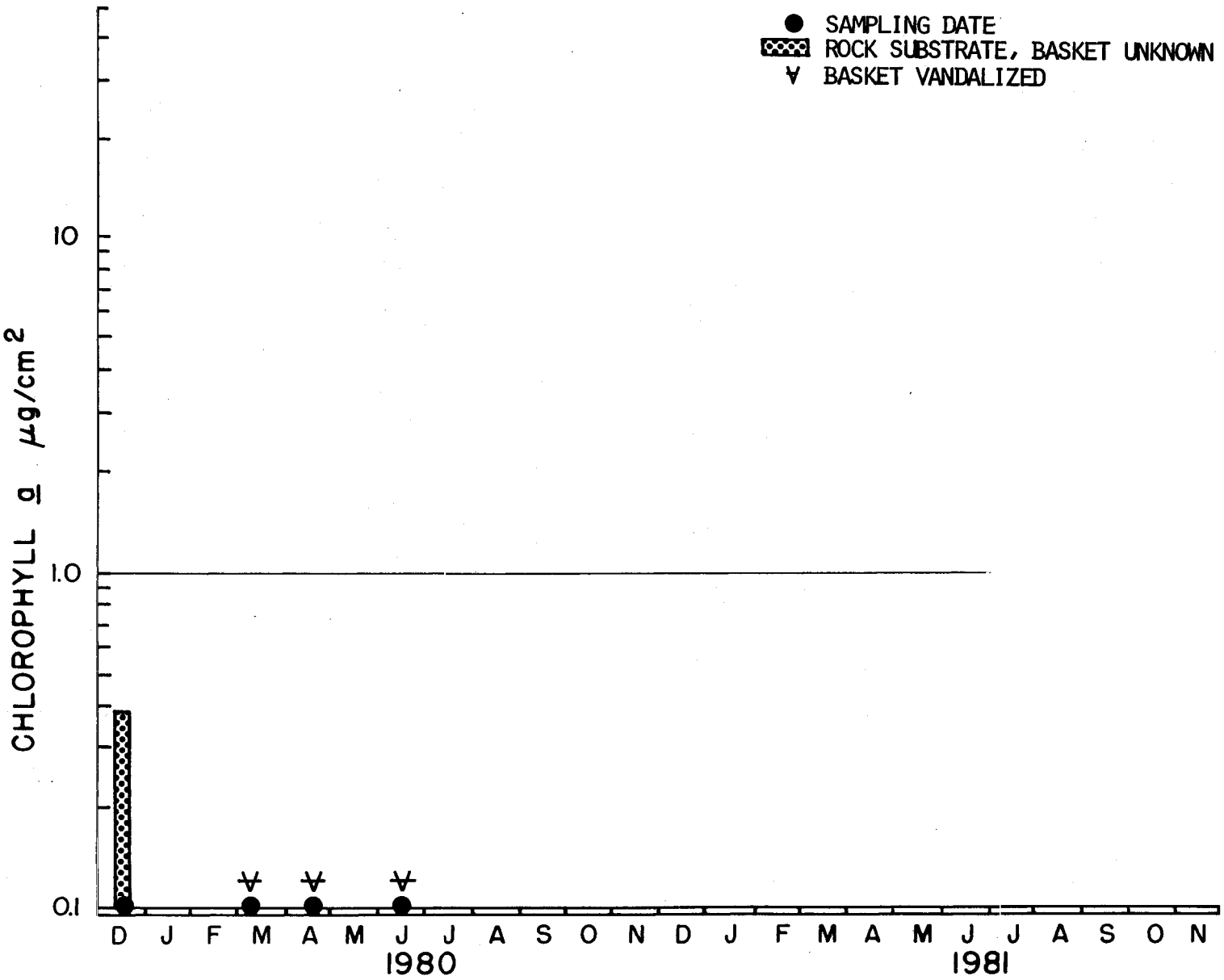

Figure D-7. Plantes Ferry station Spokane River periphyton chlorophyll a

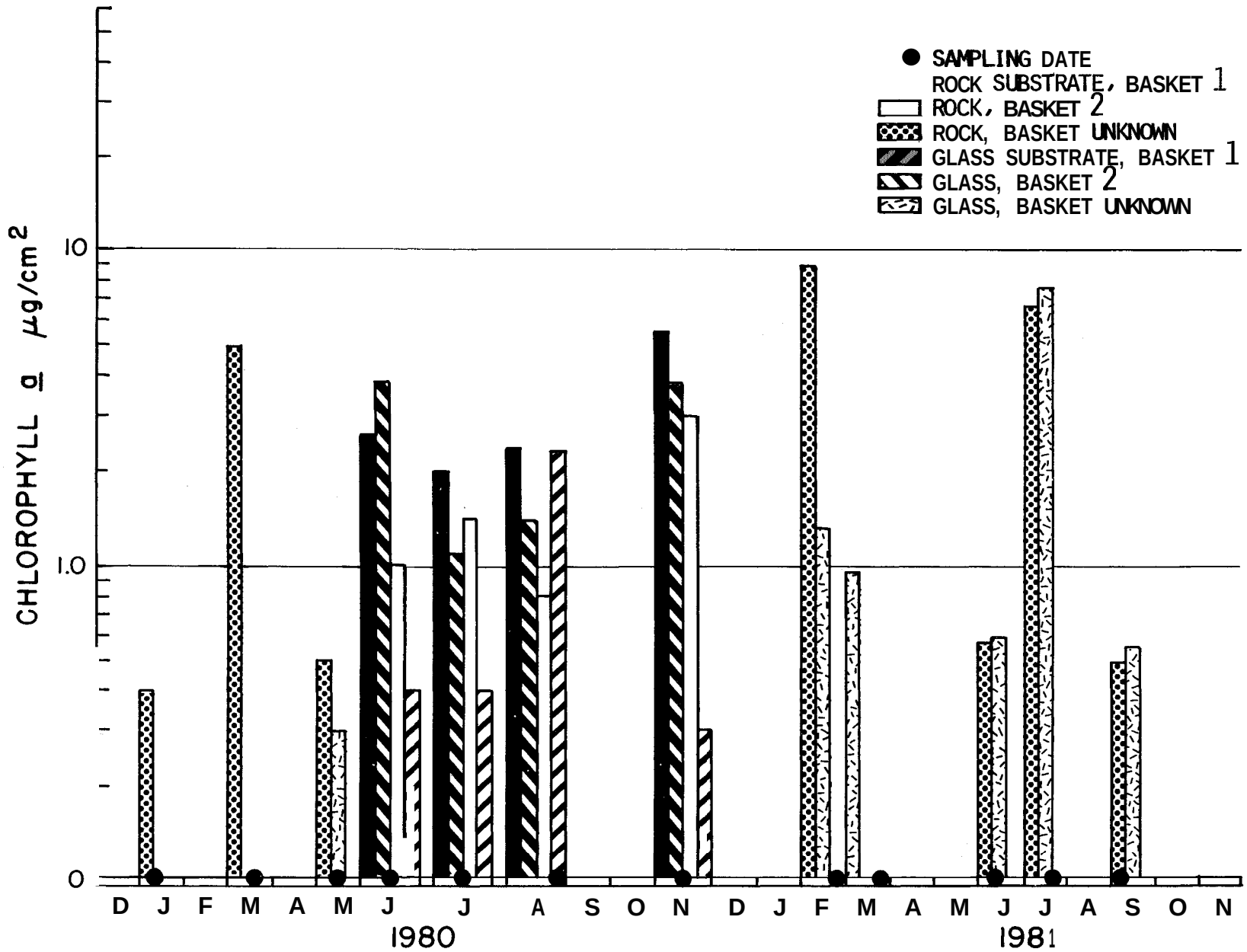

Figure D-8. Upriver station Spokane River periphyton chlorophyll a

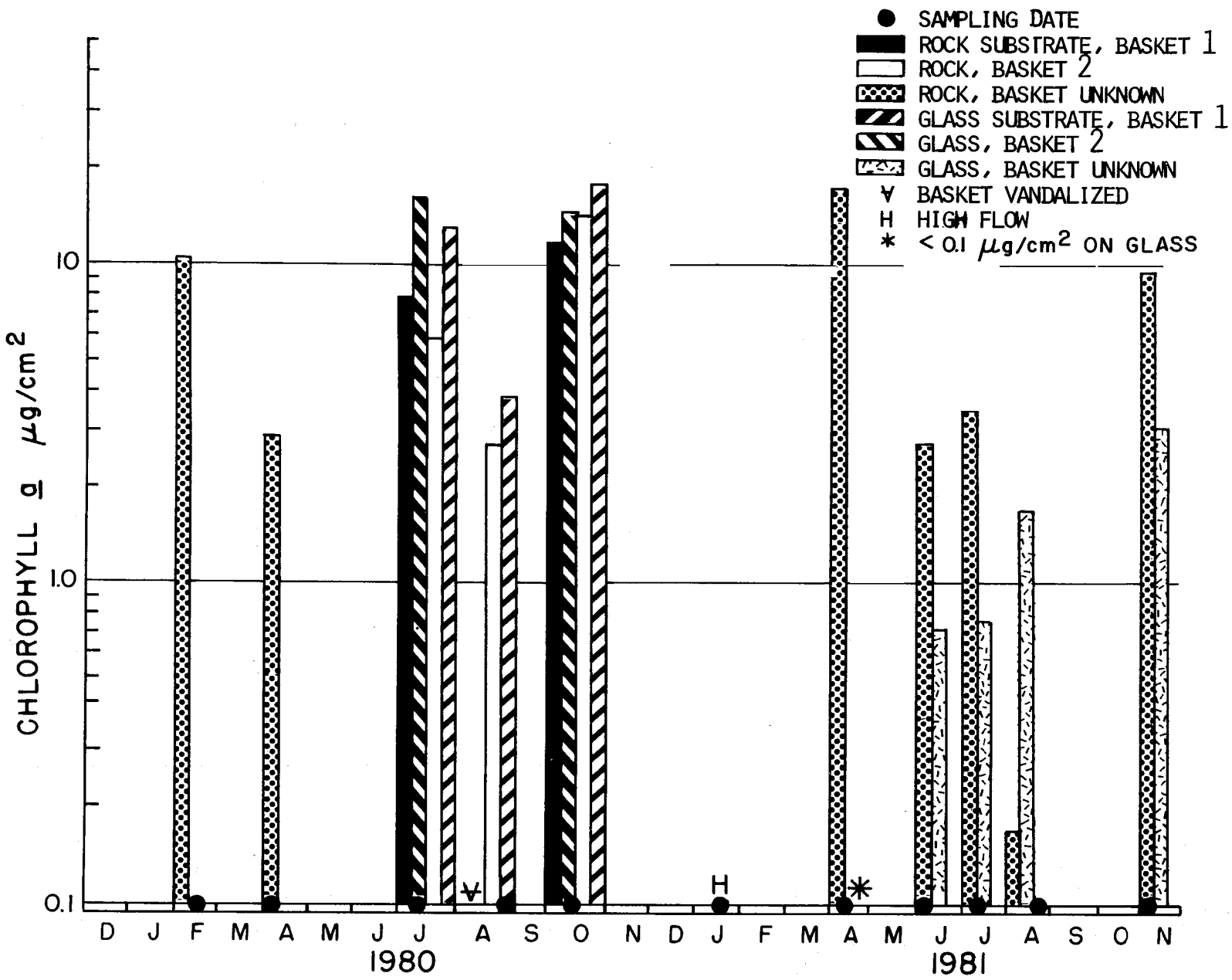

Figure D-9. Greene station Spokane River periphyton chlorophyll a

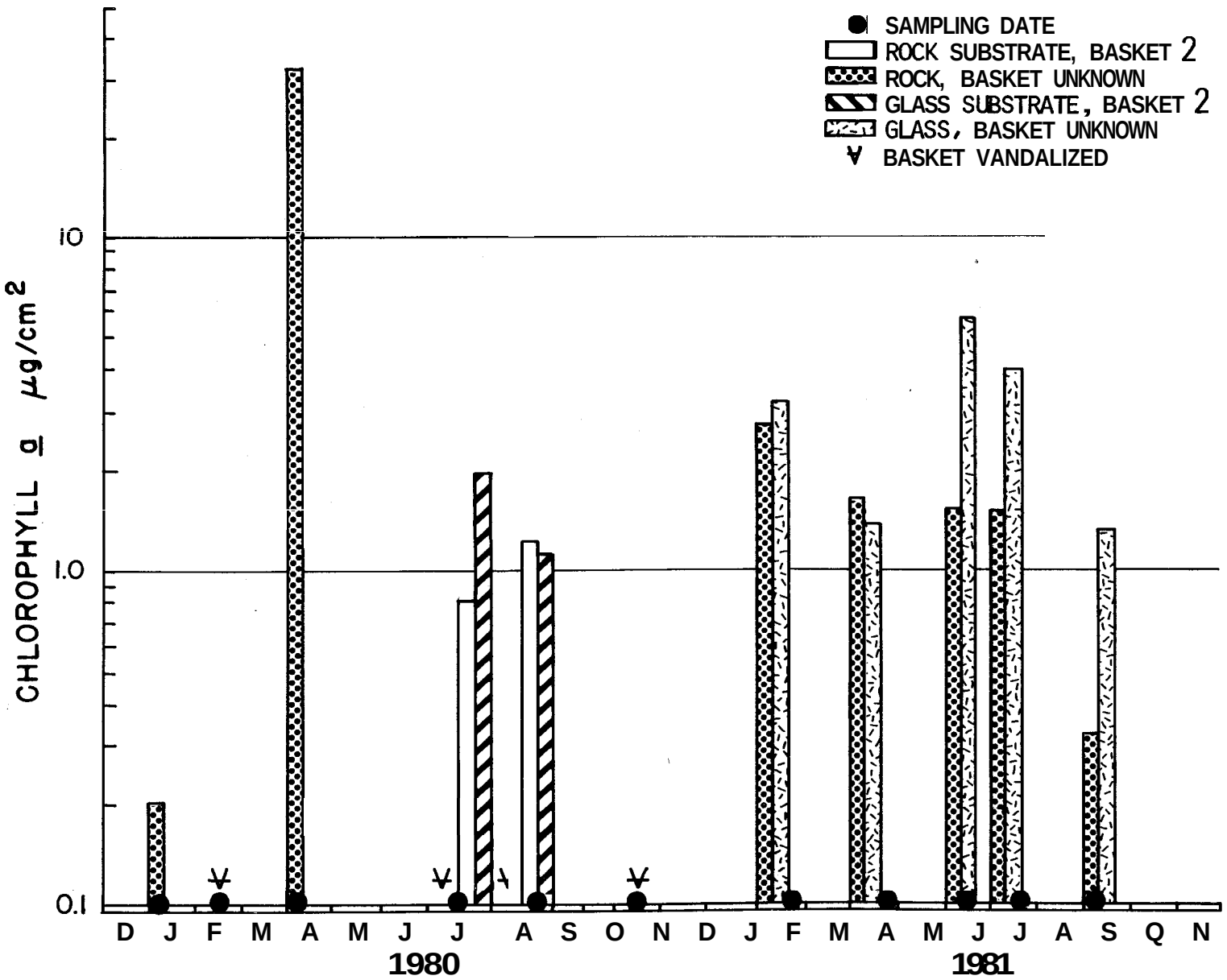

Figure D-10. Gonzaga station Spokane River periphyton chlorophyll a.

