## Fishermen's R eport Surfclam/O cean Quahog

Delmarva Peninsula - G eorges Bank J une 3 - July 12, 2002

FRV DELAWARE II
National M arine Fisheries Service Northeast Fisheries Science Center W oods Hole, MA 02543


Surfclam
(Spisula solidissima)

Ocean Quahog (Arctica islandica)


CLAM FISHERMEN'S REPORT<br>Preliminary Catch Summary<br>National Marine Fisheries Service<br>Northeast Fisheries Science Center<br>Surfclam - Ocean Quahog Survey<br>FRV DELAWARE II<br>Delmarva Peninsula - Georges Bank<br>June 03 - July 12, 2002

The 2002 region-wide survey for Atlantic surfclam, Spisula solidissima; and Ocean Quahog, Arctica islandica, was conducted in continental shelf waters, from Delmarva Peninsula to Georges Bank aboard the FRV DELAWARE II. The survey, conducted by the NMFS, Northeast Fisheries Science Center, provides indices of abundance and recruitment for both species. In addition, tows were made at 25 non-random sites during the survey to support ongoing scientific studies.

The following charts and station data describe the distribution of surfclams and ocean quahogs during the survey. Five-minute tows were made at the speed of 1.5 knots with a hydraulic jet dredge equipped with a 5 -foot wide blade and submersible pump positioned on the dredge. Survey stations were randomly selected to provide unbiased abundance measurements. Therefore, these stations were not always on or near known locations of clam concentrations.

In this report, catch quantity is recorded in numbers of clams, and depth in fathoms. Percent estimates of surfclams are also given by four categories of shell height: between 0 to $4.75^{\prime \prime}, 4.76$ to $5.00^{\prime \prime}, 5.01$ to 5.50 ", and greater than 5.50 ". Distribution plots indicate relative numbers of surfclams and ocean quahogs caught on each tow.

In an effort to make this report timely, the data are summarized from unaudited catch files. Therefore, all information in this report is considered provisional and subject to change.

For further information contact Russell Brown (508-495-2380) or Linda Despres (508-495-2346), National Marine Fisheries Service, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543. To view this report on the Ecosystems Surveys Branch website, go to: http://www.nefsc.nmfs.gov/esb/fishermens\ reports.htm.


Figure 1. Dredge hauls made from R/V DELAWARE II, during National Marine
Fisheries Service, Northeast Fisheries Science Center Surfclam/
Ocean Quahog Survey (02 - 05), June 03 - July 12, 2002.


Figure 2. Dredge hauls made from R/V DELAWARE II, during National Marine Fisheries Service, Northeast Fisheries Science Center Surfclam/
Ocean Quahog Survey (02 - 05), June 03 - July 12, 2002.
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Figure 3. Dredge hauls made from R/V DELAWARE II, during National Marine
Fisheries Service, Northeast Fisheries Science Center Surfclam/
Ocean Quahog Survey (02 - 05), June 03 - July 12, 2002.

