3 AE 74- BG, SC

STUDIES OF THE AQUATIC ECOLOGY OF THE BLENHEIM-GILBOA PUMPED STORAGE RESERVOIRS AND OF SCHOHARIE CREEK IN THE VICINITY OF A PROPOSED PUMPED STORAGE FACILITY NEAR BREAKABEEN, NEW YORK

Progress Report for the Period
November 1973 - September 1974

by

Terry R. Culp, M.S.

Schoharie Valley Ecological Study
Ichthyological Associates, Inc.
111 Main Street, P.O. Box 2
Stamford, New York 12167

for

Uhl, Hall and Rich
Division of Charles T. Main of New York, Inc.
Southeast Tower, Prudential Center
Boston, Massachusetts 02199

Client

Power Authority of the State of New York

ICHTHYOLOGICAL ASSOCIATES, INC.
EDWARD C. RANEY, Ph.D., DIRECTOR
301 Forest Drive, Ithaca, New York 14850

April 1975

TABLE OF CONTENTS

	Page
INTRODUCTION	1
FISH DISTRIBUTION AND ABUNDANCE	
Introduction	2
Materials and Methods	2
Results and Discussion	7
Summary	14
FOOD HABITS (STOMACH ANALYSIS)	
Introduction	16
Materials and Methods	16
Results and Discussion	18
Summary	20
AGE AND GROWTH OF FISHES	
Introduction	21
Materials and Methods	21
Results and Discussion	21
Summary	23
CONDITION OF FISHES	
Introduction	24
Materials and Methods	24
Results and Discussion	27
Summary	27
MOVEMENT OF FISHES	
Introduction	28
Materials and Methods	28
Results and Discussion	29
Summary	30
POPULATION ESTIMATES OF FISHES	
Introduction	31
Materials and Methods	31
Results and Discussion	32
Summary	36
ICHTHYOPLANKTON	
Introduction	36
Materials and Methods	36
Results and Discussion	38
Summary	45
CREEL CENSUS	
Introduction	45
Materials and Methods	46
Results and Discussion	47
Summary	51
PHYSICOCHEMICAL DATA	
Introduction	51
Materials and Methods	52
Results and Discussion	52
Summary	55

STREAM BENTHOS
Introduction. 56
Materials and Methods 56
Results and Discussion. 58
Summary 60
FISH MORTALITY
Introduction. 61
Materials and Methods 61
Results and Discussion. 62
Summary 63
CONCLUSIONS 63
PERSONNEL 66
LITERATURE CITED. 67
TABLES. 68
FIGURES 280

LIST OF TABLES

1. Mortality due to netting of fish collected in August and September 1974 in Lower and Upper B-G 68

2. Descriptions of gill net stations 1-10 sampled in 1973 and 1974 in Lower B-G 69

3. Locations sampled by trap net in 1973 in Lower B-G. 70

4. Description of block net station sampled in 1973 and 1974 in Mine Kill Cove in Lower B-G 71

5. Locations sampled by seine net and electrofishing in 1973 in Lower B-G 72

6. Description of gill net stations 1-6 sampled in 1974 in Upper B-G 73

7. Locations sampled by gill net in 1973 in Upper B-G. 74

8. Locations sampled by trap net in 1973 in Upper B-G. 75

9. Descriptions of Fish Sampling Pools (FSPs) sampled in 1974 in Schoharie Creek 76

10. Descriptions of electrofishing stations sampled in 1974 in tributaries of Schoharie Creek. 77

11. Fish collected by month by experimental gill net from April through September 1974 in 1440 hours (240 hours per month) at ten stations in Lower B-G 78

12. Fish collected by station by experimental gill net from April through September 1974 in 1440 hours (144 hours at each station) at ten stations in Lower B-G 79

13. Abundance and biomass of fish collected by experimental gill net from April through September 1974 in Lower (1440 hours) and Upper (864 hours) B-G 80

14. Fish collected by experimental gill net from April through September 1973 (1680 hours) and 1974 (1440 hours) in Lower B-G 81

15. Fish collected by month by trap net from April through September 1974 in 1270 hours at five stations in Lower B-G. . 82

16. Fish collected by station by trap net from April through September 1974 in 1270 hours at five stations in Lower B-G. . 83

17. Abundance and biomass of fish collected by trap net from April through September 1974 in Lower (1270 hours) and Upper (1278 hours) B-G. 84

18. Fish collected by trap net in June, July, and September 1973 (590 hours) and 1974 (631 hours) in Lower B-G 85

19. Abundance and biomass of fish collected by block net from May through August 1974 at two locations in Lower B-G 86

20. Fish collected by block net on 17 August 1973 and on 18 August 1974 in Mine Kill Cove in Lower B-G. 87

21. Fish collected by seine net from June through August 1974 at three stations in Lower B-G 88

22. Fish collected by month by experimental gill net from April through September 1974 in 864 hours (144 hours per month) at six stations in Upper B-G 90

23. Fish collected by station by experimental gill net from April through September 1974 in 864 hours (144 hours at each station) at six stations in Upper B-G 91

24. Fish collected by month by trap net from April through September 1974 in 1278 hours at four stations in Upper B-G. . 92

25. Fish collected by station by trap net from April through September 1974 in 1278 hours at four stations in Upper B-G. . 93

26. Abundance and biomass of fish collected by block net in June 1974 at one location in Upper B-G. 94

27. Fish collected by trap net in June and August 1974 in 565 hours at three stations in Schoharie Creek between Schoharie Reservoir and Lower B-G 95

28. Fish collected by trap net in July and August 1973 in 336 hours at three stations in Schoharie Creek between Schoharie Reservoir and Lower B-G 97

29. Fish collected by trap net in July and August 1974 in 681 hours in Schoharie Creek between Lower B-G and the Walhalla Rocks north of Breakabeen 99

30. Fish collected by trap net in August and October 1973 in 560 hours at five stations in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen 102

31. Fish collected by electrofishing in July and August 1974 in Trib 98A and Trib 101 of Schoharie Creek. 104

32. Fish collected by electrofishing from June through August 1974 in Cole Hollow Creek (Trib 99 of Schoharie Creek). . . . 105

33. Summary of number of walleye stomachs examined from April through September 1974 in Lower and Upper B-G 108

34. Summary of major food types in the diet of walleye collected from April through September 1974 in Lower and Upper B-G. . . 109

35. Summary of number of largemouth bass stomachs examined from April through August 1974 in Lower B-G. 110

36. Summary of number of smallmouth bass stomachs examined from May through July 1974 in Lower B-G 110

37. Summary of number of chain pickerel stomachs examined from April through August 1974 in Lower B-G. 110

38. Summary of major food types in the diet of largemouth bass collected from April through August 1974 in Lower B-G 111

39. Summary of major food types in the diet of smallmouth bass collected from May through July 1974 in Lower B-G. 111

40. Summary of major food types in the diet of chain pickerel collected from April through August 1974 in Lower B-G. . . . 111

41. Summary of number of yellow perch stomachs examined from April through September 1974 in Lower and Upper B-G. 112

42. Summary of major food types in the diet of yellow perch collected from April through September 1974 in Lower and Upper B-G. 113

43. Summary of number of rock bass stomachs examined from April through September 1974 in Lower and Upper B-G. 115

44. Summary of major food types in the diet of rock bass collected from April through September 1974 in Lower and Upper B-G. 116

45. Summary of number of pumpkinseed stomachs examined from April through September 1974 in Lower and Upper B-G. 118

46. Summary of major food types in the diet of pumpkinseed collected from April through September 1974 in Lower and Upper B-G. 119

47. Summary of number of redbreast sunfish stomachs examined from May through September 1974 in Upper B-G 122

48. Summary of major food types in the diet of redbreast sunfish collected from May through September 1974 in Upper B-G. 123

49. Length-frequency distribution of pumpkinseed collected in 1974 in Lower B-G. 125

50. Length-frequency distribution of pumpkinseed collected in 1974 in Upper B-G. 127

51. Length-frequency distribution of redbreast sunfish collected in 1974 in Upper B-G 129

52. Length-frequency distribution of rock bass collected in 1974 in Lower B-G 130

53. Length-frequency distribution of rock bass collected in 1974 in Upper B-G 131

54. Length-frequency distribution of yellow perch collected in 1974 in Lower B-G. 132

55. Length-frequency distribution of yellow perch collected in 1974 in Upper B-G. 133

56. Length-frequency distribution of largemouth bass collected in 1974 in Lower B-G 135

57. Mean total length (mm) by month of each age group of pumpkinseed collected in 1974 in Lower and Upper B-G and Schoharie Creek. 136

58. Mean total length (mm) by month of each age group of redbreast sunfish collected in 1974 in Lower and Upper B-G . 138

59. Mean total length (mm) by month of each age group of rock bass collected in 1974 in Lower and Upper B-G and Schoharie Creek. 139

60. Mean total length (mm) by month of each age group of yellow perch collected in 1974 in Lower and Upper B-G and Schoharie Creek. 141

61. Mean total length (mm) by month of each age group of largemouth bass collected in 1974 in Lower and Upper B-G and Schoharie Creek. 143

62. Mean total length (mm) by month of each age group of smallmouth bass collected in 1974 in Lower and Upper B-G and Schoharie Creek. 144

63. Mean total length (mm) by month of each age group of walleye collected in 1974 in Lower and Upper B-G and Schoharie Creek 145

64. Mean total length (mm) by month of each age group of chain pickerel collected in 1974 in Lower B-G and Schoharie Creek. 146

65. Mean weight (g) by month for each age group of pumpkinseed collected in 1974 in Lower and Upper B-G and Schoharie Creek 148

66. Mean weight (g) by month for each age group of redbreast sunfish collected in 1974 in Lower and Upper B-G 150

67. Mean weight (g) by month for each age group of rock bass collected in 1974 in Lower and Upper B-G and Schoharie Creek 151

68. Mean weight (g) by month for each age group of yellow perch collected in 1974 in Lower and Upper B-G and Schoharie Creek 153

69. Mean weight (g) by month for each age group of largemouth bass collected in 1974 in Lower B-G and Schoharie Creek. . . 155

70. Mean weight (g) by month for each age group of smallmouth bass collected in 1974 in Lower B-G and Schoharie Creek. . . 156

71. Mean weight (g) by month for each age group of walleye collected in 1974 in Lower B-G and Schoharie Creek 157

72. Mean weight (g) by month for each age group of chain pickerel collected in 1974 in Lower B-G and Schoharie Creek. 158

73. Mean total length (mm) by month of each age group of pumpkinseed collected in 1973 and 1974 in Lower B-G. 160

74. Mean total length (mm) by month of each age group of rock bass collected in 1973 and 1974 in Lower B-G 161

75. Mean total length (mm) by month of each age group of rainbow trout and brook trout collected in 1974 in Cole Hollow Creek 163

76. Length-frequency distribution of rainbow trout and brook trout collected in 1974 in Cole Hollow Creek 164

77. Fish collected from April through September 1974 in Lower and Upper B-G and Schoharie Creek for which condition factor was determined 165

78. Condition factor for pumpkinseed collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek 166

79. Condition factor for yellow perch collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek 170

80. Condition factor for redbreast sunfish collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek. 173

81. Condition factor for rock bass collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek. 175

82. Condition factor for largemouth bass collected in 1973 and 1974 in Lower B-G and Schoharie Creek. 180

83. Condition factor for walleye collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek. 182

84. Condition factor for smallmouth bass collected in 1973 and 1974 in Lower B-G and Schoharie Creek. 184

85. Condition factor for chain pickerel collected in 1973 and 1974 in Lower B-G and Schoharie Creek. 186

86. Fish marked for migration study in 1974 in Lower and Upper B-G and Schoharie Creek. 187

87. Fish recaptured for migration study in 1974 in Lower and Upper B-G and Schoharie Creek. 188

88. Fishes captured in a 500' section of Trib 101 below Route 30 on 24 July 1974 and estimated populations and biomass (DeLury Method). 189

89. Fishes captured in a 500' section of Cole Hollow Creek below Bear Ladder Road on 28 June 1974 and estimated populations and biomass (DeLury Method) in the 500' and 1180' sections 190

90. Fishes captured in a 250' section of Trib 98A 235' above Schoharie Creek on 27 August 1974 and estimated populations and biomass (DeLury Method). 191

91. Larvae captured in day and night tows from 15 April 1974 through 15 September 1974 in Lower and Upper B-G 192

92. Volume (m^3) of water filtered through ichthyoplankton nets in day and night tows from 15 April through 15 September 1974 in Lower and Upper B-G. 193

93. Larvae per m^3 in day and night tows from 15 April through 15 September 1974 in Lower and Upper B-G 194

94. Larval fishes captured from 15 April through 15 September 1974 in Lower and Upper B-G. 195

95. Site totals for 3-minute day ichthyoplankton tows in April 1974 in Lower and Upper B-G. 196

96. Site totals for 3-minute day ichthyoplankton tows in May 1974 (1 May - 13 May) in Lower and Upper B-G 197

97. Site totals for 3-minute night ichthyoplankton tows in May 1974 (1 May - 13 May) in Lower and Upper B-G 198

98. Site totals for 5-minute day ichthyoplankton tows in May 1974 (15 May - 31 May) in Lower and Upper B-G 199

99. Site totals for 5-minute night ichthyoplankton tows in May 1974 (15 May - 31 May) in Lower and Upper B-G. 200

100. Species totals for 5-minute day and night ichthyoplankton tows in May 1974 in Lower and Upper B-G. 201

101. Site totals for 5-minute day ichthyoplankton tows in June 1974 in Lower and Upper B-G. 202

102. Site totals for 5-minute night ichthyoplankton tows in June 1974 in Lower and Upper B-G. 203

103. Species totals for 5-minute day and night ichthyoplankton tows in June 1974 in Lower and Upper B-G 204

104. Site totals for 5-minute day ichthyoplankton tows in July 1974 in Lower and Upper B-G. 205

105. Site totals for 5-minute night ichthyoplankton tows in July 1974 in Lower and Upper B-G. 206

106. Species totals for 5-minute day and night ichthyoplankton tows in July 1974 in Lower and Upper B-G 207

107. Site totals for 5-minute day ichthyoplankton tows in August 1974 in Lower and Upper B-G. 208

108. Site totals for 5-minute night ichthyoplankton tows in August 1974 in Lower and Upper B-G. 209

109. Species totals for 5-minute day and night ichthyoplankton tows in August 1974 in Lower and Upper B-G 210

110. Site totals for 5-minute day ichthyoplankton tows in September 1974 in Lower and Upper B-G. 211

111. Site totals for 5-minute night ichthyoplankton tows in September 1974 in Lower and Upper B-G. 212

112. Dates a creel census was conducted from 15 June through 15 September 1974 in Lower B-G. 213

113. Dates a creel census was conducted from 15 June through 15 September 1974 in Schoharie Creek. 214

114. Summary of creel census data collected from 15 June through 15 September 1974 in 264 hours in Lower B-G. 215

115. Creel census data by month collected from 15 June through 15 September 1974 in 264 hours in Lower B-G 216

116. Creel census data collected in 1973 (1 July - 30 September) and 1974 (1 August - 15 September) from Lower B-G. 218

117. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) from Schoharie Creek between Schoharie Reservoir and the iron bridge north of Breakabeen. 219

118. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Schoharie Reservoir and Lower B-G 220

119. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen (the area to be inundated by the proposed Breakabeen facility). 221

120. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen (the area which will not be inundated by the proposed Breakabeen facility. 222

121. Descriptions of water chemistry stations sampled in 1974 in Lower and Upper B-G, Schoharie Creek, and three tributaries . 223

122. Summary of air temperature data (°C) taken from April through September 1974 from Schoharie Creek, three tributaries, and Lower and Upper B-G 227

123. Summary of water temperature data (°C) taken from April through September 1974 from Lower and Upper B-G 230

124. Summary of dissolved oxygen data (ppm) taken from April through September 1974 from Lower and Upper B-G 236

125. Summary of pH data taken from April through September 1974 from Lower and Upper B-G. 242

126. Summary of turbidity data (formazin turbidity units) taken from April through September 1974 from Schoharie Creek, three tributaries, and Lower and Upper B-G. 247

127. Summary of turbidity data (inches) taken from April through September 1974 using an 8-inch Secchi disc in Lower and Upper B-G 250

128. Summary of alkalinity, total hardness, calcium hardness, and carbon dioxide data (mg/l) taken from April through September 1974 from Lower and Upper B-G 251

129. Summary of daily fluctuations in water level from December 1973 through September 1974 in Lower and Upper B-G. 257

130. Summary of water temperature data (°C) taken from April through September 1974 from Schoharie Creek and three tributaries 258

131. Summary of dissolved oxygen data (ppm) taken from April through September 1974 from Schoharie Creek and three tributaries 260

132. Summary of pH data taken from April through September 1974 from Schoharie Creek and three tributaries. 262

133. Summary of alkalinity, total hardness, calcium hardness, and carbon dioxide data (mg/l) taken from April through September 1974 from Schoharie Creek and three tributaries 264

134. Dates in 1974 on which water samples were taken from 12 stations in Schoharie Creek and its tributaries following 0.25 or more inches of rainfall in a 24-hour period 269

135. Schedule of stream benthos sampling in 1974 270

136. Stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek. 271

137. Mean and standard deviation of number of organisms, number of orders, and biomass per sample of stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek 272

138. Minimum and maximum discharges (cfs) and maximum instantaneous increase in discharge (cfs) in June through August 1974 in Lower B-G 273

139. Numerical and occurrence percentages of stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek. 274

140. Mean number of organisms and orders collected per sample in August and September 1973 and in June through August 1974 in 2 zones of Schoharie Creek. 275

141. Stream benthos collected in July and August 1974 in 2 zones (4 stations) of Cole Hollow Creek 276

142. Mean and standard deviation of number of organisms, number of orders, and biomass per sample of stream benthos collected in July through August 1974 in 2 zones (4 stations) of Cole Hollow Creek. 277

143. Numerical and occurrence percentages of stream benthos collected in July and August 1974 in 2 zones (4 stations) of Cole Hollow Creek. 278

144. Fish kills attributed to pumped storage operation from 1 June through 18 September 1974 in Lower and Upper B-G 279

LIST OF FIGURES

1. Gill net stations 1-10 on Lower B-G 280

2. Trap net stations 1-5 on Lower B-G. 281

3. Block net stations on Lower B-G 282

4. Seine net stations on Lower B-G 283

5. Gill net stations 1-6 on Upper B-G. 284

6. Trap net stations 1-4 on Upper B-G. 285

7. Block net station on Upper B-G. 286

8. Fish Sampling Pools 11, 10, 10A, spillway pool, and 1-8 on Schoharie Creek 287

9. Fish Sampling Pools 8 and 9 and the Walhalla Rocks pool on Schoharie Creek 288

10. Tributaries 108-100 of Schoharie Creek in the vicinity of the Blenheim-Gilboa Pumped Storage Project and the proposed Breakabeen pumped storage facility. 289

11. Tributaries 99-95 of Schoharie Creek in the vicinity of the proposed Breakabeen pumped storage facility 290

12. Electrofishing stations on Trib 99 (Cole Hollow Creek). . . . 291

13. Catch per hour by month of gill net sampling in 1973 and 1974 in Lower B-G. 292

14. Catch per hour by month of trap net sampling in 1973 and 1974 in Lower B-G. 293

15. Catch per hour by month of gill net sampling in 1973 and 1974 in Upper B-G. 294

16. Catch per hour by month of trap net sampling in 1973 and 1974 in Upper B-G. 295

17. Catch per hour by pool of trap net sampling in 1973 and 1974 in Schoharie Creek. 296

18. Condition factors of pumpkinseed collected in May 1973 and May 1974 in Lower and Upper B-G 297

19. Condition factors of pumpkinseed collected in June 1973 and June 1974 in Lower and Upper B-G and Schoharie Creek. 298

20. Condition factors of pumpkinseed collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek. 299

21. Condition factors of pumpkinseed collected in August 1973 and August 1974 in Lower and Upper B-G and Schoharie Creek. . . . 300

22. Condition factors of pumpkinseed collected in September 1973 and September 1974 in Lower and Upper B-G and Schoharie Creek 301

23. Condition factors of yellow perch collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek. 302

24. Condition factors of rock bass collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek. 303

25. DeLury regression curve for white sucker, blacknose dace, and fantail darter populations of a 500' section of Trib 101 below Route 30 for July 1974. 304

26. DeLury regression curve for creek chub and fallfish populations of a 500' section of Trib 101 below Route 30 for July 1974 305

27. Sections of Cole Hollow Creek sampled for population estimates in June and August 1974 306

28. DeLury regression curve for the rainbow trout population of a 500' section of Cole Hollow Creek below Bear Ladder Road for June 1974 307

29. DeLury regression curve for the blacknose dace population of a 500' section of Cole Hollow Creek below Bear Ladder Road for June 1974 308

30. DeLury regression curve for the rainbow trout population of a 500' section of Cole Hollow Creek immediately above the first bridge above Bear Ladder Road for August 1974. 309

31. DeLury regression curve for the brook trout population of a 500' section of Cole Hollow Creek immediately above the second bridge above Bear Ladder Road for August 1974. 310

32. DeLury regression curve for the chain pickerel population of a 250' section of Trib 98A of Schoharie Creek 235' above Schoharie Creek for August 1974. 311

33. Ichthyoplankton sampling stations 1-4 on Lower B-G 312

34. Ichthyoplankton sampling stations 5-7 on Upper B-G 313

35. Water chemistry station 1 on Schoharie Creek 314

36. Water chemistry stations 2-7 on Schoharie Creek and 10 on Trib 101 of Schoharie Creek 315

37. Water chemistry stations 8 and 9 on Schoharie Creek and 11 and 12 on tributaries of Schoharie Creek 316

38. Water chemistry stations 13-15 on Lower B-G. 317

39. Water chemistry stations 16 and 17 on Upper B-G. 318

40. Stream benthos sampling stations SC-1 - SC-7 on Schoharie Creek. 319

41. Stream benthos sampling stations SC-5 - SC-12 on Schoharie Creek. 320

42. Stream benthos sampling stations CH-1 - CH-4 on Cole Hollow Creek. 321

43. Fish kill survey route on Lower B-G. 322

44. Fish kill survey route on Upper B-G. 323

INTRODUCTION

In October 1972, Ichthyological Associates, Inc. began a study of the aquatic ecology of Schoharie Creek and its tributaries in the area of a proposed pumped storage facility located between North Blenheim and Breakabeen, New York. In April 1973, studies were enlarged to include the Blenheim-Gilboa Pumped Storage Project, which is located 2½ miles upstream from the proposed Breakabeen facility between Gilboa and North Blenheim, New York.

The research was designed to acquire data to determine the expected impact on the aquatic environment of the proposed Breakabeen pumped storage facility. The objectives were:

1. To determine the fishes and the fisheries present in Schoharie Creek and its tributaries which are to be inundated by the proposed Breakabeen facility.

2. To determine changes, if any, in the fisheries of Schoharie Creek above and below the Blenheim-Gilboa Pumped Storage Project which could be attributed to construction and operation of this facility.

3. To determine changes, if any, in the fisheries of Lower Blenheim-Gilboa (B-G) Reservoir after operation of the facility began in June 1973.

4. To monitor the development of the fisheries in Upper B-G Reservoir since pumping began in June 1973.

Results of the aquatic studies conducted from October 1972 through October 1973 are reported in Culp (1974). Data collected from November 1973 through September 1974 are analyzed and presented in this report.

Studies conducted in 1974 included: (1) fish distribution, (2) food habits (stomach analysis), (3) age and growth of fishes, (4) condition of fishes, (5) movement of fishes, (6) population estimates of fishes, (7) ichthyoplankton, (8) creel census, (9) physicochemical data, (10) stream benthos, and (11) fish mortality.

FISH DISTRIBUTION AND ABUNDANCE

Introduction

Fish collections were made from April through September 1974 in Lower and Upper B-G and in Schoharie Creek between the Gilboa Dam and the Walhalla Rocks; this includes the area of Schoharie Creek and its tributaries that may be inundated by the proposed Breakabeen pumped storage facility (Figures 1-12). Fish collections were made to identify the fishes and determine the relative abundance (number of individuals and biomass) in the study area and to determine aspects of their biology as noted above.

Materials and Methods

Fish were collected by experimental gill net, trap net, block net, seine net, and electrofishing.

Experimental Gill Net

Nylon experimental gill nets used are 300 ft long and 8 ft high, with 75 ft each of mesh sizes 1-in, 2-in, 3-in, and 4-in. These nets have lead core weights on the bottom lines and floats on the top lines to keep them upright. They remain stationary throughout the time period set.

Trap Net

Two trap nets used are made of 3/8-inch cotton mesh treated with tar for preservation. The trap net used on Lower B-G and Schoharie Creek was composed of a rectangular box (6' length, 3' depth, 20" width) with a funnel-shaped entrance. The trap net used on Upper B-G was composed of a 5' X 2 1/2' X 20" rectangular box with a funnel-shaped entrance. Each net had two wings (15' X 20") and a main leader (25' X 20") that bisects the angle of the wings which direct fish to the funnel-shaped opening of the rectangular box. Extending behind each box is a 6' tube, 2' in diameter, in which fish are trapped. The end of this tube is tied with a slip cord to facilitate fish removal. Both the rectangular box and the tube are held open by metal frames. The wings and leaders are equipped with floats on the top lines and lead weights on the bottom lines so they remain upright.

Block Net

The nylon block net used is 450 ft long and 40 ft high. The mesh size is 5/8-in. When the water level is low this net is set on the bottom, blocking off a given area. The bottom of the net is weighted with a lead core line and rocks to prevent the escape of fish underneath. When the water level rises, the top line of the net is lifted from the bottom and floats are secured to it. As the water recedes, all fish that are unable to escape through the 5/8-in mesh are blocked behind the net. This method is very effective in pumped storage reservoirs where water levels fluctuate greatly over a short period of time.

Seine Net

A 50-ft by 4-ft nylon seine net with 3/16-in mesh was used. Sometimes

seines were hauled parallel to the shore and at other times they were pulled from deeper waters to the beach or bank.

Electrofishing

A 115-volt, 60-cycle, 1500-watt Dayton alternator with a 4-hp Briggs & Stratton engine (15-amp rating) was used to provide an electrical current. A rectifier was used to create a direct pulsating electrical current (DC) that creates a resistance in the water different from the resistance experienced by the fish. The difference in the resistance of the water and of the fish to pulsating DC stimulates the swimming muscles of fish for short periods of time, causing the fish to orient toward and be attracted to the positive electrode. An electrical field of sufficient magnitude to immobilize the fish is present near the positive electrode. The positive electrode is a metal ring (14-in diameter) to which a net is sewn. The ring is at the end of a 7-ft wooden pole. Also connected to this wooden pole at the end of a 10-ft wire is a 3-ft metal pipe which acts as the negative electrode. As the fish are stunned at the positive electrode, they are scooped from the water and placed in a bucket of water to be revived.

Fish collected in 1974, except those used for food habits studies (stomach analysis), were processed and returned to the water. Beginning in August, those retained for study were recorded (Table 1). The total length (nearest 1.0 mm) and weight (nearest 0.1 g) were recorded and scale samples taken from an area just underneath the dorsal fin. Fish taken for migration or population studies had either the pectoral or pelvic fin removed (if under 125 mm) or were tagged (greater than 125 mm) with a metal tag attached to the operculum.

Lower B-G

Experimental gill nets were set at stations 1-10, which were the stations sampled in 1973 (Figure 1). The stations varied in depth and bottom type (Table 2). Each station was sampled for approximately 24 hours per month from April through September. Nets were set perpendicular to the shore and the small mesh was inshore.

Trap nets were set at five stations (Figure 2). The stations were not identical with those sampled in 1973 because maximum water levels differed greatly between the two years as a result of pumped storage operation (Table 3). Trap nets were set so that the box was in 8 ft or less of water. Clay and stone bottom was present at all stations. The number of hours sampled each month and at each station varied depending on the number of fish needed for biological studies.

A block net was set across Mine Kill Cove (Table 4, Figure 3). At gill net station 6 a U-shaped set was made (Figure 3). More fish were caught in the Cove because the area blocked behind the net was much greater than at gill net station 6. Fish concentrate to a greater degree in a cove than at a straight section of shoreline.

The three seine stations were not identical to those sampled in 1973 because of changes resulting from pumped storage operation (Table 5, Figure 4).

Upper B-G

Experimental gill nets were set for 24 hours each at six stations monthly from April through September (Table 6, Figure 5). The stations were not identical to those sampled in 1973 because of changes resulting from

pumped storage operation (Table 7). Nets were set perpendicular to the shore and the small mesh was inshore.

Trap nets were set at four stations which differed from those sampled in 1973 because of pumped storage operation (Table 8, Figure 6). The box was in 8 ft or less of water. The bottom at all stations was a combination of clay and stone covered with dead grasses and bushes. The number of hours sampled each month and at each station differed according to the number of fish needed for biological studies.

A block net was set in a U-shape along the shoreline between gill net stations 1 and 2 (Figure 7). It was unsuccessful in capturing fish. No narrow coves are available.

Schoharie Creek

Trap nets were set in 10 Fish Sampling Pools (FSPs); three were located between the Gilboa Dam and Lower B-G and seven were between Lower B-G and the Walhalla Rocks (Table 9, Figures 8 and 9). Pools were the only habitat sampled in Schoharie Creek. Flow decreases greatly in the summer when fish can be sampled and the game and pan fish are concentrated in the pools. The time of sampling differed from 1973 to 1974 because samples could not be taken when substantial flow occurred in Schoharie Creek.

Tributaries of Schoharie Creek

Tributaries to be inundated by the proposed Breakabeen facility (101, 99, and 98A) were sampled by electrofishing (Figures 10-12). The sections shocked were shocked in an upstream direction and are described in Table 10.

Results and Discussion

Lower B-G

Experimental Gill Net

In 1440 hours from April through September at 10 gill net stations, 13 fishes (n = 309) were captured (Tables 11 and 12). The abundance by species was pumpkinseed (n = 106), white sucker (51), carp (35), yellow perch (27), and golden shiner (21). The carp (44.2 lbs) and white sucker (20.8 lbs) comprised the greatest biomass (Table 13). Sampling was most successful in September when 74 fish were collected. Most fish were taken at station 2 (n = 50) and station 9 (60).

In 1974, the catch per unit effort for all fishes except white sucker in Lower B-G decreased or remained the same in comparison to 1973 results (Table 14). The decrease in catch per unit effort between 1973 and 1974 was most pronounced for carp, brown bullhead, stonecat, and largemouth bass. The catch per hour from April through September 1974 was 0.21 and in 1973 was 0.49 at the same stations. Monthly catch per hour was greater for all months sampled in 1973 in comparison to the same months sampled in 1974 (Figure 13).

Trap Net

In 1270 hours from April through September 1974 at five stations, 13 fishes (n = 1156) were captured (Tables 15 and 16). The brown bullhead (n = 631) and pumpkinseed (454) were most abundant. The brown bullhead comprised 99.0 lbs and the pumpkinseed 21.5 lbs of the total of 147.8 lbs (Table 17). The highest catch per hour was at station 1 and in September.

In June, July, and September 1973, 2189 fish were captured in 590 hours (Table 18). In the same months in 1974, but at different stations, 562 fish were captured in 631 hours. The catch per hour decreased from 3.71 in 1973 to 0.89 in 1974. Monthly catch per hour decreased drastically between June and July 1973 during the first two months of pumping and increased in June through September 1974 (Figure 14). Eight of the 10 fishes captured in 1974 were more abundant in catches made in 1973. Many more yellow perch, pumpkinseed, rock bass, and carp were captured in 1973. The white sucker and redbreast sunfish were more abundant in 1974.

Block Net

A block net was set in May and August in Mine Kill Cove and in June at gill net station 6 (Table 19). The catches in the two sets made in Mine Kill Cove were incomplete because approximately 100 ft at the northern shore were not blocked by the net when the water level was at its maximum. The set could not be made any nearer the head of Mine Kill Cove (and thus completely block the cove) because fish would have been stranded behind the net at night and many would have died before they could be processed. The U-shaped set made at gill net station 6 represented a complete catch.

More fish were captured in Mine Kill Cove in May 1974 (n = 2460) when 1.5 surface acres were blocked than in August (293) when 2.3 surface acres were blocked. In May the abundance by species was: pumpkinseed (n = 1916, 78%), white sucker (148, 6%), rock bass (67, 3%), and fallfish (62, 3%). In August the rank by abundance was white sucker (n = 113, 39%), pumpkinseed (71, 24%), golden shiner (68, 23%), rock bass (17, 6%), and largemouth bass

(7, 2%). The pumpkinseed comprised the greatest biomass (68.9 lbs) in May and the white sucker contributed the greatest biomass (86.9 lbs) in August (Table 19).

In June a block net was set in a U-shape along the shoreline at gill net station 6. Twenty-five fish weighing 1.0 lbs were collected in 0.23 surface acres. The pumpkinseed (n = 20) was the most abundant of the four fishes collected (Table 19).

A block net that completely blocked Mine Kill Cove in August 1973 took 18 fishes (n = 5557) in 0.75 surface acres (Table 20).

Seine Net

From June through August 1974, 29 seine hauls made at three locations took 12 fishes (n = 207) (Table 21). The rosyface shiner (n = 129) and pumpkinseed (46) were most abundant.

In April and May 1973, 19 fishes (n = 5870) were collected in 12 seine hauls and in three seine hauls in combination with electrofishing (Culp, 1974). Because stations, months, and methods varied between 1973 and 1974, comparisons between catch per haul or relative abundance of fishes captured should not be made. However, data and personal observation indicate that the number of small fish that inhabit the shallow shoreline habitats decreased greatly between 1973 and 1974.

Upper B-G

Experimental Gill Net

In 864 hours sampled from April through September at six gill net

stations, 13 fishes (n = 942) were captured (Tables 22 and 23). The rank by abundance was brown bullhead (n = 469), pumpkinseed (141), yellow perch (95), carp (94), and redbreast sunfish (66). The biomass per species was carp (104.6 lbs), brown bullhead (99.3 lbs), yellow perch (21.3 lbs), pumpkinseed (12.5 lbs), and redbreast sunfish (8.2 lbs) (Table 13). Station 2 (n = 325) and June (265) produced the most fish of all stations and months sampled.

In June through September 1973, 6 fishes (n = 16) were captured in 300 hours (Culp, 1974). During the same months but at different stations in 1974, 13 fishes (n = 675) were captured in 576 hours. Catch per hour increased from 0.05 in 1973 to 1.17 in 1974. Monthly catch per hour in 1974 was highest in June (Figure 15). The walleye, log perch, pumpkinseed, rock bass, redbreast sunfish, golden shiner, and common shiner were captured in 1974 but none of these were taken in 1973. The largemouth bass and northern redhorse were captured in 1973 but neither were collected in 1974.

Trap Net

In 1278 hours sampled from April through September 1974 at four trap net stations, 12 fishes (n = 945) were captured (Tables 24 and 25). The rank by abundance was pumpkinseed (n = 642), redbreast sunfish (119), yellow perch (85), and brown bullhead (61). The pumpkinseed (57.1 lbs), yellow perch (13.2 lbs), redbreast sunfish (11.3 lbs), and brown bullhead (9.8 lbs) comprised the greatest biomasses of the total 97.7 lbs collected (Table 17). Station 1 (1.26) and September (2.32) produced the greatest catch per hour of all stations and months sampled.

In June, July, and September 1973, 7 fishes (n = 201) were captured in 582.5 hours (Culp, 1974). During the same months but at different stations in 1974, 8 fishes (n = 642) were captured in 689 hours. Catch per hour increased from 0.35 in 1973 to 0.93 in 1974. In 1974 the monthly catch per hour increased greatly between May and September (Figure 16). The yellow perch, pumpkinseed, brown bullhead, and redbreast sunfish were most abundant in 1973 and 1974. The pumpkinseed and redbreast sunfish increased in relative abundance from 1973 to 1974, the yellow perch decreased in relative abundance, and the brown bullhead remained the same.

Block Net

In June a block net was set in a U-shape along the shoreline between gill net stations 1 and 2 (Table 26). Six fishes (n = 27) weighing 1.8 lbs were captured. The pumpkinseed (n = 13, 48%) and redbreast sunfish (6, 22%) were most abundant.

Upper B-G was not sampled by block net in 1973.

Lower and Upper B-G

Experimental Gill Net

From April through September 1974, 13 fishes (n = 309) and 13 fishes (942) were captured in Lower and Upper B-G, respectively (Table 13). The catch per hour was 0.21 in Lower B-G and 1.09 in Upper B-G.

The yellow perch, redbreast sunfish, brown bullhead, and carp were relatively more abundant in Upper B-G; 66 redbreast sunfish were captured in

Upper B-G whereas none were captured in Lower B-G. The stonecat, fallfish, and chain pickerel were relatively more abundant in Lower B-G.

Trap Net

From April through September 1974, 13 fishes (n = 1156) and 13 fishes (945) were captured in Lower and Upper B-G, respectively (Table 17). The number of hours fished in each location was approximately equal. The catch per hour was 0.91 in Lower B-G and 0.74 in Upper B-G.

More brown bullhead, white sucker, and carp were captured in Lower B-G; more pumpkinseed, redbreast sunfish, and yellow perch were captured in Upper B-G. Yellow perch (n = 85) and redbreast sunfish (119) were captured in Upper B-G; 5 yellow perch and 2 redbreast sunfish were captured in Lower B-G.

Schoharie Creek Between the Gilboa Dam and Lower B-G

Trap Net

FSPs 11, 10, and 10A were sampled for a total of 565 hours in June and August 1974 (Table 27). Eleven fishes (n = 68) were captured. Rank by abundance was pumpkinseed (n = 36), rock bass (7), and white sucker (7). A 14½-in brown trout was captured at FSP 11 in June. The white sucker comprised 22.3 lbs of the total 46.0 lbs collected. The three walleye captured weighed a total of approximately 13.5 lbs; one large walleye weighed approximately 10 lbs and was captured at FSP 11 in June.

FSPs 11, 10, and 10A were sampled in July and August 1973; 9 fishes (n = 125) were captured in 336 hours (Table 28). Catch per hour decreased

from 0.37 in 1973 to 0.12 in 1974. Each of the three pools produced a lower catch per hour in 1974 than in 1973 (Figure 17). Relative abundance of fishes captured remained the same in 1973 and 1974. A single brown trout and a single carp were captured in 1974; neither was captured in 1973.

Schoharie Creek Between Lower B-G and the Walhalla Rocks

Trap Net

The spillway pool, FSPs 2, 6, 8, and 9, and the Walhalla Rocks pool were sampled for a total of 681 hours in July and August; 13 fishes (n = 140) were collected (Table 29). Rank by abundance was rock bass (n = 50), white sucker (41), and pumpkinseed (22). Biomass per species was white sucker (39.1 lbs), rock bass (9.3 lbs), and walleye (7.3 lbs).

Five pools (spillway, FSPs 1, 2, 8, and 9) in this section of the Creek were sampled in August and October 1973; 14 fishes (n = 153) were collected in 560 hours (Table 30). Catch per hour decreased from 0.27 in 1973 to 0.21 in 1974. The four pools (spillway, FSPs 2, 8, and 9) sampled in both 1973 and 1974 each produced a lower catch per hour in 1974 than in 1973 (Figure 17). The rock bass, white sucker, and pumpkinseed were most abundant in both 1973 and 1974. The relative abundance of rock bass and white sucker increased and that of pumpkinseed decreased from 1973 to 1974.

Tributaries of Schoharie Creek

Electrofishing

Trib 101 was sampled in July (Table 31). In a 500-ft section immediately below Route 30, 8 fishes (n = 38) were captured. Rank by

abundance was white sucker (n = 18, 41%), longnose dace (9, 24%), creek chub (4, 11%), and fallfish (3, 8%).

Trib 99 (Cole Hollow Creek) was sampled six times from June through August; 5 fishes (n = 476) were captured in 2750 feet (Table 32). The rainbow trout (n = 326) and brook trout (130), which weighed 12.5 lbs and 4.6 lbs, respectively, were most abundant.

Trib 98A was sampled in August (Table 31). In a 250-ft section beginning 235 ft upstream from the mouth, 6 fishes (n = 34) weighing 1.3 lbs were captured. The chain pickerel (n = 23) was the most abundant.

Summary

1. In 1974, 4450 fish were captured in Lower B-G. The pumpkinseed, brown bullhead, and white sucker were most abundant.

2. Catch per hour by experimental gill net and trap net was lower in 1974 than in 1973 in Lower B-G.

3. The white sucker, brown bullhead, and spottail shiner increased in abundance between 1973 and 1974 in Lower B-G; abundance of all other fishes decreased.

4. The relative abundance of largemouth bass in comparison to smallmouth bass increased between 1973 and 1974 in Lower B-G.

5. The abundance of small fish which inhabit shallow shoreline areas in Lower B-G decreased greatly between 1973 and 1974.

6. In 1974, 1914 fish were captured in Upper B-G. The pumpkinseed, brown bullhead, redbreast sunfish, yellow perch, and carp were most abundant.

7. Catch per hour by experimental gill net and trap net was higher in 1974 than in 1973 in Upper B-G.

8. The pumpkinseed, redbreast sunfish, yellow perch, and brown bullhead were most abundant in both 1973 and 1974 in Upper B-G.

9. In 1974, gill net catch per hour was higher in Upper B-G than in Lower B-G; the reverse occurred in trap net samples.

10. The yellow perch and redbreast sunfish were relatively much more abundant in Upper B-G than in Lower B-G in 1974.

11. The white sucker was relatively more abundant in Lower B-G than in Upper B-G in 1974.

12. In 1974, the pumpkinseed, rock bass, and white sucker were most abundant in Schoharie Creek above and below Lower B-G.

13. The trap net catch per hour decreased in pools of Schoharie Creek above and below Lower B-G in 1974 in comparison to 1973.

14. The relative abundance of fishes in Schoharie Creek between the Gilboa Dam and Lower B-G was approximately the same in 1973 and 1974.

15. The relative abundance of rock bass and white sucker increased and that of pumpkinseed decreased in Schoharie Creek between Lower B-G and the Walhalla Rocks in 1974 as compared to 1973.

16. A single brook trout was collected in a 500-ft section of Trib 101 which may be inundated by the proposed Breakabeen facility.

17. Large numbers of brook trout and rainbow trout were collected throughout Cole Hollow Creek (Trib 99).

18. In a 250-ft section of Trib 98A which may be inundated by the proposed Breakabeen facility, 23 chain pickerel and 1 brook trout were collected.

FOOD HABITS (STOMACH ANALYSIS)

Introduction

An examination of stomach contents of fishes collected from April through September determined the major food items in the diets of game fishes such as walleye, largemouth bass, smallmouth bass, and chain pickerel and pan fishes such as yellow perch, rock bass, pumpkinseed, and redbreast sunfish in Lower and Upper B-G.

Materials and Methods

For this study, fish were collected by experimental gill net and trap net in both Reservoirs and by block net in Lower B-G. The abdominal cavity of each fish was injected with 10% formalin upon return to the access point of each Reservoir (boat ramp in Lower B-G and northeast end of dike in Upper B-G). The entire fish was then placed in 10% formalin. Upon return to the laboratory, total length (nearest 1.0 mm) and weight (nearest 0.1 g) were recorded. The stomach was then removed and placed in 10% formalin. Stomachs collected during a month were removed from the formalin, rinsed in tap water, and the contents removed. Each of the major groups of stomach contents was weighed and the various taxa present were counted. No counts were made of insect remains, fish remains, or vegetation. The stomachs and contents were then placed in 40% isopropyl alcohol for permanent storage.

Stomachs were analyzed according to fish size because as fish grow toward adulthood feeding adaptations develop and the diets of some kinds become highly restricted (Lagler, 1956). The following arbitrary size groups were established:

Walleye	more or less than 150 mm
Largemouth bass	more or less than 150 mm
Smallmouth bass	more or less than 150 mm
Chain pickerel	more or less than 200 mm
Yellow perch	more or less than 125 mm
Rock bass	more or less than 100 mm
Pumpkinseed	more or less than 100 mm
Redbreast sunfish	more or less than 100 mm

Three methods of analysis were used: (1) numerical, (2) frequency of occurrence, and (3) weight. The percent numerical is calculated by dividing the total number of each food type by the total number of all food types. The numerical method does not consider the size of food items and organisms that occur in the largest numbers are not necessarily the most important food items.

In the frequency of occurrence method, the number of stomachs in which a food type occurs is recorded. The results are expressed as a percentage of the total number of stomachs examined. This method gives an indication of what organisms are being fed upon by the greatest number of fish.

The weight method measures percent by weight of food organisms. The total weight of each food type is expressed as a percentage of the total weight of all food types in the sample. This method considers the size of the organism consumed. Often a stray or occasional occurrence of an exceptionally large or bulky food item (i.e. crayfish) gives a very high value.

Additional bias may be introduced by differential rates of digestion of certain food items.

Results and Discussion

Game Fishes

Walleye

Six stomachs (1 empty) from fish collected in Lower B-G and four stomachs (2 empty) from fish collected in Upper B-G were examined (Table 33). The predominant food item of walleye more than 150 mm in both Reservoirs was fish (*Lepomis sp.*) (Table 34).

Largemouth bass

Twelve stomachs (3 empty) from Lower B-G were examined (Table 35). Aquatic insects were present in the stomach of the one fish less than 150 mm and in the stomachs of three of the eight larger fish (Table 38). Fish remains comprised 98% of the weight of the stomach contents of the six fish collected in May. The single stomach taken in July contained crayfish.

Smallmouth bass

Three stomachs from Lower B-G were examined (Table 36). The stomach contents of the smaller fish (140 mm and 152 mm) were aquatic insects; those of the larger fish (222 mm) were fish (Table 39).

Chain pickerel

Eight stomachs (2 empty) from Lower B-G were examined; all were from fish more than 283 mm (Table 37). Fish were found in these stomachs (Table 40).

Pan Fishes

Yellow perch

Fourteen stomachs (8 empty) from fish less than 125 mm were examined; 11 were from Lower B-G and 3 were from Upper B-G (Table 41).

One hundred stomachs (49 empty) from fish more than 125 mm were examined; 27 were from Lower B-G and 73 were from Upper B-G.

Regardless of size group or month examined, the diets in both Reservoirs consisted of a large variety of food types (Table 42). Dipterans (flies, midges, and mosquitoes) were the aquatic insects most often eaten. Water fleas were much more abundant in the stomachs of fish collected in Upper B-G than in those from Lower B-G.

Rock bass

Eighteen stomachs (4 empty) from fish less than 100 mm were examined; 14 were from Lower B-G and 4 were from Upper B-G (Table 43).

Forty-five stomachs (11 empty) from fish more than 100 mm were examined; 24 were from Lower B-G and 21 were from Upper B-G.

Fish less than 100 mm fed predominantly on aquatic insects in both Reservoirs (Table 44). The diets of those more than 100 mm were more diverse and included insects (aquatic and terrestrial), earthworms, crayfish, zooplankton, and fish. Crayfish were found only in stomachs from Lower B-G. Zooplankton were found only in stomachs from Upper B-G.

Pumpkinseed

Sixty-eight stomachs (18 empty) from fish less than 100 mm were examined; 59 were from Lower B-G and 9 were from Upper B-G (Table 45).

Two hundred fifty-four stomachs (67 empty) from fish more than 100 mm were examined; 120 were from Lower B-G and 134 were from Upper B-G.

Fish less than 100 mm fed upon aquatic insects (predominantly dipterans) in Lower B-G and on copepods and water fleas in Upper B-G (Table 46). Fish more than 100 mm in both Reservoirs fed on a greater variety of organisms and in all months sampled the predominant food types were dipterans and water fleas.

Redbreast sunfish

One hundred fifteen stomachs (24 empty), all from Upper B-G, were examined (Table 47). Aquatic insects, earthworms, and water fleas were eaten by fish less than 100 mm (Table 48). Those more than 100 mm ate a greater variety including dipterans, beetles, earthworms, and water fleas.

Summary

1. An equal or greater percentage of empty stomachs occurred in walleye (50%), yellow perch (54%), rock bass (24%), and pumpkinseed (29%) in Upper B-G than in Lower B-G (17%, 42%, 24%, and 24%, respectively).

2. Fish in both Reservoirs fed on the same organisms.

3. Pan fishes ate more water fleas in Upper B-G than in Lower B-G.

4. Dipterans (flies, midges, and mosquitoes) occurred more often than any other food in the stomachs of pan fishes.

AGE AND GROWTH OF FISHES

Introduction

A study was conducted from April through September 1974 to:

1. Determine the growth rate of pumpkinseed, redbreast sunfish, rock bass, yellow perch, largemouth bass, smallmouth bass, walleye, and chain pickerel collected in Lower and Upper B-G and the area of Schoharie Creek between the Gilboa Dam and the iron bridge north of Breakabeen.

2. Determine the growth rate of rainbow trout and brook trout collected in Cole Hollow Creek.

3. Compare data on growth collected in 1973 when the Blenheim-Gilboa Pumped Storage Project first went into operation.

Materials and Methods

Analysis of length-frequency distributions and scales were used to age fish. Total length (nearest 1.0 mm) was measured and the data plotted in size groups to show length-frequency distributions (Tables 49-56). The age of each fish was determined by counting the number of annuli present as of 1 January on an impression of each scale made by pressing a scale on a plastic slide. Impressions were magnified by a Tri-Simplex Microprojector.

The mean total length (nearest 1.0 mm) and mean weight (nearest 0.1 g) for each age group of fishes collected were determined monthly (Tables 57-72).

Results and Discussion

Age groups 1+ and 2+ of pumpkinseed and rock bass were larger (length and weight) in Upper B-G than in Lower B-G. The reverse occurred with older

age groups (3+).

In April and June, age 2+ yellow perch were significantly larger in Lower B-G than in Upper B-G; the reverse occurred in July. This anomaly could be the result of the interchange of fish between the Reservoirs, making recognition of possible growth differences between locations difficult. Some fishes, such as the yellow perch, which inhabit the limnetic zone, may exhibit more frequent exchange than others, such as the Centrarchids, which inhabit the littoral zone.

Limited data were collected for fish in Schoharie Creek in 1974. Growth of 1+ and 2+ pumpkinseed and rock bass was intermediate between growth of these species in Lower B-G and in Upper B-G.

In 1973, 2399 age 1+ Centrarchids (pumpkinseed, rock bass, largemouth bass, and smallmouth bass) were captured in Lower B-G but only 24 were captured in 1974 (Culp, 1974). This indicates that reproductive success of these fishes was better in 1972 than in 1973. Because these fishes nest in shallow water, their reproductive success may have been affected by fluctuating water levels such as first occurred in June 1973 when the B-G facility went into operation. In 1974, 133 age 1+ Centrarchids were collected in Upper B-G.

Many pumpkinseed and rock bass were captured in Lower B-G in 1973 and 1974; age 1+ pumpkinseed and rock bass had a significantly greater mean length in 1974 than in 1973 whereas the reverse occurred with 2+ and 3+ age groups (Tables 73 and 74).

The monthly mean total length of each age group and the length-frequency distribution of rainbow trout and brook trout collected in Cole

Hollow Creek in 1974 were determined (Tables 75 and 76). Brook trout of a given age group averaged larger than rainbow trout of the same age. This reflects, in part, the earlier spawning of brook trout. The relatively poor growth is as it was in 1973. The small maximum size of both trout may be a result of competition for a limited food supply (Culp, 1974).

Summary

1. Younger age groups of pumpkinseed (1+ and 2+) and rock bass (2+) were significantly larger in Upper B-G than in Lower B-G in 1974.

2. The exchange of fish between the Reservoirs may, in part, mask any real differences in growth in the two locations.

3. Reproduction of the nest-building Centrarchids in Lower B-G was poor in 1973, the year when the B-G facility first operated.

4. Reproduction of Centrarchids was greater in Upper B-G than in Lower B-G in 1973.

5. In Lower B-G, the growth rate of the 1972 year class of pumpkinseed and rock bass was less than that of the 1971 and 1973 year classes.

6. In Lower B-G, older (3+) pumpkinseed were significantly larger in 1973 than the 3+ year class was in 1974.

7. Brook trout and rainbow trout in Cole Hollow Creek exhibited poor growth and small maximum size, which, in part, may be a result of keen competition for a limited food supply.

CONDITION OF FISHES

Introduction

Condition factor, "K", was determined for pumpkinseed, yellow perch, redbreast sunfish, rock bass, largemouth bass, walleye, smallmouth bass, and chain pickerel collected in Lower and Upper B-G and Schoharie Creek taken from April through September 1974.

Materials and Methods

Condition factor is a measure of relative plumpness; it is a calculated value which correlates the surface (expressed as length) of a fish with its volume (expressed as weight). The formula used to calculate condition factor is:

$$K = \frac{W(g)}{L^3(cm)} \times 100$$

where: W = weight of fish
L = total length of fish

"K" is used as an index to indicate changes or trends in the general condition of a population. The robustness of a fish may be affected by factors such as changes in habitat, food availability, population density, and energy requirements (Bennett, 1971). Changes in the condition of a specimen may result from seasonal changes in feeding habits and reproductive activity. "K" is high in mature fish with ripe gonads and is low in spent fish (Frost and Brown, 1967). It may change with age and differ with sex (Lagler, 1956).

To compare condition factor with differences in or changes in habitat, only fish collected in the same month and within the same 20-mm size group were compared.

Total length and wet weight of each fish were taken in the field and "K" was calculated. The mean "K" and standard deviation for each 20-mm size group of a species were then calculated.

Results and Discussion

"K" was determined for 2657 fish; 1292 were from Lower B-G, 1234 were from Upper B-G, and 131 were from Schoharie Creek (Table 77). The findings for pumpkinseed, yellow perch, redbreast sunfish, rock bass, largemouth bass, walleye, smallmouth bass, and chain pickerel are discussed.

Pumpkinseed

Of 1899 specimens, 1018 (54%) were from Lower B-G, 851 (45%) were from Upper B-G, and 30 (2%) were from Schoharie Creek. In all size ranges containing comparable numbers, those from Upper B-G had higher mean "K" values than those from Lower B-G (Table 78, Figures 18-22). Generally those from Lower B-G had lower mean "K" values than those from Schoharie Creek. Those captured in 1973 had consistently higher mean "K" values than those taken in the same months and locations in 1974.

Yellow perch

Of 228 specimens, 82 (36%) were from Lower B-G, 135 (59%) were from Upper B-G, and 11 (5%) were from Schoharie Creek. The condition factor of the yellow perch is best represented for comparison purposes by the July data. Those taken in 1974 from Upper B-G had greater mean "K" in comparable size ranges than those from Lower B-G and Schoharie Creek (Table 79, Figure 23).

Those taken from Lower B-G in 1974 had lower mean "K" values than those captured in 1973.

Redbreast sunfish

In 1974 most redbreast sunfish were captured in Upper B-G Reservoir. Of 214 specimens, 2 (1%) were from Lower B-G, 209 (98%) were from Upper B-G, and 3 (1%) were from Schoharie Creek (Table 80). In July, the only month for which comparisons could be made, fish in the 121-140-mm size group had a higher mean "K" value in Upper B-G than those in Lower B-G. Few were captured in 1973 and comparison with 1974 is not possible.

Rock bass

Of 180 specimens, 83 (46%) were from Lower B-G, 33 (18%) were from Upper B-G, and 69 (35%) were from Schoharie Creek (Table 81, Figure 24). July "K" values are most comparable. Those captured in 1974 in Upper B-G tended to have higher "K" values than those captured in Lower B-G; the latter had slightly higher "K" values than those taken in Schoharie Creek.

Largemouth bass

Of 68 specimens, 63 (93%) were from Lower B-G and 5 (7%) were from Schoharie Creek (Table 82). The distribution of catch prohibits comparisons between locations. Those from Lower B-G generally had lower "K" values in 1974 than in 1973 in every month for which comparisons could be made.

Walleye

Of 30 specimens, 14 (47%) were from Lower B-G, 6 (20%) were from Upper B-G, and 10 (33%) were from Schoharie Creek (Table 83). For August 1974, those captured in Upper B-G had higher mean "K" values than those of approximately equal size taken in Lower B-G. Generally fish captured in 1974 in Lower B-G had lower "K" values than those taken in 1973.

Smallmouth bass

Of 28 specimens, 21 (75%) were from Lower B-G and 7 (25%) were from Schoharie Creek (Table 84). In months and size groups for which data are adequate, those in Lower B-G had lower "K" values in 1974 than in 1973.

Chain pickerel

Of 10 specimens, 9 (90%) were from Lower B-G and one (10%) was from Schoharie Creek (Table 85). In months and size groups for which comparisons could be made, fish collected in Lower B-G had lower "K" values in 1974 than in 1973.

Summary

1. Fishes captured in 1974 in Upper B-G tended to have higher "K" values than those of the same size range taken in Lower B-G.

2. Fishes captured in 1974 in Lower B-G tended to have lower mean "K" values than those of the same size range captured in 1973.

MOVEMENT OF FISHES

Introduction

A tagging program was conducted from May through September 1974 to determine the movement of fish within the Reservoirs, between the Reservoirs, and between Lower B-G and Schoharie Creek.

Materials and Methods

In addition to established collecting sites on the Reservoirs, two new locations on Lower B-G were used. One was located off the western shore ¼-mi north of Mine Kill Cove (opposite gill net station 3); the other was 200 yards north of gill net station 9. Collections were made at FSPs 11, 10, and 10A on Schoharie Creek between the Gilboa Dam and Lower B-G.

Fish from Lower B-G were taken to the boat ramp and those from Upper B-G were taken to the boat landing at the northeast corner to be processed and tagged at streamside. All were placed in a live cage prior to processing and were released immediately after tagging. Total length and weight were taken and scales were removed for age determination. Stainless steel opercular tags were used; each is 7 mm long when closed, weighs approximately 0.16 g, and is numbered and initialed "IA."

Fish from Lower B-G and Schoharie Creek were tagged on the left operculum; those from Upper B-G were tagged on the right operculum. Tags were used only on fish more than 125 mm long; others were marked by fin removal. The pelvic fin was removed from fish from the Reservoirs (left for Lower B-G and right for Upper B-G). The right pectoral fin was removed

from fish from Schoharie Creek.

Results and Discussion

From 10 May through 13 September 1974, 428 fish were tagged and 560 were fin clipped (Table 86). Of the 528 fish marked from Lower B-G, 205 were tagged and 323 were fin clipped. These included the pumpkinseed (n = 390, 74%), rock bass (62, 12%), largemouth bass (42, 9%), smallmouth bass (14, 3%), yellow perch (9, 2%), walleye (5, <1%), and chain pickerel (2, <1%).

Of the 410 fish marked from Upper B-G, 219 were tagged and 191 were fin clipped. Those marked included the pumpkinseed (n = 289, 70%), yellow perch (60, 15%), redbreast sunfish (56, 14%), walleye (4, <1%), and rock bass (1, <1%).

Of the 50 fish marked from Schoharie Creek, 4 were tagged and 46 were fin clipped. Fishes marked included the pumpkinseed (n = 36, 72%), rock bass (7, 14%), yellow perch (4, 8%), and walleye (3, 6%).

Twelve were recaptured (Table 87) as follows: Lower B-G (n = 7), Upper B-G (3), and Schoharie Creek (2).

Fish were recaptured in Lower B-G on two occasions. Three pumpkinseed were recaptured in the block net set in Mine Kill Cove on 18 August; two had their left pelvic fins removed and the other had been tagged on the left operculum but the tag was missing. These fish had been marked and released at the boat ramp and by 18 August had moved to Mine Kill Cove. The other four pumpkinseed were recaptured by trap net on 21 August at the site opposite gill net station 3. Each had its pelvic fin removed and had been released at the boat ramp on some earlier date.

On 12 August in Upper B-G, a redbreast sunfish was taken by gill net at gill net station 6. It had been taken by trap net at trap net station 4 on 8 August and was marked and released from the boat landing. On 11 September, two pumpkinseed were recaptured by trap net at trap net station 2. One had originally been captured by trap net at trap net station 3 on 6 September and was tagged and released from the boat landing. The other had the right pelvic fin removed and was released from the boat landing on some previous date.

Two fish were recovered in Schoharie Creek early in the field season. A dead walleye was recovered by a fisherman on 24 June in FSP 11. Originally it had been taken by trap net at the same location and was tagged and released on 11 June. It was examined in the field and turned over to the Senior Fisheries Biologist at the Stamford office of the New York State Department of Environmental Conservation (DECON). A pumpkinseed was recaptured by trap net on 26 June in FSP 10. It had been captured and released at the same location on 19 June with the right pectoral fin removed.

Summary

1. In Lower B-G, Upper B-G, and Schoharie Creek, 528, 410, and 50 fish were marked; 7 (1.3%, 1 tagged, 6 fin removed), 3 (0.7%, 2 tagged, 1 fin removed), and 2 (4.0%, 1 tagged, 1 fin removed) were recaptured.

2. Pumpkinseed and redbreast sunfish had moved from the point of capture but no pattern of movement was obvious.

3. No recovered fish had moved between the Reservoirs or between Lower B-G and Schoharie Creek.

POPULATION ESTIMATES OF FISHES

Introduction

From June through August 1974, estimates of population (number and biomass) of fishes in the tributaries of Schoharie Creek were made. Studies were most extensive on Cole Hollow Creek. The proposed access road to the Breakabeen upper reservoir follows this stream for approximately two-thirds of its length.

Materials and Methods

Fish populations in the tributaries of Schoharie Creek were estimated using the DeLury regression method. According to Lagler (1956):

> The DeLury method employs data on catch per unit of effort to arrive at an estimate of population. Regrettably, the procedure cannot be applied unless the decrease in population due to fishing shows in a reduction of the subsequent take per unit of fishing effort. The reduction is proportional, ideally, to the extent of the depletion. The simplest means of estimating population numbers by this method is to graph the data, and by inspection to fit the expected straight regression line. In such a graph, the catch per unit of effort becomes the ordinate, and the total catch to and including the latest sample becomes the abscissa. Extrapolation of the regression line fitted by formula to its intercept with the X-axis yields a value at the intercept which is the approximation of the population number.

The assumptions which were met and upon which the DeLury method rests are given by Lagler (1956):

1. The population is closed; that is, the effects of migration and natural mortality are negligible.

2. The units of effort employed do not compete with one another or else they are constant during the period involved.

3. The response of the fish to the gear, i.e. their catchability, remains constant for the period under investigation.

The method used to collect fish for the DeLury population estimates was electrofishing. In order to meet the first assumption of this method (i.e. the population is closed), 1/4-in mesh seines were placed across the stream at both ends of the section sampled to completely block fish movement into or out of the section.

Results and Discussion

Five of the seven tributaries of Schoharie Creek to be inundated by the proposed Breakabeen facility dry up in summer and have been found to contain fish only in their lower reaches or not at all during the wetter parts of the year (Culp, 1974). Population estimates were made on Tribs 101, Cole Hollow Creek (99), and 98A, which flow the entire year and contain resident fish populations.

Trib 101

A 500-ft section on Trib 101 below Route 30 is part of the 3300-ft section to be inundated by the proposed Breakabeen lower reservoir. It was electrofished on 24 July. In three passes by two men, the white sucker* (n = 18), fantail darter* (13), blacknose dace* (10), longnose dace (9), creek chub* (4), fallfish* (3), log perch (2), carp (1), pumpkinseed (1), rock bass (1), and brook trout (1) were captured (Table 88). Because of the murky and relatively deep water, efficiency of capture was poor. The five fishes designated by * were captured in sufficient numbers to be fitted

into a DeLury regression curve (Figures 25 and 26). Population estimates for these fishes are: 29 fantail darter, 21 white sucker, 10 blacknose dace, 6 creek chub, and 3 fallfish. Biomass was estimated for some of these fishes.

One brook trout was shocked in the 500-ft section. However, fishermen have never been observed angling this stream by IA personnel in two years of field studies.

Cole Hollow Creek (Trib 99)

Three 500-ft sections of Cole Hollow Creek were sampled in 1974 (Figure 27). The first section, which is to be inundated by the proposed Breakabeen lower reservoir, is located 500 ft immediately below Bear Ladder Road. It was electrofished on 28 June (Table 89). In three passes by three men through the section, the rainbow trout (n = 83), brook trout (2), blacknose dace (10), and fantail darter (1) were captured. The brook trout and fantail darter were captured in a single pass so they could not be fitted to the regression formula (Table 90). The rainbow trout and blacknose dace were fitted to DeLury regression curves (Figures 28 and 29) and population estimates were 87 rainbow trout and 10 blacknose dace for the 500-ft section.

The distance from the downstream end of the 500-ft section to the point where it enters Schoharie Creek was 680 ft. Population and biomass were estimated for the 1180-ft section between the bridge on Bear Ladder Road and Schoharie Creek on the basis of the catch in the 500-ft section (Table 89). This section is the total length of Cole Hollow Creek which

is to be inundated by the proposed Breakabeen lower reservoir. The previous Progress Report dated June 1974 stated that 3000 ft was the length of Cole Hollow Creek to be inundated. This figure has been revised because the downstream 1820 ft is stillwater and located at the same elevation as Schoharie Creek and is now considered part of Schoharie Creek.

The ages of the rainbow trout captured were 1+ (77%), 2+ (19%), and 3+ (4%). Both brook trout were 1+. Some 0+ trout (approximately 25 mm long) were observed but no attempt was made to record their number or biomass. Four of the 85 trout captured were longer than 178 mm (7 in), which is believed to be the minimum size kept by fishermen. If the 500-ft section shocked is representative of the 1180 ft, 9 catchable trout (7 in or longer) were present in June 1974 in the section of Cole Hollow Creek to be lost by inundation.

Two 500-ft sections of Cole Hollow Creek were shocked in August (Figure 27). The lower section, sampled on 15 August, is located immediately above the first bridge upstream from Bear Ladder Road. Here it parallels the section of Cole Hollow Road which is to be widened to provide access to the proposed Breakabeen upper reservoir. The other section, sampled on 14 August, is located immediately above the second bridge upstream from Bear Ladder Road and parallels Cole Hollow Road above that portion to be widened to provide access to the proposed Breakabeen upper reservoir.

In the lower section, 173 rainbow trout were captured in three passes by two men using electrofishing gear. The numbers caught in each pass were fitted into a DeLury regression curve (Figure 30). The estimated population of rainbow trout was 174 and the estimated biomass was 1993.0 g. The ages

of the rainbow trout were 0+ (63%), 1+ (16%), 2+ (18%), and 3+ (3%).

In the upper section, 124 brook trout were captured in three passes by three men using electrofishing gear. Fitting the number caught in each pass into a DeLury regression curve, the estimated population was 124 brook trout and the estimated biomass was 1882.7 g (Figure 31). The ages of the brook trout captured were 0+ (47%), 1+ (31%), and 2+ (22%).

Trib 98A

A 250-ft section of Trib 98A located 235 ft upstream from Schoharie Creek was electrofished on 27 August. This section is part of the 3850 ft which is to be inundated by the proposed Breakabeen lower reservoir. In three passes by one man using electrofishing gear, the chain pickerel ($\bar{n}$ = 23), brook trout (1), white sucker (7), creek chub (1), fantail darter (1), and Johnny darter (1) were captured (Table 90). Only the chain pickerel was caught in each pass and could be fitted into a DeLury regression curve and the estimated population was 23 chain pickerel (Figure 32). Because the water was very clear and electrofishing efficiency high, the numbers of other fishes caught are assumed to be their total populations for that section. The estimated biomass of fishes within this section was slightly less than 460.3 g.