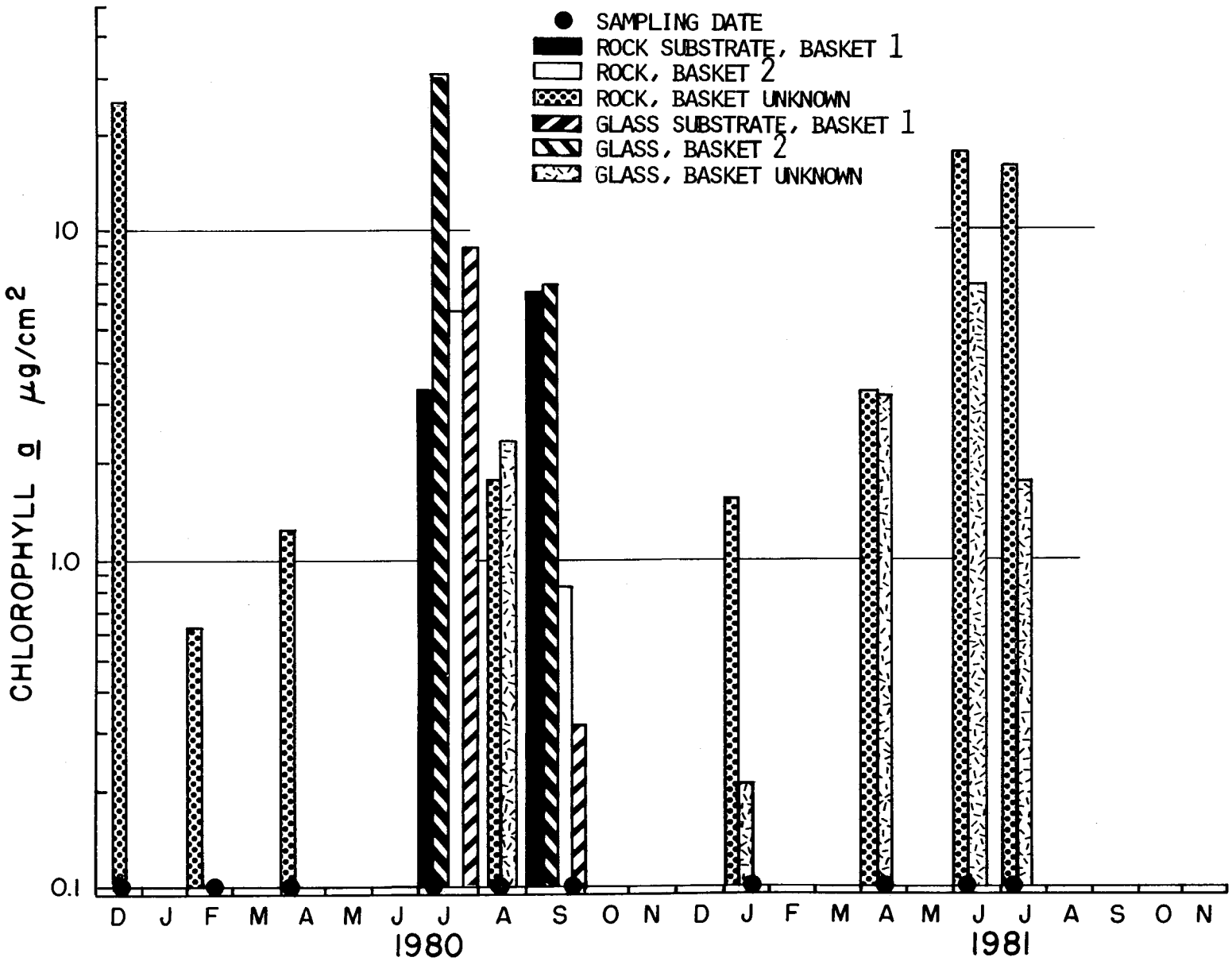

Figure D-11. Hangman station Spokane River periphyton chlorophyll a

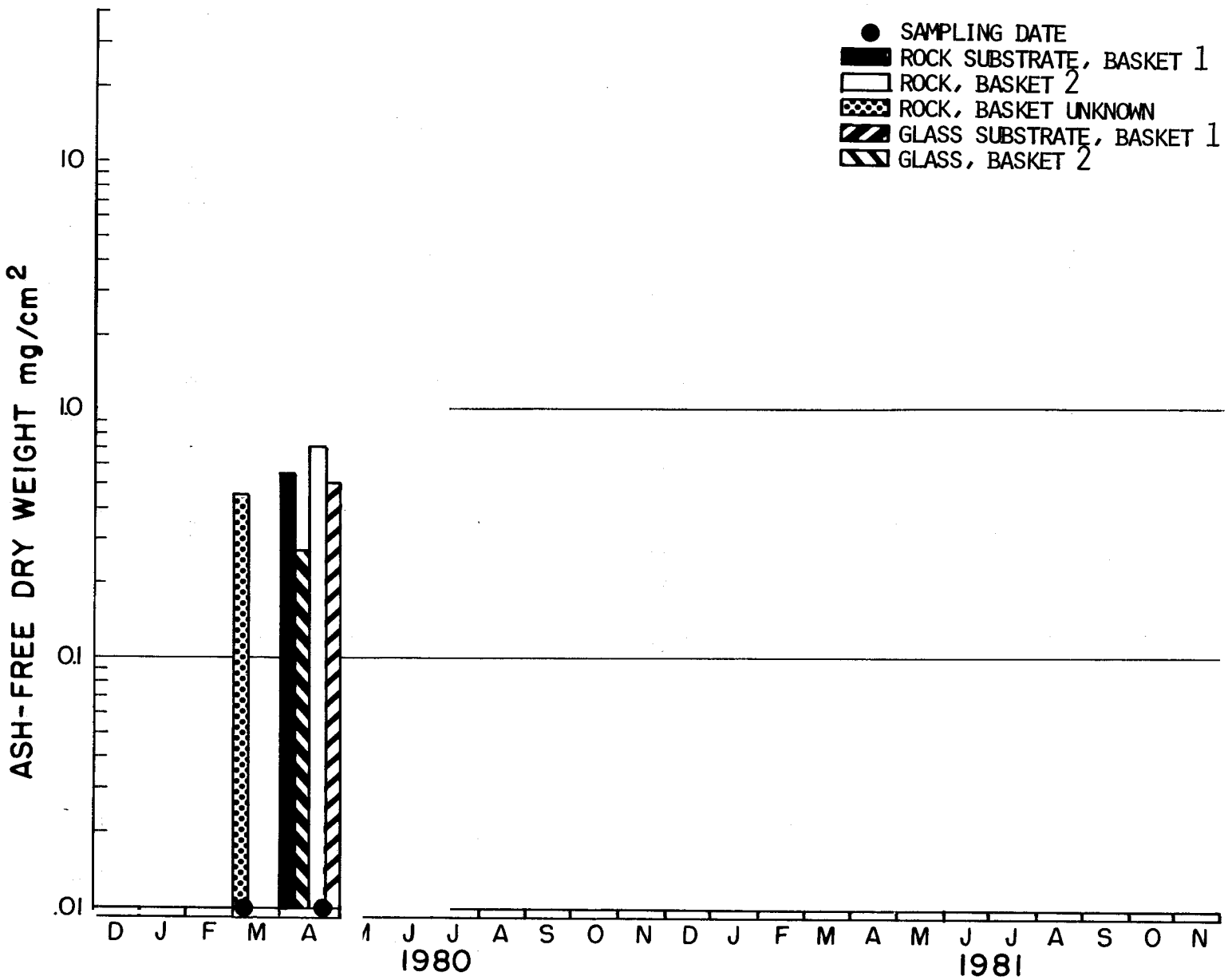

Figure E-1. Stateline station Spokane River periphyton ash-free dry weight

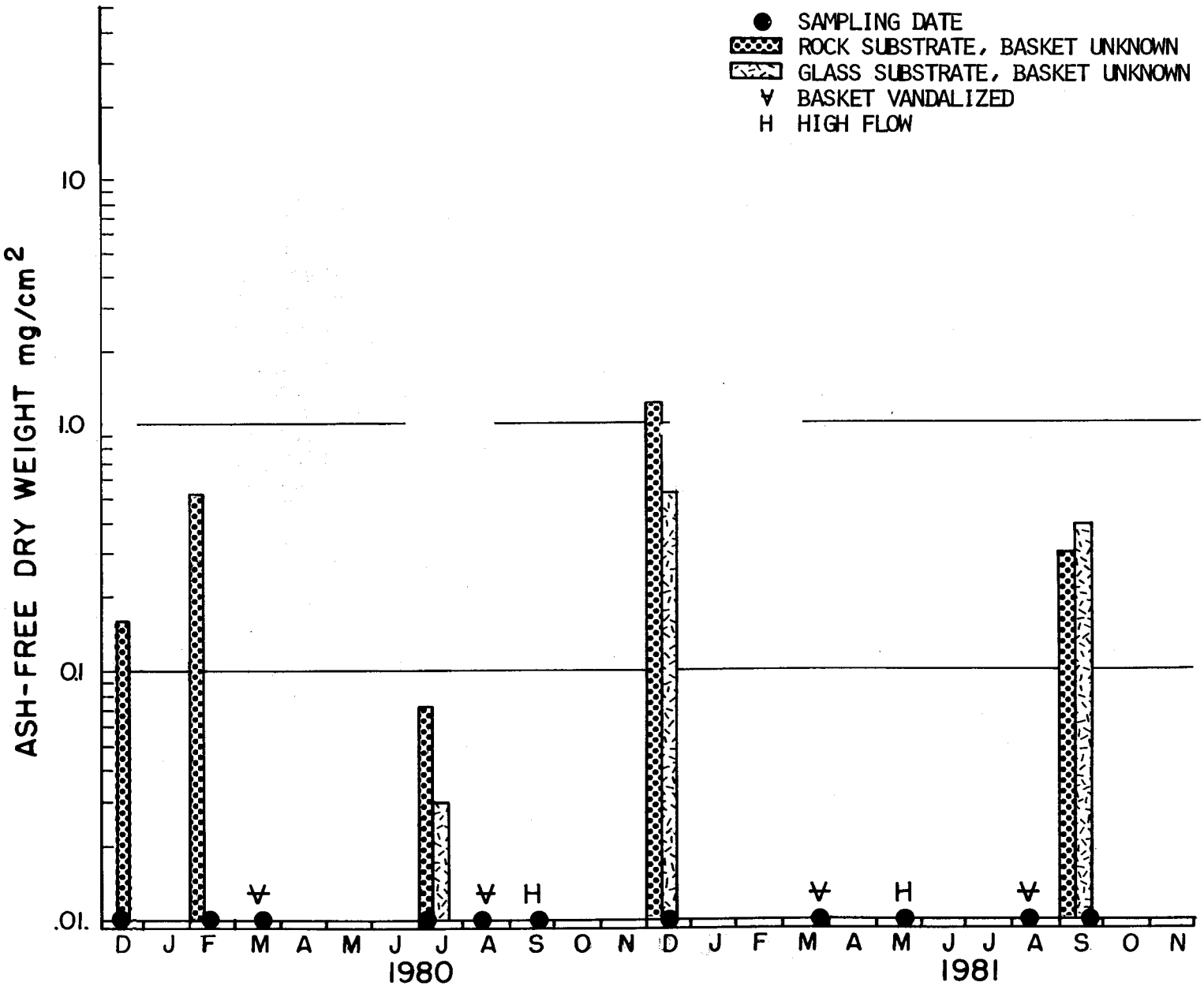

Figure E-2. Harvard I station Spokane River periphyton ash-feee dry weight

APPENDIX E

Periphyton Ash-Free Dry Weight Data of the Upper Spokane River

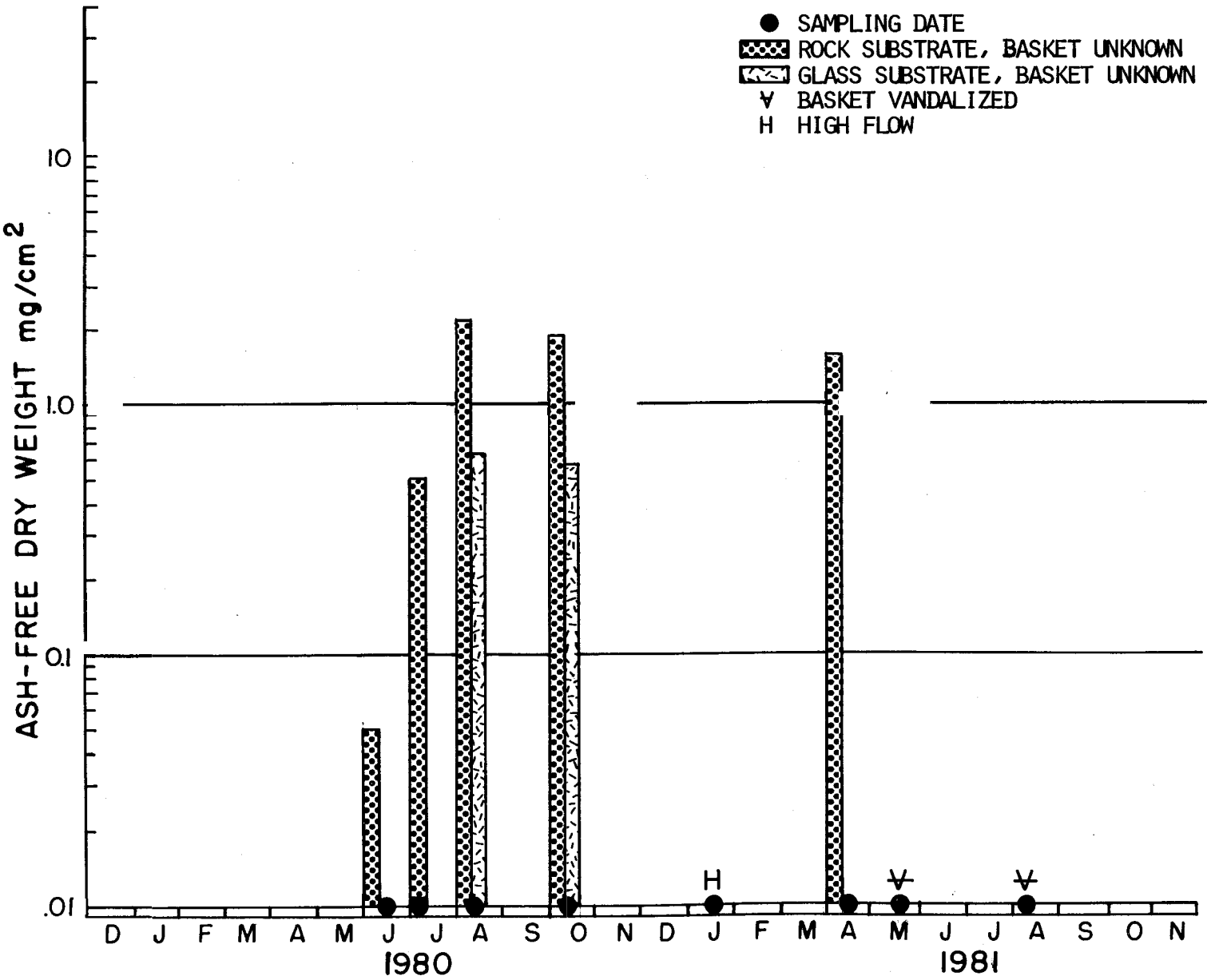

Figure E-3. Harvard II station Spokane River periphyton ash-free dry weight

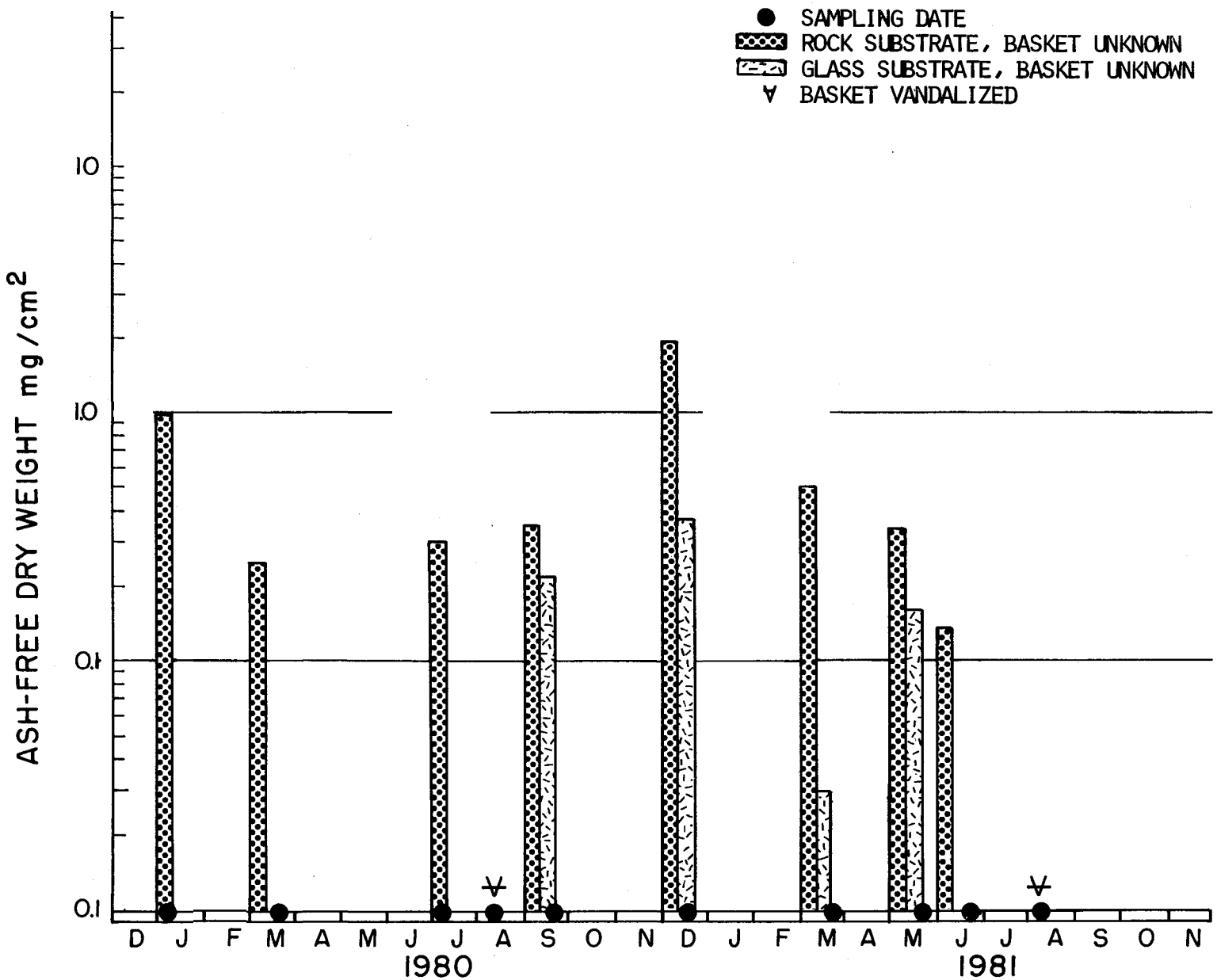

Figure E-4. Barker station Spokane River periphyton ash-free dry weight

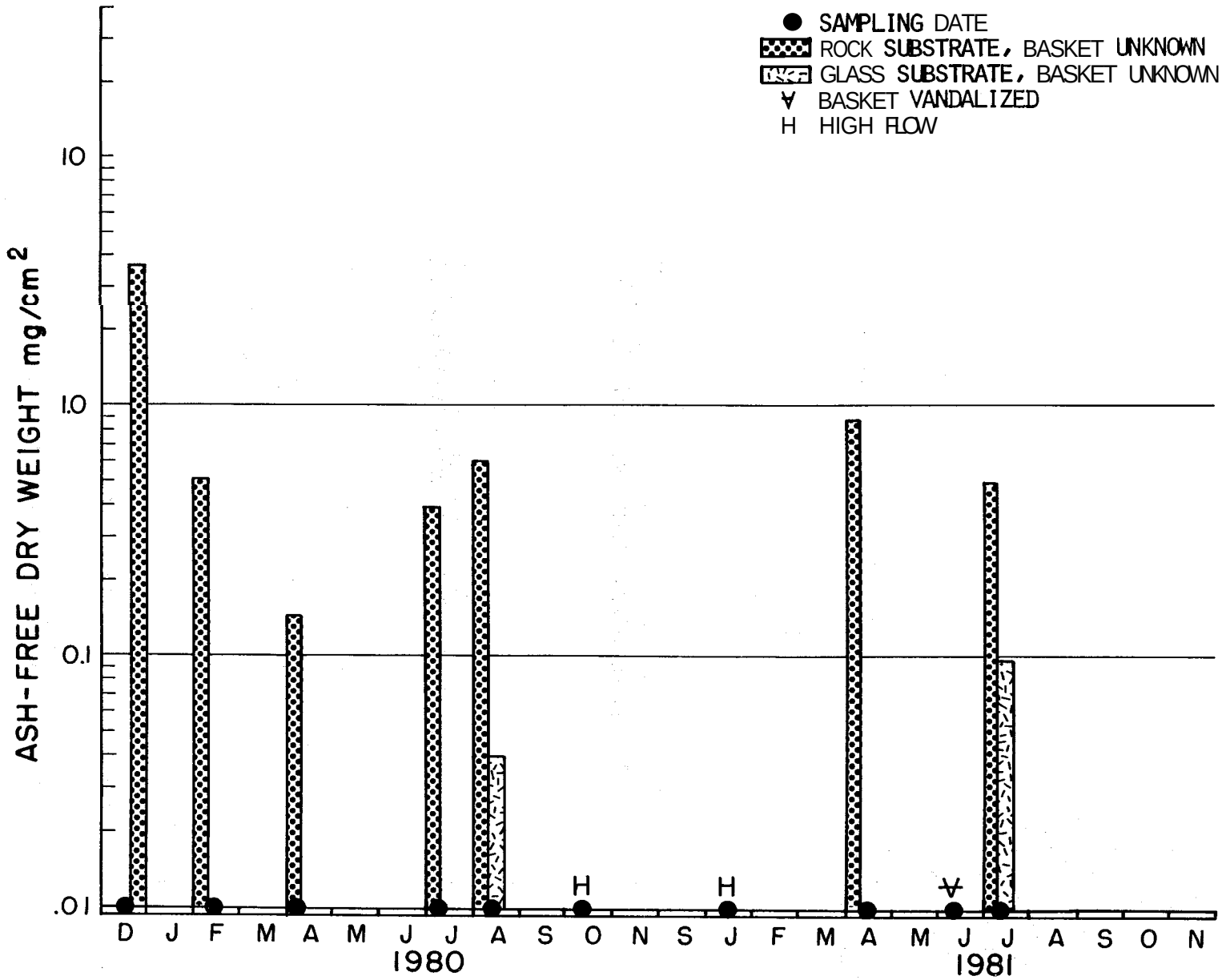

Figure E-5. Sullivan station Spokane River periphyton ash-free dry weight

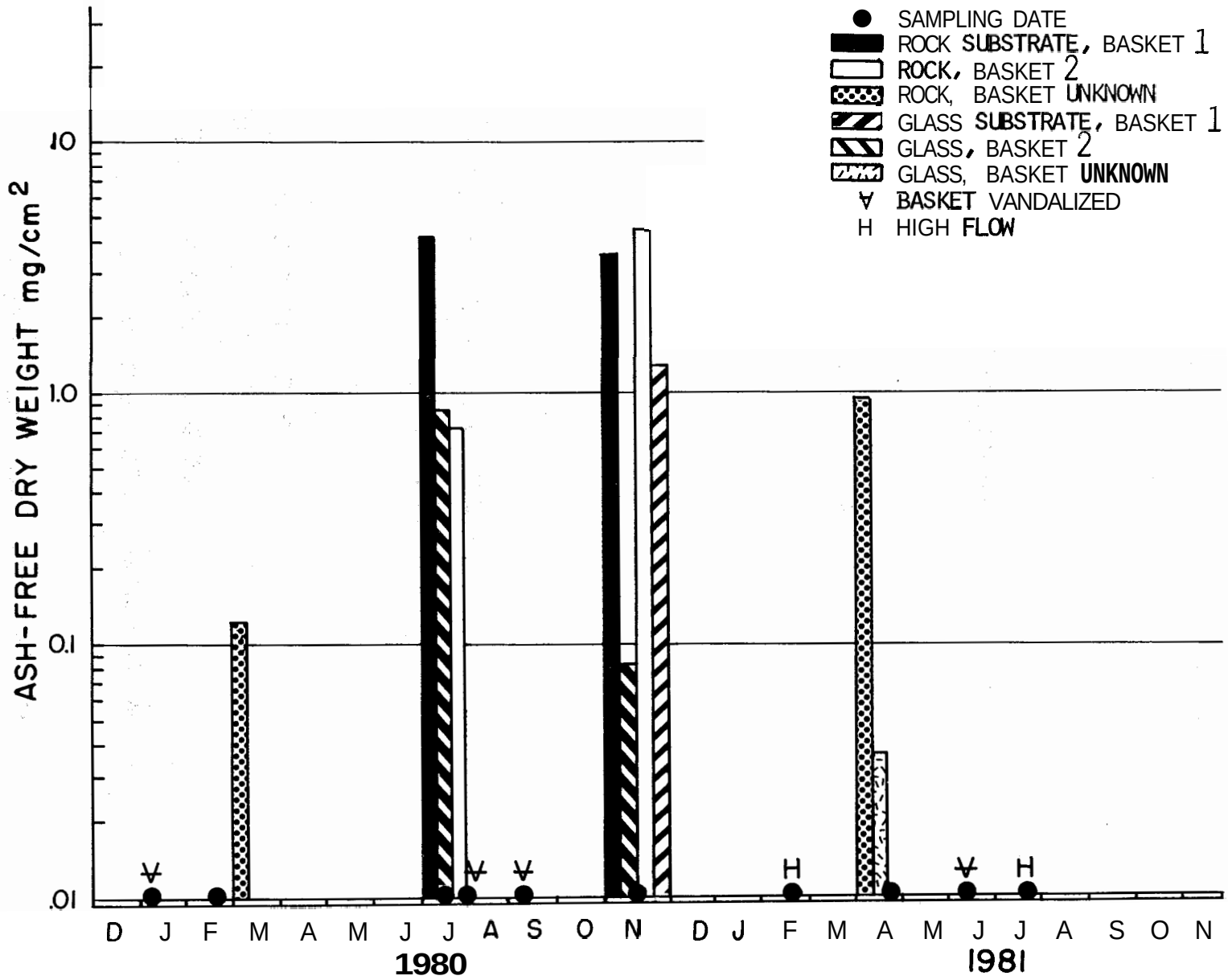

Figure E-6. Euclid station Spokane River periphyton ash-free dry weight

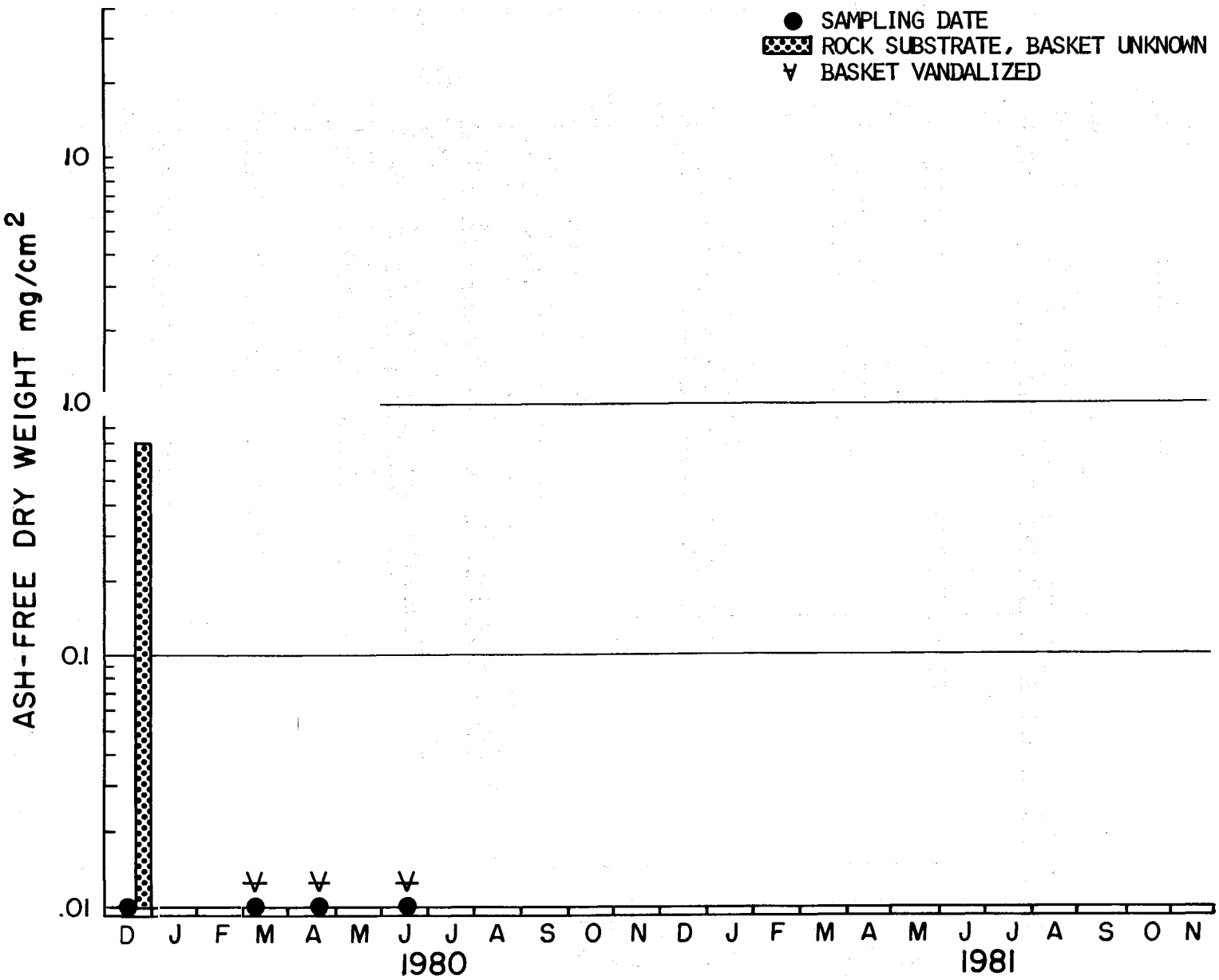

Figure E-7. Plantes Ferry station Spokane River periphyton ash-free dry weight

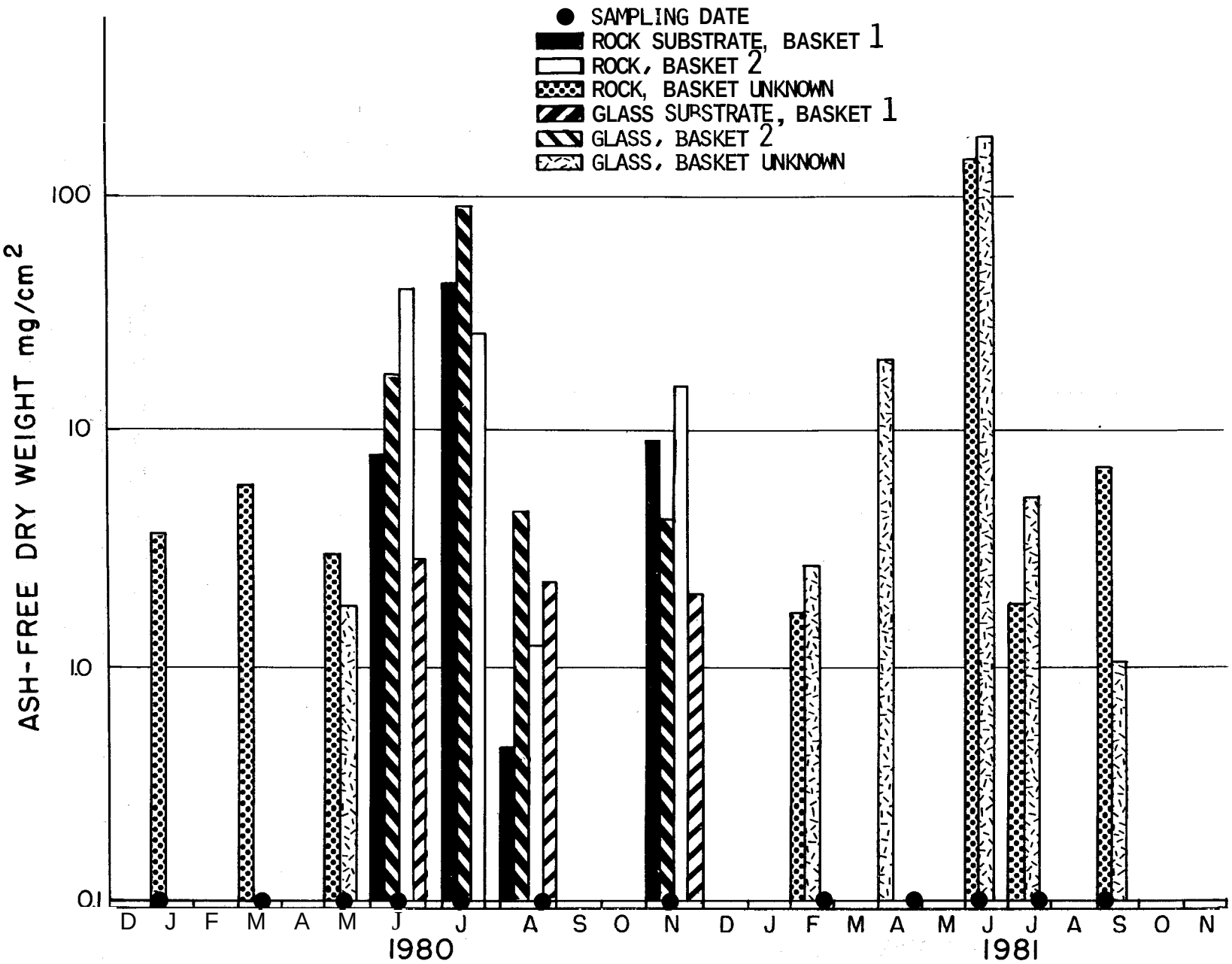

Figure E-8. Upriver station Spokane River periphyton ash-free dry weight

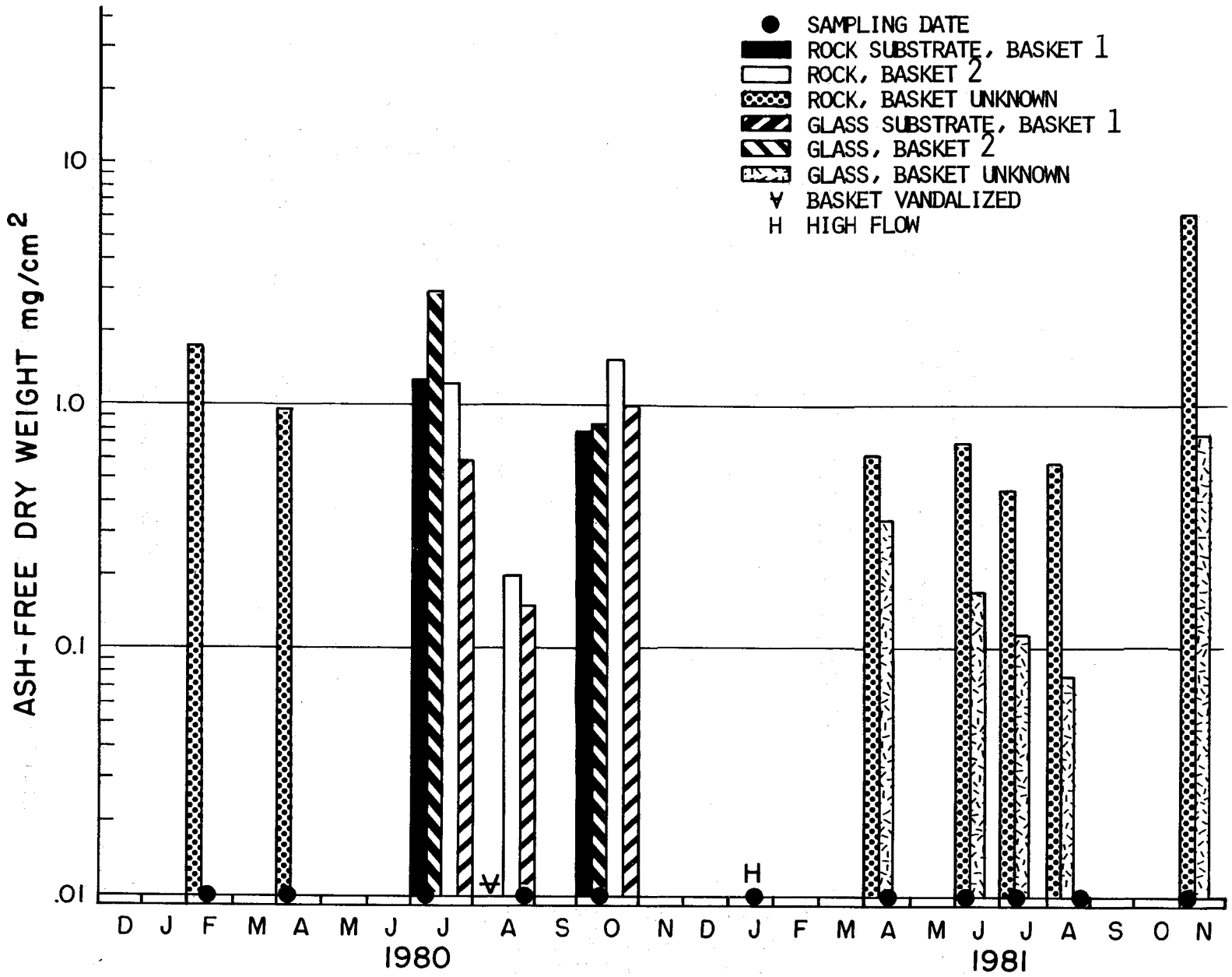

Figure E-9. Greene station Spokane River periphyton ash-free dry weight

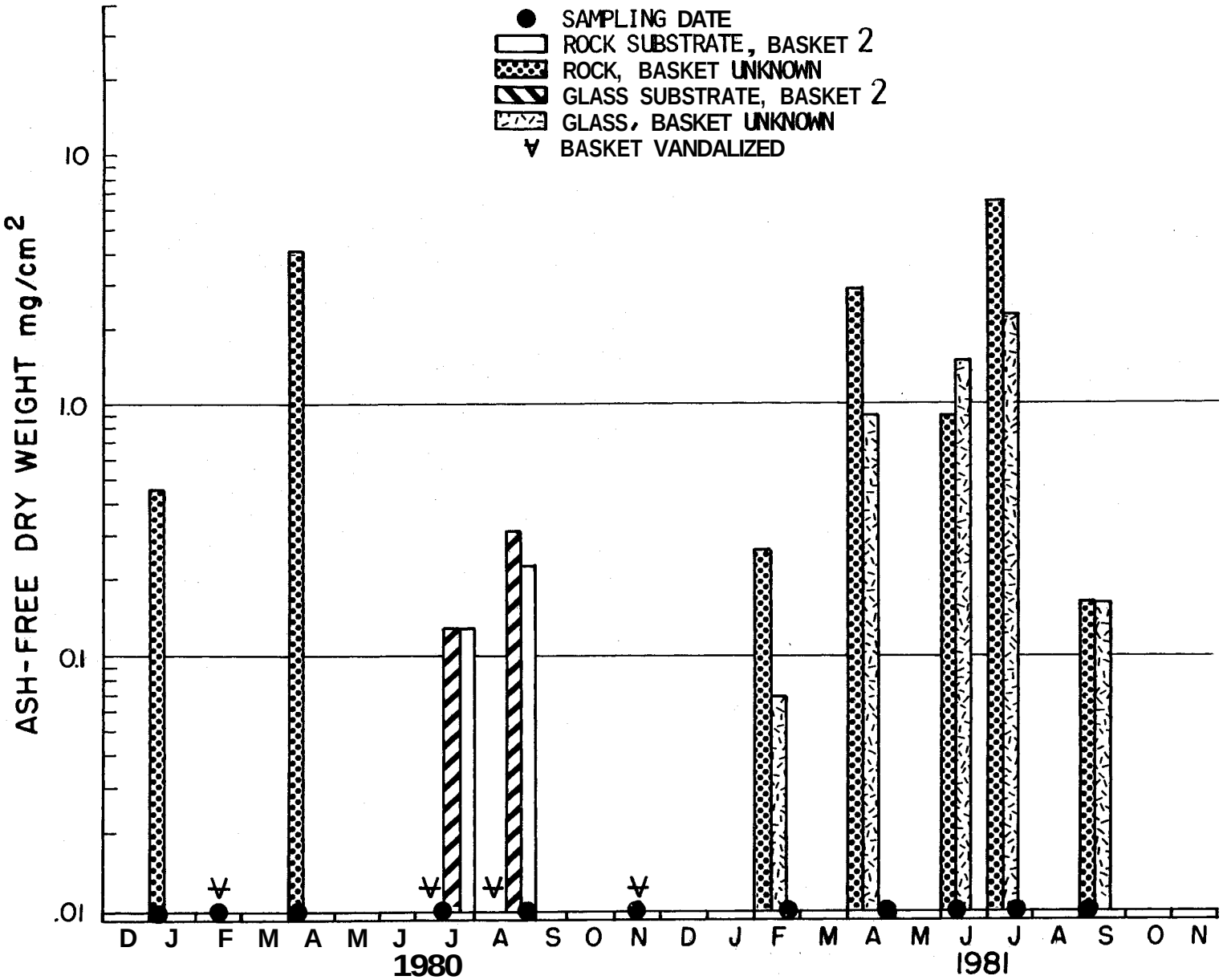

Figure E-10. Gonzaga station Spokane River periphyton ash-free dry weight

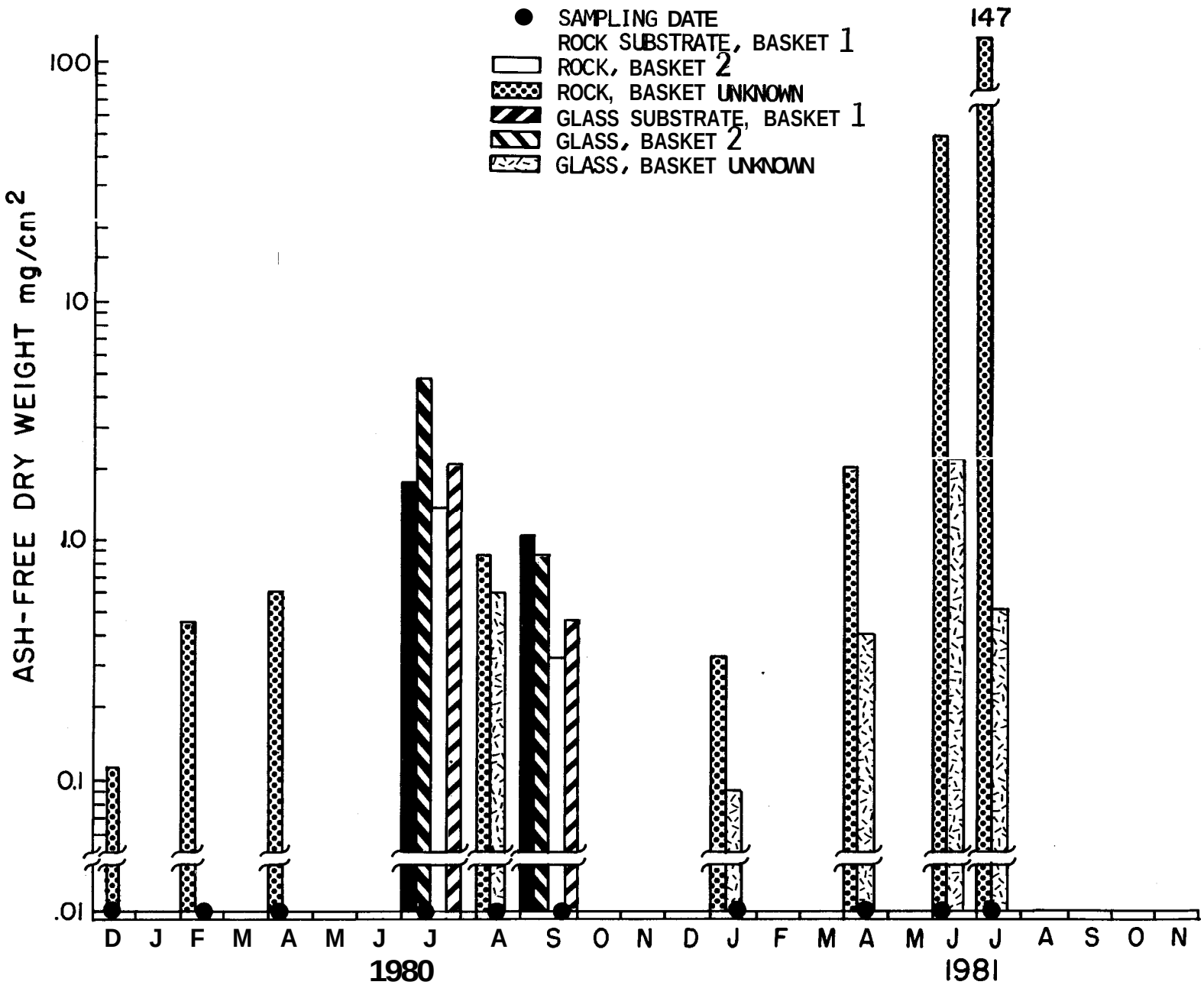

Figure E-11. Hangman station Spokane River periphyton ash-free dry weight

APPENDIX F

Macroinvertebrate Data

of the Upper Spokane River

Table F-1. Macroinvertebrates (#/m^2)

STATION: Stateline COLONIZATION PERIOD:	1-4-80/ 3-5-80		3-5-80/ 4-21-80		3-5-81/ 4-21-83	
Sampler	M-P	R	M-P	R	M-P	R
Ephemeroptera						
Baetidae						
Baetis sp.	11	15		7		
Trichoptera						
Hydropsychidae						
Hydropsyche spp.						
Cheumatopsyche sp.						11
Immature						
Pupa						
Limnephilidae						
Onocosmoecus sp.	22					
Dicosmoecus sp.	11	15	32			
Type A				7	43	
Leptoceridae						
Ceracela sp.						
Nectopsyche sp.						
Polycentropodidae						
Polycentropus sp.						
Hydroptilidae						
Oxyethira sp.						
Agraylea sp.						
Rhyacophilidae						
Rhyacophila sp.						
Phryganeidae						
Phryganea sp.						
Plecoptera						
Perlodidae						
Arcynopteryx sp.						
Odonata						
Coenagrionidae						
Ischnura sp.						
Enallagma sp.						
Aeshnidae						
Aeshna sp.						
Lepidoptera						
Pyralidae						
Parargyractis sp.						
Arctiidae sp.						
Coleoptera						
Amphizoidae						
Amphizoa sp.						
Elmidae						
Microcylloepus sp.						
Unidentified						
Hemiptera						
Gerridae						
Homoptera						
Aphidae						
Hymenoptera						
Trichagramnatidae						
Diptera						
Empididae						
Chelifera sp.						
Muscidae						
Tipulidae						
Antocha sp.						
Dicranota sp.						
Simuliidae						
Simulium sp.						
Chironomidae						
Tanypodinae						
Pentaneuriini		21				
Marcpelopiini						
Chironominae						
Chironomini						
Tanytarsini						
Orthocladiinae						
Orthocladiini	95	74	46	394	93	116
Corynoneurini					16	
Diamesinae						
Diamesini	23	10	8	263	31	78
Protanypini						
Gastropoda						
Physidae						
Physa sp.	21					
Isopoda						
Asellidae						
Asellus militaris						
Hyaracarina						
Oligochaeta						
Hirudinea						
Turbellaria						
Coelenterata						
Hydriaae						
TOTAL:	183	135	86	671	183	205
DIVERSITY ($\bar{d}$)	2.07	1.87	1.33	1.12	1.73	1.22

M-P - Multiplate
R - Rock

Table F-1. **Macroinvertebrates** (#/m^2) **- continued**

STATION: Harvard I										
COLONIZATION PERIOD:	11-12-79/ 12-16-79		12-16-79/ 2-18-80		3-22-80/ 7-12-80		8-12-80/ 10-10-80		9-24-80 12-17-80	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera										
Baetidae										
Baetis sp.	108	749	215	1033		459		15	266	952
Trichoptera										
Hydroprychidae										
Hydropsyche spp.						732		81	37	22
Cheumatopsyche sp.						22		37	15	59
Immature								200	22	
Pupa						60				
Limnephilidae										
Onocosmoecus sp.										
Dicosmoecus sp.										
Type A										
Leptoceridae										
Ceracela sp.	21	46		7				126	59	52
Nectopsyche sp.										
Polycentropodidae										
Polycentropus sp										
Hydroptilidae										
Oxyethira sp.										
Agraylea sp.								22		
Rhyacophilidae										
Rhyacophila sp.									15	44
Phryganeidae										
Phryganea sp.										
Plecoptera										
Perlodidae										
Arcyncpteryx sp.										
Odonata										
Coenagrionidae										
Isthnura sp.										
Enallagma sp.										
Aeshnidae										
Aeshna sp.										
Lepidoptera										
Pyralidae										
Parargyractis sp.		7								
Arctiidae sp.										
Coleoptera										
Amphizoidae										
Amphizoa sp.										
Elmidae										
Microcylloepus sp.						22				
Unidentified										
Hemiptera										
Gerridae						7				
Homoptera										
Aphidae										
Hymenoptera										
Trichogramnatidae										
Diptera										
Empididae										
Chelifera sp.										
Muscidae										
Tipulidae										
Antocha sp.	11	7		15					244	347
Dicranota sp.										
Simuliidae										
Simulium sp.		46		147		200			30	133
Chironomidae										
Tanypodinae										
Pentaneuriini						6		33	81	
Maropelopiini										
Chironominae										
Chironomni				181		3				
Tanytarsini										
Orthocladiinae										
Orthocladiini	75	222	20					107	689	33
Corynoneurini						19				
Diamesinae										
Diamesini		79	98	205				8	41	33
Protanypini										
Gastropoda										
Physidae										
Physa sp.									7	
Isopoda										
Asellidae										
Asellus militaris										
Hydracarina										
Olignochaeta										
Hirudinea										
Turbellaria								15		
Cwlenterata										
Hydridae									7	
TOTAL:	215	1156	333	1588		1530		644	1513	1675
DIVERSITY ($\bar{d}$):	1.58	1.59	1.77	1.56		2.11		2.49	2.44	1.99

