BCLKS 2948

BRITISH COLUMBIA PROVINCIAL MUSEUM

MARINE BIOLOGY

LAKE SURVEY - GENERAL INFORMATION

REFERENCE NO. BCPM 974-367 DRAINAGE SKEENA

NAME: SWAN SURVEYED BY Falls, Beune

DATE: June 17, 1974 MAP REF NO. 103 P/15 East

GEOGRAPHY - LOCAL: flat surrounding area, extremely glaciated resulting in NW/SE ridges and lake basins. Lake is dotted with 25-30 islets and islands, is very shallow in many areas.

Elev. 1721
Lat. 55 44'
Long. 128 37'

GENERAL: mountains approx. 10 miles N.E., running NW-SE elevation drops to West. Large number of lakes in general area.

GENERAL DESCRIPTION

ACCESS: float equipped aircraft only

HABITATION: none

WILDLIFE OBSERVED: fresh moose, black and grizzly bear sign, none sighted, nesting Ospreys (see map) Loons (common) Gulls (bonapart herring) Mallards, Mergansers, Oldsquaws.

POLLUTION: None

TERRESTRIAL VEGETATION: spruce, pine, hemlock (rainforest) moss and lichen extensive in forest.

REMARKS: Swan Lake borders the Nass drainage system, which comes to within 1 mile on the SW side (Brown Bear Lake). Both lakes were surveyed during 1 week, with significant differences in vertebrate fauna and limnological parameters detected.

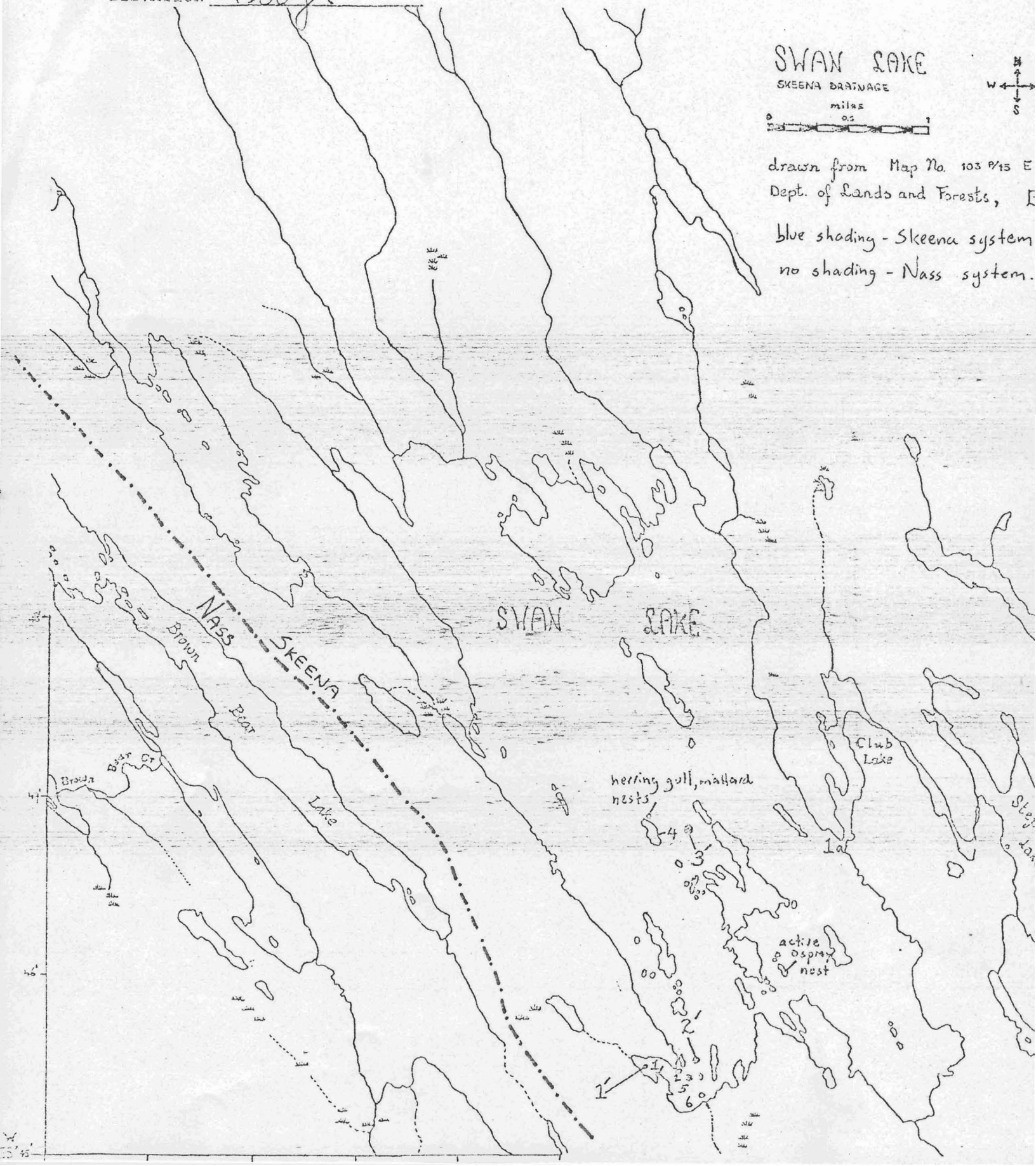
Mountain Whitefish (Prosopium williamsoni)	8
Sockeye salmon (Onhynchorus nerka)	5
Dolly Varden (Salvelinus malma)	4
Rainbow Trout (Salmo gairdneri)	2
Longnose Sucker (Catostomus catostomus)	1
Coho Salmon (Oncorhynchus kisutch)	1