This section of Trib 98A appears to be important only as a nursery ground for young chain pickerel. In two years of field studies, IA personnel have never observed fishermen utilizing this stream.

Summary

1. The sections of Tribs 101 (3300 ft) and 98A (3850 ft) to be inundated by the proposed Breakabeen lower reservoir contain trout but no fishermen have been observed fishing these streams in two years of field observations by IA personnel.

2. Throughout its length, Cole Hollow Creek (Trib 99) contains large populations of brook trout and rainbow trout.

3. The section of Cole Hollow Creek (1180 ft) to be inundated by the proposed Breakabeen lower reservoir was estimated to contain 204 rainbow trout and 5 brook trout (ages 1+ through 3+) in June 1974. This section was estimated to contain 9 rainbow trout equal to or greater than 7 in in June 1974.

4. The section of Trib 98A (3850 ft) to be inundated by the proposed Breakabeen lower reservoir is a nursery ground for chain pickerel.

ICHTHYOPLANKTON

Introduction

Weekly samples for ichthyoplankton were taken in Lower and Upper B-G from 15 April through 15 September 1974. The data indicated those fishes which were most successful in reproducing during normal operation of the pumped storage facility.

Materials and Methods

Four stations in Lower B-G and three stations in Upper B-G were each

sampled weekly (Figures 33 and 34). Day and night tows were made approximately 12 hours apart at each station except for the period from 15 April through 30 April, when samples were taken only during the day.

Surface (5 ft), mid-depth, and deep tows were made at stations 1, 5, and 6, which exceed 25 feet in depth. Surface and mid-depth tows were taken at stations 2 and 3, which were 11 to 25 ft deep. A surface tow was taken at stations 4 and 7, where depths were 10 ft or less. Two 1/2-m (0.5-mm mesh) plankton nets were towed simultaneously behind a 14-ft flat-bottomed boat powered by a 6-hp outboard motor. The nets were weighted and held open by a 1/2-m metal ring. The desired depth was obtained by controlling the length and angle at which the nets were towed.

From 15 April until 15 May, the nets were towed for 3 minutes at a constant speed of approximately 2 knots. Beginning 15 May, the nets were towed for 5 minutes at approximately 3 knots. One net was fitted with a General Oceanics digital flow meter mounted in the center of the net hoop to measure the cubic meters (m^3) of water filtered.

Specimens were preserved in 10% formalin and then stained with rose bengal. After samples were washed, all ichthyoplankton and young fish were identified, counted, measured (total length to the nearest 0.1 mm), and transferred to 40% isopropyl alcohol.

All specimens were identified to species except the pumpkinseed, redbreast sunfish, bluegill, and green sunfish, which could not be differentiated and were recorded as *Lepomis sp*. All larvae collected were identified as being either pre-larvae (yolk sac present) or post-larvae (no yolk sac).

Results and Discussion

A total of 552 larvae were captured in 23,494.1 m^3 in Lower and Upper B-G (Tables 91 and 92); 59 (11%) were captured in Lower B-G (17 (29%) during the day and 42 (71%) at night); 493 (89%) were captured in Upper B-G (35 (7%) during the day and 458 (93%) at night). No fish eggs were collected.

Surface tows produced 41 (69%) of the 59 larvae captured in Lower B-G and 435 (88%) of the 493 larvae taken in Upper B-G. Tows made at mid-depth produced 17 (29%) and 48 (10%) of the larvae captured in Lower and Upper B-G, respectively. Deep tows in Lower B-G produced 1 (2%) larva and in Upper B-G produced 10 (2%) larvae.

Lower B-G produced 0.0024 larvae per m^3 during the day and 0.0062 larvae per m^3 at night. Upper B-G produced 0.0069 larvae per m^3 during the day and 0.1000 larvae per m^3 at night (Table 93).

Surface tows during the day and night in both Reservoirs produced the greatest number of larvae per m^3 except during the day at station 3 in Lower B-G, where samples taken at mid-depth produced more larvae per m^3. Deep tows produced the fewest larvae per m^3 in both Reservoirs. (Table 93)

Station 4 was the most productive site in Lower B-G. It produced 18 (31%) of the 59 larvae captured and resulted in a catch rate of 0.0112 larvae per m^3. Station 3 was the second most productive site, producing 15 (25%) of the 59 larvae captured; the catch rate was 0.0050 larvae per m^3. Stations 2 and 1 each produced 13 larvae, giving a catch rate of 0.0027 and 0.0030 larvae per m^3, respectively.

Station 7 was the most productive site in Upper B-G. It produced 230 (47%) of the 493 larvae captured, resulting in a catch rate of 0.1667

larvae per m^3. Station 6 was the second most productive site and station 5 was the least productive site. At station 6, 170 (34%) larvae were captured; the catch rate was 0.0435 larvae per m^3. At station 5, 93 (19%) larvae were captured; the catch rate was 0.0212 larvae per m^3.

The most productive sites, stations 4 and 7, were the most shallow. At both sites, only surface samples were taken. Stations 2 and 5 were the least productive sites sampled; station 2 was nearest the pumphouse in Lower B-G and station 5 was nearest the power tunnel outlet in Upper B-G. All sites in Upper B-G were more productive (greater number of larvae per m^3) than the most productive site (station 4) in Lower B-G.

Five fish taxa were captured: Lepomis sp. (n = 439, 80%), yellow perch (56, 10%), white sucker (4, <1%), rock bass (1, <1%), and stonecat (1, <1%). Fifty-one (9%) were not identified. (Table 94)

Lepomis sp., yellow perch, and white sucker were caught in both Reservoirs. The stonecat was caught in Lower B-G and the rock bass was caught in Upper B-G. Approximately equal numbers of yellow perch and white sucker were collected in Lower and Upper B-G; 20 Lepomis sp. were captured in Lower B-G whereas 419 were captured in Upper B-G.

Monthly ichthyoplankton sampling results are as follows:

April

In April Lower B-G was sampled with 3-minute tows once during the day and Upper B-G was sampled twice during the day (Table 95). No larvae were collected. Many invertebrates, mostly Copepods, were taken.

On 15 April, ripe male yellow perch were collected during fish sampling. Ripe male chain pickerel and white sucker of both sexes were also collected.

May

Samples were taken in Lower B-G 10 times and in Upper B-G eight times. Four of the samples taken prior to 15 May in both Reservoirs were for 3 minutes (Tables 96 and 97). No larvae were captured. Beginning 15 May, all tows were made for 5 minutes (Tables 98 and 99). The first larvae were taken during night tows on 15 May.

With the exception of one white sucker (post-larvae, 14.3 mm) and three damaged beyond recognition, all larvae (n = 32) taken were yellow perch (Table 100). A single post-larvae (7.2 mm) of the yellow perch was collected; the remaining yellow perch were pre-larvae although most of the yolk had been absorbed.

Seventeen (53%) of the yellow perch larvae were captured in Lower B-G and 15 (47%) were taken in Upper B-G. The other larvae were captured in Lower B-G.

More larvae were captured during the night than during the day in Lower B-G (12 night; 9 day); the reverse was true in Upper B-G (4 night; 11 day).

Surface tows caught more larvae at all stations sampled; 26 (72%) of the 36 larvae were captured in surface tows, 12 in Lower B-G and 14 in Upper B-G. The other larvae were taken at mid-depth (9 in Lower B-G and 1 in Upper B-G).

The mean length of the yellow perch was 6.3 mm and 6.1 mm in Lower and Upper B-G, respectively.

A single pumpkinseed (79 mm) age 2+ was captured at station 2 on the night of 30 May at a depth of 15 ft. It had a lesion at the upper base of the caudal fin.

Many more invertebrates were captured than in April, but most were still Copepoda. Cladocera had increased and in some tows were more numerous than Copepoda. In addition to the invertebrate taxa captured in April, those captured in May included midge fly pupae, mayfly nymphs, and Amphipods. Fish scales were taken at all sites in May.

On 9 May a ripe male fallfish and a ripe female chain pickerel were captured in gill nets and on 10 May a ripe female yellow perch was collected. Nest-building activities of an unknown species were noted at the end of May in Lower B-G near the boat ramp.

June

Samples were taken at stations 1-4 in Lower B-G and 5 and 6 in Upper B-G eight times and at station 7 in Upper B-G seven times (Tables 101 and 102). Twenty-five post-larvae were captured (Table 103). Nine yellow perch and 1 unidentifiable larvae were captured in Lower B-G. Thirteen yellow perch and 2 white sucker larvae were captured in Upper B-G.

At night 23 (92%) larvae were captured. A single larva was captured during the day in each Reservoir.

Eight (80%) of the 10 larvae captured in Lower B-G were taken in surface tows as were 10 (67%) of the 15 larvae captured in Upper B-G.

Mid-depth tows produced 1 (10%) and 5 (33%) of the larvae captured in Lower and Upper B-G, respectively. A single larva (10%) was taken at 50 ft in Lower B-G and no larvae were taken at this depth in Upper B-G.

The mean length of yellow perch was 12.5 mm and 14.3 mm in Lower and Upper B-G, respectively. The mean length of the two white sucker was 13.2 mm.

Dip net samples were taken by visual sampling on 25 June to collect larvae in both Reservoirs. Schools of larvae had been seen frequently in Schoharie Creek and its tributaries but only two white sucker larvae (mean length = 12.7 mm) were seen and captured in Mine Kill Cove in one hour on Lower B-G. None were seen in a similar observation on Upper B-G. No fish nests were seen.

More Cladocera and Copepoda in Upper B-G were evident beginning on 10 June and their numbers continued to increase through the month. Cladocera usually outnumbered Copepoda manyfold. In addition to the invertebrate taxa captured in April and May, those captured in June included Nematoda and Annelida. Midge fly larvae and pupae were more abundant than in previous months.

The only ripe mature fish captured in June were a female rosyface shiner on 7 June and a male pumpkinseed on 28 June.

July

Samples were taken in Lower B-G eight times and in Upper B-G 10 times (Tables 104 and 105). Three hundred seventy-three post-larvae, one juvenile dace, and one juvenile log perch were captured (Table 106).

Larvae captured in Lower B-G (n = 19) included *Lepomis sp.* (13, 68%),

yellow perch (1, 5%), stonecat (1, 5%), white sucker (1, 5%), and unidentifiable (3, 16%). A juvenile dace was captured. Larvae collected in Upper B-G (n = 364) included Lepomis sp. (322, 88%), yellow perch (1, <1%), and unidentifiable (31, 9%). A juvenile log perch was collected.

At night 19 (74%) larvae were captured in Lower B-G as were 331 (94%) in Upper B-G.

Surface tows produced 15 (79%) of the larvae captured in Lower B-G and 321 (91%) of those captured in Upper B-G. Four (21%) and 26 (7%) larvae were taken in mid-depth tows on Lower and Upper B-G, respectively. Deep tows produced no larvae in Lower B-G and 7 (2%) in Upper B-G.

The mean length of Lepomis sp. captured in Lower B-G (n = 13) and Upper B-G (n = 322) was 7.3 mm and 8.4 mm, respectively.

A school of brown bullhead larvae was observed on 25 July at the boat ramp on Lower B-G but none were captured during tows.

Population blooms of Copepoda and Cladocera, primarily in Upper B-G, occurred during July. No new invertebrate taxa were taken and those previously collected (Nematoda, Annelida, mayflies, and midge flies) decreased in abundance.

No ripe fish were captured in July.

August

Lower B-G was sampled nine times, station 5 on Upper B-G was sampled eight times, and stations 6 and 7 on Upper B-G were sampled seven times (Tables 107 and 108). One hundred seventeen post-larvae were collected (Table 109). Larvae captured in Lower B-G (n = 9) included Lepomis sp.

(7, 78%) and unidentifiable (2, 22%). Those captured in Upper B-G (n = 108) included Lepomis sp. (96, 89%), rock bass (1, <1%), and unidentifiable (11, 10%).

All larvae except 2 (22%) in Lower B-G were captured at night.

Seven (78%) larvae captured in Lower B-G were caught during surface tows and 2 (22%) at mid-depth. Ninety (83%) of the larvae captured in Upper B-G were caught in surface tows, 15 (14%) at mid-depth, and 3 (3%) at a 50-ft depth.

The mean length of Lepomis sp. captured in Lower B-G was 10.2 mm and in Upper B-G was 13.9 mm. The rock bass captured in Upper B-G was 16.3 mm long.

No Nematoda or Annelida were collected in August and the abundance of Copepoda and Cladocera decreased in both Reservoirs.

September

Lower and Upper B-G were each sampled four times (Tables 110 and 111). A single post-larvae Lepomis sp. (21.1 mm) was captured in Upper B-G during a night tow (25-ft) at station 6 on 4 September.

The abundance of Copepoda and Cladocera continued at the August level.

Ichthyoplankton tows were discontinued on 15 September since larval fish in both Reservoirs had reached a size sufficiently large to successfully avoid capture.

Summary

1. In Lower and Upper B-G from 15 April through 15 September 1974, 552 larvae were captured.

2. Tows made at the surface at night produced the most larvae in both Reservoirs.

3. Station 4 on Lower B-G and station 7 on Upper B-G were the most productive sites as well as the most shallow.

4. Station 2 on Lower B-G and station 5 on Upper B-G were the least productive sites; station 2 is nearest the pumphouse on Lower B-G and station 5 is nearest the power tunnel outlet on Upper B-G.

5. *Lepomis sp.*, yellow perch, and white sucker were captured in both Reservoirs; one stonecat was captured in Lower B-G; one rock bass was captured in Upper B-G.

6. *Lepomis sp.* were much more abundant in Upper B-G than in Lower B-G.

7. *Lepomis sp.* larvae grew faster in Upper B-G than in Lower B-G.

8. Larvae were captured during May through September, with yellow perch abundant in May and June and *Lepomis sp.* abundant in July and August.

9. Zooplankton (Cladocera and Copepoda) were much more abundant in Upper B-G than in Lower B-G.

CREEL CENSUS

Introduction

A creel census was conducted from 15 June through 15 September 1974 in Lower B-G and in Schoharie Creek (including all FSPs) between Schoharie

Reservoir and the iron bridge north of Breakabeen (Figures 1, 8, and 9). The objectives were: (1) to determine resident (Gilboa, Blenheim, and Breakabeen) and non-resident success at various locations; and (2) to provide data for food habits (stomach analysis), age and growth, condition, and movement studies.

Materials and Methods

Schoharie Creek was surveyed:

Zone 1: Between Schoharie Reservoir and Lower B-G (2 mi);

Zone 2: Between Lower B-G and the iron bridge north of Breakabeen which is to be inundated by the proposed Breakabeen facility (4.4 mi);

Zone 3: Between Lower B-G and the iron bridge north of Breakabeen which is not to be inundated (3.6 mi).

Lower B-G and Schoharie Creek were surveyed for 12 daylight hours one weekday and one weekend day each week (Tables 112 and 113). Census days were chosen randomly, with the provision that each weekday be surveyed not more than once each month and that each weekend day be surveyed at least twice each month. The census was conducted on Lower B-G at the boat ramp parking area, which is the primary access point. Schoharie Creek was censused by driving to all FSPs and other likely fishing sites. Total length, weight, and scale samples were taken from game and pan fish. Only fish observed were recorded.

Results and Discussion

Lower B-G

Eight fishes (n = 59) were taken by fishermen in 264 hours from 15 June through 15 September 1974 (Table 114). Of the 54 fishermen, 94% were non-resident. The brown bullhead (n = 24, 37%) and carp (11, 17%) were most frequently caught. The largemouth bass (n = 9, 14%) and pumpkinseed (6, 9%) were the most common game and pan fishes taken.

Most fishermen were observed in August (0.26 per hour) and the least were observed in July (0.13 per hour) (Table 115). In July the most fish (0.64 per hour) were caught and fishing time per trip was the longest (3.8 hrs) of any month surveyed. In September fishermen fished the least (1.2 hours per trip) and caught no fish. Boat fishermen were usually fewer but were more successful than shore fishermen.

In 156 hours from 1 August through 30 September 1973, 8 fishes (n = 88) were caught (Table 116). The brown bullhead (n = 26, 30%) was most often taken. The smallmouth bass (n = 25, 28%), pumpkinseed (21, 24%), and largemouth bass (10, 11%) were the most abundant game and pan fishes.

The catch per unit effort during August and September decreased from 1973 (0.46 fish caught per hour) to 1974 (0.37 fish caught per hour). Fewer fishermen were observed (0.23 per hour) and they fished less (1.7 hours per trip) in 1974 than in 1973 (0.56 fishermen observed per hour; 2.2 hours fished per trip). In 1973, 63% of the total fish taken were game or pan fishes compared to 32% in 1974.

Schoharie Creek: 1974

Eleven fishes (n = 113) were taken in 276 hours from 15 June through 15 September 1974 (Table 117). Of the 95 anglers, 77% were non-resident. The brown bullhead (n = 50, 44%) was most often caught. Most abundant game and pan fishes were the pumpkinseed (n = 14, 12%), rock bass (11, 10%), smallmouth bass (8, 7%), largemouth bass (7, 6%), and walleye (6, 5%). Fishing pressure and success differed greatly among the three zones and the months surveyed (Tables 118-120).

Zone 1 (Schoharie Creek between Schoharie Reservoir and Lower B-G

Of the 113 fish taken in Schoharie Creek, 69% (n = 78) were taken from Zone 1 (Table 118). The brown bullhead represented 64% (n = 50) of the total catch and all caught in Schoharie Creek were taken from this zone. Fishermen caught 0.96 fish per hour, which was the highest catch per unit effort of the three zones surveyed. Success varied between 1.17 fish per hour in August and no fish in September. Each angler fished an average of 1.7 hours.

Zone 2 (Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen which is to be inundated by the proposed Breakabeen facility)

Three carp were taken from this zone in July (Table 119). The six fishermen observed fished an average of 1.2 hours and caught 0.43 fish per hour; none were observed in June and two were observed in each of the three succeeding months.

Zone 3 (Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen which is not to be inundated)

A total of 32 (28%) fish was taken from Zone 3 (Table 120). Those caught most often were the pumpkinseed (n = 7), walleye (6), rock bass (6), yellow perch (6), and largemouth bass (4). All of the walleye caught in Schoharie Creek came from this zone. Game and pan fishes comprised 97% of the total catch. Fishermen caught 0.65 fish per hour (1.36 in June and none in September). Each fished an average of 1.2 hours.

Schoharie Creek: 1973 vs 1974

In all zones of Schoharie Creek in 1973 from 1 July through 30 September in 312 hours, 16 fishes (n = 227) were taken by 250 fishermen (Table 117). The rock bass (n = 65), smallmouth bass (62), and pumpkinseed (42) were most abundant.

The pumpkinseed, rock bass, and smallmouth bass were the most abundant game and pan fishes taken in both 1973 and 1974, but the proportion of theses fishes as a percentage of the total catch was much greater in 1973 (74%) than in 1974 (29%). The brown bullhead comprised 1% (n = 3) of the total catch in 1973 and 44% (n = 50) of the catch in 1974. In 1973, 88% of the total catch was game and pan fish as compared to 49% in 1974.

Fishermen fished for approximately equal lengths of time in 1973 (1.2 hours) and 1974 (1.5 hours) and took 0.79 fish per hour in 1973 and 0.81 fish per hour in 1974. Fisherman pressure and success differed between 1973 and 1974 in each zone (Tables 118-120).

Zone 1

In 1973, 0.93 fish per hour and in 1974 0.96 fish per hour were taken (Table 118). Two brown bullhead were caught in 1973 and 50 were caught in 1974. Game and pan fishes comprised 97% of the total catch in 1973 and 31% of the total catch in 1974. The number of fishermen was 0.39 per hour in 1973 and 0.17 per hour in 1974. Fishing time averaged 1.2 hours in 1973 and 1.7 hours in 1974.

Zone 2

In 1973, 0.97 fish per hour and in 1974 0.43 fish per hour were taken (Table 119). Ninety-two fish were caught in 1973; three carp only were caught in 1974. Ninety-five fishermen were observed in 1973 as compared to 6 fishermen observed in 1974, resulting in 0.31 fishermen per survey hour in 1973 and 0.02 in 1974. Fishermen fished an average of 1.2 hours in both years.

Zone 3

This was the only zone in which less fish were caught in 1973 (n = 17) than in 1974 (32). In 1973, 0.34 fish per hour and in 1974 0.65 fish per hour were taken (Table 120). Game and pan fishes comprised 82% of the total catch in 1973 as compared to 97% of the total catch in 1974. Fewer smallmouth bass and chain pickerel were caught in 1974 than in 1973; more rock bass and walleye were caught in 1974 than in 1973. The pumpkinseed (n = 7), yellow perch (6), and largemouth bass (4) were not caught in 1973 but were caught in 1974. The number of fishermen observed increased from

0.11 per hour in 1973 to 0.15 per hour in 1974. Fishermen fished an average of 1.5 hours in 1973 and 1.2 hours in 1974. The high quality of the fisheries in this zone in 1974 as compared to 1973 is a result of the spillway pool and FSPs 1 and 2 being opened to public use, whereas in 1973 they were not. Five of the 6 walleye taken in 1974 were caught in the spillway pool.

Summary

1. In Lower B-G the quantity (fish caught per hour), quality (game and pan fish in the total catch), and fisherman use (per survey hour) were less in 1974 than in 1973.

2. The quality and fisherman use in Zone 1 was less in 1974 than in 1973; the quantity was approximately the same.

3. The quantity, quality, and fisherman use in Zone 2 was less in 1974 than in 1973 but the reverse was true in Zone 3.

PHYSICOCHEMICAL DATA

Introduction

The stations sampled from April through September 1974 in Lower B-G (3), Upper B-G (2), Schoharie Creek (9), and tributaries of Schoharie Creek (3) are described in Table 121 and shown in Figures 35 through 39.

Weekly values were obtained for air and water temperature (C), dissolved oxygen (ppm), pH, and turbidity (F.T.U.; 8-in Secchi disc reading).

Every other week alkalinity, total hardness, calcium hardness, and carbon dioxide (all measured in milligrams per liter, mg/l) were determined. Data on monthly fluctuation in elevation for Lower and Upper B-G was supplied by Mr. J. M. Collyer, Resident Manager of the Blenheim-Gilboa Pumped Storage Project.

Materials and Methods

In Lower and Upper B-G, turbidity was measured with an 8-in Secchi disc and a Hach DR-EL Direct Reading Engineer's Laboratory. Alkalinity, total hardness, calcium hardness, and carbon dioxide were measured from surface, mid-depth, and bottom samples using the Hach Laboratory. Water temperature and dissolved oxygen profiles were taken at 5-ft intervals at all stations using a YSI 52A Meter. The pH of samples collected from surface, mid-depth, and bottom was measured at the laboratory using an International Biophysics Corporation Trophy pH Meter.

Samples taken from Schoharie Creek and its tributaries were taken approximately 1 ft from the stream bank at a depth of not more than 1 ft. All measurements except pH were made in the field. To provide information regarding the presence of sediments, water samples were taken at all stations on Schoharie Creek and its tributaries following any rainfall which exceeded 0.25 in in a 24-hr period.

Results and Discussion

Lower and Upper B-G

Stations were sampled 25 times from April through September 1974.

Except at station 13, the temperature profiles indicated homothermous conditions, which result from the mixing caused by pumping and generating (Tables 122 and 123). Station 13, which is most distant from the pumps, exhibited temperature variations with depth in the warmer months sampled. On a given date, water temperatures usually were lower in Upper B-G than in Lower B-G. In Lower B-G water temperature was lowest at station 14 because the colder waters enter here during generation.

Dissolved oxygen profiles were fairly uniform except at station 13, where oxygen reduction occurred in bottom waters in the warmer months (Table 124). With the exception of station 13, oxygen levels generally were near or greater than 80% saturation.

The pH values ranged from 6.9 to 9.3 (Table 125).

Turbidity readings (formazin turbidity units) and Secchi disc readings fluctuated (Tables 126 and 127). High turbidity in the spring (April) accompanied the thaw and heavy rains. Station 13 was generally the least turbid of those sampled in Lower B-G. Generally, turbidity was greater in Lower B-G than in Upper B-G.

Alkalinity, total hardness, calcium hardness, and carbon dioxide levels were fairly low and relatively constant (Table 128).

Average and maximum daily fluctuations were generally greater in Lower B-G than in Upper B-G (Table 129).

Seasonally, dissolved oxygen, alkalinity, hardness (total and calcium), carbon dioxide, and pH values were relatively similar in 1973 and 1974 in both Reservoirs (Culp, 1974). Turbidity was relatively high beginning in

in July 1973 because of the initial effects of pumping and generating. By 1974 it had decreased substantially in both Reservoirs. The average daily fluctuation of water levels in the Reservoirs was much greater in 1974 than in 1973. The average daily fluctuation of water levels in 1973 (June through December) was 8.8 ft in Lower B-G and 7.4 ft in Upper B-G. The average daily fluctuation in 1974 (June through September) was 12.8 ft in Lower B-G and 11.1 ft in Upper B-G. Full operation of all units began in December 1973.

Schoharie Creek and Tributaries

Stations were each sampled 26 times from April through September. Cole Hollow Creek (station 12) was the coldest; temperatures rarely exceeded 17 C (63 F). (Tables 122 and 130).

Dissolved oxygen was highest in the spring and decreased with rising water temperatures and reduced flows (Table 131). Saturation levels were approximately 80% or greater throughout the sampling period except for a drop below 70% at station 2 (Gilboa iron bridge) on 29 August, when flow here almost ceased. Dissolved oxygen was always near saturation in the three tributaries.

The pH ranged from 7.4 to 9.2 (Table 132).

Generally, Schoharie Creek was most turbid at stations 3 (spillway pool) and 4 (3/4-mi downstream from the spillway pool) (Table 126). In comparison, the turbidity of the three tributaries was generally low. The spring thaw and heavy spring rains accounted for high turbidity readings in early April. High values in subsequent months were caused by heavy rains prior to sampling.

Alkalinity, total hardness, calcium hardness, and carbon dioxide readings were low and fairly constant throughout the sampling period except at station 2 (Table 133). After Gilboa Dam ceased to spill over on 30 May, flow ceased and the values of the four parameters increased at station 2. Low dissolved oxygen values were then recorded here.

Beginning 4 April 1974, Schoharie Creek and its tributaries were sampled 12 times following a rainfall exceeding 0.25 in in a 24-hr period (Table 134).

Summary

1. Upper B-G had less fluctuation in water level and lower turbidity and mean water temperature than Lower B-G.

2. In Lower B-G, station 13, which was the deepest and was least affected by pumped storage operation, was generally the least turbid and exhibited the greatest variation in temperature and oxygen with depth.

3. At Reservoir stations except station 13, temperature and dissolved oxygen levels were generally homogeneous.

4. In both Reservoirs, turbidity was less in 1974 than in 1973.

5. In both Reservoirs, average daily fluctuations in water level were greater in 1974 than 1973.

6. Tributaries of Schoharie Creek were less turbid than was Schoharie Creek.

7. Cole Hollow Creek (Trib 99) was the coldest of the three tributaries.

8. Low dissolved oxygen and high values for alkalinity, total hardness, calcium hardness, and carbon dioxide occurred at station 2 on Schoharie Creek when flow was greatly reduced.

9. The spillway pool (station 3) and the station located 3/4-mi downstream (4) were the most turbid in Schoharie Creek.

STREAM BENTHOS

Introduction

Stream benthos was surveyed in Schoharie Creek from June through August 1974 and in Cole Hollow Creek from July through August 1974 (Table 135, Figures 40-42). The variety (species and number) and abundance (biomass) of stream bottom organisms was determined in Schoharie Creek between the iron bridge at Gilboa and the third bridge north of Breakabeen and in Cole Hollow Creek. Objectives were to:

1. Estimate the capacity of these environments to support higher forms of aquatic life by measuring abundance in the lower trophic levels.

2. Compare findings with data collected in 1973 to determine yearly differences.

3. Compare after post-Breakabeen situation to determine changes in habitat.

4. Determine the effects of variations in water flow directly below Lower B-G (spillway pool).

Materials and Methods

Samples were taken at each station with a Standard Surber Square Foot Sampler with 23 threads to the inch. The brass frame of the sampler was

placed on the stream bottom. Rocks that occurred within the enclosure were lifted so organisms present could be washed into the collecting net by the current. After the rocks had been handled, the remaining bottom material was disturbed so other organisms present would be washed into the net. Collections were transferred to glass jars (0.24 liter), labeled, and preserved with 40% isopropyl alcohol while in the field. In the laboratory, specimens were sorted, identified to order, and weighed. The biomass of each sample was determined by taking a wet weight on an Ohaus Dial-o-gram 310 Balance to the nearest 0.01 g.

Samples were collected from predominantly rubble bottom except at stations 8 and 11 in Schoharie Creek, where more sand than rubble was present. Schoharie Creek above Lower B-G had little or no flow when sampled. Below Lower B-G, the amount of flow increased as the number of tributaries increased. Stations in Schoharie Creek were areas exposed to bright sunlight. Stations in Cole Hollow Creek were in shaded areas. The elevation of sampling stations in Schoharie Creek ranged from 970 ft at station 1 to 680 ft at station 12. Elevations of sampling stations in Cole Hollow Creek ranged from 1540 ft at station 4 to 780 ft at station 1.

Numerical percentage was calculated by comparing the number of organisms in each systematic group to the total number of organisms collected. Percentage of occurrence was calculated by comparing the number of stations at which an organism was collected to the total number of stations.

Results and Discussion

Schoharie Creek

Zone 1 is located upstream from Lower B-G and Zone 2 is downstream (Figures 40 and 41). A total of 164 samples included 13 orders and 3176 individual organisms (Table 136). In Zone 1, 9 major orders of organisms were collected; in Zone 2, where more samples were taken, 13 orders were collected. The mean number of organisms and orders collected per station in each of the two zones were fairly consistent (Table 137). However, a slightly greater variation in the number of organisms and orders collected at each station occurred in Zone 2 because small numbers of organisms and orders were collected at stations 4, 8, and 11. The mean biomass per sample in Zone 2 was almost twice that found in Zone 1 (Table 137). The difference may be related to low seasonal flows in Zone 1. Directly below Lower B-G spillway (station 4), the mean number of organisms, orders, and biomass per sample were extremely low. Flows at this station varied as much as 240 cfs in one hour (Table 138). Certain benthic organisms that inhabit fast running water cannot survive in slow water or pools and vice versa (Ruttner, 1953; Philipson, 1955 in Trotzky and Gregory, 1974). The area below the spillway is at times a stagnant pool and at other times a large volume of water flows rapidly. The latter may affect benthic populations by scouring and flushing (Trotzky and Gregory, 1974).

Stations 8 and 11 in Zone 2 produced low numbers of organisms, orders, and biomass per sample. The results obtained at stations 8 and 11 reflect the poor habitats (sand bottom) for benthic organisms at these locations.

Other stations in Zone 2, where physicochemical conditions, variations in flow, and bottom habitats sampled were fairly consistent, yielded a reasonably constant mean number of organisms, orders, and biomass.

Caddisflies were the most numerous (43.6%) in Zone 1. Other orders that comprised at least 10% of the total number of organisms were: mayflies (26.4%), worms (13.5%), and dipterans (10.1%). These and beetles were collected at the three stations in Zone 1. (Table 139)

Mayflies (52.0%) and caddisflies (21.5%) were most numerous in Zone 2. Mayflies, caddisflies, dipterans, worms, and beetles were each collected at all nine stations. (Table 139)

In 1973, an average of 40 and 92 organisms per sample were collected in Zones 1 and 2, respectively, as compared to 21 and 19, respectively, in 1974 (Table 100). In Zones 1 and 2 the average number of orders collected decreased by one from 1973 to 1974. The decrease in both number of organisms and number of orders may have been caused by changes in the environment resulting from construction and operation of the Blenheim-Gilboa Pumped Storage Project or may be a result of naturally occurring variations in benthic population levels which occur from year to year or seasonally (months sampled varied from 1973 to 1974).

Cole Hollow Creek

Two zones of the Creek were considered: Zone 1 (2 stations) was located along the proposed access road to the proposed Breakabeen upper reservoir and Zone 2 (2 stations) was located above the proposed access road (Figure 42). A total of 44 samples yielded 9 orders and 1055

individual organisms (Table 141).

The average number of organisms collected per sample was less in Zone 1 but the average biomass per sample in Zone 1 was 38% greater than that in Zone 2 (Table 142).

The major orders of aquatic insects (mayflies, caddisflies, and stoneflies) were more equally distributed in Zone 1 than in Zone 2 (Table 143). All nine orders that occurred in Zone 1 were present at both stations except crayfish, which occurred at only one station. No beetles or hellgrammites were collected in Zone 2; both occurred in Zone 1.

According to Odum (1971), the ecosystem with fewer individuals and greater diversity of types of organisms may be more stable than one with great numbers of only a few types. The upper section (Zone 2) of Cole Hollow Creek, which is known to dry up to isolated pools (Culp, 1974), has less biomass and diversity than Zone 1.

Both sections of Cole Hollow Creek support a benthic population which is typical of high quality trout streams (Needham, 1969).

Summary

1. Biomass of benthic samples taken in Schoharie Creek upstream from Lower B-G (Zone 1) was much less than that of samples taken downstream from Lower B-G (Zone 2); water flow is much less in Zone 1 than in Zone 2 during the drier months.

2. Benthic samples taken at stations 4, 8, and 11 in Zone 2 contained low numbers of organisms, orders, and biomass in comparison to other stations; station 4 was unique in that rapid variations in flow occurred whereas

stations 8 and 11 had sand bottoms in comparison to rubble bottom at all other stations.

3. Samples taken in Schoharie Creek in August and September 1973 contained greater numbers of organisms and greater biomass than samples taken in June through August 1974.

4. Benthic samples taken in the lower section (Zone 1) of Cole Hollow Creek contained greater biomass and diversity of organisms than samples taken in the upper section (Zone 2), which dried up in late summer 1973 to a series of pools.

FISH MORTALITY

Introduction

The fish mortality study was initiated in June 1974 to determine the extent of fish mortality resulting from the regular operation of the Blenheim-Gilboa Pumped Storage Project. During generating or pumping phases, fish may be subject to mechanical damage and changes in pressure. Larger fish may be impinged on the grates of the Upper B-G power tunnel outlet.

Materials and Methods

At approximately two-week intervals, observations were made from 1 July through 18 September on both Reservoirs. Surveys were one hour and were made using three observers aided by binoculars in a boat.

Surveys were made on Lower B-G by establishing a zig-zag pattern beginning near the spillway and continuing south to the southern boundary of Mine Kill State Park (Figure 43). Additional attention was given to the area directly in front of the pumphouse. On Upper B-G a complete circuit of the Reservoir was made at a distance of approximately 25 ft from shore. This was followed by a figure-eight pattern to cover the middle section of the Reservoir (Figure 44).

In addition, approximately 40 man-hours per month from 1 June through 18 September were spent on each Reservoir during regular field operations. Any dead fish observed at this time were recorded. Dead or dying fish were recovered by dip net and were measured and weighed before being preserved in 10% formalin.

Results and Discussion

From 1 July through 18 September 1974, seven surveys of 21 man-hours were made on each Reservoir. Approximately 140 man-hours were spent conducting regular project operations on each Reservoir from 1 June through 18 September. Eight dead fish were recovered; two were from Upper B-G and six were from Lower B-G (Table 144). Those from Upper B-G were found near trap net station 4 in the northeast corner of the Reservoir. Five of the six fish from Lower B-G were from the area immediately in front of the pumphouse; the other was found opposite the pumphouse near trap net station 4 (approximately 1/2-mi north of the boat ramp). Two carp were found in Upper B-G; 2 yellow perch, 2 brown bullhead, and 2 white sucker were found in Lower B-G. All showed some damage such as cuts and bruises, decapitation,

and exposure of internal organs, which probably was caused during passage through the pumped storage plant.

The small number of dead fish found indicates that fish mortality resulting from pumped storage operation is minimal and would not limit the development of fish populations in either Reservoir.

Summary

Fish mortality in both Reservoirs because of the effects of pumped storage operation was miniscule in June through September 1974.

CONCLUSIONS

1. Reproduction of Centrarchids such as largemouth bass, smallmouth bass, rock bass, and pumpkinseed and certain Cyprinids such as carp, fathead minnow, and golden shiner in Lower B-G was less in 1973 than in 1972. Because Centrarchids spawn in nests in shallow water and because Cyprinids produce adhesive eggs that become attached to submerged weeds, grasses, and roots in shallow water, it is believed that fluctuations in water level resulting from pumped storage operation (which began in June 1973) caused the poor reproduction of these fishes.

2. Reproduction of sunfishes (nest builders) was successful in both Reservoirs in 1974. They adjust their reproductive behavior and reproduce successfully where sizeable fluctuations in water level occur on a regular basis.

3. In 1974 the reproductive success of sunfishes was much greater in Upper B-G than in Lower B-G. The average daily fluctuations in water level are less in Upper B-G and the shoreline morphology may be more favorable.

4. Yellow perch, which produce semi-buoyant eggs in gelatinous ribbons, reproduced in both Reservoirs in 1974.

5. Growth and condition of fish are greater in Upper B-G than in Lower B-G. The lesser turbidity in Upper B-G permitted greater light penetration and, thus, greater plankton production. Differences in growth and condition were most pronounced in smaller fish, which feed more heavily on zooplankton than larger fish. Less daily fluctuation in water level in Upper B-G caused less disturbance of shoreline areas where many food organisms live and reproduce.

6. Fish in Lower B-G were in better condition in 1973 than in 1974.

7. Little fish mortality resulted from pumped storage operation and should not have an effect on the development of fisheries in either Reservoir.

8. The much greater abundance of redbreast sunfish and yellow perch in Upper B-G indicates that movement between the Reservoirs may be species selective.

9. The abundance and biomass of fish decreased between 1973 and 1974 in Lower B-G and increased in Upper B-G. This is believed to be caused, in part, by many more fish being pumped from Lower B-G to Upper B-G than are being returned from Upper B-G to Lower B-G during generating.

10. The species selective movement of fish between the Reservoirs and differences in reproductive success and growth between the Reservoirs may result in two different fisheries.

11. The relative abundance of fish in Schoharie Creek above and below Lower B-G remained approximately the same between 1973 and 1974.

12. The fisheries in Schoharie Creek and its tributaries that will be lost through inundation by the proposed Breakabeen facility are minor. The quantity and quality of the fisheries which may develop in the Breakabeen reservoirs are uncertain. However, a prediction may be possible after analyzing the development of the fisheries in the B-G Reservoirs. These have not yet reached a stable situation.

PERSONNEL

Culp, Terry R.	Project Leader	M.S. Fisheries Sciences Michigan State University
McCormack, Charles M.	Chief Aquatic Biologist	B.S. Biology Franklin Pierce College
Langellier, Robert A.	Aquatic Biologist	M.S. Ichthyology Northern Illinois University
Gutzke, Theodore W.	Aquatic Biologist	M.S. Biology Eastern Michigan University
Smith, Reinald E.	Aquatic Biologist	B.S. Biology Cornell University
Browell, Richard K.	Aquatic Biologist	B.S. Biology Pennsylvania State University
Haas, Jeffrey A.	Assistant Aquatic Biologist	A.A.S. Fish and Wildlife Technology, State University of New York at Cobleskill
Cole, John L.	Assistant Aquatic Biologist	A.A.S. Fish and Wildlife Technology, State University of New York at Cobleskill
Lewis, Donna J.	Secretary	
Hedberg, Lynn C.	Typist	
Snyder, Cynthia M.	Lab Assistant	

LITERATURE CITED

Bennett, George W. 1971. Management of Lakes and Ponds. Van Nostrand Reinhold Company, New York. 375 pp.

Culp, Terry R. 1974. Studies of the Aquatic Ecology of the Blenheim-Gilboa Pumped Storage Reservoirs and of Schoharie Creek in the Vicinity of a Proposed Pumped Storage Facility Near Breakabeen, New York. Miscellaneous Report for Ichthyological Associates, Inc. 79 pp.

Frost, W.E. and M.E. Brown. 1967. The Trout. Collins Clear-Type Press, London. 286 pp.

Lagler, Karl F. 1956. Freshwater Fishery Biology. William C. Brown Company, Dubuque. 421 pp.

Needham, Paul R. 1969. Trout Streams. Winchester Press, New York. 241 pp.

Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Company, Philadelphia. 574 pp.

Ruttner, Franz. 1953. Fundamentals of Limnology. University of Toronto Press, Toronto. 295 pp.

Trotzky, H.M. and R.W. Gregory. 1974. The Effects of Water Flow Manipulation Below a Hydroelectric Power Dam on the Bottom Fauna of the Upper Kennebunk River, Maine. Trans. Amer. Fish. Soc. 103: 318-324.

Table 1. Mortality due to netting of fish collected in August and September 1974 in Lower and Upper B-G.

Species	August		September	
	L B-G	U B-G	L B-G	U B-G
Pumpkinseed	48	40	10	66
Golden shiner	17	-	9	6
Yellow perch	13	17	-	15
Rock bass	7	4	-	7
Largemouth bass	2	-	-	-
Smallmouth bass	1	-	-	-
Fallfish	1	-	-	1
Chain pickerel	1	-	1	-
Redbreast sunfish	-	42	-	15
Walleye	-	1	-	-
White sucker	-	-	11	-
Brown bullhead	-	-	1	-
Log perch	-	-	-	1
Fantail darter	-	-	-	1
Number of Fish	90	104	32	112
Number of Fishes	8	5	5	8

Table 2. Descriptions of gill net stations 1-10 sampled in 1973 and 1974 in Lower B-G.

Station	Bottom Type	Depth of Net (ft)*	Distance From Shore (ft)
1	silt, clay, gravel	12-10-22	10
2	silt, clay	9-15-17	40
3	silt, gravel, rock	18-29-21	10
4	silt, gravel, rock	17-35-35	10
5	silt, clay	10-36-32	10
6	silt, clay	13-24-20	30
7	silt, clay	15-24-24	10
8	clay, gravel, rock	19-39-49	10
9	silt, rock	23-48-48	20
10	silt, rock	42-42-42	10

* Depths recorded at both ends and mid-section of net when Reservoir elevation is 885 feet.

Table 3. Locations sampled by trap net in 1973 in Lower B-G.

Date	Number of Hours Sampled	Location
21 Jun	48.00	Gill net station 6 (trap net station 3 in (1974)
21 Jun	48.00	Gill net station 9
22 Jun	48.00	Gill net station 6
22 Jun	48.00	Gill net station 9
25 Jun	21.50	Head of Mine Kill Cove (south shore)
5 Jul	22.50	Head of Mine Kill Cove (south shore)
5 Jul	20.50	Gill net station 9
5 Jul	21.25	Gill net station 6
6 Jul	71.50	Head of Mine Kill Cove (south shore)
6 Jul	73.00	Gill net station 9
6 Jul	74.00	Gill net station 6
18 Sep	47.00	Gill net station 6
18 Sep	47.00	Entrance to Mine Kill Cove (south shore)

Table 4. Description of block net station sampled in 1973 and 1974 in Mine Kill Cove in Lower B-G.

When the elevation of Lower B-G is at 900 feet, Mine Kill Cove is V-shaped. The Mine Kill enters at the western end. The eastern end opens into Lower B-G and is approximately 1000 feet wide. The length of the Cove, which runs in an east-west direction, is 2750 feet. The old channel of the Mine Kill flows near the northern shore where it first enters the Cove, then to the center and back to the northern shore just before the mouth of the Cove meets the main body of Lower B-G.

When Lower B-G is at an elevation of 870 feet, the bottom of the Cove is completely exposed. When the elevation is 900 feet, approximately two-thirds of the Cove is between 0 and 20 feet deep and one-third is between 20 and 30 feet deep. The deepest part of the Cove is at the northeastern end.

The shore is completely wooded with deciduous trees and hemlock. The bottom is composed of 85% clay, 10% rubble, and 5% boulders. Branches of dead trees and shrubs are present over approximately 25% of the bottom.

Table 5. Locations sampled by seine net and electrofishing in 1973 in Lower B-G.

Date	Number of Hauls	Location
26 Apr	4	2000' north of boat ramp
30 Apr	4	2000' north of boat ramp
21 May	*	Head of Mine Kill Cove
22 May	*	1/4-mile from dam on west shore
22 May	1	2000' north of boat ramp
24 May	2	Head of Mine Kill Cove
24 May	1	Mouth of Mine Kill Cove (south shore)
30 May	*	Boat ramp (north side)

* 100' seine used in combination with 3 wands of electrofishing gear

Table 6. Descriptions of gill net stations 1-6 sampled in 1974 in Upper B-G.

Station	Bottom Type	Depth of Net (ft)*	Distance From Shore (ft)
1	silt, clay	11-13-12	80
2	silt, clay	11-15-16	100
3	silt, clay	11-15-18	25
4	silt, clay	13-14-22	25
5	rock, gravel, clay	19-25-27	20
6	rock, gravel, clay	25-31-31	20

* Depths recorded at both ends and mid-section of net when Reservoir elevation is 2000 feet.

Table 7. Locations sampled by gill net in 1973 in Upper B-G.

Date	Number of Hours Sampled	Location
19 Jun	24.0	Western shore near access road
19 Jun	24.0	Northern shore 1500' south of north entrance
21 Jun	23.5	Western shore near southwest corner
21 Jun	24.0	Northern shore; set across cove in northeast section
11 Jul	24.0	Southern shore near southwest corner
11 Jul	23.5	Western shore near access road
13 Aug	45.0	Eastern shore 2000' east of north entrance
13 Aug	46.5	150' north of south entrance
13 Aug	24.0	Eastern shore 1000' north of south entrance
27 Sep	17.5	Eastern shore 3000' south of north entrance
28 Sep	24.0	Eastern shore 1500' south of north entrance
15 Oct	23.5	Southeast corner
15 Oct	23.5	Southeast corner

Table 8. Locations sampled by trap net in 1973 in Upper B-G.

Date	Number of Hours Sampled	Location
20 Jun	48.00	Western shore near access road
20 Jun	48.00	Northern shore 1500' south of north entrance
9 Jul	48.00	Eastern shore 7500' east of north entrance
9 Jul	78.50	Southern shore near southwest corner
9 Jul	72.00	Northern shore 2000' south of north entrance
24 Sep	72.00	Eastern shore 3000' south of north entrance
24 Sep	72.00	Eastern shore 2500' south of north entrance
24 Sep	72.00	Eastern shore 1500' south of north entrance
24 Sep	72.00	Eastern shore 1000' south of north entrance
15 Oct	97.00	Northeast shore in small cove
15 Oct	97.00	Eastern shore 1000' north of south entrance
15 Oct	47.00	Eastern shore 1200' north of south entrance
15 Oct	47.00	Southeast corner
17 Oct	50.00	North entrance
17 Oct	49.75	Eastern shore in small cove

Table 9. Descriptions of Fish Sampling Pools (FSPs) sampled in 1974 in Schoharie Creek.

FSP	Length (ft)	Width (ft)		Depth (ft)		Bottom Type
		Max.	Ave.	Max.	Ave.	
11	660	155	110	14	8	Bedrock with rubble accumulation at the downstream end
10	615	145	130	16	10	Bedrock with rubble accumulation at the downstream end and gravel along the eastern shore
10A	680	155	110	18	12	Gravel, rubble and bedrock in approximately equal proportions
Spillway	600	200	150	30	18	Mostly rubble with bedrock directly below the spillway
2	735	135	120	4	3	Rubble with boulders and gravel intermixed
6	534	140	115	7	5	Rubble and gravel in approximately equal proportions
8	1002	200	140	17	10	Rubble and bedrock with gravel accumulation at the downstream end
9	750	150	125	7	5	Rubble and gravel (at the downstream end) in approximately equal proportions
Walhalla Rocks	1400	200	160	6	4	Bedrock and fine gravel with large boulders over much of the bottom

Table 10. Descriptions of electrofishing stations sampled in 1974 in tributaries of Schoharie Creek.

Station	Description
Trib 101	A 500' section starting 500 feet below Route 30 was sampled. The stream gradient was flat and composed of 25% run. 50% riffle, and 25% pool habitat. The bottom was equal amounts of silt and clay in the pools and equal amounts of sand and gravel in the riffles. The pools were relatively large, having a 15' average width. The riffles were narrow, being 2-4' wide. Maximum depth was 4 feet. The shore was lined with deciduous trees.
Trib 99 Stations 1-3	This section of Cole Hollow Creek was 75% run and 25% pool habitat. The bottom was bedrock (45%) and gravel (45%), with small amounts of rubble (10%). Many uprooted trees were lying across the stream. Stream width varied from 3-12 feet (9' average) and depth varied from 6 inches to 3 feet. The shore was mixed with coniferous and deciduous trees.
Stations 4-5	This section of Cole Hollow Creek contains stream improvement structures. Stream habitat is a series of pools (40%) with riffle sections (60%) between pools. The bottom was gravel (45%) and sand (45%) with small amounts of silt (10%). Stream width ranged from 5-20 feet (14' average) and the maximum depth was 3 feet. Coniferous and deciduous trees lined the banks.
Trib 98A	A 250' section starting 235 feet from the backset of Schoharie Creek was sampled. The stream gradient was slight and the habitat was composed of 50% pool, 25% run, and 25% riffle. The bottom was equal amounts of clay and gravel. Width varied from 3-6 feet. Maximum depth was 3 feet. On the eastern shore was a corn field and the western shore was a steep, wooded bank.

Table 11. Fish collected by month by experimental gill net from April through September 1974 in 1440 hours (240 hours per month) at ten stations in Lower B-G.

Month	Apr	May	Jun	Jul	Aug	Sep	Total
Number of Hours Sampled	240	240	240	240	240	240	1440
Species							
Pumpkinseed	2	18	24	25	9	28	106
White sucker	12	3	7	6	5	18	51
Carp	2	6	7	10	5	5	35
Yellow perch	10	8	5	2	1	1	27
Golden shiner	7	-	-	4	-	10	21
Stonecat	8	5	3	-	-	4	20
Brown bullhead	1	2	2	2	1	5	13
Fallfish	4	6	1	-	1	-	12
Chain pickerel	3	2	1	3	-	1	10
Walleye	1	-	1	2	-	2	6
Rock bass	1	2	2	-	-	-	5
Largemouth bass	1	-	-	1	-	-	2
Northern hog sucker	-	1	-	-	-	-	1
Number of Fish	52	53	53	55	22	74	309
Number of Fishes	12	10	10	9	6	9	13

Table 12. Fish collected by station by experimental gill net from April through September 1974 in 1440 hours (144 hours at each station) at ten stations in Lower B-G.

Station	1	2	3	4	5	6	7	8	9	10	Total
Number of Hours Sampled	144	144	144	144	144	144	144	144	144	144	144
Pumpkinseed	9	16	11	8	2	11	17	1	31	-	106
White sucker	1	10	8	4	7	9	7	2	3	-	51
Carp	1	4	11	3	1	6	3	-	5	1	35
Yellow perch	2	4	2	4	1	2	6	-	3	3	27
Golden shiner	1	2	5	3	-	-	2	-	8	-	21
Stonecat	7	4	3	5	-	-	-	-	-	1	20
Brown bullhead	-	4	-	2	2	3	1	-	1	-	13
Fallfish	1	5	2	1	1	1	-	-	1	-	12
Chain pickerel	1	-	-	-	-	2	1	-	5	1	10
Walleye	-	-	2	-	-	2	-	-	2	-	6
Rock bass	1	-	-	-	1	2	1	-	-	-	5
Largemouth bass	-	-	-	1	-	-	-	-	1	-	2
Northern hog sucker	-	1	-	-	-	-	-	-	-	-	1
Number of Fish	24	50	44	31	15	38	38	3	60	6	309
Number of Fishes	9	9	8	9	7	9	8	2	10	4	13

Table 13. Abundance and biomass of fish collected by experimental gill net from April through September 1974 in Lower (1440 hours) and Upper (864 hours) B-G.

Species	Lower B-G				Upper B-G			
	Abundance		Biomass (lbs)		Abundance		Biomass (lbs)	
	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour
Pumpkinseed	106	0.07	9.9	0.01	141	0.16	12.5	0.01
White sucker	51	0.04	20.8	0.01	20	0.02	6.0	0.01
Carp	35	0.02	44.2	0.03	94	0.11	104.6	0.12
Yellow perch	27	0.02	6.0	<0.01	95	0.11	21.3	0.02
Golden shiner	21	0.01	3.1	<0.01	23	0.03	3.5	<0.01
Stonecat	20	0.01	4.7	<0.01	4	<0.01	1.8	<0.01
Brown bullhead	13	0.01	5.0	<0.01	469	0.54	99.3	0.11
Fallfish	12	0.01	3.0	<0.01	5	0.01	1.5	0.01
Chain pickerel	10	0.01	4.8	<0.01	-	-	-	-
Walleye	6	<0.01	1.8	<0.01	9	0.01	3.7	<0.01
Rock bass	5	<0.01	0.6	<0.01	8	0.01	1.3	<0.01
Largemouth bass	2	<0.01	0.5	<0.01	-	-	-	-
Northern hog sucker	1	<0.01	1.0	<0.01	-	-	-	-
Redbreast sunfish	-	-	-	-	66	0.08	8.2	0.01
Common shiner	-	-	-	-	5	0.01	1.5	<0.01
Log perch	-	-	-	-	3	<0.01	0.1	<0.01
Number of Fish and Biomass	309		105.4		942		265.3	
Number of Fishes	13				13			
Catch Per Hour		0.21		0.07		1.09		0.31

Table 14. Fish collected by experimental gill net from April through September 1973 (1680 hours) and 1974 (1440 hours) in Lower B-G.

Species	1973		1974	
	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour
Carp	289	0.17	35	0.02
Pumpkinseed	150	0.09	106	0.07
Brown bullhead	89	0.05	13	0.01
Stonecat	74	0.04	20	0.01
White sucker	55	0.03	51	0.04
Largemouth bass	41	0.02	2	<0.01
Fallfish	41	0.02	12	0.01
Yellow perch	27	0.02	27	0.02
Chain pickerel	20	0.01	10	0.01
Walleye	16	0.01	6	<0.01
Golden shiner	13	0.01	21	0.01
Rock bass	9	0.01	5	<0.01
Northern hog sucker	7	< 0.01	1	<0.01
Number of Fish	831		309	
Number of Fishes	13		13	
Catch Per Hour		0.49		0.21

Table 15. Fish collected by month by trap net from April through September 1974 in 1270 hours at five stations in Lower B-G.

Month	Apr	May	Jun	Jul	Aug	Sep	Total
Number of Hours Sampled	162	192	192	288	286	150	1270
Species							
Brown bullhead	56	194	47	26	116	192	631
Pumpkinseed	13	38	57	143	139	64	454
Rock bass	7	3	1	5	4	-	20
White sucker	8	-	8	1	1	2	20
Carp	2	2	3	3	3	-	13
Yellow perch	-	-	1	2	2	-	5
Largemouth bass	2	-	2	-	-	-	4
Walleye	-	-	-	-	2	-	2
Redbreast sunfish	-	-	-	2	-	-	2
Golden shiner	-	-	-	2	-	-	2
Log perch	1	-	-	-	-	-	1
Smallmouth bass	-	-	-	1	-	-	1
Fallfish	1	-	-	-	-	-	1
Number of Fish	90	237	119	185	267	258	1156
Number of Fishes	8	4	7	9	7	3	13
Catch Per Hour	0.56	1.23	0.62	0.64	0.93	1.72	0.91

Table 16. Fish collected by station by trap net from April through September 1974 in 1270 hours at five stations in Lower B-G.

Station	1	2	3	4	5	Total
Number of Hours Sampled	237	285	291	265	192	1270
Species						
Brown bullhead	306	229	38	34	24	631
Pumpkinseed	53	133	113	69	86	454
Rock bass	2	10	2	3	3	20
White sucker	2	7	7	3	1	20
Carp	3	1	6	1	2	13
Yellow perch	1	2	-	1	1	5
Largemouth bass	-	-	3	1	-	4
Walleye	1	-	-	-	1	2
Redbreast sunfish	-	2	-	-	-	2
Golden shiner	-	2	-	-	-	2
Log perch	-	-	1	-	-	1
Smallmouth bass	-	1	-	-	-	1
Fallfish	-	-	1	-	-	1
Number of Fish	368	387	171	112	118	1156
Number of Fishes	7	9	8	7	7	13
Catch Per Hour	1.55	1.36	0.59	0.42	0.61	0.91

Table 17. Abundance and biomass of fish collected by trap net from April through September 1974 in Lower (1270 hours) and Upper (1278 hours) B-G.

Species	Lower B-G				Upper B-G			
	Abundance		Biomass (lbs)		Abundance		Biomass (lbs)	
	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour
Brown bullhead	631	0.50	99.0	0.08	61	0.05	9.8	0.01
Pumpkinseed	454	0.36	21.5	0.02	642	0.50	57.1	0.04
Rock bass	20	0.02	4.9	<0.01	26	0.02	2.5	<0.01
White sucker	20	0.02	13.4	0.01	4	<0.01	1.2	<0.01
Carp	13	0.01	5.6	<0.01	2	<0.01	2.0	<0.01
Yellow perch	5	<0.01	0.7	<0.01	85	0.07	13.2	0.01
Largemouth bass	4	<0.01	1.6	<0.01	-	-	-	-
Walleye	2	<0.01	0.5	<0.01	1	<0.01	0.2	<0.01
Redbreast sunfish	2	<0.01	0.2	<0.01	119	0.09	11.3	0.01
Golden shiner	2	<0.01	0.1	<0.01	-	-	-	-
Log perch	1	<0.01	<0.1	<0.01	2	<0.01	<0.1	<0.01
Smallmouth bass	1	<0.01	0.1	<0.01	-	-	-	-
Fallfish	1	<0.01	<0.1	<0.01	-	-	-	-
Fantail darter	-	-	-	-	1	<0.01	<0.1	<0.01
Common shiner	-	-	-	-	1	<0.01	<0.1	<0.01
Satinfin shiner	-	-	-	-	1	<0.01	<0.1	<0.01
Number of Fish and Biomass	1156		<147.8		945		<97.7	
Number of Fishes	13				13			
Catch Per Hour		0.91		<0.12		0.74		<0.08

Table 18. Fish collected by trap net in June, July, and September 1973 (590 hours) and 1974 (631 hours) in Lower B-G.

Species	1973		1974	
	Number Collected	Catch Per Hour	Number Collected	Catch Per Hour
Pumpkinseed	1490	2.53	264	0.42
Brown bullhead	287	0.49	265	0.42
Carp	282	0.48	6	0.01
Rock bass	51	0.09	6	0.01
Yellow perch	48	0.08	3	<0.01
Largemouth bass	7	0.01	2	<0.01
Golden shiner	6	0.01	2	<0.01
White sucker	6	0.01	11	0.02
Fallfish	4	0.01	-	-
Smallmouth bass	3	0.01	1	<0.01
Bluntnose minnow	2	<0.01	-	-
Stonecat	1	<0.01	-	-
Creek chub	1	<0.01	-	-
Chain pickerel	1	<0.01	-	-
Redbreast sunfish	-	-	2	<0.01
Number of Fish	2189		562	
Number of Fishes	14		10	
Catch Per Hour		3.71		0.89

Table 19. Abundance and biomass of fish collected by block net from May through August 1974 at two locations in Lower B-G.

Date	19 May			25 Jun			18 Aug		
Location	Mine Kill Cove			Gill Net Station 6			Mine Kill Cove		
Area Blocked	1.50 Surface Acres			0.23 Surface Acres			2.30 Surface Acres		
Species	#	%	Biomass (lbs)	#	%	Biomass (lbs)	#	%	Biomass (lbs)
Pumpkinseed	1916	78	68.9	20	81	0.4	71	24	4.7
White sucker	148	6	12.5	-	-	-	113	39	86.9
Rock bass	67	3	7.4	2	8	0.1	17	6	3.6
Carp	63	3	34.7	-	-	-	4	1	2.6
Fallfish	62	3	3.3	-	-	-	2	1	2.0
Brown bullhead	44	2	12.9	-	-	-	4	1	0.3
Largemouth bass	43	2	15.0	-	-	-	7	2	1.1
Yellow perch	35	1	1.0	2	8	0.1	1	1	0.1
Spottail shiner	25	1	2.1	-	-	-	-	-	-
Golden shiner	22	1	1.6	-	-	-	68	23	7.0
Smallmouth bass	11	<1	4.3	-	-	-	5	2	1.5
Bluntnose minnow	9	<1	0.1	-	-	-	-	-	-
Walleye	6	<1	0.8	-	-	-	-	-	-
Common shiner	5	<1	0.1	-	-	-	-	-	-
Log perch	1	<1	0.1	-	-	-	-	-	-
Satinfin shiner	1	<1	0.1	-	-	-	-	-	-
Northern hog sucker	1	<1	0.5	1	4	0.4	1	1	0.4
Chain pickerel	1	<1	0.1	-	-	-	-	-	-
Number of Fish and Biomass	2460		165.5	25		1.0	293		110.2
Number of Fishes	18			4			11		

Table 20. Fish collected by block net on 17 August 1973 and on 18 August 1974 in Mine Kill Cove in Lower B-G.

Date Area Blocked	17 Aug 1973 0.75 Surface Acres (complete catch)			18 Aug 1974 2.30 Surface Acres (incomplete catch)		
Species	Number	Percent	Biomass (lbs)	Number	Percent	Biomass (lbs)
Pumpkinseed	4400	79	71.1	71	22	4.7
Carp	393	7	119.9	4	1	2.6
White sucker	186	3	42.4	113	35	86.9
Golden shiner	184	3	5.7	68	21	7.0
Smallmouth bass	72	1	10.9	5	2	1.5
Fallfish	69	1	13.9	2	1	2.0
Brown bullhead	57	1	19.4	4	1	0.3
Largemouth bass	55	1	11.0	7	2	1.1
Rock bass	49	1	3.6	17	5	3.6
Northern hog sucker	30	1	12.2	1	<1	0.4
Bluntnose minnow	23	<1	0.1	-	-	-
Log perch	12	<1	0.2	-	-	-
Walleye	7	<1	0.3	-	-	-
Common shiner	7	<1	0.1	-	-	-
Yellow perch	6	<1	0.7	1	<1	0.1
Redbreast sunfish	3	<1	0.4	-	-	-
Creek chub	3	<1	0.1	-	-	-
Cutlips minnow	1	<1	0.1	-	-	-
Chain pickerel	-	-	-	1	<1	0.1
Satinfin shiner	-	-	-	1	<1	0.1
Spottail shiner	-	-	-	25	8	2.1
Number of Fish and Biomass	5557		312.1	320		112.5
Number of Fishes	18			18		

Table 21. Fish collected by seine net from June through August 1974 at three stations in Lower B-G.

Date	6 Jun	6 Jun	7 Jun	7 Jun	9 Jul	9 Jul	15 Aug
Station*	1	2	3	1	3	1	2
Seine Size**	A	A	B	B	C	C	C
Number of Hauls	1	1	4	3	5	3	6
Rosyface shiner	1	-	1	126	-	1	-
Pumpkinseed	4	-	4	-	25	3	-
Satinfin shiner	-	-	4	7	-	-	-
Fallfish	-	-	-	-	3	-	1
Golden shiner	-	1	3	-	-	-	-
Common shiner	-	-	1	2	-	-	-
Bluntnose minnow	-	-	1	-	-	2	-
Yellow perch	-	-	-	-	-	1	-
Smallmouth bass	-	-	-	-	1	-	-
Largemouth bass	1	-	-	-	-	-	-
Carp	-	-	-	-	-	1	-
Brown bullhead	-	-	1	-	-	-	-
Number of Fish	6	1	15	135	29	8	1
Number of Fishes	3	1	7	3	3	5	1

* Stations: 1 = Mine Kill Cove; 2 = 100 yards north of the boat ramp; 3 = 2000' - 3000' north of the boat ramp.

** Seine sizes: A = 100' X 3' X 1/4" mesh; B = 50' X 3' X 1/4" mesh; C = 50' X 4' X 3/4" mesh.

Table 21 - (Continued). Seine, 1974, Lower B-G

Date	28 Aug	Total
Station	3	
Seine Size	C	
Number of Hauls	6	
Rosyface shiner	-	129
Pumpkinseed	10	46
Satinfin shiner	1	12
Fallfish	-	4
Golden shiner	-	4
Common shiner	1	4
Bluntnose minnow	-	3
Yellow perch	-	1
Smallmouth bass	-	1
Largemouth bass	-	1
Carp	-	1
Brown bullhead	-	1
Number of Fish	12	207
Number of Fishes	3	12

Table 22. Fish collected by month by experimental gill net from April through September 1974 in 864 hours (144 hours per month) at six stations in Upper B-G.

Month	Apr	May	Jun	Jul	Aug	Sep	Total
Number of Hours Sampled	144	144	144	144	144	144	864
Species							
Brown bullhead	3	183	160	99	17	7	469
Pumpkinseed	1	22	46	23	33	16	141
Yellow perch	8	2	1	23	29	32	95
Carp	-	28	38	13	10	5	94
Redbreast sunfish	-	6	2	28	19	11	66
Golden shiner	-	2	2	6	1	12	23
White sucker	2	1	8	7	2	0	20
Walleye	-	1	-	2	4	2	9
Rock bass	-	2	1	1	-	4	8
Fallfish	1	-	1	-	-	3	5
Common shiner	2	-	3	-	-	-	5
Stonecat	1	2	-	1	-	-	4
Log perch	-	-	3	-	-	-	3
Number of Fish	18	249	265	203	115	92	942
Number of Fishes	7	10	11	10	8	9	13

Table 23. Fish collected by station by experimental gill net from April through September 1974 in 864 hours (144 hours at each station) at six stations in Upper B-G.

Station	1	2	3	4	5	6	Total
Number of Hours Sampled	144	144	144	144	144	144	864
Species							
Brown bullhead	67	184	68	67	30	53	469
Pumpkinseed	27	50	20	16	3	25	141
Yellow perch	4	19	9	25	22	16	95
Carp	10	33	15	22	7	7	94
Redbreast sunfish	5	22	4	10	14	11	66
Golden shiner	10	5	2	-	4	2	23
White sucker	3	4	5	7	-	1	20
Walleye	-	2	3	-	4	-	9
Rock bass	2	2	1	-	2	1	8
Fallfish	1	2	1	-	-	1	5
Common shiner	1	2	1	1	-	-	5
Stonecat	-	-	1	-	2	1	4
Log perch	3	-	-	-	-	-	3
Number of Fish	133	325	130	148	88	118	942
Number of Fishes	11	11	12	7	9	10	13

Table 24. Fish collected by month by trap net from April through September 1974 in 1278 hours at four stations in Upper B-G .