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Harvard II COLONIZATION PERIOD:	3-22-80/ 6-18-80		3-22-80/ 7-2-80		7-2-80/ 8-12-80		8-12-80/ 10-10-80		8-12-80/ 10-10-80		1-20-81/ 4-16-31	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera												
Baetidae												
Baetis sp.	22		11						11		194	170
Trichoptera												
Hydropsychidae												
	204	81	172	140			215	39	32		22	37
	441	46	22	30	22				11		11	15
mature			172									7
Pupa	86	7	237	15								
Limnephilidae												
Onocosmoecus sp.												
Dicosmoecus sp.											32	
Type A												
Leptoceridae												
Ceracela sp.							54	53	54			7
Nectopsyche sp.					108							
Polycentropodidae												
Polycentropus sp.				7								
Hydroptilidae												
Oxyethira sp.								22				
Agrayiea sp.												
Rhyacophilidae												
Rhyacophila sp.												
Phryganeidae												
Phryganea sp.												
Plecoptera												
Perlodidae												
Arcynopteryx sp.												
Odonata												
Coenagrionidae												
Ischnura sp.												
Enallagma sp.												
Aeshnidae												
Aeshna sp.												
Lepidoptera												
Pyralidae												
Parargyractis sp.							11	22	11			
Arctiidae sp.												
Coleoptera												
Amphizoidae												
Amphizoa sp.												
Elmidae												
Microcylloepus sp.								7				
Unidentified												
Homoptera												
Aphidae			11									
Hymenoptera												
Trichogrammatidae	11											
Diptera												
Empididae												
Chelifera sp.												
Muscidae												
Tipulidae												
Antocha sp.							11					
Dicranota sp.												
Simuliidae												
Simulium sp.	32	7		7			22					7
Chironomidae												
Tanypadinae												
Pentaneuriini		9	10	14					313			
Maropelopiini												
Chironominae												
Chironomini	626	36	52						782			
Tanytarsini	52	9										
Orthocladiinae												
Orthocladiini		91	202	140	2444		506	3791	626		194	339
Corynoneurini												
Diamesinae												
Diamesini		9			611			421			64	
Protanypini												
Gastropoda												
Physidae												
Physa sp.												
Isopoda												
Asellidae												
Asellus militaris												
Hydracarina												
Oligochaeta									11			
Hirudinea												
Turbellaria	32		11						11			
Coelenterata												
Hydridae							54		75		11	
TOTAL	1506	295	900	353	3185		873	4355	1937		528	582
DIVERSITY (d)	2.02	2.43	1.98	1.83	0.96		1.74	0.73	2.11		2.10	1.55

M-P - Hultiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Barker COLONIZATION PERIOD:	11-12-79/ 1-4-80		1-4-80/ 3-2-80		3-22-80/ 7-2-80		3-22-80/ 7-2-80		8-12-80/ 9-24-80		8-12-80/ 9-24-60		9-24-80/ 12-17-00		12-17-80/ 3-27-81		3-27-81/ 5-19-81		5-19-81/ 6-25-81	
Sampler	M-		M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-p	R	M-P	R	M-P	R	M-P	R
Ephemeroptera																				
Baetidae																				
Baetis sp.	112	1498	387	1432	1270	30	496	310		46		15	377		829		108	44		
Trichoptera																				
Hydropsychidae																				
Hydropsyche spp.	11	22			3056	74	377	2002		504		812			54		161	96		
Cheumatopsyche sp.	65	105		22	355		312	119		74					43		75			
Immature					269		215													
Pupa					258	46	226	60				7								
Limnephilidae																				
Onocosmoecus sp.				88	108		11								22		11	7		
Dicosmoecus sp.				15	11															
Type A		7																		
Leptoceridae																				
Ceracela sp.			11	46			11			74		7	54		409					
Nectopsyche sp.																				
Polycentropodidae																				
Polycentropus sp.																				
Hydroptilidae																				
Oxyethira sp.																				
Agraylea sp.																				
Rhyacophilidae																				
Rhyacophila sp.															22					
Phryganeidae																				
Phryganea sp.																				
Plecoptera																				
Perlodidae																				
Arcynopteryx sp.					22		11	22												
Odonata																				
Caeoagricnidae																				
Ischnura sp.																				
Enallagma sp.																				
Aeshnidae																				
Aeshna sp.																				
Lepidoptera																				
Pyralidae																				
Parargyractis sp.				7													11			
Arctiidae sp.																				
Coleoptera																				
Amphizoidae																				
Amphizoa sp.																				
Elmidae																				
Microcylloepus sp.																				
Unidentified																				
Hemiptera																				
Gerridae												7								
Homoptera																				
Apnidae																				
Hymenoptera																				
Trichogrammatidae																				
Diptera																				
Empididae																				
Chelifera sp.																				
Muscidae																				
Tipulidae																				
Antocha sp.								30							32		54			
Dicranota sp.																				
Simuliidae																				
Simulium sp.	344	1295	76	147	119			22		7		7	151		43		54	15		
Chimere																				
Tanypodinae																				
Pentaneurini					124		807			90										
Maropelopiini																				
Chironominae																				
Chironomini			13	386	68		215			90					24					
Tanytarsini																				
Orthocladiinae																				
Orthocladiini	86	532	67	386	34		108	141		721		599	366		36		140	30		22
Corynoneurini																				
Diamesinae																				
Diamesini			200	1157									183		36					
Protanypini																				
Gastropoda																				
Physidae																				
Physa sp.																				
Isopoda																				
Asellidae																				
Asellus militaris																				
Hydracarina												15								
Oligochaeta																				
Hirudinea										22										
Turbellaria					11		32													
Coelenterata																				
Hydridae										46										
TOTAL:	618	3459	754	3624	5703	150	2821	2136		1674		1469	1131		1550		614	192		22
DIVERSITY ($\bar{d}$):	1.80	1.68	1.83	2.22	1.72	1.49	1.41	0.7[illegible]		2.29		1.28	2.08		2.06		2.63	1.87		0.0

