

# Northeast Regional Cod-Tagging Program: Bi-monthly Update – May 2003.

## 1. Overview

The Northeast Regional Cod-tagging Program represents an international partnership between the fishing industry and scientific organizations throughout New England and maritime Canada. The key personnel at each tagging organization are presented in Annex 1, Table 1.

This program was implemented after holding multiple town meetings throughout New England. The aim of these meetings was to involve both scientists and fishing communities in the process of outlining the needs of and designing a regional tagging program. The program aims to assess the movement and growth of Atlantic cod, *Gadus morhua*, in the Gulf of Maine and neighboring Canadian waters.

The implementation process of this program has been complex and multi-faceted, involving aspects of scientific design; data management and database design; equipment research; publicity, outreach and education; recruitment of scientists and vessels; and training of both the researchers and fishermen involved. The information presented in this first program update will demonstrate that considerable progress has been made since the Northeast Regional Cod-tagging Program began in January 2003.

## 2. Program Update Overall – Gulf of Maine Aquarium (GMA)

| Date            | Progress  |
|-----------------|---|
| <b>Jan – 03</b> | <ul style="list-style-type: none"> <li>• Shelly Tallack filled the position of Program Manager at the Gulf of Maine Aquarium on January 20, 2003.</li> <li>• Tagging equipment (tags, guns, needles) was researched, ordered, obtained.</li> <li>• RFP sent out to recruit vessels for DMR’s Area 1 and Area 2.</li> </ul> <p><b>Database:</b></p> <ul style="list-style-type: none"> <li>• Meeting held with the Cod-tagging Data Management Committee (Committee members presented in Annex 1, Table 2) – primary discussion was the design of both the datasheets and the database.</li> </ul>   |
| <b>Feb – 03</b> | <p><b>Database:</b></p> <ul style="list-style-type: none"> <li>• Design and review of data-sheets ongoing.</li> <li>• Contract negotiation and finalization with Northern Geomatics, Inc (NGI).</li> </ul> <p><b>Outreach:</b></p> <ul style="list-style-type: none"> <li>• Meeting held with the Cod-tagging Outreach Committee (Committee members presented in Annex 1, Table 3) – decision on the types of outreach required, and who is responsible for which types of outreach.</li> <li>• Poster presentation: the Maine Fishermen’s Forum February 2003.</li> <li>• Draft Pamphlet produced and distributed at the Fishermen’s Forum – its update is used as a general information leaflet.</li> <li>• Press releases: article in “Collaborations”, produced by NAMA (GMA).</li> </ul> |

**Mar - 03****Training:**

- A tagging training day was held on March 7<sup>th</sup> with all scientific research organizations present; a standard tagging protocol was agreed upon. An information booklet will be designed for distribution among all vessels and personnel involved in tagging for the Northeast Regional Cod-tagging Program.
- Tagging equipment distributed.

**Database:**

- Datasheets: these were finalized during the tagging training day meeting; produced and distributed in mid-March 2003.

**Outreach:**

- Poster presentation: the Benthic Ecology Meeting (March 2003).
- Press releases: The Working Waterfront (Island Institute); The Fisheries and Oceanography DISPATCH (SMAST).
- Local town meetings: Meetings to promote involvement in collaborative research were scheduled by Togue Brawn (GMA); Shelly attended three of these (Stonington, Southwest Harbor & Port Clyde) to present Cod-tagging as an example of a large-scale regional collaborative research initiative. It was also hoped to heighten the awareness of this program and scout for vessels to be contracted for DMR tagging efforts in Downeast Maine.

**Tagging:**

- DMR: Vessels were selected and contracted for Area 1 – tagging due to start in late April 2003.
- DMR: A revised RFP was sent out to recruit vessels for Area 2 due to the low interest expressed by vessel owners to operate in the Jordan Basin and inshore Downeast Maine waters.
- CCCHFA: Tagging began in mid-late March 2003.

**Recruitment:**

- DMR: Interviewed a total of 12 people for two Area Coordinator positions with DMR to coordinate Areas 1 and 2 respectively.

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**April - 03****Database:**

- NGI began producing the database and the online GIS mapping and data-entry interface.

**Outreach:**

- Design of posters for region-wide distribution to publicize the tagging program and inform stakeholders what to do in the event of capturing a tagged cod (hereforth referred to as “NE Regional Cod-tagging Poster”); this poster will also be printed in Portuguese.
- Design and pricing of the tagging incentive rewards: T-shirts, caps and mugs will be produced during May 2003.
- Press releases: Fishermen’s Voice (Island Institute); Cape Cod Times (CCCHFA).

**Recruitment:**

- Recruitment of field technicians (taggers) to create a pool of approximately 10 individuals to undertake the tagging on vessels contracted to perform dedicated tagging trips with DMR.