Month	Apr	May	Jun	Jul	Aug	Sep	Total
Number of Hours Sampled	192	187	192	256	210	241	1278
Species							
Pumpkinseed	3	2	18	38	143	438	642
Redbreast sunfish	-	4	2	11	41	61	119
Yellow perch	9	-	-	9	31	36	85
Brown bullhead	46	3	1	-	9	2	61
Rock bass	2	-	4	1	2	17	26
White sucker	1	-	-	-	1	2	4
Log perch	1	-	-	-	-	1	2
Carp	1	-	-	-	1	-	2
Fantail darter	-	-	-	-	-	1	1
Common shiner	-	1	-	-	-	-	1
Satinfin shiner	-	1	-	-	-	-	1
Walleye	-	-	-	-	1	-	1
Number of Fish	63	11	25	59	229	558	945
Number of Fishes	7	5	4	4	8	8	12
Catch Per Hour	0.33	0.06	0.13	0.23	1.09	2.32	0.74

Table 25. Fish collected by station by trap net from April through September 1974 in 1278 hours at four stations in Upper B-G .

Station	1	2	3	4	Total
Number of Hours Sampled	387	317	263	311	1278
Species					
Pumpkinseed	405	122	43	72	642
Redbreast sunfish	44	29	14	32	119
Yellow perch	24	18	16	27	85
Brown bullhead	2	2	48	9	61
Rock bass	9	4	8	5	26
White sucker	2	-	1	1	4
Log perch	-	1	1	-	2
Carp	1	-	-	1	2
Fantail darter	1	-	-	-	1
Satinfin shiner	-	-	-	1	1
Common shiner	1	-	-	-	1
Walleye	-	-	-	1	1
Number of Fish	489	176	131	149	945
Number of Fishes	8	6	7	9	12
Catch Per Hour	1.26	0.56	0.50	0.48	0.74

Table 26. Abundance and biomass of fish collected by block net in June 1974 at one location in Upper B-G.

Date Location Area	19 Jun between gill net stations 1&2 0.23 Surface Acres		
Species	Number	Percent	Biomass (lbs)
Pumpkinseed	13	48	0.3
Redbreast sunfish	6	22	0.2
Log perch	3	11	0.1
Carp	3	11	1.0
Common shiner	1	4	0.1
Bluntnose minnow	1	4	0.1
Number of Fish and Biomass	27		1.8
Number of Fishes	6		

Table 27. Fish collected by trap net in June and August 1974 in 565 hours at three stations in Schoharie Creek between Schoharie Reservoir and Lower B-G.

Date	11 Jun	11 Jun	17 Jun	17 Jun	17 Jun	19 Jun	24 Jun
Number of Hours Fished	48	48	48	48	48	48	45
FSP*	11	11	10	10	10	10	11
Pumpkinseed	-	-	-	-	-	29	-
Rock bass	-	-	-	-	-	1	-
White sucker	2	1	-	-	-	-	-
Yellow perch	1	-	-	-	-	1	-
Brown bullhead	-	-	-	-	-	2	-
Walleye	-	1**	-	-	-	-	-
Stonecat	-	-	-	-	-	2	-
Carp	-	-	-	-	-	-	-
Fallfish	-	-	-	-	-	-	-
Northern hog sucker	-	1	-	-	-	-	-
Brown trout	-	1	-	-	-	-	-
Number of Fish	3	4	0	0	0	35	0
Number of Fishes	2	4	0	0	0	5	0

* FSP = Fish Sampling Pool.
** Exact weight unknown (approximately 10 lbs).

Table 27 - (Continued). Trap net, 1974, Schoharie Creek

Date	24 Jun	26 Jun	26 Jun	28 Aug	28 Aug	Total	
						Number	Biomass (lbs)
Number of Hours Fished	45	48	48	44	47		
FSP	11	10	10	10A	10A		
Pumpkinseed	-	6	-	-	1	36	2.5
Rock bass	-	5	-	-	1	7	1.4
White sucker	1	2	-	1	-	7	22.3
Yellow perch	-	2	-	-	-	4	0.3
Brown bullhead	-	-	-	1	1	4	1.9
Walleye	-	1	-	1	-	3	13.5***
Stonecat	-	-	-	1	-	3	1.1
Carp	-	-	-	-	1	1	0.4
Fallfish	-	-	-	1	-	1	0.7
Northern hog sucker	-	-	-	-	-	1	0.5
Brown trout	-	-	-	-	-	1	1.4
Number of Fish	1	16	0	5	4	68	46.0***
Number of Fishes	1	5	0	5	4	11	11

*** Approximate

Table 28. Fish collected by trap net in July and August 1973 in 336 hours at three stations in Schoharie Creek between Schoharie Reservoir and Lower B-G .

Date	18 Jul	18 Jul	1 18 Jul	18 Jul	19 Jul	19 Jul	13 Aug
Number of Hours Fished	22	22	25	25	24	24	49
FSP*	10	10	11	11	11	10	10A
Pumpkinseed	9	5	3	13	1	19	2
Rock bass	2	1	-	3	1	-	-
Brown bullhead	1	-	-	-	-	-	-
White sucker	-	-	-	1	-	-	-
Walleye	-	-	-	-	-	-	-
Yellow perch	1	-	-	3	-	-	-
Fallfish	-	-	-	-	-	-	-
Northern hog sucker	-	-	-	-	-	-	-
Redbreast sunfish	-	-	-	1	-	-	-
Number of Fish	13	6	3	21	2	19	2
Number of Fishes	4	2	1	5	2	1	1

* FSP = Fish Sampling Pool.

Table 28 - (Continued). Trap net, 1973, Schoharie Creek

Date	13 Aug	15 Aug	15 Aug	Total
Number of Hours Fished	49	48	48	
FSP	10A	10A	10A	
Pumpkinseed	10	14	4	80
Rock bass	2	5	-	14
Brown bullhead	-	6	-	7
White sucker	-	6	-	7
Walleye	-	7	-	7
Yellow perch	-	2	-	6
Fallfish	-	2	-	2
Northern hog sucker	-	1	-	1
Redbreast sunfish	-	-	-	1
Number of Fish	12	43	4	125
Number of Fishes	2	8	1	9

Table 29. Fish collected by trap net in July and August 1974 in 681 hours in Schoharie Creek between Lower B-G and the Walhalla Rocks north of Breakabeen.

Date	15 Jul	15 Jul	16 Jul	16 Jul	17 Jul	17 Jul	18 Jul
Number of Hours Fished	41	20	45	46	46	47	44
FSP*	2	2	Spillway	Spillway	8	8	8
Rock bass	3	2	3	2	1	1	-
White sucker	2	4	-	-	2	1	-
Pumpkinseed	6	5	-	-	-	3	4
Northern hog sucker	-	-	-	-	1	-	-
Brown bullhead	1	-	-	-	-	1	-
Walleye	1	-	1	-	-	-	1
Redbreast sunfish	-	-	-	-	-	-	-
Carp	-	-	2	-	-	-	-
Log perch	-	-	-	-	1	-	-
Smallmouth bass	-	-	-	-	-	-	-
Fallfish	1	-	-	-	-	-	-
Stonecat	-	-	-	-	-	1	-
Chain pickerel	-	-	-	-	-	1	-
Number of Fish	14	11	6	2	5	8	5
Number of Fishes	6	3	3	1	4	6	2

* FSP = Fish Sampling Pool

Table 29 - (Continued). Trap net, 1974, Schoharie Creek.

Date	18 Jul	23 Jul	23 Jul	24 Jul	12 Aug	12 Aug	15 Aug
Number of Hours Fished	44	48	42	24	46	92	48
FSP*	8	8	8	8	Walhalla Rocks	Walhalla Rocks	6
Rock bass	3	1	3	3	12	8	2
White sucker	2	-	2	-	14	11	2
Pumpkinseed	-	-	1	-	-	-	-
Northern hog sucker	2	-	-	1	2	-	-
Brown bullhead	-	-	1	3	-	-	-
Walleye	-	-	-	1	-	-	1
Redbreast sunfish	-	-	-	-	1	1	-
Carp	-	-	-	-	-	-	-
Log perch	-	-	-	-	-	-	-
Smallmouth bass	-	-	-	-	-	1	-
Fallfish	-	-	-	-	-	-	-
Stonecat	-	-	-	-	-	-	-
Chain pickerel	-	-	-	-	-	-	-
Number of Fish	7	1	7	8	29	21	5
Number of Fishes	3	1	4	4	4	4	3

Table 29 - (Continued). Trap net, 1974, Schoharie Creek

Date	29 Aug	Total	
		Number	Biomass (lbs)
Number of Hours Fished	48		
FSP	9		
Rock bass	6	50	9.3
White sucker	1	41	39.1
Pumpkinseed	1	20	1.4
Northern hog sucker	2	8	4.5
Brown bullhead	-	6	1.6
Walleye	-	5	7.3
Redbreast sunfish	1	3	0.6
Carp	-	2	0.6
Log perch	-	1	0.1
Smallmouth bass	-	1	0.3
Fallfish	-	1	0.1
Stonecat	-	1	0.3
Chain pickerel	-	1	0.4
Number of Fish	11	140	65.6
Number of Fishes	5	13	

Table 30. Fish collected by trap net in August and October 1973 in 560 hours at five stations in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen.

Date	6 Aug	6 Aug	6 Aug	6 Aug	6 Aug	6 Aug	13 Aug
Number of Hours Fished	24	22	43	65	48	66	53
FSP*	1	Spillway	Spillway	Spillway	1	1	2
Pumpkinseed	-	1	1	3	-	-	16
Rock bass	-	1	-	1	-	-	1
White sucker	3	1	1	-	2	1	-
Walleye	-	-	3	5	1	1	1
Brown bullhead	-	-	-	1	1	1	4
Yellow perch	-	2	4	-	1	-	-
Northern red horse	4	-	-	-	-	1	-
Redbreast sunfish	-	-	-	-	-	-	-
Largemouth bass	-	-	-	-	-	-	2
Northern hog sucker	-	-	-	-	-	-	-
Chain pickerel	-	-	-	-	-	-	1
Bluegill	-	-	-	1	-	-	1
Fallfish	-	-	-	-	-	-	-
Golden shiner	1	-	-	-	-	-	-
Number of Fish	8	5	9	11	5	4	26
Number of Fishes	3	4	4	5	4	4	7

* FSP = Fish Sampling Pool.

Table 30 - (Continued). Trap net, 1973, Schoharie Creek

Date	13 Aug	10 Oct	10 Oct	10 Oct	10 Oct	Total Number
Number of Hours Fished	53	46	47	47	46	
FSP	2	8	8	9	9	
Pumpkinseed	18	2	2	-	1	44
Rock bass	-	1	3	5	19	31
White sucker	-	4	3	4	6	25
Walleye	2	-	1	-	-	14
Brown bullhead	2	-	3	-	-	12
Yellow perch	-	-	-	-	-	7
Northern red horse	-	-	-	-	-	5
Redbreast sunfish	-	-	-	-	4	4
Largemouth bass	1	-	-	-	-	3
Northern hog sucker	-	1	1	-	-	2
Chain pickerel	1	-	-	-	-	2
Bluegill	-	-	-	-	-	2
Fallfish	-	-	1	-	-	1
Golden shiner	-	-	-	-	-	1
Number of Fish	24	8	14	9	30	153
Number of Fishes	5	4	7	2	4	14

Table 31. Fish collected by electrofishing in July and August 1974 in Trib 98A and Trib 101 of Schoharie Creek.

Date	24 Jul			27 Aug		
Station*	1			2		
Length of Section Shocked	500'			250'		
Number of Times Shocked	3			3		
Species	Number	Percent	Biomass (lbs)	Number	Percent	Biomass (lbs)
White sucker	18	47	1.4	7	21	0.3
Longnose dace	9	24	0.1	-	-	-
Creek chub	4	11	0.1	1	3	0.1
Fallfish	3	8	0.1	-	-	-
Pumpkinseed	1	3	0.1	-	-	-
Rock bass	1	3	0.2	-	-	-
Carp	1	3	0.4	-	-	-
Brook trout	1	3	0.4	1	3	0.3
Fantail darter	-	-	-	1	3	0.1
Johnny darter	-	-	-	1	3	0.1
Chain pickerel	-	-	-	23	68	0.4
Number of Fish and Biomass	38		2.8	34		1.3
Number of Fishes	8			6		

* Station: 1 = Trib 101 below bridge on Route 30; 2 = Trib 98A 235' above backset of Schoharie Creek.

Table 32. Fish collected by electrofishing from June through August 1974 in Cole Hollow Creek (Trib 99 of Schoharie Creek).

Date	11 Jun			17 Jun			28 Jun		
Location *	1			2			3		
Length of Section Shocked	250'			500'			500'		
Number of Times Shocked	1			1			3		
Species	#	%	Biomass (lbs)	#	%	Biomass (lbs)	#	%	Biomass (lbs
Rainbow trout	-	-	-	11	100	1.5	83	86	4.0
Brook trout	4	100	0.3	-	-	-	2	2	0.1
Blacknose dace	-	-	-	-	-	-	10	10	0.1
Fantail darter	-	-	-	-	-	-	1	1	0.1
Longnose	-	-	-	-	-	-	-	-	-
Number of Fish and Biomass	4		0.3	11		1.5	96		4.3
Number of Fishes	1			1			4		

* Station: 1 = 500' below second bridge on Cole Hollow Road; 2 = 500' below bridge on Bear Ladder Road; 3 = at first bridge on Cole Hollow Road; 4 = at bridge on Bear Ladder Road; 5 = at second bridge on Cole Hollow Road.

Table 32 - (Continued). Electrofishing 1974, Cole Hollow Creek

Date	12 Jul			14 Aug			16 Aug		
Location	4			5			2		
Length of Section Shocked	500'			500'			500'		
Number of Times Shocked	3			3			3		
Species	#	%	Biomass (lbs)	#	%	Biomass (lbs)	#	%	Biomass (lbs)
Rainbow trout	60	87	2.6	-	-	-	172	100	4.4
Brook trout	-	-	-	124	100	4.2	-	-	-
Blacknose dace	3	4	0.1	-	-	-	-	-	-
Fantail darter	5	7	0.1	-	-	-	-	-	-
Longnose dace	1	1	0.1	-	-	-	-	-	-
Number of Fish and Biomass	69		2.9	124		4.2	172		4.4
Number of Fishes	4			1			1		

Table 32 - (Continued). Electrofishing, 1974, Cole Hollow Creek

Date		
Location		
Length of Section Shocked	Total	
Number of Times Shocked		

Species	#	Biomass (lbs)
Rainbow trout	326	12.5
Brook trout	130	4.6
Blacknose dace	13	-
Fantail darter	6	-
Longnose dace	1	-
Number of Fish and Biomass	476	17.1
Number of Fishes	5	

Table 33. Summary of number of walleye stomachs examined from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Lower B-G			Upper B-G		
		Number Examined	Number Empty	Percent Empty	Number Examined	Number Empty	Percent Empty
Apr	240	1	0	0.0	0	-	-
May	157-348	3	1	33.3	1	1	100.0
Jul	248-252	2	0	0.0	0	-	-
Aug	233	0	-	-	1	0	0.0
Sep	233-276	0	-	-	2	1	50.0
Total		6	1	16.7	4	2	50.0

Table 34. Summary of major food types in the diet of walleye collected from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Food Type	Lower B-G			Upper B-G		
			% Numerical	% Occurrence	% Weight	% Numerical	% Occurrence	% Weight
Apr	240	Fish	100.0	100.0	100.0	-	-	-
May	157-348	Mayflies	100.0	33.3	2.0	-	-	-
		Fish remains	*	33.3	97.2	-	-	-
		Unidentifiable	*	66.7	0.8	-	-	-
Jul	248-252	Fish remains	*	50.0	95.3	-	-	-
		Unidentifiable	*	50.0	4.7	-	-	-
Aug	233	Fish	-	-	-	100.0	100.0	100.0
Sep	233-276	Unidentifiable	-	-	-	*	50.0	100.0

* % Numerical not able to be calculated

Table 35. Summary of number of largemouth bass stomachs examined from April through August 1974 in Lower B-G.

Month	Size Group (mm)	Number Examined	Number Empty	Percent Empty
Apr	125	1	1	100.0
	193-196	2	1	50.0
May	186-234	6	0	0.0
Jul	222	1	0	0.0
Aug	110-134	2	1	50.0
Total		12	3	25.0

Table 36. Summary of number of smallmouth bass stomachs examined from May through July 1974 in Lower B-G.

Month	Size Group (mm)	Number Examined	Number Empty	Percent Empty
May	140	1	0	0.0
	152	1	0	0.0
Jul	222	1	0	0.0
Total		3	0	0.0

Table 37. Summary of number of chain pickerel stomachs examined from April through August 1974 in Lower B-G.

	Size Group (mm)	Number Examined	Number Empty	Percent Empty
Apr	283-332	3	1	33.3
May	301-307	2	0	0.0
Jun	299	1	1	100.0
Jul	346	1	0	0.0
Aug	355	1	0	0.0
Total		8	2	25.0

Table 38. Summary of major food types in the diet of largemouth bass collected from April through August 1974 in Lower B-G.

Month	Size Group (mm)	Food Type	% Numerical	% Occurrence	% Weight
Apr	193-196	Insect remains	*	50.0	100.0
May	186-234	Mayflies	75.0	16.7	0.5
		Stoneflies	25.0	16.7	1.4
		Fish remains	*	66.7	98.0
		Unidentifiable	*	16.7	0.1
Jul	222	Crayfish	100.0	100.0	100.0
Aug	110-134	Dipterans	100.0	50.0	100.0

Table 39. Summary of major food types in the diet of smallmouth bass collected from May through July 1974 in Lower B-G.

Month	Size Group (mm)	Food Type	% Numerical	% Occurrence	% Weight
May	140	Stoneflies	100.0	100.0	100.0
	152	Stoneflies	50.0	100.0	12.3
		Beetles	50.0	100.0	45.7
		Insect remains	*	100.0	42.0
Jul	222	Fish remains	*	100.0	100.0

Table 40. Summary of major food types in the diet of chain pickerel collected from April through August 1974 in Lower B-G.

Month	Size Group (mm)	Food Type	% Numerical	% Occurrence	% Weight
Apr	283-332	Fish	100.0	66.7	100.0
May	301-307	Fish remains	*	100.0	100.0
Jul	346	Insect remains	*	100.0	4.4
		Fish remains	*	100.0	95.6
	355	Fish remains	*	100.0	100.0

* % Numerical not able to be calculated

Table 41. Summary of number of yellow perch stomachs examined from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Lower B-G			Upper B-G		
		Number Examined	Number Empty	Percent Empty	Number Examined	Number Empty	Percent Empty
Apr	130-202	10	5	50.0	17	9	52.9
May	67-84	8	3	37.5	0	-	-
	144-203	7	3	42.9	2	1	50.0
Jun	86-89	2	1	50.0	0	-	-
	170-220	5	0	0.0	4	1	25.0
Jul	170-201	2	1	50.0	15	8	53.3
Aug	92-115	1	1	100.0	1	1	100.0
	144-208	2	1	50.0	16	7	43.8
Sep	76-88	0	-	-	2	2	100.0
	167-212	1	1	100.0	19	12	63.2
Total		38	16	42.1	76	41	54.0

Table 42. Summary of major food types in the diet of yellow perch collected from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Apr	130-202	Fish	42.9	20.0	95.9	-	-	-
		Dipterans	42.9	10.0	0.1	88.2	47.1	17.5
		Mayflies	14.3	10.0	0.1	-	-	-
		Earthworms	-	-	-	5.9	11.8	9.7
		Caddisflies	-	-	-	5.9	5.9	0.1
		Insect remains	*	20.0	0.3	-	-	-
		Fish remains	*	10.0	3.7	-	-	-
		Unidentifiable	-	-	-	*	41.2	72.2
May	67-84	Earthworms	58.3	12.5	25.0	-	-	-
		Dipterans	33.3	25.0	12.5	-	-	-
		Mayflies	8.3	12.5	12.5	-	-	-
		Insect remains	*	25.0	37.5	-	-	-
		Unidentifiable	*	12.5	12.5	-	-	-
	144-203	Dipterans	40.8	20.1	0.4	100.0	50.0	33.1
		Earthworms	31.2	6.7	0.9	-	-	-
		Mayflies	9.1	13.3	0.9	-	-	-
		Stoneflies	9.1	13.3	24.7	-	-	-
		Crayfish	4.5	6.7	18.9	-	-	-
		Insect remains	*	26.7	5.7	*	50.0	23.0
		Fish remains	*	6.7	39.6	-	-	-
		Unidentifiable	*	33.3	8.8	*	50.0	41.9

* % Numerical not able to be calculated

Table 42 - (Continued). Yellow perch

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Jun	86-89	Fish remains	*	50.0	100.0	-	-	-
	170-220	Crayfish	60.0	57.1	99.2	50.0	25.0	33.6
		Dipterans	40.0	14.3	0.4	-	-	-
		Earthworms	-	-	-	50.0	25.0	53.1
		Unidentifiable	-	-	-	*	50.0	13.3
Jul	170-201	Water fleas	98.0	50.0	90.0	8.5	6.7	1.0
		Dipterans	2.0	50.0	10.0	9.0	20.0	2.5
		Caddisflies	-	-	-	80.0	13.3	84.0
		Dragonflies, Damselflies	-	-	-	1.5	13.3	84.0
		Mayflies	-	-	-	0.5	6.7	1.0
		Ants, bees, etc.	-	-	-	0.5	6.7	0.5
		Fish remains	-	-	-	*	6.7	0.5
		Unidentifiable	-	-	-	*	20.0	5.7
Aug	144-208	Crayfish	100.0	33.3	100.0	-	-	-
		Water fleas	-	-	-	99.1	29.4	77.8
		Dipterans	-	-	-	0.8	17.7	6.7
		Caddisflies	-	-	-	0.1	5.9	2.2
		Fish remains	-	-	-	*	11.8	4.4
		Unidentifiable	-	-	-	*	17.7	8.9
Sep	167-212	Mayflies	-	-	-	13.1	9.5	27.8
		Water fleas	-	-	-	73.8	4.8	5.6
		Dipterans	-	-	-	13.1	4.8	5.6
		Vegetation	-	-	-	*	4.8	5.5
		Fish remains	-	-	-	*	4.8	38.9
		Unidentifiable	-	-	-	*	9.5	16.7

Table 43. Summary of number of rock bass stomachs examined from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Lower B-G			Upper B-G		
		Number Examined	Number Empty	Percent Empty	Number Examined	Number Empty	Percent Empty
Apr	82-97	1	1	100.0	1	0	0.0
	143-212	7	3	42.9	1	0	0.0
May	68-91	11	0	1.0	0	-	-
	130-155	10	2	20.0	2	1	50.0
Jun	66-96	1	1	100.0	2	1	50.0
	113-149	1	1	100.0	3	1	33.3
Jul	132-140	0	-	-	3	1	33.3
Aug	74	1	1	100.0	0	-	-
	148-194	6	0	0.0	4	1	25.0
Sep	93	0	-	-	1	0	0.0
	116-149	0	-	-	8	1	12.5
Total		38	9	23.7	25	6	24.0

Table 44. Summary of major food types in the diet of rock bass collected from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Apr	82-197	Dipterans	-	-	-	100.0	100.0	<0.1
		Unidentifiable	-	-	-	*	100.0	100.0
	143-212	Dipterans	25.0	14.3	0.1	-	-	-
		Fish	75.0	42.9	100.0	-	-	-
		Unidentifiable	-	-	-	*	100.0	100.0
May	68-91	Mayflies	42.3	36.4	29.8	-	-	-
		Stoneflies	30.8	72.7	33.3	-	-	-
		Dipterans	23.1	18.8	0.1	-	-	-
		Earthworms	3.8	9.1	0.5	-	-	-
		Insect remains	*	45.5	12.3	-	-	-
		Unidentifiable	*	36.4	19.3	-	-	-
	130-155	Stoneflies	40.0	60.0	11.7	-	-	-
		Mayflies	46.7	50.0	5.5	-	-	-
		Crayfish	10.0	30.0	21.6	-	-	-
		Beetles	3.3	10.0	7.8	-	-	-
		Fish	-	-	-	100.0	50.0	100.0
		Insect remains	*	50.0	21.6	-	-	-
		Unidentifiable	*	70.0	17.2	-	-	-
Jun	66-96	Water mites	-	-	-	100.0	50.0	50.0
		Unidentifiable	-	-	-	*	50.0	50.0
	113-149	Earthworms	-	-	-	50.0	20.0	29.4
		Unidentifiable	-	-	-	*	66.7	67.6

* % Numerical not able to be calculated

Table 44 - (Continued). Rock bass

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Jul	132-140	Unidentifiable	-	-	-	*	33.3	100.0
Aug	148-194	Crayfish	25.0	33.3	41.5	-	-	-
		Caddisflies	25.0	16.7	0.3	86.7	50.0	68.5
		Salamanders	16.7	16.7	6.8	-	-	-
		Mayflies	16.7	16.7	0.6	-	-	-
		Grasshoppers, crickets, etc.	8.3	16.7	3.8	-	-	-
		Dipterans	8.3	16.7	0.2	6.7	25.0	0.9
		Dragonflies, damselflies	-	-	-	4.0	50.0	26.1
		Earthworms	-	-	-	1.3	25.0	27.0
		Water mites	-	-	-	1.3	25.0	0.5
		Insect remains	*	83.3	33.5	-	-	-
		Unidentifiable	-	-	-	*	25.0	0.9
Sep	93	Caddisflies	-	-	-	100.0	100.0	33.3
		Insect remains	-	-	-	*	100.0	66.7
	116-149	Water fleas	-	-	-	94.2	25.0	3.9
		Caddisflies	-	-	-	3.6	37.5	5.5
		Fish	-	-	-	0.5	25.0	64.2
		Beetles	-	-	-	1.4	25.0	7.5
		Dragonflies, damselflies	-	-	-	0.3	12.5	0.4
		Insect remains	-	-	-	*	62.5	14.6
		Fish remains	-	-	-	*	25.0	2.4
		Unidentifiable	-	-	-	*	50.0	1.6

Table 45. Summary of number of pumpkinseed stomachs examined from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Lower B-G			Upper B-G		
		Number Examined	Number Empty	Percent Empty	Number Examined	Number Empty	Percent Empty
Apr	57-99	8	6	75.0	0	-	-
	115-166	7	3	42.9	4	2	50.0
May	70-90	9	1	9.1	1	1	100.0
	101-137	52	10	19.2	10	4	40.0
Jun	68-98	12	3	25.0	3	1	33.3
	103-152	12	1	8.3	30	5	16.7
Jul	72-99	23	1	4.4	3	3	100.0
	100-123	17	2	11.8	26	3	11.5
Aug	97-99	7	1	14.3	2	1	50.0
	100-132	15	4	26.7	38	12	31.6
Sep	100-158	17	11	64.7	26	10	38.5
Total		179	43	24.0	143	42	29.4

Table 46. Summary of major food types in the diet of pumpkinseed collected from April through September 1974 in Lower and Upper B-G.

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Apr	57-99	Dipterans	100.0	66.7	75.0	-	-	-
		Unidentifiable	*	66.7	25.0	-	-	-
	115-166	Dipterans	100.0	50.0	100.0	100.0	50.0	100.0
		Unidentifiable	*	12.5	<0.1	-	-	-
May	70-90	Dipterans	98.3	25.0	11.5	-	-	-
		Mayflies	1.7	10.0	3.9	-	-	-
		Insect remains	*	15.0	29.7	-	-	-
		Unidentifiable	*	30.0	36.2	-	-	-
	101-137	Dipterans	63.5	56.1	17.3	37.2	40.0	16.5
		Mayflies	15.1	26.8	5.4	-	-	-
		Stoneflies	13.5	22.0	20.9	-	-	-
		Beetles	4.8	12.2	6.1	15.7	30.0	16.3
		Leeches	0.1	2.4	2.4	-	-	-
		Earthworms	0.1	2.4	1.1	47.0	30.0	29.4
		Crayfish	0.1	2.4	0.2	-	-	-
		Water mites	0.1	2.4	0.1	-	-	-
		Insect remains	*	46.3	15.0	*	50.0	20.1
		Unidentifiable	*	70.7	45.5	*	90.0	17.6

* % Numerical not able to be calculated

Table 46 - (Continued). Pumpkinseed

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Jun	85-98	Dipterans	100.0	66.7	40.0	-	-	-
		Copepods	-	-	-	81.3	50.0	75.0
		Water fleas	-	-	-	18.7	50.0	25.0
		Insect remains	*	8.3	0.5	-	-	-
		Unidentifiable	*	33.7	55.0	-	-	-
	103-152	Dipterans	1.4	8.3	0.6	23.2	30.0	6.9
		Earthworms	-	-	-	4.6	13.3	34.7
		Water fleas	97.2	16.6	7.0	-	-	-
		Beetles	0.1	8.3	1.8	6.8	6.7	9.6
		Caddisflies	-	-	-	0.7	3.3	2.6
		Snails	0.6	8.3	7.3	-	-	-
		Copepods	-	-	-	46.4	3.3	0.4
		Ants, bees, etc.	-	-	-	3.2	3.3	0.3
		Spiders	-	-	-	2.5	10.0	0.4
		Grasshoppers, crickets, etc.	-	-	-	0.4	3.3	1.5
		True bugs	-	-	-	0.4	3.3	0.2
		Mayflies	-	-	-	0.4	3.3	0.2
		Insect remains	*	8.3	2.9	*	3.3	0.7
		Fish remains	*	16.6	46.8	*	3.3	23.9
		Unidentifiable	*	50.0	31.6	*	40.0	18.0

Table 46 - (Continued). Pumpkinseed

Month	Size Group (mm)	Food Type	Lower B-G % Numerical	Lower B-G % Occurrence	Lower B-G % Weight	Upper B-G % Numerical	Upper B-G % Occurrence	Upper B-G % Weight
Jul	72-99	Dipterans	82.7	91.3	48.4	-	-	-
		Crayfish	0.1	8.7	4.3	-	-	-
		Insect remains	*	26.1	15.1	-	-	-
		Unidentifiable	*	52.2	32.3	-	-	-
	100-123	Dipterans	6.9	29.4	14.3	54.7	38.5	18.7
		Water fleas	83.7	35.3	42.0	32.9	7.7	6.4
		Fish eggs	9.4	5.9	4.9	-	-	-
		Copepods	-	-	-	12.3	3.8	1.8
		Insect remains	*	11.8	3.7	*	19.2	22.9
		Unidentifiable	*	41.2	34.6	*	61.5	49.5
Aug	91-97	Unidentifiable	*	53.3	100.0	*	50.0	100.0
	100-132	Water fleas	86.2	6.7	28.6	91.2	13.2	15.0
		Dipterans	13.8	33.3	19.4	8.8	5.3	6.7
		Insect remains	*	6.7	1.0	*	5.3	5.0
		Unidentifiable	*	100.0	50.0	*	50.0	56.7
Sep	100-158	Ants, bees, etc.	55.3	11.8	46.3	-	-	-
		Dipterans	22.1	5.9	1.3	45.6	19.2	34.4
		Water fleas	22.1	5.9	1.3	23.8	34.6	14.8
		Caddisflies	0.6	5.9	1.3	23.8	11.5	18.0
		Beetles	-	-	-	6.7	19.2	9.8
		Vegetation	-	-	-	*	7.7	3.3
		Insect remains	*	5.9	1.3	*	26.9	11.5
		Unidentifiable	*	29.4	48.8	*	19.2	8.2

Table 47. Summary of number of redbreast sunfish stomachs examined from May through September 1974 in Upper B-G.

Month	Size Group (mm)	Number Examined	Number Empty	Percent Empty
May	85-93	2	0	0.0
	117-127	8	2	25.0
Jun	110-134	12	2	16.7
Jul	103-145	27	6	22.2
Aug	94-95	2	0	0.0
	100-142	40	9	22.5
Sep	119-156	24	6	25.0
Total		115	24	21.0

Table 48. Summary of major food types in the diet of redbreast sunfish collected from May through September 1974 in Upper B-G.

Month	Size Group (mm)	Food Type	% Numerical	% Occurrence	% Weight
May	85-93	Earthworms	55.6	50.0	26.9
		Dipterans	44.4	100.0	11.5
		Insect remains	*	50.0	30.7
		Unidentifiable	*	50.0	30.7
	117-127	Earthworms	41.3	12.5	40.4
		Beetles	37.0	25.0	13.6
		Dipterans	21.7	25.0	4.2
		Insect remains	*	50.0	26.8
		Unidentifiable	*	50.0	15.0
Jun	110-134	Water fleas	82.8	8.3	13.6
		Dipterans	10.8	45.0	3.9
		Beetles	2.5	25.0	5.4
		Ants, bees, etc.	1.9	16.6	6.2
		True bugs	1.3	8.3	1.2
		Dragonflies, damselflies	0.6	8.3	1.6
		Insect remains	*	58.3	53.1
		Unidentifiable	*	25.0	15.2
Jul	103-145	Dipterans	39.6	22.2	2.0
		Beetles	37.5	11.1	11.3
		Earthworms	10.4	3.7	22.4
		Ants, bees, etc.	10.4	7.4	11.6
		Horsehair worms	2.1	3.7	0.2
		Insect remains	*	37.0	40.4
		Unidentifiable	*	33.3	11.8
Aug	94-95	Water fleas	100.0	50.0	66.7
		Unidentifiable	*	50.0	33.3
	100-142	Water fleas	89.0	27.5	19.4
		Dipterans	7.6	32.5	5.6
		Beetles	1.3	17.5	7.2
		Caddisflies	1.5	15.0	6.1
		Grasshoppers, crickets, etc.	0.1	5.0	14.5
		Earthworms	0.1	5.0	5.4
		Mussels	0.2	5.0	0.4
		Water mites	0.1	2.5	0.3
		True bugs	0.1	2.5	0.1
		Snails	0.1	2.5	0.1
		Insect remains	*	15.0	20.7
		Unidentifiable	*	42.5	20.3

* % Numerical not able to be calculated

Table 48 - (Continued). Redbreast sunfish

Month	Size Group (mm)	Food Type	% Numerical	% Occurrence	% Weight
Sep	119-156	Ants, bees, etc.	37.5	33.3	64.3
		Dipterans	42.9	29.2	15.0
		Beetles	1.5	33.3	3.6
		Water fleas	17.5	20.8	1.3
		Grasshoppers, crickets, etc.	0.3	16.7	3.0
		Caddisflies	0.3	8.3	0.1
		Fish	0.1	4.2	8.0
		Insect remains	*	45.8	3.7
		Unidentifiable	*	20.8	0.9

Table 49. Length-frequency distribution of pumpkinseed collected in 1974 in Lower B-G.
Method of capture indicated as follows: G = gill net; T = trap net; B = block net; S = seine net.

Total Length (mm)	Frequency																				
	Apr			May						Jun								Jul			
	15	16	17	8	13	13	14	15	19	6	7	11	11	12	13	20	25	8	8	9	10
	T	T	T	T	T	G	G	G	B	S	S	T	G	G	G	G	B	T	G	S	T
56-59	1								6												
60-63	1								11		1										
64-67	1			1					18								2			1	
68-71									39								1				
72-75									76								8	1		1	1
76-79	1			1					75								3			2	
80-83	1	1		2	1				100			5								2	2
84-87					3				113			4					1			4	3
88-91	1		1						94			4					3			3	2
92-95					2				125			9						1		9	3
96-99	1				1				117			2								1	5
100-103					2				150			7						1		3	6
104-107					1				111			2					2			2	4
108-111					4				102	1	1	1						1			3
112-115				2	4			1	129		1	4						1			2
116-119				1	2				84		1			1				2	3		
120-123					2			5	46				1		2	2			5		2
124-127			1	1	1			1	43	1		1	1		2	5			7		
128-131						1	3		23	1			2	1	1	6			4		
132-135	1			1	1			1	6										1		
136-139									3	1									1		
140-143				1					5												
144-147									1												
148-151					1				3												
152-155					2				8										1		2
156-159			1	1					3			2									
160-163									3			2									
164-167			1																		
Total	8	1	4	11	27	1	3	8	1494	4	3	43	4	2	5	13	20	7	22	28	35

Table 49 - (Continued). Pumpkinseed, Lower B-G.

Total Length (mm)	Frequency																		
	Jul			Aug										Sep					
	11	19	30	1	2	6	6	7	8	9	18	20	28	10	10	11	12	16	17
	G	T	T	T	T	T	G	G	G	G	B	T	S	G	T	G	G	G	G
56-59																			
60-63																			
64-67												1							
68-71			1			2					1	1							
72-75			1	1		1						2							
76-79			7	1								6							
80-83			3	1											1				
84-87			10	2							1	4			1				
88-91			7	4							3	2			1				
92-95			17	5								4			3				
96-99			3	3							1	3			2				
100-103			3	6							1	1			2				
104-107		2	12	4	2						3	10							
108-111		3	8	5							7	13	2		6				
112-115		2	8	4							12	5	2		9				
116-119		2	8	1	2				1		11	6	1		6				
120-123		3	7	3			2			1	13	5	2	3	6	1	1	2	1
124-127	2		4	4	1		2	1	1		11	1			10	1	2	5	4
128-131							1				2		1			2		1	1
132-135		1	1								1	1	2		2		1	2	
136-139											2								
140-143												1							
144-147											1								
148-151											1								
152-155			1	1											1				
156-159		1																	
160-163																			
164-167																			
Total	2	14	101	45	5	3	5	1	2	1	71	66	10	3	50	4	4	10	6

Table 50. Length-frequency distribution of pumpkinseed collected in 1974 in Upper B-G.
Method of capture indicated as follows: G = gill net; T = trap net.

Total Length (mm)	Frequency																				
	Apr			May				Jun				Jul				Aug					
	22 T	24 G	24 T	13 T	20 G	22 G	23 G	17 G	18 G	19 G	26 T	8 T	10 T	16 G	17 G	1 T	2 T	5 T	6 T	7 T	12 G
80-83				1																	
84-87											1		2							1	
88-91													1				1				
92-95											1	1					2				
96-99	1										1		1			1	1		2	2	
100-103											2		3			2			1	5	
104-107											4	1	2			2	9		5	2	
108-111									1		3	6	5	1		1	7		5	5	
112-115			1		1						3	1	3			1	2		12	7	
116-119			1		2		1	4	3		1	2		4	2		3		3	3	
120-123					5	1		4	5	5	1	3	2	7	2		1		7	2	3
124-127		1			4		1	3	6	6	1	1	2	2	3	2			8	1	4
128-131					4				2	2				1	1	2		1	2	1	2
132-135					2		1		1	1			1			4	2		4	2	1
136-139				1								1							2		
140-143								2											4	1	
144-147																1			1		
148-151																			1		
152-155								1											3		
156-159																			1		
160-163																					
164-167																					
Total	1	1	2	2	18	1	3	14	18	14	18	16	22	15	8	16	28	1	61	32	10

Table 50 - (Continued). Pumpkinseed, Upper B-G

Total Length (mm)	Frequency										
	Aug			Sep							
	13	14	18	4	5	6	10	11	12	18	19
	G	G	G	T	T	T	T	T	T	G	G
80-83											
84-87				1							
88-91				1							
92-95							1				
96-99						1			1		
100-103				5			1		3		1
104-107				3		5	3		1		
108-111				4		5	5	1	1		
112-115		2		10	1	6	3	4	2		
116-119	1	2		8		5	8	8	4		
120-123		6		10	1	9	18	17	17		
124-127	1	5	2	5	2	3	15	20	16		1
128-131		3		6		3	14	12	15	1	1
132-135		1		3	1	4	9	6	16		
136-139	1			3	1	1	10	8	4		
140-143				1	2	1	7	5	6		
144-147				3	1	1	10	6	6		
148-151				1		1	2	2	3		
152-155				1		2	2		1		
156-159						1	2				
160-163							6				
164-167							1	2			
Total	3	19	2	65	9	48	117	91	96	1	3

Table 51. Length-frequency distribution of redbreast sunfish collected in 1974 in Upper B-G. Method of capture indicated as follows: G = gill net; T = trap net.

Total Length (mm)	Frequency																											
	May				Jun			Jul					Aug								Sep							
	13	20	23	28	18	19	26	8	10	16	18	22	1	2	6	7	12	13	14	15	4	5	6	10	11	18	19	23
	T	G	G	G	G	T	T	T	T	G	G	G	T	T	T	T	G	G	G	G	T	T	T	T	T	G	G	G
80-83						1																						
84-87	1																											
88-91																												
92-95	1					2																						
96-99						1																						
101-103								1							2													
104-107						1		1	1				2	2	3													
108-111							1	2	1				1	2	2	1												
112-115					1		1						2		2	1					3							
116-119	1	1								1				1	1					1	2							
120-123			2		1			1		5	1	1	1	1	3	1		1					1	1				
124-127			2	1						8	1	2		2	2		4	1			3		4	1		1		
128-131	1							2		3	1	1			2	2	2	2			3		1	3		3		1
132-135											2						3	1	1	1	5	1	1	2		2	1	1
136-139										1					2					1		2		1				
140-143								1	1						1						3			1				1
144-147										1					1			1			1		1	1				
148-151															1						2	1	1	3	2			
152-155														1								1	2	1	2	1		
156-159																					1	1		2				
160-163																									1			
164-167																												
Total	4	1	4	1	2	5	2	8	3	19	5	4	6	9	22	5	9	6	1	3	23	6	11	16	5	7	1	3

Table 52. Length-frequency distribution of rock bass collected in 1974 in Lower B-G.
Method of capture indicated as follows: G = gill net; T = trap net; B = block net.

Total Length (mm)	Frequency																
	Apr				May			Jun				Jul			Aug		
	15	16	17	17	13	14	15	12	19	20	25	8	10	30	1	18	20
	T	T	T	G	T	G	G	G	T	G	B	T	T	T	T	B	T
64-67											2						
68-71																1	
72-75															1		
76-79																	
80-83	1																
84-87																1	
88-91																	
92-95																	
96-99																	
100-103																	
104-107																1	
108-111																1	
112-115																	
116-119																	
120-123																	1
124-127					1												
128-131																	
132-135					1												
136-139					1							1					
140-143				1			1							1		1	
144-147						1		1								1	
148-151									1	1							
152-155		1	1										1				
156-159		1															
160-163																	1
164-167																	
168-171														1		2	
172-175																4	
176-179			1													1	1
180-183													1			1	
184-187																	
188-191		1	1														
Total	1	3	3	1	3	1	1	1	1	1	2	1	2	2	1	14	3

Table 53. Length-frequency distribution of rock bass collected in 1974 in Upper B-G.
Method of capture indicated as follows: G = gill net; T = trap net; B = block net.

Total Length (mm)	Frequency																		
	Apr		May				Jun	Jul		Aug		Sep							
	22	24	17	19	23	28	26	8	16	1	2	4	5	6	10	11	12	18	23
	T	T	G	B	G	G	T	T	T	T	T	T	T	T	T	T	T	T	T
64-67				2															
68-71				5			1												
72-75				6															
76-79				1															
80-83				2															
84-87																			
88-91				2															
92-95													1						
96-99							1												
100-103								1											
104-107															3				
108-111																			
112-115							2				1			1					
116-119													2						
120-123				1												1			
124-127				1									2						
128-131	1			5		1						1							2
132-135			1	3					1	1			1		1	1			
136-139				3	1				1									1	
140-143				9															
144-147				6								1					1		1
148-151				4									1						
152-155				8															
156-159				1															
160-163																			
164-167				1															
168-171				3															
172-175				2															
176-179																			
180-183				1															
184-187																			
188-191				1															
192-195																			
196-199																			
200-203																			
204-207																			
208-211																			
212-215		1																	
Total	1	1	1	67	1	1	4	1	2	1	1	2	7	1	4	2	1	1	3

Table 54. Length-frequency distribution of yellow perch collected in 1974 in Lower B-G.
Method of capture indicated as follows: G = gill net; T = trap net; B = block net.

Total Length (mm)	Frequency																					
	Apr						May					Jun				Jul			Aug			Sep
	15	16	17	18	25	26	9	13	14	15	19	10	11	13	19	8	15	30	1	9	20	10
	G	G	G	G	G	G	G	G	G	G	B	G	G	G	T	G	G	T	T	G	T	G
80-83											6											
84-87											3											
88-91											1											
92-95																			1		1	
96-99																						
100-103																						
104-107																						
108-111																						
112-115											1											
116-119																						
120-123																						
124-127											1											
128-131																						
132-135											2											
136-139																						
140-143											2											
144-147											1											
148-151																						
152-155																						
156-159																		1				
160-163																						
164-167																		1				
168-171																						
172-175																						
176-179					1						1											
180-183							1															1
184-187		1				2																
188-191	2									1	1			1						1		
192-195				2						1		1				1						
196-199								1	2				1				1					
200-203		1					2															
204-207															1							
208-211																						
212-215			1										1									
216-219												1										
Total	2	2	1	2	1	2	3	1	2	2	19	2	2	1	1	1	1	2	1	1	1	1

Table 55. Length-frequency distribution of yellow perch collected in 1974 in Upper B-G.
Method of capture indicated as follows: G = gill net; T = trap net.

Total Length (mm)	Frequency																			
	Apr			May		Jun	Jul						Aug							
	22	23	24	20	23	18	8	10	16	17	18	22	1	2	5	6	7	12	13	14
	T	G	T	G	G	G	T	T	G	G	G	G	T	T	T	T	T	G	G	G
80-83																				
84-87																				
88-91																				
92-95																				
96-99																				
100-103																				
104-107																				
108-111																				
112-115													1							
116-119																				
120-123																				
124-127																				
128-131			1																	
132-135			1														1			
136-139																	1			
140-143			1				1													
144-147			2																	
148-151							1													
152-155			1				1													
156-159	2						2									1	1			
160-163			1											1						
164-167	1	3					1				1			6						
168-171	1					1	2	1	1					1		1			1	
172-175		1	1		1				1		1	4	1	2			1			
176-179		1		1							2	1	1		1	1	1	2		
180-183									1	3	2			1				6		
184-187											1			2			2	2		1
188-191										1	1					2		2	5	1
192-195												1		1				4	4	
196-199												1					1	1		
200-203																				
204-207																				
208-211																				
212-215																				
Total	4	5	8	1	1	1	8	1	3	4	8	7	3	14	1	5	8	17	10	2

Table 55 - (Continued). Yellow perch, Upper B-G

Total Length (mm)	Frequency							
	Sep							
	4	5	6	10	11	18	19	23
	T	T	T	T	T	G	G	G
80-83					1			
84-87					1			
88-91			1		1			
92-95								
96-99								
100-103								
104-107								
108-111								
112-115								
116-119								
120-123								
124-127								
128-131								
132-135								
136-139								
140-143								
144-147	1							
148-151								
152-155								
156-159								
160-163								
164-167		1				2		
168-171								
172-175				1				1
176-179	1	1			1			
180-183	1			2				1
184-187		2			1		1	
188-191	1	3				2	3	1
192-195	1	1	1	1	1	1		2
196-199				2	2		3	1
200-203	3				2		4	
204-207							1	1
208-211							1	2
212-215								1
Total	8	8	2	6	10	5	13	10

Table 56. Length-frequency distribution of largemouth bass collected in 1974 in Lower B-G.
Method of capture indicated as follows: G = gill net; T = trap net; B = block net; S = seine net.

Total Length (mm)	Frequency					
	Apr		May	Jun		Jul
	15	16	19	6	11	15
	G	T	B	S	T	G
172-175			1			
176-179				1		
180-183			1			
184-187			2			
188-191			3			
192-195	1		3			
196-199		1	3			
200-203			3			
204-207			3			
208-211			4			
212-215			2			
216-219			2			
220-223						1
224-227						
228-231			1			
232-235			1		1	
236-239						
240-243			3			
244-247			2			
248-251						
252-255						
256-259						
260-263						
264-267			2			
268-271			1			
272-275			1		1	
276-279						
280-283			1			
284-287			1			
Total	1	1	40	1	2	1

Table 57. Mean total length (mm) by month of each age group of pumpkinseed collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		1+			2+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML[1]	63	117	-	90	112	-
	SD[2]	-	-	-	23.82	14.00	-
	R[3]	-	-	-	57-134	97-125	-
	N[4]	1	1	-	10	3	-
May	ML	-	-	-	95*	123*	-
	SD	-	-	-	14.48	13.93	-
	R	-	-	-	60-132	82-136	-
	N	-	-	-	237	12	-
Jun	ML	-	65	-	103*	112*	107
	SD	-	14.80	-	20.00	17.10	10.06
	R	-	50-87	-	63-135	55-131	87-122
	N	-	5	-	95	51	35
Jul	ML	-	-	-	99*	115*	104
	SD	-	-	-	17.47	11.57	11.62
	R	-	-	-	77-131	85-139	85-129
	N	-	-	-	183	55	18
Aug	ML	102	104	-	110*	119*	-
	SD	9.56	8.54	-	15.15	9.64	-
	R	78-115	75-118	-	68-151	94-143	-
	N	12	46	-	218	112	-
Sep	ML	102*	113*	-	119*	129*	-
	SD	8.25	10.03	-	9.68	11.11	-
	R	93-109	85-136	-	86-135	105-165	-
	N	4	71	-	79	238	-

* Significant differences in mean total length between Lower and Upper B-G at the 0.05 α level or greater from t-test.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm)
4. N = number of fish

Table 57 - (Continued). Pumpkinseed

Age		3+			4+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML	138	-	-	166	-	-
	SD	18.00	-	-	-	-	-
	R	124-158	-	-	-	-	-
	N	3	-	-	1	-	-
May	ML	120	-	-	143	-	-
	SD	8.58	-	-	14.29	-	-
	R	100-154	-	-	117-160	-	-
	N	105	-	-	24	-	-
Jun	ML	143	127	-	157	-	-
	SD	18-91	15.10	-	-	-	-
	R	126-161	106-152	-	-	-	-
	N	8	10	-	1	-	-
Jul	ML	133*	116*	150	-	-	185
	SD	21.16	4.09	26.15	-	-	-
	R	97-175	109-123	132-180	-	-	-
	N	24	9	3	-	-	1
Aug	ML	144	135	-	-	-	-
	SD	12.10	11.85	-	-	-	-
	R	125-160	114-157	-	-	-	-
	N	7	19	-	-	-	-
Sep	ML	140	144	-	-	-	-
	SD	11.67	11.84	-	-	-	-
	R	130-158	105-165	-	-	-	-
	N	7	42	-	-	-	-

Table 58. Mean total length (mm) by month of each age group of redbreast sunfish collected in 1974 in Lower and Upper B-G.

Age		1+		2+		3+	
Location		L B-G	U B-G	L B-G	U B-G	L B-G	U B-G
May	ML[1]	-	-	-	110	-	125
	SD[2]	-	-	-	16.99	-	3.59
	R[3]	-	-	-	85-126	-	120-128
	N[4]	-	-	-	6	-	4
Jun	ML	-	-	-	110	-	123
	SD	-	-	-	22.00	-	-
	R	-	-	-	39-134	-	-
	N	-	-	-	19	-	1
Jul	ML	-	-	127	125	-	-
	SD	-	-	-	10.18	-	-
	R	-	-	-	105-145	-	-
	N	-	-	2	35	-	-
Aug	ML	-	95	-	121	-	150
	SD	-	0.71	-	10.73	-	-
	R	-	94-95	-	100-154	-	-
	N	-	2	-	80	-	1
Sep	ML	-	132	-	136	-	154
	SD	-	16.97	-	12.38	-	2.89
	R	-	120-144	-	115-166	-	151-156
	N	-	2	-	62	-	3

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 59. Mean total length (mm) by month of each age group of rock bass collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML[1]	-	-	-	82	129	-	153	-	-
	SD[2]	-	-	-	-	-	-	7.00	-	-
	R[3]	-	-	-	-	-	-	143-158	-	-
	N[4]	-	-	-	1	1	-	4	-	-
May	ML	-	-	-	74	130	-	143	137	-
	SD	-	-	-	7.99	-	-	10.67	-	-
	R	-	-	-	64-91	-	-	127-175	-	-
	N	-	-	-	16	1	-	43	1	-
Jun	ML	-	70	-	66*	108*	-	147	135	-
	SD	-	-	-	0.70	10.44	-	2.89	-	-
	R	-	-	-	65-66	96-115	-	144-149	-	-
	N	-	1	-	2	3	-	3	1	-
Jul	ML	-	-	-	99	131	104	161	-	157
	SD	-	-	-	12.73	18.35	24.81	23.05	-	12.74
	R	-	-	-	90-108	100-147	78-137	125-198	-	136-164
	N	-	-	-	2	5	4	12	-	7
Aug	ML	71	-	-	120	-	122	170	-	150
	SD	-	-	-	21.79	-	8.96	12.89	-	11.70
	R	-	-	-	74-155	-	106-137	140-194	-	131-163
	N	1	-	-	15	-	9	16	-	6
Sep	ML	-	105	-	80	130	-	-	140	-
	SD	-	7.80	-	-	7.63	-	-	13.44	-
	R	-	93.115	-	-	116-145	-	-	120-149	-
	N	-	5	-	1	12	-	-	4	-

* Significant differences in mean total length between Lower and Upper B-G at the 0.05 α level or greater from t-test.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 59 - (Continued). Rock bass

Age		4+			5+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML	187	-	-	-	212	-
	SD	7.00	-	-	-	-	-
	R	179-193	-	-	-	-	-
	N	3	-	-	-	1	-
May	ML	275	-	-	216	-	-
	SD	9.13	-	-	-	-	-
	R	169-191	-	-	-	-	-
	N	6	-	-	1	-	-
Jun	ML	-	-	-	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	-	-
Jul	ML	186	-	177	230	-	201
	SD	11.75	-	12.34	-	-	17.15
	R	175-215	-	163-189	-	-	184-270
	N	9	-	4	1	-	5
Aug	ML	223	-	190	238	-	222
	SD	13.08	-	19.14	8.49	-	2.83
	R	208-232	-	173-222	232-244	-	220-224
	N	3	-	5	2	-	2
Sep	ML	-	-	-	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	-	-

Table 60. Mean total length (mm) by month of each age group of yellow perch collected in 1974 in Lower and Upper B-G and Schoharie Creek*.

Age		1+			2+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML[1]	-	145	-	193**	167**	-
	SD[2]	-	11.0	-	5.00	9.00	-
	R[3]	-	130-156	-	186-202	147-179	-
	N[4]	-	7	-	9	10	-
May	ML	76	-	-	134	-	-
	SD	7.43	-	-	10.45	-	-
	R	60-91	-	-	112-144	-	-
	N	27	-	-	8	-	-
Jun	ML	88	-	-	206**	173**	-
	SD	1.50	-	-	12.00	3.30	-
	R	86-89	-	-	193-214	170-177	-
	N	2	-	-	8	4	-
Jul	ML	135	137	-	164**	177**	-
	SD	-	4.24	-	18.00	11.87	-
	R	-	134-140	-	151-201	148-201	-
	N	1	2	-	12	31	-
Aug	ML	185	177	182	-	193	-
	SD	13.44	18.41	-	-	13.28	-
	R	175-194	92-210	-	-	185-208	-
	N	2	80	1	-	3	-
Sep	ML	-	162	-	183	195	-
	SD	-	10.50	-	-	9.85	-
	R	-	146-167	-	-	176-215	-
	N	-	4	-	1	53	-

* In addition, four 0+ yellow perch (ML = 82, SD = 5.32, R = 76-88) were captured in September in Upper B-G.

** Significant differences in mean total length between Lower and Upper B-G at the 0.05 α level or greater from t-test.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm)
4. N = number of fish

Table 60 - (Continued). Yellow perch

Age		3+		
Location		L B-G	U B-G	SC
Apr	ML	215	-	-
	SD	-	-	-
	R	-	-	-
	N	1	-	-
May	ML	195	179	-
	SD	8.25	2.83	-
	R	178-204	177-181	-
	N	11	2	-
Jun	ML	234	-	-
	SD	37.50	-	-
	R	207-260	-	-
	N	2	-	-
Jul	ML	210	-	-
	SD	23.20	-	-
	R	197-245	-	-
	N	4	-	-
Aug	ML	-	-	-
	SD	-	-	-
	R	-	-	-
	N	-	-	-
Sep	ML	-	204	-
	SD	-	12.02	-
	R	-	195-212	-
	N	-	2	-

Table 61. Mean total length (mm) by month of each age group of largemouth bass collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML[1]	-	-	-	125	-	-	195	-	-
	SD[2]	-	-	-	-	-	-	2.12	-	-
	R[3]	-	-	-	-	-	-	193-196	-	-
	N[4]	-	-	-	1	-	-	2	-	-
May	ML	-	-	-	218	-	-	285	-	-
	SD	-	-	-	29.95	-	-	92.63	-	-
	R	-	-	-	172-286	-	-	219-350	-	-
	N	-	-	-	40	-	-	2	-	-
Jun	ML	-	-	-	230	-	-	-	-	-
	SD	-	-	-	50.50	-	-	-	-	-
	R	-	-	-	178-279	-	-	-	-	-
	N	-	-	-	3	-	-	-	-	-
Jul	ML	-	-	-	223	-	-	263	-	281
	SD	-	-	-	2.83	-	-	24.55	-	22.59
	R	-	-	-	221-225	-	-	222-290	-	221-290
	N	-	-	-	2	-	-	6	-	6
Aug	ML	114	-	-	229	-	-	258	-	-
	SD	12.74	-	-	-	-	-	-	-	-
	R	101-134	-	-	-	-	-	-	-	-
	N	6	-	-	1	-	-	1	-	-

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 62. Mean total length (mm) by month of each age group of smallmouth bass collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
May	ML[1]	204	-	-	270	-	-
	SD[2]	59.43	-	-	23.82	-	-
	R[3]	140-276	-	-	234-294	-	-
	N[4]	6	-	-	5	-	-
Jul	ML	-	-	-	222	-	266
	SD	-	-	-	-	-	0.71
	R	-	-	-	-	-	265-266
	N	-	-	-	1	-	2
Aug	ML	164	-	-	164	-	-
	SD	24.75	-	-	24.75	-	-
	R	146-181	-	-	146-181	-	-
	N	2	-	-	2	-	-

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 63. Mean total length (mm) by month of each age group of walleye collected in 1974 in Lower and Upper B-G and Schoharie Creek*.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	ML[1]	240	-	-	-	-	-	-	-	-
	SD[2]	-	-	-	-	-	-	-	-	-
	R[3]	-	-	-	-	-	-	-	-	-
	N[4]	1	-	-	-	-	-	-	-	-
May	ML	194	-	-	175	-	-	-	348	-
	SD	29.05	-	-	-	-	-	-	-	-
	R	157-235	-	-	-	-	-	-	-	-
	N	5	-	-	1	-	-	-	1	-
Jun	ML	249	-	-	-	-	-	-	-	-
	SD	-	-	-	-	-	-	-	-	-
	R	-	-	-	-	-	-	-	-	-
	N	1	-	-	-	-	-	-	-	-
Jul	ML	-	-	-	205	271	-	260	-	316
	SD	-	-	-	53.03	25.46	-	62.93	-	34.86
	R	-	-	-	135-252	253-289	-	215-304	-	293-399
	N	-	-	-	5	2	-	2	-	5
Aug	ML	249	262	229	-	-	-	-	-	406
	SD	4.95	19.35	-	-	-	-	-	-	-
	R	245-252	233-275	-	-	-	-	-	-	-
	N	2	4	1	-	-	-	-	-	1
Sep	ML	267	-	-	310	255	-	-	-	-
	SD	-	-	-	-	30.41	-	-	-	-
	R	-	-	-	-	233-276	-	-	-	-
	N	1	-	-	1	2	-	-	-	-

* In addition, one 5+ walleye (703 mm) was captured in July 1974 in Schoharie Creek.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 64. Mean total length (mm) by month of each age group of chain pickerel collected in 1974 in Lower B-G and Schoharie Creek.

Age		1+		2+		3+	
Location		L B-G	SC	L B-G	SC	L B-G	SC
Apr	ML[1]	-	-	297	-	-	-
	SD[2]	-	-	21.43	-	-	-
	R[3]	-	-	283-322	-	-	-
	N[4]	-	-	3	-	-	-
May	ML	248	-	-	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	1	-	-	-	-	-
Jun	ML	-	-	299	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	1	-	-	-
Jul	ML	-	-	285	-	324	324
	SD	-	-	-	-	31.11	-
	R	-	-	-	-	302-346	-
	N	-	-	1	-	2	1
Aug	ML	-	-	-	-	335	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	1	-
Sep	ML	-	-	-	-	450	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	1	-

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 64 - (Continued). Chain pickerel

Age		4+	
Location		L B-G	SC
Apr	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
May	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
Jun	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
Jul	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
Aug	ML	415	-
	SD	-	-
	R	-	-
	N	1	-
Sep	ML	-	-
	SD	-	-
	R	-	-
	N	-	-

Table 65. Mean weight (g) by month for each age group of pumpkinseed collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	MW[1]	3.2	35.9	-	15.1	32.8	-	49.3	-	-
	SD[2]	-	-	-	15.03	12.60	-	17.38	-	-
	R[3]	-	-	-	2.6-47.6	19.9-45.1	-	34.0-68.2	-	-
	N[4]	1	1	-	10	2	-	3	-	-
May	MW	-	-	-	16.6*	42.7*	-	33.5	-	-
	SD	-	-	-	10.91	11.72	-	9.10	-	-
	R	-	-	-	3.2-44.4	10.3-58.2	-	16.1-76.0	-	-
	N	-	-	-	236	12	-	105	-	-
Jun	MW	-	6.6	-	22.3*	35.1*	-	61.2	51.4	-
	SD	-	4.60	-	13.10	13.10	-	24.01	20.60	-
	R	-	2.5-14.2	-	3.9-45.7	2.5-50.1	-	27.9-88.1	28.7-90.7	-
	N	-	5	-	91	51	-	8	10	-
Jul	MW	-	-	-	21.4*	35.2*	23.4	50.5	37.6	76.2
	SD	-	-	-	13.88	11.75	7.65	25.21	5.88	49.59
	R	-	-	-	7.0-56.0	12.4-59.5	14.9-38.0	18.9-126.0	26.7-43.4	41.5-133.0
	N	-	-	-	180	54	18	25	9	3
Aug	MW	20.3	23.2	-	26.0*	35.1*	-	56.7	50.1	-
	SD	5.88	5.89	-	10.68	9.22	-	15.14	14.85	-
	R	6.5-29.8	7.8-34.8	-	5.1-56.0	14.5-58.9	-	39.8-73.1	28.4-79.8	-
	N	12	46	-	218	112	-	7	19	-
Sep	MW	19.8*	30.1*	-	34.4*	44.5*	-	63.1	59.5	-
	SD	6.57	9.29	-	9.11	12.61	-	19.75	15.94	-
	R	12.9-26.8	14.3-51.3	-	15.4-52.1	22.8-94.0	-	45.4-101.5	28.5-91.5	-
	N	4	71	-	79	237	-	7	41	-

* Significant differences in mean weight between Lower and Upper B-G at the 0.05 α level or greater from t-test.

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 65 - (Continued). Pumpkinseed

Age		4+		
Location		L B-G	U B-G	SC
Apr	MW	85.7	-	-
	SD	-	-	-
	R	-	-	-
	N	1	-	-
May	MW	61.8	-	
	SD	10.02	-	-
	R	30.3-91.9	-	-
	N	24	-	-
Jun	MW	84.9	-	-
	SD	-	-	-
	R	-	-	-
	N	1	-	-
Jul	MW	-	-	127.0
	SD	-	-	-
	R	-	-	-
	N	-	-	1
Aug	MW	-	-	-
	SD	-	-	-
	R	-	-	-
	N	-	-	-
Sep	MW	-	-	-
	SD	-	-	-
	R	-	-	-
	N	-	-	-

Table 66. Mean weight (g) by month for each age group of redbreast sunfish collected in 1974 in Lower and Upper B-G.

Age		1+		2+		3+	
Location		L B-G	U B-G	L B-G	U B-G	L B-G	U B-G
Apr	MW[1]	-	-	-	-	-	-
	SD[2]	-	-	-	-	-	-
	R[3]	-	-	-	-	-	-
	N[4]	-	-	-	-	-	-
May	MW	-	-	-	31.8	-	47.2
	SD	-	-	-	15.43	-	3.71
	R	-	-	-	11.8-48.7	-	42.9-51.7
	N	-	-	-	6	-	4
Jun	MW	-	-	-	36.4	-	44.2
	SD	-	-	-	15.50	-	-
	R	-	-	-	2.7-56.2	-	-
	N	-	-	-	19	-	1
Jul	MW	-	-	51.5	49.5	-	-
	SD	-	-	1.77	11.52	-	-
	R	-	-	50.2-52.7	26.6-64.9	-	-
	N	-	-	2	35	-	-
Aug	MW	-	18.3	-	40.9	-	70.6
	SD	-	1.77	-	12.00	-	-
	R	-	17.0-19.5	-	12.4-74.0	-	-
	N	-	2	-	80	-	1
Sep	MW	-	59.2	-	58.5	-	93.7
	SD	-	25.95	-	17.21	-	15.06
	R	-	40.9-77.6	-	32.6-108.6	-	76.3-103.2
	N	-	2	-	62	-	3

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 67. Mean weight (g) by month for each age group of rock bass collected in 1974 in Lower and Upper B-G and Schoharie Creek.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	MW[1]	-	-	-	8.7	42.6	-	65.3	-	-
	SD[2]	-	-	-	-	-	-	13.03	-	-
	R[3]	-	-	-	-	-	-	46.0-74.3	-	-
	N[4]	-	-	-	1	1	-	4	-	-
May	MW	-	-	-	6.9	49.2	-	59.2	59.0	-
	SD	-	-	-	2.53	-	-	23.09	-	-
	R	-	-	-	3.9-12.5	-	-	16.8-119.8	-	-
	N	-	-	-	16	1	-	43	1	-
Jun	MW	-	6.7	-	5.3*	28.9*	-	59.8	51.8	-
	SD	-	-	-	0.80	6.90	-	1.70	-	-
	R	-	-	-	4.7-5.8	20.9-32.9	-	58.6-61.0	-	-
	N	-	1	-	2	3	-	2	1	-
Jul	MW	-	-	-	19.4	48.4	24.8	82.4	-	72.8
	SD	-	-	-	6.79	17.34	18.64	39.16	-	21.19
	R	-	-	-	14.6-24.2	23.3-62.5	9.3-51.8	37.8-144.4	-	41.9-102.5
	N	-	-	-	2	4	4	11	-	6
Aug	MW	5.9	-	-	36.8	-	35.9	90.0	-	64.8
	SD	-	-	-	19.73	-	9.42	25.83	-	15.69
	R	-	-	-	10.0-66.3	-	26.0-54.0	51.1-150.9	-	44.3-83.1
	N	1	-	-	15	-	9	16	-	6
Sep	MW	-	21.8	-	8.4	44.6	-	-	56.6	-
	SD	-	7.43	-	-	6.75	-	-	19.15	-
	R	-	14.5-32.1	-	-	34.1-58.4	-	-	34.4-68.8	-
	N	-	5	-	1	11	-	-	3	-

* Significant differences in mean weight between Lower ahd Upper B-G at the 0.05 α level or greater from t-test.

