

Report to National Marine Fisheries Service
Release of Three Juvenile and Two Subadult Pilot Whales on August 10,
2003 off the Florida Keys

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Pre-release preparations

- Veterinary examinations were done in the water with the animals the day before release. The lungs of whales #2 and #3 were evaluated while the animals were being fed. This allowed better evaluation of the lungs than on the previous physical examinations because the animals would take normal breaths while unrestrained in the water. Because the animals were accustomed to being hand fed, they allowed the exam without objection.
- At the same time as the veterinary exams were done, tagging measurements were taken to ensure the tags were the appropriate sizes for the animals.
- Four veterinarians arrived to assist with the release between one to several days before the release. They met the day before the release and agreed on a plan for tagging and monitoring the animals during the release. Dr. Charlie Manier was designated as the lead veterinarian. The other veterinarians were Dr. Doug Mader, Dr. Bob Stevens and Dr. Laurie Gage. Three veterinarians, Drs. Manier, Stevens, and Gage are experienced marine mammal veterinarians, each with experience in cetacean transport.
- Tracking devices and the tracking team arrived two days before transport and were able to check all of the devices and ensure all tags and receivers were working correctly. There was a mix-up on the type of receiver required, and a new receiver was brought in the day before the release.
- The method of transport (“wet” or “dry”) was discussed, with the most attention placed on how best to transport whale #2. Transporting “wet” meant the animal would be placed in a stretcher, and the stretcher would be suspended in a cradle containing approximately 24 inches of water. Transporting “dry” meant each animal would be placed in a stretcher and placed in a cradle without water. Their skin would be kept moist at all times with cool water sprayers and buckets and sponges.
- It was decided that #2 had to be transported in a wet box, as she had problems during the capture and restraint for the complete physical examinations done the week before. It was decided that two whales on the barge would be transported dry, and two in wet boxes. The Nautica was

- unable to travel safely with a wet box on board, so the whale on that vessel needed to go dry as well.
- The loading order of the whales was carefully considered and tailored to expedite the transport. The plan was to tag the two whales traveling in the wet boxes (#2 and #4) on the beach due to space constraints in the wet boxes. Whale #3 was to travel on the Nautica and needed to be tagged on the beach as well because of space constraints.
 - Multiple practice runs were made on both the Nautica and on the barge. Volunteers from MMC were trained and directed by the MRC staff. Several practice runs were required with such a complicated release, so that every person knew their job and knew what their position was and what was needed to be done. These practice runs were key to making the release go smoothly.
 - The tracking vessels, tow boats, and service boats all had to be coordinated for both the practice runs and for the release. This complicated scheduling was done by the NMFS personnel.
 - The rigging for all of the stretchers, cradles, crane, and all other whale transport equipment was designed and handled by the MRC team. Everything was in place and ready to go the night before the release. Many adjustments to the cradles and stretchers needed to be made in the several days prior to the release to ensure comfort for the animals and ease of release.
 - All arrangements for the large numbers of reporters and television crews were made and handled by NMFS. A press conference was held two days before the release (partly because the release date was set back by one day).

Release Date

The original release date was set to be August 9, 2003, however due to some technical issues and a problem with the tracking vessels, as well as uncertain weather conditions, the release date was moved to Sunday August 10, 2003.

Release of the Whales

Release day required the coordination of government agencies, multiple boats and boat captains, scientists, veterinarians, volunteers, and the press. The coordination of all of these groups was handled by NMFS.

MRC handled all of the release details, including catching the animals, rigging the crane, and rigging all of the cradles on the barge and on the Nautica, as well as monitoring the animals during the transport.

MMC was responsible for getting the animals into the holding pen early on the morning of the release, and for helping the MRC team catch the animals and observe the animals during the transport.

The tagging team consisted of Brad Hanson, Frank Deckhert, and one of the veterinarians.

To keep the transport time to a minimum, the tagging team stayed behind on the beach to tag whale #3 and load her onto the Nautica allowing the other whales to start the trip out to sea immediately after the last of the four was loaded onto the barge. The Nautica was a faster boat and could catch up with the barge before the designated release site.

The loading of the whales commenced with whale #4 which was easily captured, placed in a sling, and brought onto the beach for tagging. Once tagged, it was placed on the barge into a wet box. As the tagging began for whale #4, whale #2 was given 21 mg Medazolam IM to calm her for the transport. After 35 minutes, whale #2 was captured for tagging. The original plan was for the tagging team to stay on the beach and tag #2 while the capture team was catching and placing whales #6 and #7 onto the barge. The plan was aborted, however, when #2 was perceived to be having respiratory problems. A veterinary decision was made to bring whale #2 directly onto the barge without placing the tag. Whale #2 seemed to stabilize and its heart rate and respiratory rate became steady once placed in the wet box.