2002 NMFS-NEFSC Surf Clam -- Ocean Quahog Survey
R/V DELAWARE II June 03 - July 12

| Station Data $\quad \begin{aligned} & \text { Surf Clams } \\ & \text { Percent of Survey Catch }\end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  | Ocean Quahogs <br> Catch Number |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Survey | Station | Position |  | Loran |  |  | Depth <br> (FM) | Catch Number | 0-4.74" | 4.76-5.00" | 5.01-5.50" | >5.50" |  |  |
| Stratum | Number | Latitude | Longitude | Time De | lays He | Heading |  |  |  |  |  |  |  |  |
| 01 | 0277 | 3753.4 | 7444.8 | X26937.2 | Y42046.8 | 8256 | 17.5 | 68 | 22.1 | 2.9 | 11.8 | 63.2 |  | 0 |
| 01 | 0375 | 3758.9 | 7428.7 | X26863.9 | Y42127.1 | . 48 | 27.3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 168 |
| 01 | 0376 | 3806.3 | 7412.8 | X26791.0 | Y42224.8 | 8323 | 30.1 | 3 | 100.0 | 0.0 | 0.0 | 0.0 |  | 25 |
| 01 | 0377 | 3811.2 | 7424.7 | X26861.2 | Y42264.2 | 266 | 19.7 | 158 | 79.7 | 8.2 | 3.2 | 8.9 |  | 11 |
| 01 | 0378 | 3816.3 | 7420.6 | X26846.9 | Y42323.2 | 248 | 23.5 | 127 | 90.6 | 2.4 | 5.5 | 1.6 |  | 77 |
| 01 | 0380 | 3813.8 | 7406.8 | X26768.5 | Y42310.3 | 3338 | 35.5 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 31 |
| 02 | 0386 | 3843.9 | 7332.6 | X26608.4 | Y42647.6 | 6 59 | 36.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 66 |
| 02 | 0387 | 3900.6 | 7332.5 | X26626.1 | Y42816.9 | 965 | 26.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 116 |
| 02 | 0399 | 4021.5 | 7256.6 | X26478.7 | Y43589.1 | 134 | 21.9 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 93 |
| 02 | 0453 | 4109.8 | 7123.9 | X25760.6 | Y43868.2 | 2186 | 18.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 5 |
| 03 | 0004 | 4046.0 | 7144.6 | X25912.5 | Y43716.1 | 165 | 31.2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 30 |
| 03 | 0395 | 4003.1 | 7302.9 | X26500.1 | Y43423.9 | 977 | 24.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 156 |
| 03 | 0396 | 4006.4 | 7254.7 | X26442.1 | Y43448.7 | 76 | 26.2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 123 |
| 03 | 0397 | 4011.3 | 7256.6 | X26463.3 | Y43495.5 | 50 | 25.7 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 174 |
| 03 | 0398 | 4013.8 | 7256.6 | X26466.9 | Y43518.5 | 59 | 24.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 142 |
| 03 | 0400 | 4024.0 | 7242.5 | X26369.5 | Y43597.6 | 6 33 | 24.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 66 |
| 03 | 0454 | 4106.2 | 7102.8 | X25566.4 | Y43813.5 | 5112 | 18.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 05 | 0322 | 3653.6 | 7536.7 | X27077.3 | Y41295.3 | 3156 | 12.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 05 | 0328 | 3636.3 | 7530.5 | X27025.2 | Y41117.2 | 264 | 10.4 | 5 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 05 | 0329 | 3631.0 | 7514.6 | X26953.1 | Y41098.0 | - 169 | 15.9 | 51 | 78.4 | 0.0 | 15.7 | 5.9 |  | 0 |
| 05 | 0330 | 3636.1 | 7502.4 | X26909.2 | Y41181.3 | 3132 | 13.7 | 1 | 0.0 | 0.0 | 0.0 | 100.0 |  | 0 |