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 67 - (Continued). Rock bass

Age		4+			5+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	MW	129.3	-	-	-	240.6	-
	SD	16.31	-	-	-	-	-
	R	111.5-143.5	-	-	-	-	-
	N	3	-	-	-	1	-
May	MW	98.5	-	-	203.1	-	-
	SD	18.65	-	-	-	-	-
	R	65.7-120.5	-	-	-	-	-
	N	6	-	-	1	-	-
Jun	MW	-	-	-	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	-	-
Jul	MW	134.9	-	106.2	288.1	-	144.2
	SD	24.85	-	26.07	-	-	31.86
	R	105.9-182.7	-	82.3-101.3	-	-	108.7-182.3
	N	9	-	4	1	-	5
Aug	MW	212.5	-	137.3	273.4	-	239.6
	SD	22.01	-	47.44	30.50	-	2.26
	R	187.4-228.4	-	96.5-216.5	251.8-295.0	-	238.0-241.2
	N	3	-	5	2	-	2
Sep	MW	-	-	-	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	-	-

Table 68. Mean weight (g) by month for each age group of yellow perch collected in 1974 in Lower and Upper B-G and Schoharie Creek*.

Age		1+			2+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	MW[1]	-	42.3	-	83.8**	65.9**	-
	SD[2]	-	8.93	-	8.67	9.45	-
	R[3]	-	28.9-52.7	-	73.5-101.9	48.7-76.1	-
	N[4]	-	7	-	9	10	-
May	MW	4.6	-	-	24.8	-	-
	SD	1.28	-	-	6.21	-	-
	R	2.7-7.3	-	-	15.6-31.9	-	-
	N	26	-	-	8	-	-
Jun	MW	7.5	-	-	113.5**	75.3**	-
	SD	0.28	-	-	22.6	0.9	-
	R	7.3-7.7	-	-	89.6-141.3	73.8-75.9	-
	N	2	-	-	7	4	-
Jul	MW	30.8	41.6	-	55.0**	77.5**	-
	SD	-	4.95	-	14.77	16.26	-
	R	-	38.1-45.1	-	39.3-79.7	50.0-108.3	-
	N	1	2	-	12	31	-
Aug	MW	69.0	74.2	64.7	-	106.6	-
	SD	20.22	19.65	-	-	21.05	-
	R	54.7-83.3	17.4-105.2	-	-	90.0-130.5	-
	N	2	80	1	-	3	-
Sep	MW	-	63.5	-	94.0	95.4	-
	SD	-	15.37	-	-	14.82	-
	R	-	48.2-80.0	-	-	74.5-131.5	-
	N	-	4	-	1	53	-

* In addition, four 0+ yellow perch (MW = 7.1, SD = 1.31, R = 5.1-8.1) were captured in September in Upper B-G.

** Significant differences in mean weight between Lower and Upper B-G at the 0.05 α level or greater from t-test.

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g)
4. N = number of fish

Table 68 - (Continued). Yellow perch

Age		3+		
Location		L B-G	U B-G	SC
Apr	MW	116.4	-	-
	SD	-	-	-
	R	-	-	-
	N	1	-	-
May	MW	90.8	82.9	-
	SD	12.50	2.83	-
	R	68.8-108.1	10.9-84.9	-
	N	10	2	-
Jun	MW	94.2	-	-
	SD	6.51	-	-
	R	98.6-98.8	-	-
	N	2	-	-
Jul	MW	103.9	-	-
	SD	27.65	-	-
	R	84.1-145.0	-	-
	N	4	-	-
Aug	MW	-	-	-
	SD	-	-	-
	R	-	-	-
	N	-	-	-
Sep	MW	-	102.4	-
	SD	-	4.45	-
	R	-	99.2-105.5	-
	N	-	2	-

Table 69. Mean weight (g) by month for each age group of largemouth bass collected in 1974 in Lower B-G and Schoharie Creek.

Age		1+		2+		3+	
Location		L B-G	SC	L B-G	SC	L B-G	SC
Apr	MW[1]	-	-	27.4	-	90.6	-
	SD[2]	-	-	-	-	1.27	-
	R[3]	-	-	-	-	89.7-91.5	-
	N[4]	-	-	1	-	2	-
May	MW	-	-	143.9	-	250.6	-
	SD	-	-	87.32	-	82.19	-
	R	-	-	42.7-333.3	-	120.8-331.3	-
	N	-	-	40	-	5	-
Jun	MW	-	-	188.7	-	-	-
	SD	-	-	137.9	-	-	-
	R	-	-	70.2-340.0	-	-	-
	N	-	-	3	-	-	-
Jul	MW	-	-	115.5	-	255.2	242.8
	SD	-	-	26.23	-	85.28	43.30
	R	-	-	96.6-133.7	-	133.4-308.9	176.4-299.6
	N	-	-	2	-	6	6
Aug	MW	19.6	-	142.8	-	251.6	-
	SD	8.75	-	-	-	-	-
	R	9.9-31.3	-	-	-	-	-
	N	6	-	1	-	1	-

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 70. Mean weight (g) by month for each age group of smallmouth bass collected in 1974 in Lower B-G and Schoharie Creek.

Age		1+		2+		3+	
Location		L B-G	SC	L B-G	SC	L B-G	SC
May	MW[1]	-	-	117.9	-	250.6	-
	SD[2]	-	-	95.69	-	82.19	-
	R[3]	-	-	29.6-260.1	-	120.8-331.3	-
	N[4]	-	-	6	-	5	-
Jul	MW	-	-	-	-	255.2	248.8
	SD	-	-	-	-	85.28	43.30
	R	-	-	-	-	133.4-208.9	176.4-299.6
	N	-	-	-	-	6	6
Aug	MW	-	-	48.8	-	207.5	240.1
	SD	-	-	21.28	-	18.41	74.87
	R	-	-	33.7-63.8	-	186.9-230.0	154.0-323.2
	N	-	-	2	-	4	5

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 71. Mean weight (g) by month for each age group of walleye collected in 1974 in Lower and Upper B-G and Schoharie Creek*.

Age		1+			2+			3+		
Location		L B-G	U B-G	SC	L B-G	U B-G	SC	L B-G	U B-G	SC
Apr	MW[1]	105.2	-	-	-	-	-	-	-	-
	SD[2]	-	-	-	-	-	-	-	-	-
	R[3]	-	-	-	-	-	-	-	-	-
	N[4]	1	-	-	-	-	-	-	-	-
May	MW	63.7	-	-	44.2	-	-	385.2	-	-
	SD	30.34	-	-	-	-	-	-	-	-
	R	32.0-100.7	-	-	-	-	-	-	-	-
	N	5	-	-	1	-	-	1	-	-
Jun	MW	134	-	-	-	-	-	-	-	-
	SD	-	-	-	-	-	-	-	-	-
	R	-	-	-	-	-	-	-	-	-
	N	1	-	-	-	-	-	-	-	-
Jul	MW	-	-	-	125.0	167.3	-	195.4	-	200.0
	SD	-	-	-	43.70	45.18	-	78.28	-	9.25
	R	-	-	-	94.2-156.0	135.3-199.2	-	140.0-250.7	-	191.6-210.0
	N	-	-	-	2	2	-	2	-	4
Aug	MW	103.7	158.3	82.3	-	-	-	-	-	-
	SD	10.61	31.65	-	-	-	-	-	-	-
	R	96.2-111.2	110.8-174.5	-	-	-	-	-	-	-
	N	2	4	1	-	-	-	-	-	-
Sep	MW	138.5	-	-	-	151.4	-	-	-	-
	SD	-	-	-	-	63.50	-	-	-	-
	R	-	-	-	-	106.5-196.3	-	-	-	-
	N	1	-	-	-	2	-	-	-	-

* In addition, one 5+ walleye (2770 g) was captured in July 1974 in Schoharie Creek.

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 72. Mean weight (g) by month for each age group of chain pickerel collected in 1974 in Lower B-G and Schoharie Creek.

Age		1+		2+		3+	
Location		L B-G	SC	L B-G	SC	L B-G	SC
Apr	MW[1]	-	-	159.8	-	-	-
	SD[2]	-	-	34.11	-	-	-
	R[3]	-	-	134.9-198.7	-	-	-
	N[4]	-	-	3	-	-	-
May	MW	55.6	-	213.6	-	-	-
	SD	-	-	72.30	-	-	-
	R	-	-	162.5-264.7	-	-	-
	N	1	-	2	-	-	-
Jun	MW	-	-	185.7	-	-	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	1	-	-	-
Jul	MW	-	-	146.7	-	201.7	201.3
	SD	-	-	-	-	126.85	-
	R	-	-	-	-	112.0-291.4	-
	N	-	-	1	-	2	1
Aug	MW	-	-	-	-	242.0	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	1	-
Sep	MW	-	-	-	-	667.2	-
	SD	-	-	-	-	-	-
	R	-	-	-	-	-	-
	N	-	-	-	-	1	-

1. MW = mean weight (g) 2. SD = standard deviation 3. R = range (g) 4. N = number of fish

Table 72 - (Continued). Chain pickerel

Age		4+	
Location		L B-G	SC
Apr	MW	-	-
	SD	-	-
	R	-	-
	N	-	-
May	MW	-	-
	SD	-	-
	R	-	-
	N	-	-
Jun	MW	-	-
	SD	-	-
	R	-	-
	N	-	-
Jul	MW	-	-
	SD	-	-
	R	-	-
	N	-	-
Aug	MW	-	440.4
	SD	-	-
	R	-	-
	N	-	1
Sep	MW	-	-
	SD	-	-
	R	-	-
	N	-	-

Table 73. Mean total length (mm) by month of each age group of pumpkinseed collected in 1973 and 1974 in Lower B-G.

Age		1+		2+		3+		4+	
Date		1973	1974	1973	1974	1973	1974	1973	1974
Apr	ML[1]	52	63	117	90	134	138	133	166
	SD[2]	8.03	-	-	23.82	7.29	18.00	3.00	-
	R[3]	35-66	-	-	57-134	123-146	124-158	130-136	-
	N[4]	42	1	1	10	8	3	3	1
May	ML	43	-	115	95	127	120	-	143
	SD	6.22	-	8.50	14.48	4.62	8.58	-	14.29
	R	32-97	-	105-121	60-132	122-130	100-154	-	117-160
	N	687	-	3	237	3	105	-	24
Jun	ML	69	-	-	103	129	143	141	157
	SD	13.61	-	-	20.00	10.78	18.91	13.80	-
	R	38-99	-	-	63-135	114-141	126-161	125-151	-
	N	834	-	-	95	6	8	3	1
Jul	ML	76	-	145*	99*	150*	133*	151	-
	SD	12.02	-	9.06	17.47	6.31	21.16	13.69	-
	R	54-105	-	126-157	77-131	140-166	97-175	121-169	-
	N	215	-	16	183	26	24	15	-
Aug	ML	81*	102*	139*	110*	143	144	136	-
	SD	17.62	9.56	10.99	15.15	13.37	12.10	9.95	-
	R	32-131	78-115	75-166	68-151	105-171	125-160	122-147	-
	N	352	12	49	218	20	7	9	-
Sep	ML	81*	102*	123*	119*	134	140	150	-
	SD	18.93	8.25	8.82	9.68	13.42	11.67	9.90	-
	R	54-127	93-109	106-143	86-135	120-157	130-158	143-157	-
	N	138	4	43	79	8	7	2	-

* Significant differences in mean total length between 1973 and 1974 at the 0.05 α level or greater from t-test.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 74. Mean total length (mm) by month of each age group of rock bass collected in 1973 and 1974 in Lower B-G.

Age		1+		2+		3+		4+	
Date		1973	1974	1973	1974	1973	1974	1973	1974
Apr	ML[1]	45	-	138	82	-	153	-	187
	SD[2]	-	-	2.12	-	-	7.00	-	7.00
	R[3]	-	-	136-139	-	-	143-158	-	179-193
	N[4]	1	-	2	1	-	4	-	3
May	ML	44	-	96	74	-	143	-	275
	SD	-	-	-	7.99	-	10.67	-	9.13
	R	-	-	-	64.91	-	127-175	-	169-191
	N	1	-	1	16	-	43	-	6
Jun	ML	-	70	-	66	141	147	148	-
	SD	-	-	-	0.70	-	2.89	-	-
	R	-	-	-	65-66	-	144-149	-	-
	N	-	1	-	2	1	3	1	-
Jul	ML	61	-	133	99	149	161	172	186
	SD	4.72	-	8.80	12.73	12.90	23.05	6.95	11.75
	R	52-68	-	116-145	9-108	133-175	125-198	163-180	175-215
	N	21	-	16	2	14	12	4	9
Aug	ML	61	-	142*	120*	163	170	-	223
	SD	8.02	-	7.55	21.79	15.09	12.89	-	13.08
	R	46-76	-	125-154	74-155	149-188	140-194	-	208-232
	N	25	-	14	15	5	16	-	3
Sep	ML	60*	105*	165	80	-	-	-	-
	SD	5.66	7.80	-	-	-	-	-	-
	R	56-64	93-115	-	-	-	-	-	-
	N	2	5	1	1	-	-	-	-

* Significant differences in mean total length between 1973 and 1974 at the 0.05 α level or greater from t-test.

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 74 - (Continued). Rock bass

Age		5+	
Date		1973	1974
Apr	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
May	ML	-	216
	SD	-	-
	R	-	-
	N	-	1
Jun	ML	-	-
	SD	-	-
	R	-	-
	N	-	-
Jul	ML	213	230
	SD	23.31	-
	R	179-235	-
	N	5	1
Aug	ML	-	238
	SD	-	8.49
	R	-	232-244
	N	-	2
Sep	ML	-	-
	SD	-	-
	R	-	-
	N	-	-

Table 75. Mean total length (mm) by month of each age group of rainbow trout and brook trout collected in 1974 in Cole Hollow Creek.

Age		0+		1+		2+		3+	
Species		RT	BT	RT	BT	RT	BT	RT	BT
Jun	ML[1]	-	-	114	129	165	-	211	-
	SD[2]	-	-	9.28	20.60	13.80	-	5.50	-
	R[3]	-	-	99-154	108-158	145-2-1	-	205-215	-
	N[4]	-	-	74	6	16	-	3	-
Aug	ML	68	73	122	128	167	187	205	-
	SD	5.29	5.78	13.84	18.60	28.99	33.25	9.90	-
	R	62-70	61-80	99-164	87-198	145-209	156-222	198-212	-
	N	3	9	56	52	4	3	2	-

1. ML = mean length (mm) 2. SD = standard deviation 3. R = range (mm) 4. N = number of fish

Table 76. Length-frequency distribution of rainbow trout and brook trout collected in 1974 in Cole Hollow Creek.

Total Length (mm)	Frequency			
	Rainbow Trout		Brook Trout	
	28 Jun	14 & 16 Aug	28 Jun	14 & 16 Aug
50-54		2		1
55-59		9		2
60-64		27		12
65-69		18		11
70-74		39		23
75-79		11		6
80-84		1		1
85-89		1		1
90-94				
95-99	1	1		
100-104	11	3		2
105-109	12	5	1	
110-114	16	11	1	5
115-119	17	7		7
120-124	11	7		11
125-129	1	6	2	6
130-134	4	6		17
135-139		2		1
140-144		3		3
145-149	1	3		4
150-154	4	2	1	
155-159	3		1	3
160-164	2	2		1
165-169	5			
170-174	2			2
175-179				
180-184				1
185-189	1			
190-194		1		1
195-199		1		1
200-204	1			
205-209	1	2		
210-214	1	1		
215-219	1			
220-224		1		
Total	95	172	6	122

Table 77. Fish collected from April through September 1974 in Lower and Upper B-G and Schoharie Creek for which condition factor was determined.

Species	Lower B-G		Upper B-G		Schoharie Creek		Total
	Number	Percent	Number	Percent	Number	Percent	Number
Pumpkinseed	1018	54	851	45	30	23	1899
Yellow perch	82	36	135	59	11	8	228
Redbreast sunfish	2	1	209	98	3	2	214
Rock bass	83	46	33	18	64	49	180
Largemouth bass	63	93	-	-	5	4	68
Walleye	14	47	6	20	10	8	30
Smallmouth bass	21	75	-	-	7	5	28
Chain pickerel	9	90	-	-	1	1	10
Number of fish	1292		1234		131		2657

Table 78. Condition factor for pumpkinseed collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	41-60	-	-	-	1	1.4039	-
		61-80	-	-	-	3	1.372.	0.09
		81-100	-	-	-	5	1.5300	0.10
		101-120	1	2.1910	-	-	-	-
		121-140	7	1.9056	0.19	4	1.9356	0.10
		141-160	-	-	-	1	1.7291	-
		161-180	-	-	-	1	1.8735	-
	U B-G	81-100	-	-	-	1	2.1804	-
		101-120	-	-	-	2	2.1860	0.08
		121-140	-	-	-	1	2.3091	-
May	L B-G	41-60	-	-	-	2	1.6935	0.03
		61-80	-	-	-	55	1.5235	0.15
		81-100	-	-	-	101	1.6179	0.16
		101-120	5	2.1539	0.28	145	1.8280	0.16
		121-140	7	2.1440	0.22	67	1.9954	0.16
		141-160	1	1.9453	-	18	2.0517	0.27
		161-180	-	-	-	1	1.8104	-
	U B-G	81-100	-	-	-	1	1.8681	-
		101-120	-	-	-	5	2.2519	0.15
		121-140	-	-	-	17	2.1846	0.13

Table 78 - (Continued). Pumpkinseed

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Jun	L B-G	61-80	-	-	-	17	1.7836	0.13
		81-100	-	-	-	30	1.7065	0.24
		101-120	2	1.9223	0.08	29	1.7892	0.20
		121-140	7	2.3396	0.29	25	1.9423	0.17
		141-160	7	2.1683	0.26	4	2.0386	0.14
		161-180	-	-	-	1	2.1100	-
	U B-G	41-60	-	-	-	4	2.1689	0.20
		61-80	-	-	-	4	2.0303	0.13
		81-100	-	-	-	8	2.1366	0.17
		101-120	-	-	-	24	2.4442	0.16
		121-140	-	-	-	24	2.3607	0.14
		141-160	-	-	-	2	2.5362	0.07
	S C	101-120	-	-	-	6	2.1751	0.33
		121-140	-	-	-	1	1.4043	-

Table 78 - (Continued). Pumpkinseed

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Jul	L B-G	61-80	-	-	-	21	1.7834	0.30
		81-100	13	1.9268	0.21	87	1.8392	0.25
		101-120	4	2.1639	0.27	102	1.8791	0.24
		121-140	2	2.0630	0.07	39	2.0132	0.24
		141-160	2	2.0134	0.19	6	1.9553	0.27
		161-180	-	-	-	1	1.5312	-
	U B-G	61-80	2	1.9932	0.01	-	-	-
		81-100	-	-	-	5	2.1563	0.28
		101-120	-	-	-	34	2.3023	0.29
		121-140	-	-	-	22	2.2654	0.37
	S C	41-60	2	4.0298	0.26	-	-	-
		61-80	23	3.0537	0.36	-	-	-
		81-100	21	2.5717	0.23	8	2.0924	0.43
		101-120	1	2.2719	-	8	1.9941	0.38
		121-140	-	-	-	2	1.9431	0.01
		141-160	-	-	-	1	2.2805	-
		161-180	-	-	-	-	2.0058	-

Table 78 - (Continued). Pumpkinseed

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	61-80	-	-	-	14	1.6896	0.23
		81-100	6	1.9585	0.20	37	1.7418	0.24
		101-120	43	1.9754	0.22	61	1.7718	0.20
		121-140	32	2.0184	0.14	27	1.8314	0.18
		141-160	45	2.1867	0.17	5	1.8674	0.19
		161-180	2	2.2965	0.35	-	-	-
	U B-G	61-80	-	-	-	1	1.8489	-
		81-100	-	-	-	14	1.9584	0.18
		101-120	-	-	-	81	1.9781	0.21
		121-140	-	-	-	56	2.0362	0.16
		141-160	-	-	-	11	1.9839	0.11
		161-180	-	-	-	1	2.3919	-
	S C	81-100	1	2.0612	-	1	1.5186	-
		101-120	7	1.8938	0.31	-	-	-
		121-140	-	-	-	1	2.1558	-
Sep	L B-G	61-80	-	-	-	1	1.6406	-
		81-100	1	1.9300	-	8	1.7337	0.19
		101-120	42	2.0986	0.15	26	1.8959	0.28
		121-140	65	2.1028	0.15	35	1.9510	0.15
	U B-G	61-80	2	2.2071	0.06	-	-	-
		81-100	4	2.2785	0.35	8	1.8835	0.18
		101-120	5	2.2991	0.08	129	2.0164	0.25
		121-140	7	2.4441	0.28	242	2.0479	0.19
		141-160	2	2.4571	0.22	52	1.9660	0.25
		161-180	-	-	-	8	1.9838	0.21
	S C	81-100	4	1.6200	0.10	-	-	-
		101-120	8	1.6864	0.11	-	-	-

Table 79. Condition factor for yellow perch collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	161-180	1	1.2123	-	-	-	-
		181-200	1	1.3660	1	8	1.1802	0.08
		201-220	-	-	-	2	1.1346	0.05
	U B-G	121-140	-	-	-	2	1.3686	0.07
		141-160	-	-	-	7	1.3799	0.08
		161-180	-	-	-	8	1.3824	0.07
May	L B-G	41-60	-	-	-	1	1.0185	-
		61-80	-	-	-	18	1.0369	0.11
		81-100	-	-	-	7	0.9822	0.04
		101-120	-	-	-	1	1.1317	-
		121-140	-	-	-	4	1.1052	0.07
		141-160	-	-	-	2	0.8009	0.37
		161-180	1	1.3610	-	1	1.2199	-
		181-200	-	-	-	6	1.0539	0.35
		201-220	-	-	-	3	1.2440	0.05
	U B-G	161-180	-	-	-	1	1.4589	-
		181-200	-	-	-	1	1.4318	-

Table 79 - (Continued). Yellow perch

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Jun	L B-G	81-100	-	-	-	1	1.4589	-
		121-140	1	1.2937	-	-	-	-
		141-160	3	1.2974	0.12	-	-	-
		161-180	2	1.4956	0.10	-	-	-
		181-200	2	1.3635	0.14	3	1.2253	0.09
		201-220	-	-	-	3	1.2175	0.10
	U B-G	161-180	-	-	-	4	1.4491	0.08
	S C	121-140	-	-	-	1	1.2446	-
		141-160	-	-	-	1	1.1116	-
		161-180	-	-	-	1	0.8951	-
		181-200	-	-	-	2	1.0936	0.06
		241-260	-	-	-	1	0.8644	-
Jul	L B-G	41-60	-	-	-	1	1.3058	-
		121-140	1	1.3083	-	1	1.2518	-
		141-160	7	1.3532	0.15	7	1.2643	0.14
		161-180	13	1.3066	0.14	2	1.3261	0.23
		181-200	2	1.3315	0.08	4	1.1204	0.04
		201-220	-	-	-	1	0.9815	-
		241-260	-	-	-	1	0.9826	-
	U B-G	121-140	-	-	-	2	1.6136	0.04
		141-160	-	-	-	4	1.5042	0.05
		161-180	-	-	-	10	1.5045	0.17
		181-200	-	-	-	8	1.4596	0.06
		201-220	-	-	-	1	1.3127	-
	S C	101-120	2	1.5595	0.05	-	-	-

Table 79 - (Continued). Yellow perch

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	81-100	-	-	-	2	1.3100	0.24
		101-120	1	0.9613	-	-	-	-
		121-140	1	1.2937	-	-	-	-
		141-160	2	1.1441	0.02	-	-	-
		161-180	8	1.2795	0.09	-	-	-
		181-200	16	1.2153	0.11	2	1.2063	0.09
		201-220	2	1.2704	0.01	-	-	-
		221-240	1	1.4762	-	-	-	-
	U B-G	121-140	-	-	-	1	1.0461	-
		141-160	-	-	-	3	1.2002	0.06
		161-180	-	-	-	16	1.3215	0.12
		181-200	-	-	-	31	1.3208	0.11
	S C	181-200	-	-	-	1	1.0732	-
Sep	L B-G	161-180	2	1.2685	0.01	-	-	-
		181-200	13	1.2715	0.10	1	1.5338	-
	U B-G	61-80	-	-	-	2	1.3833	0.29
		81-100	-	-	-	3	1.1734	0.08
		101-120	23	1.4470	0.09	-	-	-
		121-140	37	1.4572	0.15	-	-	-
		141-160	18	1.5050	0.13	1	1.5487	1.00
		161-180	-	-	-	3	1.2176	0.14
		181-200	1	1.4061	-	20	1.2261	0.10
		201-220	-	-	-	6	1.2388	0.08
		261-280	-	-	-	1	0.6453	-

Table 80. Condition factor for redbreast sunfish collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
May	U B-G	81-100	-	-	-	2	1.8683	0.08
		101-120	-	-	-	3	2.2812	0.24
		121-140	-	-	-	5	2.4197	0.14
Jun	U B-G	21-40	-	-	-	1	2.5287	-
		81-100	-	-	-	4	2.2046	0.21
		101-120	-	-	-	4	2.4952	0.23
		121-140	-	-	-	11	2.4981	0.12
Jul	L B-G	121-140	-	-	-	2	2.5118	0.09
		161-180	1	2.0130	-	-	-	-
	U B-G	101-120	-	-	-	11	2.6788	0.22
		121-140	-	-	-	21	2.5698	0.20
		141-160	-	-	-	3	2.2038	0.64
	S C	101-120	1	2.6474	-	1	2.6475	-
		121-140	1	1.6696	-	-	-	-
Aug	U B-G	81-100	-	-	-	1	1.7400	-
		101-120	-	-	-	25	2.0466	0.32
		121-140	-	-	-	26	2.1682	0.22
		141-160	-	-	-	5	2.1390	0.14
	S C	141-160	3	1.8128	0.48	-	-	-
		181-200	-	-	-	2	1.9582	0.04

Table 80 - (Continued). Redbreast sunfish

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Sep	U B-G	81-100	-	-	-	15	2.2022	0.12
		101-120	-	-	-	19	2.4107	0.19
		121-140	-	-	-	34	2.2903	0.23
		141-160	-	-	-	18	2.1599	0.43
		161-180	-	-	-	1	2.3741	-

Table 81. Condition factor for rock bass collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	81-100	-	-	-	1	1.5779	-
		121-140	4	1.8346	0.53	-	-	-
		141-160	-	-	-	4	1.7870	0.21
		161-180	-	-	-	1	1.9441	-
		181-200	-	-	-	2	1.9676	0.04
		241-260	2	2.3966	0.21	-	-	-
	U B-G	121-140	-	-	-	1	1.9845	-
		201-220	-	-	-	1	2.5252	-
May	L B-G	61-80	-	-	-	15	1.5922	0.30
		81-100	-	-	-	3	1.7618	0.29
		121-140	-	-	-	11	1.8494	0.42
		141-160	1	1.9244	-	-	-	-
		161-180	1	2.2587	-	4	1.9770	0.22
		181-200	-	-	-	1	1.7294	-
		201-220	-	-	-	1	2.0153	-
	U B-G	121-140	-	-	-	2	2.2670	0.04

Table 81 - (Continued). Rock bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Jun	L B-G	61-80	-	-	-	2	1.8644	0.21
		121-140	-	-	-	1	1.6725	-
		141-160	3	1.9927	0.18	2	1.9072	0.19
		181-200	2	2.0741	0.05	-	-	-
		201-220	1	2.2256	-	-	-	-
		221-240	1	1.6158	-	-	-	-
	U B-G	61-80	-	-	-	1	1.9534	-
		81-100	-	-	-	1	2.3623	-
		101-120	-	-	-	2	2.2188	0.08
		121-140	-	-	-	1	2.1054	-
	S C	121-140	-	-	-	2	2.2937	0.59
		141-160	-	-	-	3	2.0835	0.20
		181-200	-	-	-	1	2.6884	-

Table 81 - (Continued). Rock bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Jul	L B-G	81-100	-	-	-	1	2.0027	-
		101-120	1	2.1244	-	1	1.9211	-
		121-140	3	1.9790	0.21	3	1.8091	0.22
		141-160	5	2.1818	0.31	5	1.8276	0.24
		161-180	2	2.3834	0.20	5	2.0565	0.19
		181-200	-	-	-	7	1.9933	0.17
		201-220	1	2.2173	-	1	1.8886	-
	U B-G	61-80	1	2.2107	-	-	-	-
		81-100	-	-	-	1	2.3300	-
		121-140	-	-	-	3	2.3018	0.07
	S C	61-80	1	3.1803	-	1	1.9597	-
		81-100	-	-	-	1	2.0061	-
		101-120	6	2.4827	0.15	1	1.8054	-
		121-140	1	2.3059	-	2	1.7351	0.10
		141-160	1	2.0830	-	5	1.8021	0.21
		161-180	-	-	-	5	1.8899	0.13
		181-200	-	-	-	8	1.9287	0.20
		201-220	-	-	-	2	1.6806	0.04
		221-240	-	-	-	1	2.4678	-

Table 81 - (Continued). Rock bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	61-80	-	-	-	1	2.4678	-
		121-140	8	1.9907	0.19	1	1.8916	-
		141-160	10	1.9085	0.13	-	-	-
		161-180	1	1.9701	-	8	1.6352	0.27
		181-200	-	-	-	1	2.1957	-
		201-220	1	2.0825	-	-	-	-
		221-240	3	1.8975	0.10	-	-	-
		241-260	1	2.0307	-	-	-	-
	U B-G	101-120	-	-	-	2	1.8805	0.01
		121-140	-	-	-	1	2.2783	-
	S C	61-80	1	1.6742	-	-	-	-
		101-120	-	-	-	6	1.9843	0.34
		121-140	3	1.8205	0.47	6	1.9993	0.13
		141-160	3	1.7264	0.32	6	1.8814	0.10
		161-180	1	2.1265	-	5	1.9204	0.29
		181-200	5	2.1672	0.57	4	1.5389	0.36
		201-220	3	2.3740	0.23	2	2.1539	0.15
		221-240	3	1.9066	1.02	3	1.9893	0.15
		281-300	2	1.2491	0.81	-	-	-
		301-320	3	0.7944	0.04	-	-	-
		321-340	2	0.8282	0.01	-	-	-
		421-440	1	0.5138	-	-	-	-

Table 81 - (Continued). Rock bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Sep	L B-G	161-180	1	1.8343	-	-	-	-
	U B-G	81-100	-	-	-	1	2.1507	-
		101-120	-	-	-	7	1.6756	0.78
		121-140	-	-	-	7	1.9785	0.13
		141-160	-	-	-	2	1.9977	0.11
	S C	61-80	16	2.0044	0.08	-	-	-
		81-100	2	1.9457	0.17	-	-	-
		101-120	12	1.8312	0.19	-	-	-
		121-140	23	1.8867	0.12	-	-	-
		141-160	4	1.8364	0.12	-	-	-
		161-180	3	1.9954	0.12	-	-	-
		201-220	2	1.8368	0.06	-	-	-

Table 82. Condition factor for largemouth bass collected in 1973 and 1974 in Lower B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	121-140	-	-	-	1	1.4029	-
		181-200	-	-	-	2	1.2321	0.06
May	L B-G	81-100	3	1.0279	0.06	-	-	-
		121-140	3	1.0974	0.16	-	-	-
		161-180	-	-	-	1	0.8392	-
		181-200	1	1.3195	-	14	1.2694	0.31
		201-220	-	-	-	12	1.2510	0.26
		221-240	-	-	-	5	1.2805	0.16
		241-260	-	-	-	4	1.1984	0.15
		261-280	-	-	-	5	1.6436	0.09
		281-300	-	-	-	1	1.4072	-
		341-360	-	-	-	1	1.7866	-
Jun	L B-G	81-100	1	1.1523	-	-	-	-
		101-120	2	1.3361	0.19	-	-	-
		161-180	4	1.4964	0.12	1	1.2447	-
		201-220	2	1.4825	0.08	-	-	-
		221-240	-	-	-	1	1.2493	-
		261-280	-	-	-	1	1.6528	-
Jul	L B-G	121-140	1	1.4429	-	-	-	-
		141-160	1	1.2525	-	-	-	-
		181-200	3	1.4463	0.12	-	-	-
		221-240	-	-	-	2	1.0571	0.23
		241-260	-	-	-	1	1.0406	-
		261-280	-	-	-	3	1.4816	0.13
	S C	241-260	-	-	-	1	1.2143	-
		261-280	-	-	-	2	1.1684	0.24
		281-300	-	-	-	2	1.0160	0.18

Table 82 - (Continued). Largemouth bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	41-60	1	1.2037	-	-	-	-
		81-100	1	1.1077	-	-	-	-
		101-120	-	-	-	4	1.1382	0.13
		121-140	6	1.2441	0.08	2	1.4661	0.23
		141-160	19	1.4497	0.09	-	-	-
		161-180	16	1.5137	0.17	-	-	-
		181-200	13	1.5085	0.17	-	-	-
		201-220	4	1.7129	0.10	-	-	-
		221-240	2	1.8689	0.04	1	1.1891	-
		241-260	1	1.7676	-	1	1.4650	-
		261-280	1	1.9560	-	-	-	-
		281-300	3	1.8114	0.23	-	-	-
		301-320	3	1.7507	0.18	-	-	-
		321-340	2	1.6770	0.01	-	-	-
		341-360	1	1.4853	-	-	-	-
Sep	L B-G	161-180	2	1.4125	0.12	-	-	-
		181-200	9	1.3966	0.09	-	-	-
		201-220	2	1.4752	0.01	-	-	-
		221-240	2	1.7088	0.25	-	-	-
		241-260	2	1.7349	0.09	-	-	-
	S C	41-60	1	1.3824	-	-	-	-
		61-80	1	1.3110	-	-	-	-
		81-100	2	1.2927	0.02	-	-	-

Table 83. Condition factor for walleye collected in 1973 and 1974 in Lower and Upper B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	221-240	2	0.8254	0.07	1	0.7610	-
		241-260	1	0.9761	-	-	-	-
		281-300	1	1.0900	-	-	-	-
May	L B-G	141-160	-	-	-	1	0.8269	-
		161-180	-	-	-	1	0.8247	-
		181-200	-	-	-	2	0.7472	0.18
		201-220	1	0.8431	-	1	1.0012	-
		221-240	1	0.8048	-	1	0.7759	-
	U B-G	341-360	-	-	-	1	0.9140	-
Jun	L B-G	241-260	5	0.9226	0.08	1	0.8680	-
		261-280	1	0.8734	-	-	-	-
		281-300	1	0.9383	-	-	-	-
		301-320	1	1.0336	-	-	-	-
	S C	341-360	-	-	-	2	0.7215	0.04
		361-380	-	-	-	3	0.7864	0.04
		401-420	-	-	-	1	0.9129	-
Jul	L B-G	221-240	-	-	-	1	0.8161	-
		241-260	-	-	-	2	0.7972	0.01
		301-320	1	0.8537	-	1	0.8923	-
	S C	61-80	-	-	-	1	0.5479	-
		301-320	-	-	-	2	0.7260	0.04
		581-600	-	-	-	1	1.0509	-

Table 83 - (Continued). Walleye

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	241-260	1	1.0389	-	2	0.6745	0.03
		261-280	1	0.9152	-	-	-	-
		401-420	1	1.0639	-	-	-	-
	U B-G	221-240	-	-	-	2	0.7806	0.13
		261-280	-	-	-	3	0.8720	0.03
	S C	121-140	1	0.8759	-	-	-	-
		241-260	1	0.7257	-	-	-	-
		261-280	1	0.8353	-	-	-	-
		281-300	5	0.8274	0.13	-	-	-
		301-320	4	0.7765	0.05	-	-	-
		321-340	4	0.8329	0.08	-	-	-
		341-360	1	0.8087	-	-	-	-
		381-400	2	0.8031	0.06	-	-	-
		401-420	1	0.8811	-	-	-	-
		421-440	1	0.5134	-	-	-	-
		441-460	1	0.8171	-	-	-	-
		501-520	1	0.7604	-	-	-	-
		601-620	1	0.8786	-	-	-	-
Sep	S C	121-140	1	0.0245	-	-	-	-
		161-180	1	0.7686	-	-	-	-

Table 84. Condition factor for smallmouth bass collected in 1973 and 1974 in Lower B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
May	L B-G	41-60	2	1.3870	0.08	-	-	-
		61-80	1	1.2340	-	-	-	-
		81-100	6	1.2376	0.14	-	-	-
		121-140	4	1.2741	0.18	1	1.0787	-
		141-160	-	-	-	1	1.1732	-
		161-180	1	1.3200	-	1	0.8698	-
		221-240	-	-	-	1	0.9427	-
		241-260	-	-	-	2	1.1216	0.09
		261-280	-	-	-	3	1.2703	0.03
		281-300	-	-	-	2	1.2995	0.12
Jun	L B-G	321-340	1	1.2172	-	-	-	-
		341-360	1	0.9984	-	-	-	-
Jul	L B-G	121-140	-	-	-	1	1.3006	-
		161-180	-	-	-	1	1.1384	-
		221-240	-	-	-	1	1.4002	-
	S C	261-280	-	-	-	2	1.2916	0.18

Table 84 - (Continued). Smallmouth bass

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Aug	L B-G	81-100	1	1.2600	-	-	-	-
		101-120	11	1.3586	0.29	-	-	-
		121-140	23	1.2280	0.14	-	-	-
		141-160	9	1.2184	0.16	1	1.0829	-
		161-180	11	1.3472	0.12	-	-	-
		181-200	9	1.2381	0.34	1	1.0759	-
		201-220	11	1.2617	0.25	-	-	-
		241-260	4	1.3247	0.10	2	1.1700	0.01
		261-280	2	1.6087	0.49	2	1.0607	0.05
		281-300	4	1.6732	0.30	1	0.9010	-
		301-320	1	1.5240	-	-	-	-
		321-340	3	1.5351	0.13	-	-	-
	S C	61-80	1	1.3697	-	-	-	-
		121-140	1	1.1290	-	-	-	-
		181-200	1	1.2550	-	-	-	-
		201-220	2	1.3437	0.29	-	-	-
		221-240	-	-	-	1	1.1800	-
		241-260	-	-	-	1	1.1617	-
		261-280	3	1.2660	0.15	1	1.1680	-
		281-300	2	1.2014	0.02	2	1.2644	0.03
Sep	S C	61-80	1	1.4686	-	-	-	-
		81-100	1	1.3003	-	-	-	-
		121-140	1	1.2153	-	-	-	-
		141-160	1	1.4089	-	-	-	-
		181-200	1	1.3722	-	-	-	-
		201-220	1	1.2867	-	-	-	-

Table 85. Condition factor for chain pickerel collected in 1973 and 1974 in Lower B-G and Schoharie Creek.

Month	Location	Size Range (mm)	1973 Number	1973 Mean "K"	1973 SD	1974 Number	1974 Mean "K"	1974 SD
Apr	L B-G	281-300	1	0.7465	-	2	0.6062	0.02
		321-340	2	0.6512	0.14	1	0.5952	-
		341-360	2	0.6837	0.19	-	-	-
May	L B-G	241-260	-	-	-	1	0.5959	-
		301-320	1	0.6493	-	2	0.6397	0.40
		321-340	6	0.5966	0.09	-	-	-
		361-380	1	0.5658	-	-	-	-
Jun	L B-G	281-300	-	-	-	1	0.6947	-
		321-340	2	0.8299	0.01	-	-	-
		341-360	5	0.8208	0.03	-	-	-
Jul	L B-G	281-300	-	-	-	1	0.6337	-
		341-360	-	-	-	1	0.7035	-
		401-420	2	0.8133	0.01	-	-	-
Aug	L B-G	361-380	1	0.7386	-	-	-	-
	S C	261-280	1	0.6695	-	-	-	-
		281-300	1	0.6131	-	-	-	-
		301-320	1	0.5772	-	-	-	-
		401-420	-	-	-	1	0.6162	-
Sep	L B-G	201-220	1	0.6371	-	-	-	-
		401-420	1	0.8663	-	-	-	-

Table 86. Fish marked for migration study in 1974 in Lower and Upper B-G and Schoharie Creek.

Species	May		Jun		Jul		Aug		Sep		Total		
	T[1]	C[2]	T	C	T	C	T	C	T	C	T	C	Total
Lower B-G													
Pumpkinseed	18	10	28	10	14	147	18	101	4	40	82	308	390
Rock bass	29	1	-	-	8	3	15	5	-	1	52	10	62
Largemouth bass	37	-	2	-	1	-	2	4	-	-	42	4	46
Smallmouth bass	9	-	-	-	-	-	5	-	-	-	14	-	14
Yellow perch	2	-	1	-	4	-	1	1	-	-	8	1	9
Walleye	3	-	-	-	-	-	1	-	1	-	5	-	5
Chain pickerel	1	-	-	-	1	-	-	-	-	-	2	-	2
Total	99	11	31	10	28	150	42	111	5	41	205	323	528
Upper B-G													
Pumpkinseed	1	-	-	-	2	-	23	107	105	51	131	158	289
Yellow perch	-	-	-	-	1	-	39	-	20	-	60	-	60
Redbreast sunfish	-	-	-	-	1	-	8	28	17	2	26	30	56
Rock bass	-	-	-	-	-	-	-	3	1	-	1	3	4
Walleye	-	-	-	-	-	-	1	-	-	-	1	-	1
Total	1	-	-	-	4	-	71	138	143	53	219	191	410
Schoharie Creek													
Pumpkinseed	-	-	-	35	-	-	-	1	-	-	-	36	36
Rock bass	-	-	-	6	-	-	1	-	-	-	1	6	7
Yellow perch	-	-	-	4	-	-	-	-	-	-	-	4	4
Walleye	-	-	2	-	-	-	1	-	-	-	3	-	3
Total	-	-	2	45	-	-	2	1	-	-	4	46	50

1. T = tagged; 2. C = clipped.

Table 87. Fish recaptured for migration study in 1974 in Lower and Upper B-G and Schoharie Creek.

Species	Date Captured	Date Recaptured	Location Captured	Location Recaptured	Method of Recapture	Identification
				Lower B-G		
Pumpkinseed	-*	18 Aug 74	L B-G	Mine Kill Cove	block net	clipped left pelvic
Pumpkinseed	-	18 Aug 74	L B-G	Mine Kill Cove	block net	clipped left pelvic
Pumpkinseed	-	18 Aug 74	L B-G	Mine Kill Cove	block net	tag (missing)
Pumpkinseed	-	21 Aug 74	L B-G	opposite gill net station 3	trap net	clipped left pelvic
Pumpkinseed	-	21 Aug 74	L B-G	opposite gill net station 3	trap net	clipped left pelvic
Pumpkinseed	-	21 Aug 74	L B-G	opposite gill net station 3	trap net	clipped left pelvic
Pumpkinseed	-	21 Aug 74	L B-G	opposite gill net station 3	trap net	clipped left pelvic
				Upper B-G		
Redbreast sunfish	8 Aug 74	12 Aug 74	trap net station 4	gill net station 6	gill net	tag #291
Pumpkinseed	6 Sep 74	11 Sep 74	trap net station 3	trap net station 2	trap net	tag #408
Pumpkinseed	-	11 Sep 74	U B-G	trap net station 2	trap net	clipped right pelvic
				Schoharie Creek		
Walleye	11 Jun 74	24 Jun 74	FSP 11	FSP 11	trap net	tag #101
Pumpkinseed	19 Jun 74	26 Jun 74	FSP 10	FSP 10	trap net	clipped right pectoral

* - Captured between 10 May and date of recapture.

Table 88. Fishes captured in a 500' section of Trib 101 below Route 30 on 24 July 1974 and estimated populations and biomass (DeLury Method).

Species	Number Captured	Size Range (mm)	Est. Number	Est. Biomass (g)
White sucker	18	81-254	21.3	762.1
Fantail darter	13	*	28.6	*
Blacknose dace	10	*	10.0	*
Longnose dace	9	37-69	**	**
Creek chub	4	73-95	6.0	30.5
Fallfish	3	80-89	3.3	16.5
Log perch	2	*	**	**
Carp	1	213	**	**
Pumpkinseed	1	100	**	**
Rock bass	1	145	**	**
Brook trout	1	250	**	**

* Fish escaped through mesh of live trap.

** Insufficient numbers collected for population estimate.

Table 89. Fishes captured in a 500' section of Cole Hollow Creek below Bear Ladder Road on 28 June 1974 and estimated populations and biomass (DeLury Method) in the 500' and 1180' sections.

Species	Number	Size Range (mm)	Estimated Number		Estimated Biomass (g)	
			500' section	1180' section	500' section	1180' section
Rainbow trout	83	99-215	86.6	204.4	1912.1	4512.6
Blacknose dace	10	51-85	10.1	23.8	36.5	86.4
Brook trout	2	108-110	2.0	4.7	24.1	56.9
Fantail darter	1	57	1.0	2.4	2.1	5.0

Table 90. Fishes captured in a 250' section of Trib 98A 235' above Schoharie Creek on 27 August 1974 and estimated populations and biomass (DeLury Method).

Species	Number Captured	Size Range (mm)	Est. Number	Est. Biomass (g)
Chain pickerel	23	91-148	23.0	161.8
White sucker	7	109-159	7.0	132.0
Brook trout	1	270	1.0	136.5
Creek chub	1	120	1.0	28.0
Fantail darter	1	27	1.0	<1.0
Johnny darter	1	35	1.0	<1.0

Table 91. Larvae captured in day and night tows from 15 April 1974 through 15 September 1974 in Lower and Upper B-G.

Station	Apr		May		Jun		Jul		Aug		Sep		Total		
	Day	Night[1]	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Station
							Lower B-G								
1 S[2]	-		1	1	-	-	5	-	1	2	-	-	7	3	13
1 M[3]	-		-	-	-	-	-	-	-	2	-	-	-	2	
1 D[4]	-		-	-	1	-	-	-	-	-	-	-	1	-	
2 S	-		-	2	-	-	-	3	-	3	-	-	-	8	13
2 M	-		-	2	-	-	-	2	1	-	-	-	1	4	
3 S	-		1	2	-	1	-	1	-	-	-	-	1	4	15
3 M	-		6	1	-	1	-	2	-	-	-	-	6	4	
4 S	-		1	4	-	7	-	6	-	-	-	-	1	17	18
Total	-		9	12	1	9	5	14	2	7	-	-	17	42	59
							Upper B-G								
5 S	-		-	1	-	2	1	40	-	19	-	-	1	62	93
5 M	-		-	1	-	3	-	13	-	9	-	-	-	26	
5 D	-		-	-	-	-	-	4	-	-	-	-	-	4	
6 S	-		1	-	-	4	6	104	-	27	-	-	7	135	170
6 M	-		-	-	-	2	-	13	-	6	-	1	-	22	
6 D	-		-	-	-	-	-	3	-	3	-	-	-	6	
7 S	-		10	2	1	3	16	154	-	44	-	-	27	203	230
Total	-		11	4	1	14	23	331	-	108	-	1	35	458	493
Grand Total	-		20	16	2	23	28	345	2	115	-	1	52	500	552

1. No night tows made in April; 2. S = 5'; 3. M = 10-25'; 4. D = greater than 25'.

Table 92. Volume (m^3) of water filtered through ichthyoplankton nets in day and night tows from 15 April through 15 September 1974 in Lower and Upper B-G.

Station	Apr		May		Jun		Jul		Aug		Sep		Total		
	Day	Night[1]	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Station
							Lower B-G								
1 S[2]	5.0		97.5	127.1	146.3	159.6	178.1	178.8	201.1	184.6	93.8	68.0	721.8	718.1	4383.2
1 M[3]	11.2		129.7	90.6	295.7	332.1	212.2	216.7	181.7	149.0	93.7	75.9	924.2	864.3	
1 D[4]	11.0		166.0	179.6	25.1	27.8	112.5	112.2	184.1	152.1	92.7	91.7	591.4	563.4	
2 S	10.4		160.1	112.5	164.6	163.3	186.7	189.1	221.5	192.9	98.0	82.0	841.3	739.8	4852.5
2 M	17.6		327.5	284.1	364.0	366.2	373.1	336.4	450.6	366.8	203.8	181.3	1736.6	1534.8	
3 S	13.8		132.1	110.6	151.0	172.9	169.7	191.1	212.7	188.2	96.8	96.4	776.1	759.2	2977.3
3 M	12.2		168.2	162.1	130.2	185.8	92.3	192.0	98.4	193.8	106.0	101.0	607.3	834.7	
4 S	12.6		114.7	123.0	153.2	182.0	188.1	184.3	239.0	204.8	114.1	96.3	821.7	790.4	1612.1
Total	93.8		1295.8	1189.6	1430.1	1589.7	1512.7	1600.6	1789.1	1632.2	898.9	792.6	7020.4	6804.7	13825.1
							Upper B-G								
5 S	29.2		92.9	128.7	164.2	143.8	230.1	203.5	162.3	175.5	98.7	89.2	777.4	740.7	4376.3
5 M	24.2		130.2	198.8	260.0	210.4	315.7	287.3	152.7	113.6	94.0	75.4	976.8	885.5	
5 D	35.6		127.7	181.9	24.1	28.7	92.5	95.0	135.6	108.8	83.1	82.9	498.6	497.3	
6 S	11.6		101.4	86.8	154.1	158.5	184.1	194.2	155.2	120.9	87.1	87.1	693.5	647.5	3917.6
6 M	25.2		106.5	106.4	236.7	188.6	272.3	272.6	148.4	93.4	88.7	76.0	877.8	737.0	
6 D	39.6		128.0	126.3	24.1	33.1	96.4	103.2	119.4	115.9	87.0	88.8	494.5	467.3	
7 S	24.0		112.3	98.4	150.3	129.5	222.7	179.9	151.5	130.3	91.3	84.9	752.1	623.0	1375.1
Total	189.4		799.0	927.3	1013.5	892.6	1413.8	1335.7	1025.1	858.4	629.9	584.3	5070.7	4598.3	9669.0
Grand Total	283.2		2094.8	2116.9	2443.6	2482.3	2926.5	2936.3	2814.2	2490.6	1528.7	1376.9	12091.1	11403.0	23494.1

1. No night tows made in April; 2. S = 5'; 3. M = 10-25'; 4. D = greater than 25'.

Table 93. Larvae per m^3 in day and night tows from 15 April through 15 September 1974 in Lower and Upper B-G.

Station	April		May		June		July		August		Sept		Total		
	Day	Night[1]	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Station
Lower B-G															
1 S[2]	-		0.0103	0.0079	-	-	0.0281	-	0.0050	0.0108	-	-	0.0097	0.0042	0.0030
1 M[3]	-		-	-	-	-	-	-	-	0.0134	-	-	-	0.0023	-
1 D[4]	-		-	-	0.0398	-	-	-	-	-	-	-	-	0.0017	-
2 S	-		-	0.0178	-	-	-	0.0159	-	0.0156	-	-	-	0.0108	0.0027
2 M	-		-	0.0070	-	-	-	0.0059	0.0022	-	-	-	0.0006	0.0026	-
3 S	-		0.0076	0.0181	-	0.0058	-	0.0052	-	-	-	-	0.0013	0.0050	0.0050
3 M	-		0.0357	0.0062	-	0.0054	-	0.0104	-	-	-	-	0.0099	0.0048	-
4 S	-		0.0087	0.0325	-	0.0385	-	0.0326	-	-	-	-	0.0021	0.0215	0.0112
Total[5]	-		0.0069	0.0101	0.0007	0.0057	0.0033	0.0087	0.0011	0.0043	-	-	0.0024	0.0062	0.0041
Upper B-G															
5 S	-		-	0.0078	-	0.0139	0.0043	0.1961	-	0.1087	-	-	0.0013	0.0840	0.0212
5 M	-		-	0.0056	-	0.0143	-	0.0452	-	0.0794	-	-	-	0.0293	-
5 D	-		-	-	-	-	-	0.0420	-		-	-	-	0.0080	-
6 S	-		0.0099	-	-	0.0253	0.0326	0.5263	-	0.2222	-	-	0.0101	0.5083	0.0435
6 M	-		-	-	-	0.0106	-	0.0476	-	0.0641	-	0.0132	-	0.0299	-
6 D	-		-	-	-	-	-	0.0291	-	0.0259	-	-	-	0.0128	-
7 S	-		0.0893	0.0203	0.0067	0.0231	0.0719	0.8333	-	0.3333	-	-	0.0358	0.3226	0.1667
Total	-		0.0138	0.0043	0.0010	0.0157	0.0163	0.2500	-	0.1266	-	0.0017	0.0069	0.1000	0.0510
Grand Total	-		0.0096	0.0076	0.0008	0.0093	0.0096	0.1176	0.0007	0.0461	-	0.0007	0.0043	0.0439	0.0235

1. No night tows made in April; 2. S = 5'; 3. M = 10-25'; 4. D = greater than 25';

5. Total = total volume of water filtered divided by total number of ichthyoplankton captured.

Table 94. Larval fishes captured from 15 April through 15 September 1974 in Lower and Upper B-G.

Species	Lower B-G	Upper B-G	Total
Lepomis sp.	20	419	439
Yellow perch	27	29	56
Unidentifiable	9	42	51
White sucker	2	2	4
Stonecat	1	0	1
Rock bass	0	1	1
Total	59	493	552

Table 95. Site totals for 3-minute day ichthyoplankton tows in April 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.
			Lower B-G		
1	1	5	5.0	-	-
1	1	25	11.2	-	-
1	1	50	11.0	-	-
2	1	5	10.4	-	-
2	1	20	17.6	-	-
3	1	5	13.8	-	-
3	1	10	12.2	-	-
4	1	5	12.6	-	-
			Upper B-G		
5	2	5	29.2	14.6	4.9
5	2	25	24.2	12.1	6.9
5	1	40	12.0	-	-
5	1	50	23.6	-	-
6	2	5	11.6	5.8	2.8
6	2	25	25.2	12.6	0.3
6	1	40	19.4	-	-
6	1	50	20.2	-	-
7	2	5	24.0	12.0	2.8

Table 96. Site totals for 3-minute day ichthyoplankton tows in May 1974 (1 May - 13 May) in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (mm)	S. D. for Vol.
			Lower B-G		
1	2	5	37.4	18.7	4.1
1	2	25	42.2	21.1	6.9
1	2	50	50.8	25.4	6.8
2	4	5	77.1	19.3	3.9
2	2	10	46.2	23.1	1.0
2	2	15	37.4	18.7	1.3
2	2	20	43.8	21.9	1.6
3	2	5	45.8	22.9	2.7
3	2	10	51.9	26.0	4.6
4	2	5	35.1	17.6	4.6
			Upper B-G		
5	2	5	40.8	20.4	0.0
5	2	25	46.0	23.0	1.4
5	2	50	48.2	24.1	7.9
6	2	5	41.8	20.9	3.0
6	2	25	48.4	24.2	4.1
6	2	50	48.5	24.3	4.0
7	2	5	38.6	19.3	2.8

Table 97. Site totals for 3-minute night ichthyoplankton tows in May 1974 (1 May - 13 May) in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.
			Lower B-G		
1	2	5	43.5	21.8	5.0
1	2	25	37.8	18.9	0.4
1	2	50	56.6	28.3	0.1
2	2	5	29.4	14.7	3.0
2	1	15	18.8	18.8	-
2	1	20	10.8	10.8	-
2	1	25	18.3	18.3	-
3	2	5	37.6	18.8	4.2
3	1	10	22.4	22.4	-
3	1	15	19.0	19.0	-
4	2	5	41.0	20.5	1.0
			Upper B-G		
5	4	5	69.1	17.3	4.4
5	4	25	71.6	17.9	3.2
5	4	50	99.5	24.9	3.8
6	2	5	31.7	15.9	0.5
6	2	25	39.5	19.8	0.1
6	2	50	43.9	22.0	5.4
7	2	5	34.2	17.1	3.8

Table 98. Site totals for 5-minute day ichthyoplankton tows in May 1974 (15 May - 31 May) in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured: Yellow perch	White sucker	Unidentifiable	Larvae per m^3
						Lower B-G						
1	3	5	60.1	20.0	2.1	15.3	306.0	0.0	1	-	-	0.0166
1	3	25	87.5	29.2	5.9	16.9	337.7	15.9	-	-	-	-
1	3	50	115.2	38.4	1.6	17.4	348.7	17.5	-	-	-	-
2	3	5	83.0	27.8	5.3	15.3	306.0	0.0	-	-	-	-
2	1	10	24.6	-	-	5.2	311.0	-	-	-	-	-
2	2	15	62.8	31.4	0.6	10.6	319.0	1.4	-	-	-	-
2	1	20	28.5	-	-	5.3	317.0	-	-	-	-	-
2	2	25	84.2	-	-	11.0	328.5	0.7	-	-	-	-
3	3	5	86.3	28.8	3.4	15.3	305.7	1.5	1	-	-	0.0116
3	1	10	38.9	-	-	5.2	312.0	-	-	-	-	-
3	2	15	77.4	38.7	3.5	10.5	313.5	2.1	4	-	2	0.0775
4	3	5	79.6	26.5	4.4	15.4	307.3	1.5	1	-	-	0.0126
						Upper B-G						
5	2	5	52.1	26.1	2.9	9.7	291.5	20.5	-	-	-	0.0192
5	2	25	84.2	42.1	2.7	11.0	329.5	2.8	-	-	-	-
5	2	50	79.5	39.8	7.7	11.6	349.0	5.7	-	-	-	-
6	2	5	59.6	29.8	0.7	10.3	307.5	3.5	1	-	-	0.0168
6	2	25	58.1	29.1	3.2	11.0	329.0	5.7	-	-	-	-
6	2	50	79.5	39.8	7.7	11.8	353.5	4.9	-	-	-	-
7	2	5	73.7	36.9	13.1	10.2	306.0	0.0	10	-	-	0.1351

Table 99. Site totals for 5-minute night ichthyoplankton tows in May 1974 (15 May - 31 May) in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured: Yellow perch	White sucker	Unidentifiable	Larvae per m3
						Lower B-G						
1	3	5	80.6	26.9	2.6	15.6	311.7	5.5	1	-	-	0.0124
1	3	25	60.8	20.3	10.0	16.6	332.0	3.0	-	-	-	-
1	3	50	123.0	41.0	5.5	17.6	351.0	7.9	-	-	-	-
2	3	5	83.1	27.9	3.7	15.5	309.0	2.5	2	-	-	0.0239
2	3	15	109.0	36.3	3.3	16.1	321.0	1.0	-	-	-	-
2	3	25	127.2	42.4	5.1	16.8	336.0	5.3	2	-	-	0.0157
3	3	5	73.0	24.3	9.1	15.4	308.7	1.5	2	-	-	0.0274
3	3	15	120.7	40.2	3.7	16.2	323.7	1.5	1	-	-	0.0083
4	3	5	82.0	27.3	2.7	15.5	310.7	3.8	2	1	1	0.0488
						Upper B-G						
5	2	5	59.6	26.0	5.9	10.3	308.0	2.8	1	-	-	0.0168
5	2	25	127.2	42.4	5.2	11.0	330.5	4.9	1	-	-	0.0079
5	2	50	82.4	41.2	5.1	11.5	345.0	2.8	-	-	-	-
6	2	5	55.1	27.6	3.5	10.2	207.0	1.4	-	-	-	-
6	2	25	66.9	33.5	2.8	10.9	326.0	4.2	-	-	-	-
6	2	50	82.4	41.2	5.1	11.7	349.5	0.7	-	-	-	-
7	2	5	64.2	32.1	4.1	10.3	308.0	2.8	2	-	-	0.0312

Table 100. Species totals for 5-minute day and night ichthyoplankton tows in May 1974 in Lower and Upper B-G.

Species	Number Captured	Size Range (mm)	Mean Length (mm)	Standard Deviation
		Lower B-G		
Yellow perch	17	5.1-7.2	6.3*	0.6
Unidentifiable	3	4.9-6.2	5.4	0.7
White sucker	1	-	14.3	-
		Upper B-G		
Yellow perch	15	5.0-7.3	6.1*	0.7

* significantly different at the 0.4 α level from t-test

Table 101. Site totals for 5-minute day ichthyoplankton tows in June 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured: Yellow perch	Total Larvae Captured: White sucker	Larvae per m^3
						Lower B-G					
1	4	5	146.3	36.6	13.6	20.6	309.5	1.9	0	0	-
1	3	15	139.7	46.6	10.4	17.1	342.7	3.2	0	0	-
1	4	25	156.0	39.0	14.3	41.2	353.1	24.6	0	0	-
1	1	50	25.1	25.1	-	5.8	346.0	-	1	0	0.0398
2	4	5	164.6	41.2	14.2	20.6	309.5	2.5	0	0	-
2	4	15	181.5	45.4	14.5	21.8	326.3	8.0	0	0	-
2	4	25	182.5	45.6	11.4	22.4	336.5	10.4	0	0	-
3	4	5	151.0	37.8	17.9	20.3	304.5	17.1	0	0	-
3	3	15	130.2	43.4	8.9	16.2	323.3	8.1	0	0	-
4	4	5	153.2	38.3	11.7	20.6	309.5	2.1	0	0	-
						Upper B-G					
5	4	5	164.2	41.1	18.3	20.9	313.5	5.6	0	0	-
5	2	15	106.4	53.2	0.1	11.1	331.5	4.9	0	0	-
5	4	25	153.6	38.4	16.1	23.0	344.5	14.7	0	0	-
5	1	50	24.1	24.1	-	5.7	340.0	-	0	0	-
6	4	5	154.1	38.5	14.0	20.7	310.5	3.9	0	0	-
6	2	15	92.0	46.0	3.5	11.4	342.0	12.7	0	0	-
6	4	25	144.7	36.2	18.4	22.8	342.5	12.6	0	0	-
6	1	50	24.1	24.1	-	5.6	337.0	-	0	0	-
7	4	5	150.3	37.6	15.4	20.9	313.3	6.2	1	0	0.0067

Table 102. Site totals for 5-minute night ichthyoplankton tows in June 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured: Yellow perch	Total Larvae Captured: White sucker	Total Larvae Captured: Unidentifiable	Larvae per m^3
						Lower B-G						
1	4	5	159.6	39.9	13.0	20.9	313.3	3.0	0	0	0	-
1	3	15	144.1	48.0	10.7	17.1	342.7	3.2	0	0	0	-
1	4	25	188.0	47.0	16.7	24.1	361.0	31.9	0	0	0	-
1	1	50	27.8	27.8	-	5.8	346.0	-	0	0	0	-
2	4	5	163.3	40.8	17.4	20.9	313.0	3.4	0	0	0	-
2	4	15	168.7	42.2	13.1	22.0	330.0	9.8	0	0	0	-
2	4	25	197.5	49.4	13.2	22.8	342.3	15.9	0	0	0	-
3	4	5	172.9	43.2	19.2	20.9	313.3	3.8	0	0	1	0.0058
3	4	15	185.8	46.5	16.8	21.9	328.8	27.0	1	0	0	0.0054
4	4	5	182.0	45.5	15.7	21.0	315.0	4.5	7	0	0	0.0385
						Upper B-G						
5	4	5	143.8	36.0	13.4	20.8	312.5	7.9	1	1	0	0.0130
5	2	15	62.5	31.3	1.1	11.1	332.5	3.5	1	0	0	0.0160
5	4	25	147.9	37.0	8.3	23.1	346.3	17.9	1	1	0	0.0135
5	1	50	28.7	28.7	-	5.7	340.0	-	0	0	0	-
6	4	5	158.5	39.6	8.5	20.9	313.3	6.1	4	0	0	0.0253
6	2	15	79.7	39.9	2.8	11.0	329.5	6.4	0	0	0	-
6	3	25	108.9	36.3	6.2	17.1	341.0	18.1	2	0	0	0.0183
6	1	50	33.1	33.1	-	5.7	340.0	-	0	0	0	-
7	3	5	129.5	43.2	15.2	15.6	312.0	5.2	3	0	0	0.0243

Table 103. Species totals for 5-minute day and night ichthyoplankton tows in June 1974 in Lower and Upper B-G.

Species	Number Captured	Size Range (mm)	Mean Length (mm)	Standard Deviation
		Lower B-G		
Yellow perch	9	7.1-21.4	12.5**	4.2
White sucker*	2	12.3-13.1	12.7	0.6
Unidentifiable	1	-	-	-
		Upper B-G		
Yellow perch	13	6.9-21.1	14.3**	5.1
White sucker	2	-	13.2	0.0

* Captured by dip net in Mine Kill Cove

** significantly different at the 0.4 α level from t-test

Table 104. Site totals for 5-minute day ichthyoplankton tows in July 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured: *Lepomis* sp.	Total Larvae Captured: Unidentifiable	Larvae per m^3
						Lower B-G					
1	4	5	178.1	44.5	6.0	20.8	311.8	5.7	5	0	0.0281
1	1	15	47.1	47.1	-	5.5	327.0	-	0	0	-
1	4	25	165.1	41.3	4.7	22.4	336.5	3.1	0	0	-
1	3	50	112.5	37.5	5.7	22.8	342.5	5.0	0	0	-
2	4	5	186.7	46.7	6.1	20.6	308.8	1.7	0	0	-
2	4	15	180.8	45.2	3.2	21.7	325.0	2.4	0	0	-
2	4	25	192.3	48.1	3.9	22.5	338.0	9.0	0	0	-
3	4	5	169.7	42.4	4.6	20.6	308.5	2.4	0	0	-
3	2	15	92.3	46.2	1.6	10.9	325.5	.7	0	0	-
4	4	5	188.1	47.0	7.6	20.7	310.3	2.4	0	0	-
						Upper B-G					
5	5	5	230.1	46.0	6.1	25.8	310.3	1.8	1	0	0.0043
5	2	15	97.1	48.6	11.4	28.2	338.2	5.5	0	0	-
5	5	25	218.6	43.7	8.1	11.1	333.0	9.9	0	0	-
5	3	50	92.5	30.8	2.4	17.0	340.0	2.0	0	0	-
6	5	5	184.1	48.6	9.0	26.1	313.2	1.9	6	0	0.0326
6	2	15	88.3	44.2	13.9	11.1	331.5	4.9	0	0	-
6	5	25	184.0	36.8	7.9	28.2	338.4	4.2	0	0	-
6	3	50	96.4	32.1	3.9	16.9	338.7	1.5	0	0	-
7	5	5	222.7	44.5	7.2	25.9	310.4	1.8	15	1	0.0901

Table 105. Site totals for 5-minute night ichthyoplankton tows in July 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S. D. for Vol.	Total Time (min.)	Mean Time (sec.)	S. D. for Time	Total Larvae Captured A	B	C	D	E	Larvae per m^3
						Lower B-G								
1	4	5	178.8	44.7	5.4	20.8	312.0	2.4	0	0	0	0	0	-
1	1	15	46.2	46.2	-	5.4	323.0	-	0	0	0	0	0	-
1	4	25	170.5	42.6	4.4	22.7	341.0	7.7	0	0	0	0	0	-
1	3	50	112.2	37.4	6.4	17.6	351.7	7.6	0	0	0	0	0	-
2	4	5	189.1	47.3	1.6	20.8	311.5	3.0	3	0	0	0	0	0.0159
2	4	15	163.6	40.9	3.1	21.7	326.0	3.6	1	0	0	0	0	0.0061
2	4	25	172.8	40.9	5.4	22.9	344.0	3.9	0	1	0	0	0	0.0058
3	4	5	191.1	47.8	3.2	20.8	312.0	1.6	0	0	1	0	0	0.0052
3	4	15	192.0	48.0	1.4	21.7	325.0	3.9	1	1	0	0	0	0.0104
4*	4	5	184.3	46.1	4.8	21.0	315.3	4.7	3	1	0	1	1	0.0326

* single juvenile dace was also captured at this site.

