

TABLE 1: AVAILABLE DATA

| | | | |
|---------------------|---------------------------|--------------------|--|
| COMMON NAME: | YELLOWTAIL FLOUNDER | SPECIES: | <i>Limanda ferruginea</i> |
| AREA: | NORTHWEST ATLANTIC | STOCK: | SOUTHERN NEW ENGLAND NAFO SUBDIV. 5ZW |
| CREATED BY: | JAY BURNETT 2001-07-30 | 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 | ✓ | ✓ | ✓ | (✓) | ✓ | | ✓ | | ✓ |
| 1975 | ✓ | ✓ | ✓ | (✓) | ✓ | | ✓ | | ✓ |

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

TABLE 2: DATA BASIS, FORMAT AND QUALITY

| | | |
|--|--|----------------------|
| COMMON NAME: | YELLOWTAIL FLOUNDER | |
| AREA: | NORTHWEST ATLANTIC | |
| STOCK: | SOUTHERN NEW ENGLAND NAFO SUBDIV. 5ZW | |
| REPRODUCTIVE STRATEGY: | DETERMINATE BATCH SPAWNER | REF. NO.: [] |
| TIMING OF SPAWNING: | APRIL-AUGUST | REF. NO.: 1 |
| OPTIMAL TIME FOR MATURITY SAMPLING: | MARCH-MAY | 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 | 1963-1972 | A,L | S | Y,B | Relative abundance VPA | 2 |
| | 1973-1998 | A,L,W | S,CL,(CC) | B,Q,(M) | | 2,3 |
| | 1999-2001 | A,L,W | S,CL CC | B,Q,M | | 3 |
| Stock composition | 1963-1964 | A,L | S | Y | | 2 |
| | 1965-1991 | A,L | S,CL | B,Q | | 2 |
| | 1992-2001 | A,L,W | S,CL | B,Q | | 2,3 |
| Age determination | 1963-1964 | | S | Y | | 2,3,4 |
| | 1965-1988 | | S,CL | Y,B,Q | | |
| | 1989-2001 | | S,CL,CC | B,Q,M | | |
| Sex ratio | 1970-2001 | A,L | S | B | | 5 |
| Maturity: | | | | | | |
| A. Ogives (E) | 1973-1991 | A,L | S | B | Macroscopic observations | 6 |
| | 1985-1990 | A,L | S | B | | 7 |
| | 1992-2001 | A,L | S | B | | 2,3,8 |
| B. Skip of spawning | | | | | | |
| C. Spawning probability | | | | | | |
| D. Other | | | | | | |
| Fecundity: | | | | | | |
| A. Estimation | | | | | | |
| B. First time vs. repeat spawners | | | | | | |
| C. Atresia | | | | | | |
| 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. |
| Weight: | | | | | | |
| A. Commercial fisheries data | 1973-2001 | A,L | CL | Q | Estimated mean weights at age | 2,3 |
| B. Survey data | 1992-2001 | A,L | B | B | Individual weights | 5 |
| 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 | M-Q | Egg and larval surveys | 1,9,10, 11,12 |
| Contamination | 1980 | L | Special study | | PCH and PCB levels n=23 | 13 |
| Environmental key factors | | | | | | |
| Other factors or parameters | 1973-2001 | A,L | S | B,Q | Food habits studies | 14 |

TABLE 3: STUDIES OF REPRODUCTIVE POTENTIAL

| | |
|---------------------|--|
| COMMON NAME: | YELLOWTAIL FLOUNDER |
| AREA: | NORTHWEST ATLANTIC |
| STOCK: | SOUTHERN NEW ENGLAND NAFO SUBDIV. 5ZW |

| 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 | 1963-1998 | 2 |
| Other studies | | | |

TABLE 4: DATA SOURCES

| | |
|---------------------|--|
| COMMON NAME: | YELLOWTAIL FLOUNDER |
| AREA: | NORTHWEST ATLANTIC |
| STOCK: | SOUTHERN NEW ENGLAND NAFO SUBDIV. 5ZW |

| 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. Rep.</i> , No. SHL 85-04, 35 p. |
| 2. | NORTHERN DEMERAL WORKING GROUP, NORTHEAST REGIONAL STOCK ASSESSMENT WORKSHOP. 2000. Assessment of 11 Northeast groundfish stocks through 1999. <i>NEFSC Ref. Doc.</i> , 00-05, 175 p. |
| 3. | CADRIN, S. Northeast Fisheries Science Center, 166 Water St., Woods Hole, MA 02543, USA (Steven.Cadrin@noaa.gov). |
| 4. | PENTTILA, J. 1988. Yellowtail flounder <i>Limanda ferruginea</i> (Chapter 19). In: Age determination methods for Northwest Atlantic species. 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. | ALMEIDA, F., and J. BURNETT. 1997. Changes in growth and maturation of yellowtail flounder, <i>Pleuronectes ferrugineus</i> , from the southern New England and Georges Bank stocks during periods of high and low abundance. <i>SAW-24 Working Paper D2</i> . |
| 7. | 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. |
| 8. | NORTHEAST FISHERIES SCIENCE CENTER. 1998. Southern New England yellowtail flounder. <i>NEFSC Ref. Doc.</i> , 98-15, 328-350 p. |
| 9. | COLTON, J., and J. ST. ONGE. 1974. Distribution of fish eggs and larvae in continental shelf waters, Nova Scotia to Long Island. <i>Ser. Atlas Mar. Environ., Am. Gerogr. Soc. Folio</i> , 23 . |
| 10. | COLTON, J. B., Jr., W. G. SMITH, A. W. KENDALL, Jr., P. L. BERRIEN, and M. P. FAHAY. 1979. Principal spawning areas and times of marine fishes, Cape Sable to Cape Hatteras. <i>Fish. Bull.</i> , 76 (4): 5. |
| 11. | SMITH, W. G., J. D. SIBUNKA, and A. WELLS. 1975. Seasonal distributions of larval flatfish (Pleuronectiformes) on the continental shelf between Cape Cod and Cape Lookout, N.C., 1965-66. <i>NOAA Tech. Rep. Spec. Sci. Rep. Fish.</i> , 691 : 68 p. |
| 12. | 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. |
| 13. | BOEHM, P. D., and P. HIRTZER. 1982. Gulf and Atlantic survey for selected organic pollutants in finfish. <i>NOAA Tech. Mem.</i> , NMFS-F/NEC-13, 111 p. |
| 14. | 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. |