**Training:**

- A tagging training day was held (8<sup>th</sup> April 2003) to train field technicians for DMR in the procedures of tagging and conduct at sea (safety, attitude, behavior etc.).

|                 |  |
|-----------------|--|
|                 | <p><b>Tagging:</b></p> <ul style="list-style-type: none"> <li>RFP sent out for Area 2 – it is hoped to start tagging during May 2003.</li> <li>First tagging trips undertaken by DMR, DFO &amp; SMAST (see individual reports for more details).</li> </ul>  |
| <b>May - 03</b> | <ul style="list-style-type: none"> <li>DMR: Vessels selected and contracted for Area 2 – tagging in Downeast Maine due to start in late May/early June 2003.</li> <li>Attended the ICES Cod &amp; Climate Change Workshop in New Bedford, MA. This 3 day meeting offered a highly useful summary of cod biological findings throughout the eastern US and Canadian coastal waters, in addition to findings from Europe.</li> </ul> <p><b>Database:</b></p> <ul style="list-style-type: none"> <li>NGI are in the final phase of producing the database and the online mapping and data-entry interface; a working protocol is anticipated for the end of May 2003.</li> </ul> <p><b>Outreach:</b></p> <ul style="list-style-type: none"> <li>Poster presentation: the NEERS/SNECAFS Joint Meeting, New Bedford, MA.</li> <li>Press Releases in progress: Collaborations (GMA); The Working Waterfront (GMA with Island Institute).</li> <li>NE Regional Cod-tagging Poster: these are being translated into Portuguese by David Martins (SMAST).</li> <li>Pricing for the NE Regional Cod-tagging Poster has been carried out; the final products will include both 11x17 poster (some laminated) and 8x10.5 posters (some laminated); distribution of posters to each tagging organization is planned for late May 2003.</li> <li>Tagging incentive rewards: T-shirts, caps and mugs are in production – the order should be completed by late May 2003.</li> </ul> <p><b>Tagging:</b></p> <ul style="list-style-type: none"> <li>CCCHFA: Shelly visited the CCCHFA – tagging progress to date is impressive; Tom Rudolph has worked hard to recruit, organize and train a core tagging fleet of ten hook vessels. See the CCCHFA update section for more details of their progress.</li> </ul> |

Please find below a summary of tagging efforts to date (Table 1). The vessels recruited by each organization are also presented in Table 2.

**Table 1: Summary of tagging efforts to date.**

|                         | <b>No of personnel</b>    | <b>No. of vessels</b>                   | <b>Tagging start date</b> | <b>No. of trips</b> | <b>No. of fish tagged</b> |
|-------------------------|---------------------------|---|---------------------------|---------------------|---------------------------|
| <b>DFO</b>              | 2                         | ?                                       | 05/15/03                  | 1                   | -                         |
| <b>Island Institute</b> | 1 plus a field technician | 7 vessel owners interested in tagging   | May 2003?                 | 0                   | -                         |
| <b>DMR</b>              | 3                         | 12                                      | 04/24/03                  | 2                   | <b>76</b>                 |
| <b>SMAST</b>            | 3                         | 10                                      | 04/18/03                  | 2                   | <b>891</b>                |
| <b>CCCHFA</b>           | 1 plus volunteers         | 10 dedicated, 8 for non-dedicated trips | 03/15/03                  | >60                 | <b>&gt;14,000</b>         |
| <b>Totals</b>           |                           |   |                           |                     | <b>&gt;15,000</b>         |

**Table 2: The names provided to date of commercial vessels involved in the Northeast Regional Cod-tagging Program; Trawl vessels show (T), Hook vessels show (H).**

| No. | CCCHFA              | SMAST                 | DMR                      |
|-----|---------------------|-----------------------|--------------------------|
| 1   | FV Crystal Lee (H)  | FV Atlantis (T)       | FV Adventurer (T)        |
| 2   | FV Glory K (H)      | FV Inheritance (T)    | FV Elizabeth (T)         |
| 3   | FV Magic (H)        | FV Melissa Jayne (T)  | FV Jocka (T)             |
| 4   | FV Miss Dorothy (H) | FV Nauset (T)         | FV Lady Luck (T)         |
| 5   | FV Murrulet (H)     | FV Sao Paulo (T)      | FV Leslie Ann (T)        |
| 6   | FV Peggy B II (H)   | FV T-Luis (T)         | FV Perseverance (H)      |
| 7   | FV Saga (H)         | FV Trident (T)        | FV Poseidon (H)          |
| 8   | FV Sea Wolf (H)     | FV Victory (T)        | FV Robert Michael (T)    |
| 9   | FV Shalako (H)      | FV Vila de Ilhavo (T) | FV Tara Lynn (T)         |
| 10  | FV Sue-Z (H)        | FV Virginia Sands (T) | FV Tara Lynn II (T)      |
| 11  |                     |                       | FV Theresa & Allyson (T) |
| 12  |                     |                       | FV Titan (T)             |

### 3. GMA's Priority Tasks for the next two months

GMA will continue to make site visits over the next few months, hopefully undertaking at least one tagging trip with each tagging organization; on the 19<sup>th</sup> May Shelly will travel to Nova Scotia to join Don Clarke and Jennifer Hinze to assist with part of their scheduled dedicated tagging trip.