						Upper B-G								
5*	5	5	203.5	40.7	4.1	25.8	315.3	3.5	36	4			0	0.2128
5	2	15	88.7	44.4	5.9	11.0	329.5	.7	2	0			0	0.0225
5	5	25	198.6	39.7	5.8	27.7	332.4	7.9	8	3			0	0.0552
5	3	50	95.0	31.7	1.8	16.9	337.0	14.5	4	0			0	0.0420
6	5	5	194.2	38.8	7.5	26.1	313.2	7.0	104	0			0	0.5556
6	2	15	76.3	38.2	2.9	10.8	324.5	.7	3	0			0	0.0394
6	5	25	196.3	39.3	5.1	28.3	339.0	7.3	7	3			0	0.0510
6	3	50	103.2	34.4	7.9	17.0	340.7	20.6	3	0			0	0.0291
7	5	5	179.9	36.0	5.9	26.0	311.6	2.1	133	20			1	0.8333

* single juvenile log perch was captured at this site.

A = *Lepomis sp.* B = Unidentifiable C = White sucker D = Stonecat E = Yellow perch

Table 106. Species totals for 5-minute day and night ichthyoplankton tows in July 1974 in Lower and Upper B-G.

Species	Number Captured	Size Range (mm)	Mean Length (mm)	Standard Deviation
		Lower B-G		
Lepomis sp.	13	5.0-11.9	7.3*	2.7
Unidentifiable	3	-	-	-
Yellow perch	1	15.1	-	-
Stonecat	1	16.0	-	-
White sucker	1	4.8	-	-
Dace - juvenile	1	29.1	-	-
		Upper B-G		
Lepomis sp.	322	3.3-19.2	8.4*	2.9
Unidentifiable	31	-	-	-
Yellow perch	1	9.5	-	-
Log perch - juvenile	1	21.1	-	-

* significantly different at the 0.2 α level from t-test

Table 107. Site totals for 5-minute day ichthyoplankton tows in August 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S.D. for Vol.	Total Time (min.)	Mean Time (sec.)	S.D. for Time	Total Larvae Captured: *Lepomis sp.*	Total Larvae Captured: Unidentifiable	Larvae per m^3
						Lower B-G					
1	5	5	201.1	40.2	6.5	26.0	311.6	2.3	1	0	0.0050
1	5	25	181.7	36.3	7.1	28.1	337.2	8.6	0	0	-
1	5	50	184.1	36.8	7.9	28.5	342.4	13.0	0	0	-
2	5	5	221.5	44.3	0.8	26.0	312.2	2.8	0	0	-
2	5	15	216.4	43.3	6.5	27.0	324.0	3.3	0	0	-
2	5	25	234.2	46.8	7.5	28.1	337.6	4.6	0	1	0.0043
3	5	5	212.7	42.5	4.5	25.9	311.0	2.7	0	0	-
3	2	15	98.4	49.2	0.7	11.0	328.5	4.9	0	0	-
4	5	5	239.0	47.8	3.3	26.0	311.8	3.4	0	0	-
						Upper B-G					
5	4	5	162.3	40.6	8.7	20.7	309.8	2.1	0	0	-
5	4	25	152.7	38.2	5.8	22.7	339.8	1.0	0	0	-
5	4	50	135.6	33.9	3.9	23.0	345.5	2.6	0	0	-
6	4	5	155.2	38.8	7.0	20.6	309.5	1.9	0	0	-
6	4	25	148.4	37.1	6.4	22.8	341.3	3.9	0	0	-
6	4	50	119.4	29.9	3.9	23.0	345.3	6.2	0	0	-
7	4	5	151.5	37.9	3.9	20.7	309.8	1.3	0	0	-

Table 108. Site totals for 5-minute night ichthyoplankton tows in August 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S.D. for Vol.	Total Time (min.)	Mean Time (sec.)	S.D. for Time	Total Larvae Captured: *Lepomis* sp.	Total Larvae Captured: Rock bass	Total Larvae Captured: Unidentifiable	Larvae per m^3
						Lower B-G						
1	4	5	184.6	46.2	3.6	20.8	312.5	1.3	2	0	0	0.0108
1	4	25	149.0	37.5	5.2	23.0	344.8	4.6	2	0	0	0.0134
1	4	50	152.1	38.0	7.6	23.8	357.3	16.0	0	0	0	-
2	4	5	192.9	48.2	5.2	20.9	314.0	2.2	2	0	1	0.0156
2	4	15	184.9	46.2	3.9	22.1	331.8	3.1	0	0	0	-
2	4	25	181.9	45.5	6.0	23.3	349.5	8.0	0	0	0	-
3	4	5	188.2	47.1	3.7	20.9	313.3	2.2	0	0	0	-
3	4	15	193.8	48.5	6.1	22.1	331.5	2.4	0	0	0	-
4	4	5	204.8	51.2	8.5	20.9	313.5	1.7	0	0	0	-
						Upper B-G						
5	4	5	175.5	43.9	4.5	20.6	309.0	1.8	18	0	1	0.1087
5	3	25	113.6	37.9	5.6	17.2	343.3	2.3	6	0	3	0.0794
5	3	50	108.8	36.3	2.5	17.5	350.3	15.3	0	0	0	-
6	3	5	120.9	40.3	3.8	15.4	308.0	2.0	24	0	3	0.2222
6	3	25	93.4	31.1	5.5	17.0	339.3	6.0	4	1	1	0.0641
6	3	50	115.9	38.6	7.6	17.2	344.0	17.1	3	0	0	0.0259
7	3	5	130.3	43.4	8.5	15.6	312.7	6.4	41	0	3	0.3333

Table 109. Species totals for 5-minute day and night ichthyoplankton tows in August 1974 in Lower and Upper B-G.

Species	Number Captured	Size Range (mm)	Mean Length (mm)	Standard Deviation
		Lower B-G		
Lepomis sp.	7	6.7-13.8	10.2*	2.1
Unidentifiable	2	-	-	-
		Upper B-G		
Lepomis sp.	96	6.7-31.7	13.9*	3.7
Unidentifiable	11	-	-	-
Rock bass	1	-	16.3	-

* significantly different at the 0.02 α level from t-test

Table 110. Site totals for 5-minute day ichthyoplankton tows in September 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S.D. for Vol.	Total Time (min.)	Mean Time (sec.)	S.D. for Time	Total Larvae Captured	Larvae per m^3
					Lower B-G					
1	2	5	93.8	46.9	0.1	10.4	311.0	1.4	0	-
1	2	25	93.7	46.9	0.1	11.1	333.0	5.7	0	-
1	2	50	92.7	46.4	2.8	11.2	336.5	14.8	0	-
2	2	5	98.0	49.0	0.1	10.4	312.0	0.0	0	-
2	2	15	101.6	50.8	0.4	10.8	323.5	2.1	0	-
2	2	25	102.2	51.1	0.6	11.3	337.5	3.5	0	-
3	2	5	96.8	48.4	2.0	10.4	312.5	0.7	0	-
3	2	15	106.0	53.0	1.4	10.9	326.5	6.4	0	-
4	2	5	114.1	57.1	1.6	10.4	312.5	0.7	0	-
					Upper B-G					
5	2	5	98.7	49.4	0.1	10.4	311.3	2.5	0	-
5	2	25	94.0	47.0	10.2	10.9	328.0	21.2	0	-
5	2	50	83.1	41.6	9.8	11.5	344.0	4.2	0	-
6	2	5	87.1	43.6	2.1	10.3	310.3	2.5	0	-
6	2	25	88.7	44.4	8.4	11.4	342.5	0.7	0	-
6	2	50	87.0	43.5	2.0	11.5	344.0	4.2	0	-
7	2	5	91.3	45.7	4.6	10.4	311.0	1.4	0	-

Table 111. Site totals for 5-minute night ichthyoplankton tows in September 1974 in Lower and Upper B-G.

Station No.	No. of Tows	Depth of Tow (ft)	Total Vol. Filtered (m^3)	Mean Vol. Filtered (m^3)	S.D. for Vol.	Total Time (min.)	Mean Time (sec.)	S.D. for Time	Total Larvae Captured *Lepomis sp.*	Larvae per m^3
					Lower B-G					
1	2	5	68.0	34.0	4.7	10.4	313.0	1.4	0	-
1	2	25	75.9	38.0	0.9	11.6	348.0	0.0	0	-
1	2	50	91.7	45.9	3.2	11.7	351.5	2.1	0	-
2	2	5	82.0	41.0	9.9	10.5	314.0	1.4	0	-
2	2	15	87.9	44.0	2.6	11.0	332.0	0.0	0	-
2	2	25	93.4	46.7	3.1	11.6	348.0	5.7	0	-
3	2	5	96.4	48.2	2.0	10.5	313.5	0.7	0	-
3	2	15	101.0	50.5	2.0	11.2	335.0	2.8	0	-
4	2	5	96.3	48.2	3.7	10.5	314.5	2.1	0	-
					Upper B-G					
5	2	5	89.2	44.6	5.1	10.4	310.5	2.1	0	-
5	2	25	75.4	37.7	1.6	11.3	338.0	0.0	0	-
5	2	50	82.9	41.5	3.9	11.3	339.0	0.0	0	-
6	2	5	87.1	43.6	6.3	10.5	315.0	5.7	0	-
6	2	25	76.0	38.0	7.5	11.4	342.5	4.9	1	0.0132
6	2	50	88.8	44.4	3.7	11.2	337.0	5.7	0	-
7	2	5	84.9	42.3	7.8	10.4	311.0	1.4	0	-

Table 112. Dates a creel census was conducted from 15 June through 15 September 1974 in Lower B-G.

Weekdays		Weekend Days	
June			
20 Jun	Thursday	16 Jun	Sunday
25 Jun	Tuesday	23 Jun	Sunday
		29 Jun	Saturday
July			
1 Jul	Monday	7 Jul	Sunday
10 Jul	Wednesday	13 Jul	Saturday
18 Jul	Thursday	21 Jul	Sunday
30 Jul	Tuesday	27 Jul	Saturday
August			
1 Aug	Thursday	3 Aug	Saturday
7 Aug	Wednesday	11 Aug	Sunday
12 Aug	Monday	18 Aug	Sunday
20 Aug	Tuesday	24 Aug	Saturday
		31 Aug	Saturday
September			
2 Sep	Monday	7 Sep	Saturday
11 Sep	Wednesday	15 Sep	Sunday

Table 113. Dates a creel census was conducted from 15 June through 15 September 1974 in Schoharie Creek.

Weekdays		Weekend Days	
June			
19 Jun	Wednesday	15 Jun	Saturday
28 Jun	Friday	22 Jun	Saturday
		30 Jun	Sunday
July			
3 Jul	Wednesday	6 Jul	Saturday
15 Jul	Monday	14 Jul	Sunday
19 Jul	Friday	20 Jul	Saturday
23 Jul	Tuesday	28 Jul	Sunday
August			
2 Aug	Friday	4 Aug	Sunday
5 Aug	Monday	10 Aug	Saturday
14 Aug	Wednesday	17 Aug	Saturday
22 Aug	Thursday	25 Aug	Sunday
27 Aug	Tuesday		
September			
5 Sep	Thursday	1 Sep	Sunday
9 Sep	Monday	8 Sep	Sunday
		14 Sep	Saturday

Table 114. Summary of creel census data collected from 15 June through 15 September 1974 in 264 hours in Lower B-G.

	Boat Fishermen	Shore Fishermen	Total
Fishermen Counted:			
Resident	0	3 (7.9%)	3 (5.6%)
Non-resident	16 (100%)	35 (92.1%)	51 (94.4%)
Total	16	38	54
Per Hour	0.06	0.14	0.20
Fish Caught:			
Brown bullhead	12 (48.0%)	12 (35.3%)	24 (40.7%)
Carp	3 (12.0%)	8 (23.5%)	11 (18.6%)
Largemouth bass	5 (20.0%)	4 (11.8%)	9 (15.3%)
Pumpkinseed	1 (4.0%)	5 (14.7%)	6 (10.2%)
Rock bass	2 (8.0%)	1 (2.9%)	3 (5.1%)
Smallmouth bass	0	3 (8.8%)	3 (5.1%)
Yellow perch	1 (4.0%)	1 (2.9%)	2 (3.4%)
Chain pickerel	1 (4.0%)	0	1 (1.7%)
Total	25	34	59
Per Hour	0.57	0.44	0.49
Hours Fished:			
Total	44.0	77.5	121.5
Per Fisherman	2.8	2.0	2.3

Table 115. Creel census data by month collected from 15 June through 15 September 1974 in 264 hours in Lower B-G.

	Boat Fishermen	Shore Fishermen	Total	Boat Fishermen	Shore Fishermen	Total
	June 1974 60 Survey Hours			July 1974 72 Survey Hours		
Fishermen Counted:						
Resident	0	3 (30%)	3 (20%)	0	0	0
Non-resident	5 (100%)	7 (70%)	12 (80%)	2 (100%)	7 (100%)	9 (100%)
Total	5	10	15	2	7	9
Per Hour	0.08	0.17	0.25	0.03	0.10	0.13
Fish Caught:						
Brown bullhead	6 (66.7%)	3 (33.3%)	9 (50.0%)	0	3 (18.8%)	3 (13.6%)
Carp	2 (22.2%)	1 (11.1%)	3 (16.7%)	0	6 (37.5%)	6 (27.3%)
Largemouth bass	0	0	0	5 (83.3%)	4 (25.0%)	9 (40.9%)
Pumpkinseed	1 (11.1%)	4 (44.4%)	5 (27.8%)	0	1 (6.3%)	1 (4.6%)
Rock bass	0	1 (11.1%)	1 (5.6%)	0	0	0
Smallmouth bass	0	0	0	0	1 (6.3%)	1 (4.6%)
Yellow perch	0	0	0	0	1 (6.3%)	1 (4.6%)
Chain pickerel	0	0	0	1 (16.7%)	0	1 (4.6%)
Total	9	9	18	6	16	22
Per Hour	0.82	0.37	0.51	1.00	0.56	0.64
Hours Fished:						
Total	11.0	24.5	35.5	6.0	28.5	34.5
Per Fisherman	2.2	2.4	2.4	3.0	4.1	3.8

Table 115. (Continued). Creel census, Lower B-G

	Boat Fishermen	Shore Fishermen	Total	Boat Fishermen	Shore Fishermen	Total
	August 1974 96 Survey Hours			September 1974 36 Survey Hours		
Fishermen Counted:						
Resident	0	0	0	0	0	0
Non-resident	4 (100%)	21 (100%)	25 (100%)	5 (100%)	0	5 (100%)
Total	4	21	25	5	0	5
Per Hour	0.04	0.22	0.26	0.14	0.00	0.14
Fish Caught:						
Brown bullhead	6 (60.0%)	6 (66.7%)	12 (63.2%)	0	0	0
Carp	1 (101.%)	1 (11.1%)	2 (10.5%)	0	0	0
Largemouth bass	0	0	0	0	0	0
Pumpkinseed	0	0	0	0	0	0
Rock bass	2 (20.0%)	0	2 (10.5%)	0	0	0
Smallmouth bass	0	2 (22.2%)	2 (10.5%)	0	0	0
Yellow perch	1 (10.0%)	0	1 (5.3%)	0	0	0
Chain pickerel	0	0	0	0	0	0
Total	10	9	19	0	0	0
Per Hour	0.48	0.37	0.42	0.00	0.00	0.00
Hours Fished:						
Total	21.0	24.5	45.5	6.0	0.0	6.0
Per Fisherman	5.3	1.2	1.8	1.2	0.0	1.2

Table 116. Creel census data collected in 1973 (1 August - 30 September) and 1974 (1 August - 15 September) from Lower B-G.

	Boat Fishermen	Shore Fishermen	Total	Boat Fishermen	Shore Fishermen	Total
	1 August 1973 - 30 September 1973 156 Survey Hours			1 August 1974 - 15 September 1974 132 Survey Hours		
Fishermen Counted:						
Resident	4 (26.7%)	2 (2.7%)	6 (6.8%)	0	0	0
Non-resident	11 (73.2%)	71 (97.3%)	82 (93.2%)	9 (100%)	21 (100%)	30 (100%)
Total	15	73	88	9	21	30
Fish Caught:						
Brown bullhead	9 (37.5%)	17 (26.6%)	26 (29.5%)	6 (60.0%)	6 (66.7%)	12 (63.2%)
Largemouth bass	8 (33.3%)	2 (3.1%)	10 (11.4%)	0	0	0
Smallmouth bass	6 (25.0%)	19 (29.7%)	25 (28.4%)	0	2 (22.2%)	2 (10.5%)
Rock bass	1 (4.2%)	0	1 (1.1%)	2 (20.0%)	0	2 (10.5%)
Carp	0	2 (3.1%)	2 (2.3%)	1 (10.0%)	1 (11.1%)	2 (10.5%)
Yellow perch	0	0	0	1 (10.0%)	0	1 (5.3%)
Pumpkinseed	0	21 (32.8%)	21 (23.9%)	0	0	0
Fallfish	0	2 (3.1%)	2 (23.%)	0	0	0
Redbreast sunfish	0	1 (1.6%)	1 (1.1%)	0	0	0
Total	24	64	88	10	9	19
Per Hour	0.39	0.49	0.46	0.37	0.37	0.37
Hours Fished:						
Total	61.0	131.1	192.1	27.0	24.5	51.5
Per Fisherman	4.1	1.8	2.2	3.0	1.2	1.7

Table 117. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) from Schoharie Creek between Schoharie Reservoir and the iron bridge north of Breakabeen.

	1973 276 Survey Hours	1974 312 Survey Hours
Fishermen Counted:		
Resident	31 (12.4%)	22 (23.2%)
Non-resident	219 (87.6%)	73 (76.8%)
Total	250	95
Per Hour	0.80	0.34
Fish Caught:		
Rock bass	65 (28.6%)	11 (9.7%)
Smallmouth bass	62 (27.3%)	8 (7.1%)
Pumpkinseed	42 (18.5%)	14 (12.4%)
Fallfish	10 (4.4%)	1 (0.9%)
Carp	9 (4.0%)	7 (6.2%)
Largemouth bass	7 (3.1%)	7 (6.2%)
Yellow perch	6 (2.6%)	7 (6.2%)
Chain pickerel	5 (2.2%)	1 (0.9%)
Redbreast sunfish	5 (2.2%)	0 (0.0%)
Bass sp.	4 (1.8%)	0 (0.0%)
Walleye	3 (1.3%)	6 (5.3%)
Brown bullhead	3 (1.3%)	50 (44.2%)
Northern redhorse	2 (0.9%)	0 (0.0%)
White sucker	2 (0.9%)	0 (0.0%)
Bluegill	1 (0.4%)	0 (0.0%)
Log perch	1 (0.4%)	0 (0.0%)
Rainbow trout	0 (0.0%)	1 (0.9%)
Total	227	113
Per Hour	0.79	0.81
Hours Fished:		
Total	287.2	139.0
Per Fisherman	1.2	1.5

Table 118. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Schoharie Reservoir and Lower B-G.

Date Survey Hours	Jun 74 60	Jul 74 72	Aug 74 96	Sep 74 48	Jun-Sep 74 276	Jul-Sep 73 312
Fishermen Counted:						
Resident	4 (44.4%)	7 (50.0%)	2 (9.1%)	1 (33.3%)	14 (29.2%)	10 (8.2%)
Non-resident	5 (55.6%)	7 (50.0%)	20 (90.9%)	2 (66.7%)	34 (70.8%)	112 (91.8%)
Total	9	14	22	3	48	122
Per Hour	0.15	0.19	0.23	0.06	0.17	0.39
Fish Caught:						
Brown bullhead	0	8 (47.1%)	42 (77.8%)	0	50 (64.1%)	2 (1.7%)
Pumpkinseed	4 (57.1%)	0	3 (5.6%)	0	7 (9.0%)	37 (31.1%)
Smallmouth bass	1 (14.3%)	1 (5.9%)	5 (9.3%)	0	7 (9.0%)	26 (21.9%)
Rock bass	0	2 (11.8%)	3 (5.6%)	0	5 (6.4%)	34 (28.6%)
Largemouth bass	1 (14.3%)	2 (11.8%)	0	0	3 (3.9%)	6 (5.0%)
Carp	0	3 (17.6%)	0	0	3 (3.9%)	0
Fallfish	0	0	1 (1.9%)	0	1 (1.3%)	0
Rainbow trout	1 (14.3%)	0	0	0	1 (1.3%)	0
Yellow perch	0	1 (5.9%)	0	0	1 (1.3%)	6 (5.0%)
Redbreast sunfish	0	0	0	0	0	4 (3.4%)
Bass sp.	0	0	0	0	0	3 (2.5%)
Log perch	0	0	0	0	0	1 (0.8%)
Total	7	17	54	0	78	119
Per Hour	0.58	0.79	1.17	0.00	0.96	0.93
Hours Fished:						
Total	12.0	21.5	45.5	2.0	81.0	128.6
Per Fisherman	1.3	1.5	2.1	0.7	1.7	1.1

Table 119. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen (the area to be inundated by the proposed Breakabeen facility).

Date Survey Hours	Jun 74 60	Jul 74 72	Aug 74 96	Sep 74 48	Jun-Sep 74 276	Jul-Sep 73 312
Fishermen Counted:						
Resident	0	1 (50.0%)	0	0	1 (16.7%)	16 (16.8%)
Non-resident	0	1 (50.0%)	2 (100%)	2 (100%)	5 (83.3%)	79 (83.2%)
Total	0	2	2	2	6	95
Per Hour	0.00	0.03	0.02	0.04	0.02	0.30
Fish Caught:						
Carp	0	3 (100%)	0	0	3 (100%)	9 (9.8%)
Rock bass	0	0	0	0	0	30 (32.6%)
Smallmouth bass	0	0	0	0	0	27 (29.3%)
Fallfish	0	0	0	0	0	7 (7.6%)
Pumpkinseed	0	0	0	0	0	5 (5.4%)
Chain pickerel	0	0	0	0	0	2 (2.2%)
Walleye	0	0	0	0	0	2 (2.2%)
Northern redhorse	0	0	0	0	0	2 (2.2%)
White sucker	0	0	0	0	0	2 (2.2%)
Bass sp.	0	0	0	0	0	1 (1.1%)
Brown bullhead	0	0	0	0	0	1 (1.1%)
Largemouth bass	0	0	0	0	0	1 (1.1%)
Yellow perch	0	0	0	0	0	1 (1.1%)
Redbreast sunfish	0	0	0	0	0	1 (1.1%)
Bluegill	0	0	0	0	0	1 (1.1%)
Total	0	3	0	0	3	92
Per Hour	0.00	1.00	0.00	0.00	0.43	0.97
Hours Fished:						
Total	0.0	3.0	2.0	2.0	7.0	108.8
Per Fisherman	0.0	1.5	1.0	1.0	1.2	1.2

Table 120. Creel census data collected in 1973 (1 July - 30 September) and 1974 (15 June - 15 September) in Schoharie Creek between Lower B-G and the iron bridge north of Breakabeen (the area which will not be inundated by the proposed Breakabeen facility).

Date Survey Hours	Jun 74 60	Jul 74 72	Aug 74 96	Sep 74 48	Jun-Sep 74 276	Jul-Sep 73 312
Fishermen Counted:						
Resident	0	1 (9.1%)	6 (46.2%)	0	7 (17.0%)	5 (15.2%)
Non-resident	14 (100%)	10 (90.9%)	7 (53.8%)	3 (100%)	34 (82.9%)	28 (84.8%)
Total	14	11	13	3	41	33
Per Hour	0.23	0.15	0.14	0.06	0.15	0.11
Fish Caught:						
Pumpkinseed	6 (31.6%)	1 (10.0%)	0	0	7 (21.9%)	0
Walleye	5 (26.3%)	1 (10.0%)	0	0	6 (18.8%)	1 (5.9%)
Rock bass	3 (15.8%)	2 (20.0%)	1 (33.3%)	0	6 (18.8%)	1 (5.9%)
Yellow perch	4 (21.1%)	1 (10.0%)	1 (33.3%)	0	6 (18.8%)	0
Largemouth bass	0	4 (40.0%)	0	0	4 (12.5%)	0
Smallmouth bass	0	1 (10.0%)	0	0	1 (3.1%)	9 (52.9%)
Chain pickerel	0	0	1 (33.3%)	0	1 (3.1%)	3 (17.7%)
Carp	1 (5.3%)	0	0	0	1 (3.1%)	0
Fallfish	0	0	0	0	0	3 (17.7%)
Total	19	10	3	0	32	17
Per Hour	1.36	0.50	0.23	0.00	0.65	0.34
Hours Fished:						
Total	14.0	22.0	13.0	2.0	51.0	49.8
Per Fisherman	1.0	2.0	1.0	0.7	1.2	1.5

Table 121. Descriptions of water chemistry stations sampled in 1974 in Lower and Upper B-G, Schoharie Creek, and three tributaries.

Station	Description
Schoharie Creek	
1 (run)	Approximately 70 feet upstream from the iron bridge at Prattsville a few feet upstream from the U.S.G.S. gauging station. The banks are steep and contain large pines and hardwoods, saplings, brush, and grasses. The bottom is boulder. The elevation is 1240 feet above sea level.
2 (pool)	Approximately 50 feet upstream from the iron bridge at Gilboa on the south shore. The banks are steep and heavily forested with mixed hardwoods on the north shore; the south shore is a gradual incline with heavily forested mixed hardwoods and some open areas of grass. The bottom is boulder. The elevation is 970 feet.
3 (pool)	Approximately 150 yards from the Lower B-G spillway and 60 feet from the end of the cement walls at the base of the spillway. The station is along the east shore, which is rocky with a 40-ft rise up to a grassy plateau. The pool is deep, with a maximum depth of 30 feet and an average depth of 18 feet. The bottom is boulder. The elevation is 820 feet.
4 (run)	Near the U.S.G.S. gauging station on the west shore approximately 3/4-mile downstream from the spillway of Lower B-G. The east bank contains mixed hardwoods with a few conifers, brush, and grasses on a flat plain. The west bank is lined with hardwoods only near the shore. Behind the trees are grasses leading up to a blacktop road. The bottom is gravel. The elevation is 800 feet.
5 (run)	Approximately 50 feet above the covered wooden bridge north of North Blenheim and on the east side of the Creek. The east bank is steep, consisting of large rocks and hardwoods. The bottom is boulder. The elevation is 780 feet.

Table 121 - (Continued). Water chemistry stations

Station	Description
Schoharie Creek	
6 (pool)	Approximately one mile north of station 10 on a dirt road off Route 30 along the east bank of the Creek. The east shore is lined with hardwoods and brush and is nearly level with the Creek. The bottom is gravel. The elevation is 760 feet.
7 (pool)	Approximately 1/4-mile north of station 6 at a point where a pool (FSP 8) is formed by Route 30 and a cement retaining wall, on the south side of the wall. The west side of the pool is lined with mixed hardwoods. The south shore is vegetated by few hardwoods and mostly grasses. The bottom is equal proportions of rubble and gravel. The elevation is 740 feet.
8 (run)	Near the first iron bridge north of Breakabeen on Route 30, 70 feet upstream from the bridge on the north shore. The north shore is steep and consists of solid rock 12 feet up, with grasses and conifers the remainder of the way up. The bottom is gravel. The elevation is 700 feet.
9 (run)	Near the second large bridge north of Breakabeen and the Toe Path Mountain State Park on Route 30, 100 feet east of the bridge on the north shore. The shore is grass covered for 30 feet, then runs into a large stand of mixed hardwoods. The bottom is gravel. The elevation is 680 feet.
Tributaries	
10 (pool)	Approximately one mile north of North Blenheim on Route 30 at Trib 101 where it enters Schoharie Creek on the east bank. The stream width is six feet, the bottom is mud, and many small alder saplings line the banks. The elevation is approximately 750 feet.

Table 121 - (Continued). Water chemistry stations

Station	Description
Tributaries	
11 (run)	On Trib 97 (Keyser Kill), which enters Schoharie Creek at Breakabeen. This station was 60 feet east of the Route 30 bridge on the north shore. Grasses and brush line the banks. The stream width is 10 feet, the bottom is gravel, and the elevation is 710 feet.
12 (run)	West of Bear Ladder Road on the north bank of Trib 99 (Cole Hollow Creek) approximately 10 feet west of a small cement bridge. The banks are forested with mixed hardwoods and conifers. The stream width is 10 feet, the bottom is rubble, and the elevation is 780 feet.
Lower B-G	
13	On the north end of the Reservoir approximately 200 feet from the spillway and 80 feet from the west shore. The west shore has a rock cliff of approximately 10 feet, then a steep slope above that is grass covered. Depth varies as a result of pumped storage operation; average depth is about 55 feet when the Reservoir is at an elevation of 875 feet.
14	Approximately 100 yards in front of the power house on the east shore of the Reservoir. The east shore is predominantly rock and boulder, with sparse vegetation. Depth is approximately 30 feet when the Reservoir is at an elevation of 875 feet.
15	Approximately 1/2-mile south of the power house at the narrows where the electrical lines cross the Reservoir; in the middle of the narrows approximately 30 feet from shore at a depth of 25 feet when the elevation of the Reservoir is 875 feet. The east shore is steep and lacking in vegetation, the barren shore consisting of large boulders and gravel. The west shore is less steep, with a cliff of approximately six feet. Above the cliff is a sparsely vegetated area for about 20 feet, then becoming mixed hardwoods and conifers.

Table 121 - (Continued). Water chemistry stations

Station	Description
Upper B-G	
16	Approximately 100 yards from the west shore bay of the Reservoir near the manifold. The west shore consists of large boulders forming a dike, beyond which grasses occur. Depth is 70 feet when the elevation of the Reservoir is 2000 feet.
17	Approximately 100 yards from the south shore bay of the Reservoir. The south shore consists of large boulders and gravel forming a dike, beyond which grasses occur. Depth is 70 feet when the elevation of the Reservoir is 2000 feet.

Table 122. Summary of air temperature data (°C) taken from April through September 1974 from Schoharie Creek, three tributaries, and Lower and Upper B-G.

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4 Apr	19	19	21	19	20	23	23	22	22	22	23	23	–	–	–	–	–
11 Apr	11	9	9	14	11	19	11	13	14	16	13	14	–	–	–	–	–
15 Apr	–	–	–	–	–	–	–	–	–	–	–	–	6	6	5	5	5
18 Apr	18	17	19	20	26	24	24	30	25	22	26	22	–	–	–	–	–
23 Apr	–	–	–	–	–	–	–	–	–	–	–	–	11	11	11	16	16
25 Apr	9	16	15	16	16	18	14	16	20	16	17	15	–	–	–	–	–
29 Apr	–	–	–	–	–	–	–	–	–	–	–	–	23	23	23	18	19
2 May	12	13	12	12	13	13	14	15	16	13	14	16	–	–	–	–	–
8 May	–	–	–	–	–	–	–	–	–	–	–	–	17	14	18	14	14
9 May	12	12	13	14	15	15	16	16	16	15	16	16	–	–	–	–	–
14 May	–	–	–	–	–	–	–	–	–	–	–	–	22	23	22	19	18
16 May	20	20	20	22	22	26	25	26	26	23	26	26	–	–	–	–	–
22 May	–	–	–	–	–	–	–	–	–	–	–	–	23	26	26	25	24
23 May	19	20	21	21	22	21	21	21	23	21	22	21	–	–	–	–	–
29 May	–	–	–	–	–	–	–	–	–	–	–	–	17	18	18	11	11
30 May	19	19	21	21	23	25	25	25	25	24	25	26	–	–	–	–	–

Table 122 - (Continued). Air temperature

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3 Jun	-	-	-	-	-	-	-	-	-	-	-	-	22	22	24	21	21
6 Jun	23	21	25	29	29	29	29	31	31	28	30	31	-	-	-	-	-
10 Jun	-	-	-	-	-	-	-	-	-	-	-	-	32	32	34	29	29
13 Jun	19	22	23	26	23	24	24	23	25	22	24	26	-	-	-	-	-
17 Jun	22	21	24	25	23	21	23	25	26	23	24	20	21	21	23	22	22
19 Jun	-	-	-	-	-	-	-	-	-	-	-	-	25	24	25	21	21
20 Jun	22	22	24	27	26	25	26	26	27	26	26	27	-	-	-	-	-
24 Jun	-	-	-	-	-	-	-	-	-	-	-	-	17	18	19	18	18
27 Jun	19	19	20	22	22	21	21	22	24	21	22	22	-	-	-	-	-
1 Jul	-	-	-	-	-	-	-	-	-	-	-	-	25	24	25	23	23
4 Jul	25	23	28	29	29	31	31	31	31	31	31	31	-	-	-	-	-
8 Jul	-	-	-	-	-	-	-	-	-	-	-	-	29	28	29	24	24
11 Jul	23	24	22	25	23	23	22	25	25	22	25	25	-	-	-	-	-
15 Jul	-	-	-	-	-	-	-	-	-	-	-	-	28	28	28	25	25
18 Jul	24	24	25	26	26	27	27	26	26	23	28	25	-	-	-	-	-
24 Jul	-	-	-	-	-	-	-	-	-	-	-	-	22	22	22	18	18
25 Jul	21	22	27	25	26	23	23	26	26	22	24	25	-	-	-	-	-
29 Jul	-	-	-	-	-	-	-	-	-	-	-	-	28	26	26	25	25

Table 122 - (Continued). Air temperature

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Aug	25	25	27	25	26	27	27	28	27	27	27	27	–	–	–	–	–
5 Aug	–	–	–	–	–	–	–	–	–	–	–	–	24	22	24	19	20
8 Aug	18	18	25	23	28	26	25	27	27	27	26	28	–	–	–	–	–
12 Aug	–	–	–	–	–	–	–	–	–	–	–	–	26	27	27	19	21
15 Aug	20	20	24	24	24	23	25	24	25	25	23	27	–	–	–	–	–
19 Aug	–	–	–	–	–	–	–	–	–	–	–	–	25	27	27	21	19
22 Aug	22	21	24	23	24	26	26	27	28	26	23	27	–	–	–	–	–
26 Aug	–	–	–	–	–	–	–	–	–	–	–	–	23	23	23	21	19
29 Aug	16	16	17	18	16	17	17	17	17	16	17	19	–	–	–	–	–
4 Sep	–	–	–	–	–	–	–	–	–	–	–	–	15	14	14	11	12
5 Sep	15	12	17	17	15	18	17	18	18	17	17	19	–	–	–	–	–
9 Sep	–	–	–	–	–	–	–	–	–	–	–	–	23	24	24	18	18
11 Sep	19	21	27	23	23	26	25	25	28	23	23	28	–	–	–	–	–
16 Sep	–	–	–	–	–	–	–	–	–	–	–	–	20	20	19	18	16
19 Sep	21	24	24	23	24	25	25	26	25	24	20	23	–	–	–	–	–
23 Sep	–	–	–	–	–	–	–	–	–	–	–	–	9	9	9	5	6
26 Sep	17	14	17	21	16	16	16	19	17	19	16	19	–	–	–	–	–
30 Sep	–	–	–	–	–	–	–	–	–	–	–	–	12	11	11	8	9

Table 123. Summary of water temperature data (°C) taken from April through September 1974 from Lower and Upper B-G.

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
13											
15 Apr	5.5	5.5	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
23 Apr	7.8	7.2	7.0	6.9	6.8	6.8	6.8	6.4	6.2	6.0	6.0
29 Apr	13.5	11.5	10.0	9.5	8.5	8.5	8.0	8.0	7.5	7.5	7.5
8 May	11.0	10.2	10.0	9.8	9.8	9.8	9.5	9.5	9.3	9.3	9.2
14 May	11.5	11.0	11.0	10.8	10.5	10.2	10.2	10.2	10.2	10.0	10.0
22 May	15.0	14.0	14.0	14.0	13.2	13.0	12.8	12.8	12.5	12.0	11.0
29 May	14.5	14.5	14.2	14.2	14.2	14.0	14.8	14.0	14.0	14.0	13.8
3 Jun	19.5	17.5	16.5	16.0	15.0	15.0	14.7	14.5	14.5	14.2	13.8
10 Jun	24.0	19.0	18.0	17.5	17.5	17.1	17.0	16.5	15.0	14.0	13.8
19 Jun	20.0	19.8	19.5	19.0	18.9	18.4	18.1	18.0	17.8	16.0	14.4
24 Jun	19.7	19.3	19.3	19.0	18.9	18.5	17.8	16.5	15.5	14.0	14.0
1 Jul	20.5	20.5	20.1	19.9	19.9	19.1	19.0	19.0	18.7	17.5	16.5
8 Jul	23.0	22.2	21.8	21.2	21.0	20.8	20.0	19.8	19.5	19.2	19.0
15 Jul	23.1	22.8	22.2	22.2	22.0	21.8	21.5	21.2	20.7	20.0	19.0
24 Jul	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.5	21.0	19.2	18.5
29 Jul	24.5	24.2	23.8	23.2	23.0	22.2	22.0	22.0	21.2	19.0	18.5
5 Aug	24.0	23.5	23.0	23.0	23.0	22.5	22.5	22.0	22.0	22.0	21.0
12 Aug	24.2	24.0	23.5	23.0	22.8	22.8	22.2	22.0	21.5	21.5	21.0
19 Aug	24.5	24.0	23.7	23.5	23.2	23.0	22.5	22.0	21.8	21.2	20.8
26 Aug	23.8	23.8	23.8	23.5	23.2	23.0	23.0	23.0	23.0	21.0	20.5

* Stations: 13-15 = Lower B-G
16-17 = Upper B-G

Table 123 - (Continued). Water temperature

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
					Depth (ft)						
13											
4 Sep	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.5
9 Sep	22.0	21.5	21.2	21.0	21.0	20.5	20.0	19.5	19.0	19.0	18.8
16 Sep	20.1	20.1	20.1	20.1	20.1	20.0	20.0	20.0	19.8	19.0	18.5
23 Sep	18.3	18.4	18.5	18.5	18.5	18.0	18.0	17.5	17.0	16.8	16.7
30 Sep	17.0	17.0	17.0	17.0	17.0	17.0	17.0	16.5	16.0	15.5	15.5
14											
15 Apr	5.0	5.0	5.0	5.0	-	-	-	-	-	-	-
23 Apr	7.2	7.3	7.2	7.1	7.1	-	-	-	-	-	-
29 Apr	10.0	9.0	8.5	8.5	8.5	-	-	-	-	-	-
8 May	9.2	9.2	9.2	9.2	9.2	-	-	-	-	-	-
14 May	10.0	10.0	10.0	10.0	10.0	-	-	-	-	-	-
22 May	14.0	13.8	13.8	13.5	13.5						
29 May	14.1	14.1	14.1	14.1	14.1	-	-	-	-	-	-
3 Jun	15.5	15.2	15.2	15.2	15.2	-	-	-	-	-	-
10 Jun	17.9	17.8	17.8	17.8	17.8	-	-	-	-	-	-
19 Jun	18.9	18.9	18.9	18.9	18.9	-	-	-	-	-	-
24 Jun	19.2	19.2	19.2	-	-	-	-	-	-	-	-
1 Jul	19.5	19.2	19.1	19.1	19.1	-	-	-	-	-	-
8 Jul	21.0	21.0	21.0	21.0	21.0	-	-	-	-	-	-
15 Jul	22.0	22.0	22.0	22.0	22.0	-	-	-	-	-	-
24 Jul	22.0	22.0	22.0	22.0	22.0	-	-	-	-	-	-
29 Jul	21.5	21.5	21.5	21.5	21.5	-	-	-	-	-	-

Table 123 - (Continued). Water temperature

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
14											
5 Aug	23.0	23.0	23.0	23.0	23.0	-	-	-	-	-	-
12 Aug	23.0	23.0	23.0	23.0	22.5	-	-	-	-	-	-
19 Aug	23.2	23.2	23.2	23.2	23.2	-	-	-	-	-	-
26 Aug	23.2	23.2	23.2	23.2	23.2	-	-	-	-	-	-
4 Sep	21.0	21.0	21.0	21.0	21.0	-	-	-	-	-	-
9 Sep	20.5	20.5	20.5	20.5	20.5	-	-	-	-	-	-
16 Sep	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-
23 Sep	18.5	18.5	18.5	18.5	18.5	-	-	-	-	-	-
30 Sep	16.5	17.0	17.0	17.0	-	-	-	-	-	-	-
15											
15 Apr	3.0	-	-	-	-	-	-	-	-	-	-
23 Apr	10.0	10.0	10.0	10.0	10.0	10.0	-	-	-	-	-
29 Apr	15.0	13.0	9.0	8.8	-	-	-	-	-	-	-
8 May	9.5	9.5	9.5	9.5	9.5	-	-	-	-	-	-
14 May	12.0	11.5	11.1	11.1	11.1	-	-	-	-	-	-
22 May	18.0	16.0	14.5	13.8	13.0	-	-	-	-	-	-
29 May	14.5	14.2	13.5	13.2	13.2	-	-	-	-	-	-
3 Jun	18.5	16.0	15.2	15.0	15.0	-	-	-	-	-	-
10 Jun	21.2	18.5	18.0	17.7	17.5	-	-	-	-	-	-
19 Jun	19.9	19.9	19.0	18.9	18.7	-	-	-	-	-	-
24 Jun	20.0	19.5	19.0	18.0	-	-	-	-	-	-	-

Table 123 - (Continued). Water temperature

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
15											
1 Jul	20.0	19.5	19.1	19.1	-	-	-	-	-	-	-
8 Jul	26.0	22.0	21.5	21.0	21.0	21.0	-	-	-	-	-
15 Jul	24.0	23.2	22.5	22.0	21.8	-	-	-	-	-	-
24 Jul	22.0	22.0	21.8	21.8	21.5	21.5	-	-	-	-	-
29 Jul	24.5	24.0	23.0	22.5	22.5	-	-	-	-	-	-
5 Aug	24.5	23.0	22.5	22.0	21.5	-	-	-	-	-	-
12 Aug	23.0	22.5	22.2	21.0	20.5	-	-	-	-	-	-
19 Aug	25.0	24.0	23.0	22.0	21.0	-	-	-	-	-	-
26 Aug	23.2	23.0	22.8	21.5	20.5	-	-	-	-	-	-
4 Sep	20.0	20.0	18.0	16.0	16.0	-	-	-	-	-	-
9 Sep	21.2	21.0	20.0	17.0	16.5	-	-	-	-	-	-
16 Sep	20.0	20.0	19.2	17.0	-	-	-	-	-	-	-
23 Sep	15.5	15.2	13.3	12.5	-	-	-	-	-	-	-
30 Sep	15.0	13.5	13.0	-	-	-	-	-	-	-	-
16											
15 Apr	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
23 Apr	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.1	6.9	6.8
29 Apr	9.0	8.5	8.0	8.0	8.0	7.8	7.5	7.5	7.5	7.5	7.5
8 May	10.0	9.5	9.1	9.1	9.1	9.0	9.0	9.0	9.0	9.0	9.0
14 May	9.9	9.8	9.7	9.7	9.5	9.5	9.5	9.3	9.1	9.0	9.0
22 May	15.5	15.0	14.5	14.0	13.5	13.5	13.5	13.0	13.0	13.5	11.5
29 May	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	13.8	13.8

Table 123 - (Continued). Water temperature

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
16											
3 Jun	16.5	15.5	15.2	15.1	15.0	15.0	15.0	15.0	15.0	14.9	14.8
10 Jun	20.5	19.0	18.0	17.5	17.4	17.1	17.0	16.9	16.5	16.4	16.1
19 Jun	19.8	19.8	19.0	18.8	18.8	18.5	18.5	18.2	18.1	18.0	15.5
24 Jun	20.0	19.8	19.8	19.8	19.5	19.2	19.2	19.0	19.0	19.0	19.0
1 Jul	20.0	19.9	19.9	19.3	19.2	19.1	19.1	19.0	19.0	19.0	18.9
8 Jul	23.0	22.5	22.0	21.5	21.0	20.5	20.0	20.0	20.0	20.0	19.8
15 Jul	23.0	22.5	22.2	22.0	22.0	22.0	21.8	21.6	21.6	21.5	21.5
24 Jul	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.8
29 Jul	23.0	23.0	23.0	22.8	22.2	22.1	22.0	22.0	22.0	21.8	21.8
5 Aug	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
12 Aug	23.2	23.0	23.0	22.8	22.8	22.8	22.8	22.5	22.5	22.2	22.2
19 Aug	23.5	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
26 Aug	23.2	23.2	23.2	23.2	23.2	23.0	23.0	23.0	23.0	23.0	23.0
4 Sep	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
9 Sep	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
16 Sep	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
23 Sep	18.0	18.5	18.5	18.5	18.5	18.5	18.6	18.6	18.6	18.7	18.7
30 Sep	16.5	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
17											
15 Apr	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
23 Apr	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.2	6.8
29 Apr	9.0	9.0	9.0	8.8	8.8	8.2	8.0	7.5	7.5	7.5	7.5

Table 123 - (Continued). Water temperature

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
	Depth (ft)										
17											
8 May	10.2	10.0	9.6	9.3	9.2	9.2	9.2	9.1	9.1	9.1	9.1
14 May	10.1	10.1	10.0	10.0	10.0	10.0	9.8	9.8	9.8	9.8	9.8
22 May	15.5	15.5	15.0	14.5	14.0	13.5	13.5	13.0	12.5	12.0	12.0
29 May	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	13.8
3 Jun	17.1	15.5	15.1	15.1	15.1	15.1	15.0	15.0	14.9	14.8	14.5
10 Jun	18.7	18.2	17.9	17.7	17.5	17.3	17.1	17.0	16.5	16.5	16.2
19 Jun	19.5	19.5	19.0	18.9	18.5	18.5	18.5	18.2	18.0	17.5	16.0
24 Jun	20.0	20.0	19.8	19.8	19.8	19.5	19.2	19.2	19.0	18.9	18.5
1 Jul	19.8	19.5	19.2	19.1	19.1	19.1	19.0	19.0	19.0	18.9	18.9
8 Jul	23.0	23.0	22.5	22.0	21.2	20.8	20.2	20.0	20.0	20.0	19.8
15 Jul	23.0	22.8	22.5	22.2	22.0	22.0	21.8	21.8	21.5	21.5	21.5
24 Jul	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
29 Jul	22.8	22.5	22.2	22.2	22.2	22.0	22.0	22.0	21.8	21.8	21.8
5 Aug	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
12 Aug	23.0	22.8	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
19 Aug	23.2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
26 Aug	23.2	23.2	23.2	23.2	23.0	23.0	23.0	23.0	23.0	23.0	23.0
4 Sep	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
9 Sep	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
16 Sep	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
23 Sep	18.3	18.4	18.5	18.5	18.5	18.5	18.4	18.5	18.5	18.5	18.5
30 Sep	16.0	16.5	16.7	16.9	17.0	17.0	17.0	17.0	17.0	17.0	17.0

Table 124 Summary of dissolved oxygen data (ppm) taken from April through September 1974 from Lower and Upper B-G.

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
13											
15 Apr	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	14.2	14.3
23 Apr	11.8	12.6	13.0	12.4	11.4	10.8	10.6	9.6	9.4	9.4	9.7
8 May	6.4	6.2	6.2	6.1	6.0	5.9	5.9	5.9	5.9	5.9	5.9
14 May	11.5	12.0	12.3	11.9	11.5	11.4	11.4	11.4	11.4	11.3	11.0
22 May	10.6	10.6	10.6	10.6	10.2	10.1	10.0	10.0	10.0	10.0	9.8
29 May	14.5	14.5	14.2	14.2	14.2	14.0	14.0	14.0	14.0	14.0	13.8
3 Jun	9.8	9.8	9.8	9.8	9.6	9.1	9.0	8.6	8.4	8.4	7.9
10 Jun	10.0	10.0	10.0	10.0	9.8	9.5	9.2	8.0	8.0	7.0	6.5
19 Jun	9.3	9.3	9.3	9.0	8.7	8.4	8.2	8.1	7.9	6.6	5.9
24 Jun	8.8	8.7	8.7	8.2	7.9	7.8	7.1	6.4	6.0	5.0	4.3
1 Jul	8.9	8.9	8.9	8.5	8.2	7.8	7.4	7.2	6.8	6.2	6.2
8 Jul	8.6	8.5	8.4	8.4	8.4	8.4	7.8	7.4	7.1	7.0	6.5
15 Jul	9.1	8.6	8.6	8.5	8.2	7.9	7.8	7.4	6.5	6.2	5.6
24 Jul	7.9	7.8	7.7	7.6	7.5	7.5	7.5	6.5	5.4	4.2	3.7
29 Jul	8.8	8.8	8.8	8.8	8.6	7.8	7.4	7.2	5.5	4.5	2.6
5 Aug	8.7	8.6	8.4	8.4	8.4	7.1	6.9	6.6	6.3	5.5	5.2
12 Aug	8.2	8.2	8.2	8.2	8.2	8.0	6.0	5.6	4.7	4.4	2.8
19 Aug	7.8	7.7	7.7	7.7	7.7	7.7	6.2	4.6	4.0	2.8	1.6
26 Aug	7.6	7.5	7.4	7.4	7.3	7.2	6.5	6.4	3.4	1.8	0.9

* Stations: 13-15 = Lower B-G
16-17 = Upper B-G

Table 124 - (Continued). Dissolved oxygen

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
13											
4 Sep	7.6	7.4	7.3	7.2	7.2	7.1	7.1	7.1	7.1	7.0	7.0
9 Sep	8.0	8.0	7.9	7.9	7.7	7.0	6.4	6.4	6.4	6.4	6.4
16 Sep	7.9	7.8	7.3	7.3	7.3	7.3	7.0	6.8	6.4	6.9	6.8
23 Sep	9.3	9.2	9.0	9.1	9.0	9.0	8.6	8.5	9.0	9.0	9.0
30 Sep	8.0	7.6	7.4	7.1	6.2	6.2	6.2	6.2	6.2	6.0	6.0
14											
15 Apr	>15.0	>15.0	>15.0	>15.0	-	-	-	-	-	-	-
23 Apr	11.9	12.0	12.3	12.6	12.4	-	-	-	-	-	-
8 May	6.0	5.9	5.8	5.8	5.8	-	-	-	-	-	-
14 May	11.3	11.3	11.2	11.2	11.2	-	-	-	-	-	-
22 May	10.2	10.2	10.2	10.2	10.2	-	-	-	-	-	-
29 May	14.1	14.1	14.1	14.1	14.1	-	-	-	-	-	-
3 Jun	9.4	9.4	9.4	9.4	9.4	-	-	-	-	-	-
10 Jun	8.9	8.9	8.9	8.9	8.9	-	-	-	-	-	-
19 Jun	9.0	8.9	8.9	8.9	8.9	-	-	-	-	-	-
24 Jun	8.4	8.3	8.3	-	-	-	-	-	-	-	-
1 Jul	8.2	8.2	8.2	8.2	8.2	-	-	-	-	-	-
8 Jul	8.4	8.4	8.4	8.2	7.6	7.6	-	-	-	-	-
15 Jul	8.3	8.2	7.9	7.9	7.8	7.8	-	-	-	-	-
24 Jul	7.4	7.4	7.4	7.4	7.4	-	-	-	-	-	-
29 Jul	8.0	8.0	8.0	8.0	8.0	-	-	-	-	-	-

Table 124 - (Continued). Dissolved oxygen

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
14											
5 Aug	8.2	7.9	7.9	7.9	7.9	-	-	-	-	-	-
12 Aug	7.8	7.7	7.6	7.6	7.5	-	-	-	-	-	-
19 Aug	7.8	7.6	7.5	7.4	7.4	-	-	-	-	-	-
26 Aug	7.6	7.4	7.4	7.2	7.2	-	-	-	-	-	-
4 Sep	7.6	7.5	7.4	7.3	7.3	-	-	-	-	-	-
9 Sep	7.3	7.2	7.2	7.2	7.2	-	-	-	-	-	-
16 Sep	7.9	7.6	7.6	7.6	7.6	-	-	-	-	-	-
23 Sep	9.2	8.2	8.2	8.2	8.2	-	-	-	-	-	-
30 Sep	7.6	7.2	7.1	7.1	-	-	-	-	-	-	-
15											
15 Apr	>15.0	-	-	-	-	-	-	-	-	-	-
23 Apr	11.2	11.2	11.4	11.6	12.0	11.8	-	-	-	-	-
8 May	9.8	8.8	8.0	7.6	-	-	-	-	-	-	-
14 May	11.4	11.6	11.8	11.8	-	-	-	-	-	-	-
22 May	10.8	10.4	10.0	10.0	-	-	-	-	-	-	-
29 May	14.5	14.2	13.5	13.2	-	-	-	-	-	-	-
3 Jun	8.9	8.6	8.2	8.2	8.2	-	-	-	-	-	-
10 Jun	9.4	9.1	9.0	9.0	8.6	-	-	-	-	-	-
19 Jun	9.4	9.4	9.1	9.0	8.6	-	-	-	-	-	-
24 Jun	8.4	7.6	7.2	7.0	-	-	-	-	-	-	-

Table 124 - (Continued). Dissolved oxygen

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
15											
1 Jul	8.5	8.1	7.9	7.8	-	-	-	-	-	-	-
8 Jul	8.2	7.6	7.5	7.1	7.0	7.0	-	-	-	-	-
15 Jul	8.0	7.9	7.7	7.4	6.9	-	-	-	-	-	-
24 Jul	7.8	7.8	7.3	7.2	7.2	7.0	-	-	-	-	-
29 Jul	8.1	8.0	7.9	7.8	7.7	-	-	-	-	-	-
5 Aug	8.4	8.1	7.8	7.3	6.7	-	-	-	-	-	-
12 Aug	7.9	7.8	7.6	7.2	6.5	-	-	-	-	-	-
19 Aug	8.0	7.7	7.4	7.0	6.4	-	-	-	-	-	-
26 Aug	8.0	7.7	7.3	6.9	6.6	-	-	-	-	-	-
4 Sep	8.7	8.6	8.1	7.7	7.7	-	-	-	-	-	-
9 Sep	7.8	7.7	7.5	7.5	7.5	-	-	-	-	-	-
16 Sep	8.2	8.2	8.0	6.8	-	-	-	-	-	-	-
23 Sep	9.0	8.8	8.7	8.6	-	-	-	-	-	-	-
30 Sep	5.4	5.0	4.8	-	-	-	-	-	-	-	-
16											
15 Apr	12.0	>15.0	>15.0	>15.0	>15.0	>15.0	14.2	14.0	10.6	9.6	9.0
23 Apr	13.0	14.4	13.1	13.3	11.2	10.0	9.3	8.8	8.6	8.7	8.8
8 May	10.6	10.2	10.0	10.0	10.0	9.6	9.6	9.6	9.6	9.6	9.6
14 May	10.9	11.0	11.0	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
22 May	10.4	10.9	10.9	10.9	10.9	10.9	10.9	10.8	10.7	10.6	10.6
29 May	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	13.8	13.8

Table 124 - (Continued). Dissolved oxygen

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
16											
3 Jun	9.8	9.7	9.6	9.5	9.4	9.4	9.4	9.2	9.2	9.2	9.2
10 Jun	9.9	9.8	9.7	9.5	9.4	9.4	9.3	9.1	9.0	9.0	8.8
19 Jun	8.8	8.8	8.8	8.6	8.6	8.6	8.6	8.5	8.4	8.4	6.2
24 Jun	9.2	8.6	8.2	8.1	8.1	8.0	7.8	7.6	7.6	7.5	7.5
1 Jul	9.4	9.4	9.1	8.9	8.5	8.5	8.2	8.2	8.2	8.1	7.8
8 Jul	9.2	9.2	8.7	8.2	8.2	8.2	8.2	8.0	8.0	8.0	7.8
15 Jul	8.9	8.6	8.3	7.9	7.9	7.9	7.9	7.8	7.5	7.5	7.4
24 Jul	7.5	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.1	7.1	6.8
29 Jul	8.2	8.2	8.2	8.1	7.9	7.8	7.7	7.6	7.6	7.5	7.5
5 Aug	7.6	7.6	7.6	7.6	7.6	7.5	7.5	7.4	7.4	7.2	7.0
12 Aug	8.0	8.0	8.0	7.9	7.8	7.7	7.7	7.7	7.7	7.5	7.4
19 Aug	8.0	7.9	7.8	7.8	7.8	7.8	7.8	7.6	7.6	7.6	7.6
26 Aug	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3
4 Sep	7.2	7.2	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.8	6.8
9 Sep	7.8	7.6	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.3	7.3
16 Sep	7.1	6.9	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.6
23 Sep	6.0	5.5	5.2	4.4	4.4	4.8	4.3	4.3	4.3	4.2	4.2
30 Sep	10.0	8.6	8.2	8.1	8.1	8.0	8.0	8.0	8.1	8.0	8.0
17											
15 Apr	13.2	11.6	11.0	9.8	7.6	6.0	5.0	4.6	4.6	4.0	4.0
23 Apr	11.2	11.7	13.3	12.6	11.8	11.5	11.0	11.0	10.7	10.6	10.7

Table 124 - (Continued). Dissolved oxygen

Station* & Date	Surface	5	10	15	20	25	30	35	40	45	50
						Depth (ft)					
17											
8 May	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.5	9.5	9.5	9.5
14 May	11.0	11.0	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.5	10.5
22 May	11.5	11.3	11.2	10.8	10.8	10.8	10.6	10.6	10.6	10.6	10.6
29 May	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	13.8
3 Jun	10.0	10.0	10.0	9.9	9.9	9.8	9.8	9.7	9.5	9.5	9.4
10 Jun	9.1	9.1	8.9	8.9	8.8	8.8	8.7	8.7	8.6	8.5	8.3
19 Jun	9.4	9.2	9.0	8.8	8.7	8.7	8.6	8.4	8.4	8.2	7.5
24 Jun	8.0	7.9	7.8	7.8	7.8	7.8	7.7	7.6	7.5	7.3	7.2
1 Jul	8.6	8.4	8.3	8.1	8.1	8.1	8.0	8.0	7.9	7.8	7.7
8 Jul	8.6	8.4	8.2	8.2	8.2	8.0	7.8	7.8	7.8	7.5	7.5
15 Jul	9.2	9.2	9.2	9.2	8.5	8.5	8.4	8.1	8.0	8.0	7.9
24 Jul	7.6	7.6	7.6	7.5	7.3	7.3	7.3	7.3	7.3	7.3	7.2
29 Jul	8.5	8.5	8.2	8.2	8.1	7.8	7.8	7.8	7.7	7.6	7.6
5 Aug	8.0	7.9	7.8	7.7	7.6	7.6	7.6	7.6	7.5	7.4	7.4
12 Aug	8.4	8.1	8.1	8.1	8.0	8.0	8.0	8.0	7.9	7.8	7.8
19 Aug	8.2	8.0	8.0	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.7
26 Aug	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.1	7.1	7.0	7.0
4 Sep	8.3	8.1	8.1	8.1	7.1	7.1	7.1	7.1	7.1	7.1	7.0
9 Sep	8.0	7.8	7.8	7.7	7.7	7.7	7.7	7.6	7.4	7.4	7.3
16 Sep	7.3	7.1	7.0	7.1	6.9	6.9	6.9	6.9	6.8	6.8	6.7
23 Sep	8.8	8.8	8.7	8.7	8.6	8.6	8.6	8.6	8.6	8.6	8.6
30 Sep	10.5	10.1	9.9	9.8	9.7	9.7	9.7	9.6	9.4	9.2	9.2

Table 125. Summary of pH data taken from April through September 1974 from Lower and Upper B-G.

Station* & Date	Surface	Mid-depth	Bottom
13			
15 Apr	8.8	8.9	9.1 (56)**
23 Apr	7.1	7.6	7.5 (54)
29 Apr	7.8	7.6	7.6 (56)
8 May	7.9	7.8	7.8 (53)
14 May	8.0	7.9	8.0 (58)
22 May	8.1	8.3	8.3 (58)
29 May	8.4	8.4	8.3 (56)
3 Jun	7.6	7.8	7.3 (54)
10 Jun	7.5	7.8	7.4 (68)
19 Jun	8.6	-	- (60)
24 Jun	8.1	8.2	8.1 (48)
1 Jul	7.6	8.0	8.2 (58)
8 Jul	7.5	7.4	7.3 (57)
15 Jul	8.6	8.4	8.2 (59)
24 Jul	8.4	8.3	7.8 (58)
29 Jul	8.0	7.8	7.4 (57)
5 Aug	7.6	7.5	7.5 (54)
12 Aug	8.4	8.4	8.0 (53)
19 Aug	7.6	7.6	7.3 (52)
26 Aug	7.6	7.6	7.3 (53)
4 Sep	8.4	8.3	8.1 (57)
9 Sep	7.6	7.4	7.3 (55)
16 Sep	7.7	7.7	7.7 (54)
23 Sep	8.0	8.0	7.6 (48)
30 Sep	8.1	-	8.1 (48)
14			
15 Apr	8.8	8.7	8.0 (25)
23 Apr	7.4	7.4	7.4 (25)
29 Apr	7.6	7.6	7.6 (24)

* Stations: 13-15 = Lower B-G
16-17 = Upper B-G

** Maximum depth in feet

Table 125 - (Continued). pH

Station* & Date	Surface	Mid-depth	Bottom
14			
8 May	7.7	7.8	7.9 (14)
14 May	7.8	7.8	7.7 (20)
22 May	8.1	7.7	7.6 (28)
29 May	8.3	8.4	8.4 (18)
3 Jun	7.8	8.0	7.4 (17)
10 Jun	7.6	8.2	7.8 (25)
19 Jun	8.6	-	- (26)
24 Jun	8.0	7.9	7.9 (10)
1 Jul	8.0	8.0	8.0 (23)
8 Jul	7.4	7.6	7.4 (23)
15 Jul	8.2	8.2	8.1 (26)
24 Jul	8.0	7.8	7.8 (20)
29 Jul	7.6	7.7	7.6 (22)
5 Aug	7.9	7.7	7.8 (22)
12 Aug	8.0	8.0	7.8 (19)
19 Aug	7.5	7.6	7.4 (17)
26 Aug	7.5	7.5	7.6 (18)
4 Sep	8.1	8.0	7.9 (18)
9 Sep	7.4	7.6	7.6 (18)
16 Sep	7.8	7.8	7.8 (20)
23 Sep	8.1	8.0	7.6 (20)
30 Sep	8.2	-	- (15)
15			
15 Apr	8.4	-	- (10)
23 Apr	7.7	7.5	7.6 (12)
29 Apr	8.9	8.8	8.8 (12)
8 May	8.1	7.9	8.1 (20)
14 May	7.9	8.0	7.9 (20)
22 May	7.6	7.6	7.6 (20)
29 May	8.4	8.4	8.3 (18)

Table 125 - (Continued). pH

Station* & Date	Surface	Mid-depth	Bottom
15			
3 Jun	7.3	7.1	7.3 (22)**
10 Jun	7.3	7.2	7.2 (26)
19 Jun	8.8	-	- (16)
24 Jun	7.7	7.6	7.6 (14)
1 Jul	7.5	7.8	7.8 (15)
8 Jul	7.5	7.5	7.6 (24)
15 Jul	8.1	8.0	7.8 (20)
24 Jul	7.8	7.6	7.5 (25)
29 Jul	8.2	8.5	8.3 (22)
5 Aug	8.1	7.7	7.7 (22)
12 Aug	7.8	7.8	7.6 (21)
19 Aug	8.2	8.2	7.9 (18)
26 Aug	8.5	8.2	7.8 (21)
4 Sep	7.9	7.7	7.6 (20)
9 Sep	8.1	8.1	7.8 (21)
16 Sep	7.7	7.7	7.7 (17)
23 Sep	8.0	8.1	7.6 (16)
30 Sep	8.1	-	- (13)
16			
15 Apr	8.8	9.2	9.3 (65)
23 Apr	8.6	8.6	8.6 (59)
29 Apr	7.8	7.8	7.6 (62)
8 May	7.8	7.7	7.6 (60)
14 May	7.6	7.7	7.7 (56)
22 May	7.6	7.5	7.3 (60)
29 May	8.0	8.4	8.4 (58)
3 Jun	7.7	7.7	7.6 (60)
10 Jun	7.2	7.3	6.9 (60)
19 Jun	8.2	-	- (61)
24 Jun	7.7	7.7	7.5 (62)

Table 125 - (Continued). pH

Station* & Date	Surface	Mid-depth	Bottom
16			
1 Jul	8.2	8.1	7.9 (61)
8 Jul	7.4	7.6	7.4 (61)
15 Jul	7.8	7.8	7.6 (62)
24 Jul	7.8	7.6	7.5 (58)
29 Jul	8.1	8.2	8.0 (59)
5 Aug	7.4	7.6	7.5 (60)
12 Aug	7.5	7.8	7.7 (51)
19 Aug	7.6	7.6	7.2 (62)
26 Aug	8.0	7.8	7.8 (58)
4 Sep	7.8	7.6	7.6 (68)
9 Sep	7.8	7 6	7.6 (56)
16 Sep	7.5	7.5	7.5 (62)
23 Sep	8.0	8.0	7.8 (65)
30 Sep	7.9	7.8	7.8 (60)
17			
15 Apr	8.9	8.8	8.6 (63)
23 Apr	8.7	8.8	8.7 (62)
29 Apr	7.6	7.7	7.7 (64)
8 May	7.8	7.6	7.4 (57)
14 May	7.5	7.6	7.7 (60)
22 May	7.8	7.7	7.3 (54)
29 May	8.3	8.3	8.3 (59)
3 Jun	8.2	8.1	7.9 (60)
10 Jun	7.2	7.4	7.4 (57)
19 Jun	8.2	-	- (62)
24 Jun	7.5	7.5	7.3 (62)
1 Jul	8.6	8.3	8.2 (62)
8 Jul	8.3	8.1	8.0 (62)
15 Jul	7.6	7.6	7.2 (62)
24 Jul	7.6	7.6	7.3 (58)
29 Jul	8.0	8.0	7.6 (62)

Table 125- (Continued). pH

Station* & Date	Surface	Mid-depth	Bottom
17			
5 Aug	7.7	7.8	7.3 (65)
12 Aug	7.5	7.5	7.6 (66)
19 Aug	7.9	7.9	7.4 (63)
26 Aug	7.8	7.8	7.7 (64)
4 Sep	7.5	7.5	7.4 (60)
9 Sep	7.6	7.6	7.4 (65)
16 Sep	7.3	7.3	7.3 (63)
23 Sep	8.0	8.0	8.0 (48)
30 Sep	7.9	7.9	7.9 (64)

Table 126. Summary of turbidity data (formazin turbidity units) taken from April through September 1974 from Schoharie Creek, three tributaries, and Lower and Upper B-G.

