



**SCIENTIFIC COUNCIL MEETING – OCTOBER/NOVEMBER 2005**

The Spanish NE Arctic Shrimp Fishery in 2004

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**Abstract**

This paper shows data about catch, effort, catch per unit effort (CPUE) and size distributions of shrimp (*Pandalus borealis*) for Spanish commercial fishery in ICES Subarea IIb in 2004. The yields in 2004 were lesser than 2003.

**Introduction**

In 2004 year, the Spanish fleet targeting for shrimp was composed by five freezer trawlers HP (1 650-2 000) that worked from August to December in Svalbard area (ICES Division IIb). The gear used was a simple trawl with sorting grates and a mesh size of 40-45 mm in the codend. All the hauls were carried out in depths between 200 and 500 meters.

**Material and Methods**

The Catch and effort data for the whole fleet has been collected from the Spanish Fisheries Administration and adjusted according to the data gathered by the observers on board.

Scientific sampling was carried out on board of two units of the fleet in the third quarter of the year. The observer recorded the catches of the most important species, fishing effort (hours) and main biological data of shrimp (oblique carapace length, sex and maturity stage) from samples obtained in one of the two vessels.

**Results**

The Table 1 shows the catches and yields of shrimp by quarter and division as well as the distribution of effort (Number of active units and number of days and hours of activity). Also the catches of the others species (by-catch and discarded) were estimated from the vessel where the scientific observer was present.

The peak of activity and biggest yields (around 160 kg/h) were located mainly at the end of the summer and the beginning of the autumn. These yields were lesser than obtained in 2003 (Casas, 2004).

The Table 2 and Fig. 1 show the length distribution of shrimp catches as percentage by quarters.

**References**

Casas, J. M. 2004. The Spanish NE arctic shrimp Fishery in 2003. ICES WGPAND WD-2.

TABLE 1. Nominal shrimp catches (kg) and by-catch of the main species caught by quarter of the Spanish trawl fleet directed to shrimp fishery in Svalbard area (ICES Div. IIb) in 2004. Also the effort and yields of shrimp (kg/h) are shown.

| SPECIES                  | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | Total <sup>1</sup> |
|--------------------------|-----------------|-----------------|-----------------|-----------------|--------------------|
| <b>ICES DIVISION IIb</b> |                 |                 |                 |                 |                    |
| Shrimp                   |                 |                 | 201887          | 154094          | 355981             |
| Greenland halibut        |                 |                 | 1010            | 771             | 1782               |
| Polar cod                |                 |                 | 5117            | 3905            | 9022               |
| Long rough dab           |                 |                 | 653             | 499             | 1152               |
| Redfish                  |                 |                 | 4101            | 3130            | 7231               |
| Cod                      |                 |                 | 3837            | 2929            | 6766               |
| Skate                    |                 |                 | 1071            | 817             | 1888               |
| Wolfish                  |                 |                 | 328             | 250             | 578                |
| Other spp,               |                 |                 | 610             | 465             | 1075               |
| Number of vessels        |                 |                 | 3               | 3               | 5                  |
| Fishing days             |                 |                 | 74              | 71              | 145                |
| Fishing hours            |                 |                 | 1258            | 1207            | 2465               |
| CPUE Shrimp (kg/h)       |                 |                 | 160             | 128             | 144                |

<sup>1</sup> Total by-catch estimated from the by-catch observed by scientific observed on board in the last quarter.

Table 2. Length distribution of Arctic Shrimp from Spanish catches in ICES Div. IIb, 2004.