| 05 | 0331 | 3633.6 | 7450.6 | X26857.0 | Y41183.8 | 8136 | 24.6 | 8 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 05 | 0340 | 3643.7 | 7504.7 | X26928.4 | Y41256.3 | 3241 | 14.8 | 107 | 72.9 | 2.8 | 19.6 | 4.7 |  | 0 |
| 05 | 0341 | 3638.9 | 7516.5 | X26971.4 | Y41177.9 | 93 | 17.5 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 05 | 0342 | 3646.3 | 7512.6 | X26965.2 | Y41266.4 | 496 | 16.4 | 14 | 0.0 | 14.3 | 42.9 | 42.9 |  | 0 |
| 06 | 0332 | 3631.2 | 7448.7 | X26846.4 | Y41163.9 | 9192 | 29.5 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 06 | 0333 | 3639.0 | 7446.9 | X 26847.4 | Y41248.3 | 3351 | 32.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 2 |
| 06 | 0502 | 4103.7 | 6705.1 | W13174.4 | Y43564.2 | 294 | 36.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 298 |
| 09 | 0014 | 4051.0 | 7223.2 | X26249.9 | Y43806.0 | - 259 | 7.7 | 25 | 32.0 | 0.0 | 0.0 | 68.0 |  | 1 |
| 09 | 0283 | 3746.2 | 7500.6 | X27003.1 | Y41945.7 | 733 | 15.3 | 37 | 5.4 | 0.0 | 27.0 | 67.6 |  | 0 |
| 09 | 0284 | 3746.4 | 7456.8 | X26985.0 | Y41953.3 | 395 | 15.9 | 11 | 0.0 | 0.0 | 36.4 | 63.6 |  | 0 |
| 09 | 0285 | 3741.2 | 7456.6 | X26975.4 | Y41896.1 | 1217 | 18.6 | 36 | 36.1 | 36.1 | 27.8 | 0.0 |  | 0 |
| 09 | 0286 | 3733.6 | 7458.6 | X26972.7 | Y41809.3 | 3178 | 15.9 | 50 | 4.0 | 4.0 | 44.0 | 48.0 |  | 0 |
| 09 | 0287 | 3740.7 | 7506.4 | X27021.4 | Y41876.0 | 0230 | 15.9 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0288 | 3738.7 | 7508.6 | X27028.4 | Y41850.4 | 4235 | 14.8 | 1 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0289 | 3738.6 | 7518.9 | X27076.5 | Y41833.8 | 8252 | 9.8 | 2 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0293 | 3728.7 | 7516.6 | X27048.2 | Y41725.9 | 90 | 14.2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0294 | 3731.3 | 7506.7 | X27006.9 | Y41770.9 | 966 | 17.0 | 1 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0295 | 3726.3 | 7502.8 | X26980.8 | Y41722.0 | - 170 | 17.5 | 17 | 29.4 | 29.4 | 23.5 | 17.6 |  | 0 |
| 09 | 0296 | 3723.7 | 7506.7 | X26994.6 | Y41686. 7 | 7273 | 17.5 | 5 | 80.0 | 0.0 | 20.0 | 0.0 |  | 0 |
| * 09 | 0297 | 3718.8 | 7513.0 | X27015.4 | Y41621.5 | 5255 | 14.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0300 | 3723.9 | 7518.6 | X27049.1 | Y41668.7 | 7215 | 15.3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0303 | 3708.8 | 7530.7 | X27077.0 | Y41477.7 | 72 | 9.8 | 1 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0307 | 3701.4 | 7523.1 | X 27032.1 | Y41409.6 | . 294 | 15.3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0308 | 3701.4 | 7526.6 | X27047.2 | Y41402.7 | 75 | 12.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0309 | 3706.4 | 7524.8 | X27047.4 | Y41461.9 | 98 | 14.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0310 | 3711.4 | 7526.8 | X27064.4 | Y41514.1 | 1348 | 13.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0312 | 3716.4 | 7522.6 | X27054.3 | Y41577.8 | 8 29 | 12.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 09 | 0314 | 3713.7 | 7508.8 | X26988.5 | Y41572.7 | 7313 | 16.4 | 4 | 25.0 | 25.0 | 25.0 | 25.0 |  | 0 |


