

TABLE 1: AVAILABLE DATA**COMMON
NAME:**

AMERICAN PLAICE

SPECIES:*Hippoglossoides platessoides***AREA:**

NORTHWEST ATLANTIC

STOCK:

NAFO DIV. 3LNO

CREATED BY:JOANNE MORGAN
SUSANA JUNQUERA**UPDATED BY:**

JM 2002-03-26

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	√	√	√	√	√		(√)		

Data status									
Year	Stock size	Stock composition	Age	Sex ratio	Maturity	Fecundity	Weight	Condition	Additional data
1977	√	√	√	√	√		(√)		
1976	√	√	√	√	√		(√)		
1975	√	√	√	√	√		(√)		
1974	√	√	√		√		(√)		
1973	√	√	√		√		(√)		
1972	√	√	√		√		(√)		
1971	√	√	√		√		(√)		
1970	√	√	√		√		(√)		
1969	√	√	√		√		(√)		
1968	√	√	√		√		(√)		
1967	√	√	√		√		(√)		
1966	√	√	√		√		(√)		
1965	√	√	√		√		(√)		
1964	√	√	√	√	√		(√)		
1963	√	√	√	(√)	√		(√)		
1962	√	√	√		√		(√)		
1961	√	√	√	(√)	√	√	(√)		
1960	√	√	√	(√)	√	√	(√)		
1959				(√)					
1958				(√)					
1957				(√)					
1956									
1955									
1954									
1953				(√)					
1952									
1951				(√)					
1950				(√)					

TABLE 2: DATA BASIS, FORMAT AND QUALITY

COMMON NAME:	AMERICAN PLAICE	
AREA:	NORTHWEST ATLANTIC	
STOCK:	NAFO DIV. 3LNO	
REPRODUCTIVE STRATEGY:	DETERMINATE BATCH SPAWNER	REF. NO.: 1,9
TIMING OF SPAWNING:	MARCH-JULY	REF. NO.: 1,2,3,4
OPTIMAL TIME FOR MATURITY SAMPLING:	FEB-JUNE	REF. NO.:

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	1960-1974	A	CL	Q	VPA starting 1960	5
	1975-1989	A,L	CC,CL,S	Q,Q,Y		6
	1990-1995	A,L	CC,CL,S	Q,Q,B	few otoliths sampled from the commercial fishery from 1993-1998	6
	1996-2001	A,L	CC,CL,S	Q,Q,3/yr		4,6,12
Stock composition	1960-1974	A	CL,S	Q,Q,Y		5
	1975-1989	A,L	CC,CL,S	Q,Q,Y		6
	1990-1995	A,L	CC,CL,S	Q,Q,B		6
	1996-2001	A,L	CC,CL,S	Q,Q,3/yr		4,6,12
Age determination	1960-1974	A	CL	Q		5
	1975-1989	A	CC,CL,S	Q,Q,Y		6
	1990-2000	A	CC,CL,S	Q,Q,B		6
	2001	A	CC,CL,S	Q,Q,B		4
Sex ratio	1975-1983	A	S	Y		4
	1984-1989	A	S	Y		4
	1990-1995	A	S	B		4
	1996-2001	A	S	3/YR		4,12
	1964	A,L	S	APR-JUNE	data from 1950-51, 1953, 1957-61, 1963-64 combined	13
Maturity:						
A. Ogives (E)	1960-2001	A,L	S	Y	Maturities are produced by cohort	8,4,6
B. Skip of spawning						
C. Spawning probability						

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.
D. Other						
Fecundity:						
A. Estimation	1961-1962	A,L	S	FEB-MAR	part of stock area	2
	1987-1989	L,W	CC	M	part of stock area	1
	1993-1998	A,L,W	S	Apr-Jun		4
B. First time vs. repeat spawners						
C. Atresia	1987-1989		CC	M	Part of stock area	1
	1998	A,L,W	CL,S	FALL		4
D. Other						
Weight:						
A. Commercial fisheries data	1960-1974	L	CL	Q	Invariant length/weight relationship	5
	1975-2000	L	CC,CL	Q		6
	2001	L	CC,CL	Q		4
	1987-1989	L	CC	M	part of stock area	1
B. Survey data	1990-2000	A,L	S	B		6
	2001	A,L	S	B		4
C. Other						
Condition:						
A. Fulton	1990-2001	A,L	S	B		4
	1993-1995	A,L	S	sporadic		9
B. HSI	1990-2001	A,L	S	B		4
	1993-1995		S	sporadic		9
C. Energy						
D. Other	1987-1989		CC	M	GSI, part of stock area	1
	1990-2001	A,L	S	B	GSI	4
	1993-1995		S	sporadic	GSI	9
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						

