NAFO Sci. Coun Studies, 37: 231–236

TABLE 1: AVAILABLE DATA

COMMON NAME:	YELLOWTAIL FLOUNDER	**SPECIES:**	*Limanda ferruginea*
AREA:	NORTHWEST ATLANTIC	**STOCK:**	NAFO DIV. 3LNO
CREATED BY:	JOANNE MORGAN SUSANA JUNQUERA	**UPDATED BY:**	JOANNE MORGAN 2002-03-25

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					(√)				
1949					(√)				

TABLE 2: DATA BASIS, FORMAT AND QUALITY

COMMON NAME:	YELLOWTAIL FLOUNDER		
AREA:	NORTHWEST ATLANTIC		
STOCK:	NAFO DIV. 3LNO		
REPRODUCTIVE STRATEGY:	DERTERMINATE BATCH SPAWNER	**REF. NO.:**	8,9
TIMING OF SPAWNING:	MAY-JULY	**REF. NO.:**	6,8
OPTIMAL TIME FOR MATURITY SAMPLING:	MARCH-JUNE	**REF. NO.:**	8

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	1965-1974	W	CL	Q	Production model	1
	1975-1985	A,L	S,CC,CL	Y,Q,Q		2
	1986-1989	A,L	S,CC,CL	B,Q,Q		2
	1990-1996	A,L	S,CC,CL	3/YR,Q,Q		2,3
	1997-1998	A,L	S,CC,CL	6/YR,Q,Q		2,3
	1999	A,L	S,CC,CL	5/YR,Q,Q		2,3
	2000	A,L	S,CC,CL	3/YR,Q,Q		2,3
Stock composition	1968-1974	A,L	CL	Q		4
	1975-1985	A,L	S,CC,CL	Y,Q,Q		2
	1986-1989	A,L	S,CC,CL	B,Q,Q		2
	1990-1996	A,L	S,CC,CL	3/YR,Q,Q		2
	1997-1998	A,L	S,CC,CL	6/YR,Q,Q		2,3
	1999	A,L	S,CC,CL	5/YR,Q,Q		2,3
	2000	A,L	S,CC,CL	3/YR,Q,Q		2,3
Age determination	1968-1974	A	CL	Q	Age determination beyond age 7 unreliable	4
	1975-1985	A	S,CC,CL	Y,Q,Q		2,4
	1986-1989	A	S,CC,CL	B,Q,Q		2,4
	1990-1994	A	S,CC,CL	3/YR,Q,Q		2
	1995-2000	A	S,CC,CL	B,Q,Q		2
Sex ratio	1975-1985	A	S	Y		5,15
	1986-1989	A	S	B		5,15
	1987	L,W	CC	JUN-JUL	part of stock area	8
	1990-1994	A	S	3/YR		5,15
	1995-2000	A	S	B		5,15

Maturity:						
A. Ogives (E)	1949-1953	A,L	S			5
	1968	A,L	S	NOT GIVEN	Data for 1959-1968 combined	6
	1969-1977	A,L	S	A		5
	1978-1983	A,L	S	A	ogives by cohort	7,5
	1984-1999	A,L	S	A	by cohort and annual	2,7,5
	1995-1998	L,W	S	A		17
	2000	A,L	S	A		5
B. Skip of spawning						
C. Spawning probability						
D. Other						
Fecundity:						
A. Estimation	1966-1967	A,L	S	spring	Both years combined	12
	1993-1994,1996-1998	A,L	S	A	part of stock area	5
	1987	L,W	CC	JUN-JUL		8
B. First time vs. repeat spawners						
C. Atresia	1987	L,W	CC	JUN-JUL	part of stock area	8
	1998	A,L,W	CL,S	FALL		13
D. Other						
Weight:						
A. Commercial fisheries data	1968-1987	L	CC,CL	Q	Invariant length/weight relationship	4,14
	1988-2000	L	CC,CL	Q		5,14
B. Survey data	1990-1994	A,L	S	3/YR		5
	1995-1998	L	S	A	part of stock area	17
	1995-2000	A,L	S	B		5
C. Other						
Condition:						
A. Fulton	1990-2000	A,L	S	B		5
B. HSI	1990-2000	A,L	S	B		5
C. Energy						
D. Other	1990-2000	A,L	S	B	GSI	5
Egg viability:						
A. Egg quality						
B. Fertilisation success						
C. Egg 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.**
Larval viability:						
A. Hatching success	1999	L	EC	4 FISH		11
B. Larvae quality	1999	L	EC	6 FISH		16
C. Mortality						
D. Other						
Spawning time	1968		S	NOT GIVEN	Data combined for 1959-1968	6
	1987	L,W	CC	Jun-Jul	part of stock area	8
	1975-2000	A,L	S	Y		5
Contamination						
Environmental key factors	1999	L	EC	4 FISH	Effect of temperature on hatching success	11
Other factors or parameters	1994-1999	L	S	Y	Pelagic O group survey	10