With the infrastructure now in place in terms of getting tagged fish in the water, and as the number of tagged cod at liberty increases, the next two months will see GMA focusing on outreach issues.

#### 3.1 Outreach

Outreach will be fundamental at this stage if we aim to maximize the public awareness of the program and encourage respectable tag return rates from different sectors of the fishing industry.

Specifically, the NE Regional Cod-tagging Poster (currently in production) needs to be distributed throughout the region, both by GMA and individual research organizations.

In addition, a major task for GMA will now be the design and development of the program's website (<http://www.codresearch.org>). This site will host all information regarding the program, and will provide the link to the online mapping interface being created by NGI.

#### 3.2 Database

With more tagged fish entering the water, individual tagging organizations will soon need to concentrate on the input of tagging data collected to date, in addition to new data which will be obtained as tagging trips find their momentum.

## **4. Program Update by Tagging Organization**

### **4.1 Canada Department of Fisheries and Oceans (DFO)**

- A research trip went to Browns Bank in late April 2003. Tagging during this trip was opportunistic; catches of cod were very small, with only the tows at deeper depths (app. 120 fathom) producing any cod. These few were tagged.
- A dedicated tagging trip is scheduled for the 16<sup>th</sup>-24<sup>th</sup> May 2003.

### **4.2 Island Institute**

- Ben Neal attended a meeting in Eastport, ME with Will Hopkins of the Cobscook Bay Resource Center. A total of 7 vessel owners have expressed interest in participating with tagging. Ben will be returning to the area the second week of June for a meeting with the partners to discuss gear setup and to undertake some tagging trips.
- June is the time for cod, lobster, and pollock fishing to start in these colder Downeast waters; tagging will therefore also take place during this time of year.
- Training will be carried out in May and June of 2003.
- One “educational” tagging trip was undertaken in early May 2003.
- Additional meetings in Downeast locations are planned for the near future.

### **4.3 Maine Department of Marine Resources (DMR)**

- Cod Tagging Area Coordinators have been hired for Area 1 (Cashes and Fippennies Ledges) and Area 2 (Jordan Basin (offshore) and Penobscot Bay down to the Canadian border (nearshore)). The Area 1 coordinator is Susan Hann who is working out of the Gulf of Maine Aquarium (GMA) in Portland. The Area 2 coordinator is Amy Winkle who is working out of DMR in Boothbay Harbor.
- Additional on-board tagging technicians have been recruited and hired for the program by GMA.
- **Area 1:** Four commercial vessels (along with one backup) have been recruited for directed cod tagging trips in Area 1; these are all trawl vessels. Tagging operations began in Area 1 on 4/24/03. Two trips have been undertaken in this area, both resulting in very low catch rates (though many haddock were caught); both trips were aborted to save the hours for future trips. It was decided to delay subsequent tagging trips by one week in the hope that catch rates would improve; the next trip involves two vessels working together and will depart on 5/19/03.
- **Area 2:** Proposals from vessel captains interested in working in Area 2 were received in late April 2003; 6 vessels were promptly selected (in addition to 1 backup vessel) and Letters of Acknowledgement have been requested. Tagging in Area 2 will begin in late May 2003 (possibly June, depending on when the cod appear in Downeast waters).

### **4.4 School for Marine Science and Technology (SMAST)**

- SMAST has completed one trip to Georges Bank in April. It was cut short (4 days instead of 5) due to poor catches and bad weather. We have another trip scheduled for Monday April 28 and two trips in May. Our goal is to have 4 trips completed by the end of May. The schedule continues with one trip in June, pausing during July and August before starting up again with one trip in September, two in October, one November and one in December.
- The lack of fish on our first trip was attributed to strong currents resulting from high course tides. (The full moon occurred midway through the trip). Weather also did not

cooperate with high wind and seas every day except the first. We also ran into considerably more haddock than expected. Cod were caught by other vessels towing close by, but in waters too deep to tag safely.

