

TABLE 1: AVAILABLE DATA

COMMON NAME:	ATLANTIC HERRING	SPECIES:	<i>Clupea harengus</i>
AREA:	NORTHWEST ATLANTIC	STOCK:	COASTAL COMPLEX NAFO SUBAREAS 5+6
CREATED BY:	JAY BURNETT 2001-9-25	UPDATED BY:	

Data status									
Year	Stock size	Stock composition	Age	Sex ratio	Maturity	Fecundity	Weight	Condition	Additional data
2001	(√)	√	√	(√)	√		√	(√)	√
2000	(√)	√	√	(√)	√		√	(√)	√
1999	(√)	√	√	(√)	√		√	(√)	√
1998	√	√	√	(√)	√		√	(√)	√
1997	√	√	√	(√)	√		√	(√)	√
1996	√	√	√	(√)	√		√	(√)	√
1995	√	√	√	(√)	√		√	(√)	√
1994	√	√	√	(√)	√		√	(√)	√
1993	√	√	√	(√)	√	(√)	√	(√)	√
1992	√	√	√	(√)	√	(√)	√	(√)	√
1991	√	√	√	(√)	√	(√)	√		√
1990	√	√	√	(√)	√	(√)	√		√
1989	√	√	√	(√)	√	(√)	√		√
1988	√	√	√	(√)	√		√		√
1987	√	√	√	(√)	√		√		√
1986	√	√	√	(√)	√		√		√
1985	√	√	√	(√)	√		√		√
1984	√	√	√	(√)	√		√		√
1983	√	√	√	(√)	√		√		√
1982	√	√	√	(√)	√		√		√
1981	√	√	√	(√)	√		√		√
1980	√	√	√	(√)	√		√		√
1979	√	√	√	(√)	√		√		√
1978	√	√	√	(√)	√		√		√
1977	√	√	√	(√)	√		√		√
1976	√	√	√	(√)	√		√		√

Data status									
Year	Stock size	Stock composition	Age	Sex ratio	Maturity	Fecundity	Weight	Condition	Additional data
1975	√	√	√				√		√
1974	√	√	√				√		√
1973	√	√	√				√		√
1972	√	√	√				√		√
1971	√	√	√				√		√
1970	√	√	√				√		√
1969	√	√	√				√		√
1968	√	√	√				√		√
1967	√	√	√				√		√
1966	(√)	√							√
1965	(√)	√							√
1964	(√)	√							√
1963	(√)	√							√

TABLE 2: DATA BASIS, FORMAT AND QUALITY

COMMON NAME:	ATLANTIC HERRING	
AREA:	NORTHWEST ATLANTIC	
STOCK:	COASTAL COMPLEX NAFO SUBAREAS 5+6	
REPRODUCTIVE STRATEGY:		REF. NO.:
TIMING OF SPAWNING:	AUGUST-DECEMBER	REF. NO.: 1
OPTIMAL TIME FOR MATURITY SAMPLING:	SEPT-OCT	REF. NO.: 1

Data basis, format and quality						
Variables	Year range	Data basis (A/L/W)	Data origin	Sampling frequency	Notes on data, methods and contents	Ref. No.
Stock size	1999-2001	A/L/W	S,CL	B,Q	Relative abundance	2
	1967-1998	A/L/W	S,CL	B,Q	VPA estimates	2,3
	1963-1966	A/L	S	A	Relative abundance	2
Stock composition	1967-2001	A/L/W	S,CL	B,Q		2,3
	1963-1966	A/L	S	A		2
Age determination	1967-2001		S,CL	B,Q		2,3,4
Sex ratio	1976-2001		S	B		5
Maturity:						
A. Ogives (E)	1976-1997	A/L	S,CL	B,Q	Macroscopic observations	3
	1985-1990	A/L	S	B		6
B. Skip of spawning						
C. Spawning probability						
D. Other						
Fecundity:						
A. Estimation	1989-1993	A/L/W	Special study	A	Unpublished data; n > 2000	10
B. First time vs. repeat spawners						
C. Atresia						
D. Other						
Weight:						
A. Commercial fisheries data	1967-1997	A/L	CL	Q	Estimated mean weights	2,3
B. Survey data	1992-2001	A/L	S	B	Individual fish weights	5