|  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

2002 NMFS-NEFSC Surf Clam -- Ocean Quahog Survey
R/V DELAWARE II June 03- July 12

| Station Data $\begin{aligned} & \text { Surf Clams } \\ & \text { Percent of Survey Catch }\end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  | Ocean Quahogs <br> Catch Number |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Survey | Station | Position |  | Loran |  |  | Depth <br> (FM) | Catch Number | 0-4.74" | 4.76-5.00" | 5.01-5.50" | >5.50" |  |  |
| Stratum | Number | Latitude | Longitude | Time De | lays He | Heading |  |  |  |  |  |  |  |  |
| 17 | 0199 | 3836.3 | 7418.8 | X26868.8 | Y42539.9 | 957 | 22.4 | 4 | 50.0 | 0.0 | 25.0 | 25.0 |  | 23 |
| 17 | 0200 | 3841.2 | 7424.3 | X26908.9 | Y42589.2 | 271 | 17.5 | 18 | 44.4 | 5.6 | 0.0 | 50.0 |  | 1 |
| 17 | 0201 | 3848.8 | 7426.7 | X26937.0 | Y42670.4 | 44 | 10.9 | 15 | 20.0 | 13.3 | 13.3 | 53.3 |  | 0 |
| 17 | 0202 | 3851.4 | 7424.4 | X26928.6 | Y42699.9 | 964 | 16.4 | 96 | 3.1 | 0.0 | 3.1 | 93.8 |  | 0 |
| 17 | 0207 | 3846.4 | 7414.6 | X26861.7 | Y42651.2 | 237 | 20.8 | 16 | 56.2 | 0.0 | 0.0 | 43.8 |  | 16 |
| 17 | 0246 | 3843.7 | 7404.6 | X26798.4 | Y42628.1 | 181 | 25.2 | 2 | 50.0 | 0.0 | 0.0 | 50.0 |  | 66 |
| 17 | 0247 | 3843.5 | 7354.7 | X26739.6 | Y42631.6 | 6210 | 22.4 | 13 | 92.3 | 7.7 | 0.0 | 0.0 |  | 33 |
| 17 | 0251 | 3833.9 | 7414.9 | X26842.6 | Y42517.0 | . 332 | 25.2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 103 |
| 17 | 0252 | 3828.4 | 7416.7 | X26844.1 | Y42456.6 | . 222 | 22.4 | 19 | 89.5 | 0.0 | 5.3 | 5.3 |  | 21 |
| 18 | 0248 | 3833.6 | 7353.1 | X26717.2 | Y42529.4 | 4265 | 30.1 | 1 | 100.0 | 0.0 | 0.0 | 0.0 |  | 93 |
| 18 | 0249 | 3828.3 | 7402.4 | X26763.4 | Y42467.0 | O 206 | 28.4 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 60 |
| 18 | 0250 | 3826.2 | 7406.8 | X26785.3 | Y42441.3 | 34 | 30.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 1 |
| 19 | 0382 | 3821.6 | 7354.0 | X26707.6 | Y42403.9 | 960 | 36.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 28 |
| 19 | 0383 | 3826.4 | 7348.6 | X26682.8 | Y42458.1 | 165 | 34.4 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 237 |
| 19 | 0384 | 3833.9 | 7342.5 | X26656.1 | Y42539.8 | 82 | 33.9 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 21 |
| 21 | 0061 | 3946.1 | 7335.0 | X26709.3 | Y43276.6 | 6284 | 19.1 | 38 | 36.8 | 5.3 | 7.9 | 50.0 |  | 69 |
| 21 | 0062 | 3941.4 | 7346.9 | X26784.5 | Y43233.2 | 26 | 10.4 | 232 | 5.6 | 2.2 | 4.3 | 87.9 |  | 1 |
| 21 | 0070 | 3933.7 | 7346.7 | X26768.6 | Y43154.2 | 24 | 13.7 | 24 | 37.5 | 12.5 | 4.2 | 45.8 |  | 0 |
| 21 | 0071 | 3923.5 | 7340.4 | X26708.7 | Y43049.0 | - 145 | 19.1 | 69 | 23.2 | 7.2 | 17.4 | 52.2 |  | 0 |
| 21 | 0072 | 3921.4 | 7345.5 | X26739.2 | Y43027.7 | 7.7275 | 19.7 | 62 | 8.1 | 1.6 | 12.9 | 77.4 |  | 5 |
| * 21 | 0073 | 3923.4 | 7342.8 | X26724.5 | Y43048.1 | 1330 | 18.6 | 147 | 10.2 | 4.8 | 15.6 | 69.4 |  | 0 |
| 21 | 0074 | 3915.6 | 7358.6 | X26814.7 | Y42966.7 | 7200 | 15.3 | 47 | 8.5 | 2.1 | 4.3 | 85.1 |  | 0 |