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4 Apr	42	11	31	54	21	26	33	23	32	8	30	19	–	–	–	–	–
11 Apr	2	18	19	19	13	19	10	13	11	0	0	0	–	–	–	–	–
15 Apr	–	–	–	–	–	–	–	–	–	–	–	–	30	25	18	23	17
18 Apr	1	3	19	22	20	12	4	18	9	0	0	0	–	–	–	–	–
23 Apr	–	–	–	–	–	–	–	–	–	–	–	–	18	18	18	13	10
25 Apr	2	3	10	12	17	18	17	18	18	0	3	2	–	–	–	–	–
29 Apr	–	–	–	–	–	–	–	–	–	–	–	–	0	17	3	9	12
2 May	4	4	20	17	19	19	6	4	4	3	2	1	–	–	–	–	–
8 May	–	–	–	–	–	–	–	–	–	–	–	–	0	15	4	1	7
9 May	0	0	9	13	10	17	18	13	12	8	0	0	–	–	–	–	–
14 May	–	–	–	–	–	–	–	–	–	–	–	–	9	12	5	3	4
16 May	11	10	23	20	10	13	13	17	12	3	3	2	19	–	–	–	–
22 May	–	–	–	–	–	–	–	–	–	–	–	–	5	6	4	8	8
23 May	6	2	16	3	2	10	10	10	10	2	4	1	3	–	–	–	–
29 May	–	–	–	–	–	–	–	–	–	–	–	–	9	12	6	9	10
30 May	2	6	13	9	9	9	9	7	7	1	1	0	8	–	–	–	–

Table 126 - (Continued). Turbidity

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3 Jun	-	-	-	-	-	-	-	-	-	-	-	-	6	15	10	6	6
6 Jun	2	4	12	9	20	12	15	4	4	5	4	2	8	-	-	-	-
10 Jun	-	-	-	-	-	-	-	-	-	-	-	-	9	11	6	8	7
13 Jun	10	2	11	4	18	10	10	5	5	5	3	5	4	-	-	-	-
19 Jun	-	-	-	-	-	-	-	-	-	-	-	-	10	17	9	5	1
20 Jun	4	9	18	12	19	12	11	8	5	2	0	5	10	-	-	-	-
24 Jun	-	-	-	-	-	-	-	-	-	-	-	-	15	9	18	10	9
27 Jun	5	3	20	47	18	30	32	8	9	7	1	3	10	-	-	-	-
1 Jul	-	-	-	-	-	-	-	-	-	-	-	-	10	12	9	5	3
4 Jul	28	50	40	15	17	9	15	20	45	2	10	2	9	-	-	-	-
8 Jul	-	-	-	-	-	-	-	-	-	-	-	-	11	11	21	10	5
11 Jul	7	10	26	11	11	11	19	10	7	6	9	6	12	-	-	-	-
15 Jul	-	-	-	-	-	-	-	-	-	-	-	-	5	12	10	5	5
18 Jul	8	3	6	2	5	8	15	10	10	4	8	1	5	-	-	-	-
24 Jul	-	-	-	-	-	-	-	-	-	-	-	-	9	12	8	2	9
25 Jul	12	1	30	18	12	12	12	10	8	5	2	3	11	-	-	-	-
29 Jul	-	-	-	-	-	-	-	-	-	-	-	-	0	9	12	5	1

Table 126- (Continued). Turbidity

Dates	Stations																
	Schoharie Creek									Tributaries			L B-G			U B-G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Aug	10	12	52	47	35	30	28	27	20	15	7	5	10	-	-	-	-
5 Aug	-	-	-	-	-	-	-	-	-	-	-	-	8	15	13	15	12
8 Aug	17	5	50	32	15	15	15	10	5	10	7	4	10	-	-	-	-
12 Aug	-	-	-	-	-	-	-	-	-	-	-	-	11	12	12	5	8
15 Aug	8	5	38	28	10	12	15	6	5	22	3	3	11	-	-	-	-
19 Aug	-	-	-	-	-	-	-	-	-	-	-	-	6	5	9	10	5
22 Aug	1	0	10	1	2	5	8	2	3	4	0	1	6	-	-	-	-
26 Aug	-	-	-	-	-	-	-	-	-	-	-	-	2	5	11	8	5
29 Aug	52	55	35	33	29	26	8	11	9	18	9	2	12	-	-	-	-
4 Sep	-	-	-	-	-	-	-	-	-	-	-	-	8	10	12	6	5
5 Sep	18	26	32	16	10	15	15	11	8	5	0	0	-	-	-	-	-
9 Sep	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	1	0
11 Sep	5	4	7	10	12	10	10	9	2	4	0	0	-	-	-	-	-
16 Sep	-	-	-	-	-	-	-	-	-	-	-	-	0	0	30	4	0
19 Sep	2	2	2	0	0	10	25	18	8	0	5	0	-	-	-	-	-
23 Sep	-	-	-	-	-	-	-	-	-	-	-	-	0	0	5	0	0
26 Sep	2	0	21	20	3	11	15	10	2	7	7	0	-	-	-	-	-
30 Sep	-	-	-	-	-	-	-	-	-	-	-	-	3	11	21	6	0

Table 127. Summary of turbidity data (inches) taken from April through September 1974 using an 8-inch Secchi disc in Lower and Upper B-G .

Date	Stations				
	L B-G			U B-G	
	13	14	15	16	17
15 Apr	8	22	-	20	22
23 Apr	23	23	26	22	25
29 Apr	30	32	74	32	34
8 May	31	31	117	32	36
14 May	32	28	54	32	32
22 May	40	45	96	48	48
29 May	50	46	45	46	52
3 Jun	64	44	44	54	54
10 Jun	72	60	60	82	70
19 Jun	62	48	39	66	65
24 Jun	50	36	22	48	60
1 Jul	60	48	44	42	48
8 Jul	34	42	19	82	99
15 Jul	34	33	36	72	60
24 Jul	58	50	40	44	48
29 Jul	76	54	46	65	73
5 Aug	60	48	30	54	54
12 Aug	106	60	48	72	68
19 Aug	96	54	42	64	64
26 Aug	62	40	20	56	72
4 Sep	48	36	36	48	60
9 Sep	74	52	44	58	58
16 Sep	120	65	65	96	100
23 Sep	49	53	19	61	60
30 Sep	48	60	24	48	48

Table 128. Summary of alkalinity, total hardness, calcium hardness, and carbon dioxide data (mg/l) taken from April through September 1974 from Lower and Upper B-G.

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
23 Apr					
13	S[1]	10	15	10	2
	M[2]	15	15	15	2
	B[3]	15	15	15	2
14	S	15	15	15	2
	M	20	20	20	2
	B	15	15	15	2
15	S	15	15	10	2
	M	15	15	10	2
	B	15	15	10	2
16	S	20	15	10	2
	M	10	15	10	2
	B	15	15	15	2
17	S	15	15	10	2
	M	15	15	15	2
	B	15	20	15	2
8 May					
13	S	15	15	15	2
	M	20	15	15	2
	B	20	15	15	2
14	S	15	20	15	2
	M	20	15	15	2
	B	20	15	15	2
15	S	20	15	15	2
	M	20	15	15	2
	B	20	15	15	2

* Stations: 13-15 = Lower B-G
16-17 = Upper B-G

1 S = surface
2 M = mid-depth
3 B = bottom

Table 128 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
8 May					
	S	20	15	15	2
16	M	20	15	15	2
	B	15	15	10	2
	S	20	15	15	2
17	M	20	15	15	2
	B	20	15	15	2
22 May					
	S	15	15	15	2
13	M	20	20	20	2
	B	20	20	15	2
	S	15	15	15	2
14	M	15	15	15	2
	B	20	15	15	2
	S	20	20	15	2
15	M	20	20	15	2
	B	20	20	10	2
	S	20	20	15	2
16	M	20	20	15	2
	B	20	15	15	2
	S	20	15	15	2
17	M	20	15	15	2
	B	20	20	10	2
3 Jun					
	S	25	20	20	2
13	M	25	15	15	2
	B	25	20	20	2
	S	25	15	10	2
14	M	25	15	15	2
	B	25	15	15	2

Table 128 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
3 Jun					
	S	30	15	10	2
15	M	35	25	15	4
	B	35	25	15	6
	S	30	15	15	2
16	M	25	15	15	2
	B	25	15	15	2
	S	20	15	15	2
17	M	25	15	15	2
	B	20	15	15	2
24 Jun					
	S	20	20	15	4
13	M	20	20	10	6
	B	20	20	10	6
	S	20	20	15	4
14	M	20	20	10	4
	B	20	20	10	4
	S	35	35	20	8
15	M	35	35	20	6
	B	40	40	25	8
	S	20	20	15	4
16	M	20	20	10	4
	B	20	20	10	6
	S	20	20	15	4
17	M	20	20	15	4
	B	20	20	10	6
8 Jul					
	S	25	35	20	4
13	M	25	30	20	4
	B	30	35	30	6

Table 128 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
8 Jul					
	S	25	35	20	2
14	M	25	30	20	4
	B	30	30	20	4
	S	30	40	20	4
15	M	35	35	25	6
	B	45	50	40	8
	S	15	30	20	2
16	M	15	30	25	4
	B	10	30	20	6
	S	25	25	20	4
17	M	25	30	20	4
	B	30	25	20	8
24 Jul					
	S	25	20	20	2
13	M	25	20	20	2
	B	30	25	25	4
	S	25	20	20	2
14	M	25	20	20	4
	B	25	20	20	4
	S	30	20	20	4
15	M	25	25	25	4
	B	30	20	15	4
	S	25	20	20	2
16	M	25	20	20	2
	B	30	20	20	2
	S	25	20	20	2
17	M	25	25	25	2
	B	25	20	20	2

Table 128 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
5 Aug					
	S	30	20	20	2
13	M	30	20	20	4
	B	30	20	20	6
	S	25	25	20	4
14	M	25	30	20	4
	B	25	25	20	4
	S	40	35	30	4
15	M	50	40	35	6
	B	70	40	35	10
	S	35	20	20	4
16	M	35	20	20	4
	B	30	20	20	6
	S	30	25	25	4
17	M	30	25	25	6
	B	30	25	25	6
19 Aug					
	S	30	25	15	2
13	M	30	35	20	2
	B	40	35	25	8
	S	30	35	25	2
14	M	35	30	25	2
	B	25	30	20	2
	S	35	35	25	2
15	M	35	35	25	4
	B	30	35	20	4
	S	30	30	20	2
16	M	35	35	20	2
	B	25	30	15	8
	S	30	25	20	2
17	M	30	35	25	2
	B	30	35	25	4

Table 128 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*		Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
9 Sep					
	S	20	35	25	4
13	M	25	30	25	6
	B	30	30	25	6
	S	20	30	25	6
14	M	20	30	25	6
	B	20	30	20	6
	S	30	35	30	4
15	M	30	35	30	4
	B	35	60	45	6
	S	20	30	25	6
16	M	20	30	25	4
	B	20	30	25	6
	S	25	35	25	4
17	M	25	35	25	4
	B	25	30	25	4
23 Sep					
	S	30	45	30	2
13	M	30	35	25	2
	B	35	45	30	2
	S	30	45	30	2
14	M	35	35	30	2
	B	40	35	25	2
	S	40	35	35	2
15	M	40	35	35	2
	B	55	60	40	2
	S	30	40	25	2
16	M	30	35	30	2
	B	30	35	25	2
	S	30	25	25	2
17	M	30	35	25	2
	B	30	35	30	2

Table 129. Summary of daily fluctuations in water level from December 1973 through September 1974 in Lower and Upper B-G.

Date	Lower B-G						Upper B-G					
	Days Level Changed		Amount of Fluctuation (feet)				Days Level Changed		Amount of Fluctuation (feet)			
	Did Occur	Did not Occur	Min. Fluc*	Max. Fluc**	Ave. Daily Fluc.	Standard Deviation	Did Occur	Did not Occur	Min. Fluc*	Max. Fluc**	Ave. Daily Fluc.	Standard Deviation
Dec 73	31	0	0.4	22.4	14.1	6.2	28	3	0.0	18.6	11.0	5.6
Jan 74	31	0	0.7	25.7	16.7	5.8	30	1	0.0	17.1	13.5	4.5
Feb 74	28	0	2.1	22.1	14.3	4.3	28	0	1.8	20.2	11.5	3.6
Mar 74	31	0	3.4	20.8	13.9	4.9	31	0	4.3	14.1	11.2	3.3
Apr 74	30	0	7.4	18.6	14.3	3.6	30	0	4.3	15.3	11.5	2.6
May 74	31	0	4.7	22.3	13.4	3.8	31	0	4.5	23.3	12.9	3.3
Jun 74	30	0	4.6	22.0	11.0	3.5	30	0	4.0	27.1	13.8	6.2
Jul 74	31	0	4.2	26.9	13.7	5.4	31	0	3.6	22.4	11.1	4.4
Aug 74	31	0	0.8	17.2	12.5	4.6	30	1	0.0	13.6	9.8	3.4
Sep 74	30	0	0.1	12.6	5.3	14.4	29	1	0.0	9.8	4.4	3.2

* The least change in water level on any day during the month.
** The greatest change in water level on any day during the month.

Table 130. Summary of water temperature data (°C) taken from April through September 1974 from Schoharie Creek and three tributaries.

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	12
4 Apr	7.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0
11 Apr	2.0	4.5	4.5	6.5	5.0	5.0	5.8	7.0	6.1	5.5	6.0	4.1
18 Apr	6.0	6.0	6.5	7.0	7.0	7.5	9.0	8.5	9.0	9.0	10.0	8.0
25 Apr	6.0	7.0	9.0	9.0	10.0	10.0	10.0	11.0	11.5	10.5	10.0	7.5
2 May	8.0	8.0	9.5	10.0	9.5	9.5	10.0	12.0	11.5	9.0	8.5	8.0
9 May	9.0	10.0	10.0	10.0	10.0	10.0	10.0	11.0	11.0	9.0	10.0	9.0
16 May	13.0	12.0	12.0	13.0	13.0	13.0	14.0	16.0	15.0	14.0	16.0	13.0
23 May	17.0	18.0	15.0	15.0	15.0	15.0	15.0	16.0	15.0	14.0	15.0	13.0
30 May	14.5	15.0	14.5	18.5	16.5	18.0	18.0	16.5	16.5	14.0	16.0	12.5
6 Jun	17.9	19.0	20.0	21.0	17.5	20.0	22.0	22.0	22.0	15.0	19.0	15.0
13 Jun	17.0	18.0	19.0	21.0	18.0	17.0	20.0	20.0	20.0	15.0	18.0	14.0
17 Jun	17.2	18.3	17.7	23.8	19.4	18.3	20.0	21.6	23.3	13.8	18.9	15.0
20 Jun	18.3	20.0	15.0	19.0	18.0	19.0	21.0	21.0	21.0	16.0	20.0	16.0
27 Jun	16.5	18.2	17.2	21.0	17.5	17.0	17.3	19.0	19.0	15.1	16.5	14.5
4 Jul	18.0	21.0	20.0	20.5	20.5	21.0	21.5	22.0	21.0	18.0	20.0	17.0
11 Jul	19.0	21.0	21.5	22.5	19.0	20.0	22.5	22.5	22.0	17.0	20.5	16.5
18 Jul	19.0	21.0	22.0	21.0	19.0	21.0	23.0	23.0	22.0	16.0	21.0	16.0
25 Jul	18.5	20.0	19.0	21.5	20.0	20.0	20.0	22.0	22.0	18.0	19.5	16.0

Table 130 - (Continued). Water temperature

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	11
1 Aug	22.0	21.0	21.0	23.0	22.0	21.0	21.0	21.0	21.0	17.0	20.0	17.0
8 Aug	20.0	20.5	21.0	23.0	20.0	21.5	23.5	24.0	24.0	19.0	22.5	17.0
15 Aug	22.5	22.0	22.5	23.5	22.0	23.0	25.0	25.0	25.0	19.0	24.0	17.0
22 Aug	21.0	22.0	22.5	23.0	23.0	24.5	24.0	25.5	26.0	19.0	24.0	18.0
29 Aug	17.5	18.0	20.5	19.0	18.0	18.0	18.0	18.0	19.0	16.0	18.0	11.0
5 Sep	14.0	15.0	19.5	20.0	15.0	16.5	18.2	18.0	17.5	15.0	15.0	13.0
11 Sep	18.5	18.5	19.5	21.0	19.0	19.0	20.5	21.0	21.5	17.5	19.0	15.5
19 Sep	17.0	19.0	10.5	20.5	20.5	18.5	19.3	18.9	19.0	16.5	16.5	14.0
26 Sep	10.6	12.5	16.0	17.5	15.5	13.0	14.5	14.0	14.8	15.6	12.5	10.5

Table 131. Summary of dissolved oxygen data (ppm) taken from April through September 1974 from Schoharie Creek and three tributaries.

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	12
4 Apr	13.0	>15.0	>15.0	>15.0	15.0	>15.0	>15.0	>15.0	>15.0	14.0	>15.0	>15.0
11 Apr	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	13.0	12.8	13.7	13.4	3.8
18 Apr	>15.0	>15.0	>15.0	>15.0	>15.0	>15.0	13.8	>15.0	15.0	>15.0	>15.0	13.8
25 Apr	14.4	11.6	12.6	12.2	12.2	12.2	11.4	12.4	11.6	10.0	11.6	12.2
2 May	11.4	12.0	14.0	14.0	13.6	13.4	14.0	13.2	13.4	11.8	13.8	14.0
9 May	11.8	11.6	11.9	11.5	11.5	11.4	11.5	11.8	11.5	12.0	11.4	12.6
16 May	11.0	12.2	13.0	14.0	13.0	12.4	12.0	11.9	11.2	11.2	10.4	10.2
23 May	9.4	9.4	10.8	10.6	10.8	11.2	12.2	11.2	10.4	11.4	10.8	10.3
30 May	11.9	10.8	10.3	11.2	11.2	10.9	10.8	10.4	10.3	9.1	10.2	10.6
6 Jun	10.4	9.6	11.1	11.6	11.0	9.6	10.6	10.0	9.8	9.8	10.0	10.4
13 Jun	10.0	11.0	11.0	12.0	10.0	10.0	9.0	9.0	9.0	10.0	10.0	9.0
20 Jun	9.1	10.4	10.5	10.3	10.1	9.4	9.4	9.5	8.5	11.1	9.5	10.2
27 Jun	10.0	10.1	9.4	10.1	10.0	10.1	10.2	10.0	8.4	10.8	9.6	10.6
4 Jul	9.4	8.6	9.8	9.8	9.6	9.0	9.2	9.2	8.9	10.8	9.6	9.8
11 Jul	8.7	7.8	9.1	10.9	9.4	9.2	9.4	9.2	7.5	9.4	9.0	9.3
18 Jul	8.6	7.9	9.0	9.1	9.2	9.2	9.4	9.1	7.8	9.2	9.0	9.3
25 Jul	9.8	8.9	9.1	10.1	9.4	9.5	9.8	9.3	7.6	9.1	9.3	9.6

Table 131 - (Continued). Dissolved oxygen

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	12
1 Aug	9.0	10.5	8.9	9.0	8.8	9.3	9.6	9.0	8.4	8.8	9.0	9.4
8 Aug	8.6	9.6	8.5	10.4	9.2	8.8	9.0	8.8	7.0	8.4	8.4	9.2
15 Aug	8.9	8.2	8.5	9.4	9.6	8.6	10.0	8.8	8.8	9.2	8.7	9.3
22 Aug	8.4	8.5	8.7	10.8	10.0	8.5	9.9	9.4	8.2	9.3	9.3	9.0
29 Aug	8.9	6.2	8.6	9.5	9.4	8.9	9.8	9.1	7.9	10.5	10.0	11.0
5 Sep	10.0	7.7	9.4	8.2	10.2	10.5	9.6	9.4	9.0	9.4	10.1	9.9
11 Sep	10.6	11.2	9.2	11.1	10.4	10.4	10.5	10.0	9.4	9.2	9.6	9.8
19 Sep	9.4	8.4	8.5	8.9	8.8	8.8	8.3	8.6	8.0	9.5	9.5	9.9
26 Sep	10.0	8.4	10.7	9.2	8.7	10.2	8.7	10.0	8.8	7.8	9.8	9.4

Table 132. Summary of pH data taken from April through September 1974 from Schoharie Creek and three tributaries.

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	12
11 Apr	8.6	8.8	8.8	8.7	8.7	8.6	8.7	8.7	8.6	8.7	8.9	8.6
18 Apr	8.7	8.8	8.6	8.6	8.6	8.6	8.7	8.7	8.8	8.6	8.8	8.7
25 Apr	7.7	7.8	8.2	8.8	8.6	8.7	8.5	8.9	9.2	7.5	7.8	8.2
2 May	8.0	8.0	8.2	8.7	8.6	8.7	7.8	8.8	8.8	7.8	8.1	8.4
9 May	8.0	8.0	7.8	7.8	7.8	8.0	8.3	8.4	8.4	7.6	7.8	7.8
16 May	7.8	8.4	8.0	8.0	7.8	7.8	7.8	8.1	8.0	7.6	7.7	7.9
23 May	8.2	8.1	7.9	8.3	8.2	8.0	7.8	8.0	7.9	7.8	8.2	7.6
30 May	7.6	8.2	8.2	8.0	8.5	8.1	8.1	8.2	8.1	8.2	8.1	8.0
6 Jun	8.2	8.0	8.2	8.2	8.4	8.4	8.0	8.1	8.0	7.7	8.0	8.1
13 Jun	8.5	8.4	8.8	8.1	8.2	7.8	7.9	8.0	7.9	7.8	8.3	8.0
20 Jun	7.9	8.6	8.0	7.8	7.0	7.7	7.7	8.2	7.7	7.5	7.8	7.8
27 Jun	8.4	8.3	8.4	8.4	8.4	8.1	8.0	8.0	8.0	8.1	8.0	7.9
4 Jul	8.2	8.0	8.0	8.0	8.0	7.8	7.4	7.7	7.7	7.4	7.7	7.6
11 Jul	8.4	8.2	8.4	8.6	8.4	8.4	8.2	8.2	8.0	8.0	8.0	8.2
18 Jul	8.5	8.1	8.4	8.2	8.1	8.2	7.9	7.9	7.8	7.6	8.2	7.8
25 Jul	8.3	8.2	8.3	8.3	8.2	8.0	8.0	8.2	7.9	7.9	8.3	8.0

Table 132 - (Continued). pH

Dates	Stations											
	Schoharie Creek									Tributaries		
	1	2	3	4	5	6	7	8	9	10	11	12
1 Aug	8.2	8.2	8.2	8.3	8.3	8.2	8.0	8.0	7.8	8.0	8.1	8.0
8 Aug	8.4	8.2	8.2	7.8	8.4	8.3	7.8	8.1	7.8	8.0	8.4	8.2
15 Aug	8.1	8.2	8.2	8.2	8.4	8.0	8.4	8.2	8.1	8.0	8.5	8.0
22 Aug	8.4	8.1	8.1	8.5	8.6	8.0	8.3	8.4	7.8	7.6	8.6	7.8
29 Aug	8.4	8.0	8.3	8.1	8.0	7.9	7.8	7.9	7.6	7.8	8.0	7.8
5 Sep	8.5	8.0	8.2	7.9	8.0	7.6	7.6	7.6	7.5	7.4	7.6	7.6
11 Sep	7.7	8.4	8.5	8.5	8.6	8.4	8.0	8.2	8.0	7.7	8.3	8.1
19 Sep	8.6	8.0	7.5	8.0	8.6	8.5	8.8	8.5	7.4	8.0	8.5	8.1
26 Sep	8.2	8.1	8.2	8.2	8.4	8.2	8.2	8.2	8.0	8.0	8.1	8.0

Table 133. Summary of alkalinity, total hardness, calcium hardness, and carbon dioxide data (mg/l) taken from April through September 1974 from Schoharie Creek and three tributaries.

Date & Station*	Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
25 Apr				
1	15	15	15	2
2	10	15	10	2
3	25	20	15	2
4	20	20	15	2
5	20	20	15	2
6	20	25	15	2
7	15	20	15	2
8	20	20	15	2
9	20	20	15	2
10	30	30	25	2
11	25	20	20	2
12	20	15	10	2
9 May				
1	15	10	10	2
2	15	10	10	2
3	15	15	15	2
4	20	15	15	2
5	20	15	10	2
6	20	15	10	2
7	15	10	10	2
8	20	10	10	2
9	15	15	10	2
10	25	15	10	2
11	20	20	10	2
12	15	10	10	2
23 May				
1	20	15	10	2
2	15	15	10	2
3	15	20	10	2
4	25	20	10	2
5	20	15	10	2
6	20	10	10	2

* Stations: 1-9 = Schoharie Creek
10-12 = Tributaries

Table 133 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station	Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
23 May				
7	25	20	15	2
8	20	15	15	2
9	20	15	15	2
10	30	20	15	2
11	25	20	15	2
12	20	15	10	2
6 Jun				
1	20	25	20	2
2	65	50	45	2
3	25	25	20	2
4	70	70	70	4
5	35	35	30	2
6	35	30	25	2
7	40	35	20	2
8	35	25	20	2
9	35	25	15	4
10	30	20	20	4
11	30	25	15	2
12	20	15	10	2
20 Jun				
1	15	15	10	2
2	75	45	45	2
3	30	15	15	2
4	40	25	20	4
5	25	20	20	2
6	40	20	20	2
7	40	25	20	2
8	35	20	20	2
9	40	30	20	4
10	35	20	20	4
11	40	20	20	2
12	25	15	15	2

Table 133 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station	Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
11 Jul				
1	15	15	10	2
2	80	70	45	6
3	25	30	20	4
4	55	35	25	4
5	30	25	25	2
6	35	30	25	4
7	35	30	25	2
8	35	25	20	2
9	35	30	15	2
10	35	30	20	4
11	30	20	15	2
12	20	15	10	4
25 Jul				
1	20	15	15	2
2	95	55	45	6
3	35	25	20	6
4	40	25	20	4
5	40	25	20	4
6	40	30	25	2
7	40	35	30	2
8	40	35	25	4
9	40	30	25	4
10	40	30	20	6
11	30	25	20	2
12	25	20	15	2
8 Aug				
1	25	20	15	2
2	85	55	50	10
3	25	25	20	4
4	50	40	35	6
5	30	25	20	4
6	35	25	20	4

Table 133 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*	Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
8 Aug				
7	40	35	30	4
8	40	25	20	4
9	45	25	20	4
10	40	35	25	6
11	40	25	20	2
12	30	15	10	4
22 Aug				
1	20	20	15	2
2	95	60	50	4
3	30	25	20	2
4	45	50	30	2
5	40	35	30	2
6	45	35	25	4
7	45	35	25	4
8	40	40	25	2
9	45	35	20	4
10	35	30	25	4
11	40	25	20	2
12	30	20	15	2
11 Sep				
1	15	15	10	2
2	110	70	65	10
3	30	20	15	6
4	35	25	25	4
5	25	20	20	2
6	30	25	20	2
7	30	25	20	4
8	30	20	20	2
9	25	25	20	10
10	30	25	25	6
11	30	20	15	2
12	30	15	10	2

Table 133 - (Continued). Alkalinity, total hardness, calcium hardness, carbon dioxide

Date & Station*	Alkalinity	Total Hardness	Calcium Hardness	Carbon Dioxide
26 Sep				
1	20	20	15	2
2	130	120	115	8
3	30	45	30	4
4	35	40	30	2
5	45	50	30	2
6	35	35	25	2
7	40	40	30	2
8	35	40	30	2
9	35	35	25	2
10	30	40	30	4
11	35	35	25	2
12	25	25	15	2

Table 134. Dates in 1974 on which water samples were taken from 12 stations in Schoharie Creek and its tributaries following 0.25 or more inches of rainfall in a 24-hour period.

Date	Amount of Rainfall (in)
April 4	0.30
May 1	0.49
13	0.80
17	0.42
June 17	0.44
22	0.60
July 3	1.22
25	0.25
August 24	1.50
28	0.70
29	0.69
September 4	1.17

Table 135. Schedule of stream benthos sampling in 1974.

Month	Schoharie Creek	Cole Hollow Creek
June	Stations 1-7, 9, 10, and 12: 2 samples per station Stations 8 and 11: 1 sample per station	No samples taken
July	Stations 1-7, 9, 10, and 12: 2 samples per station Stations 8 and 11: 1 sample per station	Stations 1-4: 1 sample per station
Aug	Stations 1-12: 10 samples per station	Stations 1-4: 10 samples per station

Table 136. Stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek.

Station No.	Zone 1*				Zone 2*										Grand Total
	1	2	3	Total	4	5	6	7	8	9	10	11	12	Total	
No. of Samples	14	14	14	42	14	14	14	14	12	14	14	12	14	122	164
Mayflies	120	47	68	235	32	235	164	95	21	96	313	50	269	1275	1510
Caddisflies	2	193	193	388	4	163	47	70	10	2	158	4	0	458	846
Dipterans (flies, midges, etc)	3	71	16	90	25	26	23	23	13	20	27	7	10	174	264
Worms	26	57	37	120	14	10	13	1	17	5	15	21	16	112	232
Stoneflies	0	0	19	19	0	7	8	77	1	3	6	0	1	103	177
Beetles	1	1	12	14	2	6	9	15	4	9	48	2	6	101	115
Bugs	1	15	0	16	0	12	4	0	0	10	4	2	0	32	48
Dragonflies, Damselflies	0	0	4	4	0	5	2	2	0	1	1	0	0	11	15
Hellgrammites	0	0	0	0	3	1	0	3	4	0	0	0	2	13	13
Crayfish	3	0	0	3	0	0	0	0	0	3	0	0	0	3	6
Snails	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Flatworms	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Miscellaneous	0	0	0	0	0	0	0	0	1	0	1	0	1	3	3
Number of Organisms	156	384	349	889	80	466	270	287	71	149	573	86	305	2287	3176
Number of Orders	7	6	7	9	6	10	8	9	8	9	9	6	8	13	13
Biomass (g)	1.45	1.09	2.50	5.04	0.68	2.97	1.54	4.94	0.56	4.45	5.19	0.38	3.82	24.53	29.57

* Zone 1 = upstream from Lower B-G
Zone 2 = downstream from Lower B-G

Table 137. Mean and standard deviation of number of organisms, number of orders, and biomass per sample of stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek.

Station No.	Zone 1*				Zone 2*										Grand
	1	2	3	Total	4	5	6	7	8	9	10	11	12	Total	Total
No. of Samples	14	14	14	42	14	14	14	14	12	14	14	12	14	122	164
Mean Number of Organisms Per Sample	11	27	25	21	6	33	19	21	6	11	41	7	22	19	19
Standard Deviation	6.0	32.6	22.2	22.1	5.6	25.2	11.7	17.6	3.5	8.1	38.9	4.1	14.0	22.4	21.7
Mean Number of Orders Per Sample	2	3	3	3	2	4	4	4	3	3	5	2	3	3	3
Standard Deviation	1.0	0.9	1.5	1.3	1.1	1.5	1.3	1.1	1.1	1.5	1.4	1.0	0.9	1.5	1.5
Mean Biomass (g) Per Sample	0.10	0.08	0.18	0.12	0.05	0.21	0.11	0.35	0.05	0.32	0.37	0.03	0.27	0.20	0.18
Standard Deviation	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.5	0.1	0.5	0.3	0.1	0.4	0.3	0.3

* Zone 1 = Upstream from Lower B-G
Zone 2 = Downstream from Lower B-G

Table 138. Minimum and maximum discharges (cfs) and maximum instantaneous increase in discharge (cfs) in June through August 1974 in Lower B-G.

Month	Minimum Discharge	Maximum Discharge	Maximum Increase in Discharge Per Hour
June	5	270	195
July	5	420	240
August	5	274	112

Table 139. Numerical and occurrence percentages of stream benthos collected in June through August 1974 in 2 zones (12 stations) of Schoharie Creek.

Organism	% Numerical			% Occurrence		
	Zone 1*	Zone 2*	Total	Zone 1	Zone 2	Total
Caddisflies	43.6	21.5	27.7	100.0	100.0	100.0
Mayflies	26.4	52.0	45.7	100.0	100.0	100.0
Worms	13.5	4.6	7.0	100.0	100.0	100.0
Dipterans (flies, midges, etc.)	10.1	7.1	8.0	100.0	100.0	100.0
Stoneflies	2.1	6.4	5.4	33.3	77.8	66.7
Bugs	1.8	1.3	1.5	66.7	55.6	58.3
Beetles	1.6	4.1	3.5	100.0	100.0	100.0
Dragonflies, Damselflies	0.4	0.4	0.5	33.3	55.6	50.0
Crayfish	0.3	0.1	0.2	33.3	11.1	16.7
Hellgrammites	-	0.5	0.4	-	41.7	41.7
Snails, Clams	-	<0.1	<0.1	-	11.1	8.3
Flatworms	-	<0.1	<0.1	-	11.1	8.3
Miscellaneous	-	0.1	0.1	-	33.3	25.0

* Zone 1 = Upstream from Lower B-G.
Zone 2 = Downstream from Lower B-G.

Table 140. Mean number of organisms and orders collected per sample in August and September 1973 and in June through August 1974 in 2 zones of Schoharie Creek.

Station No.	Zone 1*				Zone 2*										Grand Total
	1	2	3	Total	4	5	6	7	8	9	10	11	12	Total	
Mean Number of Organisms Per Sample															
1973**	63	11	47	40	3	79	55	304	59	51	-	-	-	92	75
1974	11	27	25	21	6	33	19	21	6	11	41	7	22	19	19
Mean Number of Orders Per Sample															
1973**	2	5	4	4	2	5	5	6	6	4	-	-	-	4	4
1974	2	3	3	3	2	4	4	4	3	3	5	2	3	3	3

* Zone 1 = Upstream from Lower B-G.
Zone 2 = Downstream from Lower B-G.

** No samples were taken at stations 10-12 in 1973.

Table 141. Stream benthos collected in July and August 1974 in 2 zones (4 stations) of Cole Hollow Creek.

Station No.	Zone 1* 1	2	Total	Zone 2* 3	4	Total	Grand Total
No. of Samples	11	11	22	11	11	22	44
Mayflies	92	99	191	130	207	337	528
Caddisflies	63	77	140	35	43	78	218
Stoneflies	23	39	62	46	55	101	163
Dipterans (flies, midges, etc.)	22	18	40	6	17	23	63
Worms	6	1	7	2	29	31	38
Beetles	17	7	24	0	0	0	24
Dragonflies, Damselflies	1	4	5	5	4	9	14
Hellgrammites	1	3	4	0	0	0	4
Crayfish	1	0	1	2	0	2	3
Number of Organisms	226	248	474	226	355	581	1055
Number of Orders	9	8	9	7	6	7	9
Biomass (g)	3.59	6.72	10.31	3.79	3.73	7.52	17.83

* Zone 1 = along proposed access road to Breakabeen upper reservoir.
Zone 2 = above proposed access road to Breakabeen upper reservoir.

Table 142. Mean and standard deviation of number of organisms, number of orders, and biomass per sample of stream benthos collected in July through August 1974 in 2 zones (4 stations) of Cole Hollow Creek.

Station No.	Zone 1*			Zone 2*			Grand Total
	1	2	Total	3	4	Total	
No. of Samples	11	11	22	11	11	22	44
Mean Number of Organisms Per Sample	21	23	22	21	32	26	24
Standard Deviation	8.8	20.3	15.3	23.8	20.0	21.9	18.8
Mean Number of Orders Per Samples	5	4	4	4	4	4	4
Standard Deviation	0.7	1.3	1.0	1.2	1.1	1.1	1.1
Mean Biomass (g) Per Sample	0.33	0.61	0.47	0.34	0.34	0.34	0.41
Standard Deviation	0.2	0.3	0.3	0.3	0.3	0.3	0.3

* Zone 1 = along proposed access road to Breakabeen upper reservoir.
Zone 2 = above proposed access road to Breakabeen upper reservoir.

Table 143. Numerical and occurrence percentages of stream benthos collected in July and August 1974 in 2 zones (4 stations) of Cole Hollow Creek.

Organism	% Numerical			% Occurrence		
	Zone 1*	Zone 2*	Total	Zone 1	Zone 2	Total
Mayflies	40.3	58.0	50.0	100.0	100.0	100.0
Caddisflies	29.5	13.4	20.7	100.0	100.0	100.0
Stoneflies	13.1	17.4	15.5	100.0	100.0	100.0
Dipterans (flies, midges, etc.)	8.4	4.0	6.0	100.0	100.0	100.0
Worms	1.5	5.3	3.6	100.0	100.0	100.0
Beetles	5.1	0.0	2.3	100.0	0.0	50.0
Dragonflies, Damselflies	1.1	1.5	1.3	100.0	100.0	100.0
Hellgrammites	0.8	0.0	0.4	100.0	0.0	50.0
Crayfish	0.2	0.3	0.3	50.0	50.0	50.0

* Zone 1 = along proposed access road to Breakabeen upper reservoir.
Zone 2 = above proposed access road to Breakabeen upper reservoir.

Table 144. Fish kills attributed to pumped storage operation from 1 June through 18 September 1974 in Lower and Upper B-G.

Species	Length (mm) (approx.)	Weight (g) (approx.)	Location Collected	Condition	Date Collected
Carp	335	454.4	Upper B-G near trap net station 4	decapitated	12 Jun 74
Carp	360	596.7	Upper B-G near trap net station 4	bruised & cut	12 Jun 74
Yellow perch	150	53.3	Lower B-G in front of pumphouse	bruised & cut	1 Jul 74
Yellow perch	147	51.1	Lower B-G in front of pumphouse	bruised & cut	1 Jul 74
Brown bullhead	125	21.9	Lower B-G in front of pumphouse	bruised & cut	1 Jul 74
Brown bullhead	225	213.3	Lower B-G in front of pumphouse	internal organs exposed	17 Jul 74
White sucker	325	283.0	Lower B-G near trap net station 4	internal organs exposed	29 Jul 74
White sucker	270	267.0	Lower B-G in front of pumphouse	mutilated	18 Sep 74

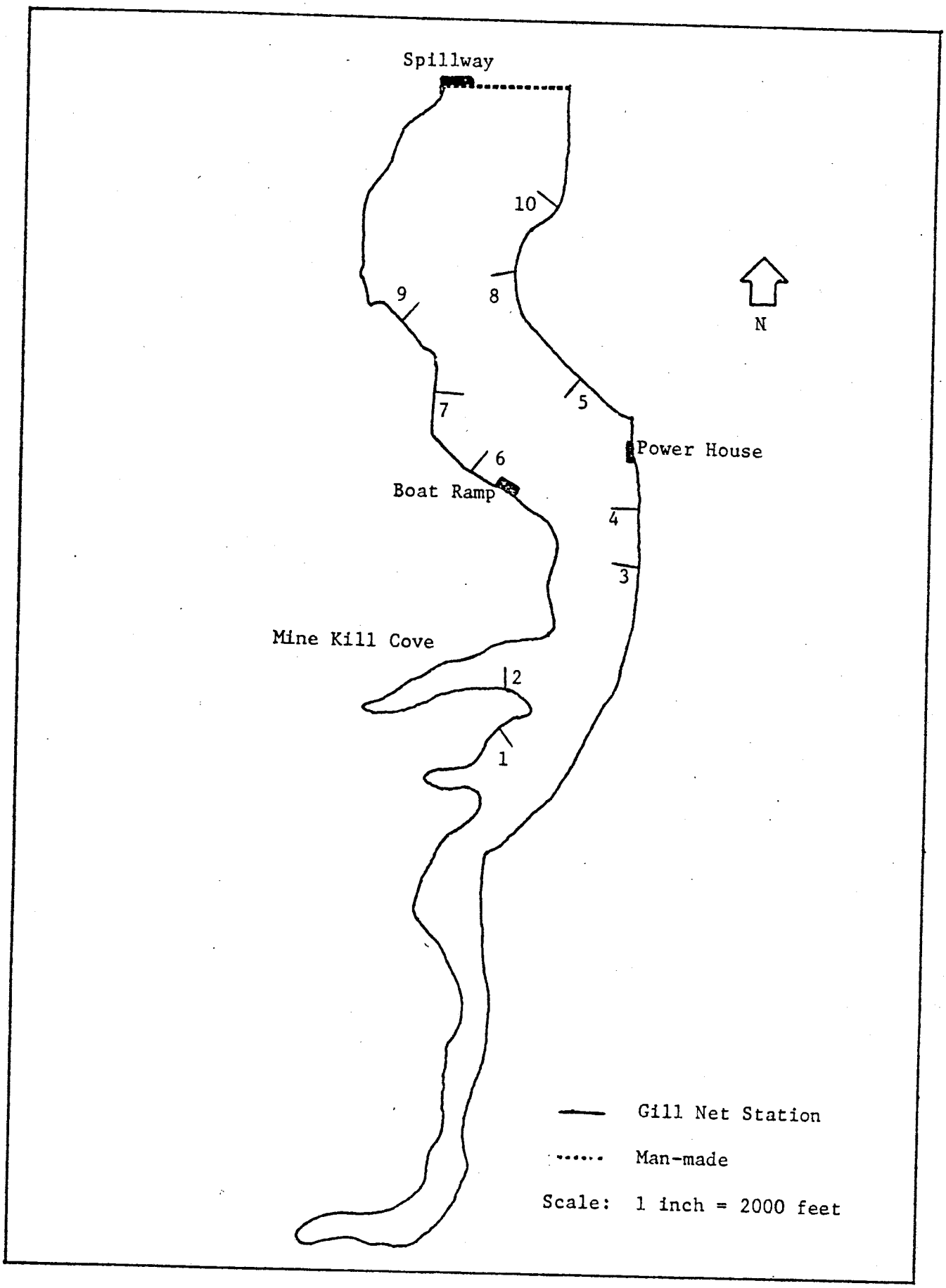

Figure 1. Gill net stations 1-10 on Lower B-G.

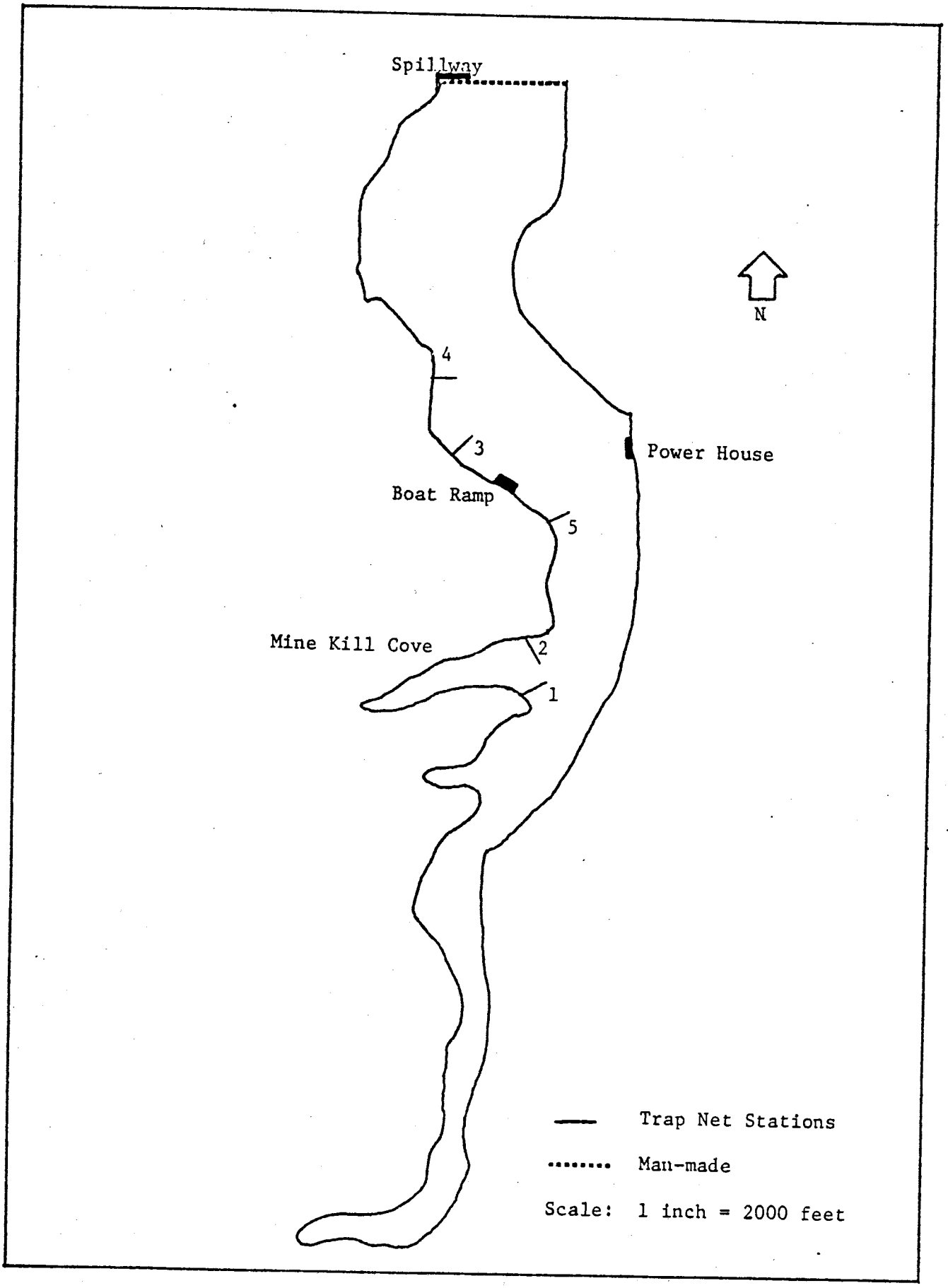

Figure 2. Trap net stations 1-5 on Lower B-G .

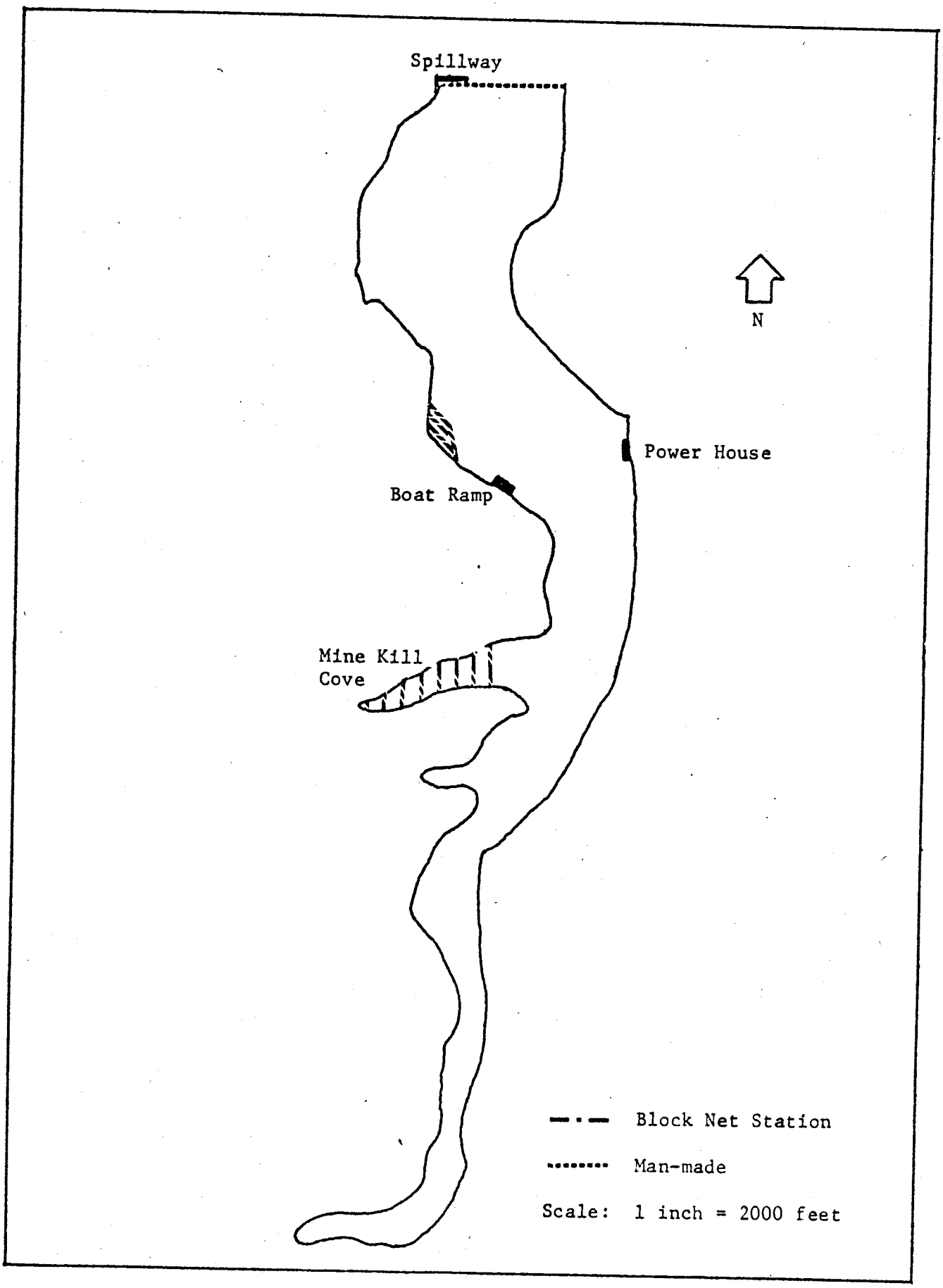

Figure 3. Block net stations on Lower B-G.

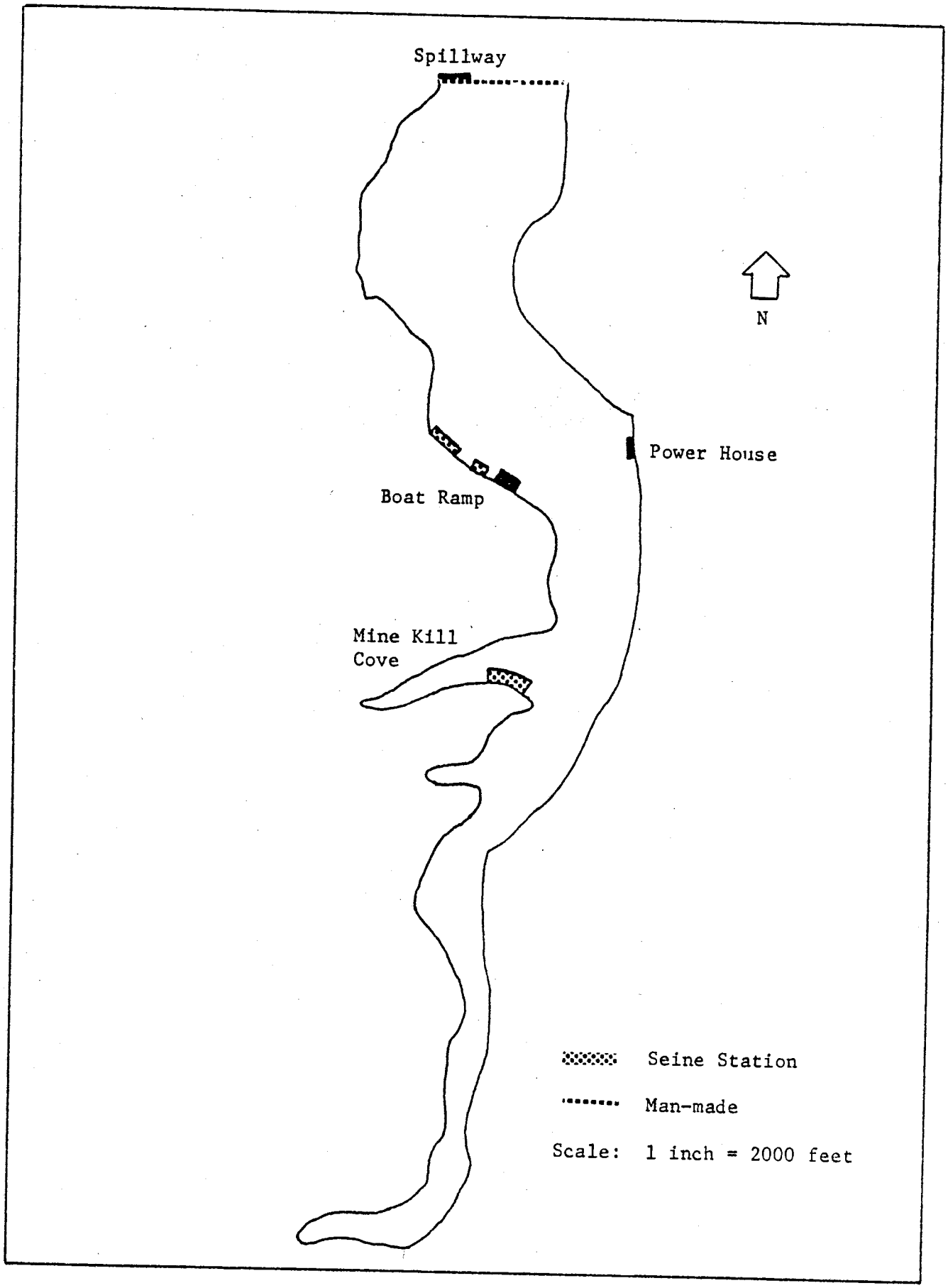

Figure 4. Seine net stations on Lower B-G .

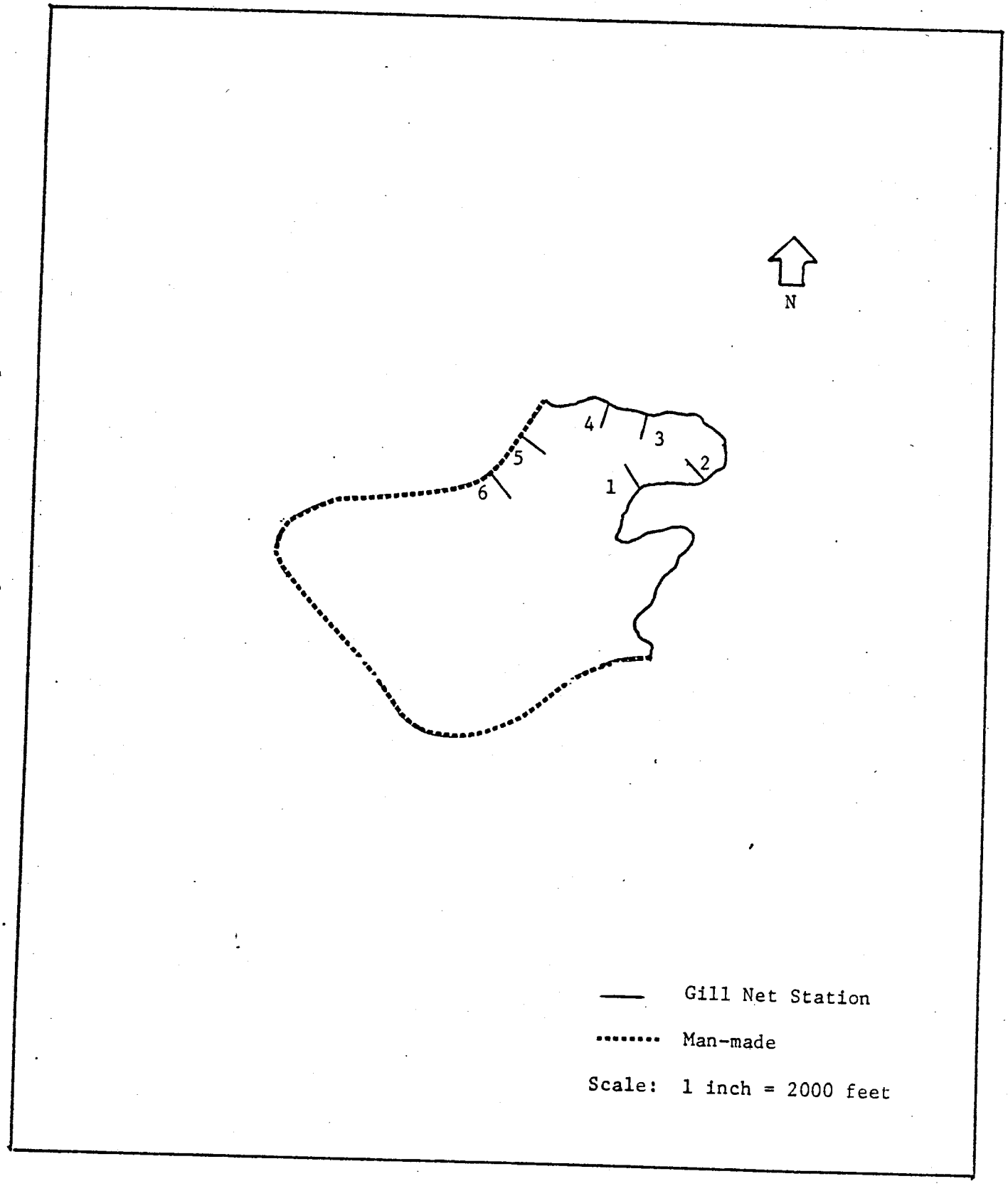

Figure 5. Gill net stations 1-6 on Upper B-G.

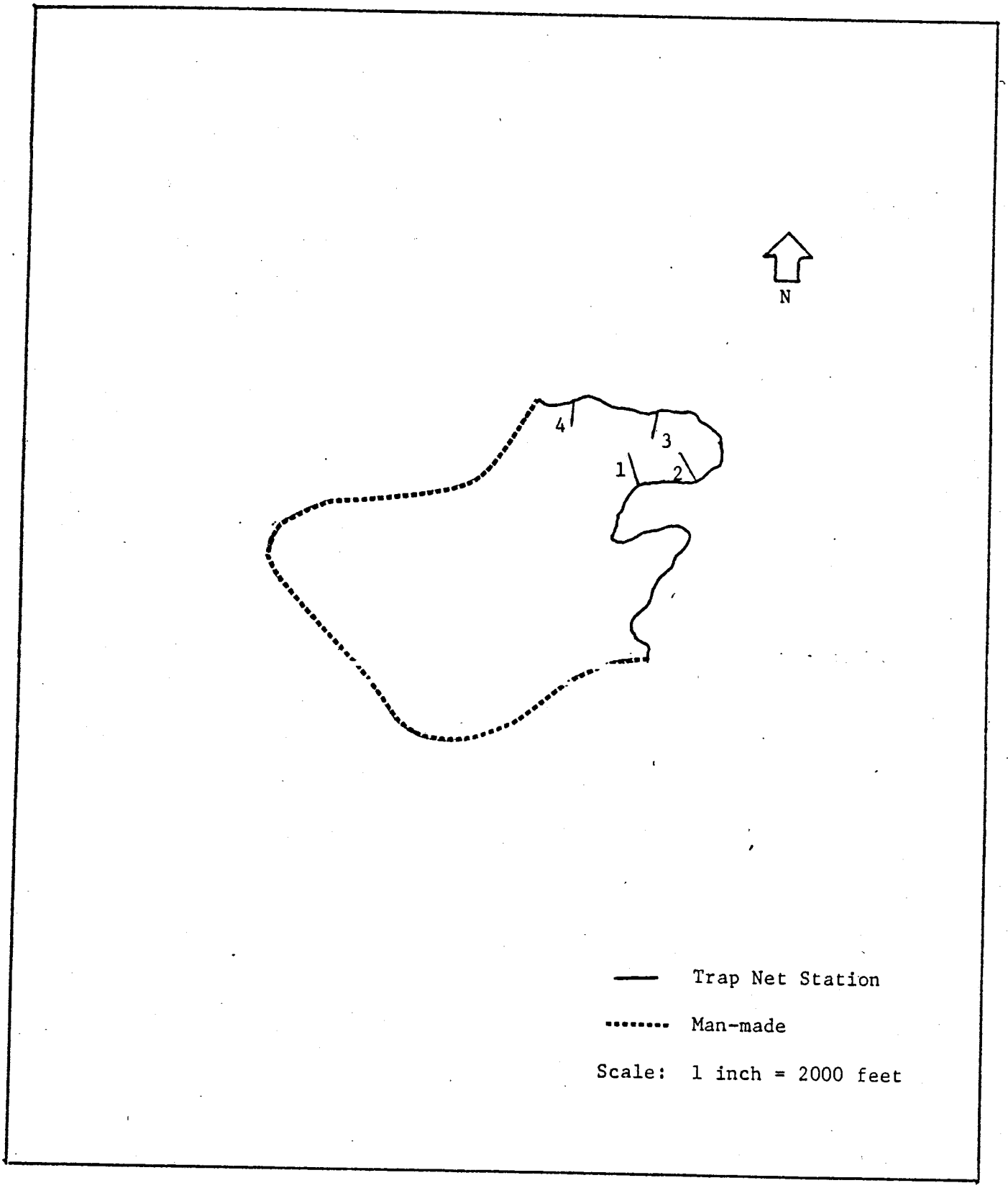

Figure 6. Trap net stations 1-4 on Upper B-C .

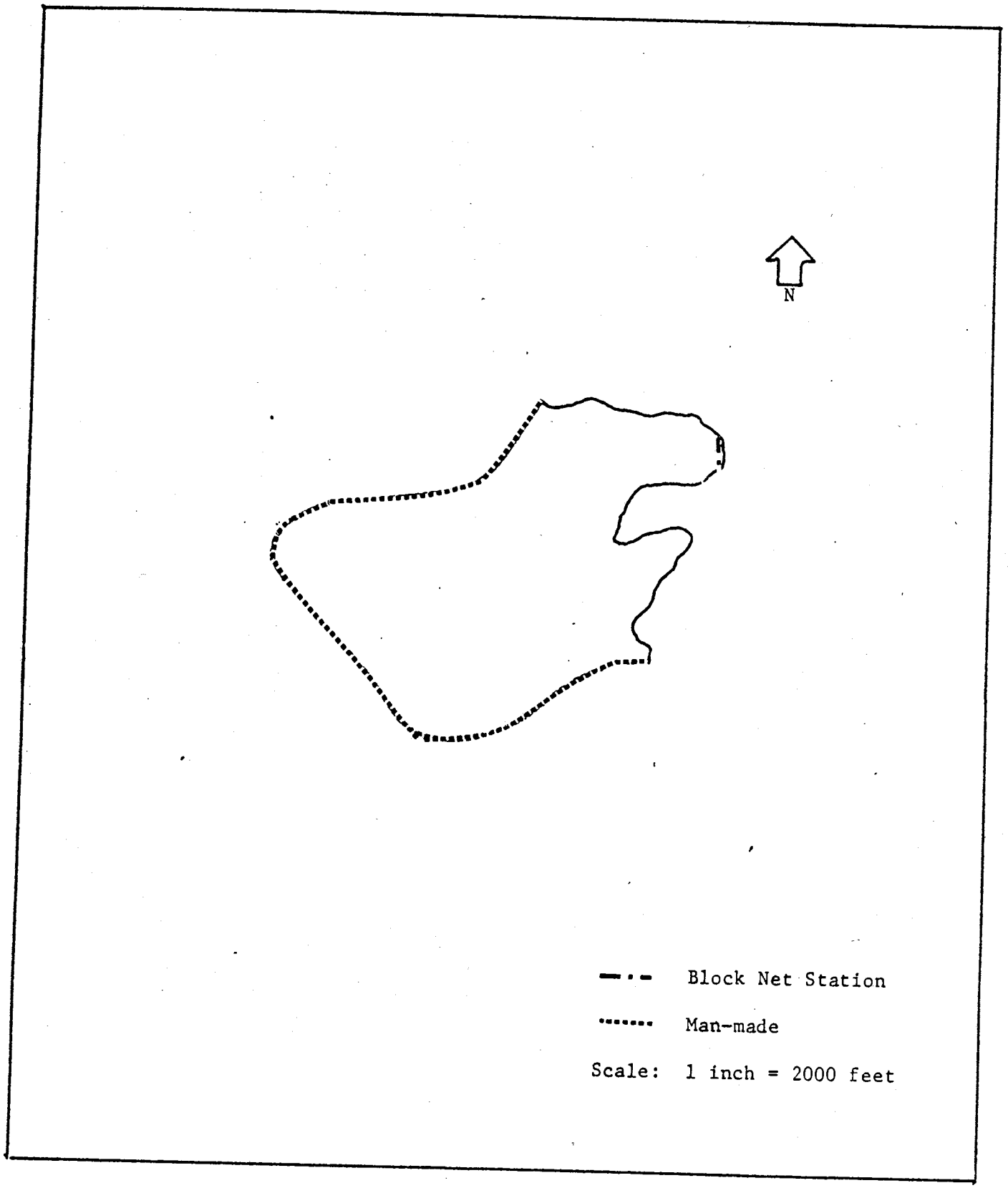

Figure 7. Block net station on Upper B-G .

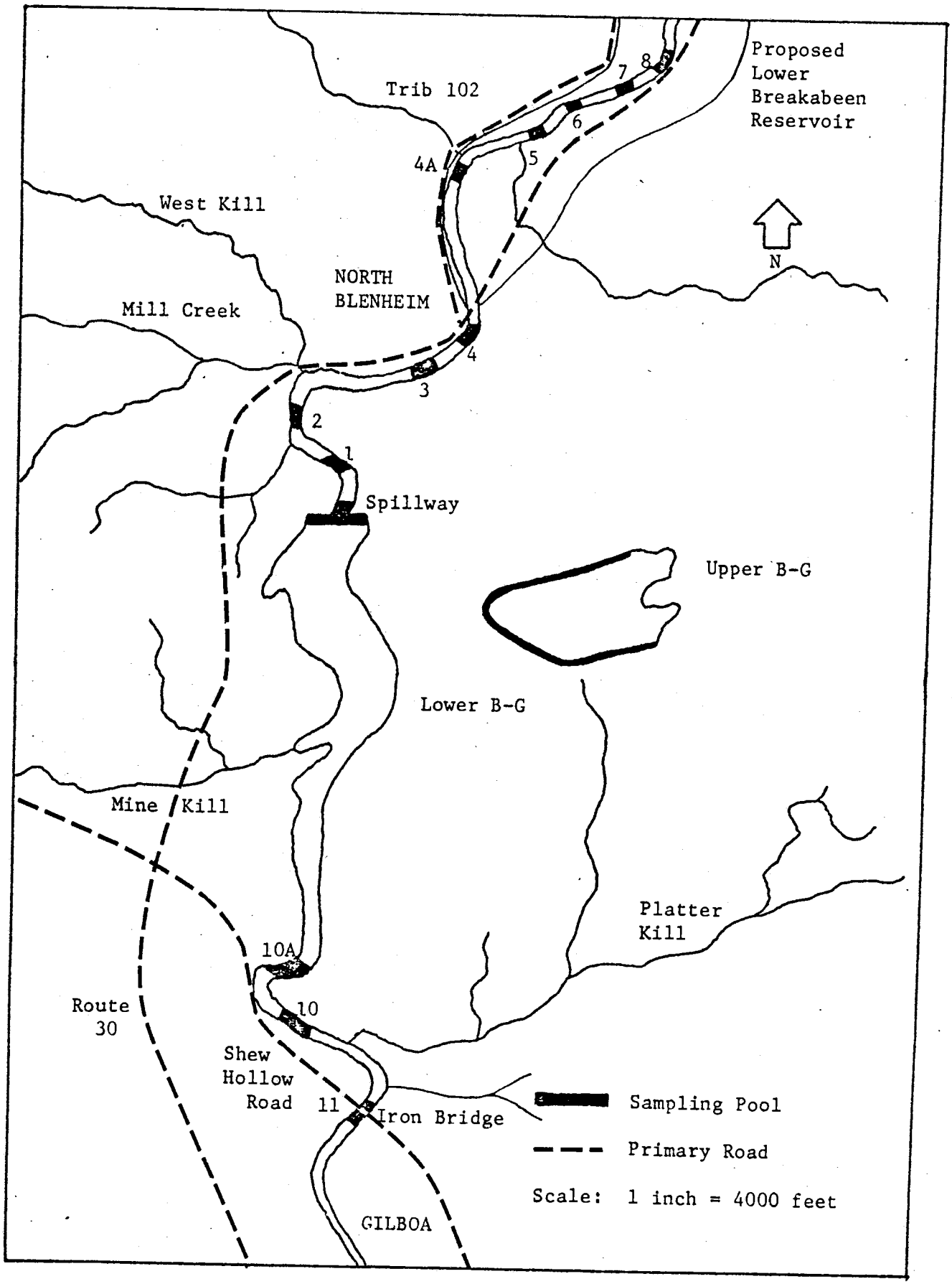

Figure 8. Fish Sampling Pools 11, 10, 10A, spillway pool, and 1-8 on Schoharie Creek.