Data basis, format and quality						
Variables	Year range	Data basis (A/L/W)	Data origin	Sampling frequency	Notes on data, methods and contents	Ref. No.
C. Other						
Condition:						
A. Fulton						
B. HSI						
C. Energy						
D. Other						
Egg viability:						
A. Egg quality						
B. Fertilisation success						
C. Egg mortality						
D. Other						
Larval viability:						
A. Hatching success						
B. Larvae quality						
C. Mortality						
D. Other						
Spawning time	1963-2001	L	S	Q-M	Egg and larval surveys	1,7,8
Contamination						
Environmental key factors						
Other factors or parameters	1973-2001	L	S	B	Foods habits data	9

TABLE 3: STUDIES OF REPRODUCTIVE POTENTIAL

COMMON NAME:	ATLANTIC HERRING
AREA:	NORTHWEST ATLANTIC
STOCK:	COASTAL COMPLEX NAFO SUBAREAS 5+6

Estimation of reproductive potential			
Subject	Brief description	Year range	Ref. No.
Potential or realised egg production			
Viable egg and larvae production			
Critical life stages			
Environmental influences			
Stock recruitment relations	Spawning stock biomass vs age 1 recruits	1965-1996	2,3
Other studies			

TABLE 4: DATA SOURCES

COMMON NAME:	ATLANTIC HERRING
AREA:	NORTHWEST ATLANTIC
STOCK:	COASTAL COMPLEX NAFO SUBAREAS 5+6

Data sources (literature reference or contact person)
1. SMITH, W. G. 1985. Temporal and spatial spawning patterns of the principal species of fish and invertebrates in the Georges Bank region. <i>NMFS Sandy Hook Lab.</i> , Rep. No. SHL 85-04, 35 p.
2. OVERHOLTZ, W. J. Northeast Fisheries Science Center, 166 Water St., Woods Hole, MA 02543 USA (William.Overholtz@noaa.gov).
3. NORTHEAST FISHERIES SCIENCE CENTER. 1998. Report of the 27th Northeast Regional Stock Assessment Workshop (27th SAW). <i>NEFSC Ref. Doc.</i> , 98-15, 350 p.
4. DERY, L. M. 1988. Atlantic herring <i>Clupea harengus</i> (Chapter 4). <i>In: Age determination methods for Northwest Atlantic species.</i> J. Penttila, and L. M. Dery (eds.) <i>NOAA Tech. Rep., NMFS 72</i> , 135 p.
5. BURNETT, J. Northeast Fisheries Science Center, 166 Water St., Woods Hole, MA 02543 USA (Jay.Burnett@noaa.gov).
6. O'BRIEN, L., J. BURNETT, and R. K. MAYO. 1993. Maturation of nineteen species of finfish off the northeast coast of the United States, 1985-1990. <i>NOAA Tech. Rep., NMFS 113</i> , 66 p.
7. BERRIEN, P., and J. SIBUNKA. 1999. Distribution patterns of fish eggs in the U.S. Northeast Continental Shelf Ecosystem, 1977-1987. <i>NOAA Tech. Rep., NMFS 145</i> , 310 p.
8. SMITH, W. G., and W. W. MORSE. 1993. Larval distribution patterns: early signals for the collapse/recovery of Atlantic herring <i>Clupea harengus</i> in the Georges Bank area. <i>U.S. Fish. Bull.</i> , 91 : 338-347.
9. LINK, J. S., and F. P. ALMEIDA. 2000. An overview and history of the Food Web Dynamics Program of the Northeast Fisheries Science Center, Woods Hole, Massachusetts. <i>NOAA Tech. Mem.</i> , NMFS-NE-159, 60 p.
10. UNPUBL. DATA: J. BURNETT, Northeast Fisheries Science Center, 166 Water St., Woods Hole, MA 02543 USA (Jay.Burnett@noaa.gov).