| Length (mm)                 | 3rd      |          | 4th      |          | Total IIb |          |
|-----------------------------|----------|----------|----------|----------|-----------|----------|
|                             | males    | females  | males    | females  | males     | females  |
| 8.5                         |          |          |          |          |           |          |
| 9.0                         |          |          |          |          |           |          |
| 9.5                         |          |          |          |          |           |          |
| 10.0                        |          |          |          |          |           |          |
| 10.5                        | 1343     |          | 1025     |          | 2368      |          |
| 11.0                        | 1343     |          | 1025     |          | 2368      |          |
| 11.5                        | 1120     |          | 854      |          | 1974      |          |
| 12.0                        |          |          |          |          |           |          |
| 12.5                        | 7691     |          | 5870     |          | 13561     |          |
| 13.0                        | 22245    |          | 16979    |          | 39223     |          |
| 13.5                        | 3247     |          | 2478     |          | 5725      |          |
| 14.0                        | 46563    |          | 35540    |          | 82103     |          |
| 14.5                        | 110543   |          | 84374    |          | 194917    |          |
| 15.0                        | 178098   |          | 135937   |          | 314034    |          |
| 15.5                        | 326872   |          | 249491   |          | 576363    |          |
| 16.0                        | 509266   |          | 388707   |          | 897973    |          |
| 16.5                        | 780313   |          | 595588   |          | 1375901   |          |
| 17.0                        | 999092   |          | 762576   |          | 1761668   |          |
| 17.5                        | 1363484  | 1120     | 1040704  | 854      | 2404188   | 1974     |
| 18.0                        | 1662584  |          | 1268998  |          | 2931583   |          |
| 18.5                        | 2009569  | 14447    | 1533841  | 11027    | 3543410   | 25474    |
| 19.0                        | 2010028  | 49778    | 1534191  | 37994    | 3544219   | 87773    |
| 19.5                        | 2368499  | 139597   | 1807801  | 106550   | 4176300   | 246147   |
| 20.0                        | 2438871  | 160050   | 1861513  | 122161   | 4300384   | 282210   |
| 20.5                        | 2335098  | 465787   | 1782307  | 355521   | 4117405   | 821308   |
| 21.0                        | 2009008  | 688840   | 1533413  | 525770   | 3542421   | 1214611  |
| 21.5                        | 1402320  | 1154042  | 1070347  | 880844   | 2472666   | 2034886  |
| 22.0                        | 874299   | 1511141  | 667325   | 1153407  | 1541624   | 2664548  |
| 22.5                        | 348099   | 1633839  | 265693   | 1247058  | 613793    | 2880897  |
| 23.0                        | 140304   | 1769703  | 107090   | 1350759  | 247393    | 3120462  |
| 23.5                        | 14821    | 1714964  | 11312    | 1308978  | 26133     | 3023942  |
| 24.0                        |          | 1513453  |          | 1155171  |           | 2668624  |
| 24.5                        |          | 1011822  |          | 772292   |           | 1784114  |
| 25.0                        |          | 744853   |          | 568523   |           | 1313375  |
| 25.5                        |          | 500424   |          | 381958   |           | 882382   |
| 26.0                        |          | 259082   |          | 197749   |           | 456831   |
| 26.5                        |          | 176060   |          | 134381   |           | 310442   |
| 27.0                        |          | 95436    |          | 72843    |           | 168279   |
| 27.5                        |          | 41539    |          | 31705    |           | 73244    |
| 28.0                        |          | 36466    |          | 27833    |           | 64299    |
| 28.5                        |          | 15581    |          | 11892    |           | 27473    |
| 29.0                        |          | 4536     |          | 3462     |           | 7999     |
| 29.5                        |          |          |          |          |           |          |
| 30.0                        |          | 1056     |          | 806      |           | 1863     |
| <i>Total number</i>         | 21964720 | 13703616 | 16764980 | 10459539 | 38729700  | 24163156 |
| <i>Total catch (kg)</i>     | 201887   |          | 154094   |          | 355981    |          |
| <i>Catches Sampled (kg)</i> |          |          | 35531    |          | 35531     |          |
| <i>N° Samplings</i>         |          |          | 36       |          | 36        |          |
| <i>N°. Spec. Sampled</i>    |          |          | 6823     |          | 6823      |          |

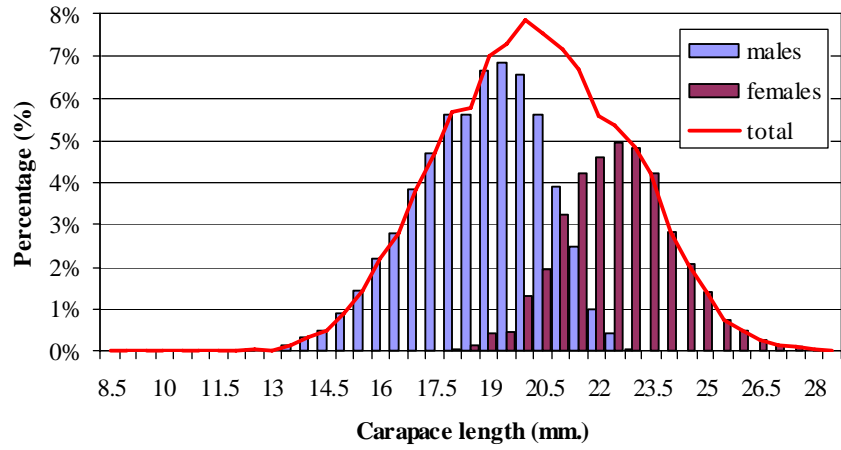


Fig. 1. Length distribution of shrimp in ICES Div. IIb from samples obtained in the third quarter of the year 2004.