Whales #6 and #7 were captured and loaded with no problems. The barge departed just after whale #3 was captured and brought onto the beach for tagging. Whale #3 was tagged and loaded uneventfully.

Approximately 30 minutes into the trip, whale #4 had some respiratory problems and was breathing erratically. It was given some steroids to stabilize it. It took about 20 minutes to stabilize and traveled well for the rest of the trip.

About 90 minutes into the trip, whale #6 had some more serious respiratory issues, and was breathing very erratically. It was given steroids and stimulated with positional changes, cold water body splashes, and physical stimulation. Its eyes were responsive throughout the 20 minute episode, but it was breath-holding and did not respond to initial stimulation. Eventually it returned to having a more normal breath pattern.

There was another pod of pilot whales sighted in the area, and the course was changed to release these animals closer to the group of wild animals.

Whale #2 was given the reversal agent (2 mg Romazicon IV) approximately 30 minutes before the release. A second dose was given immediately prior to release. After the first dose, the whale's respirations became modestly erratic, but were not enough of a problem to treat medically.

The whales were released together, with the #3 whale pushed into the water at the same moment as whales #2 and #4 were pushed off the barge. Whales #6 and #7 were released a moment after the whales in front of them. The entire release went very smoothly. This was a complicated release with many potential problems. Each person involved knew their positions, and their job and the complication of the release underscored the importance of the practice runs.

Post Release Monitoring

During the first few hours several signals could be found and tracked. There were many factors that affected the tracking of the whales. The initial tracking was compromised by some Coast Guard Regulations, and transfers of personnel from the barge to the shuttle vessels were delayed. This resulted in not getting the trackers onto the tracking vessels in a timely manner. Once on the tracking vessels the trackers were able to pick up the signals of all of the animals. The #7 whale was the first to lose the TDR tag which was held on with a suction cup. This tag was eventually picked up early on Day 2 post-release. The antenna of the tag was badly bent and appeared to have bite marks on it.

During the night of tracking Day 1 (release day), the signals of all of the whales were lost at approximately 1900. One tracking vessel went east, while the other vessel traveled southwest. The tracking teams did not find out until Day 3 that the tags were scheduled to cycle off for twelve hours each day, from 7 PM until 7 AM. This would have saved the tracking teams two full nights of continuous surveillance as well as the fuel it took to run both boats in different directions had this been known. If the tags had been left on continuously, we could have tracked all of the animals instead of the one (#7) that was near enough to one of the boats the next morning to pick up a signal.

One of the biggest problems encountered in the first two days of tracking was the lack of ability of the two vessels to communicate with one another. The radios on one vessel (the Haida) had a very short range, and whenever the vessels were over 40 miles apart, there was sketchy-to-no communication. Another problem was the lack of timely satellite information. The tracking could have been augmented significantly if satellite information were available as it came in. As it was, any disturbance in the direct tracking signals could mean hours of trying to pick up the signal again and often resulted in boats going in the wrong direction. Lightening hits in the distance were a significant problem and would obscure any ability to hear the signals from the whales. When there were numerous lightening hits, even in the distance, it could mean losing the ability to track a particular animal.

Over the next week, the only animal that could be tracked by the tracking vessels was #7. While the animal could be tracked for many hours, it was nearly impossible to obtain a direct visual of the animal itself. It was presumed he was

traveling alone, however without a visual it was impossible to say if he were traveling with another animal(s) or not.

Conclusions

I felt the entire operation went smoothly. It was a very complicated release with many potential pitfalls. Because this was the first release of its kind, there were no previous protocols to fall back on. There were many last-minute preparations, equipment procurements, and vessel coordination details that had to be in place. I felt the only area that could have been improved upon for this particular operation was the post-release tracking of the animals.

Suggestions

I feel there were a few ways in which to improve on a multiple animal release with subsequent tracking.

1. Contact the individuals who create the tags as soon as possible before the release and let them know the exact required specifications of the tags. Ensure they send tags which are clearly labeled with the frequency of each tag, and ensure ahead of time the type of duty cycle each tag will have, and the frequency of the receiver required clearly noted. Try to have the tags on site and available at least two days (ideally a week or more) before the release so they can be tested and measured for appropriate fit to the animals. The tag fitting would best be accomplished during the pre-release veterinary examination. The actual attachment of the tag(s) would be done on the release day.
2. Have at least one tracking vessel with tracking equipment and an experienced tracker aboard prior to the release. Personnel availability may not allow for this, as most of the experienced trackers are also the experienced animal handlers. If that is the case, have transport vessels immediately available to take trackers to their vessel(s) after the release.
3. Place continuous duty tags on animals requiring the closest observations for the first month or two after release.
4. Have satellite data available to be downloaded to the individuals on the tracking vessel in real-time (or as close to real-time as possible).
5. Have air support available within the first week (or two) to get visual examinations of the animals.