TABLE 4: DATA SOURCES

COMMON NAME:	YELLOWTAIL FLOUNDER
AREA:	NORTHWEST ATLANTIC
STOCK:	NAFO DIV. 3LNO

Data sources (literature reference or contact person)
1. WALSH, S. J. MS 2000. Evaluating total allowable catch projections for yellowtail flounder (Pleuronectes [*Limanda*] *ferruginea*) on the Grand Bank using multiple indices and surplus production analysis. *NAFO SCR Doc.*, No. 44, 40 p.
2. WALSH, S. J., M. J. MORGAN, D. POWER, C. DARBY, D. STANSBURY, M. J. VEITCH, and W. B. BRODIE. MS 2000. The millenium assessment of Grand Bank yellowtail flounder stock in NAFO Divisions 3LNO. *NAFO SCR Doc.*, No. 45, 46 p.
3. MADDOCK PARSONS, D., W. B. BRODIE, D. POWER, and S. J. WALSH. MS 2000. Update on cooperative surveys of yellowtail flounder in NAFO Divisions 3NO, 1996-1999. *NAFO SCR Doc.*, No. 42, Serial No. N4272, 23 p.
4. BRODIE, W. B. and S. J. WALSH. MS 1988. An update on the status of the yellowtail flounder stock in Divisions 3LNO. *NAFO SCR Doc.*, No. 38, 42 p.
5. UNPUBL. DATA: S. J. Walsh, DFO, P. O. Box 5667, St. John's, NF, A1C 5X1, Canada (walshj@dfo-mpo.gc.ca).
6. PITT, T. K. 1970. Distribution, abundance, and spawning of yellowtail flounder, *Limanda ferruginea*, in the Newfoundland area of the northwest Atlantic. *J. Fish. Res. Board Canada,* **27**: 2261-2271.
7. WALSH, S. J. and M. J. MORGAN. 1999. Variation in maturation of yellowtail flounder (*Pleuronectec ferruginea*) on the Grand Bank. *J. Northw. Atl. Fish. Sci.*, **25**: 47-59.
8. ZAMARRO, J. 1991. Batch fecundity and spawning frequency of yellowtail flounder (*Limanda ferruginea*) on the Grand Bank. *NAFO Sci. Coun. Studies,* **15**: 43-51.
9. HOWELL, W. H. 1983. Seasonal changes in the ovaries of adult yellowtail flounder, *Limanda ferruginea*. *Fish. Bull. US,* **81**: 341-355.
10. 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. *DFO Can. Stock Ass. Sec. Res. Doc.*, No. 114.
11. BENOIT, H. P. and P. PEPIN. 1999. Interaction of rearing temperature and maternal influence on egg development rates and larval size at hatch in yellowtail flounder (*Pleuronectes ferrugineus*). *Can. J. Fish. Aquat. Sci.*, **56**: 785-794.
12. PITT, T. K. 1971. Fecundity of the yellowtail flounder (*Limanda ferruginea*) from the Grand Bank, Newfoundland. *J. Fish. Res. Board Canada,* **28**: 456-457.
13. UNPUBL. DATA: M. J. Morgan, DFO, P. O. Box 5667, St. John's, NF, A1C 5X1, Canada (morganj@dfo-mpo.gc.ca).
14. BRODIE, W. B. MS 1985. An assessment of the yellowtail flounder stock in NAFO Divisions 3LNO. *NAFO SCR Doc.*, No. 50, 20 p.
15. WALSH, S. J., W. B. BRODIE, M. VEITCH, D. ORR, C. MCFADDEN, and D. MADDOCK-PARSONS. MS 1998. An assessment of the Grand Bank yellowtail flounder stock in NAFO Divisions 3LNO . *NAFO SCR Doc.*, No. 72, 78 p.
16. BENOIT, H. P. and P. PEPIN. 1999 Individual variability in growth rate and timing of metamorphosis in yellowtail flounder *Pleuronectes ferrugineus*. *Mar. Ecol. Prog. Ser.*, **184**: 231-244.
17. DURÁN P., S. JUNQUERA, and M. S. ALVAREZ. MS 1999. Yellowtail flounder length at maturity in the Grand Bank (1995-98). *NAFO SCR Doc.*, No. 16, 86 p.