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m^2) - continued

STATION: Sullivan COLONILZTION PERIOD:	11-12-79/ 12-16-79		12-16-79/ 2-18-80		2-18/80/ 4-4-80		4-4-80/ 7-8-80		7-A-801 8-12-80		1-20-81/ 4-16-81		6-5-81/ 7-9-81	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeruptera														
Baetidae														
Baetis sp.	118	39	732	2545	65	287	527	74	204		129	15	32	30
Trichoptera														
Hydropsychidae														
Hydropsyche sp	11		11		43	60	1119	126	463		32			118
Cheumatopsyche sp.					11			7	108			15		
Immature				7			1108						11	
Pupa							54							
Limephilidae														
Onocosnoecus sp.			11											
Dicosmoecus sp.													11	
Type A														
Leptoceridae														
Ceracela sp.	11								140					
Nectopsyche sp.														
Polycentropodidae														
Polycentropus sp.														
Hydroptilidae														
Oxyethira sp.														
Agraylea sp.														
Rhyacophilidae														
Rhyacophila sp.														
Phryganeidae														
Phryganea sp.														
Plecoptera														
Perlodidae														
Arcynopteryx sp.									11		11			
Odonata														
Coenagriomdae														
Ischnurd sp.									11					
Enallagma sp.														
Aeshnidae														
Aeshna sp.														
Lepidoptera														
Pyralidae														
Pararqyractis sp.												7		
Arctiidae sp.														
Coleoptera														
Amphizoidae														
Amphizoa sp.														
Elmidae														
Microcylloepus sp.														
Unidentified														
Hemiptera														
Gerridae														
Homoptera														
Apnidae														
Hymenoptera														
Trichogrammatidae														
Oiptera														
Empididae														
Chelifera sp.														
Muscidae														
Tipulidae														
Antocha sp.	11			7		30			22			7		
Dicranota sp.														
Simuliidae														
Simulium sp.			11	39	11	665	43		43					7
Chironomidae														
Tanypodinae														
Pentaneuriini													17	9
Maropelopiini														
Chimnominae														
Chironomini													34	
Tanytarsini														
Orthocladiinae														
Orthocladiini	161	133	151	742	52	488	151	250	2156		290	1304	67	28
Corynoneurini														
Diamesinae														
Diamesini				85		325			114		43	489		
Protanypini					13									
Gastropoda														
Physidae														
Physa sp.		15												
Isopoda														
Aseilidae														
Asrllus milrtaris														
Hydracarina														
Olignochaeta														
Hirudinea														
Turoellaria									11					
toelenterata														
Hydridae								15						
TOTAL:	312	187	916	3425	195	1855	3002	479	3283		505	1837	172	192
DIVERSITY ($\bar{d}$):	1.53	1.11	0.92	1.04	2.24	2.15	1.05	1.74	1.78		1.54	1.03	2.23	1.64

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Euclid COLONIZATION PERIOD:	11-12-79/ 1-4-80		1-4-80/ 3-5-80		3-5-80/ 7-16-80		3-22-80/ 7-16-80		7-29-80/ 9-9-80		9-9-80/ 11-14-80		9-9-80/ 11-14-80	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera														
Baetidae														
Baetis sp.	118	15	1818	1019	172		215		603	88	430	502		347
Trichoptera														
Hydropsychidae														
Hydropsyche spp.			11	15	1345	30			516	340	32	88		44
Cheumatopsyche sp.	21				108	15					237	30		22
Immature					108									
Pupa					32									
Limnephilidae														
Onocosmoecus sp.														
Dicosmoecus sp.							11							
Type A														7
Leptoceridae														
Ceracela sp.					22		11		86			7		59
Nectopsyche sp.														
Polycentropodidae														
Polycentropus sp.														
Hydroptilidae														
Oxyethira sp.														
Agraylea sp.														
Rhyacophilidae														
Rhyacophila sp.														
Phryganeidae														
Phryganea sp.														
Plecoptera														
Perlodidae														
Arcynopteryx sp.					54		11		43					
Odonata														
Coenagrionidae														
Ischnura sp.														
Enallagma sp.														
Aeshnidae														
Aeshna sp.														
Lepidoptera														
Pyralidae														
Parargyractis sp.												7		
Arctiidae sp.														
Coleoptera														
Amphizoidae														
Amphizoa sp.										7				
Elmidae														
Microcylloepus sp.						7								
Unidentified	11													
Hemiptera														
Gerridae														
Homoptera														
Aphidae														
Hymenoptera														
Trichogramatidae								7						
Diptera														
Empididae														
Chelifera sp.						7								
Muscidae														
Tipulidae														
Antocha sp.					11						75	243		133
Dicranota sp.														
Simuliidae														
Simulium sp.	140	46	86	125							108	15		15
Chironomidae	258	280	129	361				2716	2399					
Tanypodinae														
Pentaneuriini					215	327	498				51			89
Maropelopiini														
Chironomnae														
Chimnomini					72	197								
Tanytarsini														
Orthocladiinae														
Orthociadiini					466	590	1246			6275	509	922		413
Corynoneurini														
Diamesinae														
Oiamesini														354
Protanypini														
Gastropoda														
Physidae														
Physa sp.							11	22		7				
Isopoda														
Asellidae														
Asellus militaris														
Hydracarina					11		22							
Oligochaeta														
Hirudinea														
Turbellaria		53			11									7
Coelenterata														
Hydridae														
TOTAL:	548	394	2044	1520	2627	1176	2025	2745	3647	6717	1442	1814		1490
DIVERSITY (d):					2.09	1.75	1.51			0.41	2.27	1.50		2.61

M-P - Multiplate
R - Rock

Table F-1. **Macroinvertebrates (#/m²) - continued**

STATION: Planter Ferry				
COLONIZATION PERIOD:	11-12-79/ 12-16-79		12-16-79/ 3-5-80	
Sampler	M-P	R	M-P	R
Ephemeroptera				
Baetidae				
Baetis sp.	398	893	247	22
Trichoptera				
Hydropsychidae				
Hydropsyche spp.				
Cheumatopsyche sp.				
Immature				
Pupa				
Limnephilidae				
Onocosmoecus sp.				
Dicosmoecus sp.				
Type A				
Leptoceridae				
Ceracela sp.				
Nectopsyche sp.				
Polycentropodidae				
Polycentropus sp.				
Hydroptilidae				
Oxyethira sp.				
Agraylea sp.				
Rhyacophilidae				
Rhyacophila sp.				
Phryganeidae				
Phryganea sp.				
Plecoptera				
Perlodidae				
Arcynopteryx sp.				
Odonata				
Coenagrfonidae				
Ischnura sp.				
Enallagma sp.				
Aeshnidae				
Aeshna sp.				
Lepidoptera				
Pyralfdae				
Parargyractis sp.				
Arctiidae sp.				
Coleoptera				
Amphizoidae				
Amphizoa sp.				
Elmidae				
Microcylloepus sp.				
Unidentified				
Hemiptera				
Gerridae				
Homoptera				
Aphidae				
Hymenoptera				
Trichogramnatfdae				
Diptera				
Empididae				
Chelffera sp.				
Huscidae				
Tipulidae				
Antocha sp.	43	119		
Dicranota sp.				
Simuliidae				
Simulium sp.			11	21
Chironomidae	140			
Tanypodinae				
Pentaneuriini				
Haropelopiini				
Chironominae				
Chironomini				
Tanytarsini				
Orthocladiinae				
Orthocladiini		74	65	111
Corynoneurini				
Diamesfnae				
Diamesini				
Protanypini				
Gastropoda				
Physidae				
Physa sp.				
Isopoda				
Asellidae				
Asellus militaris				
Hydracarina				
Olignochaera				
Hirudinea				
Turbellaria				
Coelenterata				
Hydridae				
TOTAL:	581	1086	323	155
DIVERSITY (d):		0.85	0.93	1.12

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Upriver COLONIZATION PERIOD:	11-12-79/ 1-4-80		1-4-80/ 3-22-80		3-22-80/ 5-14-80		3-22-80/ 5-14-80		5-14-80/ 6-18-80		5-14-80/ 6-18-80		6-18-80/ 7-16-80		6-18-80/ 7-16-80	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P		M-P	R
Ephemeroptera																
Baetidae																
Baetis sp.								7			22		11			
Trichoptera																
Hydropsychidae																
Hydropsyche spp.											11	7	11		22	
Cheumatopsyche sp.																
Immature																
Pupa																
Limnephilidae																
Onocosmoecus sp.																
Dicosmoecus sp.												7				
Type A																
Leptoceridae																
Ceracela sp.																
Nectopsyche sp.																
Polycentropodidae																
Polycentropus sp.					22	22	11	44	11							
Hydroptilidae																
Oxyethira sp.																
Agraylea sp.																
Rhyacophilidae																
Rhyacophila sp.																
Phryganeiaae																
Phryganea sp.																
Plecoptera																
Perlodidae																
Arcynopteryx sp.																
Odonata																
Coenagrionidae																
Ischnura sp.					11		54	15							11	
Enallagma sp.																
Aeshnidae																
Aeshna sp.									11						11	
Lepidoptera																
Pyralidae																
Parargyractis sp.											11		11			
Arctiidae sp.																
Coleoptera																
Amphizoidae																
Amphizoa sp.																
Elmidae																
Microcylloepus sp.																
Unidentified																
Hemiptera																
Gerridae					11											
Homoptera																
Aphidae										15	11		11			
Hymenoptera																
Trichogrammatidae																
Oiptera																
Empididae																
Chelifera sp.																
Puscidae																
Tipulidae																
Antocha sp.																
Dicranota sp.																
Simuliidae																
Simulium sp.	75															
Chime				88		1734		1404		307	215					
Tanypodinae																
Pentaneurini							362		61							24
Maropelopiini																
Chironominae																
Chironomini							362		61						48	190
Tanytarsini									61							
Orthocladiinae																
Orrhocladiini	11		16		3142		2536		549			126	183		36	341
Corynoneurini																
Diamesinae																
Diamesini			49													
Protanypini																
Gastropoda																
Physidae																
Physa sp.					11		11		65	125	559	347			75	15
Isopoda																
Asellidae																
Asellus militaris								15								
Hydracarina																
Olignochaeta			11				32	22			32	95				
Hirudinea												7				
Turbellaria										7						7
Coelenterata																
Hydridae															32	74
TOTAL:	86		76	88	3179	1756	3368	1505	819	454	861	589	227		259	627
DIVERSITY (d̄):	0.55		1.28	0.0	0.16		1.21		1.68			1.58	1.10		2.53	1.73

M-P - Multiplate
R - Rock

Table F-1. **Macroinvertebrates (#/m²) - continued**

STATION: Upriver COLONIZATION PERIOD:	7-16-80/ 8-26-80		7-16-80/ 8-26-80		8-26-80/ 11-14-80		8-26-80/ 11-14-80		11-14-801 2-26-81		2-26-81/ 4-30-81		4-30-81/ 6-11-81		6-11-81/ 7-24-81	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera																
Baetidae																
Baetis sp.										7	22					
Trichoptera																
Hydropsychidae																
Hydropsyche spp.													11			
Cheumatopsyche sp.																
Immature																
Pupa	11															
Limnephilidae																
Onocosmoecus sp.											11		11	7		
Dicosmoecus sp.																
Type A																
Leptoceridae																
Ceracela sp.	11			7									22			
Nectopsyche sp.																
Polycentropodidae																
Polycentropus sp.	54	7	54	7				22		7						
Hydroptilidae																
Oxyethira sp.																
Agraylea sp.									11							
Rhyacophilidae																
Rhyacophila sp.																
Phryganeidae																
Phryganea sp.					11											
Plecoptera																
Perlodidae																
Arcynopteryx sp.																
Odonata																
Coenagrfonidae																
Ischnura sp.											32		11			
Enallagma sp.		7														
Aeshnidae																
Aeshna sp.	11															
Lepidoptera																
Pyralidae																
Pararqyractis sp.																
Arctiidae sp.																
Coleoptera																
Amphizoidae																
Amphizoa sp.																
Elmidae																
Microcylloepus sp.																
Unidentified																
Homoptera																
Aphidae	11	15						7			11					7
Hymenoptera																
Trichogrammatidae																7
Diptera																
Empididae																
Chelifera sp.																
Muscidae																
Tipulidae																
Antocha sp.							11				11					
Dicranota sp.																
Simuliidae																
Simulium sp.						7										
Chironomidae																
Tanypodfnae																
Pentaneuriini			21	15	22	200		42	39				32	24		26
Maropelopiini								337								
Chironominae																
Chironomim			86	21		33	176	42	78	128	244		22	24		26
Tanytarsini			21							128						
Orthocladiinae																
Orthocladiini	2023	701	195	30	22	100	662	169	667	246	5378		97	190		398
Corynoneurini																
Diamesinae																
Diamesini							44				489					133
Protanypini					11											
Gastropoda																
Physidae																
Physa sp.	11		172				11				11			229		74
Isopoda																
Asellidae																
Asellus militaris					11				11		32		11	7		
Hydracarina								15								
Oiignuchaeta			118	30	237	207							11			
Hirudinca				7	11	7				7						
Turbellaria			65			53	86	66		15			11			
Coelenterata																
Hydridae			204	15			11	15	161		22			37		
TOTAL:	2132	730	936	132	325	607	1001	715	967	538	6263		239	508		671
DIVERSITY ($\bar{d}$):	0.40	0.34	2.84	2.67	1.52	2.17	1.55	2.25	1.43	1.89	0.86		2.77	1.91		1.76

H-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m^2) - continued

STATION: Greene COLONIZATION PERIOD:	12-16-79/ 2-18-80		2-18-80/ 4-4-80		4-4-80/ 7-a-80		4-4-80/ 7-8-80		7-8-80/ 8-26-80	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera										
Baetidae										
Baetis sp.	291	1152	247	235	22	22	215	192	22	
Trichoptera										
Hydropsychidae										
Hydroosyche spp.								30		
Cheumatopsyche sp.										
Immature								89		
Pupa										
Limnephilidae										
Onocosmoecus sp.										
Dicosmoecus sp.									11	
Type A										
Leptoceridae										
Ceracela sp.									226	133
Nectopsyche sp.										
Polycentropodidae										
Polycentropus sp.		7			22				32	22
Hydroptilidae										
Oxyethira sp.										7
Agraylea sp.										
Rhyacophilidae										
Rhyacophila sp.										
Phryaaneidae										
Phryganea sp.										
Plecoptera										
Perlodidae										
Arcynopteryx sp.					43	39	43	59		
Odonata										
Cwnagrionidae										
Ischnura sp.									11	
Enallagma sp.										
Aeshnidae										
Aeshna sp.										
Lepidoptera										
Pyralidae										
Parargyractis sp.										7
Arctiidae sp.										
Coleoptera										
Amphizoidae										
Amphizoa sp.								15		
Elmidae										
Microcylloepus sp.										
Unidentified										
Homoptera										
Aphidae					11			15		
Hymenoptera										
Trichogrammatidae										
Diptera										
Empididae										
Chelifera sp.										
Muscidae										
Tipulidae										
Antocha sp.	11		22	7		7	11	7		
Dicranota sp.										
Simuliidae										
Simulium sp.			11	15						
Chironomidae	678	931		1248						
Tanypodinae										
Pentaneuriini						72		19		11
Maropelopiini										
Chimnaninae										
Chimnomini									5220	
Tanytarsini										
Orthocladiinae										
Orthocladiini			468		947	2067	1980	395	12179	567
Corynoneurini										
Oiamesinae										
Diamesini			586							
Protanypini										
Gastropoda										
Physidae										
Physa sp.		15			65	22		44		7
Isopoda										
Asellidae										
Asellus militaris										
Hydracarina										
Oligochaeta										
Hirudinea									11	
Turbellaria										
Coelenterata										
Hydridae										
TOTAL:	980	2104	1334	1505	1110	2229	2249	865	17712	754
DIVERSITY ($\bar{d}$):			1.66		0.91	05	0.63	2.37	1.02	1.18

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Greene COLONIZATIGN PERIOD:	8-26-80/ 10-10-80		8-26-80/ 10-10-80		1-20-81/ 4-16-81		4-17-81/ 6-5-81		6-5-81/ 7-9-81		7-9-81/ 8-25-81	
Sampler	M-P	R	M-P	R	H-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera												
Baetidae												
Baetis sp.		15			118	155	251		269	1048		
Trichoptera												
Hydropsychidae												
Hydropsyche spp.		7	11		11		7			81		
Cheumatopsyche sp.						7			22	15		
Immature										37		
Pupa												
LImnephilidae												
Onocosmoecus sp.												
Dicosmoecus sp.												
Type A												
Leptoceridae												
Ceracela sp.	75	111	43		32							
Hectopsyche sp.												
Polycentropodidae												
Polycentropus sp.		7										
Hydroptilidae												
Oxyethira sp.		15										
Rhyacophilidae												
Rhyacophila sp.												
Phryganeidae												
Phryganea sp.												
Plecoptera												
Perlodidae												
Arcynopteryx sp.												
Odonata												
Coenagrionidae												
Ischnura sp.												
Enallagma sp.												
Aeshnidae												
Aeshna sp.												
Lepidoptera												
Pyralidae												
Parargyractis sp.		30										
Arctiidae sp.												
Coleoptera												
Amphizoidae												
Amphizoa sp.												
Elmidae												
Microcylloepus sp.												
Unidentified												
Homoptera												
Aphidae	11	7	11								11	
Hymenoptera												
Trichogrammatidae	11											
Diptera												
Empididae												
Chelifera sp.	11											
Muscidae	11											
Tipulidae												
Antocha sp.	65	59	11			7	7		32	15	11	
Dicranota sp.	32											
Simuliidae												
Simulium sp.							44					
Chironomidae		391										
Tanypodinae												
Pentaneuriinf	200		52									
Maropelopiini												
Chironominae												
Chironomini			288				53				25	
Tanytarsini												
Orthocladinae												
Orthocladiinf	467		445		1090	2532	403		2202		20	
Corynoneurini									122	184		
Olamesinae												
Diamesini					363	745	81		122			
Protanypini												
Gastropoda												
Physidae												
Physa sp.							7				22	
Isopoda												
Asellidae												
Asellus militaris												
Hydracarina	11											
Oligochaeta			11									
Hirudinea												
Turbellaria												
ioelenterata												
Hydridae												
TOTAL:	294	642	872		1614	3446	853		2769	1380	89	
DIVERSITY (d):	2.11		1.80		1.30	1.04	1.52		1.12	1.16	2.24	

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m²) - continued

STATION: Gonzaga COLONIZATION PERIOD:	11-12-79/ 1-4-80		2-18-80/ 4-4-80		4-4-80/ 7-16-80		7-16-80/ 8-26-80		11-14-80/ 2-26-81		2-26-81 4-30-81		4-30-81/ 6-11-81		6-11-81/ 7-24-81	
Sdmoler	M-P	R	M-P	R	M-P	R	M-P	R	H-P	P	M-P	R	M-P	R	M-P	R
Ephemeraptera																
Baetidae																
Baetis sp.		7	11							15		44			11	
Trichoptera																
Hydropsychidae																
Hydropsyche spp.																
Cheumatopsyche sp.																
Immature																
Pupa																
Limnephilidae																
Onocosmoecus sp.					11		11									
Dicosmoecus sp.																
Type A																
Lepiceridae																
Ceracela sp.	21	22		7			387	235		7		59				
Nectopsyche sp.												7				
Polycentropodidae																
Polycentropus sp.							11									
Hydroptilidae																
Oxyethira sp.					22			7							32	
Rhyacophilidae																
Rhyacophila sp.																
Phryganeidae																
Phryganea sp.																
Plecoptera																
Perlodidae																
Arcynopteryx sp.																
Odonata																
Coenagrionidae																
Ischnura sp.																
Enallagma sp.																
Aeshnidae																
Aeshna sp.										7						
Lepidoptera																
Pyralidae																
Parargyractis sp.												7				
Arctiidae sp.																
Coleoptera																
Amphizoidae																
Amphizoa sp.																
Elmidae																
Microcylloepus sp.																
Unidentified																
Hemiptera																
Gerridae																
Homoptera																
Aphidae																
Hymenoptera																
Trichogrammatidae																
Oiptera																
Empididae																
Chelifera sp.																
Muscidae																
Tipulidae																
Antocha sp.										37		15				
Dicranota sp.																
Simuliidae																
Simulium sp.		7	11	7												
Chironomidae																
Tanypodinae																
Pentaneuriini							575	156		16			129		41	
Maropelopiini																
Chironominae																
Chironomini			50	27	21	8	575	201		8			65		533	
Tanytarsini						8							32		123	
Orthocladiinae																
Orthocladiini	108	59	126	135	206	94	2300	183		72		3061	323		164	
Corynoneurini																
Oiamesinae																
Diamesini			147	244	182		144					245				
Protanypini																
Gastropoda																
Physidae																
Physa sp.	11					59									11	
Isopoda																
Asellidae																
Asellus militaris													11			
Hydracarina						15	11									
01ignochaeta				7									11			
Hirudinea																
Turbellaria																
Coelenterata																
Hydridae							43	312					11			
TOTAL:	140	95	345	347	442	184	4057	1094		162		3438	582		915	
DIVERSITY (d):	0.99	1.47	1.77	1.53	1.60	1.71	1.90	2.32		2.26		0.67	1.86		1.81	

