

# FSO

## "Gateway to Decisions"

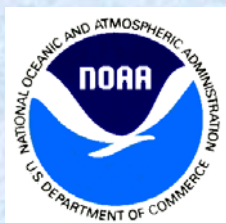
Making decisions that affect thousands of individuals, families and businesses is serious business. Collecting data that support those decisions is FSO's business. With thousands of vessels and dealers from Maine to North Carolina, the responsibility is far reaching and highly challenging. Assembling and analyzing these data is the cornerstone of fisheries management.

### That's FSO.

*In the Field* and *In the Office* helping NOAA and industry steer a steady course.

For more information visit our website:

[www.nero.noaa.gov/fso](http://www.nero.noaa.gov/fso)



# Fisheries Statistics Office

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NOAA / NMFS

Northeast Region

Fisheries Statistics Office

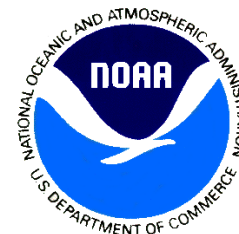
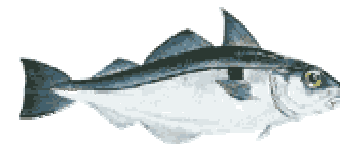
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## Haddock



## Sampling Program



NOAA staff Buddy Heiskell measuring haddock

# "Gateway to Decisions"

# BIOLOGICAL SAMPLING PROGRAM

## "Gateway to Decisions"

The **Fisheries Statistics Office (FSO)** is a key component of **NOAA Fisheries** in the northeast. One of the office's primary functions is to collect fishery data and biological samples. These data are essential to the fishery management process.

Both in the field and in the office, FSO works to provide our customers, other NOAA fisheries groups, fishing industry, and other constituents with accurate, reliable and timely data. **FSO** operates 11 field offices covering states from Maine to Virginia. Each office is staffed with knowledgeable personnel who serve as the agency's front line to the fishing industry.

Under the direction of John Witzig, Ph.D., FSO's central office is located in NOAA Fisheries' Regional Office in Gloucester, Massachusetts.

*For more information visit our website:*

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NOAA staff, Buddy Heiskell, displays a haddock that he just measured. Measuring marine fish helps scientists determine age and growth patterns

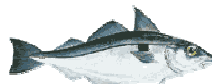
## Haddock



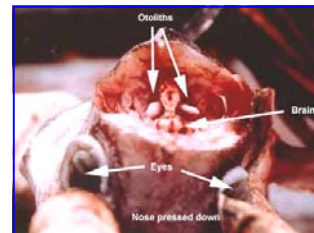
NOAA's Mark Grant holds a haddock otolith while field staff and mentor Caleb Gilbert looks on in admiration

**What We Do and How:** The mission of the sampling program is to obtain raw data essential to understanding the ages and the size distributions of individual stocks of marine fish. Field work provides the biological foundation for many fisheries assessments. Biological data, which is collected in the field, are used in models designed to guide management decisions and future research.

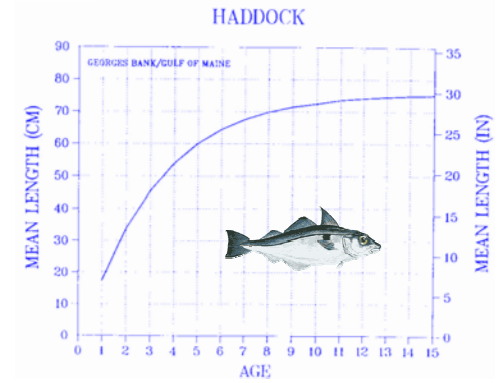
The ages of haddock and many other marine fishes are determined by measuring and extracting *otoliths* from the head - commonly called ear bones. Otoliths contain growth rings which are counted much the same as counting rings on a tree stump. Each ring usually represents one year. Other species, such as flounders are aged using *scales* which also contain growth rings.



Haddock Otoliths



Notice the two white "ear bones" or otoliths located just behind the brain.



**Age and Growth:** The graph above and the table below illustrate growth rates of **Haddock**. During the first two years the growth rate nearly doubles. After year 5 the growth rate slows down considerably.

## Haddock Georges Bank & Gulf of Maine

Age	Length (in)	Length (cm)
1	6.9	17.5
2	13.3	33.8
3	17.9	45.5
4	21.3	54.0
5	23.7	60.1
6	25.4	64.5
7	26.6	67.6
8	27.5	69.9
9	28.1	71.5
10	28.6	72.7
11	29.0	73.6
12	29.2	74.2
13	29.4	74.6
14	29.5	75.0
15	29.6	75.2