| 21 | 0086 | 3916.0 | 7351.7 | X26770.8 | Y42971.6 | 6224 | 19.7 | 107 | 11.2 | 2.8 | 15.0 | 71.0 |  | 8 |
| 21 | 0087 | 3916.2 | 7346.7 | X26738.6 | Y42974.0 | - 238 | 20.2 | 242 | 6.2 | 5.0 | 21.1 | 67.8 |  | 29 |
| * 21 | 0092 | 3916.3 | 7346.8 | X26739.4 | Y42975.1 | 161 | 19.7 | 148 | 6.8 | 0.7 | 34.5 | 58.1 |  | 5 |
| 21 | 0168 | 3909.0 | 7344.6 | X26714.0 | Y42900.0 | 0 270 | 18.6 | 35 | 62.9 | 5.7 | 8.6 | 22.9 |  | 12 |
| 21 | 0169 | 3908.7 | 7354.3 | X26775.3 | Y42895.1 | . 270 | 25.2 | 23 | 95.7 | 0.0 | 0.0 | 4.3 |  | 484 |
| 21 | 0170 | 3906.3 | 7402.4 | X26822.3 | Y42868.1 | 1274 | 19.1 | 29 | 34.5 | 3.4 | 13.8 | 48.3 |  | 19 |
| 21 | 0171 | 3911.0 | 7406.5 | X26856.7 | Y42917.0 | O 320 | 12.0 | 8 | 25.0 | 12.5 | 0.0 | 62.5 |  | 0 |
| 21 | 0208 | 3856.3 | 7416.8 | X26892.6 | Y42756.5 | . 41 | 18.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 84 |
| 21 | 0209 | 3901.0 | 7423.1 | X26939.8 | Y42804.8 | - 52 | 13.1 | 56 | 10.7 | 1.8 | 1.8 | 85.7 |  | 0 |
| 21 | 0210 | 3856.0 | 7404.7 | X26818.8 | Y42758.4 | 465 | 18.0 | 12 | 83.3 | 0.0 | 16.7 | 0.0 |  | 3 |
| 21 | 0211 | 3856.1 | 7400.5 | X26793.4 | Y42761.1 | 129 | 19.7 | 28 | 32.1 | 7.1 | 3.6 | 57.1 |  | 52 |
| 21 | 0212 | 3848.5 | 7354.7 | X26746.7 | Y42683.9 | 9171 | 23.5 | 1 | 100.0 | 0.0 | 0.0 | 0.0 |  | 114 |
| 21 | 0213 | 3848.9 | 7348.8 | X26711.7 | Y42690.9 | 9 7 | 24.6 | 5 | 60.0 | 0.0 | 20.0 | 20.0 |  | 275 |
| 21 | 0219 | 3853.5 | 7342.7 | X26680.6 | Y42741.0 | O 27 | 21.9 | 10 | 60.0 | 20.0 | 0.0 | 20.0 |  | 12 |
| 21 | 0220 | 3858.8 | 7350.7 | X26737.3 | Y42792.9 | 93 | 20.8 | 9 | 33.3 | 0.0 | 11.1 | 55.6 |  | 70 |
| 21 | 0221 | 3911.2 | 7334.2 | X26650.1 | Y42924.1 | 197 | 24.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 13 |
| 21 | 0222 | 3916.2 | 7324.4 | X26592.4 | Y42975.1 | 104 | 24.1 | 24 | 91.7 | 4.2 | 0.0 | 4.2 |  | 44 |
| 21 | 0223 | 3916.0 | 7335.2 | X26663.2 | Y42972.7 | 7279 | 27.3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 7 |
| 21 | 0224 | 3919.0 | 7334.5 | X26662.8 | Y43003.1 | 188 | 24.1 | 9 | 55.6 | 0.0 | 22.2 | 22.2 |  | 3 |
| 21 | 0225 | 3921.1 | 7322.6 | X26586.4 | Y43023.9 | 9 137 | 25.7 | 17 | 88.2 | 11.8 | 0.0 | 0.0 |  | 46 |
| 21 | 0226 | 3928.8 | 7334.7 | X26678.6 | Y43102.3 | 3304 | 17.5 | 88 | 8.0 | 1.1 | 9.1 | 81.8 |  | 1 |
| 21 | 0227 | 3933.7 | 7333.0 | X26674.5 | Y43151.4 | 4256 | 19.7 | 21 | 9.5 | 4.8 | 4.8 | 81.0 |  | 1 |
| 21 | 0228 | 3933.1 | 7323.8 | X26610.1 | Y43143.4 | 4255 | 18.0 | 98 | 24.5 | 4.1 | 11.2 | 60.2 |  | 1 |
| 21 | 0230 | 3941.3 | 7330.8 | X26671.4 | Y43227.0 | - 284 | 23.0 | 9 | 66.7 | 11.1 | 22.2 | 0.0 |  | 0 |
| 22 | 0218 | 3851.3 | 7342.8 | X26678.5 | Y42718.4 | 40 | 24.6 | 2 | 100.0 | 0.0 | 0.0 | 0.0 |  | 39 |
| 22 | 0389 | 3911.4 | 7322.4 | X26573.8 | Y42927.3 | 363 | 26.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 59 |
| 23 | 0385 | 3838.6 | 7334.8 | X26616.0 | Y42592.6 | 6 65 | 32.8 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 22 |




