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Preliminary Inventory of Larval Herring Data from Canadian Surveys
off Western Nova Scotia

by

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A preliminary inventory of larval herring surveys of the Bay of Fundy region and western Nova Scotia found 90 cruises in the period 1960-1980. The surveys were initiated by a number of scientific staff at St. Andrews. Analyses of the surveys have been reported in numerous documents and are not reported here. Much of the information from the surveys was not available for the inventory. Table 1 lists available data.

The surveys were generally based on March and October cruises where the monthly distribution was: Jan. - 6, Feb. - 7, March - 11, April - 7, May - 4, June - 2, July - 5, Aug. - 9, Sept. - 4, Oct. - 16, Nov. - 12, Dec. - 4. The available set information indicated gear preferences as: Butterfly Trawl - 1, Boris Trawl - 8, Bongo - 50, Isaacs-Kidd Trawl - 28, Metre Net - 46, Neuston Net - 1.

Beginning in 1969 a series of surveys using the E.E. Prince were initiated which used a standard set of station locations covering the Bay of Fundy and approaches with a grid concentration of approximately 1 station per 100 square nautical miles. The latter surveys in this series were standardized to a minimum 10 minute oblique tow using 61 cm. Bongo (505 and 333u) nets. In addition surface salinities and BT casts were collected. Subsamples of Chaetognaths, Pteropods, Euphausiids and Amphipods were enumerated in conjunction with the University of Guelph. The subsampling began with EEP-55 and includes most subsequent surveys for at least one group. The distribution and abundances of these plankters have been related to the associated larval herring concentrations.

The standardization of the data formats of the survey results has been initiated. Survey results as available are in the process of conversion to the S.S.I.P. cruise formats. Conversion to an IMAGE/3000 (HP3000/Series III) data base structure will be implemented when possible with July 1981 as the target date. Analytical capabilities associated with this data included: generalized tabulation and reporting, two and three dimensional plotting software (Figure 1.), and linkage to onboard hardware for depth telemetering devices. An interface to S.A.S. has yet to be implemented. The larval herring survey program supported the development of ultrasonic telemetering equipment for measuring gear depth, temperature and salinity. Surveys since EEP-202 have used depth telemetering for vertical placement of the gear. The November 1980 E.E. Prince survey will include temperature and salinity.

Table 1. Inventory of larval herring data.

[illegible]

Table 1. (Cont'd)

Cruise #	Date	Vessel	Location	# Sets	Sorted	Survey	Drift Bottles	Temp. Sal. BT	Gear			Tow			Tagging	Depth Telemetry	Chaetognaths Removed	Pteropods Removed	Euphausiids Counted	Amphipods Removed	Echo Sounder	Sonar	Length Frequency
									1st	2nd	3rd	1st	2nd	3rd									
EEP-25		Prince	Passamaquoddy Bay																		*	*	
EEP-31	16/7/61	Prince	S.W. Nova Scotia	46	1	L	*		IK	M		V	O										*
EEP-38	19/11/68	Prince		13	1	L																	*
Cheb 1	21/1/69	Chebucto		44	1	LJ																	*
EEP-44	24/4/69	Prince	Bay of Fundy, E. Gulf of Maine, E. Georges Bank, W. Scotian Shelf	95	1	LA	*	*	IK	M		V	O										*
EEP-50	21/7/69	Prince	Bay of Fundy, E. Gulf of Maine, E. Georges Bank, W. Scotian Shelf	95	1	LA	*	*	IK	M		V	O										*
EEP-55	7/10/69	Prince	Bay of Fundy, and S.W. Nova Scotia	51	2	L		*	IK							*		*	*				*
EEP-56	14/10/69	Prince	Bay of Fundy, E. Gulf of Maine, E. Georges Bank, W. Scotian Shelf	95	1	LA	*	*	IK	M													
EEP-57	28/10/69	Prince	Bay of Fundy, Grand Manan Channel, St. Mary's Bay	50	2	L		*	IK									*	*	*			*
EEP-58	12/11/69	Prince	Bay of Fundy, Minas Basin			LA		*	IK									*	*				*
EEP-60	3/12/69	Prince	Bay of Fundy			L		*	IK											*			
EEP 62/63	28/1/70	Prince	Bay of Fundy, S.W. Nova Scotia	27	1	L	*	*	IK	M		O											*
JBN-1	15/3/71	Nickerson	N.S. Banks, Banquer-eau to Emerald					*													*		
EEP-92	13/10/71	Prince	Bay of Fundy, Grand Manan Channel, Lurcher-Trinity	75	1	L	*	*	IK	M		O									*		
EEP-98	1/4/72	Prince	Bay of Fundy, St. Mary's Bay, Grand Manan Channel	77	1	L	*	*	BT	IK											*		
HS-111	6/9/72	Harengus	S.W. Nova Scotia, Bay of Fundy, Lurcher-Trinity	43		L			B3	B5													
EEP-109	6/11/72	Prince	S.W. Nova Scotia, St. Mary's Bay and approaches.	130	2		*	*	B3	B5	BT							*					
EEP-111/112	28/2/73	Prince	S.W. Nova Scotia, Gulf of Maine, Bay of Fundy, St. Mary's Bay	129	2	J	*	*	B	IK	BU					*		*	*				

