MFB–at–mating

Biomass (1000's t)

case
A−I
A−J

MFB−at−mating

year

1990
1995
2000
2005
2010
2015

case
A−I
A−J
Bycatch mortality (1000's t)

Females, directed fishery
Females, directed fishery

Bycatch mortality (1000's t)

2005: Female case A−I
2005: Female case A−J
2010: Female case A−I
Males, snow crab fishery bycatch mortality

Discard mortality (1000's t)

Year

Case A−I
Case A−J

Male
Males, snow crab fishery bycatch mortality

Discard mortality (1000s t)
Females, snow crab fishery bycatch mortality

Discard mortality (1000's t)
Females, snow crab fishery bycatch mortality

Discard mortality (1000's t)

year

A−I
A−J
Males, BBRKC crab fishery bycatch mortality

Discard mortality (1000's t)

Year


Case

A−I A−J

Male
Females, BBRKC fishery bycatch mortality

Discard mortality (1000's t)

Case A−I

Case A−J

Year

1950

1975

2000
Females, BBRKC fishery bycatch mortality

Discard mortality (1000's t)

year


case
A−I
A−J

female
Groundfish fisheries bycatch mortality

Discard mortality (1000's t)

year


Case

A−I

A−J
Males, retained fishing mortality rate

Mean Retained Mortality Rate

case
A-I
A-J
Males, directed fishery total mortality rate


Case:
- A-I
- A-J

Fully-selected Fishing Mortality Rate
Males, directed fishery total mortality rate

Mean Fishing Mortality Rate

Year

Mean Fishing Mortality Rate

Case

A–I

A–J
Males, directed fishery total mortality rate

Mean Fishing Mortality Rate

Year

Case
- A-I
- A-J
Females, directed fishery bycatch mortality rate

Mean Fishing Mortality Rate

Year

Case A-I

Case A-J
Snow crab bycatch mortality rate on males

- Fully-selected Fishing Mortality Rate

Graph showing the bycatch mortality rate on males over the years 1950 to 2000.
Snow crab bycatch mortality rate on males

Fully-selected Fishing Mortality Rate

Case A-I vs. A-J
Snow crab bycatch mortality rate on males

Mean Fishing Mortality Rate

Year

Case

male

A−I

A−J
Snow crab bycatch mortality rate on males

Mean Fishing Mortality Rate

year

male

case

A–I

A–J
Snow crab bycatch mortality rate on females

Fully-selected Fishing Mortality Rate vs. year

Case A-I: Red line
Case A-J: Blue line
Snow crab bycatch mortality rate on females
Snow crab bycatch mortality rate on females

Mean Fishing Mortality Rate

Case: A–I

Year: 1950, 1975, 2000
Snow crab bycatch mortality rate on females
BBRKC bycatch mortality rate on males

Fully-selected Fishing Mortality Rate

Year

1950  1975  2000

Case

A–I  A–J
BBRKC bycatch mortality rate on males
BBRKC bycatch mortality rate on males

Mean Fishing Mortality Rate

case
A−I  A−J

year

male

Mean Fishing Mortality Rate
0.002 0.003 0.004 0.005 0.006
BBRKC bycatch mortality rate on females

Fully-selected Fishing Mortality Rate

case
- A-I
- A-J

year
- 1990
- 1995
- 2000
- 2005
- 2010
- 2015

female
BBRKC bycatch mortality rate on females

Mean Fishing Mortality Rate

Year:
- 1950
- 1975
- 2000

Cases:
- A-I
- A-J
BBRKC bycatch mortality rate on females
Groundfish bycatch fishing mortality

Fully-selected Fishing Mortality Rate

year

case
A−I
A−J

male
Groundfish bycatch fishing mortality

Mean Fishing Mortality Rate

Year:
- 1950
- 1975
- 2000

Case:
- A−I
- A−J

Male
Groundfish bycatch fishing mortality

Mean Fishing Mortality Rate

Year


Case

- A-I
- A-J
parameter value
case A–I A–J
TCF: male (total) selectivity

- Size (mm CW)
- Selectivity

Cases:
- A–I
- A–J

Years:
- 1992
- 1993
- 1994
- 1995
- 1996
- 2005
- 2006
- 2007
- 2008
- 2009
- 2013
- 2014
- y <= 1990
TCF: male (total) selectivity (dodged)
TCF: male retained selectivity (dodged)

- case A−I
- case A−J

Size (mm CW)

Selectivity

Year:
- 1992
- 1993
- 1994
- 1995
- 1996
- 2005
- 2006
- 2007
- 2008
- 2009
- 2013
- 2014
- y <= 1990
TCF: male retention functions

$y \leq 1990$

$y \geq 1991$

- selectivity

- size (mm CW)

- case
  - A–I
  - A–J
TCF: male retention functions (dodged)

y <= 1990

y >= 1991
TCF: female selectivity (dodged)

all years

size (mm CW)

selectivity

case

A–I

A–J
SCF: female selectivity

- $y \leq 1996$
- $1997 \leq y \leq 2004$
- $2005 \leq y$

Size (mm CW)

Selectivity

Case:
- A–I
- A–J

SCF: female selectivity

0.00 0.25 0.50 0.75 1.00
0.00 0.25 0.50 0.75 1.00
0.00 0.25 0.50 0.75 1.00
0.00 0.25 0.50 0.75 1.00
50 100 150
selectivity

SCF: female selectivity (dodged)

y ≤ 1996

1997 ≤ y ≤ 2004

2005 ≤ y

size (mm CW)

case

A–I

A–J
RKF: male selectivity

- **y <= 1996**
- **1997 <= y <= 2004**
- **2005 <= y**

**Selectivity**

**Case**
- A–I
- A–J

**Size (mm CW)**
RKF: female selectivity

- y <= 1996
- 1997 <= y <= 2004
- 2005 <= y

Case
- A–I
- A–J

Size (mm CW)
RKF: female selectivity (dodged)

- $y \leq 1996$
- $1997 \leq y \leq 2004$
- $2005 \leq y$

Selectivity vs. size (mm CW)

Case:
- A–I
- A–J
GTF: female selectivity

- $y \leq 1986$
- $1977 \leq y \leq 1996$
- $1997 \leq y$

Selectivity vs. size (mm CW)
GTF: female selectivity (dodged)

- $y \leq 1986$
- $1977 \leq y \leq 1996$
- $1997 \leq y$

**Case A-J**
NMFS trawl survey: male selectivity

1974 \leq y \leq 1981

1982 \leq y \leq 1987

1988 \leq y

size (mm CW)

selectivity

case
A−I
A−J
NMFS trawl survey: female selectivity

1974 <= y <= 1981

1982 <= y <= 1987

1988 <= y

Case

A−I
A−J

Selectivity vs size (mm CW)
NMFS trawl survey: female selectivity (dodged)

1974 <= y <= 1981

1982 <= y <= 1987

1988 <= y

size (mm CW)

selectivity

case

A−I

A−J