2002 NMFS-NEFSC Surf Clam -- Ocean Quahog Survey
R/V DELAWARE II June 03- July 12


2002 NMFS-NEFSC Surf Clam -- Ocean Quahog Survey
R/V DELAWARE II June 03- July 12

| Station Data $\quad \begin{aligned} & \text { Surf Clams } \\ & \text { Percent of Survey Catch }\end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  | Ocean Quahogs <br> Catch Number |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Survey | Station | Position |  | Loran |  |  | Depth <br> (FM) | Catch Number | 0-4.74" | 4.76-5.00" | 5.01-5.50" | >5.50" |  |  |
| Stratum | Number | Latitude | Longitude | Time De | lays He | Heading |  |  |  |  |  |  |  |  |
| 85 | 0270 | 3808.0 | 7457.7 | X27028.1 | Y42192.7 | 7158 | 12.0 | 9 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 86 | 0195 | 3848.9 | 7458.9 | X27121.7 | Y42652.4 | 4337 | 6.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 86 | 0196 | 3846.3 | 7454.8 | X27092.6 | Y42625.7 | 73 | 7.7 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 86 | 0257 | 3831.2 | 7450.7 | X27037.1 | Y42459.2 | 2322 | 10.9 | 4 | 25.0 | 25.0 | 50.0 | 0.0 |  | 0 |
| 87 | 0177 | 3908.6 | 7418.1 | X26924.6 | Y42888.7 | 7102 | 12.0 | 8 | 12.5 | 0.0 | 0.0 | 87.5 |  | 0 |
| 87 | 0178 | 3908.6 | 7416.7 | X26915.9 | Y42889.0 | 0259 | 11.5 | 75 | 4.0 | 10.7 | 13.3 | 72.0 |  | 0 |
| 87 | 0179 | 3906.1 | 7429.2 | X26987.6 | Y42858.3 | 3236 | 10.4 | 42 | 14.3 | 0.0 | 2.4 | 83.3 |  | 0 |
| 87 | 0180 | 3903.6 | 7436.8 | X27027.9 | Y42828.1 | 1261 | 9.8 | 194 | 1.0 | 7.7 | 60.8 | 30.4 |  | 0 |
| 87 | 0181 | 3903.8 | 7438.7 | X27039.7 | Y42829.6 | 6127 | 7.1 | 2 | 50.0 | 0.0 | 0.0 | 50.0 |  | 0 |
| 87 | 0182 | 3901.3 | 7430.9 | X26987.5 | Y42805.1 | 119 | 9.3 | 23 | 47.8 | 13.0 | 13.0 | 26.1 |  | 0 |
| 87 | 0183 | 3858.8 | 7434.4 | X27002.9 | Y42776.1 | 1240 | 7.7 | 20 | 45.0 | 20.0 | 25.0 | 10.0 |  | 0 |
| 87 | 0184 | 3858.7 | 7436.9 | X27017.5 | Y42773.9 | 9355 | 5.5 | 20 | 40.0 | 20.0 | 30.0 | 10.0 |  | 0 |
| 87 | 0185 | 3859.3 | 7439.3 | X27033.1 | Y42779.5 | 5304 | 6.6 | 2 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 87 | 0186 | 3853.8 | 7436.7 | X27005.7 | Y42719.9 | 9183 | 8.7 | 9 | 55.6 | 0.0 | 22.2 | 22.2 |  | 0 |
| 87 | 0189 | 3851.4 | 7442.8 | X27035.9 | Y42690.0 | 0229 | 8.7 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 87 | 0190 | 3858.5 | 7446.5 | X27073.5 | Y42767.3 | 3283 | 7.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 87 | 0191 | 3853.8 | 7448.5 | X27074.2 | Y42713.7 | 7328 | 4.9 | 4 | 25.0 | 0.0 | 25.0 | 50.0 |  | 0 |
| 87 | 0192 | 3851.8 | 7446.6 | X27058.7 | Y42692.4 | 4 | 7.7 | 28 | 3.6 | 0.0 | 0.0 | 96.4 |  | 0 |
| 87 | 0193 | 3848.7 | 7448.6 | X27063.1 | Y42656.5 | 518 | 8.7 | 6 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 87 | 0194 | 3848.9 | 7452.8 | X27087.4 | Y42656.2 | 2346 | 7.1 | 25 | 100.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 88 | 0066 | 3936.2 | 7408.7 | X26923.1 | Y43184.3 | 3228 | 8.2 | 2 | 0.0 | 0.0 | 0.0 | 100.0 |  | 0 |