Table 1. (Cont'd)

Cruise #	Date	Vessel	Location	# Sets	Sorted	Survey	Drift Bottles	Temp. Sal. BT	Gear	Tow	Tagging	Depth Telemetry	Chaetognaths Removed	Pteropods Removed	Euphausiids Counted	Amphipods Removed	Echo Sounder	Sonar	Length Frequency
Yar. 2	24/9/73		Trinity Bay Area						M	O									
EEP-125	28/10/73	Prince	S.W. Nova Scotia, St. Mary's Bay, Bay of Fundy	18	1	L	*	*	B3 B5										
EEP-127	20/11/73	Prince	S.W. Nova Scotia, St. Mary's Bay, Bay of Fundy	132	1		*	*	B3 B5				*		*	*			
	12/12/73		Grand Manan Area						B4 B1	O									
	19/12/73	Polly B.	Grand Manan Area						B4 B1										
	31/1/74		Passamaquoddy Bay						IK										
EEP-128	10/1/74	Prince	S.W. Nova Scotia	19	1		*	*	B3 B5										
EEP-130	4/2/74	Prince	S.W. Nova Scotia, St. Mary's Bay areas	76	1		*	*	B3 B5										
EEP-132	6/3/74	Prince	S.W. Nova Scotia, St. Mary's Bay, Bay of Fundy	94	1		*	*	B3 B5				*						
EEP-144	4/10/74	Prince	Cape Breton	52	1	L	*	*	B3 B5				*		*	*			
EEP-145	16/10/74	Prince	Bay of Fundy and S.W. Nova Scotia	132	1		*	*	B3 B5										
S-34	17/10/74	Sackville	N. Nova Scotian Shelf	77	1		*	*	B5										
EEP-146	24/10/74	Prince	Bay of Fundy	41			*	BT										*	
EEP-147	5/11/74	Prince	Bay of Fundy, S.W. Nova Scotia and St. Mary's Bay	100	1		*	*	B3 B5				*		*	*			
EEP-151	2/4/75	Prince	S.W. Nova Scotia, St. Mary's Bay, Bay of Fundy	130	3		*	*	B3 B5				*			*			
EEP-160	5/11/75	Prince	Bay of Fundy and approaches	103	3	L	*	*	B5				*			*			
EEP-163	24/3/76	Prince	Bay of Fundy, S.W. Nova Scotian Shelf	131	3		*	*	B5				*			*			
EEP-175	8/11/76	Prince	Bay of Fundy, S.W. Nova Scotian Shelf	123	3		*	*	B5	V			*			*			
EEP-180	21/3/77	Prince	Bay of Fundy, Nova Scotian Shelf	98	3	L	*	*	B5 M	O						*			
EEP-186	8/8/77	Prince	Bay of Fundy and approaches.	132	3	L	*	*	B5	O									
EEP-190	18/10/77	Prince	Bay of Fundy, S.W. Nova Scotian Shelf	128	3		*	*	B5	O									

Table 1. continued

Table 1. (Cont'd)

Cruise #	Date	Vessel	Location	# Sets	Sorted	Survey	Drift Bottles	Temp. Sal. BT	Gear			Tow			Tagging	Depth Telemetry	Chaetognaths Removed	Pteropods Removed	Euphausiids Counted	Amphipods Removed	Echo Sounder	Sonar	Length Frequency
									1st	2nd	3rd	1st	2nd	3rd									
EEP-193	15/3/78	Prince	Bay of Fundy, S.W. Nova Scotian Shelf	113	3				B5			O											
H-001	1/8/78	Hart	Grand Manan	22		L			B5			O											
EEP-202	15/8/78	Prince	Bay of Fundy and approaches	115	3			*	B3	B5	M	O			*						*		
EEP-203	21/8/78	Prince	Bay of Fundy	28		J		*	BT	M		O										*	*
EEP-207	30/10/78	Prince	Bay of Fundy and approaches.	116	3			*	B5	M		O			*						*		
EEP-214	3/2/78	Prince	Bay of Fundy and S.W. Nova Scotia					*	B	M		O									*		
EEP-217 (I)	30/3/79	Prince	Bay of Fundy	114	3			*	B3	B5	M	V	O		*						*		
EEP-217(II)	30/3/79	Prince	Bay of Fundy and N.S. Coast		3			*	BT												*	*	
EEP-226	25/7/79	Prince	Bay of Fundy	106				*	B	M	N	V					*				*		
EEP-227	7/8/79	Prince	Bay of Fundy	162				*	B5	M		O			*						*		
EEP-228	20/8/79	Prince	Bay of Fundy	116				*	B3	B5	M	V	O				*				*		
EEP-232 (I)	29/10/79	Prince	Bay of Fundy	115				*	B3	B5	M	V	O		*		*				*		
EEP-232(II)	9/11/79	Prince	Bay of Fundy			J			BT													*	
EEP-234 (I)	3/3/80	Prince	Bay of Fundy and approaches.	116		J		*	B3	B5	M	V	O		*						*		
EEP-234(II)		Prince	Bay of Fundy and approaches.					*	BT												*	*	
EEP-243	11/8/80	Prince	Bay of Fundy and approaches.	160		L		*	B3	B5		O			*		*						
EEP-xxx	3/11/80	Prince	Bay of Fundy and approaches	161		L		*	B3	B5		O			*		*						