#### 4.5 Cape Cod Commercial Hook Fishermen’s Association (CCCHFA)

- Tagging commenced March 15. As of April 27, the following vessels and crews have conducted dedicated tagging trips:

| <b>Vessel</b>          | <b>Captain</b> | <b>Crew</b>    | <b>No. of Trips</b> |
|------------------------|----------------|----------------|---------------------|
| <b>FV Sea Wolf</b>     | Tom Smith      | Andy Binowski  | 6                   |
| <b>FV Miss Dorothy</b> | Rick Tavano    | Matt Watts     | 3                   |
| <b>FV Murrulet</b>     | Steve Smith    | Kerry Doon     | 7                   |
| <b>FV Sue-Z</b>        | Tom Traina     | Jason Pilsbury | 2                   |
| <b>FV Saga</b>         | Ben Bergquist  | Dan Bergquist  | 4                   |
| <b>FV Glory K</b>      | Bruce Kruczek  | Marc Christian | 7                   |
| <b>FV Peggy B II</b>   | Ronnie Braun   | Paul Tebo      | 5                   |
| <b>FV Magic</b>        | Mike Abdow     | Billy Trombi   | 6                   |
| <b>FV Crystal Lee</b>  | Dave Nadeau    | Terry Pickard  | 6                   |
| <b>FV Shalako</b>      | Bob Nagy       | Bill Baptist   | 3                   |

- The following vessels are trained and equipped for non dedicated tagging:

|                      |                       |                     |
|----------------------|-----------------------|---------------------|
| <b>FV Sea Holly</b>  | <b>FV Riena Marie</b> | <b>FV Sea Win</b>   |
| <b>FV Yellowbird</b> | <b>FV Zachary T</b>   | <b>FV Susan Lee</b> |
| <b>FV Tenacious</b>  | <b>FV Booby Hatch</b> |                     |

- Tag deployments to date: As of April 27, we have tagged 1788 fish in area III, the Great South Channel, most in the area of Middle Rip and 5617 in area I, Cape Cod/East of Chatham. The availability of fish has been exceedingly limited due to the cold water, and we have been forced to concentrate our efforts in a few areas, but signs are encouraging that the fish are on the move and we will have more options available soon.
- The CCCHFA has distributed just over \$78,000 in direct payments to fishermen so far.
- The fish seem to be sailing through the procedure with flying colors. Most of the vessels are using a nearly barbless Japanese hook and fishing in water between 110 and 180 feet deep. Mortality in the live wells has been very low.
- Returns have mostly been in the form of “Yeah I caught one- I have it on the dash, but I haven’t called it in yet.” This is more encouraging than “Yeah I caught one and it is going to stay on the dash.”
- Having recognized an opportunity for community involvement and also the benefits of having a third set of hands on board to help out, we have also begun training a small group of volunteers, who we hope will get the opportunity to accompany the fishermen on a trip or two to dip fish out of the well, work a rod, or act as a recorder.

## Annex 1

**Table 1: Key personnel in each tagging organization.**

| <b>Name</b>     | <b>Organization</b> | <b>Role</b>         |
|-----------------|---------------------|---------------------|
| Rodney Rountree | SMAST               | Area Manager        |
| David Martins   | SMAST               | Tagging Coordinator |
| Tom Rudolph     | CCCHFA              | Area Manager        |
| Donald Clark    | DFO                 | Program Manager     |
| Jennifer Hinze  | DFO                 | Tagging Coordinator |
| Kevin Kelly     | DMR                 | Area Manager        |
| Susan Hann      | DMR                 | Area 1 Coordinator  |
| Amy Winkle      | DMR                 | Area 2 Coordinator  |
| Shelly Tallack  | GMA                 | Program Manager     |
| Ben Neal        | Island Institute    | Area Manager        |

**Table 2: The Cod-tagging DATA MANAGEMENT committee.**

| <b>Name</b>             | <b>Organization</b> |
|-------------------------|---------------------|
| Rodney Rountree (Chair) | SMAST               |
| Tom Rudolph             | CCCHFA              |
| Donald Clark            | DFO                 |
| Kevin Kelly             | DMR                 |
| Linda Mercer            | DMR                 |
| Shelly Tallack          | GMA                 |
| Ben Neal                | Island Institute    |
| Mark Terceiro           | NEFSC/NMFS          |

**Table 3: The Cod-tagging OUTREACH Committee.**

| <b>Name</b>             | <b>Organization</b> |
|-------------------------|---------------------|
| Ben Neal (Chair)        | Island Institute    |
| Shelly Tallack          | GMA                 |
| Kevin Kelly             | DMR                 |
| David Martins           | SMAST               |
| Paul Parker/Tom Rudolph | CCCHFA              |
| Earl Meredith           | NOAA Fisheries      |