| 88 | 0067 | 3936.2 | 7402.7 | X26882.6 | Y43183.2 | 2194 | 10.9 | 71 | 18.3 | 1.4 | 14.1 | 66.2 |  | 0 |
| 88 | 0068 | 3933.6 | 7401.0 | X26865.6 | Y43155.6 | 6225 | 12.6 | 18 | 16.7 | 22.2 | 16.7 | 44.4 |  | 0 |
| 88 | 0069 | 3933.6 | 7355.0 | X26825.0 | Y43154.7 | 7240 | 13.7 | 96 | 10.4 | 0.0 | 5.2 | 84.4 |  | 0 |
| 88 | 0075 | 3923.7 | 7400.7 | X26843.6 | Y43051.7 | 7254 | 12.0 | 18 | 0.0 | 16.7 | 27.8 | 55.6 |  | 0 |
| 88 | 0076 | 3928.5 | 7359.4 | X26844.4 | Y43102.0 | 0251 | 12.0 | 133 | 4.5 | 3.0 | 5.3 | 87.2 |  | 0 |
| 88 | 0077 | 3930.9 | 7407.1 | X26900.7 | Y43128.0 | 0242 | 9.3 | 21 | 33.3 | 4.8 | 4.8 | 57.1 |  | 0 |
| 88 | 0078 | 3931.3 | 7409.2 | X26915.6 | Y43132.4 | 4258 | 8.2 | 25 | 12.0 | 12.0 | 12.0 | 64.0 |  | 0 |
| 88 | 0079 | 3926.2 | 7404.8 | X26875.6 | Y43078.1 | 153 | 10.9 | 46 | 8.7 | 0.0 | 2.2 | 89.1 |  | 0 |
| 88 | 0080 | 3918.5 | 7404.9 | X26860.8 | Y42996.7 | . 7253 | 13.7 | 48 | 10.4 | 4.2 | 6.2 | 79.2 |  | 0 |
| 88 | 0081 | 3916.0 | 7407.0 | X26869.5 | Y42970.0 | - 247 | 14.8 | 153 | 5.2 | 3.9 | 4.6 | 86.3 |  | 0 |
| 88 | 0082 | 3918.7 | 7413.0 | X26913.3 | Y42998.1 | 1249 | 11.5 | 24 | 0.0 | 4.2 | 16.7 | 79.2 |  | 0 |
| 88 | 0083 | 3920.9 | 7417.0 | X26943.7 | Y43021.3 | 360 | 8.2 | 192 | 3.1 | 1.6 | 16.7 | 78.6 |  | 0 |
| 88 | 0084 | 3920.9 | 7418.7 | X26954.6 | Y43021.2 | 251 | 8.2 | 6 | 0.0 | 0.0 | 16.7 | 83.3 |  | 0 |
| 88 | 0085 | 3916.1 | 7417.3 | X26935.3 | Y42969.7 | 7264 | 9.8 | 72 | 4.2 | 6.9 | 4.2 | 84.7 |  | 0 |
| 88 | 0172 | 3911.1 | 7412.4 | X26894.1 | Y42916.9 | 9280 | 11.5 | 29 | 27.6 | 0.0 | 34.5 | 37.9 |  | 0 |
| 88 | 0173 | 3913.9 | 7417.9 | X26934.4 | Y42945.9 | 974 | 8.7 | 14 | 42.9 | 14.3 | 21.4 | 21.4 |  | 0 |
| 88 | 0174 | 3913.7 | 7428.7 | X27001.5 | Y42941.5 | 5272 | 8.2 | 50 | 2.0 | 2.0 | 12.0 | 84.0 |  | 0 |
| 88 | 0175 | 3911.2 | 7428.6 | X26995.2 | Y42914.2 | 2185 | 8.7 | 13 | 7.7 | 7.7 | 0.0 | 84.6 |  | 0 |
| 88 | 0176 | 3911.1 | 7426.6 | X26982.6 | Y42913.6 | 6113 | 9.3 | 31 | 12.9 | 6.5 | 9.7 | 71.0 |  | 0 |
| 89 | 0037 | 4008.6 | 7358.6 | X26929.8 | Y43517.6 | 6 56 | 9.3 | 43 | 18.6 | 4.7 | 9.3 | 67.4 |  | 0 |
| 89 | 0039 | 4007.3 | 7357.6 | X26919.1 | Y43503.6 | 612 | 11.5 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 89 | 0040 | 4007.0 | 7354.6 | X26896.1 | Y43498.5 | . 38 | 11.5 | 105 | 42.9 | 1.9 | 1.9 | 53.3 |  | 0 |
| 89 | 0041 | 4003.6 | 7358.0 | X26912.8 | Y43466.0 | . 00 | 11.5 | 72 | 20.8 | 0.0 | 1.4 | 77.8 |  | 0 |
| 89 | 0046 | 4001.3 | 7350.7 | X26853.9 | Y43438.0 | - 15 | 12.6 | 32 | 9.4 | 0.0 | 12.5 | 78.1 |  | 0 |
| 89 | 0050 | 3959.3 | 7350.9 | X26850.7 | Y43417.8 | 83 | 14.2 | 70 | 20.0 | 0.0 | 2.9 | 77.1 |  | 0 |
| 89 | 0051 | 3956.2 | 7354.8 | X26871.9 | Y43388.2 | 215 | 12.6 | 47 | 38.3 | 2.1 | 6.4 | 53.2 |  | 0 |
| 89 | 0052 | 3959.0 | 7400.7 | X26921.0 | Y43420.2 | 2359 | 10.9 | 93 | 48.4 | 5.4 | 4.3 | 41.9 |  | 0 |
| 89 | 0053 | 3953.8 | 7358.4 | X26892.1 | Y43365.2 | 252 | 10.4 | 43 | 14.0 | 9.3 | 4.7 | 72.1 |  | 0 |