M-P - Multiplate
R - Rock

Table F-1. Macroinvertebrates (#/m^2) - continued

STATION: Hangman Creek COLONIZATION PERIOD:	11-20-79/ 12-16-79		12-16-79/ 2-18-80		2-18-80,' 4-4-80		4-4-80/ 7-8-80		4-4-80/ 7-8-80		7-8-80/ 8-12-80		7-8-80/ 8-12-80		8-12-80/ 9-24-80	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera																
Baetidae																
Baetis sp.	689	1491	1657		140	369		731		3196		7				
Trichoptera														111	409	295
Hydropsychidae																
Hydropsyche spp.	32	7														
Cheumatopsyche sp.								1122	43	40	11	28		288	1453	723
Immature									32	532		185				
Pupa									11	7				192	269	148
Limnephilidae																
Onocosmaecus sp.			22													
Dicosmoecus sp.											43					
Type A																
Leptoceridae																
Ceracela sp.		7									43	15		7	65	177
Nectopsyche sp.																
Polycentropodidae																
Polycentropus sp.												7				
Hydroptiiidae																
Oxyethira sp.											22					37
Agraylea sp.																
Rhyacophilidae																
Rhyacophila sp.																
Phryganeidae																
Phryganea sp.																
Plecoptera																
Perlodidae																
Arcynopteryx sp.										7		7		22		
Odonata																
Coenagrionidae																
Ischnura sp.											11					
Enallagma sp.																
Aeshnidae																
Aeshna sp.																
Lepidoptera																
Pyralidae																
Parargyractis sp.								7			11	59			118	59
Arctiidae sp.																
Coleoptera																
Amphizoidae																
Amphizoa sP.																
Elmidae																
Microcylloepus sp.																
Unidentified																
Hemiptera																
Gerridae																
Homoptera																
Aphldae															22	15
Hymenoptera																
Trichogrammatidae																
Diptera																
Empididae																
Chelifera sp.																
Muscidae																
Tipulidae																
Antocha sp.	129	186			22	15		74	54	162		7			247	29
Dicranota sp.																
Simuliidae																
Simulium sp.														7		
Chironomidae					151				237						1679	2171
Tanypodinae																
Pentaneurlini										708		1312		8		
Maropelopiini																
Chironominae																
Chironomini											1754	2623				
Tanytarsini											160					
Orthocladiinae																
Orthocladiini	86	53	54				1603	1416		2124	2552	1312		51		
Corynoneurini																
Diamesinae																
Diamesini								75		142						
Pmtanypini																
Gastropoda																
Physidae																
Physa rp.																7
Isopoda																
Asellidae																
Asellus militaris																
Hydracarina										15	22				22	7
Olignochaeta									65	7						
Hirudinea						15										
Turbellaria														7		
Coelenterata																
Hydridae																
TOTAL:	936	1744	1733		313	399	1603	3425	442	6947	4629	5652		685	4445	3668
DIVERSITY (d):	1.04	0.75	0.20			0.44	0.0	1.79		2.02	1.43	1.89		1.10		

M-P - Multiplate
R - Rock

Table F-1. **Macroinvertebrates** (#/m^2) **- continued**

STATION: Hangman Creek COLONIZATION PERIOD:	8-12-80/ 9-24-80		9-24-80/ 1-29-81		1-20-811 4-16-81		4-17-81/ 6-5-81		6-5-81/ 7-9-81	
Sampler	M-P	R	M-P	R	M-P	R	M-P	R	M-P	R
Ephemeroptera										
Baetidae										
Baetis sp.		1233		59	22	273	183	118	183	37
Trichoptera										
Hydropsychidae										
Hydropsyche sp.	11	3011		1720	108	81	86	44	43	44
Cheumatopsyche sp.								7		
Immature				310						
Pupa							22	37		
Limnephilidae										
Onocosmoecus sp.										
bicosmoecus sp.										
Type A								7		
Leptocerídae										
Ceracela sp.	118	15		89	22	7				
Nectopsyche sp.										
Polycentropodidae										
Polycentropus sp.										
Hydroptilidae										
Oxyethira sp.										
Agraylea sp.										
Rhyacophilidae										
Rhyacophila sp.						15				
Plecoptera										
Perlodidae										
Arcynopteryx sp.										
Wonata										
Coenagrionidae										
Ischnura sp.										
Enallagma sp.										
Aeshnidae										
Aeshna sp.										
Lepidoptera										
Pyralidae										
Parargyractis sp.	54	66		7		7			11	
Arctiidae sp.										
Coleoptera										
Amphizoidae										
Amphizoa sp.										
Elmidae										
Microcylloepus sp.										
Unidentified										
Hemiptera										
Gerridae										
Homoptera										
Aphidae										
Hymenoptera										
Trichogrammatidae										
Diptera										
Empididae										
Chelifera sp.										
Muscidae										
Tipulidae										
Antocha sp.	43	148		177	22	126	108	15	183	22
Dicranota sp.										
Simuliidae										
Simulium sp.								7		
Chironomidae 2421 3423										
Tanypodinae										
Pentaneurini										
Maropelopiini	13	146							129	482
Chironominae										
Chironomini							148	317		121
Tanytarsini										
Orthocladiinae										
Orthocladiini	19	178		118	2340	2758	712	1270	2970	5788
Corynoneurini										
Diamesinae										
Diamesini					124	689			129	
Protanypini										
Gastropoda										
Physidae										
Physa sp.				22						7
Isopoda										
Asellidae										
Asellus militaris										
Hydracarina										
Olignocndeta										
Hirudinea										
Turbellaria										
Coelenterata										
Hydridae										
TOTAL:	258	4797		2502	2638	3956	1259	1822	3648	6501
DIVERSITY (d):	2.11	1.52		1.10	0.72	1.40	1.84	1.42	1.12	0.66

M-P - Multiplate
R - Rock

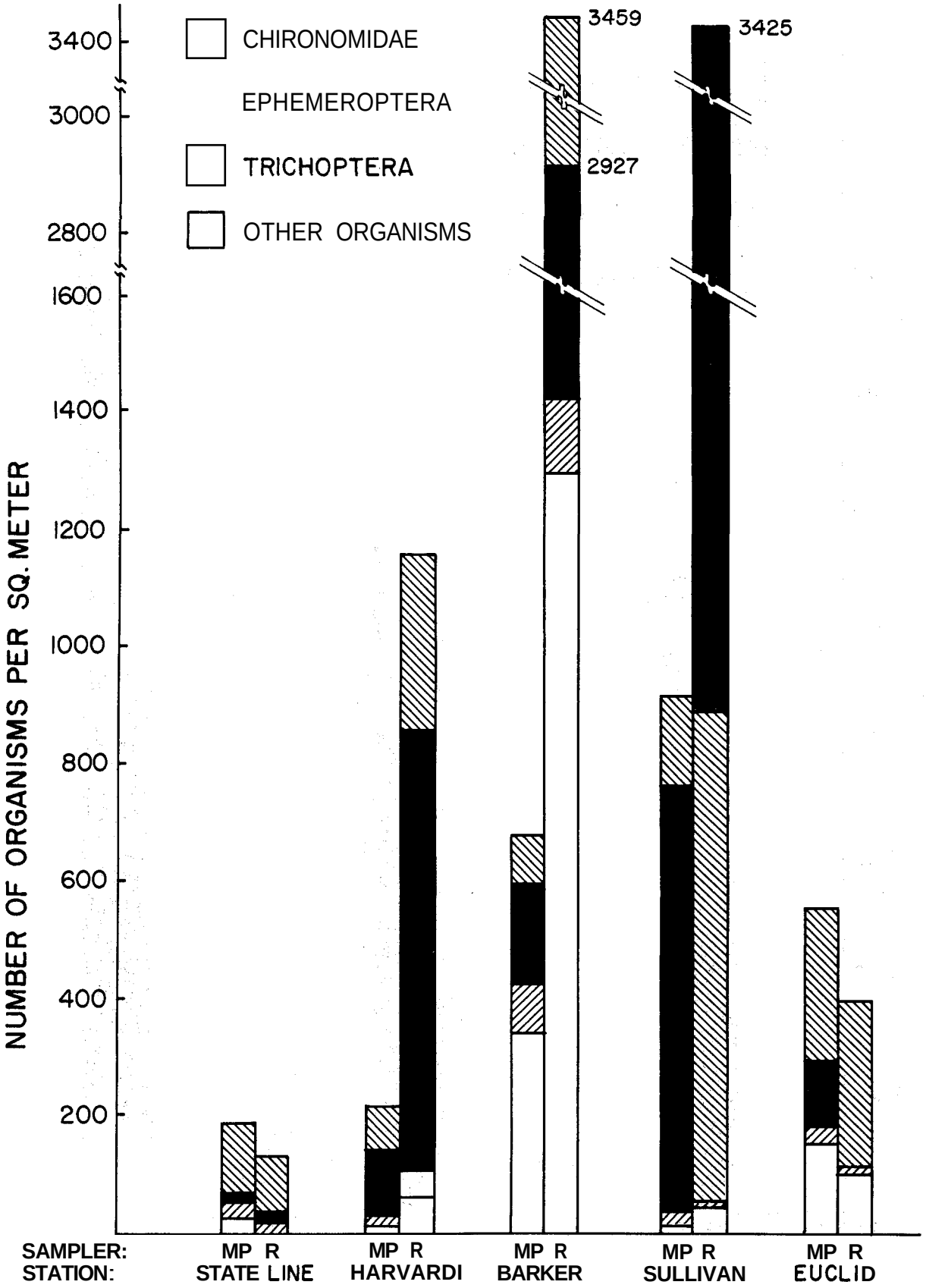

Figure F-1. Placroinvertebrate densities at the upper study area in the winter of 1979-1980

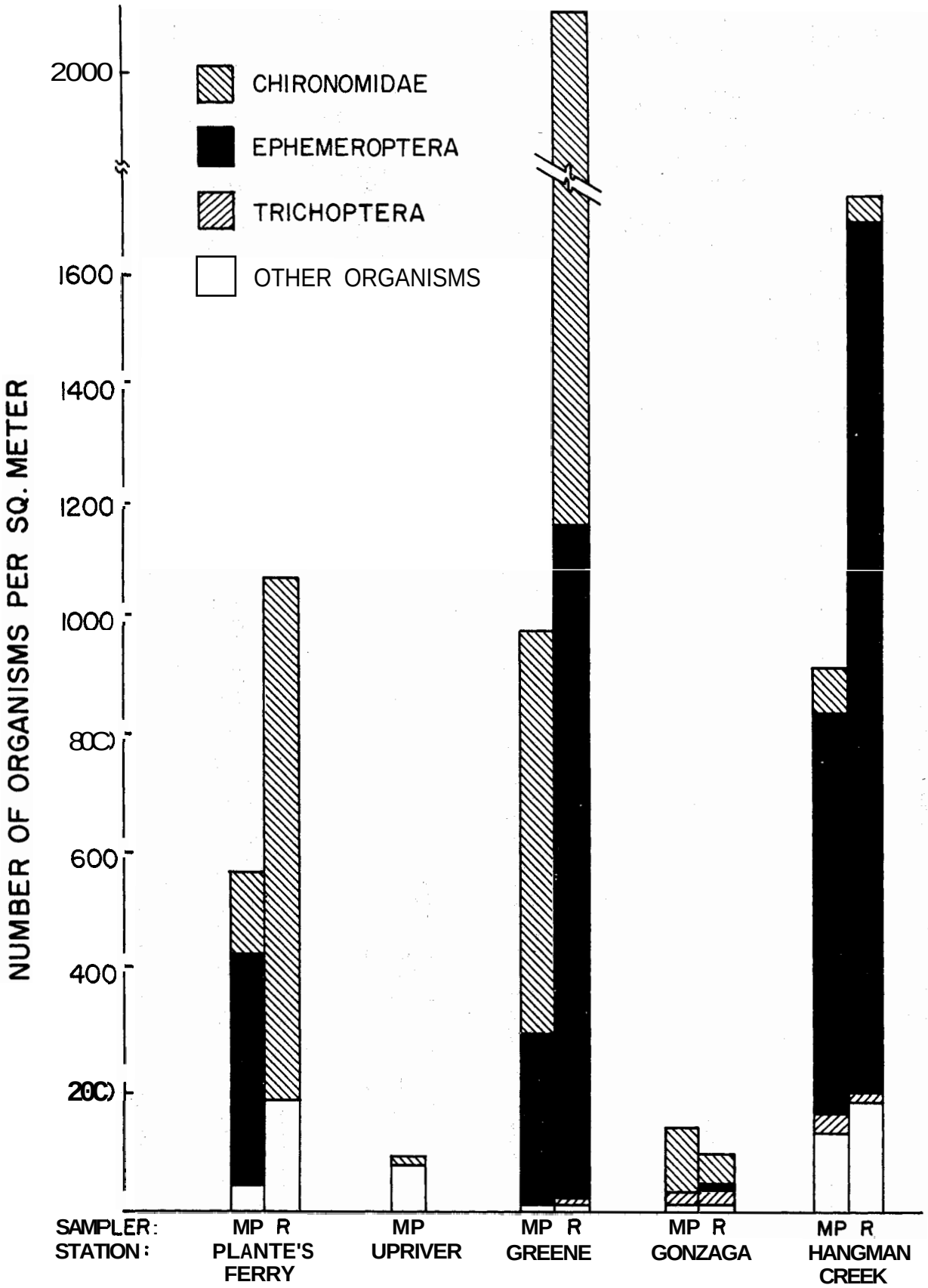

Figure F-2. Macroinvertebrate densities at the lower study area in the winter of 1979-1980

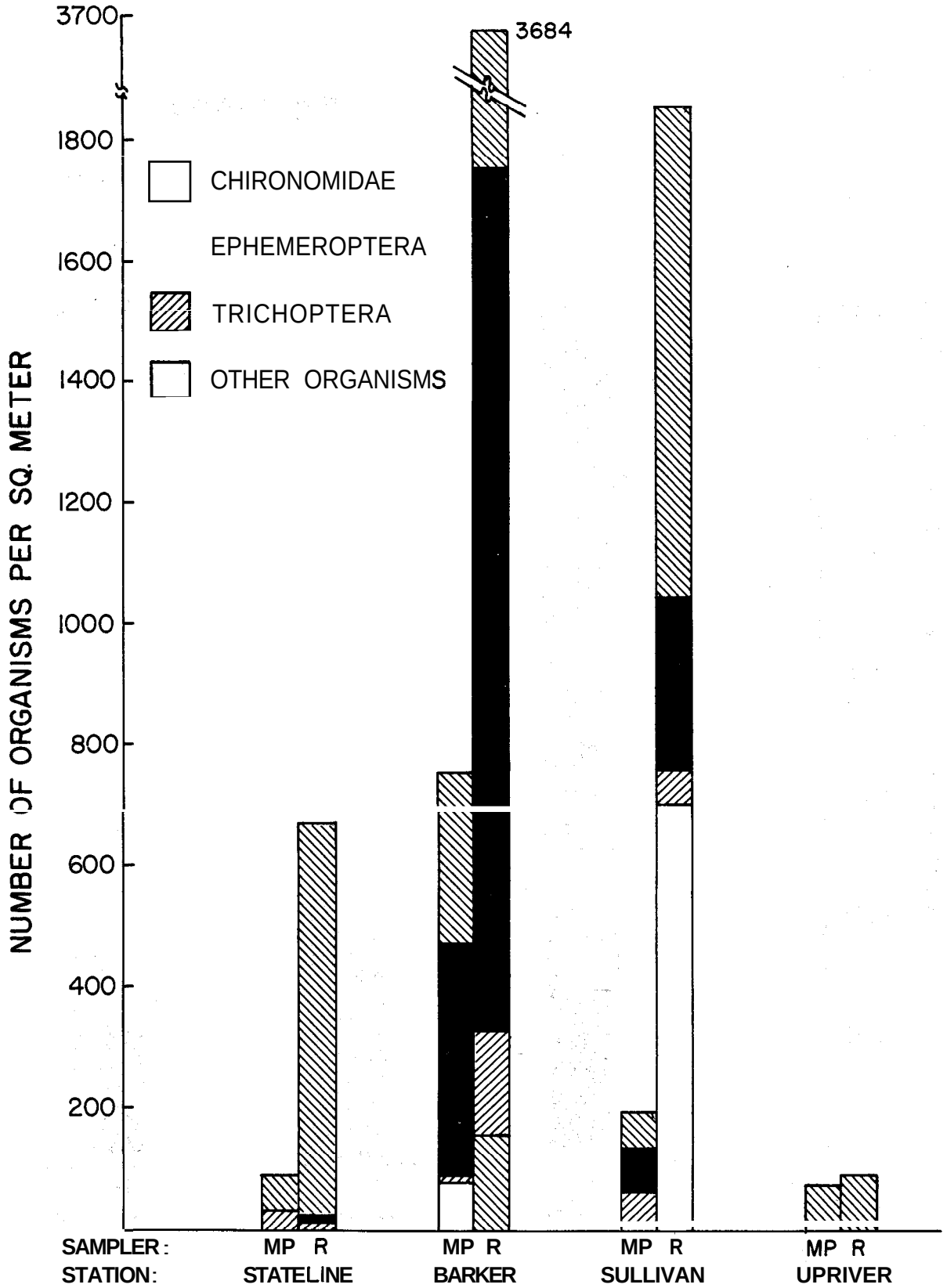

Figure F-3. Macroinvertebrate densities at the upper study area in the spring of 1980

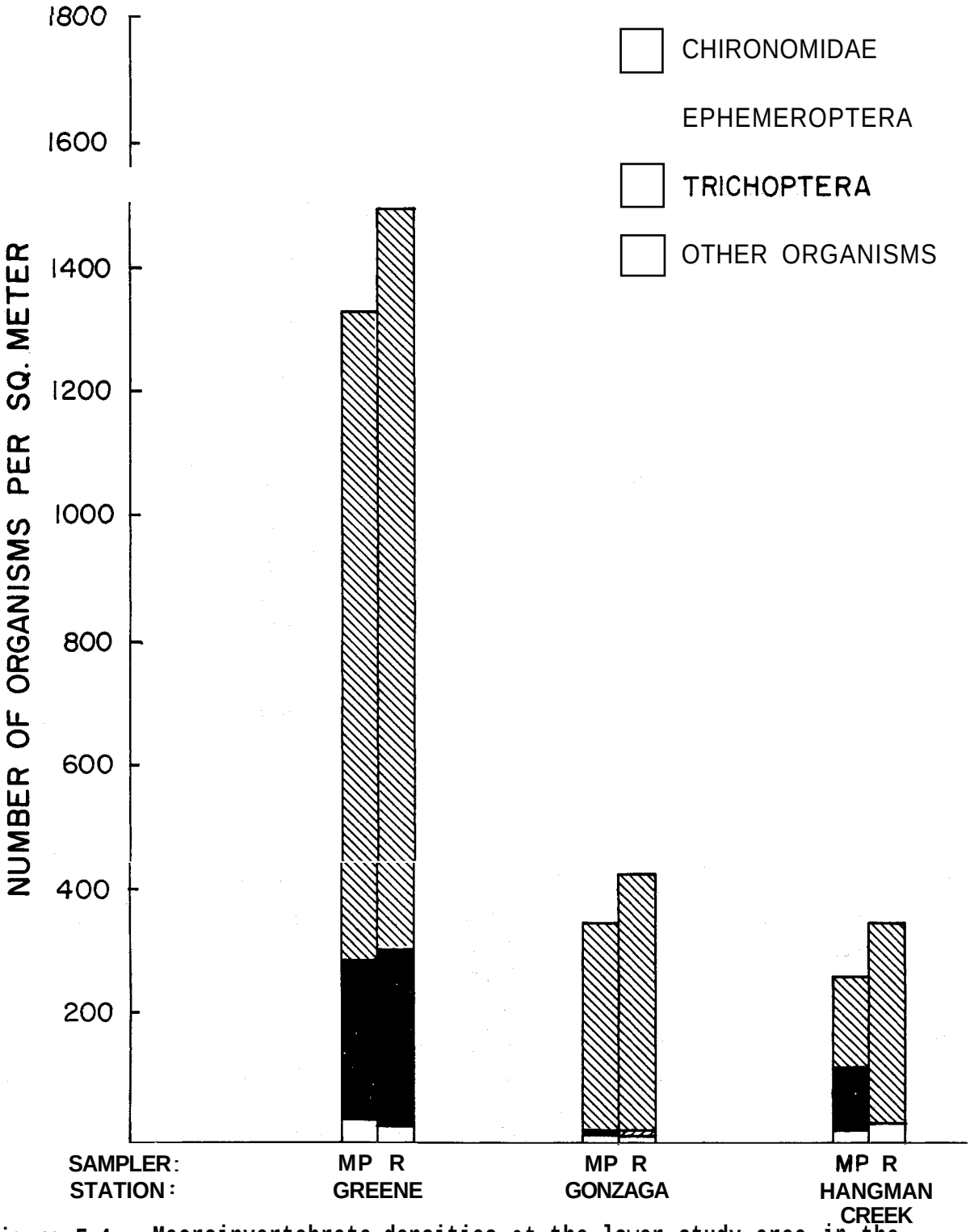

Figure F-4. Macroinvertebrate densities at the lower study area in the spring of 1980

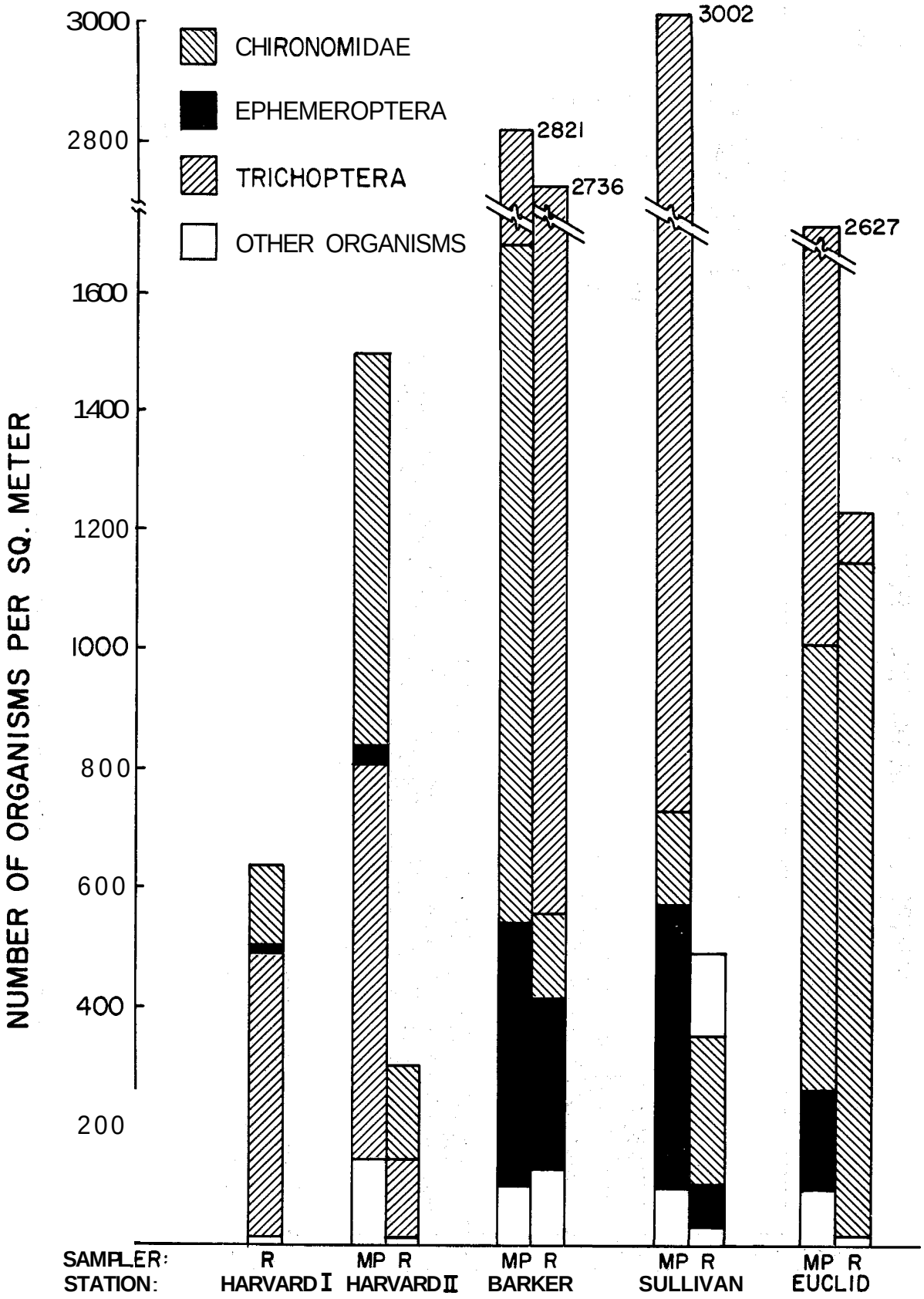

Figure F-5. Macroinvertebrate densities at the upper study area in the summer of 1980

