

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

SUMMER FLOUNDER

SPECIES:*Paralichthys dentatus***AREA:**

NORTHWEST ATLANTIC

STOCK:MID-ATLANTIC-GEORGES BANK
(NAFO SUBAREAS 5+6)**CREATED BY:**JAY BURNETT
2001-07-25**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:	SUMMER FLOUNDER	
AREA:	NORTHWEST ATLANTIC	
STOCK:	MID-ATLANTIC-GEORGES BANK (NAFO SUBAREAS 5+6)	
REPRODUCTIVE STRATEGY:	DETERMINATE BATCH SPAWNER	REF. NO.: 1
TIMING OF SPAWNING:	AUGUST-DECEMBER	REF. NO.: 2
OPTIMAL TIME FOR MATURITY SAMPLING:	SEPTEMBER-OCTOBER	REF. NO.: 2

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	1963-1981	A,L	S	Y,B	Relative abundance	3
	1982-1988	A,L,W	S,CL,R	B,Q,M	VPA	3
	1989-1999	A,L,W	S,CL,CC,R	B,Q,Q,M	VPA	3
	2000-2001	A,L,W	S,CL,CC,R	B,Q,Q,M	updated VPA	4
Stock composition	1963-1975	L	S	Y,B	Spring survey added 1968	3,4
	1976-1981	A,L	S,CL	B,Q		
	1982-1988	A,L,W	S,CL,R	B,Q,Q,M	Recreational sampling	
	1989-1991	A,L,W	S,CL,CC,R	B,Q,Q,M		
Age determination	1976-1988		S,CL	B,Q		3,5
	1989-2001		S,CL,CC	B,Q,Q		
Sex ratio	1976-2001	A,L	S	B		6
Maturity:						
A. Ogives (E)	1978-1989	A,L	S	Y	Macroscopic observations	3
	1982-1989	A,L	S	Y		3
	1985-1990	A,L	S	Y		7
	1992-1998	A,L	S	Y		3
	1999	A,L	S	Q	Histological analysis	1
B. Skip of spawning						
C. Spawning probability						
D. Other						
Fecundity:						
A. Estimation						
B. First time vs. repeat spawners						
C. Atresia						

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						
Weight:						
A. Commercial fisheries data	1982-1999	A,L	CL	Q	Estimated mean weights	3
B. Survey data	1992-2001	A.L	S	B	Individual fish weights	6
C. Other	1982-1999	L	R	Q	Estimated mean weights recreational fishery	3,4
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	2,8,9,10
Contamination	1980	L	Special study		PCH and PCB levels n=2 fish	11
Environmental key factors						
Other factors or parameters	1973-2001	A,L	S	B,Q	Food habits studies	12

TABLE 3: STUDIES OF REPRODUCTIVE POTENTIAL

COMMON NAME:	SUMMER FLOUNDER
AREA:	NORTHWEST ATLANTIC
STOCK:	MID-ATLANTIC-GEORGES BANK (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 0 recruits	1983-1999	3
Other studies			

TABLE 4: DATA SOURCES

COMMON NAME:	SUMMER FLOUNDER
AREA:	NORTHWEST ATLANTIC
STOCK:	MID-ATLANTIC-GEORGES BANK (NAFO SUBAREAS 5+6)

Data sources (literature reference or contact person)	
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2. 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. Rep.</i> , No. SHL 85-04, 35 p.	
3. NORTHEAST FISHERIES SCIENCE CENTER. 2000. D. Summer Flounder. In: 31st Northeast Regional Stock Assessment Workshop: Stock Assessment Review Committee Consensus Summary of Assessments. <i>NEFSC Ref. Doc.</i> , 00-15, 305-400 p.	
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12. 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.	