2002 NMFS-NEFSC Surf Clam -- Ocean Quahog Survey
R/V DELAWARE II June 03- July 12

| Station Data $\quad \begin{aligned} & \text { Surf Clams } \\ & \text { Percent of Survey Catch }\end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  | Ocean Quahogs <br> Catch Number |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Survey | Station | Position |  | Loran |  | Heading | Depth (FM) | Catch Number | 0-4.74" | 4.76-5.00" | 5.01-5.50" | >5.50" |  |  |
| Stratum | Number | Latitude | Longitude | Time De | lays He |  |  |  |  |  |  |  |  |  |
| 89 | 0054 | 3948.9 | 7400.8 | X26897.7 | Y43315.4 | 4352 | 9.8 | 24 | 12.5 | 8.3 | 12.5 | 66.7 |  | 0 |
| 89 | 0055 | 3946.3 | 7358.7 | x26877.1 | Y43287.6 | 6105 | 10.4 | 81 | 8.6 | 6.2 | 9.9 | 75.3 |  | 0 |
| 89 | 0056 | 3946.4 | 7355.1 | X26852.1 | Y43287.4 | 424 | 12.6 | 11 | 54.5 | 0.0 | 9.1 | 36.4 |  | 0 |
| 89 | 0057 | 3948.4 | 7354.8 | X26854.4 | Y43307.9 | 918 | 11.5 | 98 | 30.6 | 9.2 | 17.3 | 42.9 |  | 0 |
| 89 | 0058 | 3953.7 | 7350.7 | X26836.8 | Y43360.5 | 549 | 13.1 | 28 | 53.6 | 3.6 | 7.1 | 35.7 |  | 0 |
| 89 | 0059 | 3951.0 | 7350.5 | X26829.5 | Y43332.8 | 8133 | 14.2 | 91 | 25.3 | 1.1 | 3.3 | 70.3 |  | 0 |
| 89 | 0060 | 3948.6 | 7346.9 | X26798.8 | Y43306.7 | 7147 | 15.3 | 62 | 16.1 | 0.0 | 3.2 | 80.6 |  | 0 |
| 89 | 0063 | 3939.0 | 7354.4 | X26831.7 | Y43210.6 | 6355 | 14.2 | 87 | 12.6 | 1.1 | 8.0 | 78.2 |  | 0 |
| 89 | 0064 | 3940.8 | 7404.6 | X26905.7 | Y43231.9 | 9215 | 7.7 | 53 | 5.7 | 0.0 | 1.9 | 92.5 |  | 0 |
| 89 | 0065 | 3938.7 | 7406.7 | X26915.2 | Y43210.3 | 3211 | 8.2 | 32 | 9.4 | 0.0 | 15.6 | 75.0 |  | 0 |
| 90 | 0035 | 4020.9 | 7350.5 | X26900.5 | Y43635.4 | 420 | 13.1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 5 |
| 90 | 0036 | 4016.9 | 7355.9 | X26931.1 | Y43600.0 | 039 | 9.3 | 20 | 10.0 | 10.0 | 20.0 | 60.0 |  | 0 |
| 91 | 0020 | 4031.3 | 7312.5 | X26624.8 | Y43695.9 | 9234 | 12.0 | 8 | 50.0 | 0.0 | 25.0 | 25.0 |  | 1 |
| 91 | 0033 | 4026.5 | 7328.7 | X26744.1 | Y43668.5 | 536 | 12.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0 |
| 91 | 0034 | 4030.5 | 7348.9 | X26913.7 | Y43728.9 | $9 \quad 9$ | 8.7 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 1 |
| 92 | 0015 | 4047.8 | 7229.4 | X26297.5 | Y43787.7 | 7240 | 13.1 | 2 | 0.0 | 50.0 | 0.0 | 50.0 |  | 4 |
| 92 | 0019 | 4036.2 | 7257.1 | X26508.8 | Y43722.5 | 5288 | 13.1 | 53 | 18.9 | 3.8 | 15.1 | 62.3 |  | 1 |
| 93 | 0012 | 4055.6 | 7207.0 | X26117.6 | Y43821.0 | 0247 | 11.5 | 9 | 44.4 | 0.0 | 0.0 | 55.6 |  | 159 |
| 94 | 0449 | 4123.6 | 7054.8 | X25531.2 | Y43922.8 | 8238 | 12.6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 54 |
| 94 | 0451 | 4124.7 | 7105.1 | X25627.1 | Y43945.5 | 5350 | 10.9 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 404 |
| 95 | 0455 | 4116.0 | 7034.7 | X25328.9 | Y43843.8 | 8181 | 13.1 | 14 | 14.3 | 0.0 | 0.0 | 85.7 |  | 60 |
| 95 | 0459 | 4116.2 | 7018.7 | X25184.3 | Y43824.4 | 433 | 7.1 | 33 | 0.0 | 0.0 | 3.0 | 97.0 |  | 0 |
| 95 | 0460 | 4101.2 | 7010.4 | X25125.1 | Y43715.3 | 387 | 13.1 | 19 | 0.0 | 0.0 | 0.0 | 100.0 |  | 22 |
| 95 | 0463 | 4051.1 | 7006.9 | X25138.1 | Y43643.8 | 8193 | 14.2 | 19 | 0.0 | 0.0 | 0.0 | 100.0 |  | 63 |

NEFSC CLAM SURVEY - 2002 SURFCLAMS - Number/Tow Total Number


NEFSC CLAM SURVEY - 2002 SURFCLAMS - Number/Tow Greater Than 5 inches


NEFSC CLAM SURVEY - 2002 OCEAN QUAHOG - Number/Tow Total Number