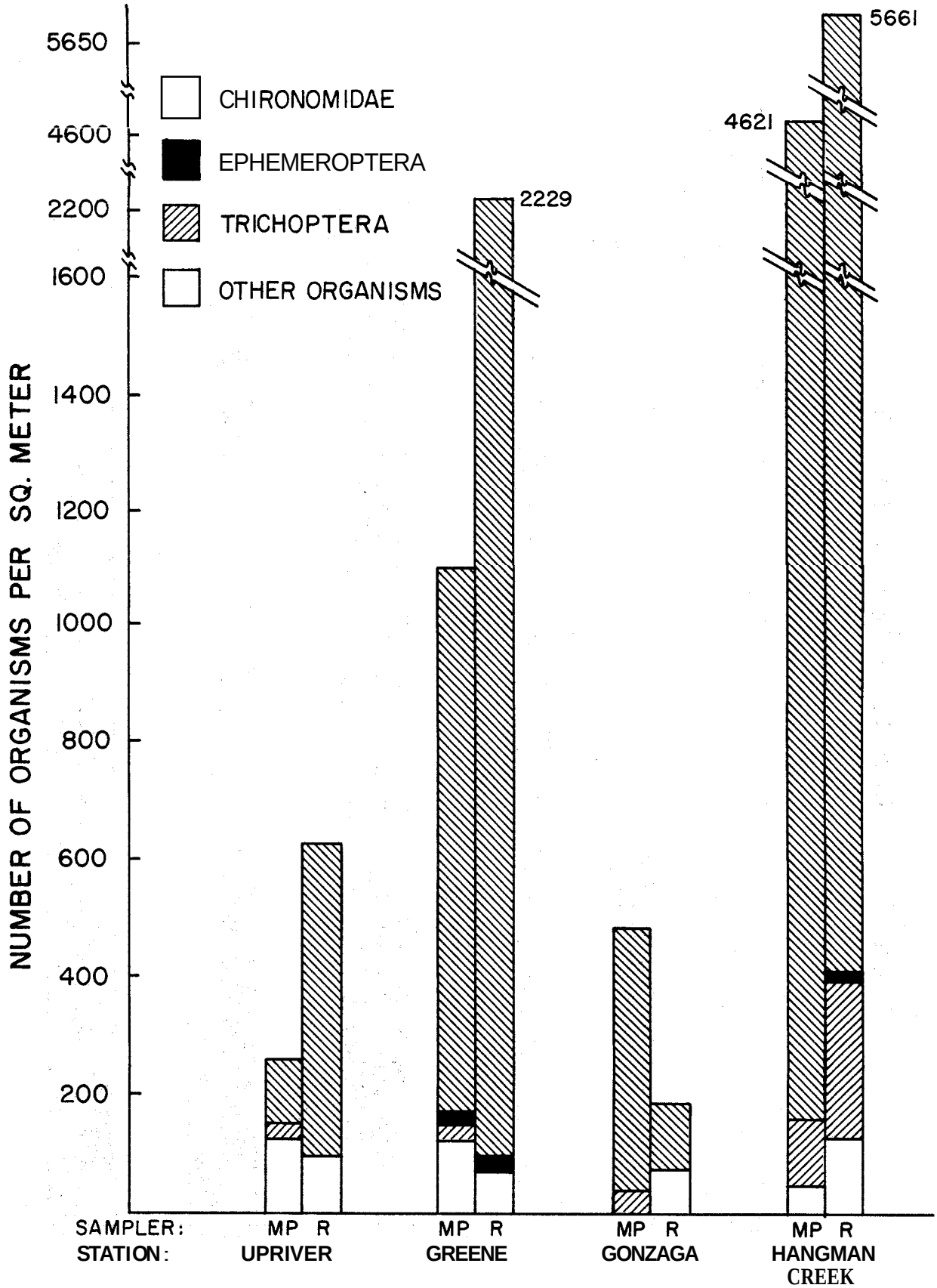

Figure F-6. Macroinvertebrate densities at the lower study area in the summer of 1980

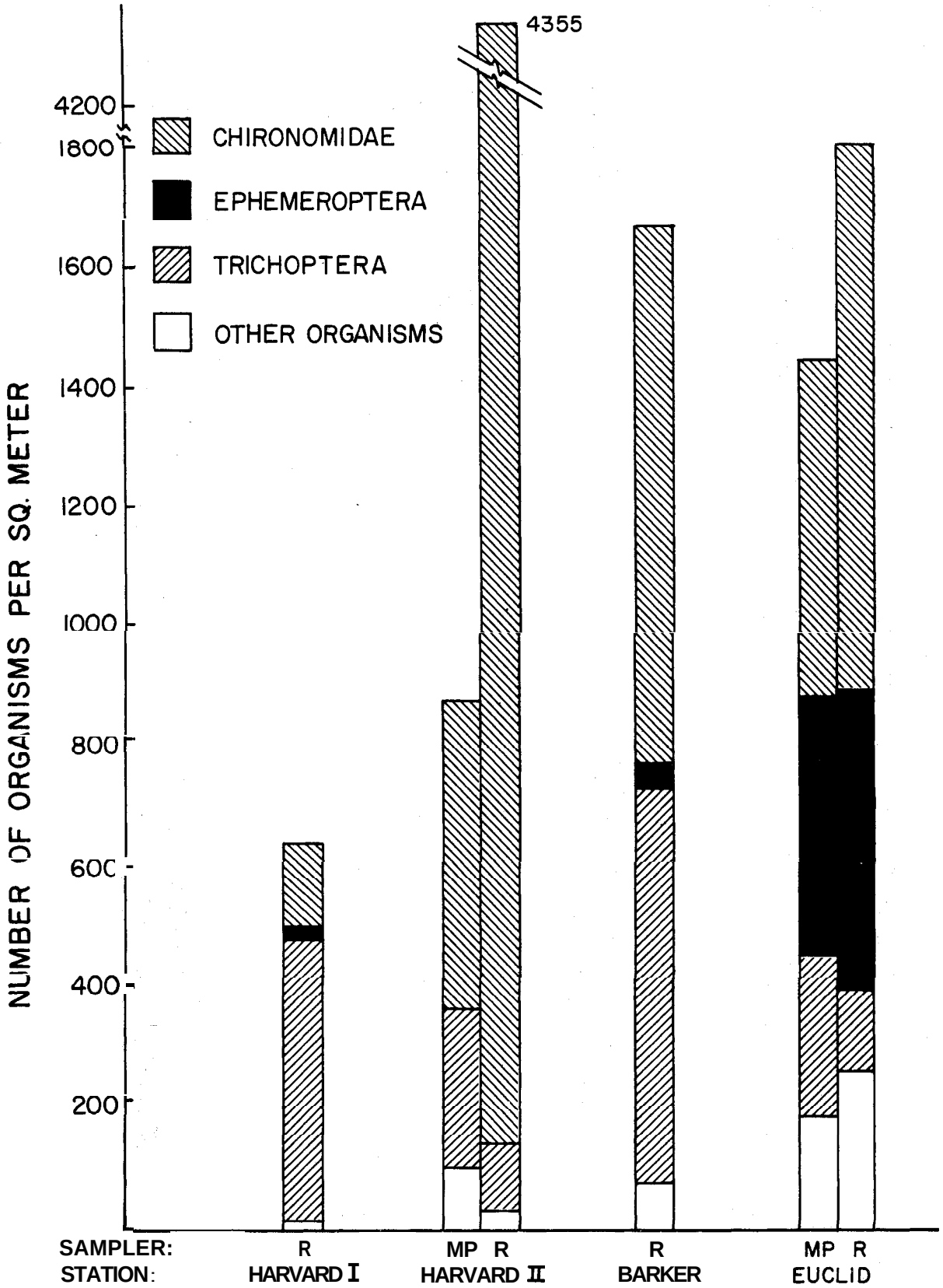

Figure F-7. Macroinvertebrate densities at the upper study area in the fall of 1980

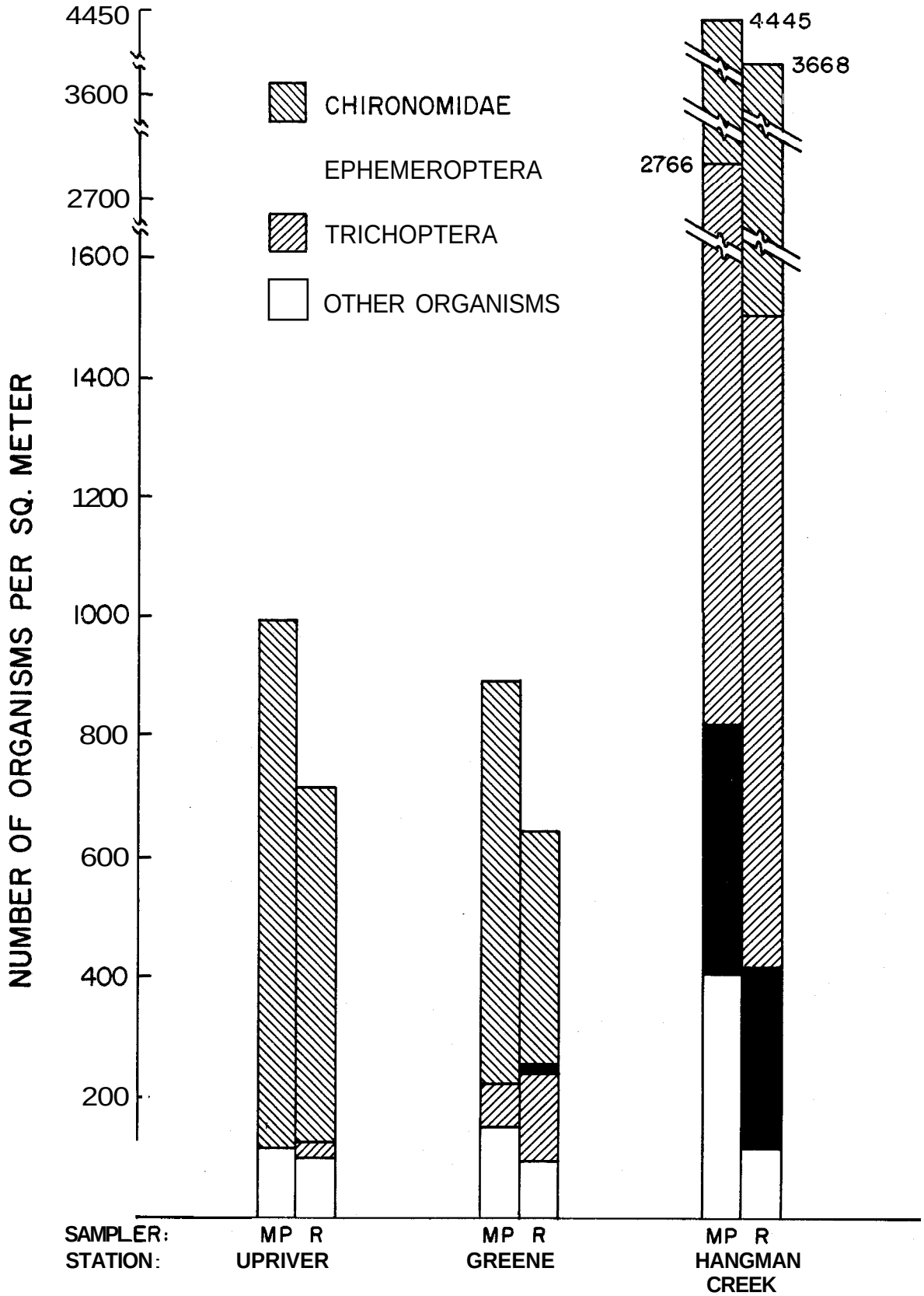

Figure F-8. Macroinvertebrate densities at the lower study area in the fall of 1980

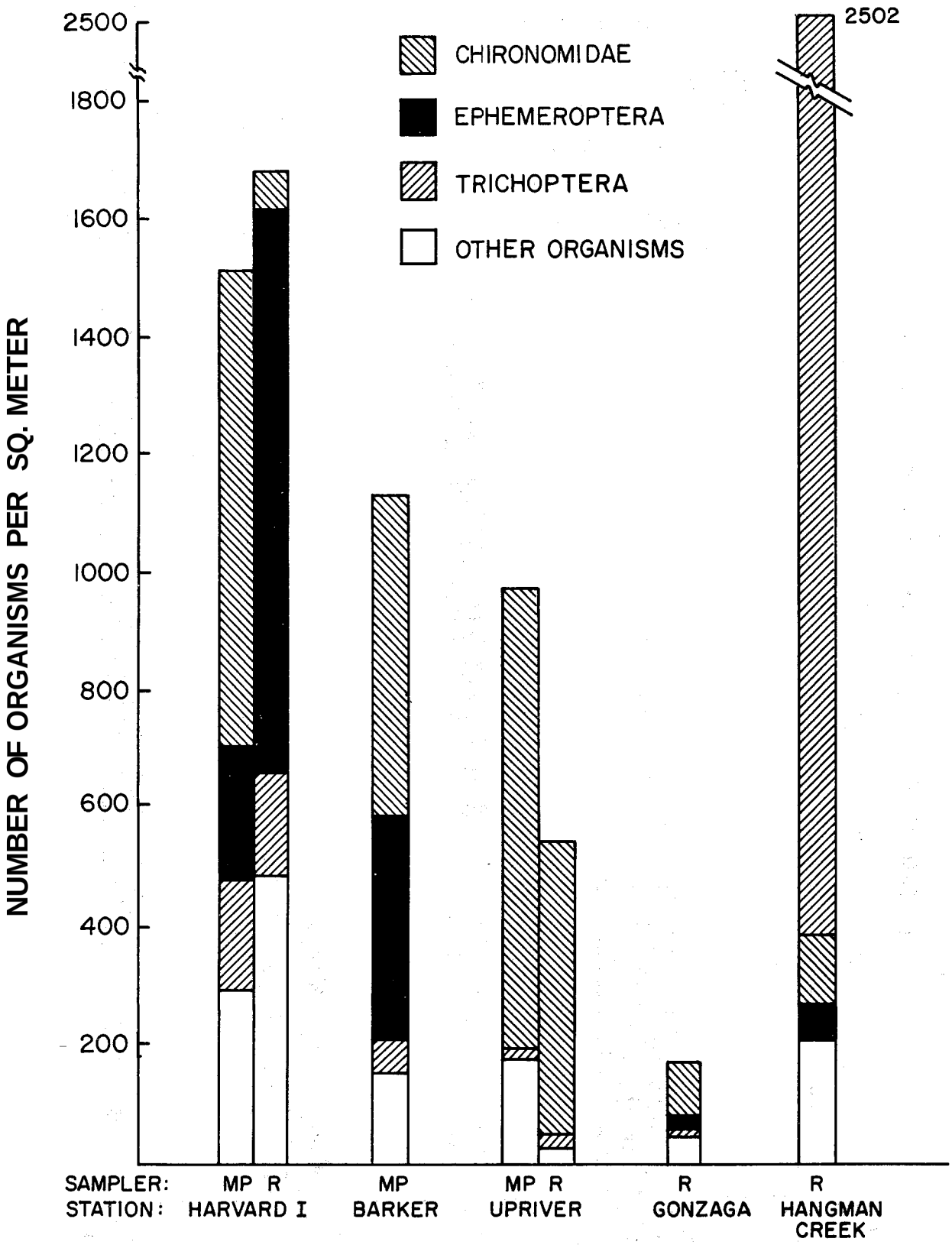

Figure F-9. Macroinvertebrate densities at selected sites in the winter of 1980-1981

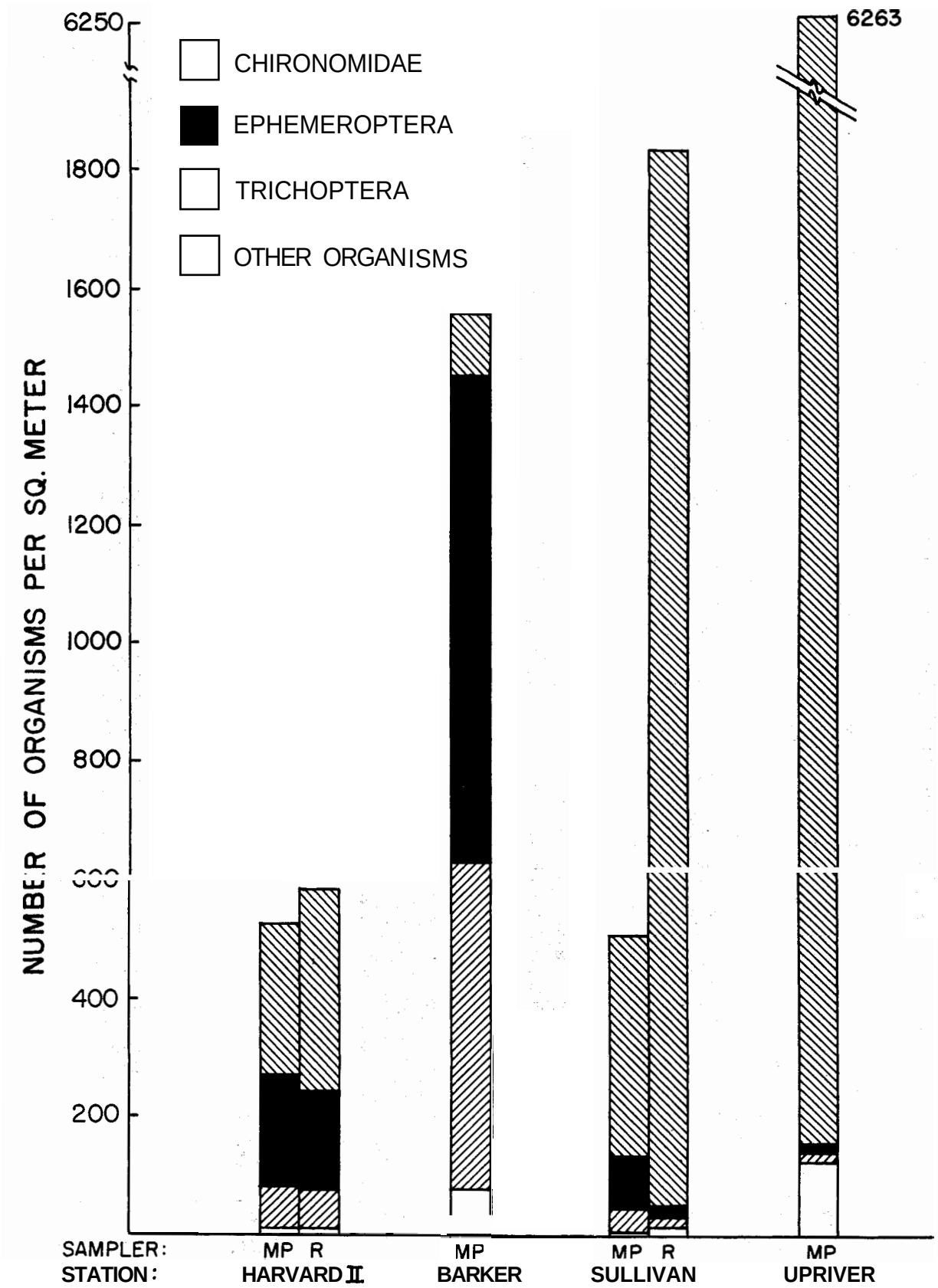

Figure F-10. Macroinvertebrate densities at the upper study area in the spring of 1981

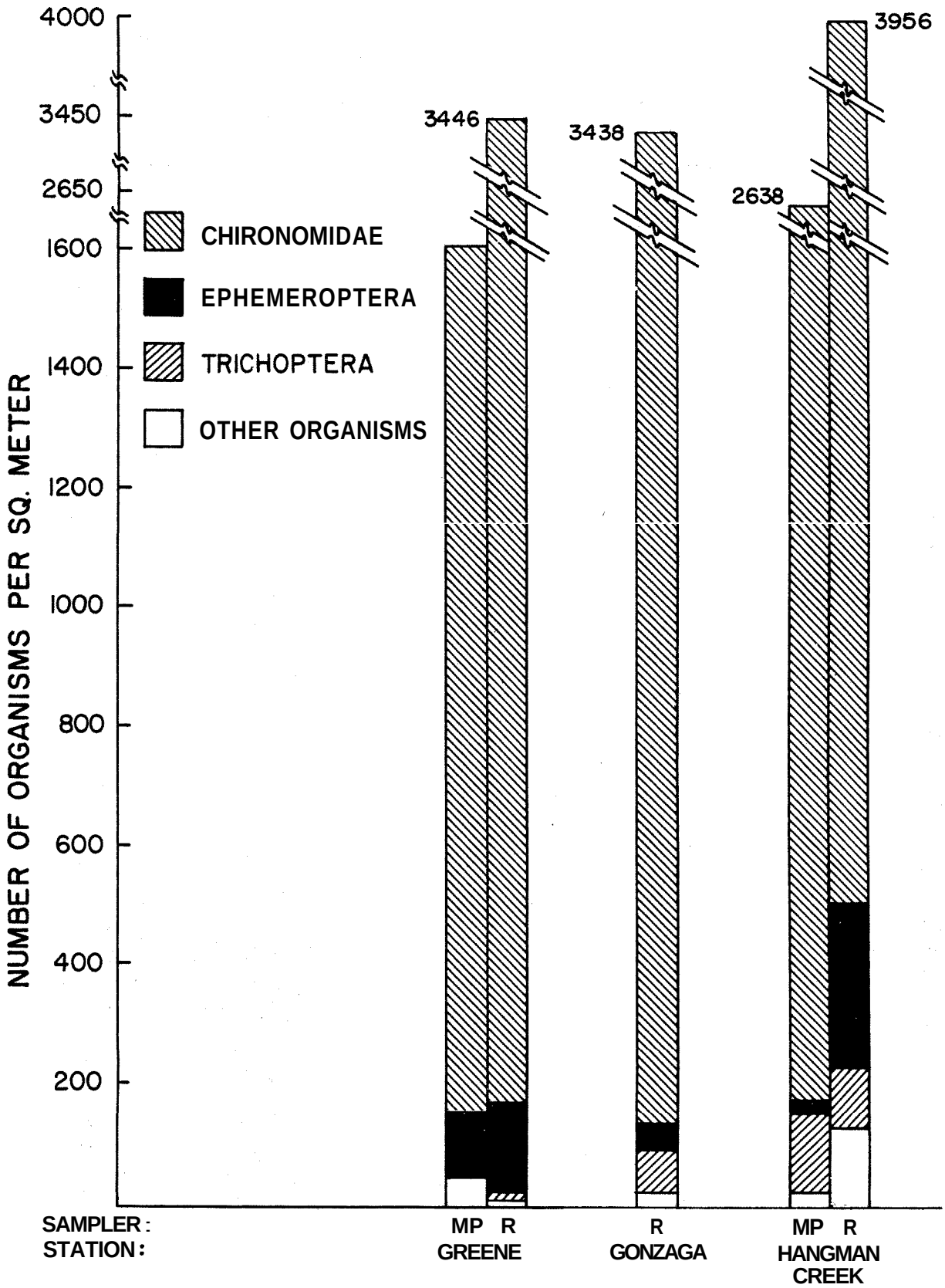

Figure F-11. Macroinvertebrate densities at the lower study area in the spring of 1981