Table 1. continued

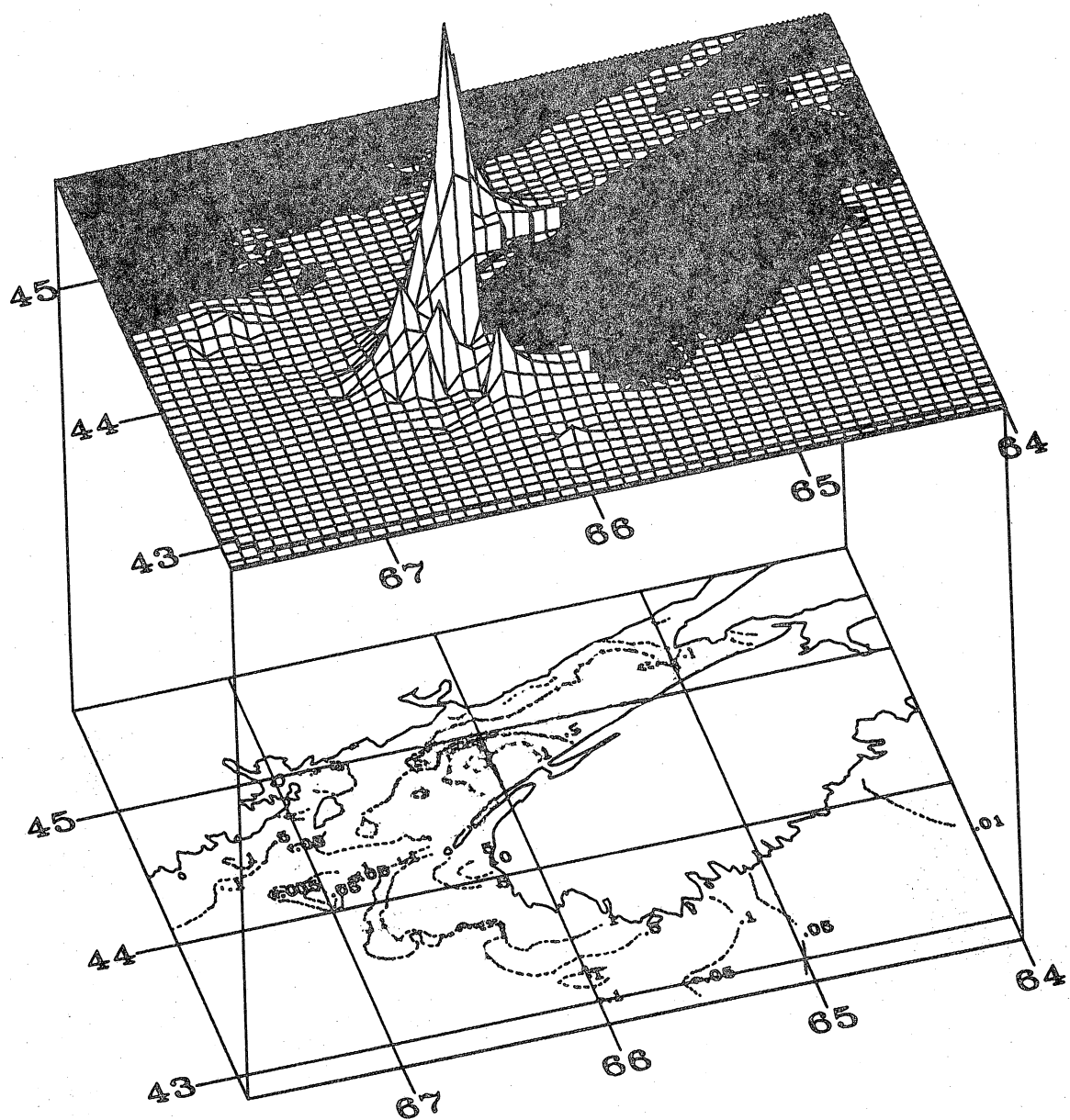


Fig. 1. E.E.Prince Cruise 145 (Nov. 1974) * Larval *C. harengus* per cubic metre