Swan Lake at dusk, facing North-East from map position 1'.

SURVEY MAP

- FISH NET HAULS (1, 2, 3, etc.)-
PLANKTON HAULS (a, b, c, etc.)
BOTTOM SAMPLES (A, B, C, etc.)
ELEVATION 1500 ft

-SECCHI, TEMP. STAT. (1' 2' 3' etc.)-
INLET (1, 2, 3, etc.)
-OUTLET (1a, 2a, 3a, etc.)-



TEMPERATURE (°C)

depth (m)	STN. 1'	STN. 2'	STN. 3'
			Secchi 10.5
surface	12	12.2	13.8
1	12	12.1	13.8
bottom 1.2	12	11.9	13.1
3		11.8	13.1
4		11.5	13.3
5		11.2	11.3
6		8.0	7.0
7		6.2M 7.0	6.2
8		bottom	6.0
9			5.7
10			5.5
11			5.5
12			5.0
13			5.0
14			5.0
15			5.0

TEMPERATURE (°C)

depth (m)	STN. 1'	STN. 2'	STN. 3'
16			5.0
17			cord limit
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
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DISSOLVED OXYGEN (mg. O_2/1)

depth (m)	STN. 1'	STN. 2'	STN. 3'	STN. 4'	STN. 5'	STN. 6'	STN. 7'
surface							

ACIDITY AND ALKALINITY

a. water PH
b. phenolphtalein alkalinity (mg. $CaCO_3$/1)
c. total alkalinity (mg. $CaCO_3$/1)

depth (m)		STN. 1'	STN. 2'	STN. 3'	STN. 4'	STN. 5'	STN. 6'	STN. 7'
surface	a.							
	b.							
	c.							
	a.							
	b.							
	c.							
	a.							
	b.							
	c.							
	a.							
	b.							
	c.							

NUTRIENTS
a. nitrate & nitrite (µg N/l)
b. dissolved phosphorus (µg P/l)
c. Total phosphorus (µg P/l)

depth (m)		STN. 1'	STN. 2'	STN. 3'	STN. 4'	STN. 5'	STN. 6'	STN. 7'
surface	a.							
	b.							
	c.							
	a.							
	b.							
	c.							
	a.							
	b.							
	c.							
	a.							
	b.							
	c.							

SAMPLE RECORD - FISHES

HAUL NO. 3

DATE SET June 18, 1974 TIME 1830 FLOATING OR SINKING float

DATE LIFTED June 19, '74 TIME 1000 TOTAL HOURS 15 1/2

LENGTH 50 DEPTH TYPE gillnet - 5 mesh sizes

SHALLOW END MESH SIZE (mm) 25 50 DEPTH 1.5. M.