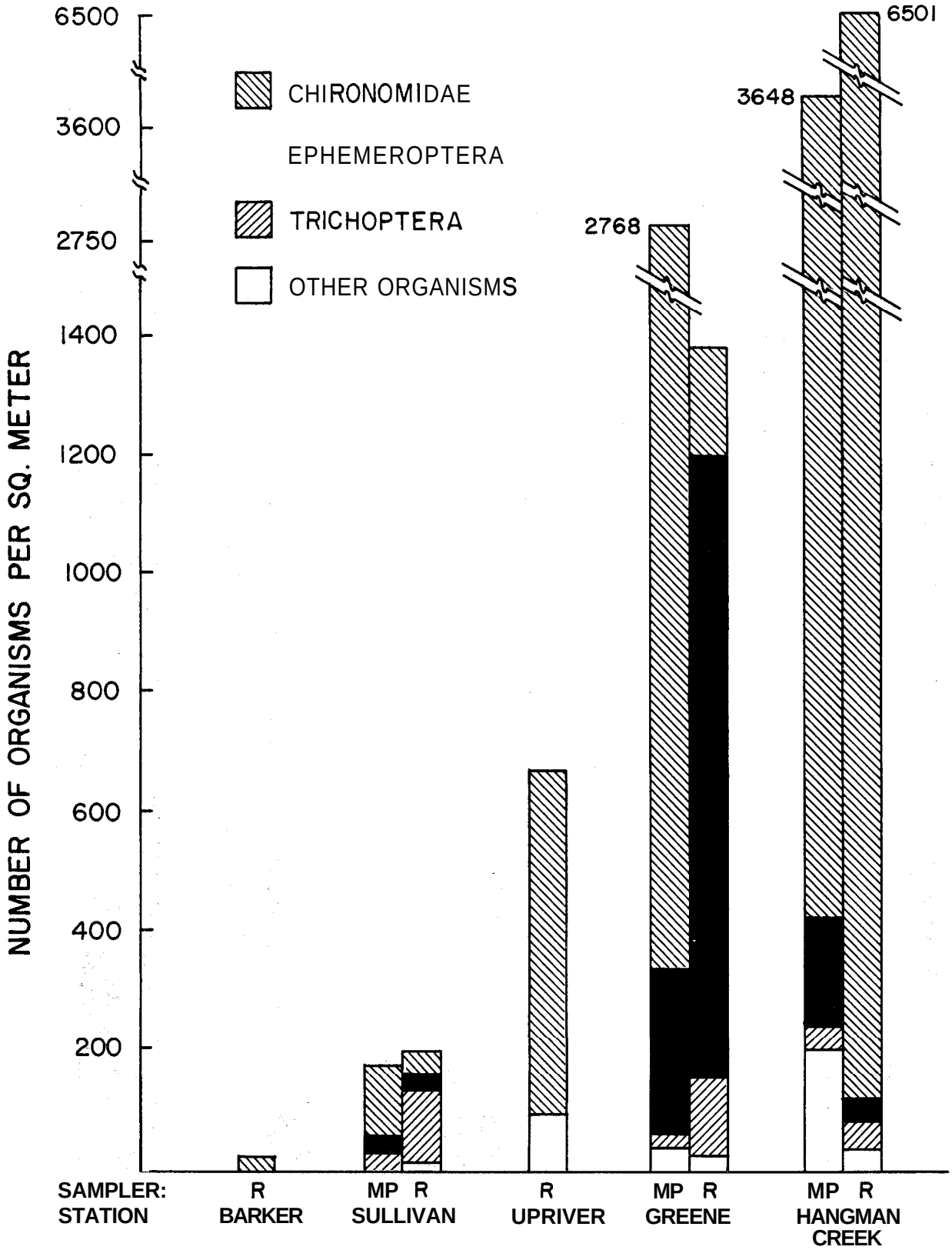

Figure F-12. Macroinvertebrate densities at selected sites in the summer of 1981

APPENDIX G

Phytoplankton Data

of the Upper Spokane River

Table G-1. Phytoplankton (#/ml)

Station: Stateline	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa			12	62							
Cocconeis sp.											
Cyclotella sp.											
Cymbella sp.											
Diatoma sp.											
Diatoma vulgare											
Fragilaria				87							
Fragilaria crotonensis											
Gyrosigma sp.											
Gomphonema sp.											
Melosira sp.		322	62	124							
Navicula sp.											
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.	37		37	87							
Tabellaria sp.	397	50	25	37							
Tabellaria fenestrata											
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown coccoid											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS											
TOTAL:	434	372	136	397							

Table G-1. Phytoplankton (#/ml)

Station: Harvard I	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa			37	136	74	602	740	3967	4822	2819	843
Cocconeis sp.											
Cyclotella sp.											
Cymbella sp.											
Diatoma sp.											
Diatoma vulgare											
Fragilaria											
Fragilaria crotonensis							148	156	78		39
Gyrosigma sp.											
Gomphonema sp.											13
Melosira sp.		99	112	198	1258	2176	2923	428			
Navicula sp.											
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.		37	25	99	481	1146	370	156	39	19	
Tabellaria sp.		62		12	130	194					
Tabellaria fenestrata											26
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.										19	
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											13
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS											340
TOTAL:		198	174	445	1943	4118	4181	4707	4939	2857	1274

Table G-1. Phytoplankton (#/ml) - continued

Station: Harvard I	1980							1981
	1/29	8/12	9/9	9/24	10/10	1114	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.								
Asterionella formosa	98		820	215	10	205	332	339
Cocconeis sp.								
Cyclotella sp.								13
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.		98	52					
Fragilaria crotonensis			182					
Gomphonema sp.								
Gyrosigma sn.								
Melosira sp.						20	129	234
Navicula sp.						10		
Pinnularia sp.							4	
Rhoicosphenia curvata								
Synedra sp.	29	20				29	47	26
Tabellaria sp.								
Tabellaria fenestrata			508	381	127	107	56	13
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.								
Characium sp.							8	
Cladophora sp.								
Cosmarium sp.								
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrum sp.								
Scenedesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stigeoclonim sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.					10			
Dinobryon sp.		10						
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizoinen sp.								
Aphani zomen flos-aquae								
EUGLENOID (Euglenophyta)								
Trachelomonas	29					10		
TOTAL	156	128	1562	596	147	381	576	625

Table G-1. Phytoplankton (#/ml) - continued

Station: Harvard I	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	744	2,158	856	3,063	10,412	8,547
Cocconcis sp.						
Cyclotella sp.		12				37
Cymbella sg.						
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.				25		
Fragilaria crotonensis						
Gomphonema sp.						
Gyrosigma sp.				12		
Melosira sp.		99	25	186	330	
Nitzschia sp.						
Navicula sp.		12	12	25		
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.			12			
Surire1la sp.						
Synedra sp.	12		124	62	136	74
Tabellaria sp.						
Tabellaria fenestrata	12	62			19	
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.						1,739
Characium sp.				12		
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						148
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.					19	
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						2,368
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria		37				
EUGLENOHD (Euglenophyta)						
Trachelomonas						
TOTAL	768	2,380	1,029	3,385	10,916	12,913

Table G-1. Phytoplankton (#/ml) - continued

Station: Harvard I	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	5678	4667	1094	606	39			
Cocconeis sp.								
Cyclotella sp.								32
Cymbella sp.					8			
Diatoma sp.								
Diatorna vilgare								
Epithemis sp.								
Fragilaria sp.					16	93	124	
Fragilaris crotonensis								
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	26							
Nitzschia sp.								
Navicula sp.								
Pinnularia sp.							8	
Rhizosolenia sp.			13					
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	39	10		31	8	23	39	
Tabellaria sp.							8	
Tabellaris fenestrata								
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	544	342	117	23	16			
Characium sp.								
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.							8	
Pediastrum sp.								
Scenedesrnus sp.								
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid							225	
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon					8			
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	124			12				
Aphanizornen flos-aquae						35		
Anphanocdpsa sp.								
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelononas								8
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	6411	5013	1224	672	95	151	412	40

Table G-1. Phytoplankton (#/ml) - continued

Station: Harvard II	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.								
Astcrionclla forrnosa	68		599	39	20	644	371	244
Cocconcis sp.								
Cyclotella sp.							20	
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.		98			20			
Fragilaria crotonensis								
Gomphonema sp.	10				10			
Gyrosigma so.								
Melosira sp.				49	20	59	234	186
Navicula sp.								
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	39	20	26		20	20	20	20
Tabellaria sp.								
Tabellaria fenestrata			469	244	107	88	39	20
GREENS (Chlorophyta)								
Actinastrum sp.			13					
Ankistrodesmus sp.								
Characium sp.								
Cladopkora sp.								
Cosmarium sp.								
Geminella sp.			208					
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrun sp.								10
Scenedesmus sp.	78							
Schroederia sp.		10						
Straurastrum sp.								
Stigeoclonium sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	10				20			
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphani zomen f10s-aquae		15						
EUGLENOID (Euglenophyta)								
Trachelomonas		20			39	29	10	
TOTAL	205	163	1315	332	256	840	694	480

Table G-1. Phytoplankton (#/ml)

Station: Harvard II	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											13
Asterionella formosa								4161	3461	2333	739
Cocconeis sp.											
Cyclotella sp.								39			
Cymbella sp.											
Diatoma sp.											13
Diatoma vulgare											
Fragilaria											
Fragilaria crotonensis								78	78		26
Gyrosigma sp.											
Gomphonema sp.											
Melosira sp.	37							622		97	
Navicula sp.											
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.	25							389	78		
Tabellaria sp.	149										
Tabellaria fenestrata								78		39	13
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											91
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS											
TOTAL:	211							5367	3617	2469	895

Table G-1. Phytoplankton (#/ml) - continued

Station: Harvard II	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.					19	
Asterionella formosa	2,627	5,217	4,070	7,400	10,471	1,833
Cocconeis sp.						
Cyclotella sp.		37				
Cymbella sp.						
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.						
Fragilaria crotonensis		74				
Gomphonema sp.		37				
Gyrosigma sp.				37		
Melosira sp.	74	185	111	74	74	
Nitzschia sp.						
Navicula sp.			37	37	19	
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.					19	
Synedra sp.		148	37	148	278	
Tabellaria sp.						
Babellaria fenestrata	259	481			37	
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					333	74
Characium sp.					19	
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.					74	
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						627
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	2,960	6,179	4,255	7,696	11,343	2,534

Table G-1. **Phytoplankton** (#/ml) - continued

Station: Harvard II	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	6222	5328	6602	365	31			336
Cocconeis sp.								
Cyclotella sp.		10						
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.						140	16	
Fragilaris crotonensis				249				
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	26	20	26					
Nitzschia sp.								
Navicula sp.					16			
Pinnularia sp.								
Rhizosolenia sp.								
Rhoicosphenia curvata								
Stauroneis sp.						8		
Surirella sp.								
Synedra sp.	65	49			54	8	16	8
Tabellaria sp.							47	152
Tabellaris fenestrata	39							
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	233		130	31	16	8	23	
Characiun sp.								
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.					8			
Scenedesmus sp.								
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.				31				
Unknown coccoid							93	
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.		10	78	80				
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	26	20		8	4		23	
Aphanizomen flos-aquae								
Anphanbcapsa sp.								
Osillatoria								
EUGLEPIOID (Euglenophyta)								
Trachclomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.					27			
TOTAL:	661	5437	6297	734	156	164	218	496

Table G-1. Phytoplankton (#/ml) - continued

Station: Barker	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.							13	13
Asterionella formosa	10	20	654	29	10	557	286	326
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.		78						
Fragilaria crotonensis								
Gomphonerna sp.								
Gyrosigma so.								
Melosira sp.				39		59	117	273
Navicula sp.								
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	10	39		10	20	20	13	13
Tabellaria sp.								39
Tabellaria fenestrata			225	303	59	98		
GREENS (Chlorophyta)								
Actinastrun sp.								
Ankistrodesrnus sp.		10			10			
Characim sp.							26	
Cladophora sp.		78						
Cosmarium sp.								
Geminella sp.			156					
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrum sp.		10						
Scenedesrnus sp.								
Schroederia sp.								
Straurastrum sp.			10	10				
Stigeoclonium sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dlnobryon sp.	10							
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphanizomen f10s-aquae								
EUGLENOID (Euglenophyta)								
Trachelomonas	78	49	39		39		26	
TOTAL	108	284	1084	391	138	734	481	664

Table G-1. Phytoplankton (#/ml)

Station: Barker	1979	1980								
	11/20	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)										
Achnanthes sp.										
Asterionella formosa			74	185	796	999	4394	4044	959	752
Cocconeis sp.							39	39		
Cyclotella sp.				19						
Cymbella sp.										
Diatoma sp.										
Diatoma vulgare										
Fragilaria				74						
Fragilaria crotonensis						111	233	233		
Gyrosigma sp.										
Gomphonema sp.							39			
Melosira sp.			124	1018	2914	3589	1283	233	39	52
Navicula sp.										
Pinnularia sp.	12									
Rhoicosphenia curvata										
Synedra sp.			112	555	1030	481	194		13	
Tabellaria sp.	186		62	37	155					
Tabellaria fenestrata						74	117			39
GREENS (CHLOROPHYTA)										
Ankistrodesmus sp.										26
Golenkinia sp.										
Scenedesmus sp.										
Staurastrum sp.										
Stigeoclonium sp.										
Unknown *coccoid*										
YELLOW-GREENS (CHRYSOPHYTA)										
Dinobryon sp.										
LUE-GREENS (CYANOPHYTA)										
Oscillatoria sp.										
UNKNOWN FILAMENTOUS								29		
TOTAL:	178	372	1888	4895	5253	6299	4578	1011		869

Table G-1. Phytoplankton (#/ml) - continued

Station: Barker	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	2,183	5,032	5,439	5,550	2,448	1,119
Cocconeis sp.						
Cyclotella sp.						
Cymbella sp.						
Diatorna sp.						
Diatoma vilgare						
Fragilaria sp.				111		
Fragilaria crotonensis					37	221
Gomphonema sp.						
Gyrosigma sp.		37				
Melosira sp.	407	148		74	93	74
Nitzschia sp.						
Navicula sp.			37	111	74	
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.		37	74	111	74	25
Tabellaria sp.	74					
Tabellaria fenestrata				444		
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesrnus sp.					463	295
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						283
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria	333					
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	2,997	5,254	5,550	6,401	3,189	2,017

Table G-1. **Phytoplankton** (#/ml) **- continued**

Station: Barker	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.	13							
Asterionella fomosa	7894	2837	1693	412				232
Cocconeis sp.								
Cyclotella sp.	13							
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.	52			155		16	16	
Fragilaris crotonensis								16
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.			13					
Melosira sp.	91	20						
Nitzschia sp.								
Navicula sp.				8				
Pinnularia sp.								8
Rhizosolenia sp.		10						
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	117	39	39	23	23	54	16	
Tabellaria sp.								
Tabellaris fenestrata	13							
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	547	244	91	31	8		8	
Characiurn sp.								
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastruni sp.								
Scenedesmus sp.								
Schroederia sp.								
Staurastrun sp.								
Stigeoclonium sp.								
Ulothrix sp.					233			
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.			26					
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	182	29			23			
Aphanizomen flos-aquae								
Anphanocapsa sp.								
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	8922	3179	1862	608	237	16	40	256

Table G-1. Phytoplankton (#/ml)

Station: Sullivan	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa			37	99	97	233	111	4667	1167	894	428
Cocconeis sp.											
Cyclotella sp.											
Cymbella sp.						19					
Diatoma sp.											
Diatoma vulgare											
Fragilaria					155		148				78
Fragilaria crotonensis							148	350	272	117	
Gyrosigma sp.			12								
Gomphonema sp.											
Melosira sp.			62	99	1068	2195	3182	1128	39		26
Navicula sp.			12	12							
Pinnularia sp.	12					19					
Rhoicosphenia curvata											
Synedra sp.			12	37	466	719	518	194	58	39	39
Tabellaria sp.			62	50		311					
Tabellaria fenestrata	186							156			
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS											
TOTAL:	198		197	297	1786	3496	4107	6795	1536	1050	571

Table G-1. Phytoplankton (#/ml) - continued

Station: Sullivan	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.								
Asterionella formosa	39		729	176	10	283	326	91
Cocconcis sp.						10		
Cyclotella sp.								13
Cymbella sp.						10		
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.	78	244				78	52	
Fragilaria crotonensis								
Gomphonema sp.								
Gyrosigma so.							13	
Melosira sp.	59						417	156
Navicula sp.								
Pinnularia sp.						10		
Rhoicosphenia curvata								
Synedra sp.	29	78	13		29		13	26
Tabellaria sp.								
Tabellaria fenestrata	10		703	254	98	49	78	65
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.								
Characiun sp.								
Cladophora sp.	39							
Cosmarium sp.								
Geminella sp.			130					
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrum sp.								
Scenedesmus sp.			52					
Schroederia sp.								
Straurastrum sp.								
Stigeoclonium sp.								
Unknown coccoid			26					
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Oinobryon sp.					49			
BLUE-GREENS (Cyanophyta)								
Anabacna sp.								
Aphanizomen sp.								
Aphanizomen f10s-aquae			26					
EUGLENOID (Euglenophyta)								
Trachelomonas			104	39		29	26	
TOTAL	**254**	**322**	**1734**	**469**	**186**	**469**	**925**	351

Table G-1. Phytoplankton (#/ml) - continued

Station: Sullivan	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.					19	
Asterionella formosa	2,368	5,439	12,284	5,994	2,595	2,374
Cocconeis sp.						
Cyclotella sp.				37	19	
Cymbella sp.	37		37			
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.						
Fragilaria crotonensis		222				
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	222	74	222	370	148	
Nitzschia sp.						
Navicula sp.				74		
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.			37			
Surirella sp.						
Synedra sp.	74	185	111	185	204	135
Tabellaria sp.						
Tabellaria fenestrata	888	111	148		56	
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					111	209
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						923
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	3,589	6,031	12,839	6,660	3,152	3,641

Table G-1. Phytoplankton (#/ml) - continued

Station: Sullivan	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	4433	6417	2122	319	8			392
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.						54	20	
Fragilaris crotonensis								
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	130	26	26					
Nitzschia sp.								
Navicula sp.				23				24
Pinnularia sp.								
Rhizosolenia sp.		13						
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	91	52	39	16	23	39		8
Tabellaria sp.								
Tabellaris fenestrata		39						48
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	372	273	104	16		31	10	
Characium sp.								
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.								
Scenedesmus sp.						31		
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.		13	13					
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	78				9			
Aphanizomen flos-aquae						16	3380	
Anphanocapsa sp.								
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	5104	6833	2305	374	40	171	3410	472

Table G-1. Phytoplankton (#/ml)

Station: Euclid	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.					19						
Asterionella formosa			62	87	241	253	518	3772	4161	2703	570
Cocconeis sp.											
Cyclotella sp.					19						
Cymbella sp.				12	19						13
Diatoma sp.					19						
Diatom. vulgare											
Fragilaria						117					
Fragilaria crotonensis							370				
Gyrosigma sp.											
Gomphonema sp.					19						
Melosira sp.			50	149	999	2409	2627	778	78	156	
Navicula sp.			12			19					
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.	25		37	50	278	874	851	78	156	19	78
Tabellaria sp.	223		87	50	74	58					
Tabellaria fenestrata							222				
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS											
TOTAL:	248		248	348	1613	3730	4588	5628	4395	2878	661

Table G-1. Phytoplankton (#/ml) - continued

Station: Euclid	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.								
Asterionella formosa	10	10	742	49		283	234	169
Cocconcis sp.								
Cyclotella sp.						10		
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fragilaria sp.	29	39						
Fragilaria crotonensis	146							
Gomphonema sp.	10							
Gyrosigma so.								
Melosira sp.	20			59	49	29	52	156
Navicula sp.								
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	29	10	20	10	10		13	13
Tabellaria sp.								
Tabellaria fenestrata	10		478	234	117	20	39	104
GREENS (Chloropnyta)								
Actinastrum sp.								
Ankistrodesmus sp.								13
Characiun sp.						10	13	
Cladophora sp.	39							
Cosmarium sp.					10			
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.	10							
Pediastrun sp.		10						
Scenedesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stigeoclonim sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.		20		10				
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphanizomen f10s-aquae		29						
EUGLENOID (Euglenophyta)								
Trachelomonas	78			20	20	49		
TOTAL	381	118	1240	382	206	401	351	455

Table G-1. **Phytoplankton** (#/ml) **- continued**

Station: Euclid	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	2,553	5,143	2,516	5,143	2,927	3,293
Cocconeis sp.						
Cyclotella sp.			37		19	
Cymbella sp.						
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.			74	74	37	
Fragilaria crotonensis					37	
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	296	407		296	37	
Nitzschia sp.						
Navicula sp.		37	37	111	204	
Rhizosolenia sp.				37		
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.	74	111	37	259	222	148
Tabellaria sp.						
Tabellaria fenestrata		185				
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					426	666
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.				74		
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						1,221
Aphanizomen sp.						
Aphanizomen flss-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	2,923	5,883	2,701	5,994	3,909	5,328

Table G-1. Phytoplankton (#/ml) - continued

Station: Euclid	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	8361	4083	1146	311	16			168
Cocconeis sp.								
Cycloteila sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.								8
Fragilaris crotonensis								
Gomphonenia sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	91							
Nitzschia sp.								
Navicula sp.				8				
Pinnularia sp.								
Rhizosolenia sp.								
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	26	26	26	39	23	31		
Tabellaria sp.								
Tabellaris fenestrata	13			16				
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	1011	221	221	23				
Characium sp.								
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.						8		
Pediastrum sp.								
Scenedesnius sp.						93		
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.				70				
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	195			8	4	4		
Apnanizomen flos-aquae						31	1029	
Anphanocapsa sp.								
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	9697	4331	1393	475	43	167	1029	176

Table G-1. Phytoplankton (#/ml) - continued

Station: Plantes Ferry	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.								
Asterionella formosa	39		716	29	10	371	234	143
Cocconcis sp.								
Cyclotella sp.						10		
Cymbella sp.								
Diatoma sp.				10				
Diatoma vilgare								
Fragilaria sp.	195	49	91			146		
Fragilaria crotonensis			52					
Gomphonerna sp.						10	13	
Gyrosigma so.								
Melosira sp.				39	137	88	104	156
Navicula sp.						10	13	
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	39	10			10	49	78	13
Tabellaria sp.								
Tabellaria fenestrata			286	156	49	20	26	52
GREENS (Chlorophyta)								
Actinastrm sp.								
Ankistrodesmus sp.								
Characium sp.							52	13
Cladophora sp.	10							
Cosmarium sp.								
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrun sp.								
Scenedesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stigeoclonium sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	10							
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphanizomen f10s-aquae								
EUGLENOID (Euglenophyta)								
Trachelomonas	59			29		49		104
TOTAL	352	59	1145	263	206	753	520	481

Table G-1. Phytoplankton (#/ml) - continued

Station: Plantes Ferry	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.					19	
Asterionella formosa	972	6,105	3,256	7,141	8,159	935
Cocconeis sp.						
Cyclotella sp.						
Cymbella sp.	37					
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.						
Fragilaria crotonensis						
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	666	259			155	25
Nitzschia sp.						
Navicula sp.			37		117	
Rhizosolenia sg.					19	
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.	37	74	74	222	194	49
Tabellaria sp.						
Tabellaria fenestrata	148	37	222			
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.	74		37	37	719	37
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.	74					209
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	2,008	6,475	3,626	7,400	9,382	1,255