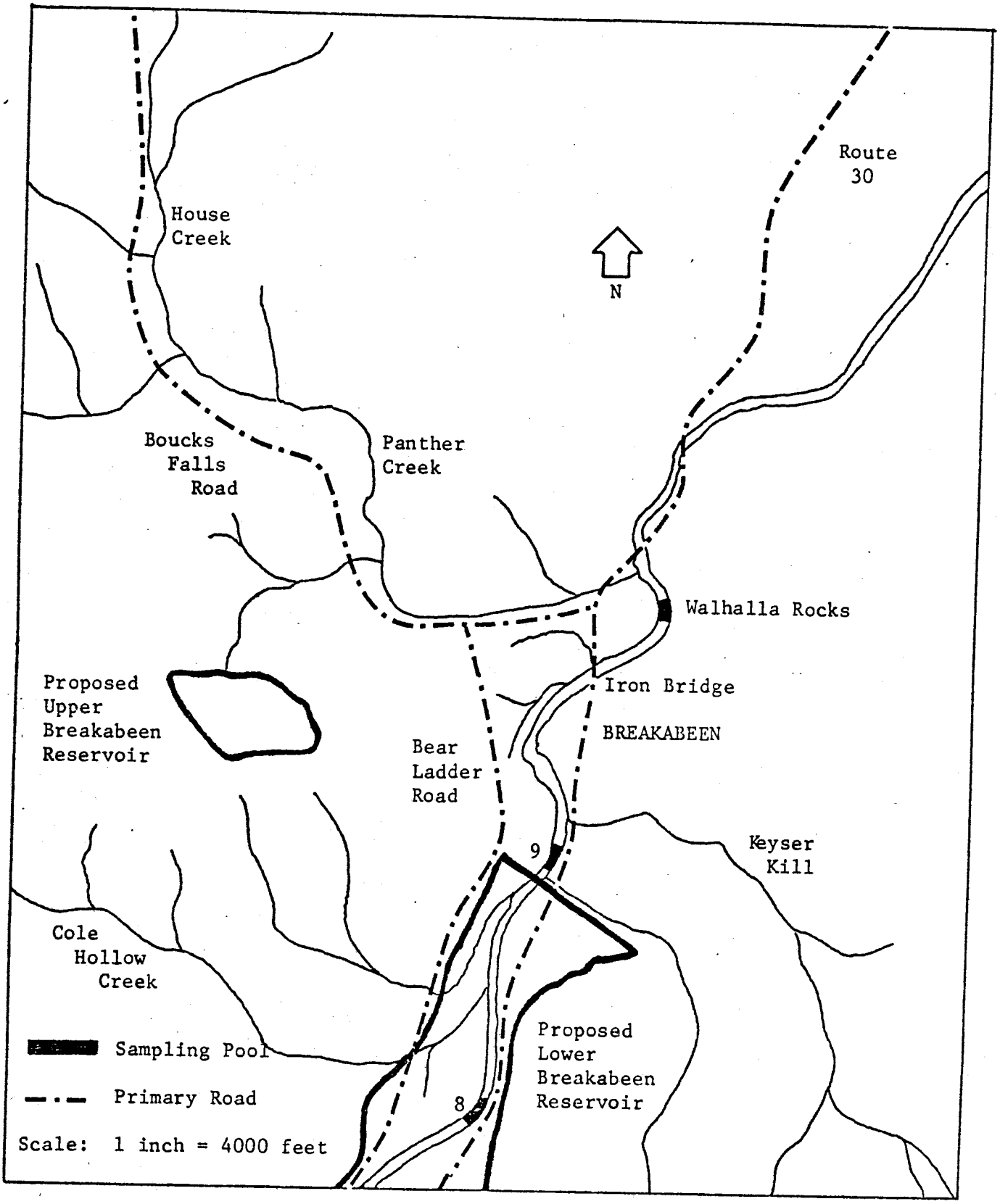

Figure 9. Fish Sampling Pools 8 and 9 and the Walhalla Rocks pool on Schoharie Creek.

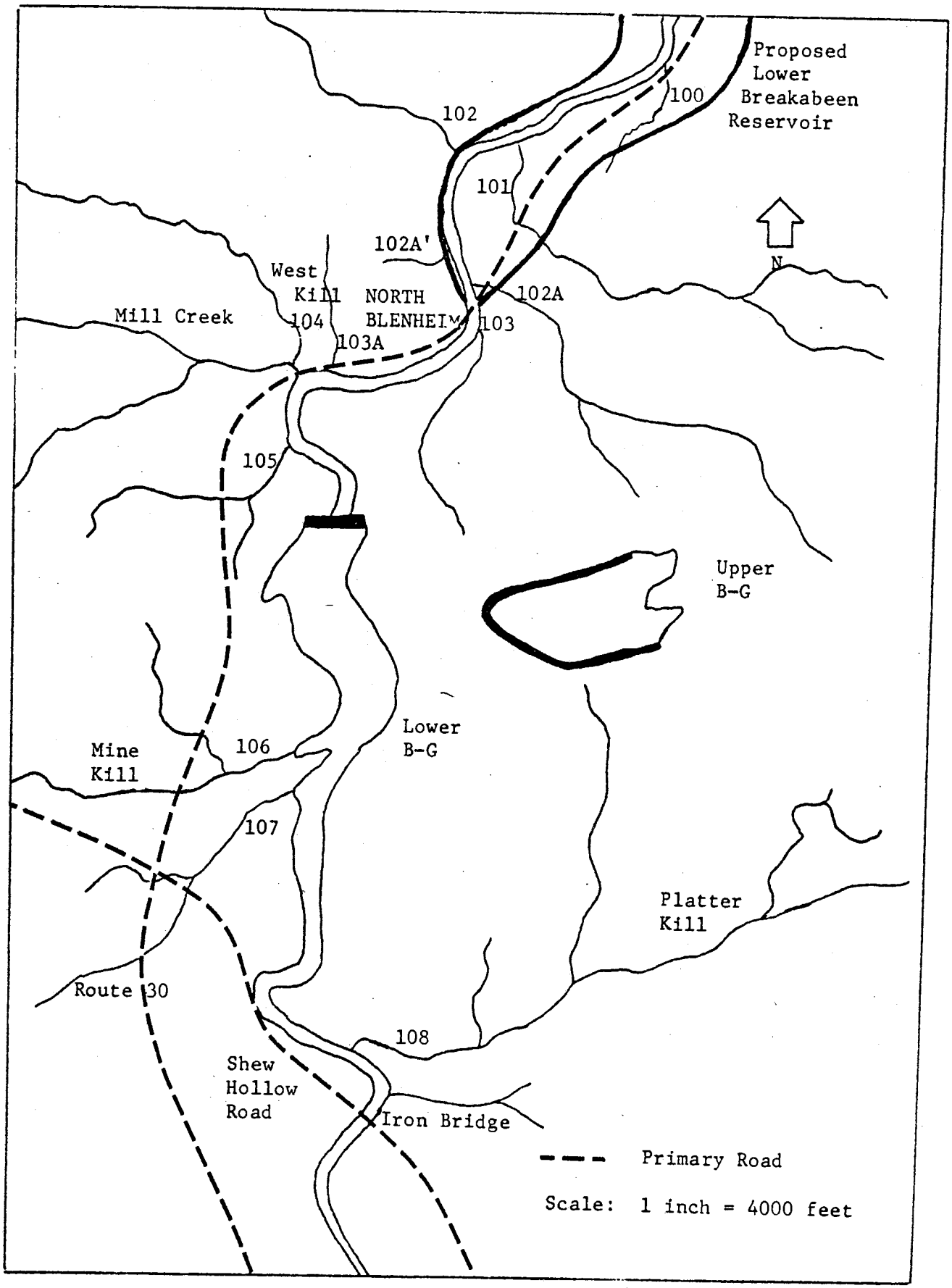

Figure 10. Tributaries 108-100 of Schoharie Creek in the vicinity of the Blenheim-Gilboa Pumped Storage Project and the proposed Breakabeen pumped storage facility.

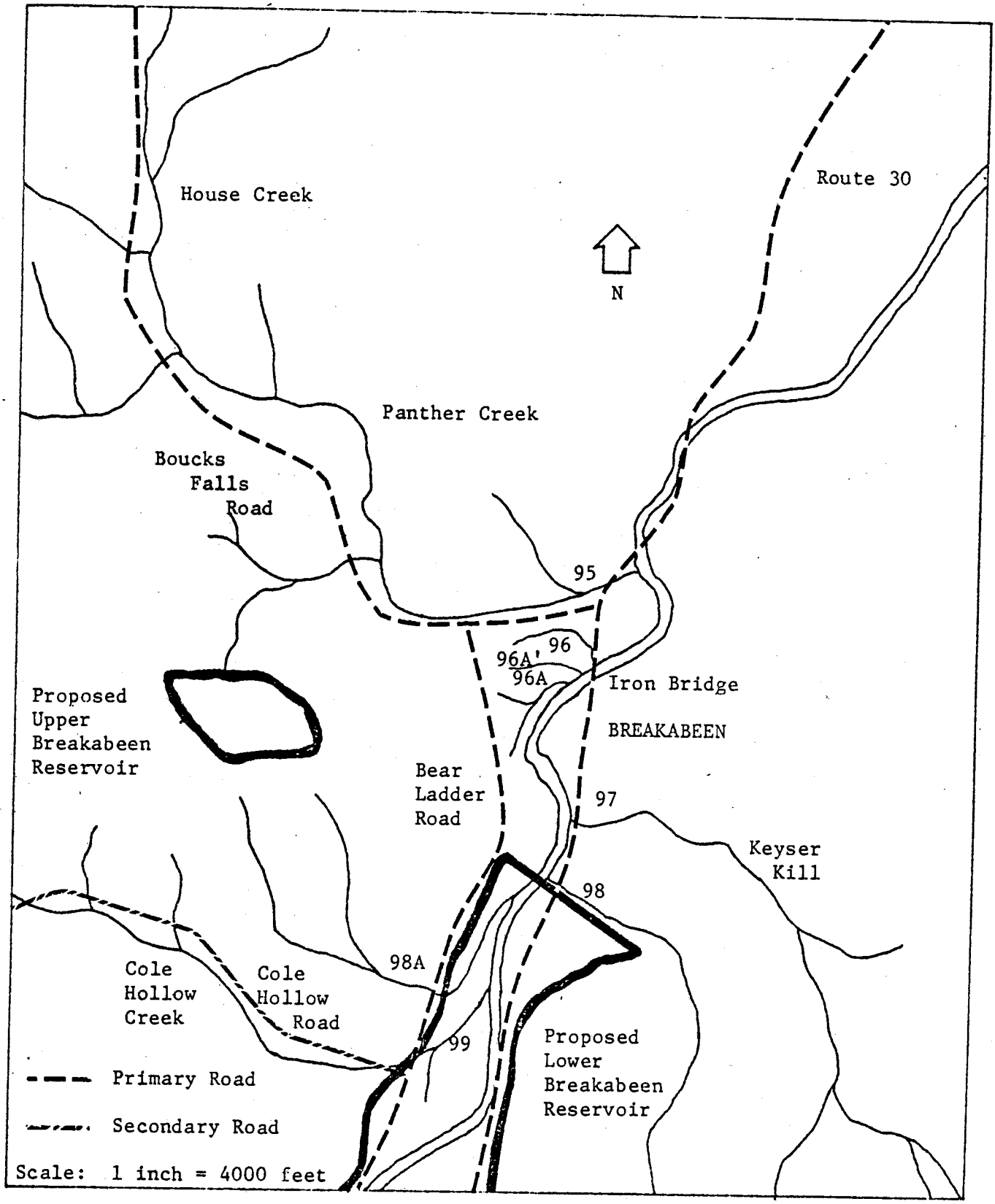

Figure 11. Tributaries 99-95 of Schoharie Creek in the vicinity of the proposed Breakabeen pumped storage facility.

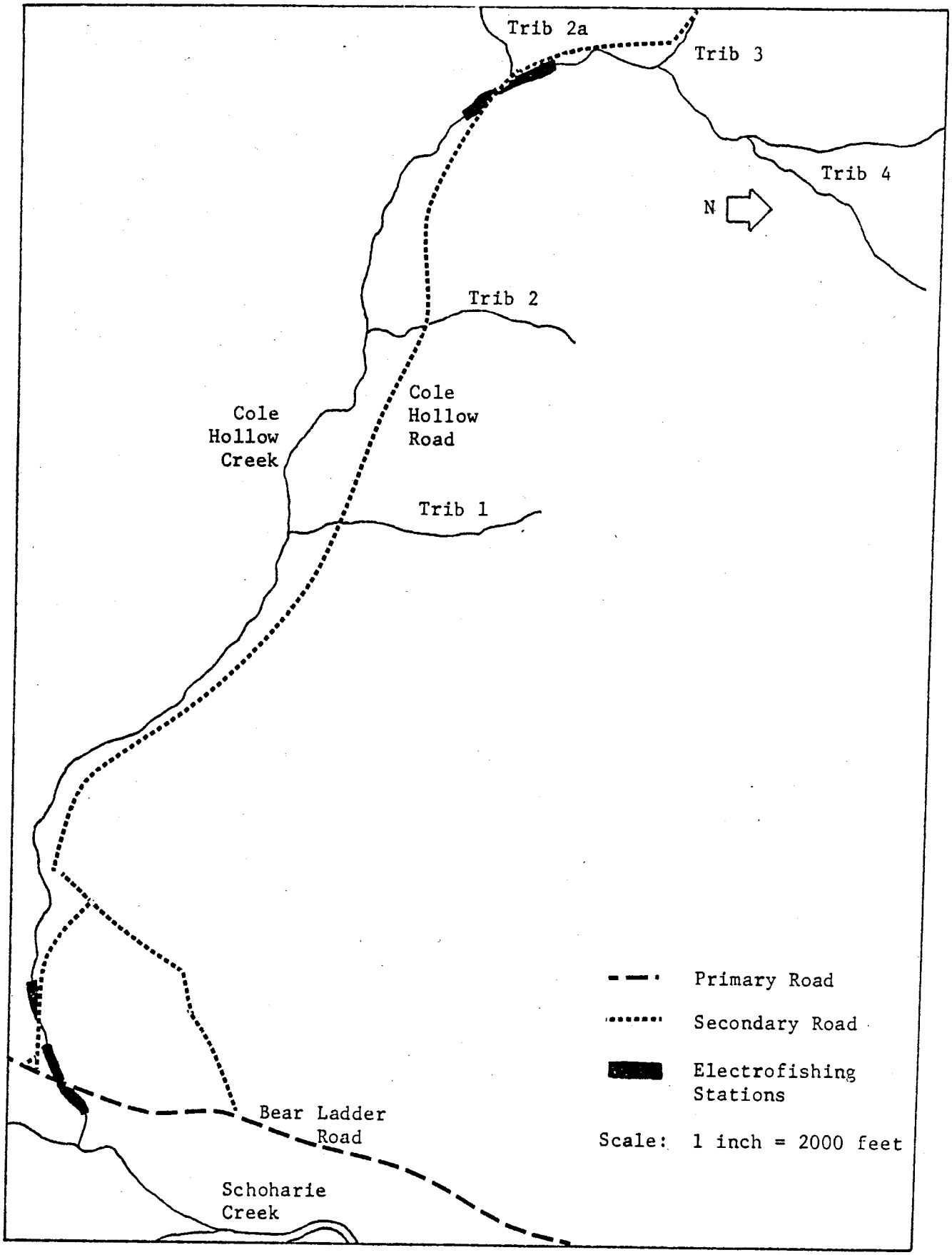

Figure 12. Electrofishing stations on Trib 99 (Cole Hollow Creek).

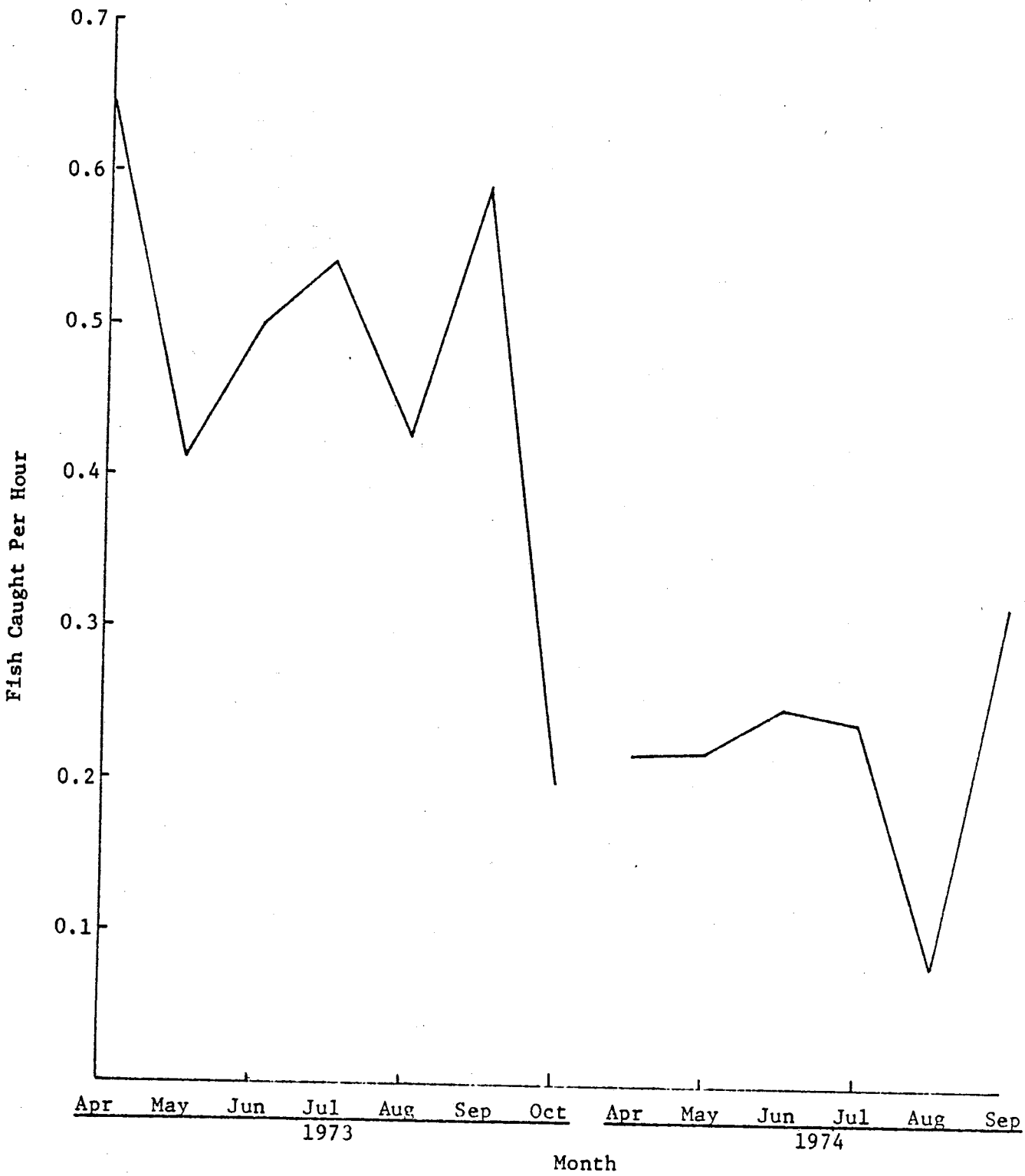

Figure 13. Catch per hour by month of gill net sampling in 1973 and 1974 in Lower B-G .

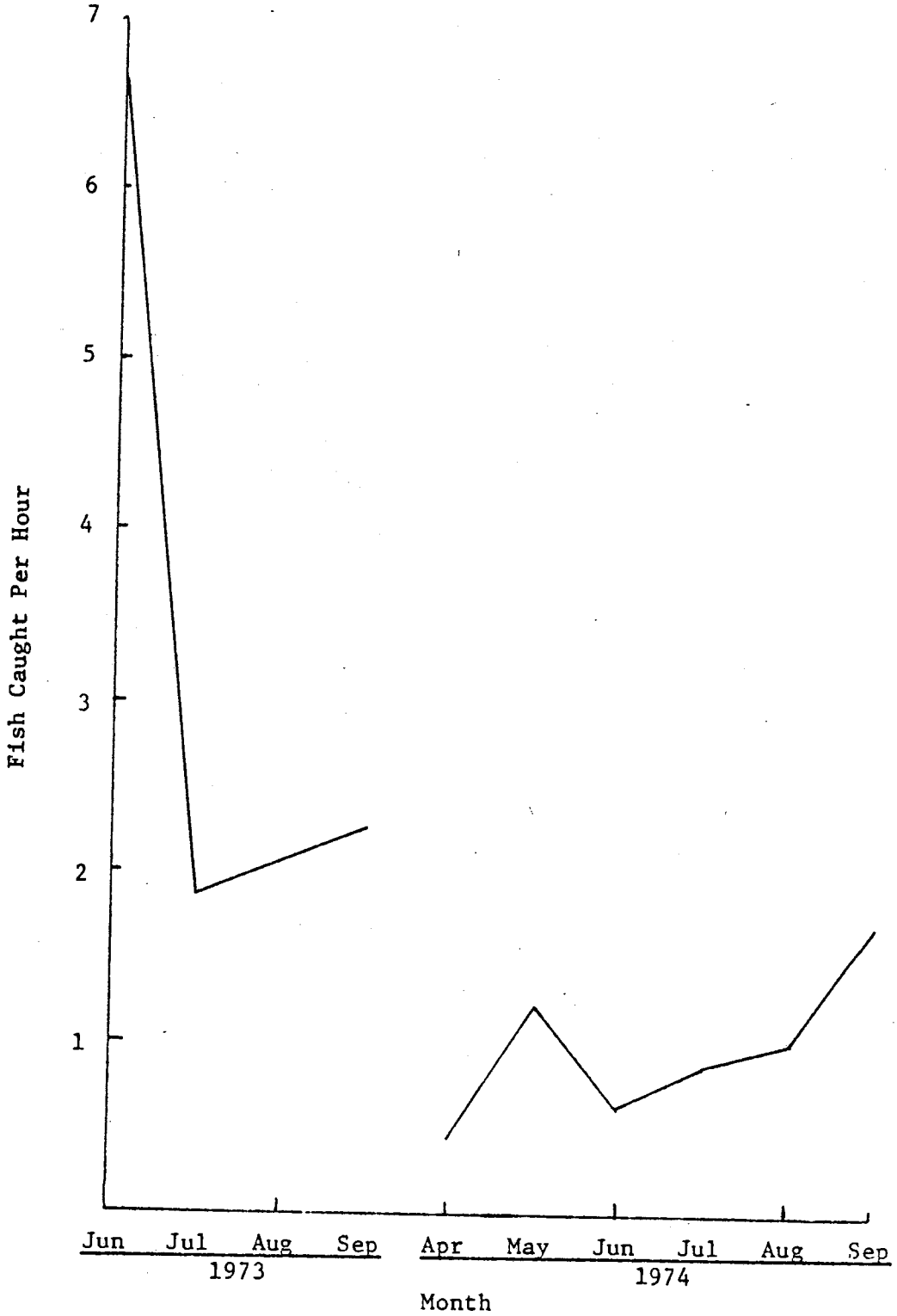

Figure 14. Catch per hour by month of trap net sampling in 1973 and 1974 in Lower B-G.

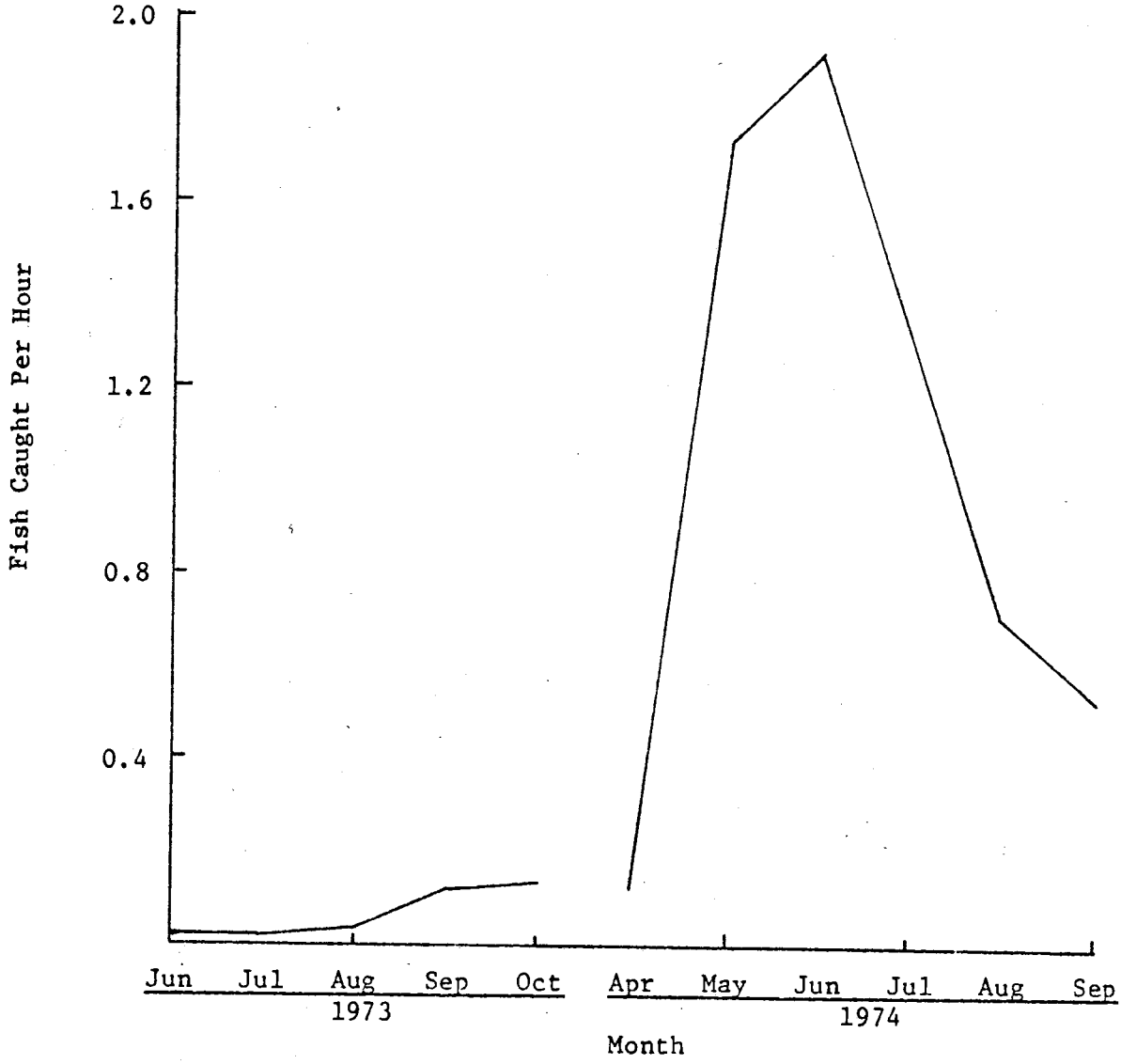

Figure 15. Catch per hour by month of gill net sampling in 1973 and 1974 in Upper B-G.

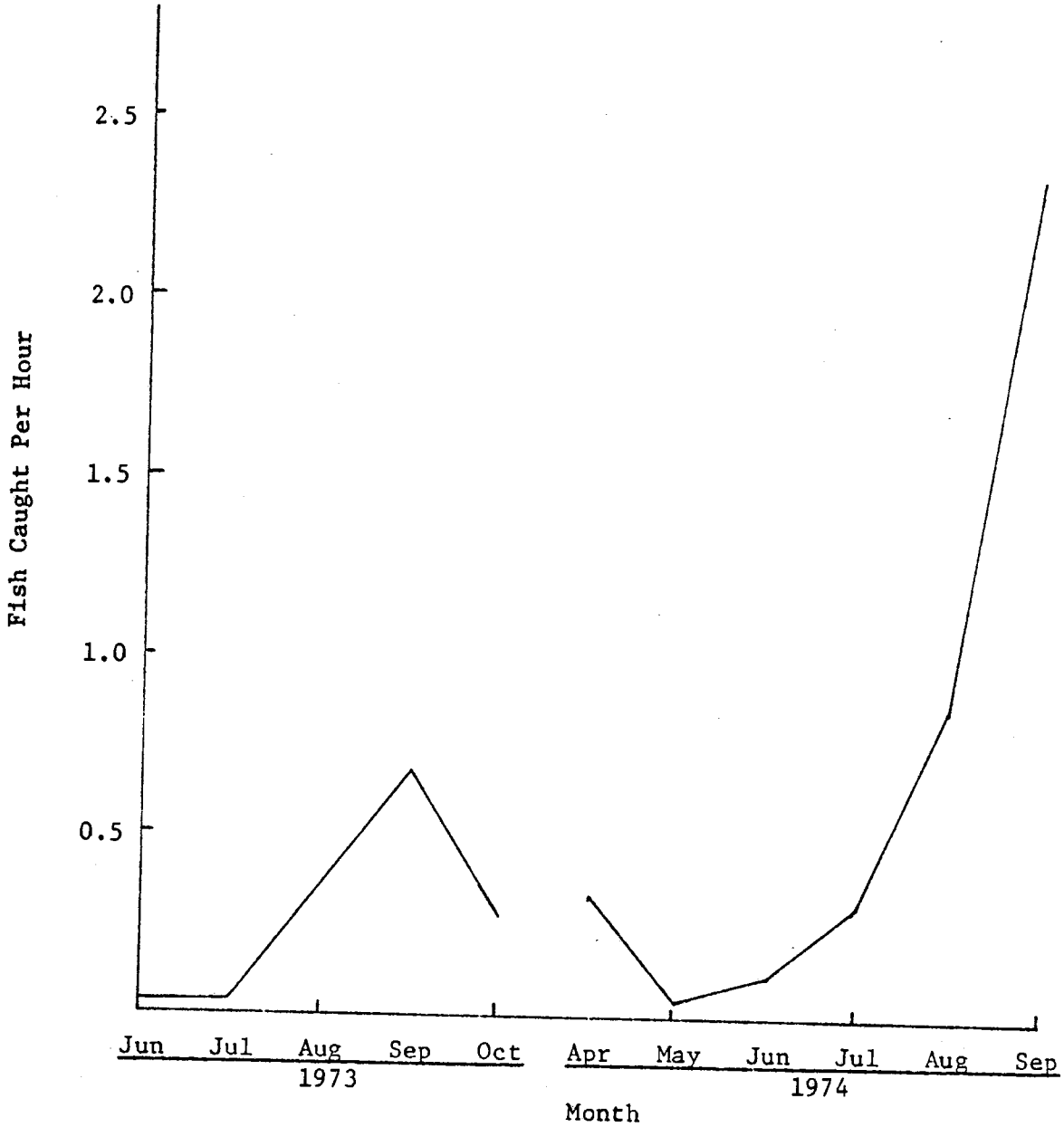

Figure 16. Catch per hour by month of trap net sampling in 1973 and 1974 in Upper B-G.

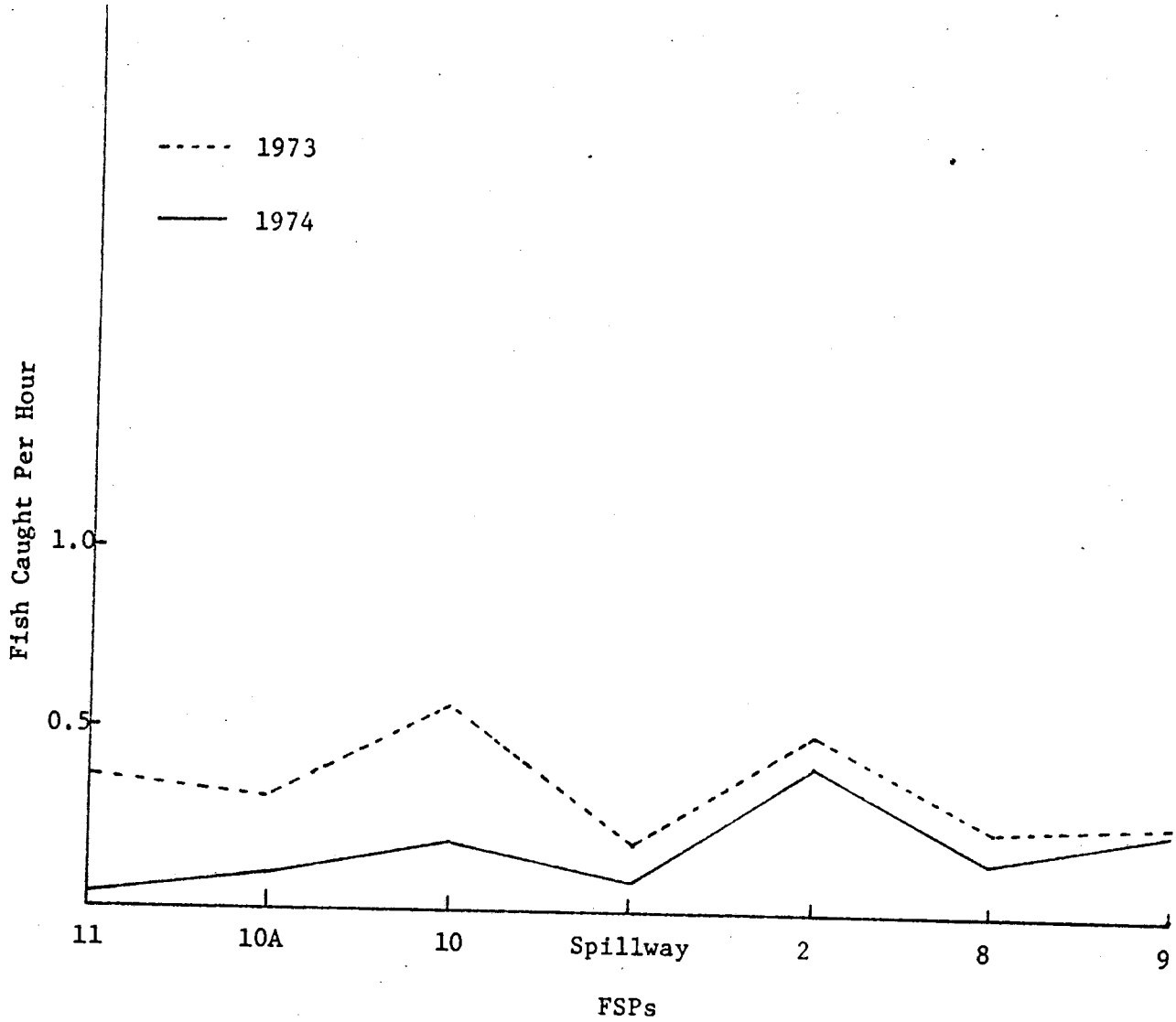

Figure 17. Catch per hour by pool of trap net sampling in 1973 and 1974 in Schoharie Creek.

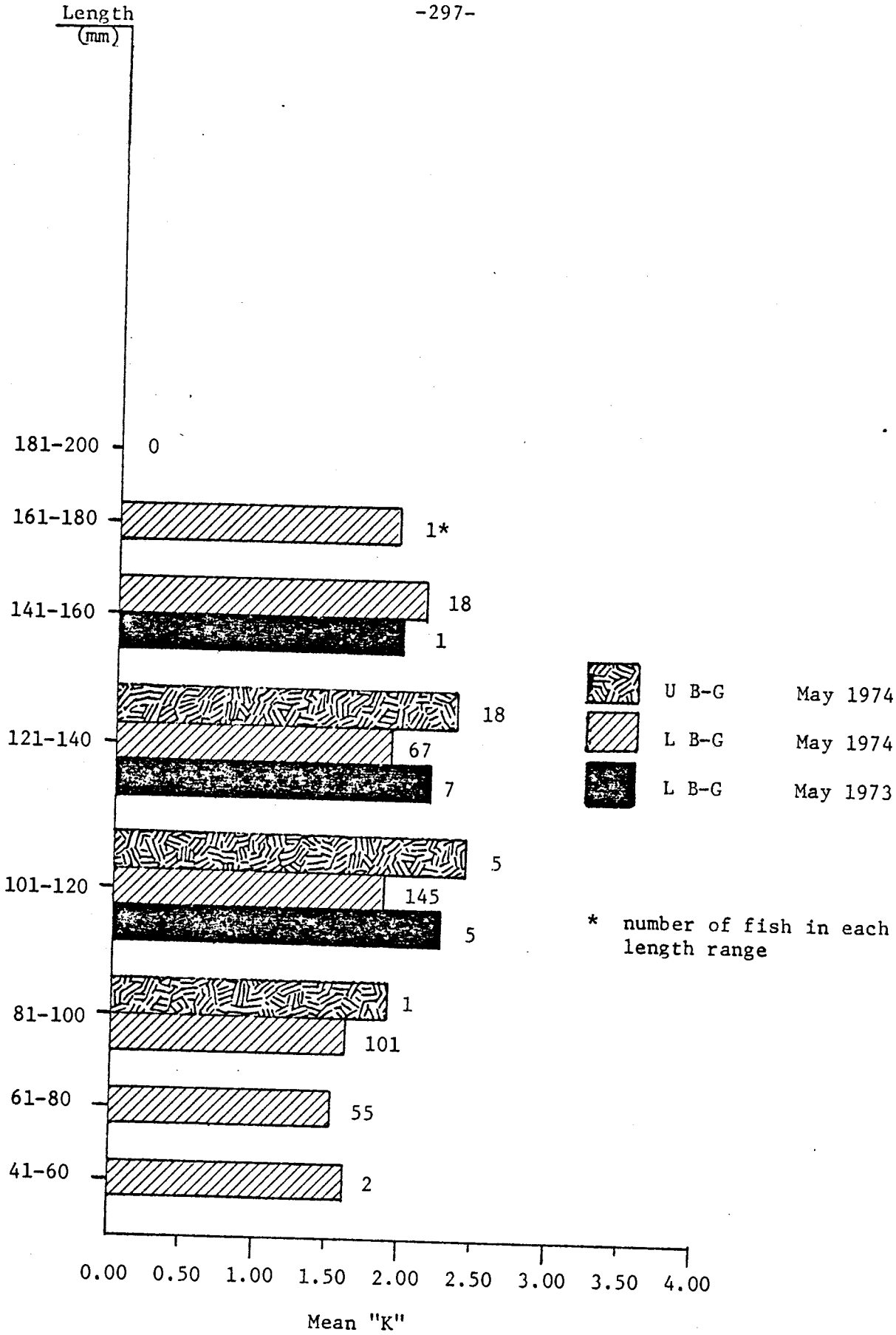

Figure 18. Condition factors of pumpkinseed collected in May 1973 and May 1974 in Lower and Upper B-G.

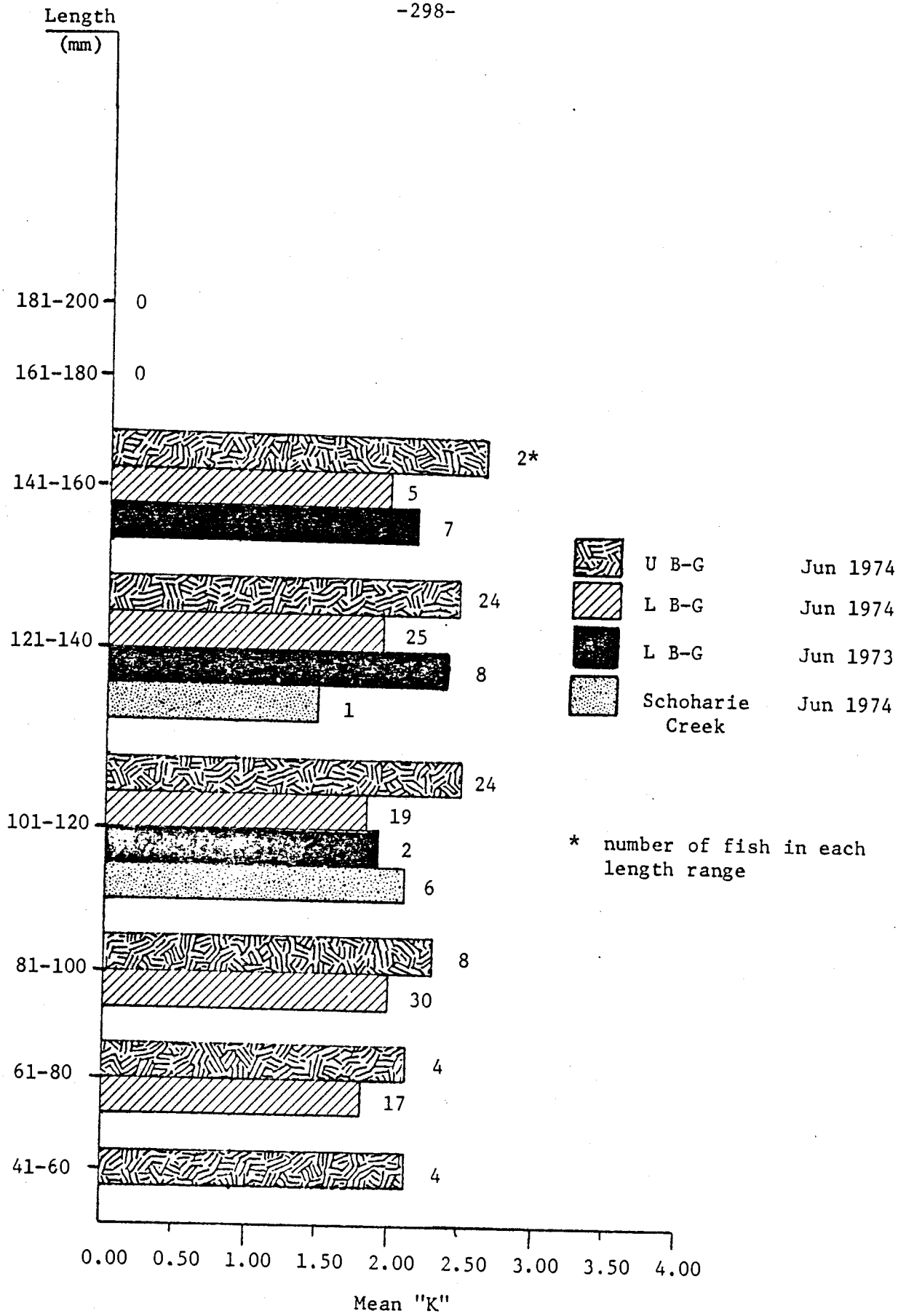

Figure 19. Condition factors of pumpkinseed collected in June 1973 and June 1974 in Lower and Upper B-G and Schoharie Creek.

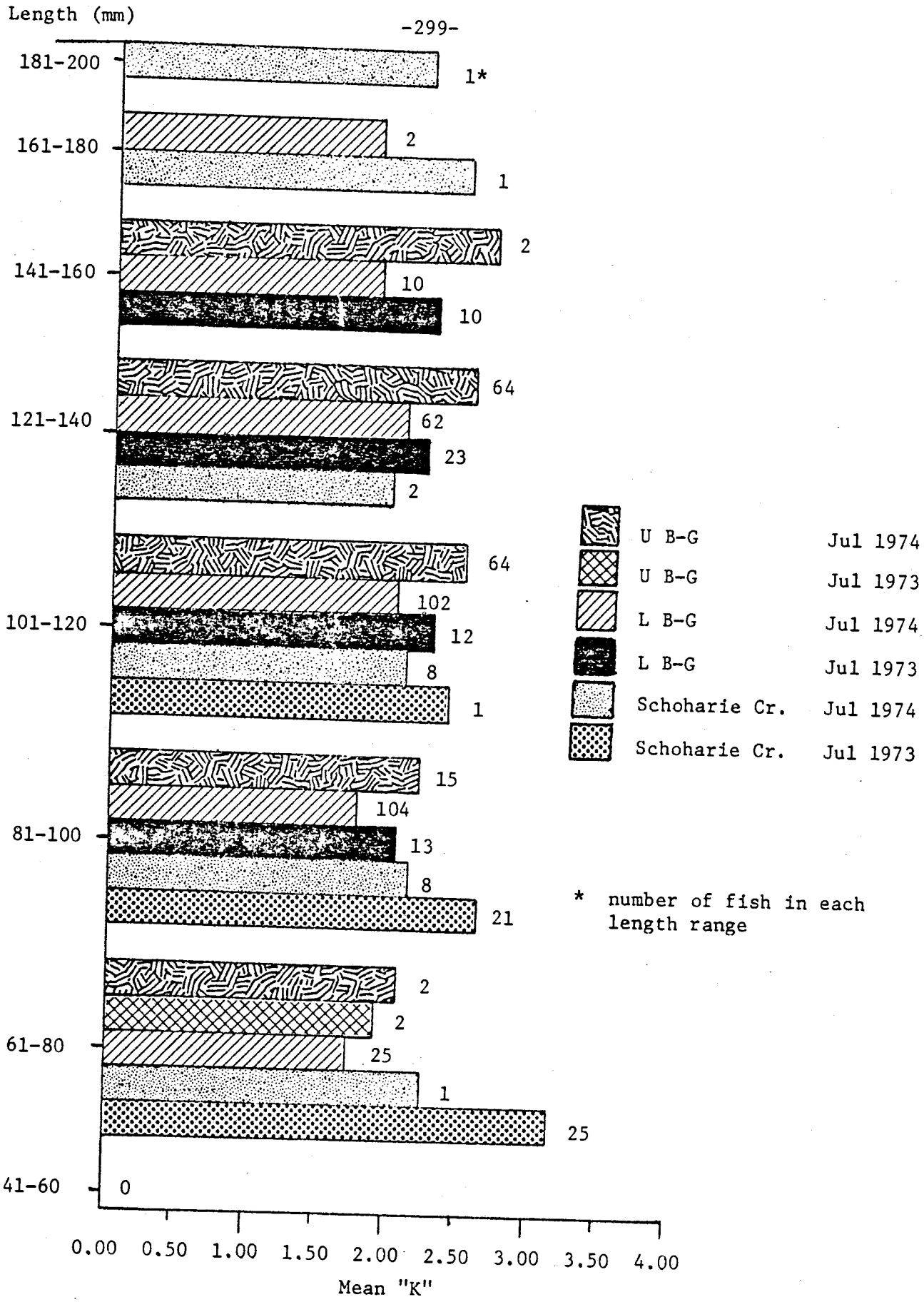

Figure 20. Condition factors of pumpkinseed collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek.

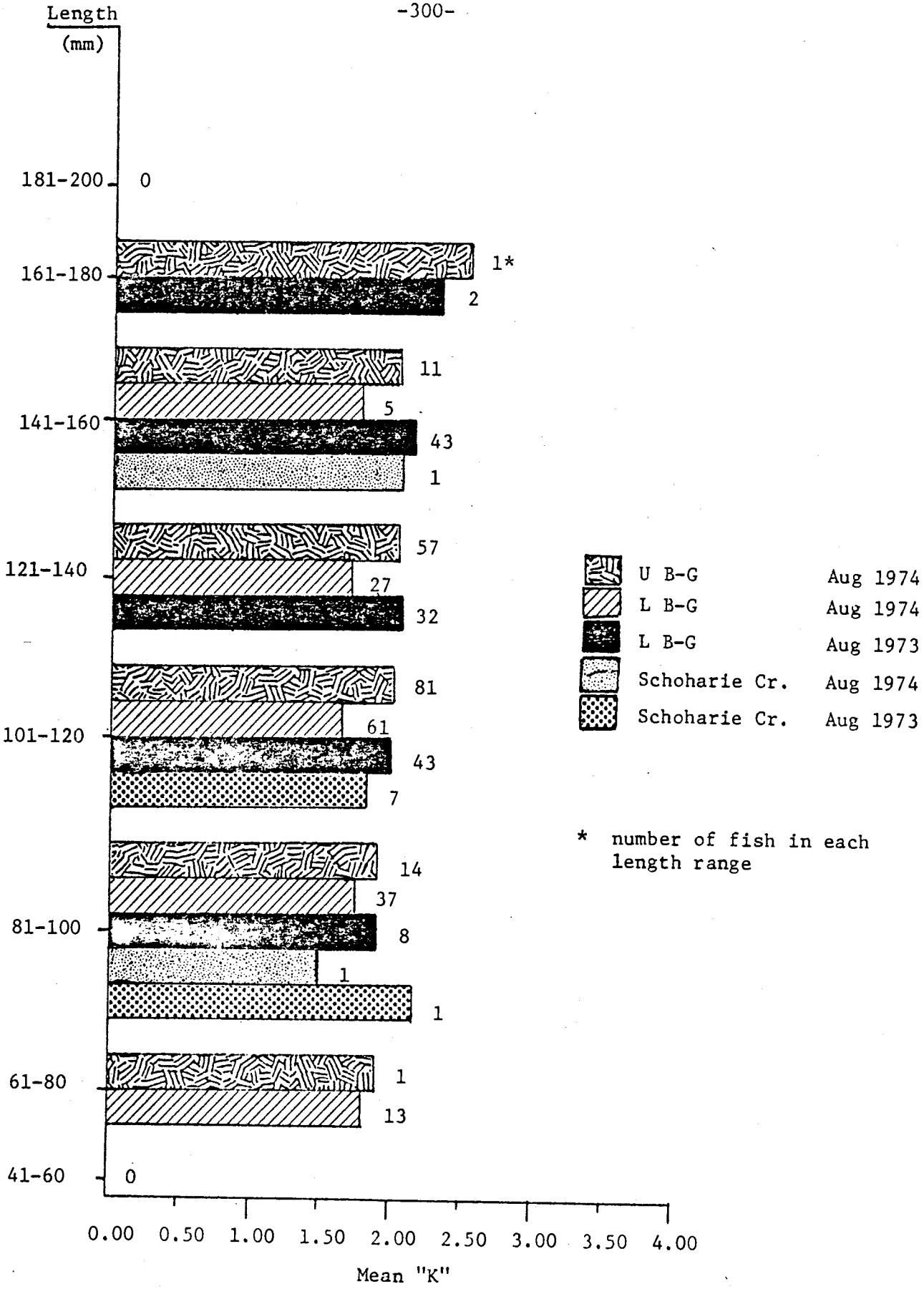

Figure 21. Condition factors of pumpkinseed collected in August 1973 and August 1974 in Lower and Upper B-G and Schoharie Creek.

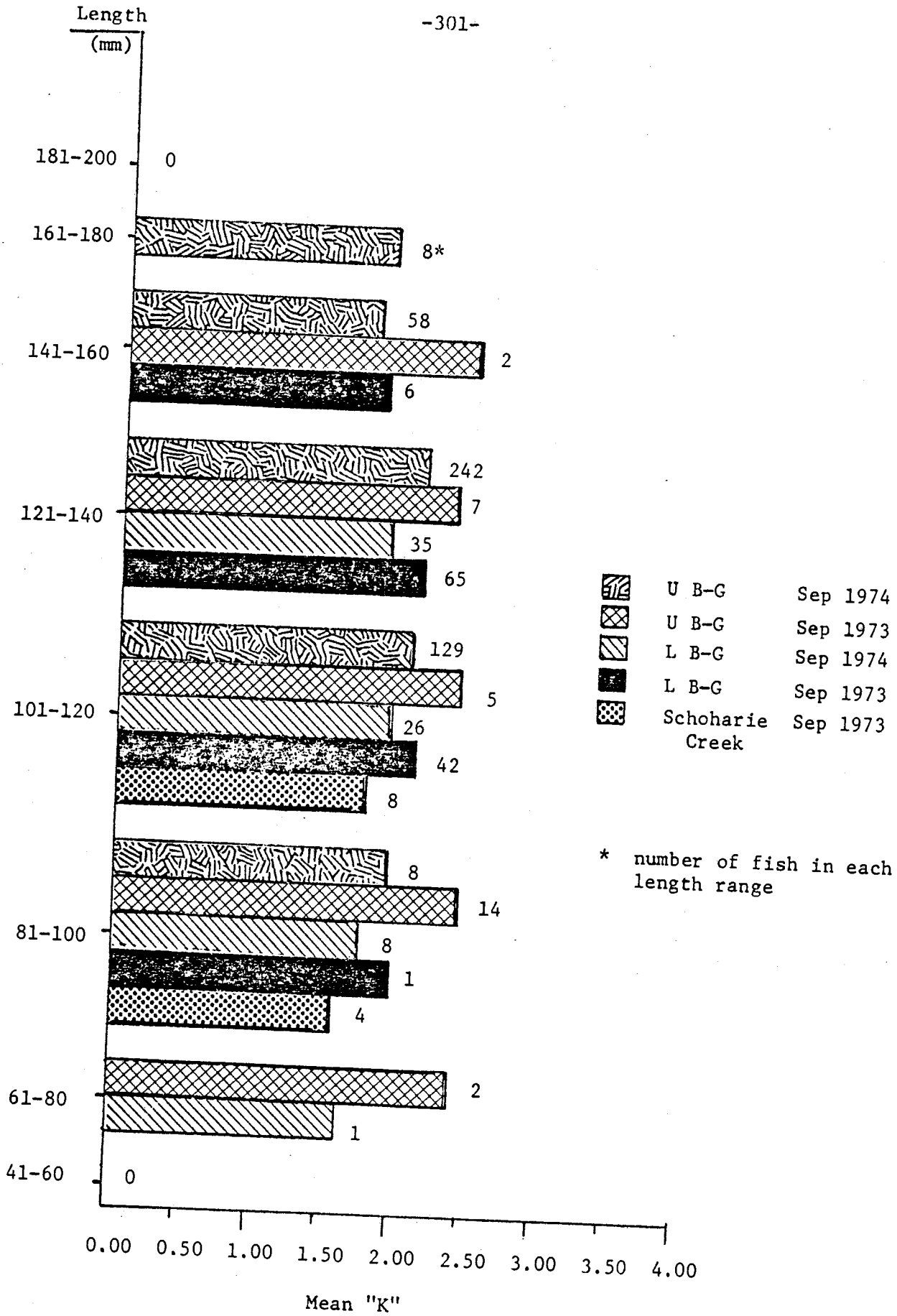

Figure 22. Condition factors of pumpkinseed collected in September 1973 and September 1974 in Lower and Upper B-G and Schoharie Creek.

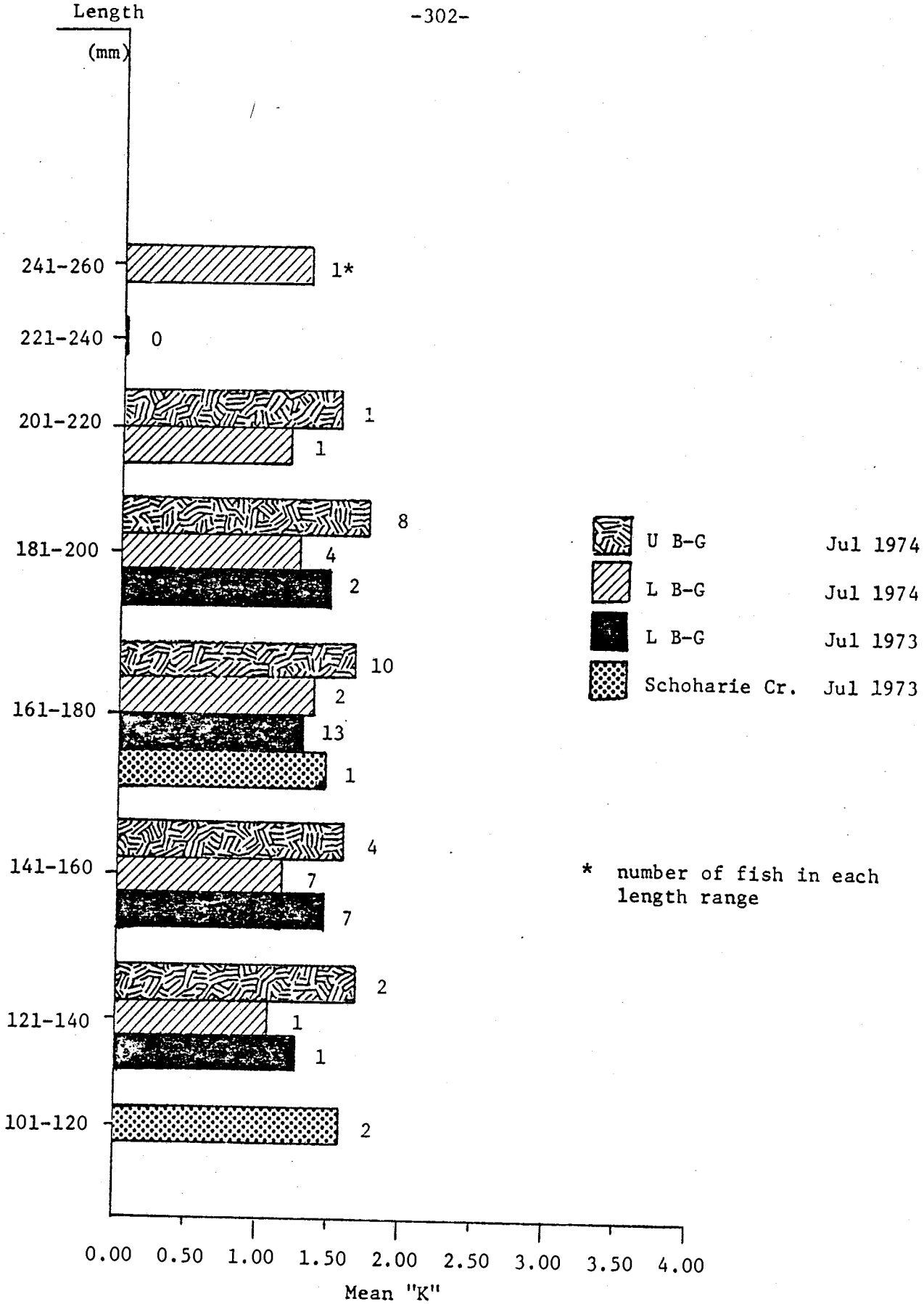

Figure 23. Condition factors of yellow perch collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek.

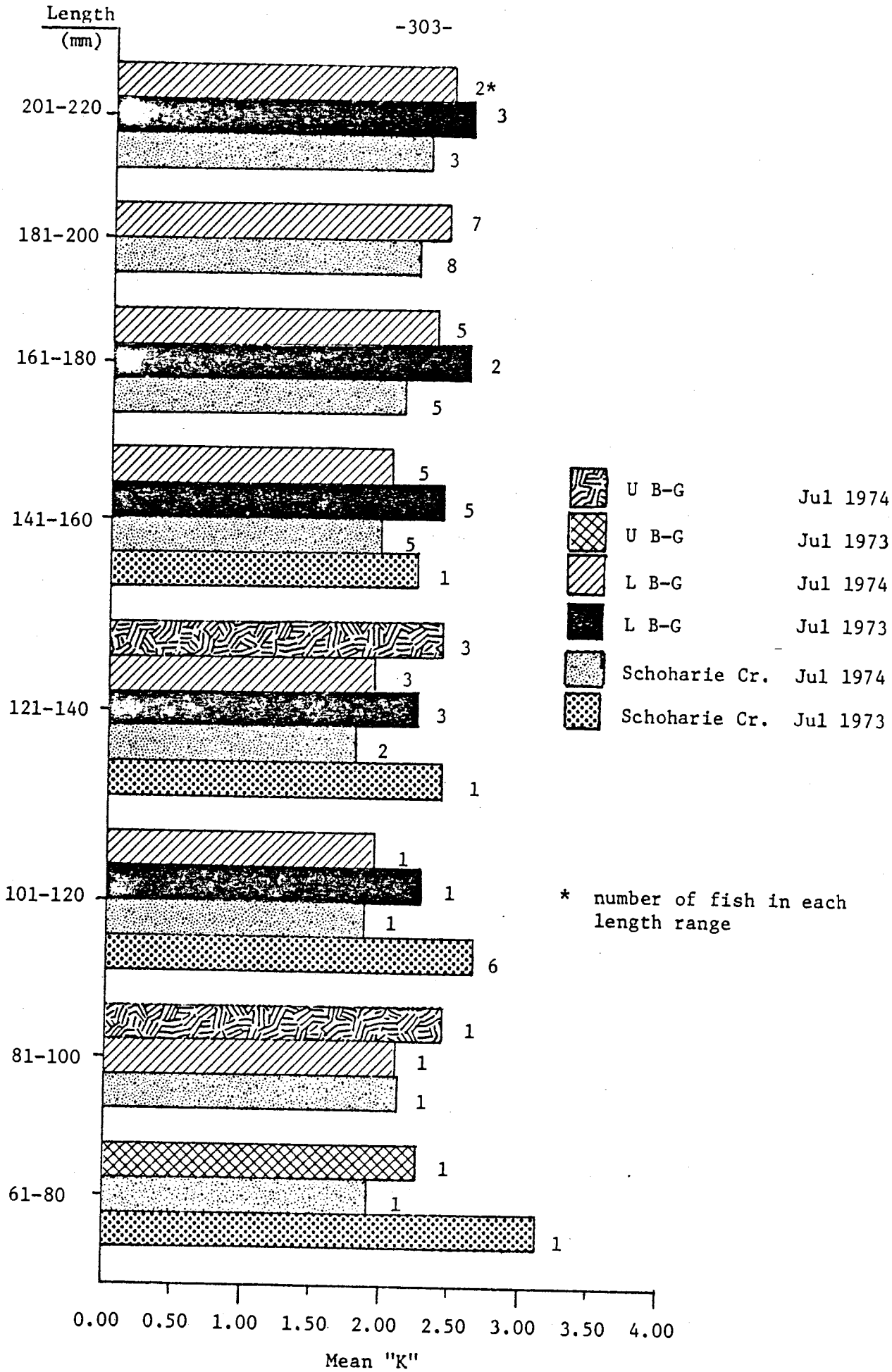

Figure 24. Condition factors of rock bass collected in July 1973 and July 1974 in Lower and Upper B-G and Schoharie Creek.

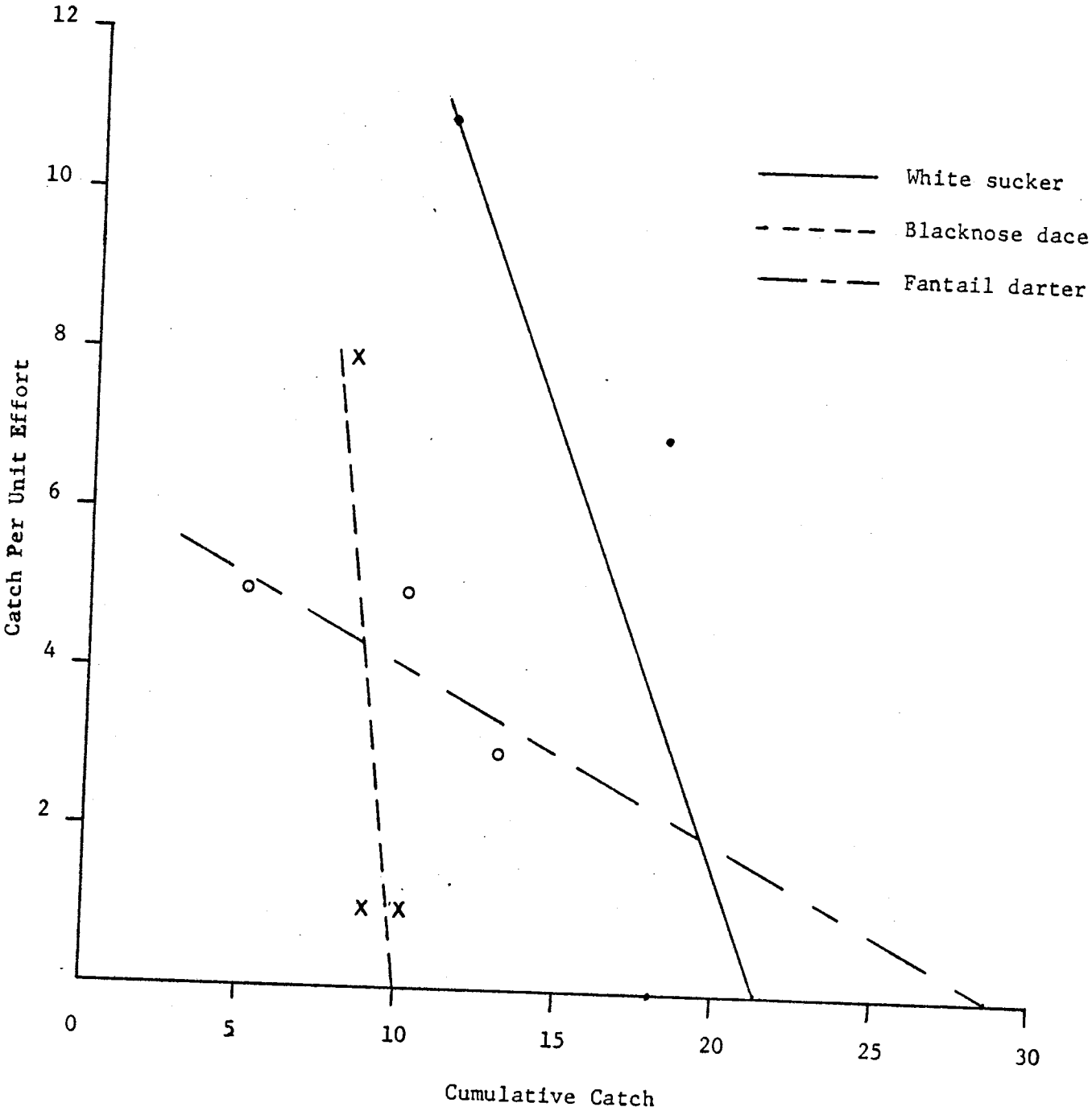

Figure 25. DeLury regression curve for white sucker, blacknose dace, and fantail darter populations of a 500' section of Trib 101 below Route 30 for July 1974.