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.
Spawning time	1950's early	L	S	MAR-JUN	part of stock area, not every year	2
	1960's					
	1954-1970					3
	1987-1989					1
	1975-1999					14
	2000-2001		S	Sept-Dec	part of stock area	4
Contamination						
Environmental key factors						
Other factors or parameters	1994-1999	L	S	Y	Pelagic O group survey	11

TABLE 3: STUDIES OF REPRODUCTIVE POTENTIAL

COMMON NAME:	AMERICAN PLAICE
AREA:	NORTHWEST ATLANTIC
STOCK:	NAFO DIV. 3LNO

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	Exploration of relationship of sex ratio, weighted mean age of SSB, and proportion of first time spawners to residuals from Beverton-Holt stock recruit relationship	1960-1995	10
Other studies			

TABLE 4: DATA SOURCES

COMMON NAME:	AMERICAN PLAICE
AREA:	NORTHWEST ATLANTIC
STOCK:	NAFO DIV. 3LNO

Data sources (literature reference or contact person)
1. ZAMARRO, J. 1992. Determination of fecundity in American plaice (<i>Hippoglossoides platessoides</i>) and its variation from 1987 to 1989 on the tail of the Grand Bank. <i>Neth. J. Sea Res.</i> , 29 : 205-209.
2. PITT, T. K. 1966. Sexual maturity and spawning of the American plaice, <i>Hippoglossoides platessoides</i> (Fabricius), from Newfoundland and Grand Bank areas. <i>J. Fish. Res. Board Canada</i> , 23 : 651-672.
3. NEVINSKY, M. M. and V. P. SEREBRYAKOV. 1973. American plaice, <i>Hippoglossoides platessoides platessoides</i> Fabr., spawning in the Northwest Atlantic area. <i>ICNAF Bull.</i> , 10 : 23-36.
4. UNPUBL. DATA: M. J. MORGAN, DFO, P.O. Box 5667, St. John's NF, A1C 5X1, Canada (morganj@dfo-mpo.gc.ca).
5. BRODIE, W. B. MS 1985. An assessment update of the American plaice stock in NAFO Div. 3LNO. <i>NAFO SCR Doc.</i> , No. 51, 30 p.
6. MORGAN, M. J., W. B. BRODIE, B. P. HEALEY, D. MADDOCK PARSONS, D. STANSBURY, and D. POWER. MS 2001. An assessment of American plaice in NAFO Divisions 3LNO. <i>NAFO SCR Doc.</i> , No. 59, 13 p.
7. MORGAN, M. J. MS 2000. A stock status update of American plaice in NAFO Div. 3LNO. <i>NAFO SCR Doc.</i> , No. 41, 15 p.
8. MORGAN, M. J. and E. B. COLBOURNE. 1999. Variation in maturity-at-age and size in three populations of American plaice. <i>ICES J. Mar. Sci.</i> , 56 : 673-688.
9. MADDOCK, D.M. and M.P.M. BURTON. 1999. Gross and histological observations of ovarian development and related condition changes in American plaice. <i>J. Fish. Biol.</i> , 53 : 928-944.
10. MORGAN, M. J., P. A. SHELTON, D.P. STANSBURY, J. BRATTEY, and G. R. LILLY. MS 2000. An examination of the possible effect of spawning stock characteristics on recruitment in 4 Newfoundland groundfish stocks. <i>Can. Stock Ass. Sec. Res. Doc.</i> , No. 28.
11. ANDERSON, J. T., E. L. DALLEY, and E. COLBOURNE. MS 1999. Recent trends in the dominant pelagic fish species and environment in the northwest Atlantic, NAFO 2J3KLNO. <i>Can. Stock Ass. Sec. Res. Doc.</i> , No. 114.
12. PAZ, X., E. ROMAN, and P. DURAN MUNOZ. MS 2000. Results from the 2000 Spanish bottom trawl survey in the NAFO regulatory area for Divisions 3NO. <i>NAFO SCR Doc.</i> , No. 46.
13. PITT, T. K. 1966. Sexual maturity and spawning of the American plaice, <i>Hippoglossoides platessoides</i> (Fabricius), from Newfoundland and Grand Bank areas. <i>J. Fish. Res. Board Canada</i> , 23 : 651-672.
14. MORGAN, M. J. 2001. Time and location of spawning of American plaice in NAFO Divisions 3LNO. <i>J. Northw. Atl. Fish. Sci.</i> , 29 : 41-49.