Table G-1. Phytoplankton (#/ml) - continued

Station: Plantes Ferry	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											no sample taken
Asterionella formosa				87	130	602	333	4278	3072	3578	
Cocconeis sp.											
Cyclotella sp.								39			
Cymbella sp.											
Diatoma sp.											
Diatoma vulgare											
Fragilaria						39					
Fragilaria crotonensis								233			
Gyrosigma sp.											
Gomphonema sp.											
Melosira sp.				25							
Navicula sp.				248	1721	2156	4810	933			
Pinnularia sp.											
Rhoicosphenia curvata									39		
Synedra sp.				124	389	1068	1295	117	78	19	
Tabellaria sp.	174			12	19	330	259				
Tabellaria fenestrata											
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.							37				
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS									321		
TOTAL:	174			496	2259	4195	6734	5600	3510	3597	

Table G-1. Phytoplankton (#/ml) - continued

Station: Plantes Ferry	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	7117	7350	1588	148	16			161
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.						23		
Fragilaris crotonensis	26							
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	104	130						
Nitzschia sp.								
Navicula sp.	13		13		1	8		
Pinnularia sp.								
Rhizosolenia sp.								
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.		13						
Synedra sp.	221	104	26			23		
Tabellaria sp.								
Tabellaris fenestrata		39						80
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	1167	469	260	78		23		
Characium sp.								
Cladophora sp.								
Closterium sp.	13							
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.								
Scenedesmus sp.								32
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	13							
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen flos-aquae							3578	
Anphanocapsa sp.								
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	8713	8105	1887	226	17	17	3578	273

Table G-1. Phytoplankton (#/ml)

Station: Upriver	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa			25	25	117	330	1036	3539	3344	4258	479
Cocconeis sp.											
Cyclotella sp.								39			
Cymbella sp.											
Diatoma sp.											
Diatoma vulgare											
Fragilaria						214					52
Fragilaria crotonensis								233	78	506	52
Gyrosigma sp.			12								
Gomphonema sp.											
Melosira sp.			25	223	1437	2156	3108	1322	194		
Navicula sp.				12							
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.			112	50	233	1068	740	78		39	
Tabellaria sp.	9		12	12			37				
Tabellaria fenestrata											
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.										78	
Staurastrum sp.					19						
Stigeoclonium sp.											
Unknown coccoid				62							
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.								39			13
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS									136		
TOTAL:	9		186	384	1806	3768	4921	5250	3752	4881	596

Table G-1. Phytoplankton (#/ml) - continued

Station: Upriver	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthcs sp.	10							
Astcrionclla formosa	59		729	88	29	234	352	12
Cocconcis sp.								
Cyclotella sp.							26	
Cymbella sp.								
Diatoma sp.								
Diatorna viloare								
Fraqilaria sp.	59	49	365	88				
Fragilaria crotonensis								
Gomphonema sp.								
Gyrosigma so.								
Melosira sp.	29					20	130	234
Navicula sp.				10				
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	117	29	26		20		26	20
Tabellaria sp.								
Tabellaria fenestrata			443	137	39	88	78	10
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.								
Characim sp.			13				13	
Cladophora sp.								
Cosmarium sp.		10						
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrun sp.								
Scenedesmus sp.								
Schroederia sp.	10							
Straurastrum sp.	10			10				
Stigeoclonium sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	20					29		
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphanizomen f10s-aquae				49		24		
EUGLEMOIO (Euglenophyta)								
Trachelomonas			13			10		39
TOTAL	314	88	1589	382	88	405	625	315

Table G-1. **Phytoplankron** (#/ml) - continued

Station: Upriver	1981 2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	777	3,219	3,367	5,624	5,769	4,644
Cocconeis sp.						
Cyclotella sp.				74		
Cymbella sp.		37				
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.		74				
Fragilaria crotonensis						
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	222	333	111	333	175	111
Nitzschia sp.						
Navicula sp.				74	19	
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.		148		111	136	74
Tabellaria sp.						
Tabellaria fenestrata		37		888		
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					39	74
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.					78	
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						1,536
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	999	3,848	3,478	7,104	6,216	6,439

Table G-1. Phytoplankton (#/ml) - continued

Station: Upriver	1981'							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	8633	7039	2096	210	31			224
Cocconeis sp.								
Cyclotella sp.								8
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.				16				16
Fragilaris crotonensis						47		
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	26	26	39					
Nitzschia sp.								
Navicula sp.				8		8		
Pinnularia sp.								
Rhizosolenia sp.	26	13						
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	39	39		16		31		8
Tabellaria sp.								
Tabellaris fenestrata								
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	622	742	286	39		16		
Characium sp.						16		
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.				8				
Scenedesmus sp.				31				
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	13		13					
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	91				16			
Aphanizomen flos-aquae								
Anphanocapsa sp.							2819	
Osillatória								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonena sp.								
TOTAL:	9450	7859	2434	2762	47	118	2819	256

Table G-1. Phytoplankton (#/ml)

Station: Greene	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa		12	25	87	93	427	592	4939	2761	6728	480
Cocconeis sp.											
Cyclotella sp.	12										
Cymbella sp.						19					
Diatoma sp.											
Diatoma vulgare								39			
Fragilaria						97					
Fragilaria crotonensis								194			
Gyrosigma sp.											
Gomphonema sp.											
Melosira sp.	87	223	25	211	999	2292	2886	894	155	156	26
Navicula sp.		12	12	12		19					13
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.	25	25		74	444	952	518	233		156	26
Tabellaria sp.	136	12	37	25	204	233	37				
Tabellaria fenestrata										58	
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.		186								525	
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											;3
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS										19	
TOTAL:	260	582	99	409	1740	4039	4033	6299	2916	7642	558

Table G-1. Phytoplankton (#/ml) - continued

Station: Greene	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthcs sp.		10	26					
Asterionella formosa	68		573	68		469	312	39
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.	88	137						
Fragilaria crotonensis								
Gomphonema sp.								
Gyrosigma so.								
Melosira sp.						39	78	182
Navicula sp.						10		
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	68	107				20	26	
Tabellaria sp.								
Tabellaria fenestrata			560	137	88	20	13	13
GREENS (Chlorophyta)								
Actinastrum sp.			13					
Ankistrodesmus sp.								
Characium sp.								
Cladophora sp.								
Cosmarium sp.								
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrun sp.								
Scenedesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stigeoclonium sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.	20			89				
BLUE-GREENS (Cyanophyta)								
Anahaena sp.								
Aphanizornen sp.								
Aphanizomen f10s-aquae			26		68			
EUGLENOID (Euglenophyta)								
Trachelomonas		10		10				39
UNKNOWN FILAMENTOUS				44				
TOTAL	244	264	1198	348	156	558	429	273

Table G-1. Phytoplankton (#/ml) - continued

Station: Greene	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	1,628	4,995	1,221	5,476	7,851	1,381
Cocconeis sp.						
Cyclotella sp.		37				
Cymbella sp.		37		37		
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.		222			26	
Fragilaria crotonensis						24
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	259	185			260	
Nitzschia sp.				37		
Navicula sp.					39	
Rhizosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.			37	111	156	12
Tabellaria sp.						
Tabellaria fenestrata	185	74			221	
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					13	530
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.				37		
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.	37					
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						1,209
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	2,109	5,550	1,258	5,698	8,566	3,156

Table G-1. Phytoplankton (#/ml) - continued

Station: Greene	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	7350	6728	7078	225	47			360
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.	26			16		62		16
Fragilaris crotonensis								
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	78	247	39					
Nitzschia sp.								
Navicula sp.					16			
Pinnularia sp.								
Rhizosolenia sp.	13			8				
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	130	78	13		16	78	13	
Tabellaria sp.								
Tabellaris fenestrata								
GREENS (Chlorophyta)								
Actinastrurn sp.								
Ankistrodesmus sp.	1322	534	339	16	16	8		
Characium sp.						8		
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.								
Scenedesmus sp.						31		
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.			26					
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	124	52						
Aphanizomen f10s-aquae								
Anphanocapsa sp.							9528	
Osillatoria								
EUGLENOID (Euglcnophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	9043	7639	7495	281	95	187	9541	376

Table G-1. Phytoplankton (#/ml)

Station: Gonzaga	1979	1980								
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.					56						
Asterionella formosa				99	204	350	777	4433	3422	2975	353
Cocconeis sp.											
Cyclotella sp.									39		
Cymbella sp.						19					13
Diatoma sp.											
Diatoma vulgare											
Fragilaria						39	740				26
Fragilaria crotonensis								467	78		
Gyrosigma sp.											
Gomphonema sp.				12							
Melosira sp.				322	1110	2331	3515	1089	39	136	
Navicula sp.				12							13
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.				87	370	932	444	156		19	52
Tabellaria sp.	99			74	19	117	37				
Tabellaria fenestrata									78	39	
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown coccoid											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											
BLUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS									156		
TOTAL:	99			606	1759	3788	5513	6145	3812	3169	457

Table G-1. **Phytoplankton** (#/ml) - continued

Station: Gonzaga	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.			13					
Asterionella formosa	39		794	156		332	254	104
Cocconcis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Fraqilaria sp.	117	225	52		39			
Fragilaria crotonensls								
Gomphonema sp.		10						
Gyrosigma so.								
Melosira sp.		39	195		39		98	286
Navicula sp.								
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	29	78	26	10	29		20	26
Tabellaria sp.								
Tabellaria fenestrata			286	117	98	29	29	
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.								
Characiun sp.								
Cladophora sp.								
Cosmarium sp.								
Geminella sp.								
Geminnella interrupta								
Golenkinia sp.								
Pandorina sp.								
Pediastrum sp.								
Scenedesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stigeocloniwn sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.								
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphaniiornen sp.								
Aphanizomen f10s-aquae					20			
EUGLENOID (Euglenophyta)								
Trachelomonas	10		13	59	20			
TOTAL	195	352	1379	342	245	361	401	416

Table G-1. Phytoplankton (#/ml) - continued

Station: Gonzaga	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	2,479	5,735	3,996	7,141	1,862	4,736
Cocconeis sp.						
Cyclotella sp.						
Cymbella sp.		37				
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.						
Fragilaria crotonensis					56	37
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	1,036	222		74	148	37
Nitzschia sp.						
Navicula sp.						
Rhimosolenia sp.						
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.	74	74	185	148	352	93
Tabellaria sp.						
Tabellaria fenestrata	222	1,258		259		
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.				370		555
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						3,238
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	3,811	7,326	4,181	7,992	2,418	8,696

Table G-1. Phytoplankton (#/ml) - continued

Station: Gonzaga	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.								
Asterionella formosa	7856	5017	3620	225	31			72
Cocconeis sp.	13							
Cyclotella sp.		13						16
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.	26							
Fragilaria sp.	52				16	16		
Fragilaris crotonensis								
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.		65						
Nitzschia sp.	143							
Navicula sp.	52					8		
Pinnularia sp.								
Rhizosolenia sp.		26	13					
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	221	26	26	8	47	62	39	
Tabellaria sp.								
Tabellaris fenestrata	52							
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	1237	456	286	23	16	8		
Characium sp.						8		
Cladophora sp.								
Closterium sp.	26							
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.								
Scenedesmus sp.	13							
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.								
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	139							
Aphanizomen flos-aquae								
Anphanocapsa sp.							20708	
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	9830	5603	3945	356	110	102	20747	88

Table G-1. Phytoplankton (#/ml)

Station: Hangman	1979	1980									
	11/20	1/4	2/18	3/5	4/4	4/21	5/14	6/3	6/18	7/2	7/16
DIATOMS (BACILLARIOPHYTA)											
Achnanthes sp.											
Asterionella formosa				87	259	272	259	2178	2800	1750	181
Cocconeis sp.											
Cyclotella sp.											
Cymbella sp.											
Diatoma sp.											
Diatoma vulgare						19					
Fragilaria						117					39
Fragilaria crotonensis										253	
Gyrosigma sp.				25							
Gomphonema sp.											
Melosira sp.			87	174	1517	2778	2590	428	233	39	
Navicula sp.											
Pinnularia sp.											
Rhoicosphenia curvata											
Synedra sp.			37	62	259	894	407	506	117	39	52
Tabellaria sp.	112		12	50	19	117	148				
Tabellaria fenestrata								156			
GREENS (CHLOROPHYTA)											
Ankistrodesmus sp.											
Golenkinia sp.											
Scenedesmus sp.											
Staurastrum sp.											
Stigeoclonium sp.											
Unknown *coccoid*											
YELLOW-GREENS (CHRYSOPHYTA)											
Dinobryon sp.											39
LUE-GREENS (CYANOPHYTA)											
Oscillatoria sp.											
UNKNOWN FILAMENTOUS									78		
TOTAL:	112		136	398	2054	4197	3404	3268	3228	2081	148

Table G-1. Phytoplankton (#/ml) - continued

Station: Hangman	1980							1981
	7/29	8/12	9/9	9/24	10/10	11/14	12/17	1/20
DIATOMS (Bacillariophyta)								
Achnanthes sp.	10	10	13					
Asterionella forrnosa	39	49	1276	88		225	495	146
Cocconeis sp.								
Cyclotella sp.			13					
Cymbella sp.								
Diatoma sp.		10	13					
Diatoma vilgare								
Fraqilaria sp.	78	137	78		20			
Fr-agilaria cmtonensls	49				98			
Goniphonema sp.								
Gyrosigma so.								
Melosira sp.			104		10		52	127
Navicula sp.			39		10			
Pinnularia sp.								
Rhoicosphenia curvata								
Synedra sp.	59	68	52		10		26	
Tabellaria sp.								
Tabellaria fenestrata			456	205		20	26	
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	10							
Characium sp.						10		
Cladophora sp.								
Cosmarium sp.	10							
Geminella sp.								
Geminnella interrupta		361						
Golenkinia sp.								
Pandorina sp.								
Pediastrum sp.								
Scencdesmus sp.								
Schroederia sp.								
Straurastrum sp.								
Stiqeocloniwn sp.								
Unknown coccoid								
YELLOW-GREENS (Chyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp.			13					
BLUE-GREENS (Cyanophyta)								
Anabaena sp.								
Aphanizomen sp.								
Aphanizomen flcs-squae		15		34				
Oscillatoria sp.	20							
EUGLENOIO (Euglenophyta)								
Trachelomonas			378		49			
TOTAL	275	650	2422	327	197	255	599	273

Table G-1. **Phytoplankton** (#/ml) **- continued**

Station: Hangman	1981					
	2/26	3/27	4/16	4/30	5/19	6/5
DIATOMS (Bacillariophyta)						
Achanthes sp.						
Asterionella formosa	2,257	5,661	5,920	13,431	8,042	5,439
Cocconeis sp.						
Cyclotella sp.						
Cymbella sp.						
Diatoma sp.						
Diatoma vilgare						
Fragilaria sp.		148				
Fragilaria crotonensis					97	
Gomphonema sp.						
Gyrosigma sp.						
Melosira sp.	703	222		148	155	148
Nitzschia sp.						
Navicula sp.				74		
Rhizosolenia sp.	37			37		
Rhoicosphenia curvata						
Stauroneis sp.						
Surirella sp.						
Synedra sp.	37			74	117	407
Tabellaria sp.						
Tabellaria fenestrata	111	148		592	78	
GREENS (Chlorophyta)						
Actinastrum sp.						
Ankistrodesmus sp.					602	740
Characium sp.						
Cladophora sp.						
Cosmarium sp.						
Geminella sp.						
Geminella interrupta						
Golenkinia sp.						
Pandorina sp.						
Pediastrum sp.						
Scenedesmus sp.						
Schroederia sp.						
Staurastrum sp.						
Stigeoclonium sp.						
Unknown coccoid						
GOLDEN-BROWNS (Chyrsophyta)						
Chrysosphaerella sp.						
Dinobryon sp.						
BLUE-GREENS (Cyanophyta)						
Anabaena sp.						629
Aphanizomen sp.						
Aphanizomen flos-aquae						
Osillatoria						
EUGLENOID (Euglenophyta)						
Trachelomonas						
TOTAL	3,145	6,179	5,920	14,356	9,091	7,363

Table G-1. **Phytoplankton** (#/ml) - continued

Station: Hangman	1981							
	6/11	6/25	7/9	7/24	8/6	8/25	9/3	11/3
DIATOMS (Bacillariophyta)								
Anchanthes sp.		13						
Asterionella formosa	5561	8128	3411	256				240
Cocconeis sp.								
Cyclotella sp.								
Cymbella sp.								
Diatoma sp.								
Diatoma vilgare								
Epithemis sp.								
Fragilaria sp.						8		
Fragilaris crotonensis		52						
Gomphonema sp.								
Gyrosigma sp.								
Mougeota sp.								
Melosira sp.	52	234			210	39		
Nitzschia sp.								
Navicula sp.		13				8		
Pinnularia sp.								
Rhizosolenia sp.			13					
Rhoicosphenia curvata								
Stauroneis sp.								
Surirella sp.								
Synedra sp.	52	52	13		8	16		
Tabellaria sp.								
Tabellaris fenestrata		65						
GREENS (Chlorophyta)								
Actinastrum sp.								
Ankistrodesmus sp.	39	506	247	16	8	8		
Characium sp.						8		
Cladophora sp.								
Closterium sp.								
Cosmarium sp.								
Geminella sp.								
Geminella interrupta								
Golenkinia sp.								
Pandoria sp.								
Pediastrum sp.								
Scenedesmus sp.								
Schroederia sp.								
Staurastrum sp.								
Stigeoclonium sp.								
Ulothrix sp.								
Unknown coccoid								
GOLDEN-BROWNS (Cyrsophyta)								
Chrysosphaerella sp.								
Dinobryon sp				31				
BLUE-GREENS (Cyanophyta)								
Anabaena sp.	160							
Aphanizomen flos-aquae								
Anphanocapsa sp.							20067	
Osillatoria								
EUGLENOID (Euglenophyta)								
Trachelomonas								
YELLOW-GREENS (Xanthophyta)								
Tribonema sp.								
TOTAL:	5864	9063	3685	303	226	87	20067	240

APPENDIX H

Chironornids Found in the Spokane River

Table H-1. List of chironomids found in the Spokane River.

- Family Chironomidae
  - Subfamily Chironominae
    - Tribe Chironomini
      - *Dicrotendipes* sp.
      - *Microtendipes* sp.
      - *Paracladopelma* sp.
      - *Polypedilum* sp.
    - Tribe Tanytarsini
      - *Micropsectra* sp.
      - *Stempellinella* sp.
  - Subfamily Diamesinae
    - Tribe Diamesini
      - *Diamesa* sp.A
      - *Diamesa* sp.B
      - *Diamesa* sp.C
      - Potthastia longimanus
  - Subfamily Orthocladiinae
    - Tribe Orthocladiini
      - *Cricotopus* sp.A
      - *Cricotopus* sp.B
      - *Cricotopus* sp.C
      - *Eukiefferiella* sp.
      - *Nanocladius* sp.
      - *Orthocladius* sp.
      - *Psectrocladius* sp.
      - Type A
    - Tribe Corynoneurini
      - *Corynoneura* sp.
  - Subfamily Tanypodinae
    - Tribe Macropelopiini
      - *Procladius* sp.
    - Tribe Pentaneurini
      - *Ablabesmyia illinoensis*
      - *Thienemannimyia* sp.

APPENDIX I

Phytoplankton Chlorophyll *a* Data

of the Upper Spokane River

Table I-1. Spokane River Phytoplankton Chlorophyll a Data (μg/ℓ)

Station	2/18/80	3/22/80	4/4/80	4/21/80	5/14/80	6/3/80	6/18/80	7/2/80	7/16/80	7/29/80
Harvard I	1.3	4.5	8.1	12.3	5.2	4.3	1.9	3.5	10.7	3.7
Harvard II	<1.0	3.9	8.4	12.1	6.5	5.5	3.1	4.2	6.6	3.0
Barker	<1.0	0.6	10.4	13.2	7.7	5.2	1.6	8.2	3.9	0.6
Sullivan	<1.0	3.8	8.0	0.5	7.4	1.9	8.5	7.7	5.3	4.8
Euclid	<1.0	4.2	0.3	3.7	7.8	4.6	4.7	5.2	6.1	3.4
Plantes Ferry	<1.0	3.9	7.2	6.1	7.1	5.2	<0.2	1.3	-	3.2
Upriver	<1.0	8.8	6.9	1.1	1.3	1.9	8.2	5.2	6.2	2.6
Greene	1.8	4.8	7.1	0.3	0.6	4.4	4.1	8.7	4.2	0.6
Gonzaga	<1.0	3.2	5.8	10.2	5.6	4.5	5.2	6.8	5.8	1.9
Hangman	4.0	1.9	10.1	9.0	5.2	4.5	8.4	5.8	7.8	7.8

Table I-1. Spokane River Chlorophyll a Data - continued

Station	8/12/80	8/26/80	9/9/80	9/24/80	10/10/80	11/14/80	12/17/80	1/20/81	2/26/81
Harvard I	2.0	3.0	3.0	3.7	<0.2	3.2	1.3	1.9	11.9
Harvard II	2.3	3.2	2.9	3.6	<0.2	3.5	0.2	2.3	10.1
Barker	1.2	1.6	3.3	2.5	<0.2	1.8	1.7	1.9	3.2
Sullivan	2.4	2.3	3.4	3.8	<0.2	4.3	1.1	1.2	6.5
Euclid	5.0	2.1	2.8	6.6	<0.2	3.5	4.1	1.3	5.1
Plantes Ferry	2.1	2.1	4.0	5.1	1.3	2.5	1.0	1.1	2.2
Upriver	2.6	1.7	2.7	2.6	<0.2	3.7	1.4	1.5	3.0
Greene	3.2	3.5	4.6	7.2	1.4	2.3	1.4	1.1	4.9
Gonzaga	5.4	5.2	4.6	4.4	<0.2	2.1	0.6	1.6	0.5
Hangman	2.9	3.5	5.9	6.7	<0.2	4.2	0.7	0.2	5.1

Table I-1. Spokane River Chlorophyll a Data - continued

Station	3/27/81	4/16/81	4/30/81	5/16/81	6/5/81	6/11/81	6/25/81
Harvard I	5.2	7.7	10.3	7.4	6.2	2.6	3.3
harvard II	1.3	0.9	7.4	4.6	4.3	4.9	7.1
Barker	1.9	8.3	12.6	5.2	5.5	1.9	1.9
Sullivan	1.9	0	2.2	5.5	4.2	3.2	3.5
Euclid	3.2	4.5	2.9	5.8	4.6	1.9	4.3
Plantes Ferry	2.9	5.8	<0.2	4.8	4.8	4.2	1.6
Upriver	-	9.0	7.4	9.3	0.9	4.4	6.5
Greene	-	8.0	11.2	5.9	1.9	5.1	0.9
Gonzaga	1.1	5.8	10.4	6.4	1.9	4.1	<0.2
Hangman	2.5	6.7	7.5	5.9	3.7	3.6	3.4

Table I-1. Spokane River Chlorophyll a Data - continued

Station	7/9/81	7/24/81	8/6/81	8/25/81	9/3/81	9/24/81	11/3/81
Harvard I	2.6	3.0	3.1	1.3	2.9	3.2	3.5
Harvard II	2.1	0.9	1.3	2.9	2.6	2.9	1.9
Barker	3.2	0.6	1.3	1.9	0.9	1.9	2.6
Sullivan	0.3	2.1	3.7	2.8	2.3	2.6	2.6
Euclid	1.8	2.6	2.2	2.9	1.3	1.6	1.3
Plantes Ferry	0.9	3.1	2.6	1.3	2.3	1.3	7.8
Upriver	1.6	<0.2	1.9	2.6	0.9	2.3	2.6
Greene	3.4	1.3	2.6	4.3	2.3	2.5	0.9
Gonzaga	2.9	2.6	3.2	4.8	0.6	1.9	3.2
Hangman	2.2	1.9	2.5	2.3	2.0	3.9	3.2