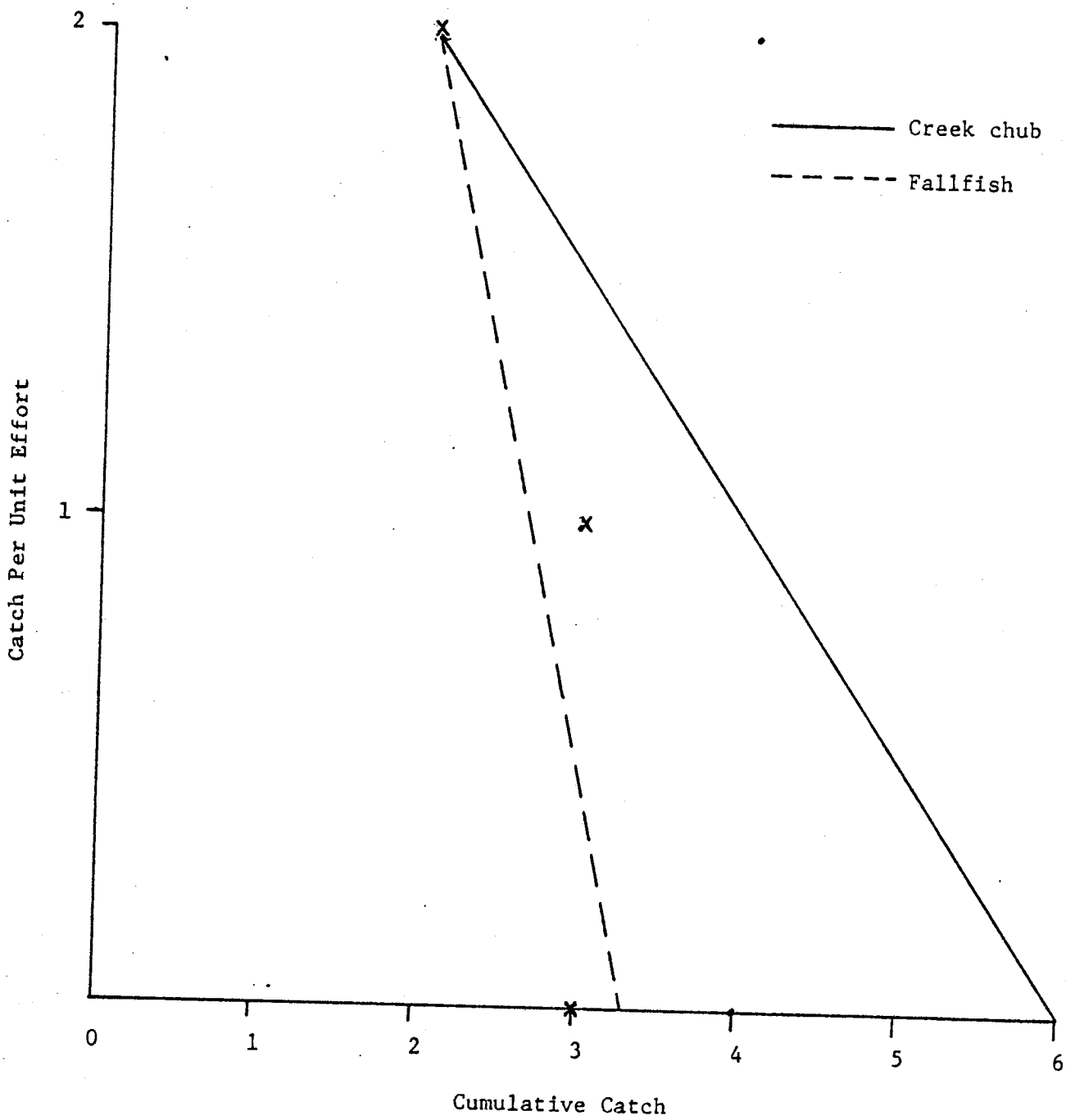

Figure 26. DeLury regression curve for creek chub and fallfish populations of a 500' section of Trib 101 below Route 30 for July 1974.

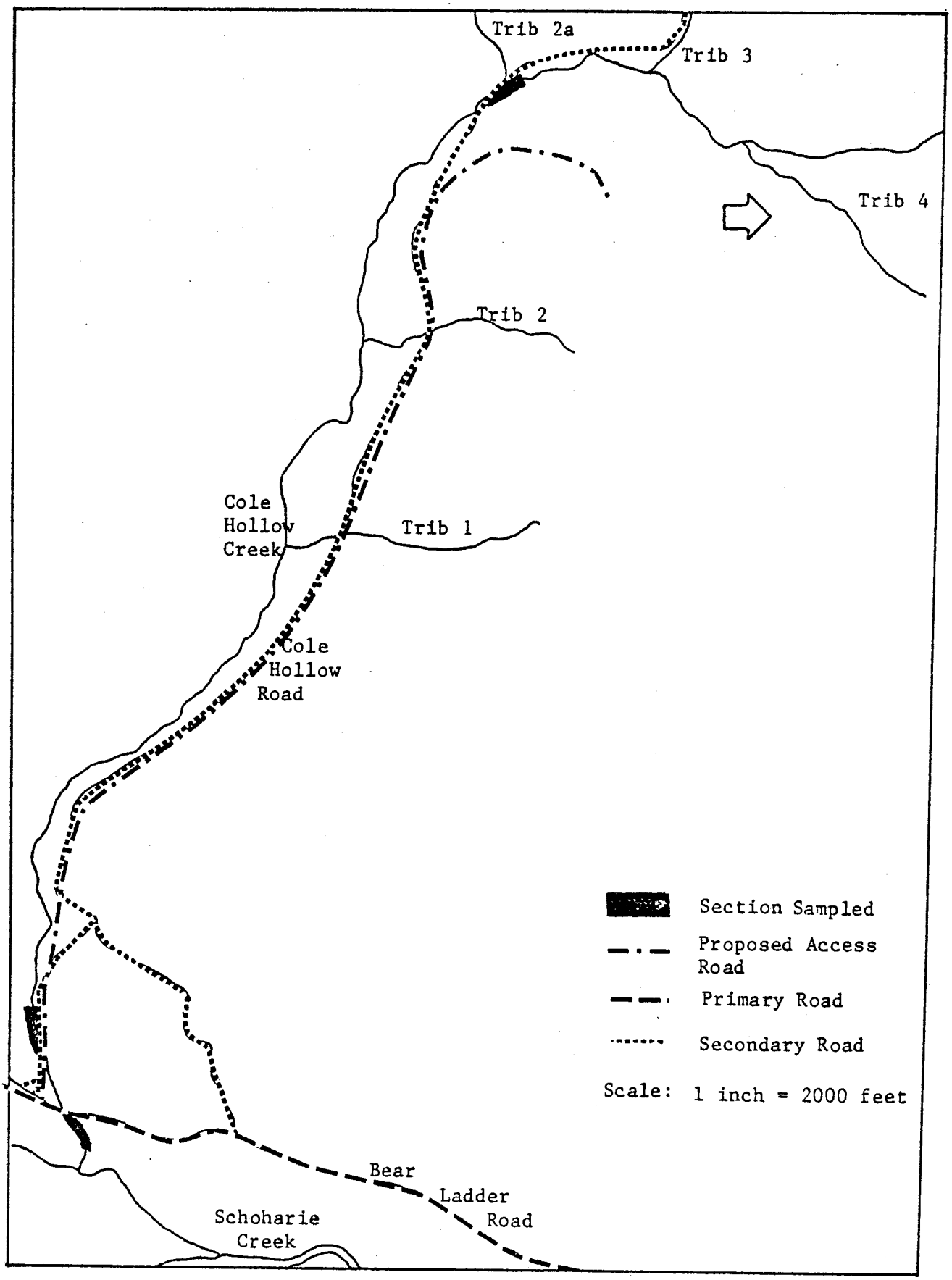

Figure 27. Sections of Cole Hollow Creek sampled for population estimates in June and August 1974.

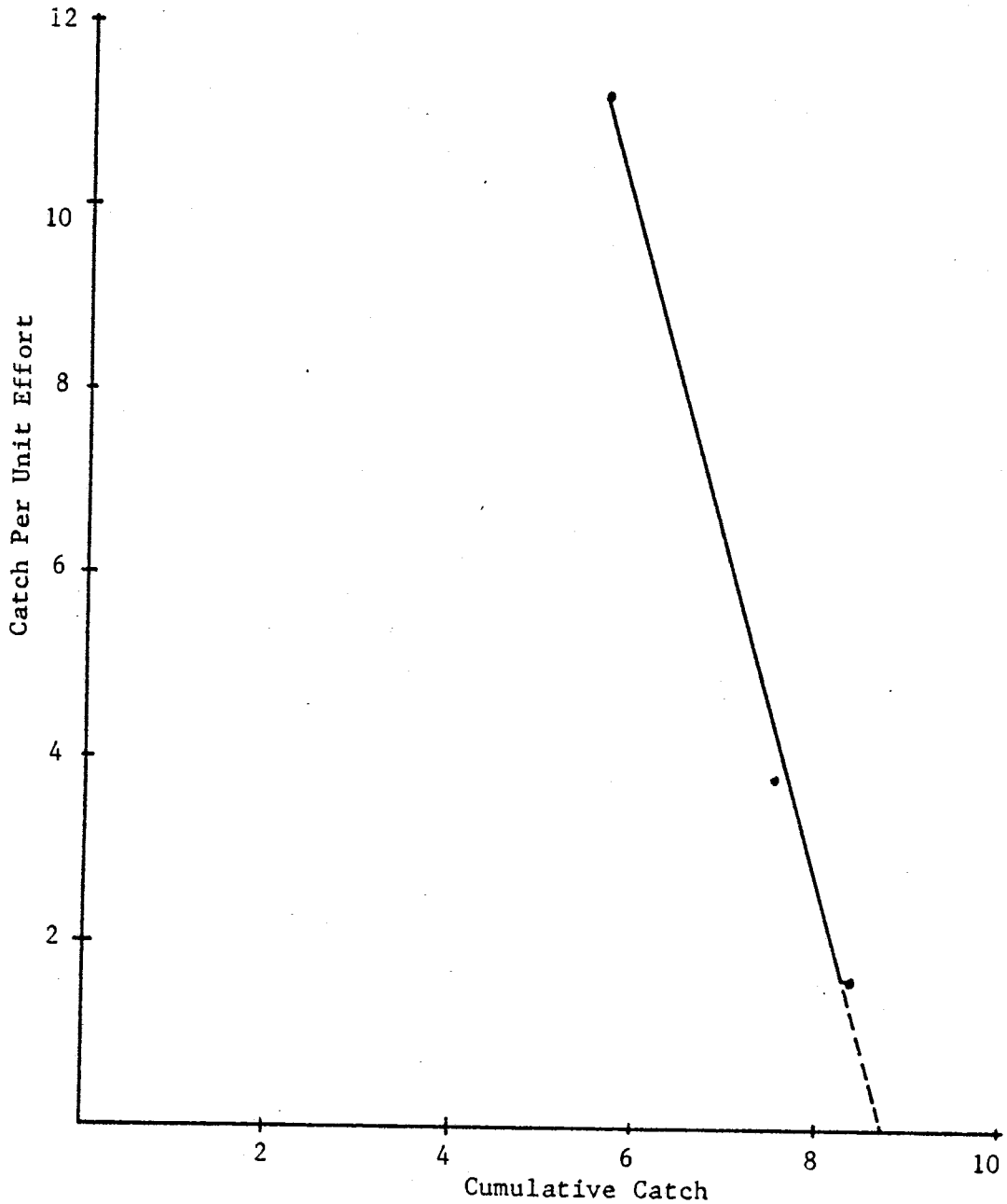

Figure 28. DeLury regression curve for the rainbow trout population of a 500' section of Cole Hollow Creek below Bear Ladder Road for June 1974.

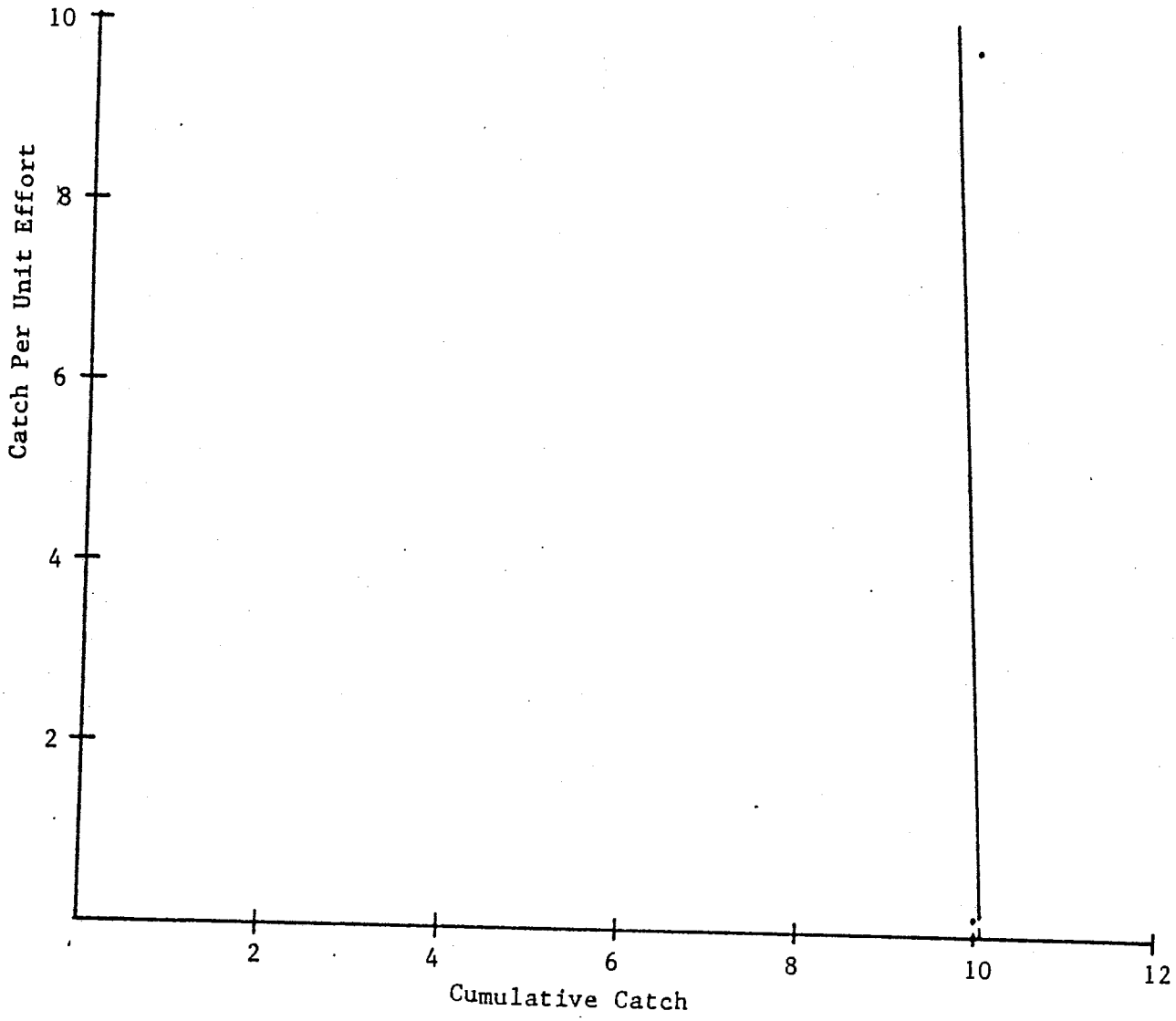

Figure 29. DeLury regression curve for the blacknose dace population of a 500' section of Cole Hollow Creek below Bear Ladder Road for June 1974.

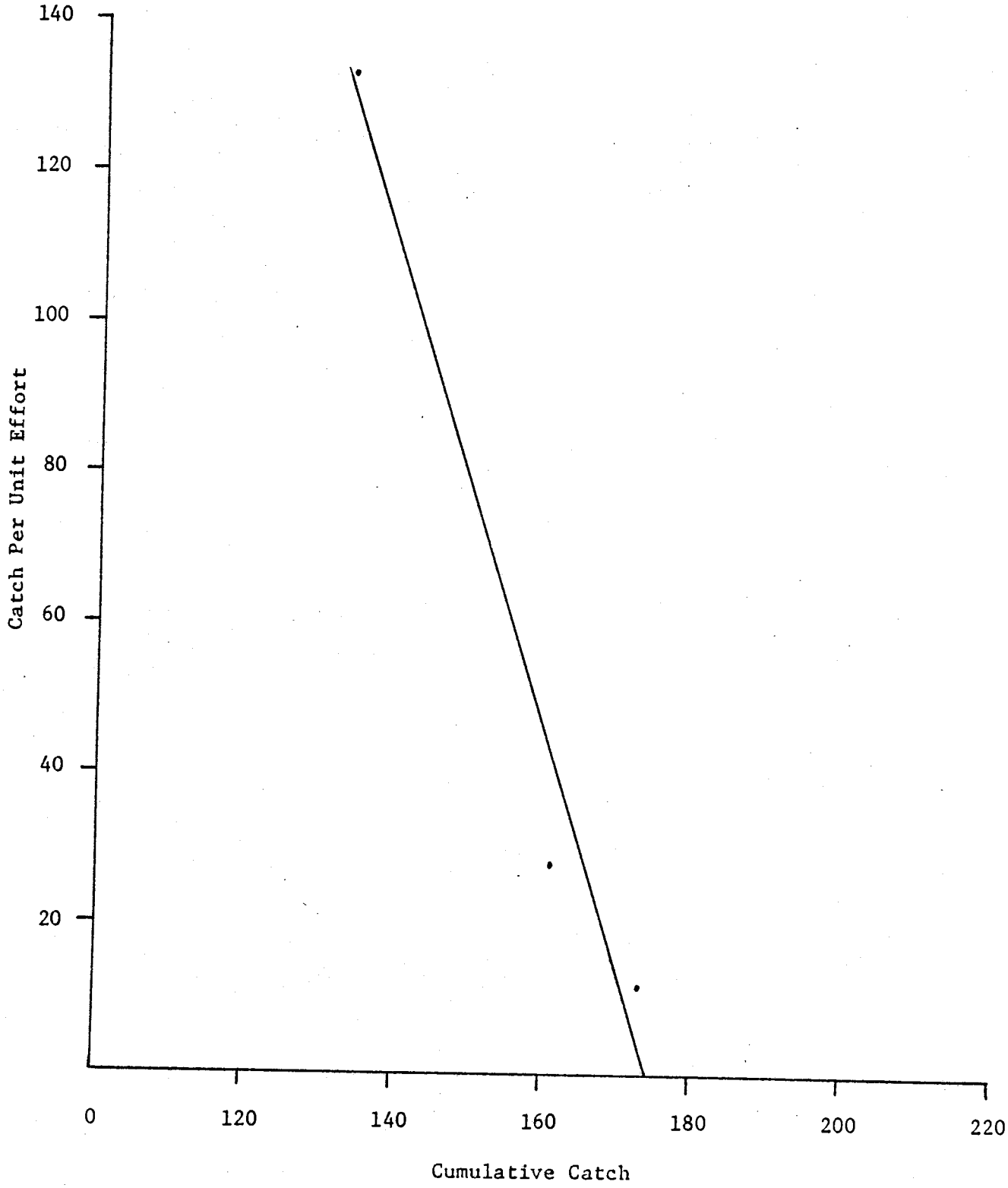

Figure 30. DeLury regression curve for the rainbow trout population of a 500' section of Cole Hollow Creek immediately above the first bridge above Bear Ladder Road for August 1974.

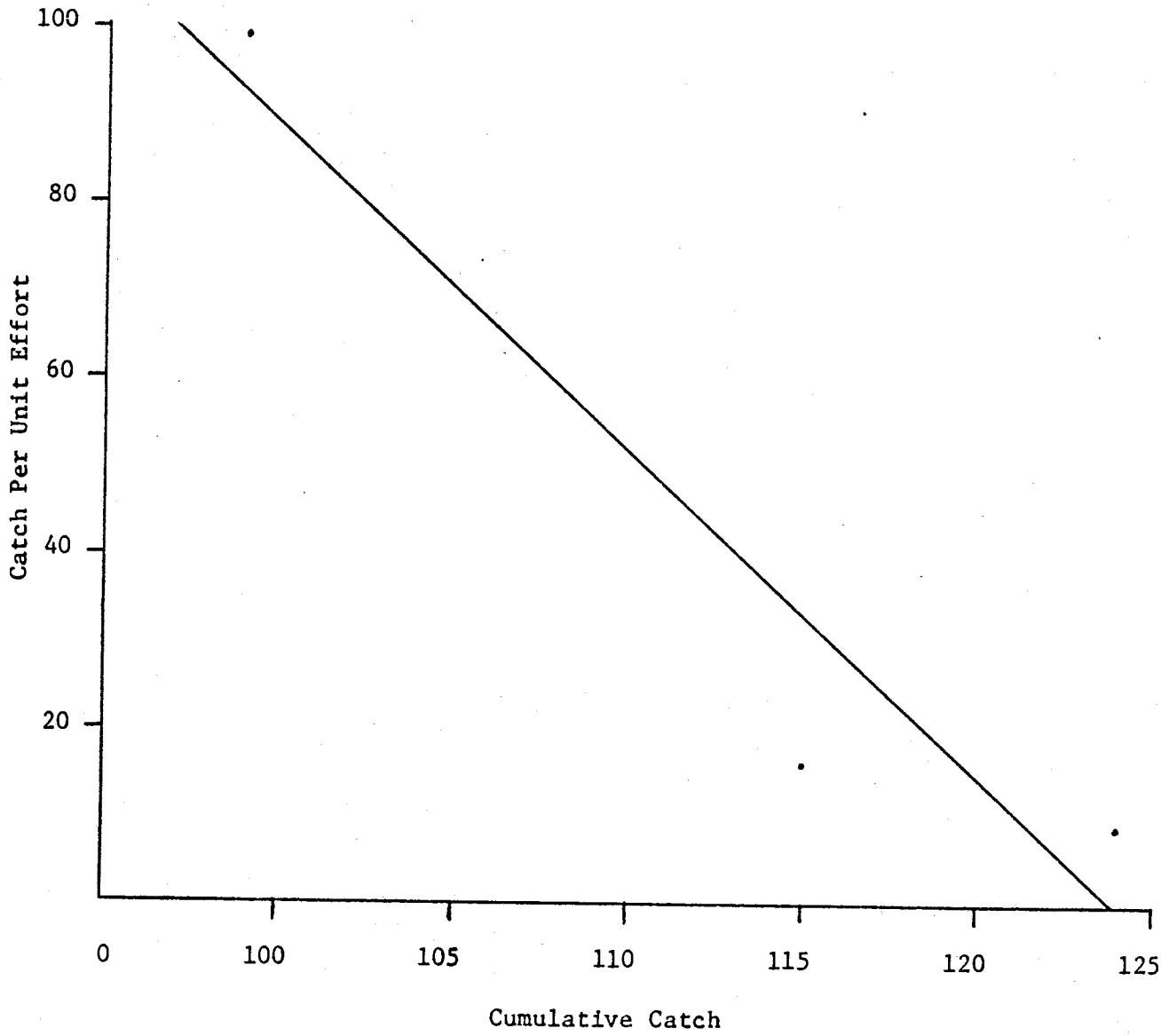

Figure 31. DeLury regression curve for the brook trout population of a 500' section of Cole Hollow Creek immediately above the second bridge above Bear Ladder Road for August 1974.

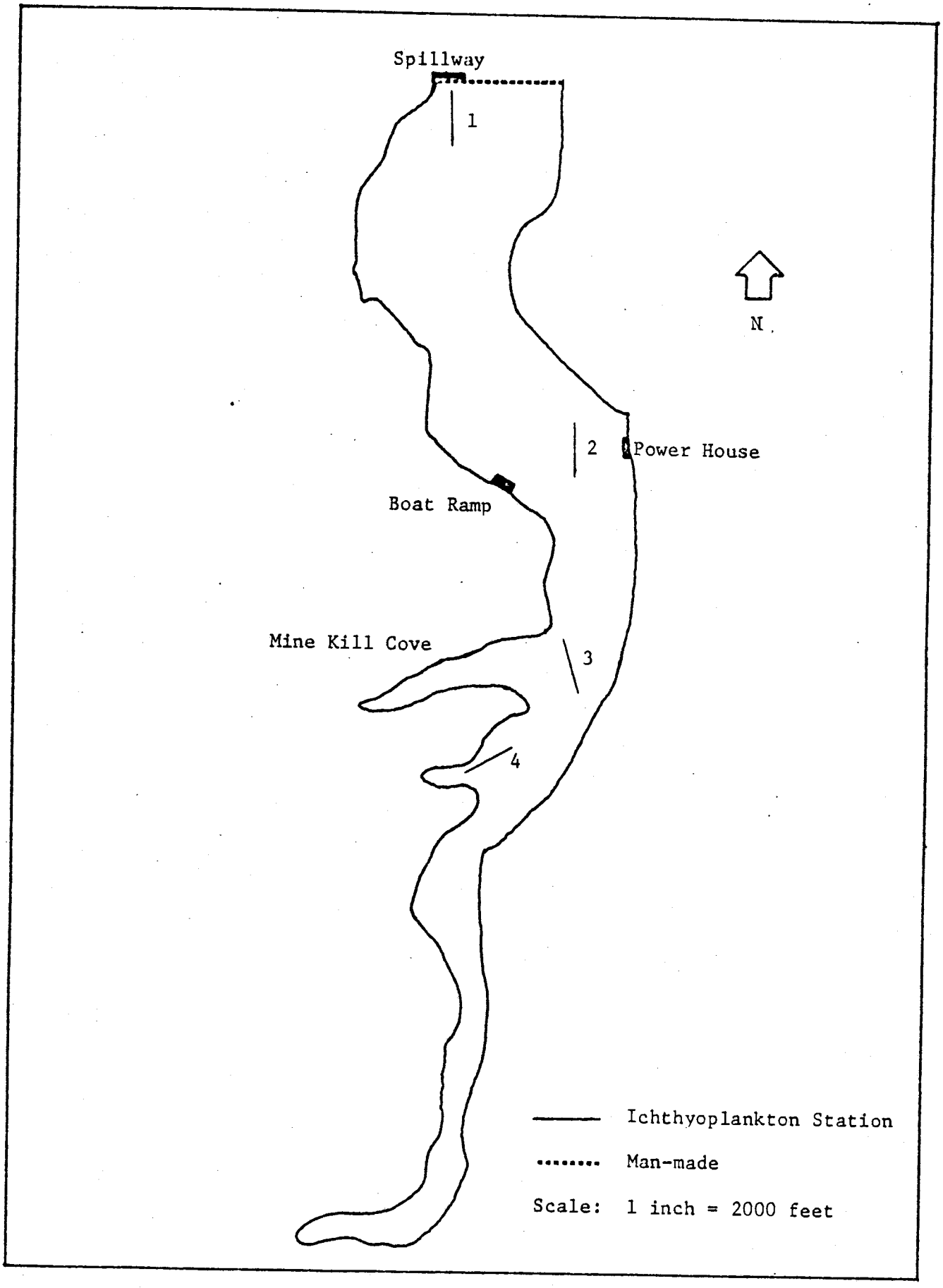

Figure 33. Ichthyoplankton sampling stations 1-4 on Lower B-G.

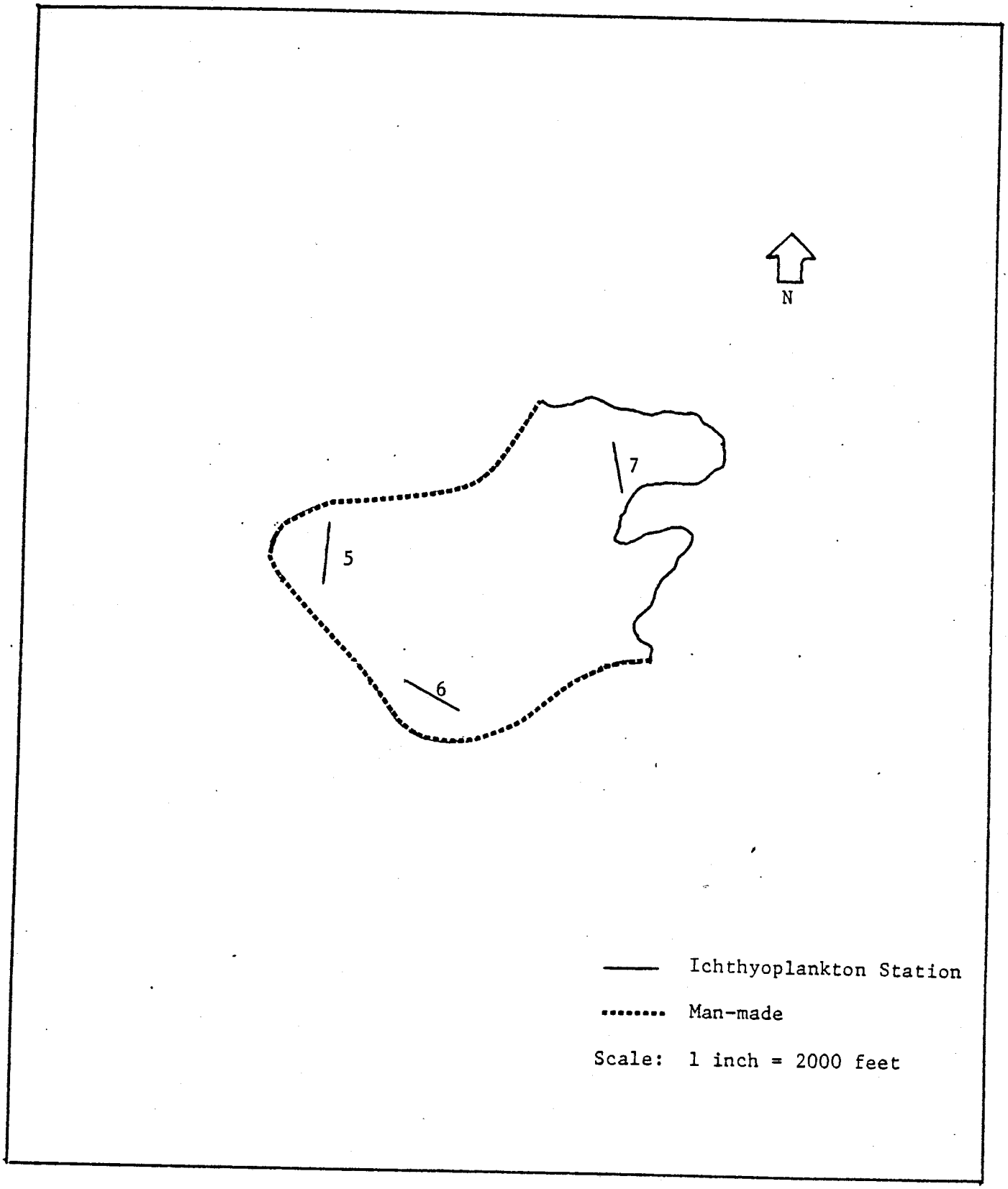

Figure 34. Ichthyoplankton sampling stations 5-7 on Upper B-G.

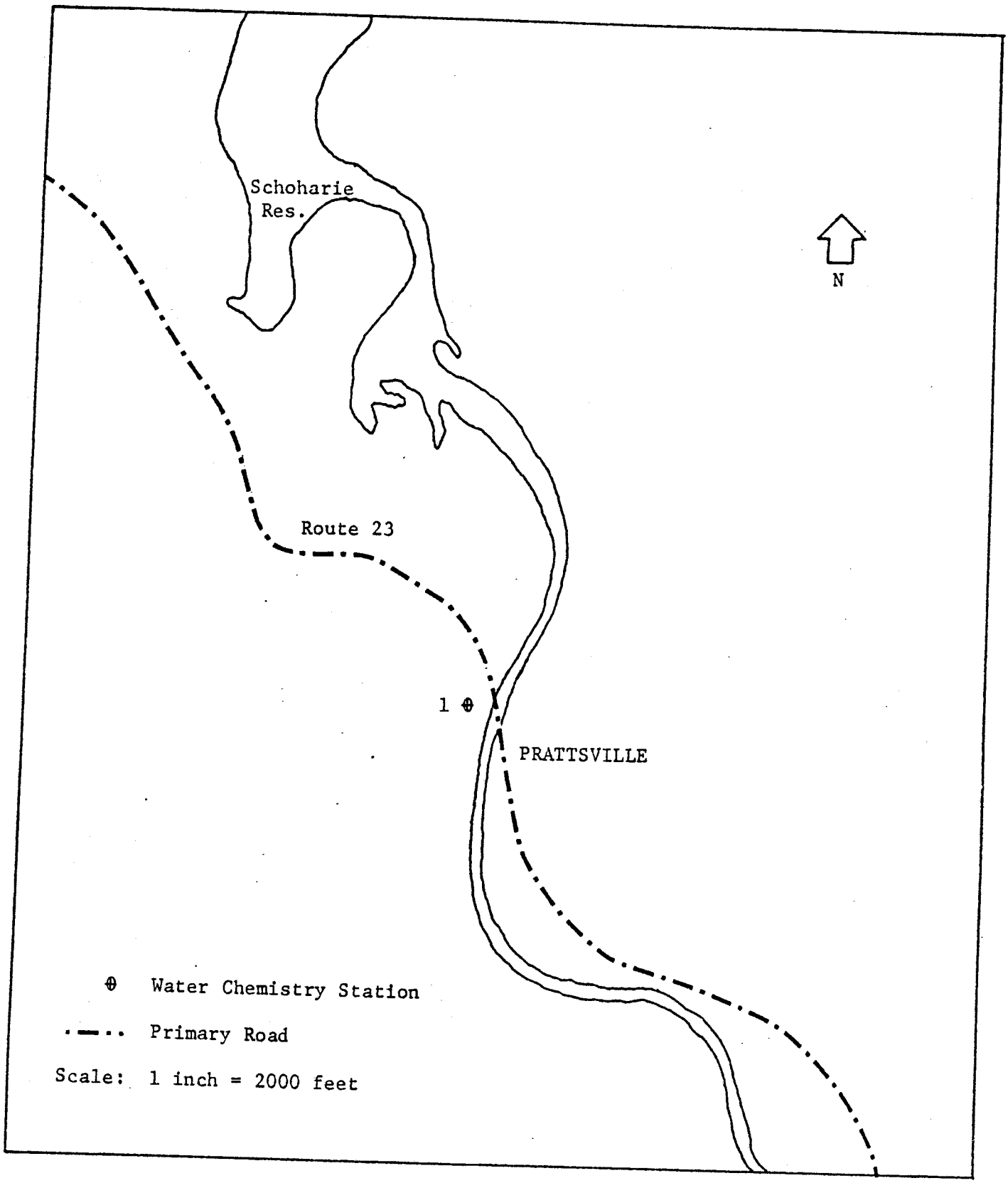

Figure 35. Water chemistry station 1 on Schoharie Creek.

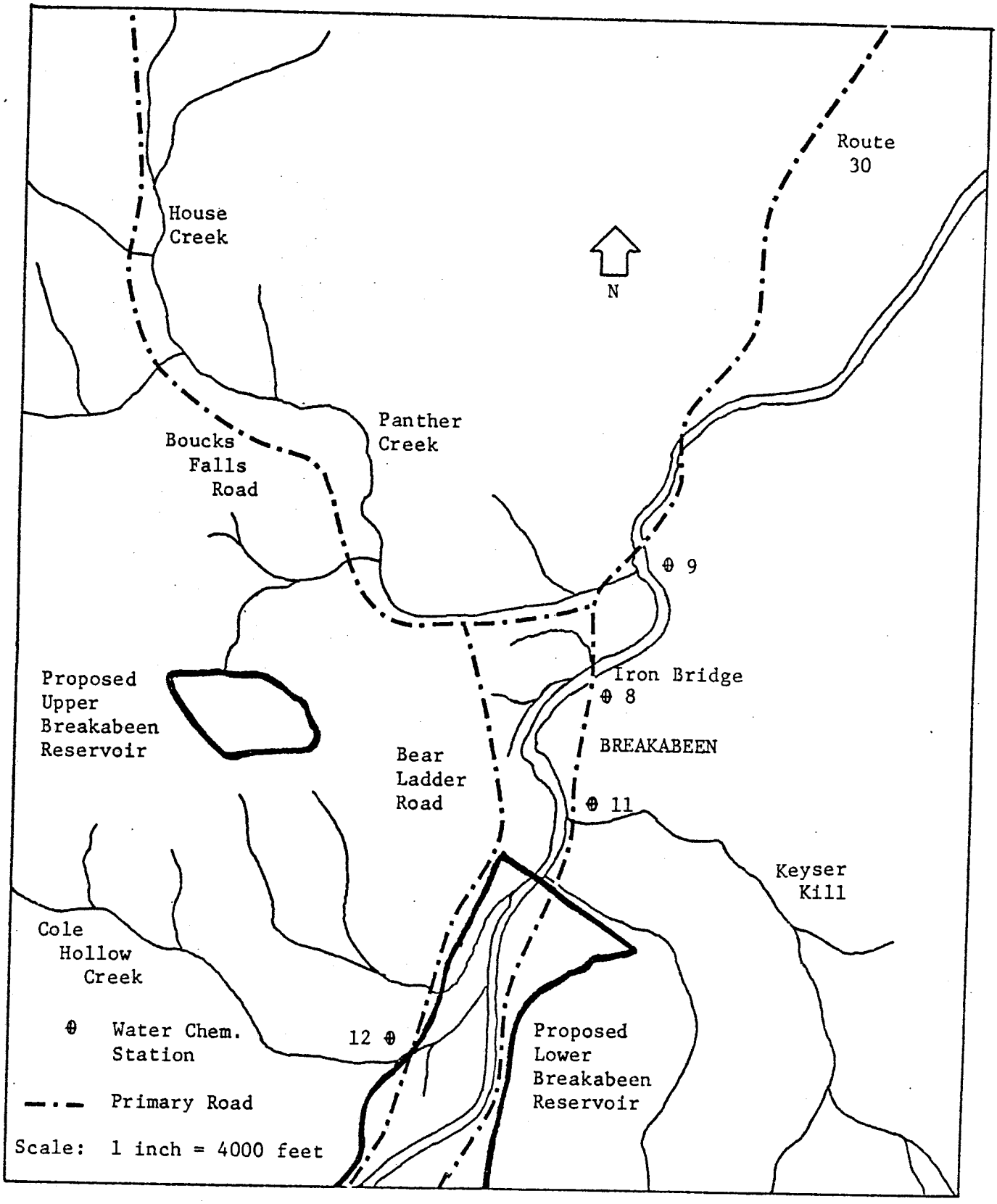

Figure 37. Water chemistry stations 8 and 9 on Schoharie Creek and 11 and 12 on tributaries of Schoharie Creek.

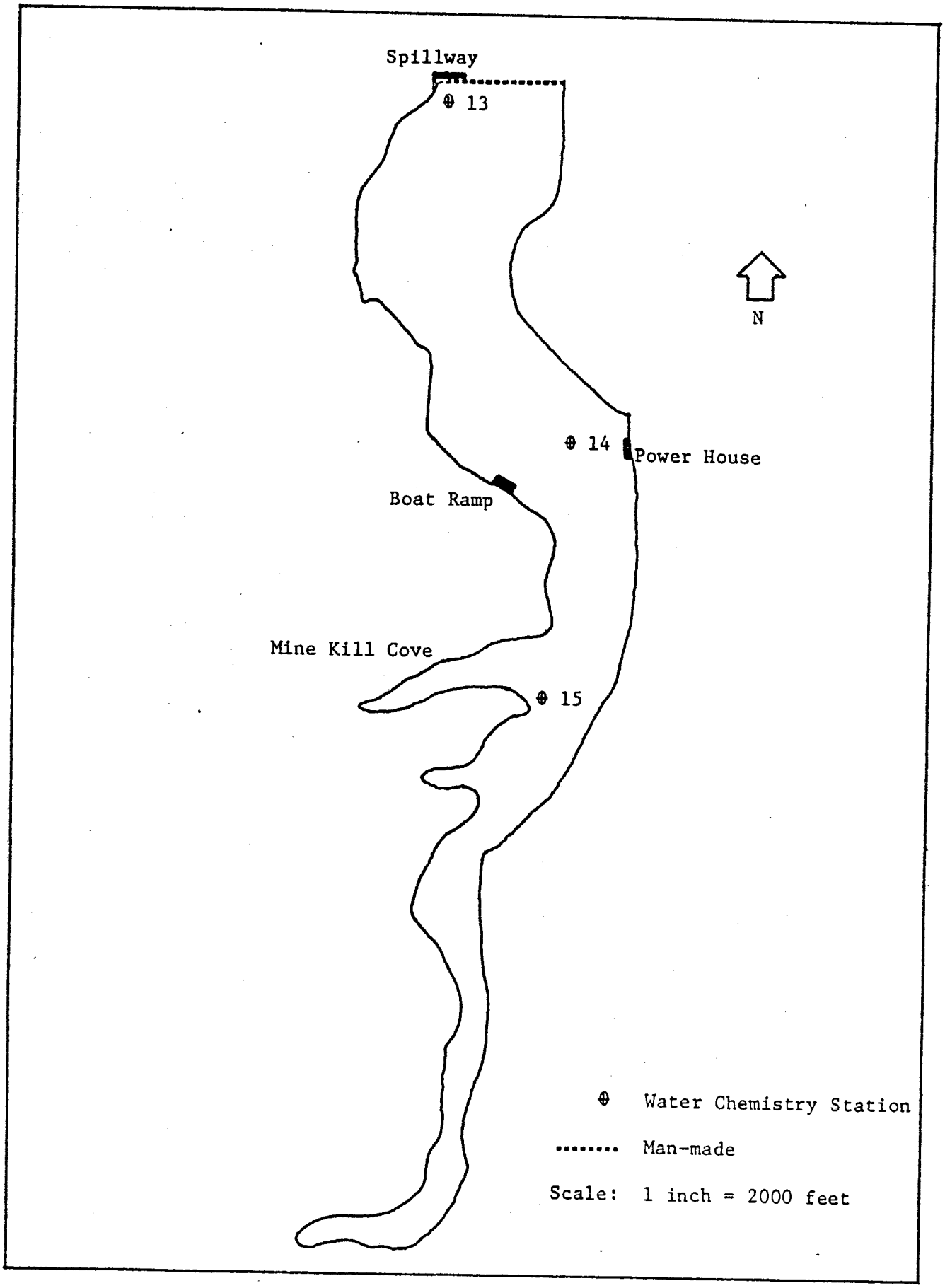

Figure 38. Water chemistry stations 13-15 on Lower B-G.

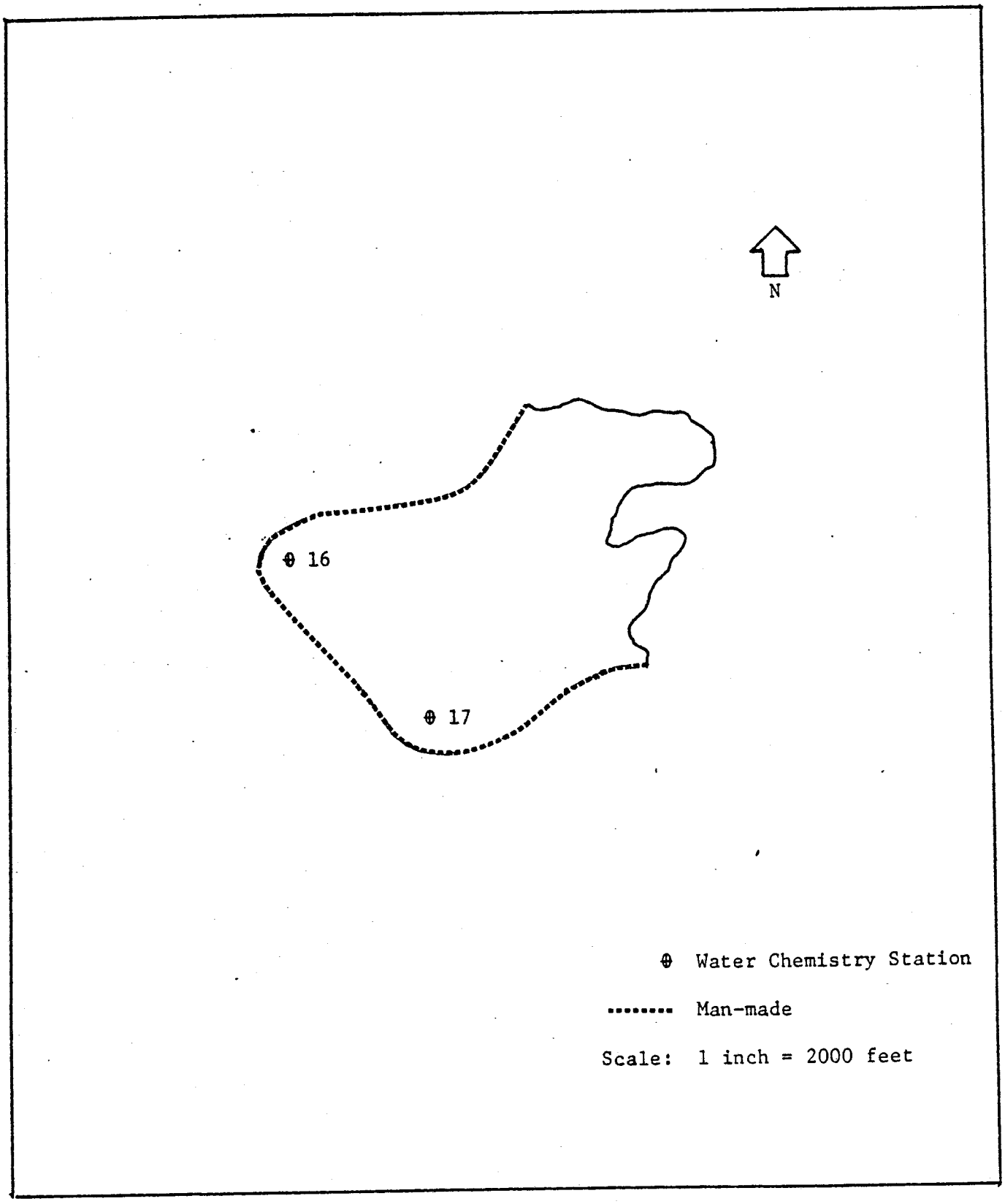

Figure 39. Water chemistry stations 16 and 17 on Upper B-G.

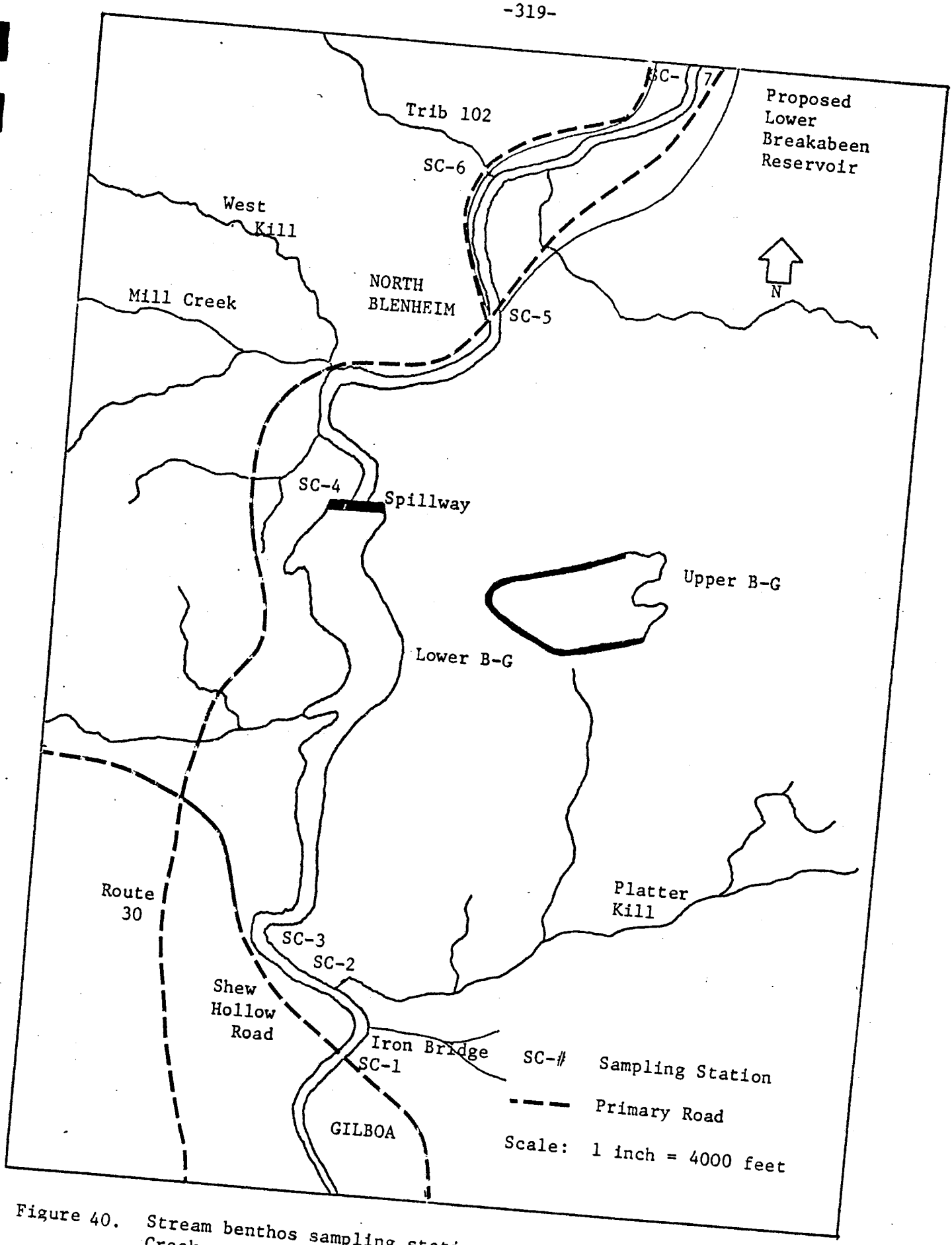

Figure 40. Stream benthos sampling stations SC-1 - SC-7 on Schoharie Creek.

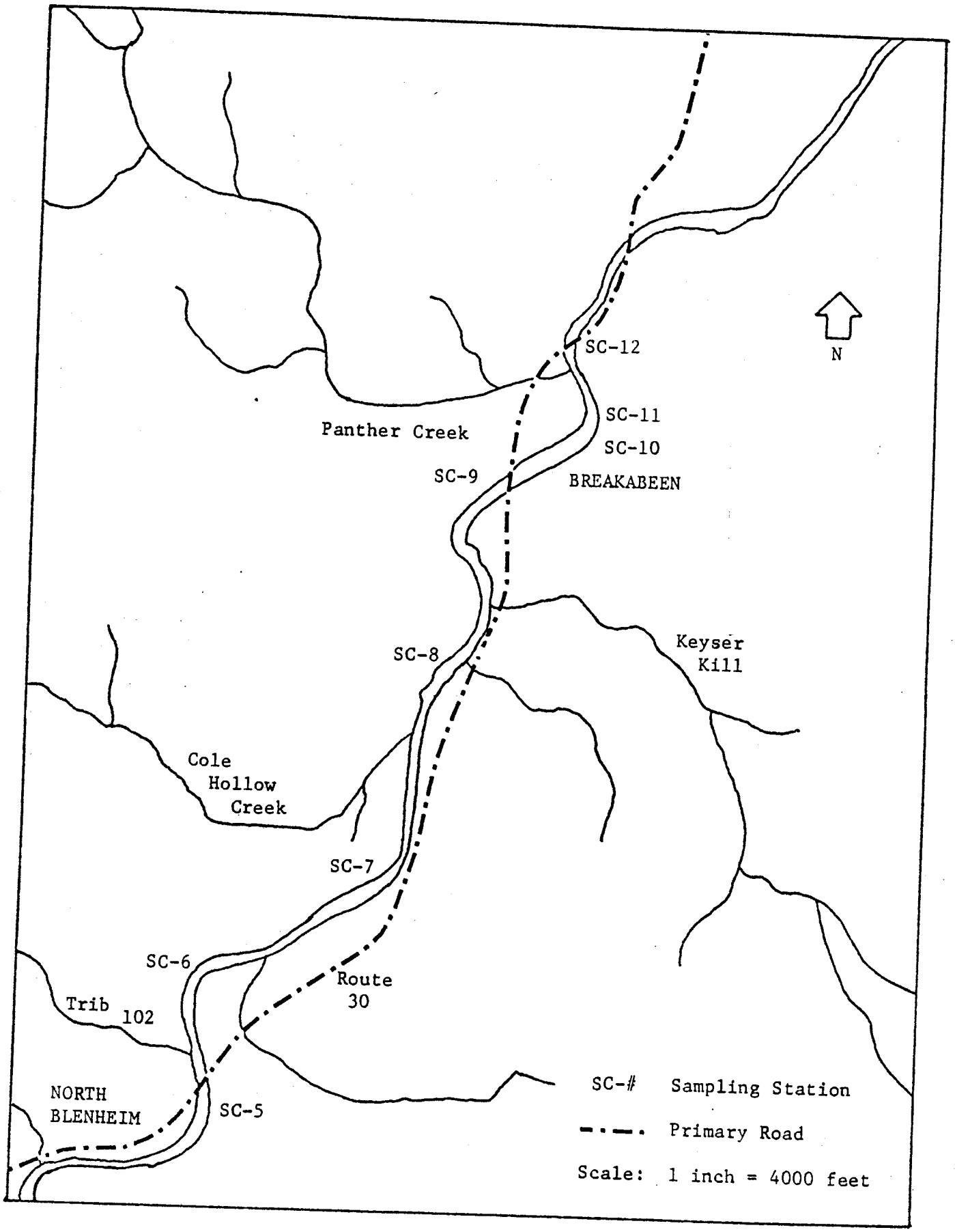

Figure 41. Stream benthos sampling stations SC-5 - SC-12 on Schoharie Creek.

..... Man-made

Scale: 1 inch = 2000 feet

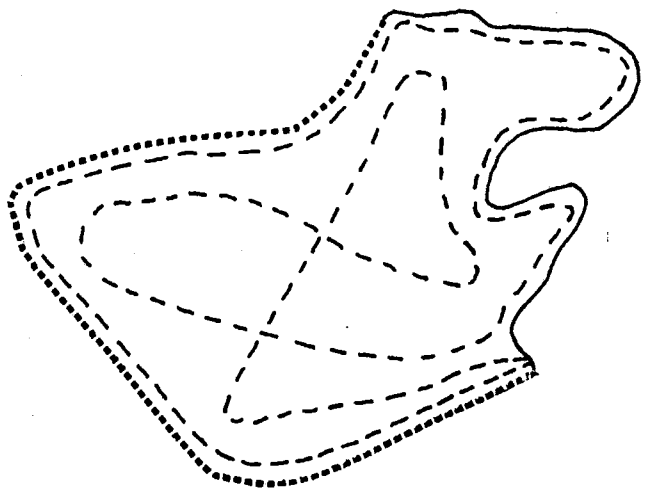

Figure 44. Fish kill survey route on Upper B-G.

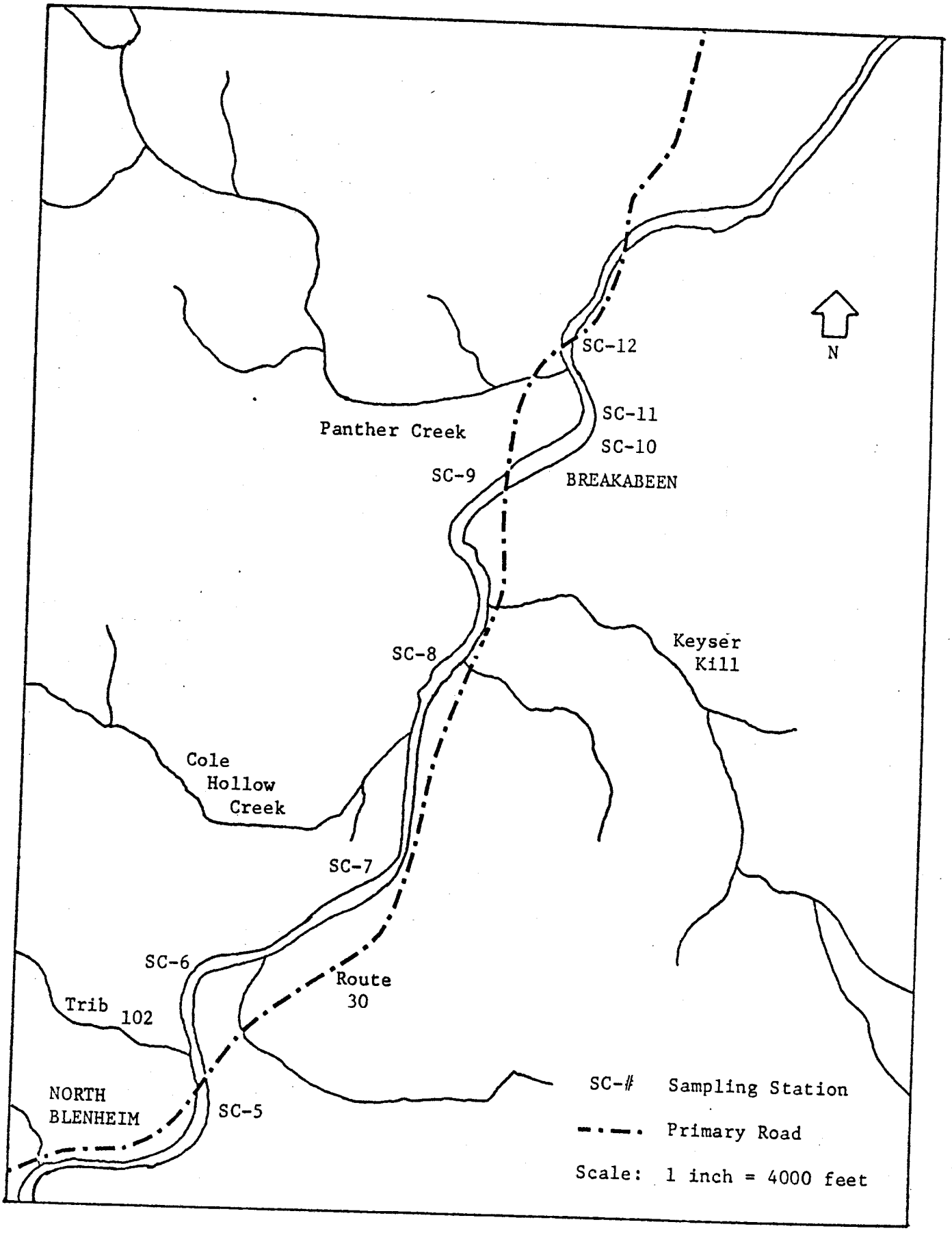

Figure 41. Stream benthos sampling stations SC-5 - SC-12 on Schoharie Creek.

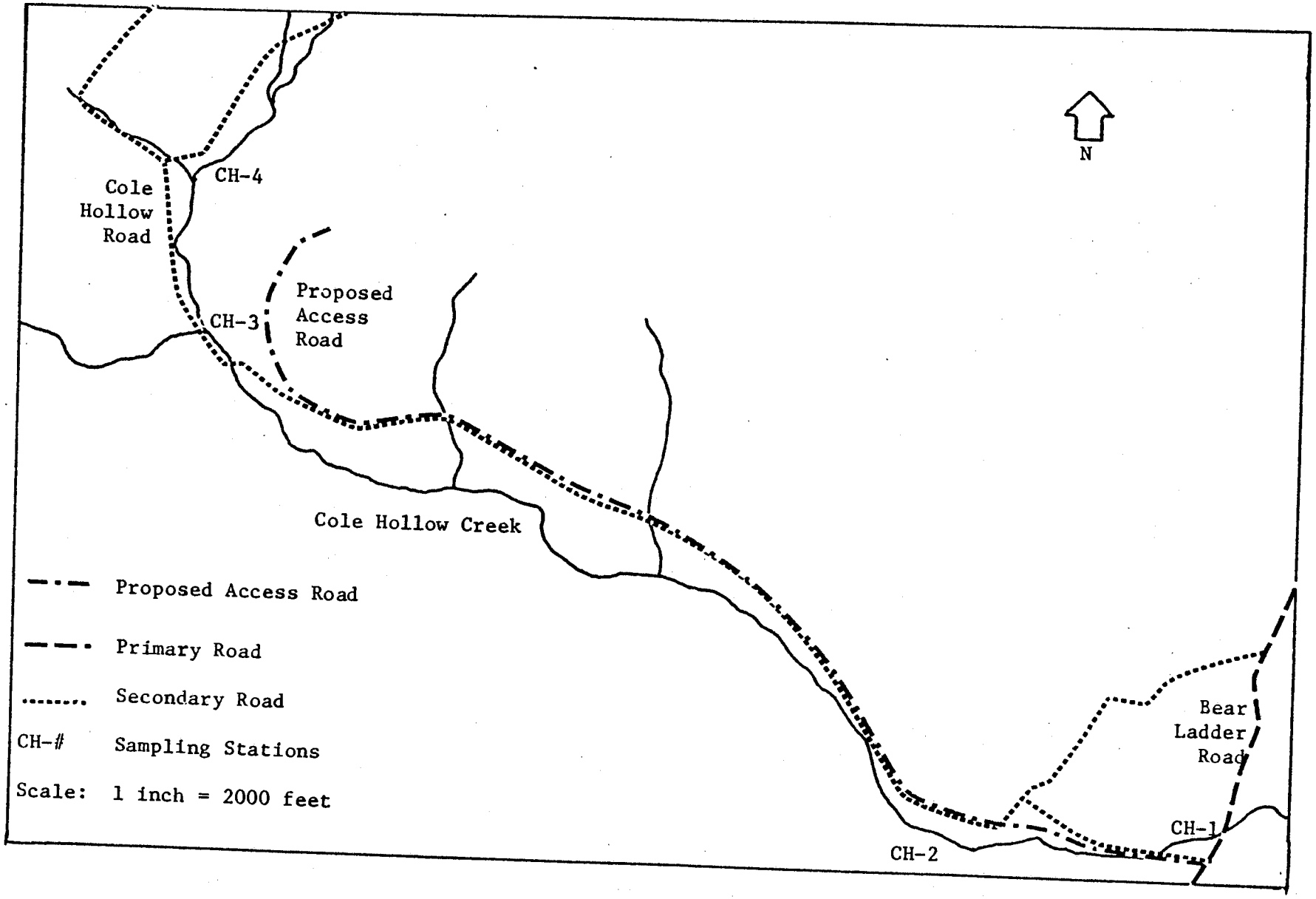

Figure 42. Stream benthos sampling stations CH-1 - CH-4 on Cole Hollow Creek.

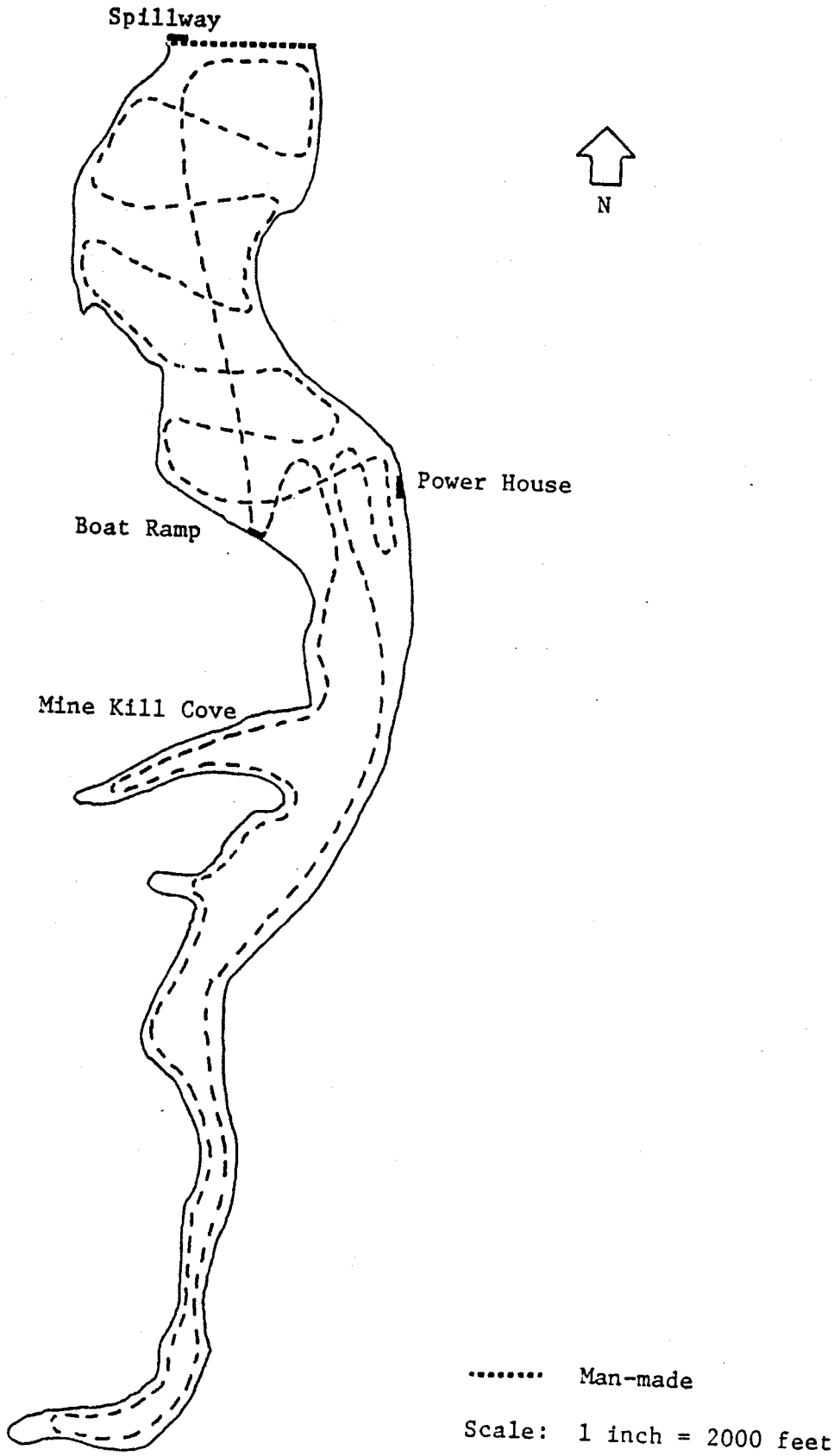

Figure 43. Fish kill survey route on Lower B-G.

..... Man-made

Scale: 1 inch = 2000 feet

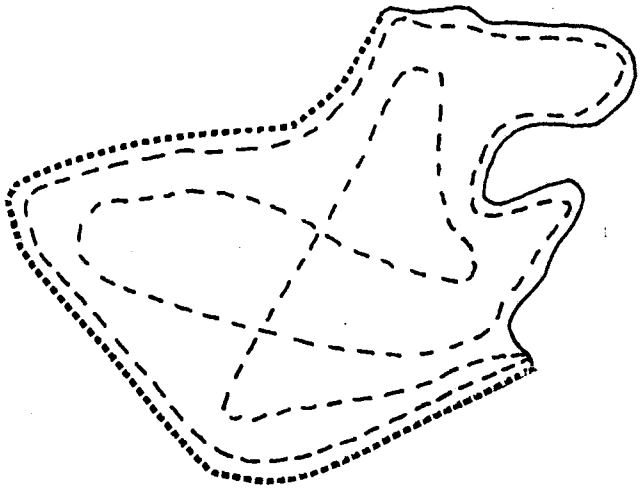

Figure 44. Fish kill survey route on Upper B-G.