DEEP END MESH SIZE 80 100 130 DEPTH 2.5 M

NATURE OF BOTTOM mud, algae

AQUATIC PLANTS none

	CAT. NO.	MESH (cm)	SPECIES	SEX	LENGTH STA. (cm.)	LENGTH TOT. (cm)	GIRTH (cm.)	AGE	PRESERVED STOM. ANA.
1	3a	8.0	Prosopium williamson	F	34.0	37.0	17.5		scales
1	3b	8.0	" "	F	31.5	35.5	17.0		scales

Prosopium williamsoni - stomach contents: larval dragonfly
larval cadisfly
unidentified amphipods
bivalves
turbellarian snails

SAMPLE RECORD - FISHES

HAUL NO. 4

DATE SET June 19, 1974 TIME 1400 FLOATING OR SINKING sinking

DATE LIFTED June 20, 74 TIME 0700 TOTAL HOURS 17

LENGTH 100 ft. DEPTH _____ TYPE gillnet 5mesh sizes

SHALLOW END MESH SIZE (mm) 25 50 DEPTH 2M

DEEP END MESH SIZE 80 100 130 DEPTH approx. 7M

NATURE OF BOTTOM rock

AQUATIC PLANTS none

CAT. NO.	MESH (cm)	SPECIES	SEX	LENGTH STA. (cm.)	LENGTH TOT. (cm)	GIRTH (cm.)	AGE	PRESERVED, STOM. ANA.
2		O. nerka		approx. 12				preserved
4		Prosopium williamsoni	F	35	40	20		scales
1		Salvelinus malma		52	57.5	30.5		scales
1		" "		36	40	19		preserved
1		" "		31.5	27.5	14.5		"
1		Salmo gairdneri		33.5	37.5	18.0		"
1		" "		30.0	33.0	15.5		"
1		Catostomus catostomus						"

SAMPLE RECORD - FISHES

HAUL NO. 5 Swan Lake

DATE SET June 19, 1974 TIME 1400 FLOATING OR SINKING

DATE LIFTED June 20, 74 TIME 0700 TOTAL HOURS 7

LENGTH 50 ft. DEPTH TYPE

SHALLOW END MESH SIZE (mm) 25 50 DEPTH 2 metres

DEEP END MESH SIZE 80 100 130 DEPTH 2 metres

NATURE OF BOTTOM mud/algae

AQUATIC PLANTS none

CAT. NO.	MESH (cm)	SPECIES	SEX	LENGTH STA. (cm.)	LENGTH TOT. (cm)	GIRTH (cm.)	AGE	PRESERVED, STOM. ANA.
3	8.0	Prosopium williamsoni						preserved

SAMPLE RECORD - FISHES

HAUL NO. 6

DATE SET June 17, 1974 TIME 1400 FLOATING OR SINKING

DATE LIFTED June 20, 74 TIME 0730 TOTAL HOURS

LENGTH DEPTH TYPE Minnow traps (3)

SHALLOW END MESH SIZE DEPTH 1-3 metres

DEEP END MESH SIZE DEPTH

NATURE OF BOTTOM mud, gravel

AQUATIC PLANTS lily pads

CAT. NO.	MESH (cm)	SPECIES	SEX	LENGTH STD. (cm.)	LENGTH TOT. (cm)	GIRTH (cm.)	AGE	PRESERVED, STOM. ANA.
6		O. nerka						preserved

SAMPLE RECORD - INVERTEBRATES NA

PLANKTON HAULS

SAMPLER _____ MESH SIZE _____ DIAMETER _____ cm

DURATION _____ seconds SPEED _____ M/sec. DEPTH _____ M

HAUL	ORGANISMS AND QUANTITIES
a.	
b.	
c.	
d.	
e.	
f.	
g.	
h.	

BOTTOM SAMPLES

SAMPLER _____ VOLUME _____ SIEVE SIZE _____

STATION	DEPTH (m)	SUBSTRATE	ORGANISMS
A			
B			
C			
D			
E			
F			
G			
H			

REMARKS: _____

DRAINAGE

INLET	TEMP. (°C)	WIDTH (meters)	DEPTH (meters)	FLOW (meters/minute)	OTHERS
1					
2					
3					
4					

REMARKS: no data available

OUTLET	TEMP. (°C)	WIDTH (meters)	DEPTH (meters)	FLOW (meters/minute)	OTHERS Length
1a	13.0	10	1	80	20 metres
2a					
3a					
4a					

REMARKS: the 20 metre outlet connects Swan to Club Lake. Sockeye spawning redds occur in the latter which connects to an unnamed lake and then Stephens, which drains into the Kispiox River. Much sign of bear activity during spawning of sockeye along outlet stream of Club. Skeletons and heads of sockeye were found scattered to 10 metres to the sides from either bank of the outlet stream.